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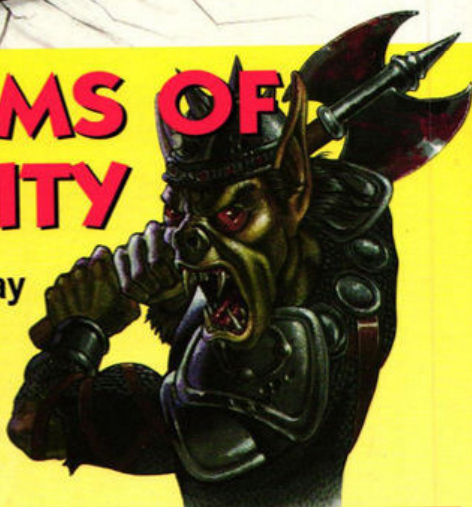
REVIEWED THIS MONTH:

POSITIVE IMAGE PREVIEW

- EXPOSÉ DIGITISER ● MASTERING PAPHYRUS ● MASTERING CALLIGRAPHER
- OMEN O/S AND DEVELOPMENT KIT
- BROTHER HL-660 ● GEMULATOR 4
- OXIEWARE CALAMUS FONTS
- ALIEN THING ● GRAVON ● SKYDUEL
- BACKWARD 3 ● SANDS OF MARS
- COUNTER ATAK AND AMAZE
- SENTENCES AND MUCH MORE...

REALMS OF REALITY

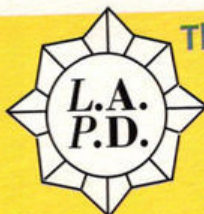
Slash your way
through the
dungeons of
hell with this
superb RPG



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games

- *** ARCADE ***
- G.413 COMBAT: Fast action military shoot 'em up in style of Operation Wolf "NEW".
 - G.410 PACMAN ON E: One or two player classic 'Pacman' with sampled music "NEW".
 - G.405 ULTIMATE ARENA: Beat 'em up in the style of 'Mortal Kombat' (S/W) "NEW".
 - G.403 SQUARE OFF: The ultimate tumbling block 'Tetris' game (1Mb, STE) (2 disks/£3.00).

- G.398 ASTEROIDIA (STE): Classic asteroid blasting action - order G399 for STFM version (1Mb).
- G.400 FRANTIC (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 HAXMAN II: 1 megabyte version of Pacman, 100 new levels!
- G.110 LLAMATRON: 100 levels of fast arcade action with wicked sound FX.
- G.201 BLAT: Tetris style three in a row, falling blocks with many added features.

*** FANTASY/ROLE PLAY ***

- G.412 NISHIRAN: Classy sci-fi, first-person view role-playing game. (1Mb) (2 disks/£3.00).
- 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.5 MORIA: A complex fantasy D&D based role-play game. (1Mb).
- G.370 MINDMELT: Fantasy adventure with an overhead view.
- G.343 BLUDGEON: Solo fantasy adventure using the Bludgeon combat system.
- 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 digi pics & sound (1Mb).
- G.387 SPACESWEEPER: A challenging 'Minesweeper' game in three dimensions!
- G.315 SKILLS: 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 CIVILIZATION: D&D type fantasy adventure set on a far earth-like planet.
- G.320 INVESTIGATION: Graphic adventure in the style of Sierra On-Line (2 disks/£3.00).
- G.201 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.156 THE AWE CHASM: An adult adventure featuring Snatch and Crunch (over 18's only).
- G.167 SUSAN: An adult adventure (over 18's only).
- G.91 QUEST FOR THE HOLY GRAIL: Pythonese madcap humour.
- G.202 UNKILLIAN UNDERWORLD: Highly rated large scale text fantasy adventure.

*** STRATEGY & OTHERS ***

- G.131 STAR TREK - THE GAME: Defeat the Klingon threat to the galaxy (1Mb).
- G.386 STAR TREK - KLINGON WARS: A Starship Enterprise battle simulation (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 CIVIL CHESS: French chess playing program for all levels.
- G.388 STRATEGEM: 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 CHAS: 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!

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!

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.

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.

art & graphics

- A.99 MINIPICS II: All resolution picture converter and catalogue. (1Mb).
- A.103 OFFICE CLIP ART: 33 PCX images of office related items.
- A.100 ANIMALS CLIP ART: Over 170 PCX images of animals. (5 disks/£7.50).
- A.101 ASTROLOGIC CLIP ART: 36 PCX images covering every zodiac sign (3 disks/£4.50).
- L.77 AUTO-STEREOGRAM: Create your own 3D 'Magic Eye' pictures. (1Mb) (£3.00).
- A.95 VISUAL ILLUSIONS: A collection of 24 'Magic Eye' 3D pictures.
- A.98 STEREOGRAM ANIMATIONS: Now see 'Magic Eye' pictures move!
- A.36 KOZMIC 4: Complete version of the stunning psychedelic pattern creator.
- A.1 ANI ST: Commercial quality animation program (once cost £60.00 to buy!).
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- A.45 CRACK ART: Demo version of the excellent German art program.
- A.75 PICTOFILM by Martin Brownlow: Make films from multiple 3D polygon objects.
- A.44 FANTASY SLIDESHOW: Spectrum 512 pictures on fantasy theme (over 16's only).
- L.27, L.28 TYPE WRITE CLIP ART: 4-disk sets of quality clip art in IMG format (£10 per set).

music

- S.4 YAMAHA PSS: Patch editor and facility to print tablature music.
- S.144 EXKED 1: A 100 track, 240ppm sequencer with many features.
- S.145 OPTRONIX MIZAK: Rip and play music from other programs.
- S.8 NOISETRACKER: Soundtracker. MIDI player with eight starter tunes.
- S.7 ACCOMPANIST: 16 Voice Henry Cosh sequencer (full instructions on disk).
- S.19 ALCHIMIE JR: Impressive Swiss multi-window, multi-task sequencer (1Mb).

utilities

- U.77 THING: Alternative desktop (1Mb).
- L.111 SUPER HACKER: Replace a picture in almost any game or demo with your own! (£3.00).
- U.67 ST TOOLS: An exhaustive collection of Atari ST utilities.
- U.53 TERADESK V1.36: Replacement desktop for the ST/STE (1Mb).
- U.20 FASTCOPY 3: Excellent disk copier for cover disks.
- U.48 PREMIER PACKERS: 13 of the best program packers, plus a de-packer.
- U.42 PICTURE HUNTER: Rips picture screens from other programs.
- U.66 BEFORE DAWN: Animated screen saver that will use your own animations.
- U.47 PROBE ST: Handy utility. Grabs music/graphics, disk/memory editor, etc.
- U.52 VAULT & TURTLE: Fast hard disk back-up utilities.

miscellaneous

- M.183 HOUSE EXPENSE MANAGER: Daily household expense management program.
- M.177 LOTTERY COMPANION: Valued assistance with your lottery entries.
- L.103 LEXICON: The ideal program for word game fanatics. Solve crosswords, anagrams etc. (£3.00).
- L.111 SUPER-HACKER: Put your own picture into demos, games etc. (£3.00).
- M.146 AWARD MAKER: Design and print awards certificates.
- M.155 ROUTE FINDER: Route finding program for England, Wales and Scotland.
- M.161 THE GARDENER: A special database for gardening enthusiasts.
- M.175 FISHERMAN'S DATABASE: The ultimate record program for the keen angler.
- M.19 AIR WARRIOR: Flight sim with World War II aircraft.
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- L.18 CIRCUIT: Easy to use electrical circuit diagram producing program (£2.50).
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- M.111 NORTHERN & EQUATORIAL STAR ATLAS: Superb serious astronomy program S/W.
- M.77 THE BIBLE: King James authorized version. 3 disks (£4.50).
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- M.100 GERMAN TRANSLATORS: Three programs to translate German text to English.
- M.26 GENEALOGY: 2 programs for the family historians to trace their forebears.
- M.5 YOUR SECOND ATARI ST MANUAL: Like a book to supplement the official manual.
- M.17 WORD PUZZLE: Stuck with word games? Then this disk may help.
- M.30 EXTRA WORD LIST: 70,000 extra words to use with disk M17.

programming

- P.53 IMAGINARY WORLD: Easy to use language to write your own role-play adventures "NEW".
- P.44 GFA V2: Full version of language with tutorial & compiler! (N.B this disk is not PD - L.A.P.D. have permission to distribute it.)
- L.68 SPRITE WORKS: New commands for games writers using GFA V3+ (2 disks/£7.00).
- DSP.1 SOZOBON C: A complete C compiler with documentation.
- P.24 MENU-MAKER: Make your own menus with music, sprite and scrolling message.
- P.33 ZX SPECTRUM EMULATOR: Emulate the old Speccy on your ST/STE (1Mb).
- P.17 68000 PROGRAMMING COURSE: 10 'How to do it' document files.
- P.19 GFA EXPERT: Massive text file and help routines for GFA-Basic 3.0.
- P.16 C ADVENTURE TOOL KIT: Write professional quality adventures in C.

business

- M.182 ST DIARY: A computer diary for the busy executive "NEW".
- W.21 MARCEL: Super word processor with built in spell checker.
- M.106 ACCOUNT-ABILITY: Fully featured accounts program. 10 accounts, 2,000 transactions!
- M.148 INVOICE MASTER: Excellent invoicing system for small businesses.
- M.13 OPLUS 2000: A superb spreadsheet program (1Mb).
- M.83 INVENTORY PRO: A stock control system.
- U.23 DOUBLE SENTRY: Impressive accounts package for the small company (no VAT).
- U.33 FAST BASE: A powerful and flexible database.
- W.3 FIRST WORD: Word processor that set the standard for others to follow.

specialist databases

- M.175 FISHERMAN'S: For the keen angler.
- M.167 DIABETES: For sufferers of Insulin Dependent Diabetes Mellitus.
- L.17 ADDRESS BANK: Names and addresses (£2.50).
- M.123 THE BIBLE: Complete King James, old and new testaments (3 disks/£4.50).
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- M.176 FUCHIAS: For the keen specialist gardener.
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- L.113 BBS: UK bulletin boards.
- M.182 REBASE: For records, tapes and CDs.
- M.164 VIENNA: Info on the city.
- M.149 CORNER SHOP VIDEO: Demo of database for small shops renting videos.
- U.24 SHARES: Shares will display general trends.
- C.17 OSO-BASE: For amateur radio enthusiasts.
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- M.21 VIDEO MANAGER: Keep track of your home videos.

educational

- L.20 SUPER SPELL: Teaching games for the 4 to 9 year old (£2.50).
- L.37 SUPER FUN: More teaching games for the 4 to 9 year old (£2.50).
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- G.83 NOAH'S ARK: Collect the animals, two by two - addictive for adults too!
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- L.01 ROBOT MATHS: Maths tutor for children aged 6+ (£2.95).
- L.02 MOON LETTERS: Spelling game for ages 5+ (£2.95).
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- L.08 ALL BLOCKED UP: Mathematical puzzles for the young (£2.95).
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- M.1 PLANETARIUM: Excellent, easy to use, astronomy program.
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- M.7 HISTORY FILE: Investigate a historical murder in Scotland (3 disks/£4.50).
- M.86 DEATH OF A PRESIDENT: Investigate the Kennedy assassination (3 disks/£4.50).
- M.114 FRANGLAIS 3 & 4: French language tutor programs.
- M.123 C.I.A. WORLD FACTBOOK: Facts and figures on countries. (4 disks/£6.00)
- W.22 HOMEWORK: A word processor for the younger user.

communications

- L.113 BBS DIRECTORY: Money saving directory of UK BBS's (£5.00).
- C.22 TEDDYTERM: A superb multi-function communications program.
- C.7 WINTERM V4: Excellent multi-function communications program.
- M.138 MORSE CODE TUTOR: Practice and perfect your skills.
- C.24 OFF-LINE READERS: Four off-line reader programs.

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- B.39 ASTEROIDS: A loving restoration
- B.20 HAXMAN: Pacman action
- B.27 FROGGY: The arcade classic
- B.51 COLOSSAL CAVE: Original adventure
- B.15 ROLL 'N' NUDGE: Fruit machine
- B.36 B BALL POOL: Bar game simulation
- B.50 STAR TREK: Save the Federation

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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

- L128 **BLUDGEON V2** (1Mb, £3.00) *NEW* by Seton Shareware Co-operative. A computer moderated fantasy combat system developed so that fantasy wargame battles could be enjoyed by single players or multi-player groups. It can be used as a tactical fantasy adventure wargame or as a part of a role-playing adventure. This licenceware version includes two ready to play solo adventures.
- L129 **BLUDGEON ADVENTURES #1** (£3.00) *NEW*. Six additional solo adventures for the above BLUDGEON game.
- L124 **THE SANDS OF MARS** (£3.00) by IZ Software. A sci-fi game that involves you in controlling the events governing the operating of a Martian Mining Corporation facility. As your resources increase, additional installations can be built, but not far away an alien menace lurks resentful of your intrusion into their world. 3D 'Creativision' view showing terrain, your colony buildings and alien cities. Use your resources to build vehicles and installations. Explore the Martian planet and deal with problems as they arise including meeting quota targets, overcrowding, plague, alien attacks, etc. A deep and challenging game.
- L105 **CONQUEST 2** (1Mb, £3.00) by Ralph Effemy. The sequel to the immensely popular game CONQUEST. In this newer version you now have no less than five islands to conquer and rule. There are also more elements for you to control than in the earlier game and these include miners, weapon-makers, fishermen, boat-builders, lumberjacks, bakers, cattle, look-outs, knights, etc. This totally absorbing game was an ST FORMAT 'Game of the Month'.
- L104 **WAR OVER THE REICH** (£3.00) by John M. Fowlston. Become the head of Britain's World War II Bomber Command then plan and execute a campaign of raids against twelve German cities. Flak, weather and enemy fighters will take a steady toll of your Lancasters, Halifaxes and Stirlings as the game progresses.
- L98 **WORLD AT WAR** (£3.00) by Seton Shareware Co-operative. A game of economic and military strategy on a grand scale for one to seven players. The objective is simple - total world domination. But to achieve it you'll need to build, arm and supply your military forces while attempting to capture the territory of your opponents. Played on a world map.
- L22 **GRAND PRIZX MANAGER** (£3.00) by S. Fowlston. A simulation game that has you running a Formula One Grand Prix team through as many seasons as you wish. Select from one of 15 recognised teams to run, including McLaren, Ferrari, Benetton etc. Hire and fire your own team of specialists, including experts in aerodynamics, engines, etc and drivers from a list of 40. Test your cars to get the best from modifications and fine tune them to perfection, then race them against the other teams and drivers in a full season of Grand Prix races. Both half meg and one meg versions of the program are available.
- L79 **DARKLYTE II** (1Mb, £3.00) by Howard Tilley. The sequel to the successful 'Darklyte' program on L.A.P.D. disk no. G.288. This one is bigger and better with nearly double the graphics, over 8 times more audio and double the equipment! It is a sci-fi space strategy game in which you must destroy the Darklyte forces. Reminiscent of the 'Space Crusade' game.
- L118 **THE UNMAGNIFICENT 15**, a simple 'Wild West shoot'em up' game; CLAN, a Hamurabi type game where you must prove yourself a capable leader and help your clan grow and prosper; QUEST KNIGHT, a fantasy game played in plan perspective - recover the fabled 'Rose of Quistoria'; LOGIC PROBLEMS, five challenging puzzles with electronic tagging to aid record keeping; LOGIC PROBLEMS II, more of the same.
- L42 **OUTWORLD** (£2.50) by Glyn Carey. An arcade strategy game in which you take control of a space colony with the sole task of keeping at least one member of the colony alive until it can escape into orbit. Crew die slowly if they run out of water, oxygen or food so to fresh supplies must be continually shipped in. Add to this the ever present threat of alien vessels launching attacks on vital areas of the colony and you'll soon find your work cut out.
- L53 **HOT DOG** (£2.50) by A.A. Covell. A game of greyhound racing for 1 to 9 players which in practice gets more and more fun the more players are involved. Over 400 dogs permanently stored on disk. Study the odds, select your dog, make your bet, then watch them run.
- L59 **ARTHUR OF THE BRITONS** (1Mb, £3.00) by Ralph Effemy. A strategy game with arcade sequences in which you take control of King Arthur and his army of ancient Britons.
- L60 **CONQUEST** (1Mb, £3.00) by Ralph Effemy. A 'God' game in which your task is simply to survive for one year in the land of your choice. To do this you will need to rule wisely, strongly and efficiently. If you survive for the full year you'll be given the name of the next land you must conquer.

arcade games

- L119 **ASTEROIDIA** (STE, £6.00) by Dave Munsie. The classic game 'Asteroids' revisited. This version features 3D rendered asteroids and a 360 degree scrolling playfield. It has good sound effects and digitised music. It is an arcade style game that requires little alien strategy but provides hours of fun. You are flying around in space trying to destroy all the asteroids that are heading towards your home planet. You'll also have to contend with little alien things that want to destroy your ship!
- L120 **ASTEROIDIA** (STFM, £7.00) The STFM version of the above.
- L121 **FRANTIC** (STE, £7.50) by Dave Munsie. Welcome brave warrior to the kinetic combat simulator Frantic. Here is where loyal soldiers sharpen their skills at operating the Empire's secret weapon. To facilitate training and boost morale, bombs and increased blast power are available to the quick. Ample bonuses are supplied for those with a taste of higher gratification.
- L122 **FRANTIC** (STFM, £7.50) The STFM version of the above.
- L123 **SQUARE OFF** (£7.50) by Dave Munsie. Falling block puzzle game in the style of the classic 'Tetris'. This time though there is a melodic digitised soundtrack, fitting sound effects and a modern graphic display.
- L93 **PROJECT PURIFY** (£3.00) by Mikael Lundberg. Purchase equipment for your spacecraft then attempt to clear twenty sectors of space debris 'Asteroids' style.

- L87 **STORM 94** (1Mb, STE, £3.00) As a member of an elite group of space marines you are designated to perform a one man reconnaissance mission of the space vessel LGH590 with which contact was lost 27 hours ago. It is expected that this will be mankind's first contact with non-human intelligent lifeforms and you are advised to proceed with extreme caution. On board the vessel you soon realise that the defective lift system is only working one way - downwards, and there are 31 decks to make your way through before you can escape! Alien lifeforms abound on the ship which you traverse using an overhead view, 'Gauntlet' style. This is a serious blasting experience with 8 way scrolling, 30 on-screen sprites, sampled sound, etc.
- L91 **STORM 94** (1Mb, STFM, £3.00) As L87 above but for the STFM.
- L86 **FLUFFIES** (1Mb, £3.00) by Howard Tilley. A platform game across many levels as you guide a blue fluffy creature in an attempt to rescue his girlfriend who has gotten lost in one of the many castles and forests of Fluffyland. Careful though as there are traps and pitfalls along the way. Similar to the classic 'Rick Dangerous'.
- L80 **MUNCHKIN** (£2.50) by Digital Dreams. The perpetually popular Pacman pastime!
- L116 **STREETS** (£3.00) by 999 Software. Drive your armed motor-car around the streets of the city collecting diamonds so carelessly dropped by fleeing gangsters. Use your on-board cannon to blast your way through obstructions whilst avoiding minis and mobsters cars. There are five areas of the city in all to navigate and each is more dangerous than the last.
- L117 **FISH TANK** (£3.00) by 999 Software. A game for younger players in which they take on the role of a little green fish in a fish tank populated by many larger, carnivorous fishes and other aquatic creatures. You must collect the poisonous food from the surface of the tank and drop it in the path of the other tank inhabitants to dispose of them. Keep your eye on the larger fishes though because they prefer the taste of little green fishes (like you) to the food you're offering!
- L70 **CHRONIC INVADERS** (£2.50) by Digital Dreams. The 'Space Invaders' return in this reworking of the all time classic computer game.
- L61 **3D ASTEROIDS** (1Mb, £2.50) by Ralph Effemy. Based on the classic 'Asteroids' game - but in 3D! Your task, using the latest spacecraft fitted with defense shields, is to clear the space-ways of junk and asteroids. Asteroids and other items tumble towards you and must be destroyed by your lasers. Unfortunately though, there are also a few space pirates who'll attempt to stop you in your task. The full STOS source code for the game is also included on the disk.

adventure & role-playing games

- L125 **PATHS OF GLORY** (£3.00) by IZ Software. A sword and sorcery role-playing game. Your task is to fulfill various quests by exploring dungeons, gathering treasure, slaying monsters and rescuing unfortunates in true fantasy adventure style. The game has a 3D isometric view of dungeon rooms showing all objects, characters and monsters in detail. It has multi character classes and hordes of marauding monsters. Three classes of spells (magical, priestly and elves). Locked and magical doors, traps and dragons, piles of treasure and magical items guarded by fierce monsters.
- L115 **DEMON II** (1Mb, £3.00) by Howard Tilley. A fantasy adventure game with an overhead view. Wander around towns, sewers, etc. Visit buildings and speak to the residents as you seek adventures. Choose from six different character classes: Warrior, Assassin, Mage, Thief, Oracle and Medic. Detailed point and click interface.
- L114 **TIME MACHINE** (£3.00) by PhantomSoft. A classless time based adventure with over 100 locations and over 40 excellent graphic screens. The game involves you travelling through time to collect six crystals needed to destroy a threat against present day Earth. The game has a comprehensive verb and noun list which should all but abolish your need to try and find the exact word to describe what you want to do.
- L112 **CRAGHAVEN** (£2.50) An adventure in a fantasy land. After coming ashore in your rowing boat at the harbour town of Eytown you set about exploring your new surroundings. It isn't long before you stumble across someone who sets you a mission that takes you to the desolate heart of the island and the castle of Craghaven.
- L97 **STONE COLD SOBER** (£4.00) by Organised Chaos. A traditional adventure game but with a point and click interface.
- L69 **BIO-HAZARD** (1Mb, £3.00) by L.J. Greenhalgh. A 'Dungeonmaster/Captive' style adventure set onboard a star-cruiser in the depths of outer space. From a first person perspective there are corridors to explore, puzzles to solve, aliens to blast.
- L21 **DEAD OR ALIVE** (£3.00) A large, complex and humorous text adventure game from Organised Chaos. Taking a short cut home you call into a strange shop where the owner shows you a strange crystal. It renders you unconscious and when you come to the shop has disappeared and your memory is blank!
- L31 **THE CURSE OF AZRIEL** (2 disks, £4.00) by A.A. Covell. A superb graphic fantasy role-playing/trading game. You start the game as a new captain of a merchant ship at anchor just outside the port of Aron's Bay. Your first ship is just a coastal vessel and unsuited to the rigours of travel across the vast oceans, but make a profit from your trading around the coastal ports and you'll soon be able to buy yourself and your men a larger, ocean-going vessel. Recruit and train men in the cities you visit. Visit, inn, armours, town mayors, fight pirates etc. Most of all though, you must try and restore law and order to the world of Lord Azriel (Now FALCON compatible).
- L41 **MURDER ON THE ORION EXPRESS** (£3.00) by Organised Chaos Software. A murder mystery game with an almost infinite variety of solutions, set on board a futuristic space-cruiser. You need to question other persons on the vessel, passengers and crew, to check out their alibis. If you take too long in tracking down the killer more and more murders take place eventually culminating in your own! The game has a graphic interface and is mouse driven.
- L50 **DEMON** (£3.00) by Howard Tilley. Trapped in a stone cell your first task is to escape before the resident demon gets back. 3D view, monsters, pits, teleporters, secret walls, magic system. It's got the lot!

puzzles

- L110 **QUICK FLIP** (£3.00) by Nice Bytes. A mind-bending tile flipping game. Flip the tiles on a 4 x 4 grid in any of four directions to try and gain the maximum score. Bonus squares, magic squares and a timer all add to the suspense.
- L106 **CRAZY LETTERS** (1Mb, £3.00) by Dunces Cap. A word search game in which you try and find a seven letter word hidden behind a grid of squares (a variation of Hangman). Also on the disk is a program to assist in the selection of UK lottery numbers.
- L102 **DCS COMPILATION #4** (£3.00). The fourth compilation disk from Dunces Cap Software. On this disk are BRAIN DAMAGE, eight very different games and fifteen stages to test your brain to the limit. SHAPES, make shapes from 16 different pieces shown down at random on the monitor screen. LINK, join together the top left hand corner of the monitor screen with the bottom right hand corner by forming a chain from 16 playing pieces. QUIZICAL, a multi-choice question and answer game.
- L101 **DCS COMPILATION #3** (£3.00). The third compilation disk of games from Dunces Cap Software. On this disk are: OUTRAGEOUS FORTUNE, a collection of logic and maths challenges to set your mind spinning. MATCH MAKER 2, four different games of matching symbols on hidden cards. FRAME OF MIND, a gambling game with five levels of play, including 'Wheel of Fate', 'Gamblers', 'Gridstar', 'Pontoon' and 'Chopper'. CRYPTOGRAM, a two player game based loosely on the TV program 'Countdown'.
- L100 **DCS COMPILATION #2** (£3.00). The second compilation of games from Dunces Cap Software. On this disk are: QUEST FOR KNOWLEDGE (1Mb), you must seek out 12 hidden icons from mazes five screens wide and eight screens deep, then answer questions to claim them. REBOUND, a bat and ball game requiring determination, skill, stamina and patience. GALACTIC FRUITBOWL, a combination of two of your favourite arcade machines, the fruit machine and the trivia quiz. GREY MATTER, a word game with hundreds of everyday words to guess.
- L99 **DCS COMPILATION #1** (£3.00). The first compilation of games from Dunces Cap Software. On this disk are: ACECHASE, a gambling program in which you must find the ace from seven face down playing cards. THE WIZ, a fun program comprised of ten tests. MINDLOCK, a quiz program on general knowledge, mathematics and the English language. MATCHMAKER, match up hidden symbols from a hidden grid of squares. There are six levels of play.
- L96 **TILES IN SPACE** (£3.00) by Inspiration. A computer version of the sliding tile puzzle game. I.e. Slide the tiles to make a picture.
- L94 **GRID MANIA** (£3.00) by Nice Bytes. A word search game for 1 or 2 players. Each player attempts to find 15 words on grids of 324 letters. The game includes 'bonus words', 'magic scoring letters' and other extra features.
- L92 **BAMBOOZLE** (£3.00) by Nice Bytes. A puzzle game where you must turn all the symbols on a 25 square grid to higher scoring ones.
- L88 **BIRDS OF TANKS** (£3.00) by Esa Myllyla. Guide your tank via an overhead view through a battlefield, destroying hidden mines with your minesweeper. An action and collect game.
- L85 **ZUFFERS** (£3.00) by Terence Pearson. A puzzle game involving a race of microscopic creatures (the Zuffers) that you must rescue after a giant meteor has crashed into their planet. 30 levels of action as you attempt to guide them back to the safety of their shelters.
- L84 **WORD WIZARD** (£3.00) by Nice Bytes. A one or two player word guessing game with different levels of difficulty.
- L83 **ZIGGY** (£3.00) by Nice Bytes. A puzzle game that puts you in the role of 'Ziggy', an extra-terrestrial explorer faced with the problem of solving the 'globe's' puzzle set for him by the Lords of Thorak. The idea is to click on a globe in a 5 x 5 grid which will then cause another globe elsewhere on the grid to change in colour. Success in eventually turning the globes into diamonds helps towards the solution.
- L75 **FREAKED OUT** (£3.00) by Chris Sharp. A joystick controlled puzzle game that sees you negotiating various screens in search of points and the quickest way to escape.
- L74 **NICE BYTES MEGA-PACK #1** (£3.00) Four puzzle games on one disk. APOKALIPSE, place atoms of varying energies onto a grid whilst attempting to obtain the highest energy possible. Care though, too much energy and they'll all explode. PURE LOGIC, a game based on Boolean logic. REGA, a tile flipping game on a 5 x 5 grid. Convert all the tiles to the same colour. LOGICA, a three phase logic/puzzle game.
- L66 **HEARTBREAK** (£3.00) by Steven Roznowski. An infuriating and highly addictive puzzle game played on a 7 x 7 grid where the challenge is to place assorted blocks into the grid to form lines of seven. Each tile has its own picture which offers points, multipliers, bombs, magnets, etc., all of which affect the other tiles. It's a sort of 'Tetris' game with an overhead view and it's incredibly addictive. You have been warned!
- L11 **PI SQUARED** (£2.50) A puzzle game by Tony Martin. Starting with a square of random symbols you are challenged to turn them all to pi symbols within the given time. Increasing levels of difficulty.
- L13 **TWO LETTER COMBO** (£2.50) Game Maker Kit #1 by Tony Martin. If you have a printer linked to your computer this program will allow you to print out and make the cards for your own word game. The aim of the game is simply to make the longest words you can think of from combinations of two letters.
- L14 **DICEY** (£2.50) A challenging dice game by Tony Martin in the style of the classic 'Yahtzee'.
- L40 **GRIDWORD** (£2.50) by Nice Bytes. A word game in which you attempt to make the longest word possible from a 16 x 16 grid of letters. The game has a wide range of difficulty settings.
- L52 **ENERGETIX** (£3.00) by Nice Bytes. The year is 2070, ten years after the worst nuclear reactor explosion in history. Now the powers-that-be are pinning their hopes on a new source of power - the Active Fusion Resonance reactor. You are the test engineer given the job of proving the viability of this new reactor. However, first you must be sure of the exact procedures needed to run such a reactor... This is a puzzle game that challenges you to find those exact procedures. 1 or 2 players.
- L58 **NICE BYTES #1** (£2.50) A compilation of two programs by Nice Bytes from our Licenceware range. They are: GRIDWORD, a word game for up to 4 players with various levels and options which enable players of varying abilities to play at their own level; REGA, a tile-flipping strategy game based on a 5 x 5 grid and including many extra features.

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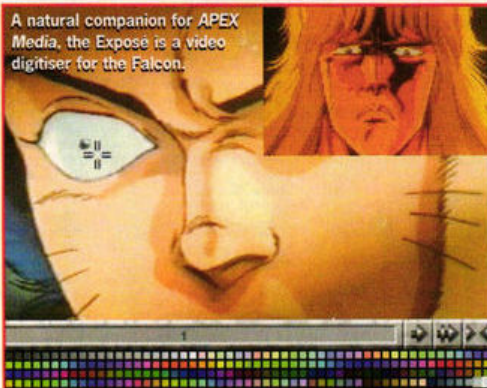
PRINTED CATALOGUE now available, listing hundreds of PD/Shareware/Licenceware titles. Only £1.00 including P&P or 50p if ordered with disks. Please state if you have a Falcon. Please make all cheques/postal orders payable to L.A.P.D. Credit cards welcomed.



ST FORMAT

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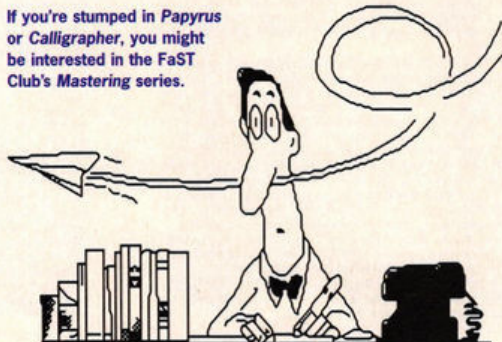
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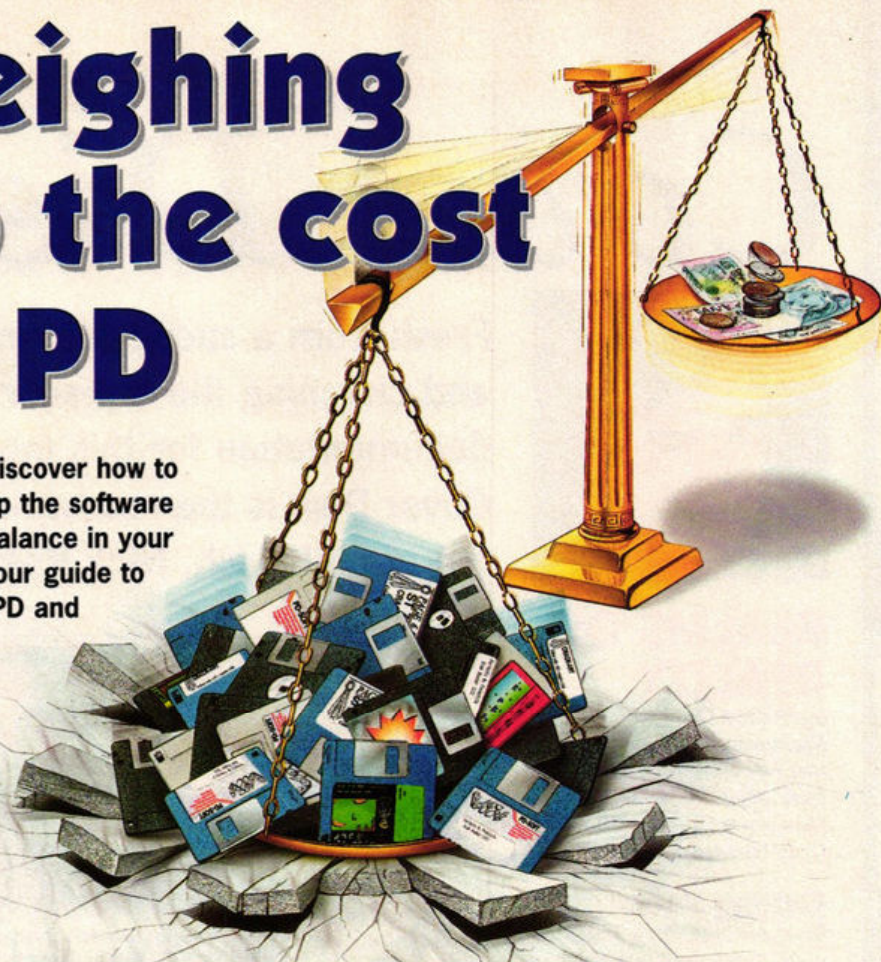


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The Price of Free Speech

COVER DISK 75

THIS MONTH...

REALMS OF REALITY:

A superb swords and sorcery romp in the style of *Ishar* and *Dungeon Master*. 1MByte required (Falcon and TOS 2.06 owners require STOSFix).

Uncompressed size: 685K

EXTRA SUBSTATION LEVEL: The winning level from our Underwater Hell competition, with a new set of monsters. Requires a 1MByte STE/Falcon and SubStation to run.

Uncompressed size: 156K

PICFIB 1.1: Keep strict tabs on your picture collection with this excellent utility for viewing, cataloguing and filtering pictures.

Uncompressed size: 264K

RESCUE ST: An accessory with something for everyone – 22 handy utilities rolled into one program. Can you afford to be without it?

Uncompressed size: 92K

LET 'EM FLY: Enhance your GEM dialogs with keyboard shortcuts and move them around the screen.

Uncompressed size: 74K

STOS SCREEN-SAVER: STOS users can now prevent monitor burn, thanks to this useful accessory.

Size: 28K

DESKCLOCK: Keep track of the time with this handy Accessory. DeskClock displays the current system day and time on the menu bar.

Size: 14K

ASSEMBLY: Three files for use with Andrew Gisby's Assembly column.

Size: 20K

BACKUP: Avoid 'damaged Cover Disk blues' with our back-up utility.

Size: 12K



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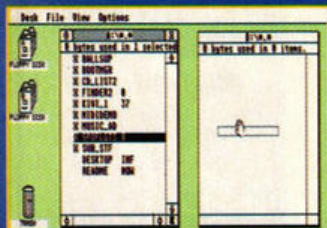
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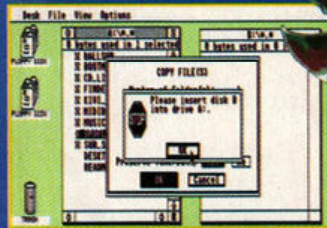
1 Assuming you have a single-drive system, insert your Cover Disk back-up into drive A. Double-click on the drive A icon to access it. Next, double-click on the drive B icon.



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

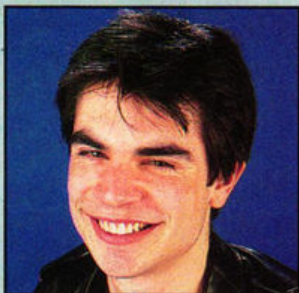


4 An alert box will tell you to insert disk A (your Cover Disk). Do so, click on OK and follow the on-screen instructions. You may have to swap disks several times during this process.



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.

Cover Disk



Fresh from a successful mission, and clutching the top-secret documentation for this month's Cover Disk is the reassuring, and not at all boyish, Nick Peers.

REALMS OF REALITY

By: Robert Megicks

Machines: All STs (TOS 2.06 and Falcon with STOSFix)

Resolution: ST low or medium

Memory required: 1MByte

Uncompressed size: 685K

Getting started

Because of the size of the program, you'll need two blank disks (the first one should be formatted to 80 tracks and ten sectors). Copy REALMS1.TOS to the first blank disk, and REALMS2.TOS to the second.

Double-click on REALMS1.TOS to dearchive the contents, then delete the TOS file. Repeat with REALMS2.TOS. Finally, copy the contents of the second blank disk onto the first (with 80 tracks and ten sectors). The

game is auto-booting, so reset to load it.



CONTROL REALITY

The mouse is used for most commands. The left mouse button is used to pick up, drop and use objects, and to select options. The right mouse button is used to toggle between the main game screen and the active character's inventory.

[Space]

Switch between characters

[Cursor keys]

Move the character forward and back, or sidesteps him to the left or right.

[Insert]

Rotate 90 degrees to the left

[Clr Home]

Rotate 90 degrees to the right

About Realms

Realms of Reality is a superb adventure game. It's style is similar to that of *Dungeon Master* and the *Ishar* series

You control two characters as they delve a dungeon searching for treasure and adventure. There's no plot to speak of, so you can content yourself with mercilessly plundering and killing anything that moves.

The dungeon can be a little disorientating at first, but you'll soon get your bearings.

Realms of Reality is easy to control - see the Control Reality panel for full details. You pick up objects by clicking on them - the arrow will change to the selected object. You can place the object in the hands of either character, or highlight the active character's inventory to stash it away in his backpack.

Unlike similar games, *Realms of Reality* treats your characters as separate entities. You can split



Dare you enter the hazardous dungeons of *Realms of Reality*? You could just stay at home with a nice cup of tea, poor, unnoticed and safe. Nah, let 'em have it!



Getting inactive characters to defend themselves is easy, as you can see from this screenshot.

them up to the explore the dungeon separately, or make one character follow the other.

Look out for various hazards. The earliest examples you'll meet are lethal potholes - fall down one and the game's over. Keep an eye out for switches, levers and special floor panels. These can be used to negate the hazards and open impassable passages.

Then there are the monsters. In combat situations you only control the active character, but you can make sure your companion defends himself while you battle away.

Register? Me?

Yes! This special *ST FORMAT* version has the entire first two levels for you to explore. If you want to go even further, you'll have to register. See the *READ_ME.MED* file for full details and some more hints and tips on getting through *Realms of Reality*.

SUBSTATION LEVEL

By: Kenton Daiziel and UDS
Machines: STE/Falcon with SubStation

Resolution: Any colour
Memory required: 1MByte
Uncompressed size: 156K

Getting started

Dearchive DAIZIEL.TOS to a DATA folder on a blank disk (80 tracks, ten sectors) or the DATA folder on your hard drive copy of SubStation.



About the level

Remember our Underwater Hell competition in issue 72? Well, here's the winning level. You'll need your copy of SubStation to run it – at the

Just what is this terrible creature? It's a product of the deranged imagination of Kenton Daiziel, that's what! I think I'll run away now, thanks.

manual protection screen, press [Shift] and [Return] instead of [Return] after entering the

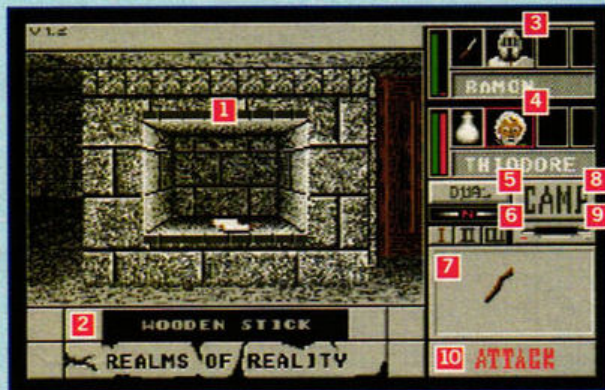
required keyword, and the new level will be loaded. Getting to the end of this

level, designed by ST FORMAT reader Kenton Daiziel, is going to be tricky. Hordes of monsters, all specially designed by Kenton himself, lie between you and the exit. There's lots of ammo (and you'll need it), but don't go taking liberties with your health – medikits and food supplies are few and far between, and heavily guarded.

What are you waiting for? Get blasting!

Fantasy addicts may also be interested to learn that Future Publishing will be launching a new role-playing

magazine on November 9th. Entitled *Arcane*, it will cover the entire fantasy genre and is going to be rather excellent.



The main screen

- 1 The main screen – this is what the currently selected character sees.
- 2 Displays information about the currently selected object.
- 3 Gives you information about Ramon – the green bar represents your energy, and the red bar your magic points (Ramon has none).
- 4 Information about Thiodore – the two boxes either side of his head represent his hands, and what is being currently held in them. Shaded

- objects can't be used by your character.
- 5 Click here to change between dual and single mode.
- 6 Switch between three spells.
- 7 The spells currently available.
- 8 Click here to enter rest mode. Once your energy is fully restored you will automatically wake.
- 9 Access disk operations.
- 10 Attack with the currently selected weapon or spell.



The inventory screen

- 1 Your backpack, which can hold up to 24 different items.
- 2 Your character's clothing – you can improve his defences with helmets, body armour and boots found scattered around the dungeon.
- 3 Click here with a parchment to learn a spell, or with a flask to drink the flask's contents.
- 4 Click here with food to prevent your character from getting hungry and losing endurance points.
- 5 Click here to select defensive weapons and spells.
- 6 Your character's right hand, and whatever he's currently holding in it.
- 7 Your character's left hand, and anything he's holding in it.



Progress through this brand new level of SubStation is going to be slow and painful. Even the most hardened commandos will be wanting their mummies by the end of this one.

UNDERWATER WINNERS

The overall winner of our Underwater Hell competition is Kenton Daiziel of St Austell, Cornwall. As well as having his level translated by UDS for all ST FORMAT-reading SubStation owners to enjoy, he also gets free copies of *Obsession* and *SubStation*.

Also receiving copies of *Obsession* and *SubStation* are Warren Brown of Bath, Avon, and Andrew Wren of North Lancing, West Sussex. Seven further

people get copies of *SubStation*: Christian De'lacy-Byrne of Milton Keynes, Bucks; Geraint Richards of Hengoed, Mid Glamorgan; Mahn Davis of Camden, London; Darren Blake of Croydon, Surrey; Bryn Jones of Corwen, Clwyd; James Steele of Bandhagen, Sweden; Matthew Riley of Midsomer Norton, Avon.

Thanks to everyone who entered, and also to Unique Developments for judging the entries and providing the prizes.

DESKCLOCK

By: Yanick Dufrense
Machines: All Ataris
Memory required: 512K
Resolution: Any
Size: 14K

Getting started

Open up the DESKCLCK folder and copy DESKCLOC.ACC to the root directory of your boot drive or disk. Re-boot to install the Accessory.

About DeskClock

DeskClock is designed to work with a system clock-setting utility, such as *SetDate* from Cover Disk 66. It enables you to view the system time and day by accessing the menu bar. Selecting this item brings up a dialog giving you information about the program.

Full details of this freeware utility can be found in the DESKCLOC.DOC file.

REMEMBER

Write-protect your Cover Disk. Slide the black tab so you can see through the hole.

Make a backup using the *Back Up* program, which is on the Cover Disk. Never ever run any software except *Back Up* directly from the Cover Disk.

Many Cover Disk programs are compressed to fit them on the Disk. Follow the step-by-step instructions on page 6 to decompress them.

Read the instructions in these pages and in any document file that is on the disk. They're there for a reason.

If you have problems with your ST, consult your manual. If you're still stuck write to: ST Answers, ST FORMAT, Future Publishing, 30 Monmouth St, Bath, BA1 2BW.

PICFIB 1.1

By: Andrew Rosenberg
Machines: All Ataris
Resolution: Any (except TrueColour)
Memory required: 512K
Uncompressed size: 264K

Getting started

Copy PICFIB.TOS to a folder on your blank disk or hard drive and double-click on it to

dearchive the contents. Double-click on PICFIB.PRG to run the program. You'll find full English and German instructions in the DOC folder.

About the program

PicFib is a picture file browser which will be particularly useful for people with large hard drives or CD-ROMs full of pictures. It supports most popular formats, including Degas, GIF,

PCX and most TIFF files, and will display them in any resolution (coloured pictures can be dithered if you've only got a mono screen).

PicFib is mainly useful for creating

PicFib comes with three example picture files, enabling you to experiment with the program before using it on your picture collection.

script files that enable you to view only the pictures you want, or to search only the directories you're interested in. Each file is given four tags, three of which can be used to filter your pictures in a variety of ways (you could, for example, attach a specific tag or tags to all your holiday snap scans). You can build up a collection of slideshows, to which you can add or remove pictures as circumstances dictate.

Once you've built a script file, you can use the View



menu to look at your pictures – you can go through them one at a time, jump to any picture in the list, or view them as a slideshow. Selecting 'Single pic' enables you to access the file selector and view any picture in the supported formats, whether it's in a list or not.

PicFib is shareware – you'll find full details in the DOCS folder. Registering enables you to create lists of more than ten pictures, and entitles you to free user support.

```

;DON'T MODIFY NEXT TWO LINES
;S{PF.AR}
;SFLAGS=4
+ E:\GRABS\LETEMBEF.P13
+ E:\GRABS\LETEMAFT.P13
+ E:\GRABS\STOSSUR.P11
+ E:\GRABS\PICFIB.P11
+ E:\GRABS\MCAL1.P13
+ E:\GRABS\MCAL2.P13
+ E:\GRABS\MCAL3.P13
+ E:\GRABS\MCALICW1.P13
+ E:\GRABS\MCALICW2.P13
+ E:\GRABS\CALLIGR.P13

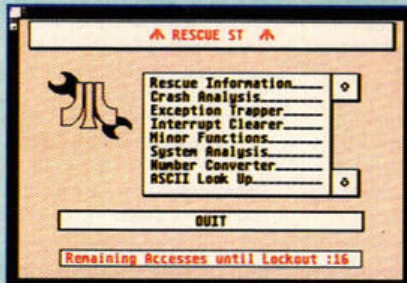
```

-End of file-

This is how a script file looks, and constructing one is a simple case of selecting a path and filter for your pictures. Easy, eh?

RESCUE ST

By: Tony Harris
Machines: All Ataris
Resolution: Any
Memory required: 512K
Uncompressed size: 92K



Rescue ST is fully Falcon-compatible, and will run in any resolution, except TrueColour.

Getting started

Copy RESCUE.TOS to the root directory of a blank disk or your boot drive, and double-click on it to dearchive its contents. Re-boot the machine to install RESCUE.ACC. *Rescue* can then be called from the Desk menu.

About Rescue

Rescue ST combines a number of utilities in an Accessory that you'll find indispensable, especially if you're a programmer. This special ST *FORMAT* version has several extra functions not found in the

normal PD release, but registering (for a platry £2.50) brings you an even more useful and powerful package.

Rescue ST offers something for everyone, ranging from a glossary of the 68000 instruction set, through several disk options, to a screen grabber.

See the Rescue Functions panel for a complete list, or consult the RESCUE.TXT file for a more comprehensive tour.

It really is a super program and there's no excuse for not registering. See the Why Register *Rescue* panel on page nine if you're still not sure.

RESCUE FUNCTIONS

Rescue information: Program details and credits.

Crash analysis: Information about the last time your computer crashed.

Exception trapper: Enables you to prevent programs from bombing out – you get error messages instead, which is obviously more helpful.

Interrupt clearer: Clears all interrupts from selected VBLs.

Minor functions: Switch disk verify, key click, key repeat and bell chime on or off. Also enables you to reset the palette to the standard configuration.

System analysis: All sorts of information about your Atari, including its TOS, free memory and installed drives.

Number converter: Convert numbers between binary, decimal and hexadecimal.

ASCII look up: Enables you to examine the entire ASCII character set.

Hertz Toggle: Switch between 50 and 60Hz.

Memory fixer: Fool your computer in thinking it has less memory than it does (useful for certain games). Not Falcon compatible.

68000 instruction set: A comprehensive glossary of the 68000 instruction set.

OS functions: Comprehensive glossary of GEMDOS, BIOS and XBIOS instructions.

GEMDOS errors: A complete list of all those annoying TOS errors and what they mean.

View .NEO/.PI? enables you to view a Neochrome or Degas picture in any resolution.

Save screen: Screen grabbing utility. Saves the current screen as a Degas picture.

Format disk: Enables you to format single or double-sided disks. The registered version gives you extra options.

Create folder: Guess.

Invoke file-selector: Brings up the installed fileselector.

Keyboard look-up: Find the ASCII and hexadecimal code of any combination of keys.

VT52 screen codes: Control codes for the VT52 emulator.

Unpack an ICE! file: Unpack files packed with the Ice packer from Cover Disk 39.

File fusion: Merge data and executable files into a single file. Useful for squeezing more space on disk, or as a security measure from hackers.

WE WANT YOUR PROGRAMS

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

Name _____

Address _____

Daytime phone _____ Program title _____

Total size in K _____

On a separate sheet, explain concisely 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 a bribe. A winning lottery ticket for 23 September 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 _____

STOS SCREEN SAVER

By: James Marson

Machines: All STs running

STOS and STOS Compiler

Falcon compatible: Yes,

with STOSFix

Memory required: 512K

Resolution: Low/medium only

Size: 28K

Getting started

To install the *STOS Screen-saver*, you need to have both *STOS* and the *STOS Compiler* extension installed. Copy the *S_SAVER* folder to a blank disk, insert that disk into your internal floppy disk and type `ACCLOAD "A:\S_SAVER\`



Smart and functional, the *STOS Screen-saver* acts as a security device as well as protecting your monitor.

S_SAVER.CMP [Return] to install the Accessory. Press [Help] from within *STOS* to bring up the installed accessories dialog. Select the *STOS Screen-saver* and make a careful note of what key you press. More details can be found in the *S_SAVER.DOC* file.

About STOS Saver

You all know about the benefits of a screen-saver. It prevents your monitor from getting damaged should you leave it on for too long with the screen staying completely static. *STOS* users will also

know that of the few screen-savers written specifically for *STOS*, all have problems working properly.

Enter James Marson's screen-saver. Assuming you own both *STOS* and the *STOS Compiler* extension, you can install it as an Accessory. You

can get the *STOS Compiler* extension from Trading Post for £12.99 – call ☎ 01952 462135 for more information.

Once installed, the program will ask you to press a key. Remember what key you pressed, as you will need to press it again to exit the screen-saver and return to *STOS*. This means the accessory can also be used as a security device. You have two chances to press the correct key – if you fail on both occasions, the program will lock up for five minutes before giving you another go.

Registering the program costs just £1.50, or a disk full of PD. In return James will program a custom version for your particular *STOS* requirements. Read *S_SAVER.DOC* for full details.

LET 'EM FLY

By: Darryl Piper

Machines: All Ataris

Resolution: any

Memory required: 512K

Uncompressed size: 74K

Getting started

Copy *LETEMFLY.TOS* to a blank disk and double-click on it to dearchive the *LETEMFLY* folder. *LETEMFLY.PR* can be called from the desktop by double-clicking on it, or placing it in the Auto folder and re-booting your machine. Full details are in *LETEMFLY.TXT*.

About Let 'Em Fly

Let 'Em Fly is a useful utility that enables you to change the way dialog boxes are controlled from within programs. Usually, dialogs are immovable and the only keyboard shortcut is [Return] for the default response.

Let 'Em Fly primarily does two things. First, it enables you to assign keyboard shortcuts to every option on the dialog. You'll notice the difference, because the first letter of



This is the initial dialog box for creating a new document in *HyperGEM* before *Let 'Em Fly* is installed...

each option will be underlined. Just press that key to select the desired function.

Second, *Let 'Em Fly* makes it possible to move dialog boxes around the screen, enabling you to position your dialogs as you please. These will remain in the given positions while the current program is still loaded. Another benefit is that when you're using a large virtual screen, dialog boxes automatically appear in the centre of the 'virtual' screen, and not in the centre of the visible screen.

Other features include extra functions for editable



...and afterwards. Just press the underlined keys to access the desired function. The box is also fully moveable.

boxes, including a clipboard, a 'history' of the last 20 inputs and a special character box for inputting awkward characters. We'll be looking at the program in more depth in a future

issue, and showing you how to configure it for your own personal requirements. *Let 'Em Fly* is freeware, so it costs nothing, but will prove a handy utility you'll find indispensable.

WHY REGISTER RESCUE?

- 1 It's only £2.50.
- 2 You're not restricted to the number of times you can access it.
- 3 Several functions are enhanced – for instance, the disk formatting option is greatly improved (you can select the number of tracks and sectors you want to format, for example). You can also view a greater number of picture formats with the picture viewer.
- 4 You can get even more functions, including a file packer, calculator, screen-saver and file deletion. See *RESCUE.TXT* for full details on what's available in the registered version.
- 5 The starving programmers will be able to buy a sandwich, and you'll have a clear conscience.

ASSEMBLY

In the cryptically named *ASSEMBLY* folder are three files to go with Andrew Gisby's Assembly column in *ST Answers* this month. *STF0001A.S* is the basic compression routine; *STF0001B.S* is a short program which uses the *STF0001A.S* source code routine to decompress a picture (*stf0001.pc1*). Once assembled and executed, it displays the picture, waits for a key press and then exits. See page 59 for more details.

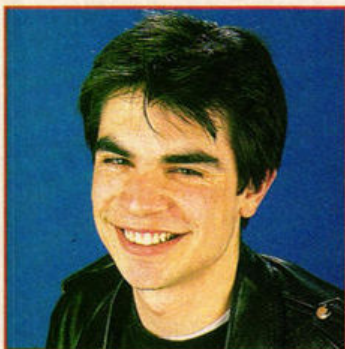
PROBLEMS?

If you can't load, copy or back up your Cover Disk, it may be faulty. If you think it is, send the disk and a padded self-addressed envelope to: *ST FORMAT* July Disk Returns, PO Box 21, Daventry, NN1 5BU. We pay the return postage.

- Please don't send faulty disks to our Bath or Somerton offices. We don't keep stocks of Cover Disks.
- 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 *ST FORMAT* Cover Disk Hotline on ☎ 01225 442244 on Wednesdays between 2pm and 6pm only.

- Cover Disks are double-sided. If you have an old *STFM* and can't read the Cover Disk then you need to upgrade your ST to a double-sided drive.
- If you have other hardware or software queries, contact the manufacturer or publisher before writing to *ST Answers*.



STF News...



Boy reporter Nick Peers brings you all the latest stories from the Atari news desk.

SNIPPETS

A new release of the Mac emulator for the ST, *Spectre GCR*, is on the way. *Spectre GCR* was originally released by Gadgets By Small, which is no longer trading, so a new – and as yet unnamed – distributor will be handling the new version, which supports a more recent Mac operating system (System 7) and colour Macs. Keep your eyes peeled for further developments.

The Beginners Guide to STOS Basic, formerly a 618-page manual, has been released as a six-disk set. Send a cheque or postal order for £6.95, made payable to T Thomson, to 14 Lanes End, Totland, Isle of Wight, PO39 0AL. If you want to know more, just send an SAE to the same address.

Australian Atari owners who are feeling a little isolated will be interested to learn about the *Adelaide Atari Computer Club*. Membership costs A\$15 per annum, and entitles members to a bi-monthly magazine and the chance to purchase PD disks for A\$3 each. Contact the club at PO Box 333, Kent Town, 5071, South Australia for more details.

Calamus, the popular Atari DTP package, has been released for PCs running Windows 95. Contact JCA Europe on 01734 452416.

Everglade has moved: its shop is now located at 10 High Street, Nairn, IV12 4BJ. Call 01667 454933 for more details.

Apex slashed to under £100

APEX Media is now available for the very reasonable sum of £99 (including VAT and carriage). Version 2.13 of the Falcon-only graphics package offers some substantial enhancements over the version 2.0 (which received an *ST FORMAT* Gold when it was reviewed in *STF* 68).

The changes include extra support for the Matrix Screeneye digitiser (*STF* 65, 90%) and increased use of the DSP chip to boost speed. The canvas size has been increased to a massive 4,096x3,072 (memory permitting), and the built-in GIF viewers now boast hardware-scrolling virtual screens, rather than squashing the image to fit. The export



These butterflies really show off the amazing capabilities of APEX Media. No wonder it scored a massive 93% in issue 68.

TGA and FLC formats have also been

improved, increasing compatibility with other platforms.

In all, over 30 alterations have been made to the program. Owners of version 2.0 can upgrade by returning their



original installation disk and registration card. For more information, contact Titan Designs on 0121 6936669 or e-mail David Encill at 100345.2350@compuserve.com.

CD-ROMs for the Atari



CD-Recorder enables you to use your Falcon or TT to record CDs.

It's All Relative has announced the release of the *Atari CD Master*, a program designed to enable Ataris to run certain PC CD-ROMs, including the *Time Almanac of the 1990s*. *Atari CD Master* enables Ataris

capable of displaying at 600x400 to access all the data and graphics on the CD-ROM. The 600x400 requirement means everything will be in mono on an ST, but TT and Falcon owners can run *Atari CD Master* in colour.

Bundled with *Atari CD Master* is *Audio CD Master 4.0*, a utility which enables you to use your CD drive to play audio CDs in the background.

It's All Relative has also released the first version of *CD-Recorder*. It enables Falcon and TT owners with at least 4MBytes of RAM, 2GBytes of hard drive space and a CD-ROM recording device to master their own CDs.

Finally, the company has just launched its own Web page, at: http://www.charm.net/~toad/iar/iar_home.htm. You can also e-mail *It's All Relative* at GREG@Genie.geis.com for more information on the company's products.

HIGHWAY ENCOUNTER

Future Media has released Vortex Software's *Highway Encounter*, an isometric game which appeared on the 8-bit machines more than five years ago. With the help of four other Dalek-like creatures, you must push a device known as the lasertron to its ultimate destination, while avoiding and removing obstacles, some of which are deadly. There are several power-ups, and you can

play with the joystick, keyboard or mouse.

As yet *Highway Encounter* has no UK distributor – interested parties can contact Future Media by e-mail at: lober@student.uni-tuebingen.de or by post at: Camberelystr 27, 74321 Bietigheim, Bissingen, Germany.



It's been a long time... *Highway Encounter* appeared on the Spectrum, Commodore 64 and Amstrad CPC between five and ten years ago.

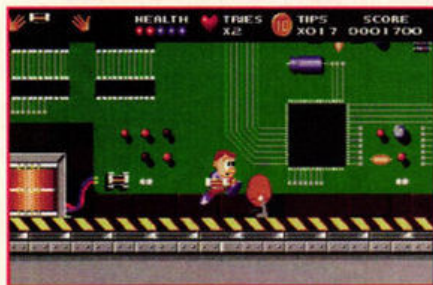
Sparky's World

Demonstrated exclusively to *ST FORMAT* at the Spotlight Show in London, *Sparky's World* comes from Ninth Wave Software. If that name seems familiar, it's probably because Ninth Wave was responsible for issue 74's Cover Disk stars,

rogue robots to avoid, traps, lifts, secret rooms and so on. Over 30 levels are planned, and each will have a number of different exits, making it possible to play the game differently each time.

Sparky's World requires a 1MByte STE and will feature 25 frames per second scrolling, four-channel stereo sound and support for the Jaguar Powerpad. The distributor is yet to be confirmed, but there are several interested parties currently bidding for the rights.

Terry King has also asked us to clarify the situation regarding payment for *Sprite Works 2* (STF 74, 90%). Cheques should be made out to 'TA King', and not Ninth Wave. Also, you only get the third disk if you buy the manual – the basic package only comprises disks 1 and 2. Ninth Wave is at: 172 Spencers Croft, Harlow, Essex, CM18 6JR.



One of the bright surprises of the Spotlight Show, *Sparky's World* should be available before Christmas.

Goin' Down and Bombs Away.

Sparky's World is an arcade/adventure platform game in which you, as Sparky the electrician, must fix problems with objects found throughout each level. There are coins to collect, people to meet, tasks to perform,



Other characters turn up in *Sparky's World*, and you do jobs for them. What a nice guy you are.

PD & SHAREWARE NEWS

If you're desperate to get hold of *Thing*, but don't have access to HENSA or a BBS, you can get the latest version (0.54) from **Floppyshop** on Disk UTL5102 (£2 including UK postage). Also on the disk is a cut-down version of *ST-Guide* (for viewing the on-line documentation), some extra GDOS fonts, and a selection of background pictures for use on *Thing*'s desktop. Floppyshop is on 01224 312756.

Asgard PD has changed its name to **MicroGear Software** and has moved to 23, The Sycamores, Horbury, Wakefield, WF4 5QG. Alternatively, call 01924 277600. Disks are £1 each (including postage), and its summer catalogue is available for just 50p.

All disks from **Locutus PDL** are now just 90p each (including P&P), thanks to the fact that the company has obtained a new source for disks. You also get a free disk for every two disks purchased. Locutus can be contacted on 0161 498 0716.

Those of you keen to find out more about *Sprite Works* (STF 74, 90%) will be pleased to know that **STellar Atari Club** is distributing a demo disk of the package (ask for Demo Disk 1). The disk includes a demo of the program itself, plus four games (including *Goin' Down*, *Bombs Away* and *Saturn's Rings*, which were on last month's Cover and Wonder Disks). You also get several demos, which show off the package's power. STellar is at 01386 840737.

If you thought all videogame mags were the same...

Think again



The Official
PlayStation
Magazine

On sale mid-September

The 'PS' logo and 'PlayStation' are trademarks of Sony Computer Entertainment Inc.



INSIDE THE SFTV
SHOW OF THE '90s,
WITH CREATOR
CHRIS CARTER

X

PLUS:
SPECIES,
WATERWORLD,
CHRISTOPHER
PRIEST & MORE...



ON SALE 22 AUGUST

Films, TV, Books, Comics, Video, Models and more...

Gasteiner's EZ135 CD solutions

Gasteiner is distributing the SyQuest EZ135, a competitor for the Zip drives being distributed by HiSoft (see preview on page 24). Gasteiner's version costs £199 and comes complete with software, one 100MByte 3.5inch cartridge, and cables. If you don't already have one, you'll

need a SCSI interface – such as Gasteiner's Top Link (£59).

Unlike the Zip drives, the EZ135 has 50-way SCSI connectors and a built-in terminator, so we believe ST owners will be able to use it as their sole SCSI device. Contact Gasteiner on ☎ 0181 3456000 for more information.

System Solutions is now distributing a large number of Atari CD-ROMs. For starters, it has acquired the rights to distribute Silmaril's Falcon-only CD-ROM versions of *Robinson's Requiem* and *Ishar 3* (see News, STF 73).

System Solutions is also distributing many serious CD-ROMs for the Atari. There are several PD and shareware collections, including the *Atari Software Treasury* and *Atari Mega Archive* CDs. The company is also distributing various font packs, including the Whiteline CD series, which boasts 300 GDOS and 500 Calamus fonts, plus many shareware and PD programs. On top of this are several graphics titles – *Clip Art* contains over 5,000 monochrome images in PCX format, and *GIFs Galore* another 5,000.

System Solutions has also

replaced CGS Computerbild as UK distributor for Digital Arts products. The price structure for these has altered as a result. Both *DA's Vector* (STF 48, 92%) and *DA's Picture* (STF 61, 91%) are now £149 each, while *DA's Vector Pro* (STF 60, 90% – a demo appeared on Cover Disk 64) is £249. There are also several competitive upgrade options available for these art packages – prices start at £29.95.

DA's Layout, a combined DTP and graphics package, is also being distributed by System Solutions. The *Light* version costs just £99, the full black-and-white version is £359, and the TrueColour version is £599. All Digital Arts software runs on any Atari with at least 2MByte of memory (ST users require a high-resolution monochrome monitor or graphics card).

All prices include VAT and System Solutions can be contacted on: ☎ 0181 6933355.

The powerful vector graphics package, *DA's Vector Pro*, is now being distributed by System Solutions, as are several other DA products.

EVEN MORE GAMES

New from **Paradise Software**, *Genocide* is a shoot-'em-up for 1MByte STes. Up to four players can take on wave after wave of aliens (plus mother creature) in a *Galaxians*-style arcade blaster. The demo circulating the public domain gives you ten waves of aliens to destroy, and is limited to one or two players only. The full game should cost £10. Paradise is at: PO Box 72, Chorlton, Manchester, M21 8JT.

The Falcon-only game *Killing Impact* now has a UK distributor: Merlin. It will cost £29 – look out for a full review soon.

Merlin is also due to release *ESLA League Manager*, yet another football management game for all 1MByte Ataris. The ST game will be £20; the Falcon



Yet more blasting in *Genocide*, a new release from Paradise Software.

version, £24.95. For the latest details, contact Merlin on ☎ 01452 770133.

Following the withdrawal of Daze Software from the ST market (see News, STF 74), **16/32** is now distributing Daze's Atari catalogue. This includes the *Ishar* series (each installment costs £12.99, or get all three for £24), *Robinson's Requiem* (£24) and *Stardust* (£24). Note that both *Ishar 2* and *Stardust* are available for just £6 until the end of September – a superb special offer.

16/32 is also distributing the Falcon-only games *Llamazap* (STF 51, 91%), *Pinball Dreams* (STF 68, 80%) and *Steel Talons* (STF 73, 83%). Contact Nick Harlow on ☎ 01634 710788 to order any of these products.



Robinson's Requiem is one of several Daze titles now available through 16/32 Systems.



NEWS DESK

If you have an Atari-related story of earth-shattering proportions, write with details to The News Desk, ST FORMAT, 30 Monmouth Street, Bath, Avon, BA1 2BW. Alternatively, fax us on ☎ 01225 465982 or e-mail Nick Peers at nick@stformat.demon.co.uk.

NET NEWS

The **Atari Web pages** are about to undergo some major changes. They'll be going off-line for three weeks from 1 September, and then returning in style. A new programmer's section will be introduced, and Tony Greenwood will be kicking things off with material on STOS. The section itself will include news and tutorials.

The Web pages are accessed at: <http://www.mcc.ac.uk/~dlms/atari.html>, and note that Mark's e-mail address will change to: dlms@nessie.mcc.ac.uk at the same time.

Computer Direct is the largest independent Atari dealer in Canada, and it has just launched its own Web page at <http://www.worldgate.com/compdirect>, for users from all over the world.

Monday 14 August saw the opening of the UK's "biggest walk-in Internet Centre" in Oxford,

according to **The Internet Group**, which plans further openings in other British high streets. Shoppers tired of trawling clothes shops or record stores can walk in off the street and access the Internet for a few pence a minute. There are also other facilities for users, including a coffee bar.

Following the opening in Oxford, centres are planned in Leamington, Chelmsford, Reading and Watford before Christmas. If you want to see what all the Internet fuss is about, this sounds like the ideal place to start.

Users of the shareware program **Route Finder** (version 2 appeared on Cover Disk 66, and version 2.1 scored 79% last month) may be interested to know that the program has its own Internet page. Just point your browser at: <http://www.ncl.ac.uk/~nbsh/> to find out more.

Sun Alliance has its own world-wide web site for customers interested in finding out more about the company. Access the site at: <http://www.sunalliance.co.uk/sunalliance/> if you need some insurance.

If, for some reason, you're worried about health and safety, you might be relieved to find out that the **Health and Safety Executive** has just launched its own page on the Internet. Point your browser at: <http://www.open.gov.uk/hse/hsehome.htm> to find something to fuss about.

Save animals from persecution and unnecessary experiments by supporting the **Body Shop**. Its Web page is at: <http://www.the-body-shop.com> and issue 2 of its on-line magazine, *Body Language*, is out now. The main article details the 'Women's Rights are Human Rights' campaign.



EuroNews...

Proving that the UK really is part of Europe, this month our very own Frank Charlton (of Newcastle, England), brings you all the latest news from across the Channel.

HTML Browser update

Last month we mentioned Alexander Clauss' off-line World Wide Web viewer, *HTML Browser*. Alexander is still beaver away with it, and it's currently at version 0.93. This version has better colour and image support, although you'll need a Falcon, TT or ST with a graphics card to take full advantage of the display. *HTML Browser* can now handle images in up to 256 greyscales, instead of the dithered monochrome display of older versions. You can even customise backgrounds and link

HTML Browser is looking much better than before. Colour image support planned for future versions.

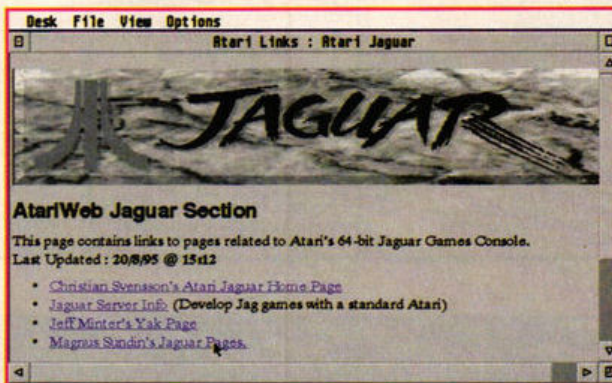
colours too, making for a very swish-looking browser.

It still doesn't handle the on-line side of things, but word is that it's being looked into. You can e-mail Alexander with suggestions at

aclauss@rbg.informatik.

th-darmstadt.de, and *HTML*

Browser now has UK support too, courtesy of Joe Connor at Interactive – drop him a line at jconnor@cix.compulink.co.uk for more details.



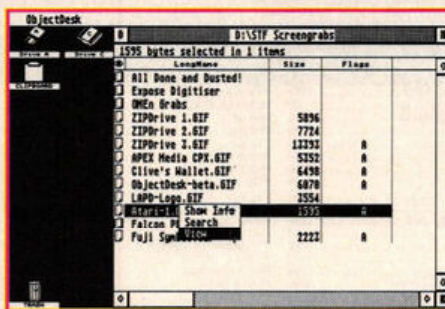
ObjectDesk

A new replacement Desktop from Hungarian Attila Mezei is currently in development. *ObjectDesk* differs from alternatives like *Thing* and *Gemini* in that Attila has created a true object-oriented Desktop. You can add functions like viewing archived files, compiling program listings and viewing images by writing small modules to take advantage of *ObjectDesk*'s built-in objects. You could set it up to give you a choice of viewers for a particular image type, for example, or so that double-clicking on a text file enables you to view or edit it.

We've seen an early version, and it looks set to be powerful and straightforward. Adding functions to the Desktop pop-up menus is easy to do, and makes for a very customisable environment to work in. It also enables you to give your files ridiculously

long names.

ObjectDesk is currently being beta-tested, and UK support is being lined up. More news as we see later versions.



Coming soon, a Desktop that enables you to give your files meaningful names of up to 31 characters in length.

SNIPPETS

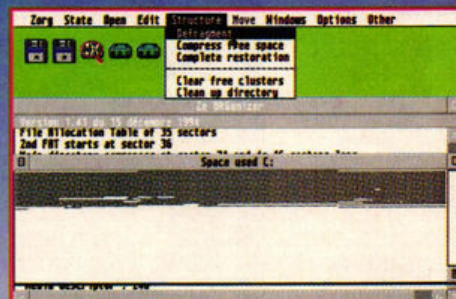
German software house **No!** Software GmbH is apparently working on a much revamped version of the old Atari spreadsheet, **LDW Power**. **LDW3** is currently being beta-tested in Germany, and like other No! programs, distribution will probably be handled by Compo. If it's as good as No!'s excellent *That's Write 3* word processor, it should be one to watch out for.

The Internet rumour mill has been grinding away again this month. Latest piece of 'news' to hit the Atari newsgroups was a posting of the technical specs of Atari's alleged re-entry into the computer world, entitled the **MicroBox**. Apparently published in a European magazine, the specs were interesting, to say the least. Imagine a hybrid of enhanced Falcon and Jaguar technology, and you've just about got it. The specs mentioned heavy use of the Jaguar's custom Tom and Jerry processors, along with the latest Motorola CPU, the 68060. As was pointed out by a number of people, including Black Scorpion's Douglas Little, the custom chips are actually far more than graphics and DSP processors, and contain quite a bit of the Jag's internals – so the Microbox is unlikely to ever appear. A pipedream, or the leaking of old plans? Who knows?

PD OF THE MONTH

When you're working with something as fundamentally important as the contents of your entire hard drive, you need to be sure a program works as it should. Shareware hard drive tools just received a welcome shot in the arm with Frenchman Ludovic Rousseau's latest release of his disk toolkit package, **Zorg**, short for Ze ORGANizer.

As well as being able to defragment and clean up hard drives, **Zorg** is a capable disk sector editor. It's gone through a number of revisions, is generally well-respected, and seems to be very reliable. If you can't afford commercial alternatives or just want to see a fine piece of programming, watch for it. Contact UK support person Joe Connor at jconnor@cix.compulink.co.uk for full details.



Working it's way through the Channel as we speak, it's **Zorg**, a powerful shareware disk toolkit from France.

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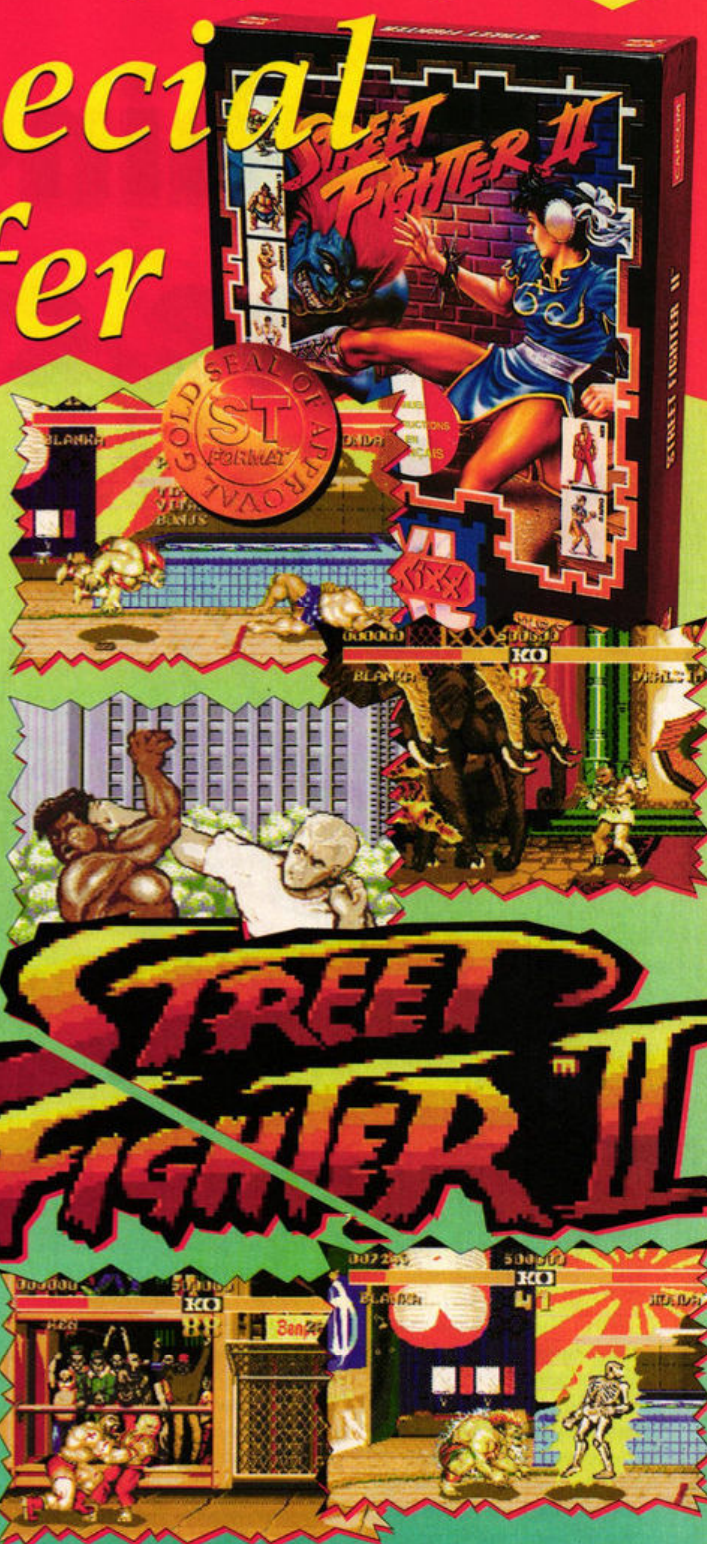
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Weighing up the cost of PD

The ST shareware scene is thriving, so save yourself a packet with our guide to the 50 best PD and shareware programs. Andy Curtis weighs up the contenders.

Quality applications at knockdown prices, useful utilities and great games, fonts, clip-art, data files and 'try before you buy' software... the PD and shareware scene really does provide 'power without the price'. Over the past ten years it has grown to such an extent that most ST users rely on several shareware and PD utilities.

Public domain programs are just such great value. PD and freeware applications are available for just the price of a disk, or a phone call to your favourite BBS, while shareware programs typically cost £5-15 to register. And remember, you only have to pay up if you find a program useful – if it doesn't do what you want, you're not out of pocket.

The range of applications is staggering, too. There are utilities to solve just about

every problem you can imagine, mainstream applications such as word processors, spreadsheets and graphic packages, games to play and images to admire. Most of the day-to-day 'chores' of ST life aren't big enough or glamorous enough to attract commercial programmers, but if

There's no denying the quality, variety and practicality of PD and shareware

you cast about the shareware scene, you'll almost always find something to make life easier. If there's something specific or awkward you want to do with your ST, chances are there's a PD program to help you along.

Many of today's top

authors began by programming PD or shareware software. For example, Douglas Little of Black Scorpion Software coded the excellent shareware graphics viewer, *Photochrome*. He's now writing Jaguar games. Likewise, Peter Zetterburg of UDS (producer of *Obsession* and *SubStation*), wrote the tennis game *Smash Hit* (Cover Disk 67).

There's no denying the quality, variety and practicality of PD and shareware software. This month we've picked out the best programs in twelve different categories. Choosing the winners was very difficult, but – after much debate – here are 50 'must-have' programs that everyone can afford. For once, the scales are tipped in your favour – so make the most of this great software.

WHAT IS PD?

'Public domain' software is released in several ways:

Freeware programs aren't charged for and can be copied freely, as long as the author's conditions are adhered to (this usually means keeping all the files together, and not altering them in any way). **Public Domain**, in its strictest sense, is freeware without the copyright, so you can do what you like with it.

Shareware programs are distributed via the same channels, but on a 'try before you buy' basis. Some authors rely on your honesty, while others restrict their programs, forcing you to pay for a key to unlock their full potential.

Licenceware is an increasingly popular variation on the shareware theme. You pay a little over the odds for the software, usually an extra 50p or £1, and that extra amount goes directly to the author. You cannot copy or distribute licenceware programs – the program you purchase is for your private use only.

Text and DTP

Marcel

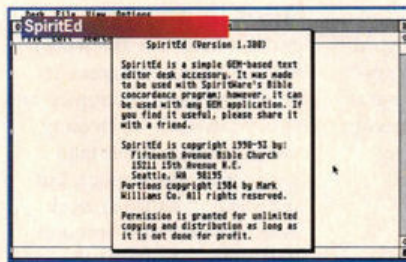
An excellent word processor with many powerful features, *Marcel* is a true GEM program with a user-friendly drop-down menu system. You could easily mistake it for a commercial program, and the 45,000-word spell checker is a big bonus. Registration is just \$15, putting the full version within everyone's reach.

Everest

There are many shareware text editors, but *Everest* comes up head and shoulders above the rest. It's simple, reliable and well-supported, and its drop-down menus and ability to handle multiple files make it friendly and versatile. Whether you are programming, editing configuration files or writing documentation, *Everest* makes the job simple, straightforward and even pleasurable.

SpiritEd

SpiritEd loads as an Accessory at boot-up. As long as you're using a program that gives you access to the Accessories



menu, *SpiritEd* is at hand any time you need to create a text file. Whether you're jotting down a last-minute shopping list, or making the most of a moment of poetic inspiration, the sheer handiness of *SpiritEd* can't be overstated.

HyperGEM

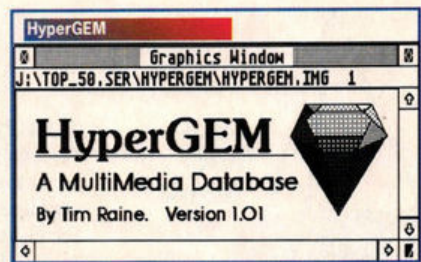
A complete hypermedia package which enables you to mix

text with pictures and sound samples, *HyperGEM* is ideal for writing interactive manuals or newsletters. It runs in high resolution and the simple point-and-

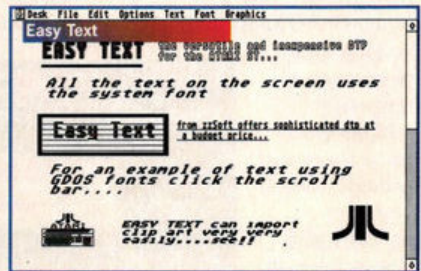
click interface makes creating and using *HyperGEM* documents a breeze.

Easy Text

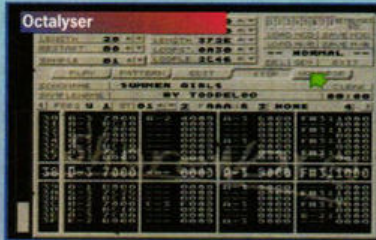
Easy Text is a simple GDOS-based DTP package. It's not as powerful as the commercial DTP



packages, but it does enable you to produce good-looking, well-laid-out documents with the minimum of fuss. So, where's that poster?



MIDI and music

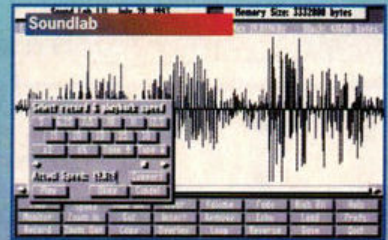
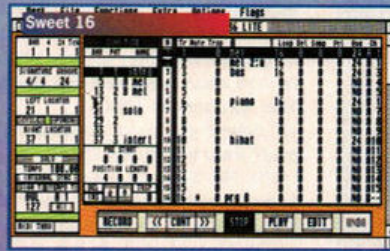


Octalyser

Octalyser was the first eight-channel MOD player. It also supports *Pro-tracker* four-channel MODs, and its colourful screen display, coupled with advanced editing control, make it a 'must have' program for MOD enthusiasts.

Sweet 16 Lite

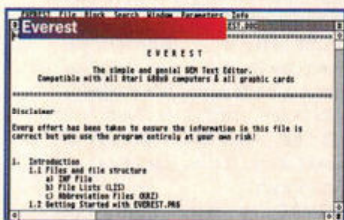
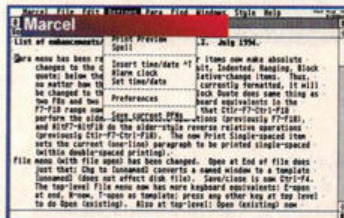
While there is no shortage of MIDI utilities for the ST, almost all MIDI software is commercial. *Sweet 16* is no exception, but you can get the 'Lite' version from PD



libraries. Its edit pages have been disabled, but it is still a very usable sequencer.

Soundlab

Soundlab is a fully featured sample manipulator. It doesn't have stereo capabilities, but it supports sample tuning, enables you to alter the sample rate, and even samples directly if you have the correct cartridge.



THE SHAREWARE PLEA

Shareware programs are supplied by PD libraries for a nominal sum (around £1.50 per disk), but the programs on them should be registered if you use them regularly. On many occasions, authors simply want a thank you postcard or some feedback about their programs, in which case it is worth taking the time to thank them for their dedication to the PD scene. Without encouragement from the people who use their programs (that's you, that is), there's really no reason for them to keep developing for the ST.

Other programs require a small sum of money to be sent to the author, who will then feel encouraged to continue upgrading his

program. To this end, programs may be restricted in their usage until you have paid the registration fee. There should always be enough functionality for you to decide whether or not you will find the program useful.

People give many reasons for not registering shareware. The least forgivable one is that they have a 'fixed' or 'cracked' version, so they do not need to register. Of course, 'cracking' software is a deplorable practice, and *ST FORMAT* has never condoned it. Other people excuse themselves by saying that they do not want to send money to an address that they are unsure of, or that they are too skint to register shareware programs.

However, it really is worth registering programs – the commercial alternatives will definitely cost more. If a program has been around for a while, it is reasonable to send a letter first to check that the author hasn't moved. If you have access to the Internet, most authors can be contacted by e-mail, and registration codes can be sent out the same way.

The Atari scene is currently supported by some superb shareware programs, many of which we did not have room to feature in our Top 50 selection. If you find any of these programs useful, please register them. In fact, why not look through your collection now, and register a program this month?

Art and Graphics



Magic Story Book

This excellent program enables you to combine text, pictures and sound effects, to the obvious delight of children everywhere. It's easy to create your own stories or demonstrations, although you'll need to prepare your pictures and samples externally. That's easy enough when you have Soundlab and Crackart, also in our Top 50.



Crackart

Crackart has long been regarded as the best shareware art package. Its main attraction is the cleverly designed drawing tools, which enable you to create images quickly and easily, and also provide in-depth image editing facilities. Crackart is slightly limited by the 512-colour palette, but its functionality makes it a clear winner.

Movie Master

Movie Master is a low resolution animation program. It must be run from floppies, and the emphasis is on creating rolling demos rather than interactive applications, but it's a real pleasure to work with. It won't turn you into Tex Avery, but it should enable you to create entertaining movies – with the obligatory dose of hard work.

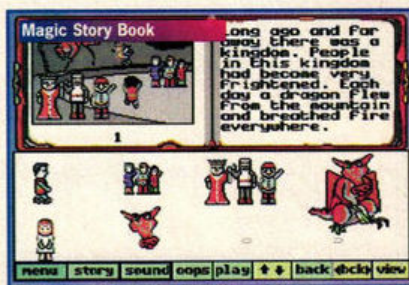


GEM View

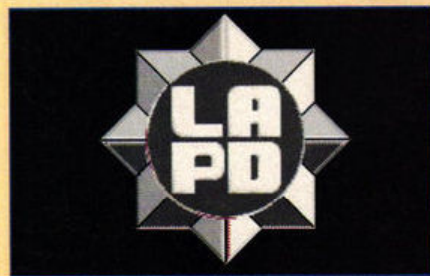
GEM View enables you to view images and convert them into any picture format native to your ST. It can also deal with pictures from other platforms. Features include picture cropping, re-scaling and dithering, and it's invaluable if you're into image-based activities, such as DTP.

POV

Otherwise known as *Persistence of Vision*, this awesome ray-tracing program produces stunning images. It is available for many computer platforms, including the ST. Pictures are constructed by compiling a picture script, which is then processed and rendered by POV. The example scripts are fun, and there are many other scripts available on BBSs or from PD libraries.



A DAY IN THE LIFE OF LAPD



When you think of a PD Library, what's the image that springs to mind? An Armani-suited exec checking his Swiss bank account, or a bearded individual fighting off sleep deprivation as he copies one last floppy? PD libraries and their librarians are mysteries to most of us: some accuse them of exploiting 'free' software, others regard them as the saviours of the ST.

So what's the truth behind the general perception of PD? ST FORMAT, in the form of Frank Charlton and Andy Curtis, recently spent a day with LAPD's Leigh Cauldwell and Clive Booth, and found out exactly what they do.

LAPD is run from two locations in darkest Derbyshire, using two STFM's, two STE's, two Falcons and a smattering of PC equipment. We settled into Leigh's comfy chair and started firing off questions.

stf: So, how did you get started?

LAPD: We were initially just two computer

enthusiasts with a mutual passion for the ST. We had both built up personal collections of PD, and this interest made us decide to expand our collections and offer them to other users. Once we had about 100 disks, we launched LAPD. That was back in 1990.

stf: After 5 years you must be making a tidy profit from the library, then?

LAPD: No! We don't run LAPD as a profit-making business at all. Both of us have full-time jobs to earn a living. If we did this to earn a wage, we couldn't have lasted. As it is, we're lucky enough to have the time to run the Library as a non-profit business.

The profit question is a common one – everyone who sees the work involved can't believe we do it without making money for ourselves. Even the Inland Revenue couldn't understand why we'd want to do it.

stf: So how can you devote enough time to running LAPD if you're both working full-time?

LAPD: We're lucky in that our jobs mean we're not usually working at the same time, so one of us is nearly always on hand. Plus, we've organised things so either of us can handle orders. We each have a full set of master disks and access to our customer database, and we work closely to keep each other up to date.

stf: How much time does LAPD take up on average, then?

LAPD: It varies – anything from three or four hours upwards to a full day. If we have more time, the work expands to fill it, especially at

weekends. Running the library usually eats away most of our free time.

stf: So why bother, if it takes so much time?

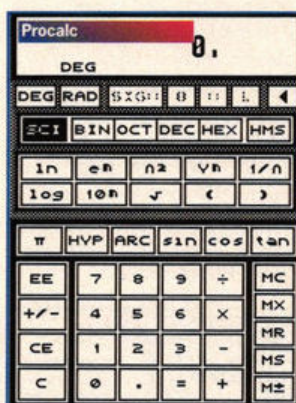
LAPD: Things are much bigger than when we started – we never imagined it'd grow the way it has. We have so many loyal customers we couldn't close if we wanted to. Actually, we thought about it a while back. We stopped advertising for a few months, to see if orders would tail off. They never did, and we're still as busy as we ever were. It'd be hard to stop now, we enjoy it too much.

stf: In ST FORMAT's Feedback pages recently, yours was one of the voices raised against 'compilation' disks, where PD is packed together. Surely the software can be copied freely, so what's your problem?



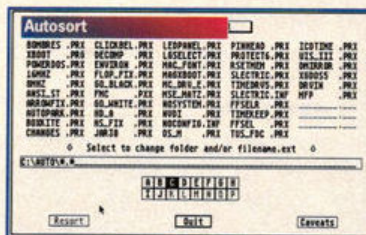
Working double time: Clive Booth (left) and Leigh Cauldwell, the ST enthusiasts behind LAPD.

Little Utilities



Procalc

Procalc has all the standard features of a hand-held calculator, plus many scientific functions. It loads as an Accessory at boot-up, enabling you to call it up for a calculation quickly. *Procalc* can be operated with either the mouse or the numeric keypad.



Autosort

The order in which your Auto folder programs run can be crucial, so sometimes you need to move things around.

Autosort will re-order your Auto folder quickly and efficiently. It waits till you have moved all the programs before it re-orders them, and works on both hard and floppy drives. It's simple, it's neat and it's extremely useful.

Turbo 407

Turbo 407 help you to create a fast and reliable reset-proof RAM disk which will not let you down. An easy config program runs that first time you boot with *Turbo* and enables you to specify which drive letter the RAM disk uses, and how big it should be.

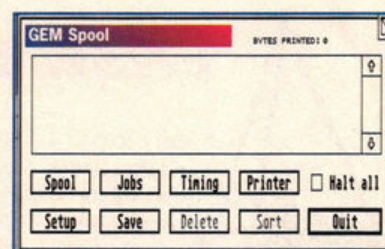
Chameleon

Chameleon enables you to load Accessories into the Accessory menu without re-booting. You can use several copies (each named differently) to create a number of flexible accessory slots in the menu. Accessories loaded

in this way can also be unloaded if you want to put something else in the *Chameleon* slot.

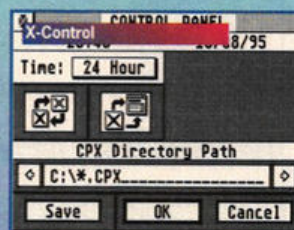
GEM Spool

Rather than twiddling your thumbs during print runs, use *GEM Spool* to interrupt the printer messages and spooling the job to disk. You can then carry on working



while your document is printed in the background.

Accessories



X-Control

Atari's PD accessory provides the basis for many excellent CPX modules – simply load in the CPX set of your choice and enjoy the power of this unique control panel. All kinds of programs have been written as CPXs, most notably configuration utilities for various programs. Commercial packages often

include a CPX module, making *X-Control* absolutely vital.

Mouse-K-Mania 2

The Atari mouse pointer and its 'busy bee' counterpart aren't very exciting, but now you can replace them with coloured, animated pointers. *Mouse-K-Mania* includes a designer (enabling you to make your own pointers), and many examples. You need never sit staring at that bee again.



A DAY IN THE LIFE OF LAPD (continued)

LAPD: The problem arises when the compilers don't acknowledge the original authors. They bung a selection of games or music on a disk with their own title screen, and often strip original documentation and credits out to squeeze as much as possible on the disk. We believe the authors deserve the credit, not the libraries or disk compilers. We leave all files intact, even the foreign README files, unless an author tells us we can remove them.

The other problem is that sometimes unscrupulous parties buy a batch of disks and pass them off as their own with no further work on their part. Recently we had a call from a guy complaining about missing files from a disk. He'd bought them from a computer show in London, and we don't sell at shows. It turned out

someone had sold these disks with our custom LAPD boot sector and stuff still on, so the guy came back to us when they didn't work.

stf: So you do provide support, then?

LAPD: Yes. Both of us spend hours giving help and advice, even when people haven't bought anything. Clive even had a guy in his house half the day testing stuff, and he left with a single disk. We like the community feeling though, and

being able to put something back is nice.

stf: And the future?

LAPD: We'll be here. We're pushing the licenceware element too, as it means the programmers get something back, and we just got an Internet connection too, so we can keep on top of new releases, and stay in touch with our customers and contacts across the World.

Interview by FRANK CHARLTON



Parcel post: Leigh and his son Jon get busy with the day's outgoing mail.

If you've toyed with the idea that running a PD library is easy, take a look at a typical day in the life of LAPD...

- 07:00 Clive picks up the day's mail from the Post Office Box.
- 07:10 Clive opens the mail, and adds any new orders and customer details to their database, making sure it's bang up to date.
- 08:30 The database spits out a list of today's orders, which is faxed to Leigh.
- 08:31 Leigh gets to grips with his section of the day's orders, some tea and cake.
- 08:35 Clive polishes off his portion of the orders. While the two are working independently, there can be up to eight computers running.
- 09:00 Reply to letters, respond to queries, check disks submitted to library and acknowledge receipt to senders. Phone and fax orders come in though the day, too.
- 15:00 Off to the Post Office with a bulging sack of mail.
- 17:00 The peak time for telephone queries.

If there's any free time, it's devoted to checking new programs, updating catalogues, preparing ads, polishing the jet-ski...

Disk utilities



Fast Copy 3

Used throughout the world for copying and formatting disks, *Fast Copy* is as near

to an industry standard as you are likely to get. It's also one of the most useful and reliable utilities of all time. *Fastcopy 3* is PD, but many people like it so much they buy the commercial version, *Fastcopy Pro*, which has even more features.

Elf Backup

The shareware solution to your hard drive backup problems is *Elf Backup*. It's simplicity itself to use, and enables you to back up files, folders or whole partitions. There is even a facility for time-saving incremental backups (rather than backing up everything, the program simply copies across the files that have changed since the last backup).

Superboot

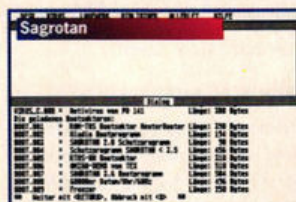
If you use a hard drive, *Superboot* is a necessity. It interrupts the boot process so you

can choose which set of accessories and Auto folder programs you want loaded. This enables you to use different boot sets for different kinds of work, and to avoid programs that clash. *Superboot* does its job very well indeed, and it even lets you display a picture during boot-up.



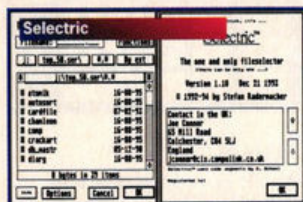
Sagrotan

Sagrotan recognises an ever-growing list of boot sectors and alerts you each time it finds one, either reassuring you that the disk is good or warning you of a possible virus. Users can add any new boot sectors to the list, then distribute the new version. Because it can be expanded, *Sagrotan* is future-proof, and it's the best shareware answer to the virus problem.



Selectric

Selectric replaces the GEM file selector, enabling you to copy, move, delete and rename files. As an added bonus, you can also create new folders as you save or load. *Selectric* makes it easy to move up and down your folders quickly, and once you're in the right place you can almost always locate a file by typing the first two or three letters of its name. It also supports wildcards.



Compression and encoding

Atomic

ATOMIX CRUNCHER3 BY ALTAIR
v3.6 completed on: 23/2/93

F1: CRUNCH EXECUTABLE.
F2: CRUNCH DATA FILE.
F3: CRUNCH ALL FILES.
F4: CRUNCH PARAMETERS.
F5: EXIT FROM ATOMIX.
F6: UNPACKER PROGRAM.

NOW WARP 9 COMPATIBLE!

LHarc & STZip

There's no point mentioning *LHarc* without *STZip*, because you will, inevitably, need both to deal with file archives effectively. *LHarc* gets the nod from us as the better of the two, because it deals intelligently with corrupted archives and can extract the data that is still intact, whereas *STZip* just crashes if the archive's no good.

Esscode

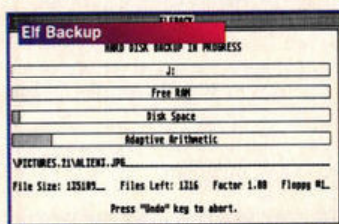
Maximum Lines / Segment = N/A
Source File: ESSCODE.MIB
Source Path: J:\TOP-50-SEN\ESSCODE4\
Current File: J:\TOP-50-SEN\ESSCODE4\ESSCODE.UUE
Status: 36K

Esscode

Esscode is the best utility for creating and decoding UUE or MIME encoded files.

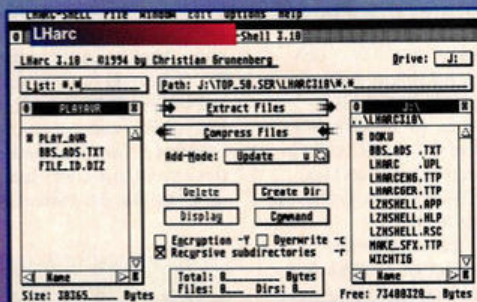
UUEncoding converts binary files into simple text files,

which can then be attached to e-mail messages and sent to anyone on the Internet. The recipient then decodes the message to retrieve the original file. MIME files are similar, but smaller, and they can contain more than one binary file.



Atomic 3.6

Archiving programs certainly makes them smaller, but you have to unpack the archive every time you want to use them. *Atomic* gives you the best of both worlds: it enables you to compress executable files, then run them as normal. Loading is slightly slower, but the trade-off in saved disk space is well worth it, especially if you have a floppy-only system.



HOW TO RELEASE A PROGRAM

If you've just finished a piece of software and you'd like to share it with other ST owners, there's more than one way to go about it. In fact, you have four choices:

Freeware: This won't make you rich, but if you just want to share your creation with the masses, this is a swift way to do it. Anyone can copy and distribute the program, but you retain the full copyright. This means no-one else can modify it or claim ownership, and you still hold the rights to it.

Public Domain: Like freeware, public domain software is freely distributable. However, you waive your rights to the program's copyright. Effectively, anyone can do what they want with the program.

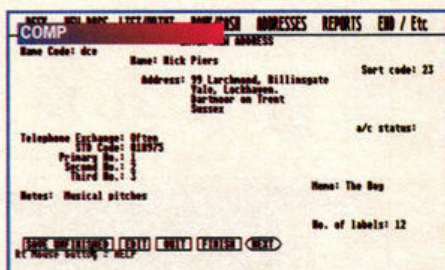
Shareware: Alternatively, you can release your work on the understanding that if someone finds it useful, they should send you a donation. This doesn't need to be money - blank disks, video tapes and even chocolate have been requested by programmers. Dealing with registrations and sending out upgrades can become a bit of a bind, though, so don't promise the earth.

Licenceware: If you want to get some reward for your work, but can't face the hassle of distribution, you can release it as licenceware - usually through a PD library. When the library sells your program, generally for £3-10, it sends you a percentage of the fee and keeps a handling charge for itself.

General Hints

Compatibility: Each version of TOS has its own foibles, but careful thought and programming can avoid compatibility problems. Do some research into the various TOS bugs, and read all the programming material you can lay your

Business



COMP

Compact Office Management Program is a serious attempt to address the many different needs of a small business in one easy-to-use management package. Features include an address database, cashflow analysis, debt letter printing, VAT calculating and invoicing; it even has a typewriter module. If you need a bit of everything, there is nothing to beat *COMP*.

Opus

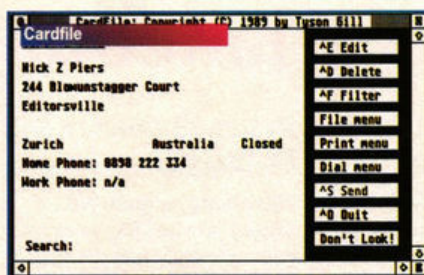
Opus is a fully featured spreadsheet system that makes use of *GDOS* for good-looking printouts. It includes advanced calculation facilities and presents you with a wealth of configuration options. It's certainly the best shareware spreadsheet system, and rivals many commercial offerings.

Cardfile

Cardfile is a straightforward address and telephone number database that scores on

simplicity and flexibility. The fields are sensibly laid out and search operations are as easy as typing in the first few letters of a name. You can also sort records by user-defined

category, enabling you to separate friends from clients, or customers from suppliers.



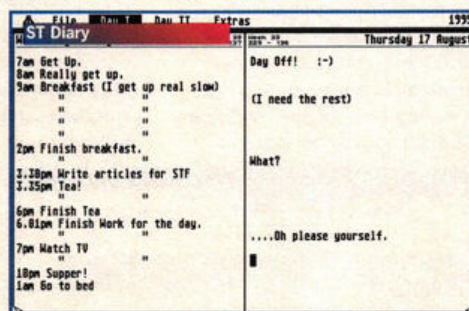
DB Master One

DB Master One is a straightforward user-configurable database. It has been around for a long while, but still holds its head up high as an effective and highly configurable

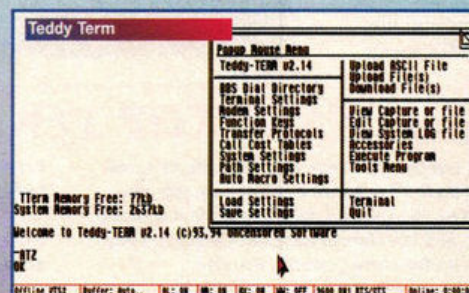
program. There are no startling features or hidden tricks with *DB Master One*, it's just solid, adaptable and dependable.

ST Diary

More than just a diary program, *ST Diary* enables you to organise your life. It has lots of extras, including flexible calendars and conversion charts, and is wrapped up in a nice GEM environment, making it a real joy to use.

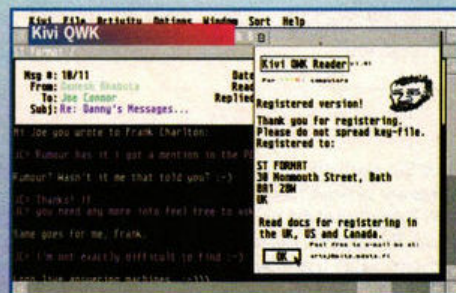


Communications



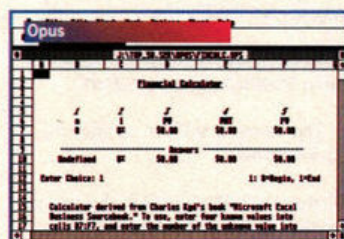
Teddy Term

The best ST comms package for your ST is *Teddy Term*. Features include a call timer, daily logging of calls, auto-logon and auto-capture of on-line sessions. If it is used in conjunction with *HS Modem 6*, it will work happily with the new 28,800bps (V34) modems, and it really puts you in control of your comms sessions.



Kivi QWK

Kivi is the ST's most compatible off-line reader. If you're into e-mail, it can slim down your phone bill, because it enables you to download your messages and reply off-line. The money you save should more than cover the registration fee. *Kivi QWK* is compatible with all current multitasking systems, and also works on the TT and Falcon.



HOW TO RELEASE A PROGRAM (continued)

hands on – there are plenty of text files available. *STOS* programmers should be especially careful, as *STOS* is notorious for compatibility problems. If possible, compile your *STOS* code on an STE – then STFM and STE users can run it. For *TOS* versions like 2.06 and Falcon *TOS*, it's handy to distribute a copy of *STOSFIX3* with your work, so users can patch it for themselves. However, don't release a pre-patched version, as it probably won't work with older *TOS* versions.

Documentation: Most programmers hate writing manuals, so why not get a friend involved?

Often he or she can explain things much more clearly from a user's point of view, and well-written documentation will mean people are much more likely to use your work.

Testing: Make sure your work is thoroughly tested before release – you'll have less work to do later sorting bugs out. If you've got a modem, ask about for people to test your work. Try local user groups, or even advertise for testers on the *ST FORMAT* Reader Ads page.

Registration incentives: If you're releasing shareware, think about added incentives for

users to register. Nice ideas include enhanced versions, printed manuals, extra utilities or even the full source code for your program. If users feel they're getting more goodies, they're much more likely to stump up the cash.

When you're ready to release your masterpiece, send it to as many PD libraries as possible, with an explanatory letter. Get your work on to the BBS network and the Internet – if you can't do it yourself, find someone to help. And don't forget to send a copy to us, addressed to: PD and Shareware Reviews, *ST FORMAT*, Future Publishing, 30 Monmouth St, Bath BA1 2BW.

Miscellaneous



Your Second Manual

It is no secret that the manual Atari ST is less than wonderful. *Your Second Manual* is a complete and exhaustive account of what your ST can do, and how you can make it do it. Even better, it is written in easy-to-understand language that won't scare away beginners and less technically-minded readers. Load it into *Revenge Document Displayer* (also in our Top 50), and away you go.

Revenge Document Displayer

This classic program can display any text file, even one with extremely long lines (such as a program listing). You can move through the document using the arrow keys, or simply by moving the mouse. The sheer speed of *Revenge Document Displayer* sets it out from the competition.

Tomshell

If you need to run batch files, or perform a multitude of other command-line-based operations, *Tomshell* is the utility for you. It comes with a

commented command list and is compatible with most versions of TOS. *Tomshell* batch files can be written for a multitude of tasks, including deleting BAK files and running BBS systems.

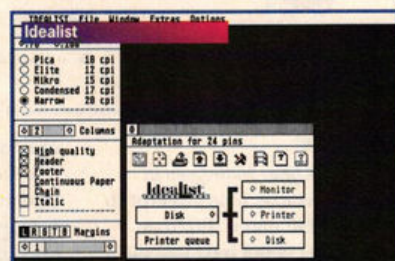
Teradesk

Teradesk has occupied the privileged position of 'best PD desktop' for some months now. It's easy icon system and ability to load text files into your favourite editor make it a joy to use, and *Teradesk* has proven itself to be completely reliable. Frugal on memory but big on features, *Teradesk* is now compatible with multi-tasking systems.

Idealist

Idealist enables you to print out large text files in small type. It uses columns, saving you paper and printer time. A number of printer dri-

vers and typefaces are included, and the whole program is beautifully presented in a windowed GEM environment.



GET YOUR TOP 50 HERE

If you want to give your PD collection a serious shot in the arm, you can buy our Top 50 from LAPD. It has been divided into two packs, Entertainment (puzzles, board games and arcade games) and Productivity (everything else). Order either or both by calling LAPD on 01773 761944. The Top 50 programs are also available individually.

Productivity Pack
40 Items £25

Entertainment Pack
10 Items £12

FALCON PD AND SHAREWARE TOP TEN

Since the Falcon030's launch, the PD and shareware market has brought us some stirring stuff. Falcon-specific games were initially a bit thin on the ground, but there some cracking programs to be had now, and any good library will have a Falcon section.

We've concentrated on Falcon-only software

here, but you can treat your machine to some great stuff ST software too. For example, the *Freedom* file selector, the replacement Desktop *Thing* and the comms package *ConNect* really shine on the more powerful machine.

Without PD, the Falcon wouldn't be anywhere near as enjoyable to use as it is. So,

in no particular order, here are ten great pieces of Falcon PD and shareware:

SToop: Brilliant hard drive boot manager that does absolutely everything.

APEX File Viewers: The best image and animation viewers for the Falcon.

Tautology 2: Maddeningly addictive TrueColour *Shanghai* game from the Reservoir Gods.

Backward 3: The ultimate tool for opening up those classic ST games.

JPEGD: Brainstorm's DSP loader for JPG images even works with *GEMView* and *ImageCopy*.

EKOSys demo: Show off the power of your Falcon with this impressive demo.

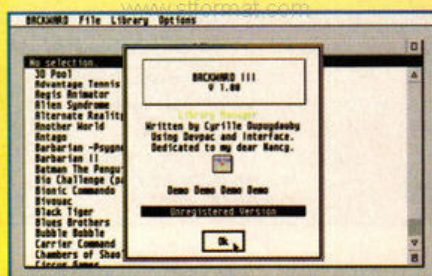
BobTracker: Black Scorpion's small but perfectly-formed Tracker MOD player offers excellent sound quality.

Towers 2: The shareware demo of this 3D role player has enough in it to keep you going for quite a while.

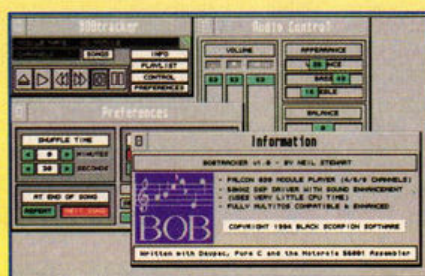
FalconSX: Change your Falcon's settings on the fly for maximum compatibility.

Videl Inside: Excellent screen expander and virtual screen manager for all monitors. It gives you massive resolutions.

Falcon Top Ten by FRANK CHARLTON



Backward 3: without a doubt, the best tool for ST compatibility, especially if you have a lot of ST games.



BobTracker offers superb sound quality and plays almost every MODule format you can find.



Tautology 2 plays a mean game, especially when you've advanced through ten levels or so. Great stuff.



One of the few software screen expanders to work well with RGB monitors, *Videl Inside* is a must-have tool.

Puzzles and Board Games



Drachen

Drachen, or Dragon in English, is a game of pairs. Sounds simple, huh? Wrong. Tiles are laid across each other and stacked up. Each contains a Chinese design, and you have to remove them in matching pairs – the object is to remove them all. This is a simple game, in essence, but one which will provide you with many hours of frustration.

Colotris

This is the ever-popular *Tetris*, reworked for low resolution colour on your ST. Blocks fall down the screen, and you have to get rid of them by building horizontal lines. Completed lines disappear; if you get too far behind and the grid fills up, the game is over. If you manage to keep the blocks at bay, the game speeds up to increase the challenge.

4-7-11

This program gives you three patience games, including the classic solitaire game. It really is just a question of sticking at the task till you finally get all the suits lined up in order. A number of options enable you to make the games easier or more difficult.

STello

Othello games have, in the past, been somewhat easy to beat. All that stops with *STello*.



The computer opponent plays to win, and will surprise even the most competent Othello player. If you're used to the *Reversi* Accessory, this version will make you wake up and smell the coffee.

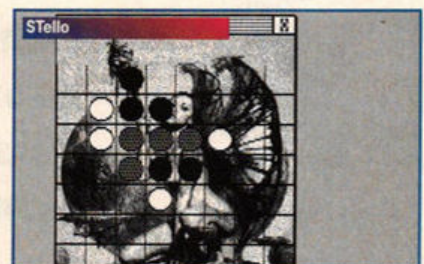
Towers

This is the original version of *Dungeon Master*, and it delivers

an intriguing blend of role playing and adventure. As you move through a 3D maze, you have to make sense of the things you find and the characters you meet. Eventually, if you persevere, you'll find the exit.

Super Break Out

This PD *Arkanoid* clone is essentially a bat-and-ball



game: hit the ball to remove the blocks that litter the screen. The animation is smooth, and the surprises regular. It only runs in high resolution, but is so packed with features that it's worth using *Sebra* if you only have a colour monitor. *Super Break Out* comes with a full level editor, enabling to create extra levels.

Arcade Games



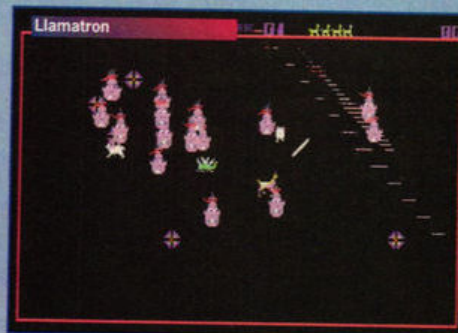
Ozone

Ozone is a delightful platform game – it looks more like a full commercial offering than a shareware game, and is bursting with colour and cheerful music. As usual, your cute character has to pick up objects and jump around platforms, but don't be deceived, there is danger lurking at every turn.



Grandad and Grandad2

These are two absolutely classic role-playing adventure games. In the first adventure you, a wheelchair-ridden Grandad, go off on the quest for the holey vest; in the second you are in search of sandwiches. It sounds silly, but great graphics and a wonderful sense of humour make these games enjoyable romps.



Llamatron

What can we say about *Llamatron* that hasn't been said before? It's a mad, manic shoot-'em-up, and it has llamas. Eye-blistering graphics and crazy sound combine to make this one of the best ST games ever. Shoot desperately for as long as you can, rescue all the lost-looking sheep, and you may just prevail...



Starball

Starball is a first-rate pinball game that runs on any Atari. The ball movement is realistic, there are three wacky bonus levels to discover, and you can even tilt the table when it all goes horribly wrong. *Starball* is a cascade of colour and explosive sound effects that will have you addicted for weeks.

CREDITS

We'd like to thank those who helped us to produce this Top 50 list, particularly Leigh and Clive from LAPD who worked extensively with us. Thanks also to James Matthews of Power PD and Colin Fisher-McAllum of 42 BBS for their excellent contributions, and to Nick Peers for writing the introduction.

LAPD ☎ 01773 01773 761944
Power PD ☎ 01622 763056
42 BBS 01256 895106 (modem)

Zip drive showcase

Zip drives – everyone's talking about them, and we've got one. Frank Charlton previews an exciting new storage technology.

Zip drives are almost *Star Trek* technology. Tiny boxes capable of storing 100MByte of data on a little disk, they run at near hard drive speeds. Zip technology has been billed by some as the future replacement for floppy systems, and rumours abound that they may be built into new machines as standard. Overhyped and underpowered, or a genuinely useful piece of kit? Let's see...

Zippidy doodah

Removable media systems have existed for years, in the shape of SyQuest drives – but SyQuests are quite bulky, and the cartridges are expensive. The Zip drive is small and portable, making it a viable storage option even for laptop users. It's also a lot less expensive than a SyQuest.

The drive itself comes in a plastic case which didn't strike us as being particularly well built, but the drive is surprisingly light because of it. The Zip disks are only slightly wider than a floppy, and about one and a half times as thick. Actually, they look very similar to floppies, complete with a spindle wheel on the back and a sliding hatch.

Hooking the Zip 100 up to your ST or Falcon is simple. To get round the 25-way ports Iomega have chosen to use, HiSoft supplies a 25 to 50-way connector. Attaching the Zip to an Atari which doesn't already have a device connected means using a standard DMA cable, or SCSI2 cable for Falcons. If you want to add the Zip to an existing device chain, you'll need an ordinary SCSI to SCSI cable. The Zip can only be configured as ID 5 or 6, but

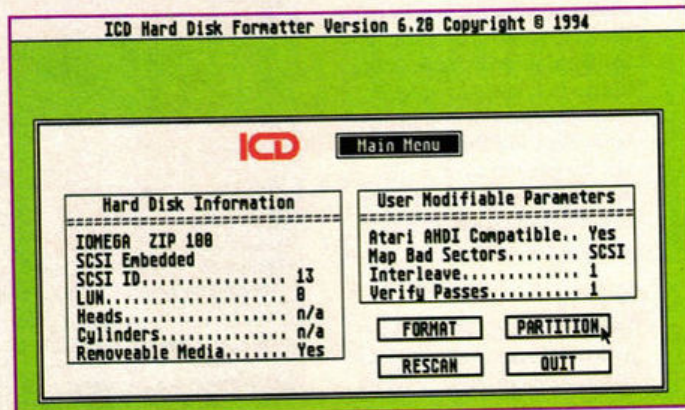
this should not be a problem unless you have a lot of other devices already connected.

Plug and Play

Oddly, the Zip doesn't have a power switch – as soon as the external power supply is plugged in, the Zip switches on. Okay, Iomega wanted to

power supply from the Zip itself when you need to switch off. Constant plug-jiggling isn't a recipe for healthy sockets, and a tiny switch somewhere would have improved matters.

Once the Zip is active, inserting a disk is as easy as using a floppy drive. However, the disks are ejected via an electronic, rather than a



Any hard drive software will partition your Zip disks – we used ICD Pro and several others.

keep the size of the drive down, but was leaving the power switch off a wise idea? We don't think so. If your mains connections are tucked away right under a desk like ours, it means unplugging the

mechanical, mechanism, so the power needs to be on to remove a disk.

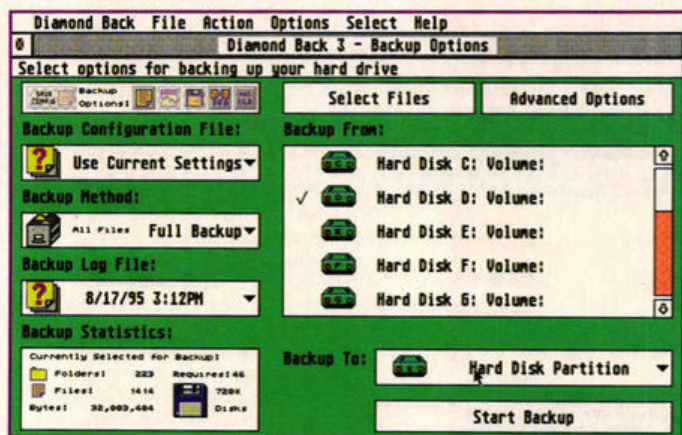
Your ST treats the Zip just like a hard drive. Disks need to be formatted, but you use hard drive software rather than a

HARE OR TORTOISE?

So how fast is the Zip drive? Considering the size of the disks, you'd be forgiven for expecting slow performance. It isn't as fast as modern hard drives, but it still shifts data about at a very respectable rate.

We found the Zip to have a data transfer rate of about 800K/s, compared to our fast hard drive's 1.5MByte/s. Considering that a quad-speed CD-ROM provides 600K/s, the Zip is no slouch.

ID, LUN	Device Name	Data Rate	Av Access
✓ 8, 0:	QUANTUM LIGHTNING 5405	1600 K/s	15 ms
✓ 13, 0:	IOMEGA ZIP 100	850 K/s	33 ms



Any normal backup program, such as Diamond Back, can be used with the Zip drive.

specific program. Once formatted, Zip disks are partitioned like a hard drive. Although the specs talk about 100MByte disks, that's the unformatted capacity – a formatted Zip disk actually provides about 95MByte of usable space.

We used the Zip with an ST (as a secondary drive) and a Falcon (as a secondary drive, and as a boot drive). Unfortunately, ST owners can't use the Zip as a boot drive (see the Terminate!

Terminate!
panel to find out why).

As an addition to your normal hard drive, the Zip is perfect for backups. It's almost as fast as a 'real' hard drive, and a few disks should be enough to back up almost anyone's drive. Any backup utility will work, and HiSoft is adding direct Zip support to the forthcoming release of *Diamond Back* (at the moment, HiSoft's hard drive utility treats the Zip as a hard drive. It can't eject the disk when it's full, so you need to back it up in chunks).

Since the Zip is a regular SCSI drive, you can quite happily use it with any of the hard drive software available. We tested it with *ICD Pro*, *AHDI 6.061* and *HD Driver*, and it performed without a hitch with all three. While we looked at it we re-partitioned the disk a lot, and generally subjected it to far more use and abuse than it

would experience normally. Not once did we encounter any bad sectors or physical disk problems – an impressive feat considering our Zip (plus disk) had already been to numerous shows with HiSoft.

The drive itself is almost deathly quiet. Most hard drive noise tends to come from the drive's fan, which the Zip doesn't have. Even in a quiet room with nothing but an ST turned on, we struggled to

hear any noise from the Zip at all – something you certainly can't say for the SyQuest mechanisms.

SyQuests also have an odd ejection system, where an LED will cycle from red to green, telling you when it's safe to spit the cartridge out. The Zip ejects in less than half a second, and with no fuss. Zip drives have built-in power-saving circuitry, too. When no disk access has occurred for a while, the drive goes into dormant mode, using less power. Accessing the disk starts it up again, and only adds a half-second or so of delay.

Password, please

Zip drives support extra SCSI commands to write-protect and password-protect disks (there isn't a write-protect tab). HiSoft is currently finishing an *XControl CPX* module to do all of this, which will be ready by the



time the Zips go on sale. The latest versions of ICD's software will apparently support these commands, but HiSoft is the only retailer currently working on custom software to run with any hard drive driver software.

For the price, the Zip provides tremendous value per megabyte. We're expecting the basic drive, including one disk, to cost £179. Extra disks cost £15.95 each, but are further discounted when you buy several at once.

If you're looking at the Zip as a back-up device for a hard drive, it's superb – fast, hassle-free and easily expandable. As

an alternative to a hard drive, it works very well – it's not as fast, but it's much easier to add capacity. If you damage a disk – and they seem robust enough – you've only lost £15 rather than a whole drive.

Despite some reservations about the case quality – one gets the impression Iomega has built down to a price rather than up to a specification – we like the Zip drive a lot. These things are selling faster than Iomega can make them, and they bring removable-media technology down to a price we can all seriously think about. Look out for the definitive review soon. *stf*

TERMINATE! TERMINATE!

In order to keep the Zip drive compact and portable, Iomega decided to make a few changes to its SCSI connectors.

Standard SCSI devices like hard drives and CD-ROMs use large 50-way SCSI connectors. Fitting two of these beasts to the Zip would have made it too bulky, so Iomega opted for smaller 25-way connectors instead. This isn't really a problem, as HiSoft is supplying adaptor cables that connect the 25-way Zip socket to standard 50-way SCSI connectors.

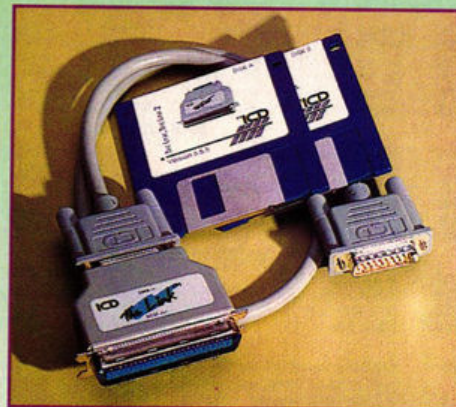
There is a drawback, though. In reducing the connections to the 25-way system, Iomega had to leave something out – in this case, the power supply contained within the SCSI termination lines. Any chain of SCSI devices needs to be terminated at the end of the chain, to prevent signal reflections, which can cause data corruption. Termination is done electrically with packs of resistors. These are either fitted to the drive's circuit board, or contained within a plug-in terminator pack fitted to the spare SCSI socket on the last item in the chain.

Unfortunately, the new breed of miniature SCSI host adaptors for the ST – such as the ICD Link, Gasteiner's TopLink and System Solutions' Translator – all require a small amount of power.

They take this power from the SCSI termination lines – which aren't active in the Zip drives. As a result, you can't connect a Zip drive to an ST unless you already have a device using the SCSI bus. So, if you have a hard drive or CD-ROM connected to your host adaptor, you're OK, since they activate the missing power lines. You won't be able to buy a Zip to use as a standalone hard drive yet, though.

Falcon and TT owners have SCSI connectors fitted, so they don't need host adaptors, and hence won't have problems.

HiSoft is currently working on a fix for this problem, which may involve taking power from another source, such as the joystick port. It's not happy about such an inelegant solution, but David Link assures us the problem will get solved. In the meantime, you need to have another SCSI device connected to use a Zip drive with a standard STFM or STE.



ICD's The Link 2 is one of several devices capable of connecting SCSI equipment to your ST.

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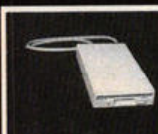
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Positive Image preview

No more smelly oil paint – image manipulation is the art form of the future. Frank Charlton previews a program that makes it all happen.

Some of the biggest-selling applications on other platforms have been graphics programs. Image retouching and manipulation packages like *PhotoShop* (Apple Mac) and *CorelDraw* (PC) have often had us looking on in envy. But Floppyshop's impending release could change all that...

Positive Image is a high-specification image processor and retouching studio, without the mindbending price tag seen on other platforms. It's a friendly GEMmed program, with a smart non-modal interface, making it ideal for a multitasking environment.

Positive Image can deal with images internally at up to 24-bit precision, and display them at whatever resolution your Atari can support. This means that the image you're working on is still held in memory as a 24-bit file, regardless of the number of colours your display has. You can make any changes you

like, and when the image is saved, it's still in the original resolution. You could touch up a rough-looking scanned image on an ST in high resolution monochrome, for example, without losing any of the original detail.

Filters

The author of *Positive Image* has obviously taken more than a passing glance at the big boys of the image processing world. Like *PhotoShop*, *Positive Image* has a smart toolbox-based interface that contains icons to get at all of its major functions. The range of tools looks good – all of options you'd expect are present, along with some advanced filtering tools.

A set of standard filters makes easy work of smoothing out or tweaking an image, and the Noise Removal filter is



Positive Image in action on a Falcon in TrueColour mode. It's ideal for retouching images of all types, and does a fine job of cleaning up scanned images.

exceptionally good at removing unwanted blurring from colour scans.

As well as the built-in filters, *Positive Image* can load external ones from disk. They aren't as sophisticated as *PhotoShop*'s Plug-Ins, but they do provide an impressive level of control.

Positive Image seems to cope with everything but the most obscure image formats. The latest revision of the Falcon version we saw was capable of decompressing TGA files via

the DSP for added speed, but JPEG loading is still slow. However, Floppyshop scores highly for making *Positive Image* the first Atari application to support CompuServe's new royalty-free PNG format, a lossless 24-bit compression routine developed to replace the aged GIF standard. This is good to see, and if the author keeps on top of emerging standards in the graphics field like this, *Positive Image* could rapidly become a major contender.

Floppyshop is aiming this professional-quality tool at all Atari users, and wants to keep the price as low as possible. Currently, it looks as if *Positive Image* will be released at approximately £80 – about a tenth of what other certain big names cost on other platforms.

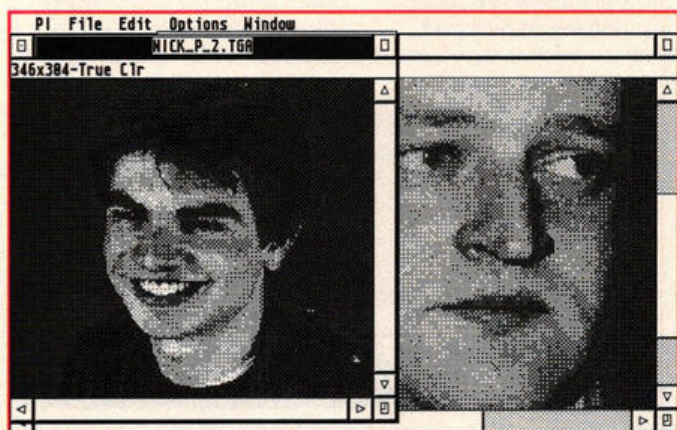
It's still in development at the moment, and Floppyshop

tells us it's aiming for an October release date. At the rate it's been adding features and extra formats, though, it may have a job keeping to that schedule.

If *Positive Image* arrives at the promised price point, it should do very well, and we're eagerly anticipating the finished release version. Watch this space for a full review or call Floppyshop on 01224 312756 for more details. stf

FRANK CHARLTON

A set of standard filters makes easy work of smoothing or tweaking images



Even on a monochrome ST, *Positive Image* can work with 24-bit images without data loss.

THE MASK

Another promising feature is the ability to use separate images as masks. Take a look at the screen grab below, for example, where a spiral pattern has been superimposed over our beloved Editor. Masks are simply greyscale TIF images, and *Positive Image* uses the level of grey to calculate the brightness of the pixel underneath when it stamps the mask on your image. We haven't seen anything like this in a program at this price point before, and it looks good.



Positive Image's masks were one of the things we really liked. This image took 30 seconds to create using one of the default masks.

Exposé



Titan Designs is finally ready to unleash its Falcon video digitiser upon

the world. Now you can watch television while you work.

Titan Designs' Exposé video digitiser has been in development for a loooooong time. We played with a version over a year ago, and it's been seen in various guises since then, but has never actually been released.

With Titan's people being the perfectionists they are, both the Exposé hardware and the RGB splitter have actually gone through numerous revisions before they were finally deemed finished. But now, at long last, here it is...

Exposé is a video frame grabber specifically for the Falcon030. It can grab either single frames or sequences of moving images directly from a video source such as a camcorder or video recorder (VCR) in 16-bit TrueColour. Images are grabbed in real-time, in user-definable sizes up to a maximum of 512x512 pixels. Exposé doesn't come with specific digitising software; instead it interfaces with

Black Scorpion's wonderful APEX Media animation and graphics suite.

Exposé is supplied in two parts – the digitiser itself, and the RGB splitter. The digitiser hardware is a custom-built printed circuit board which fits inside your Falcon. The manual explains the fitting very clearly, and it's an easy job to do. You need to remove the

main part of the Falcon's metal shielding – being careful to disconnect the internal speaker – to reveal the motherboard. Exposé fits directly on to the

It can grab single frames or sequences of images directly from a video source

Falcon's internal expansion connectors and, with a little care, slots in smoothly. The top of the board is covered with an insulating backing, to prevent it from shorting when you re-fit the shielding.

Since the RGB splitter is an external gadget, Exposé needs to communicate with it via a cable. This is where a little work is involved, since there's no way

to pass the cable through the Falcon's case without a few modifications. As the manual states, a small cut needs to be made in the side of the shielding. It should be bent back slightly to stop sharp edges pressing against the cable.

Routing the cable out through the Falcon's case means either drilling or cutting a small hole on the side or rear. In our case, we cut a small hole in the rear, just above the reset button. Including the chopping, the whole fitting took about ten minutes to do, and wasn't a stressful task.

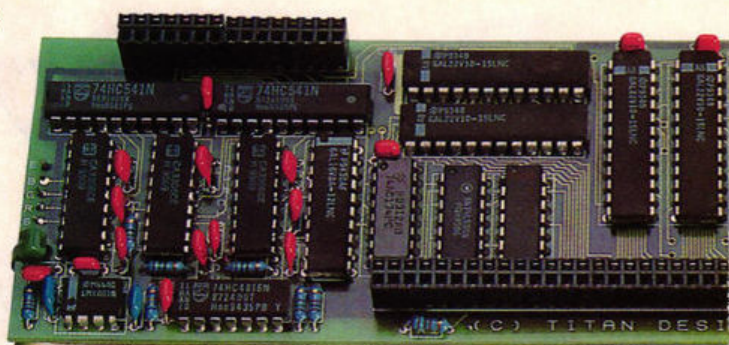
The RGB splitter

converts the composite or S-VHS video signal into the three separate colour channels – red, green and blue. Housed in a small plastic box, it will sit neatly on top of your Falcon.

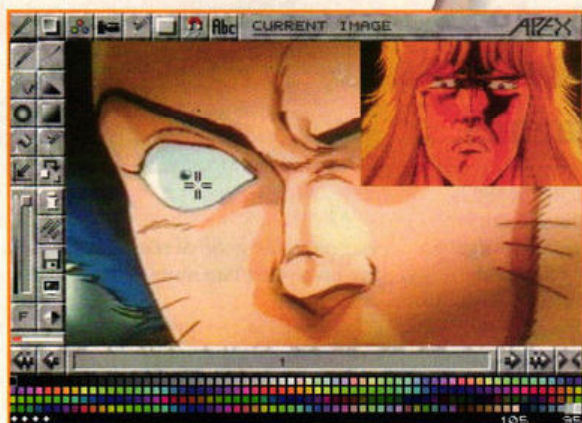
Hardware control

The front panel includes three rotary controls: colour control, image contrast and brightness. Titan's decision to provide access to colour balance via the hardware should be applauded: the splitter provides an essential level of control before the image is actually grabbed, so you don't have to rely on the software to tweak the image afterwards.

The back panel boasts video input via a phono socket for standard composite video, or the two sockets required for S-Video connections. A mini-



An unassuming piece of circuitry, Exposé lurks darkly within the safety of your Falcon.



APEX shows the incoming video in a small window on top of your current work, like a digital picture-in-picture television.



The splitter is neatly designed, and connects to Exposé with no problems.

EXTRAS AHoy!

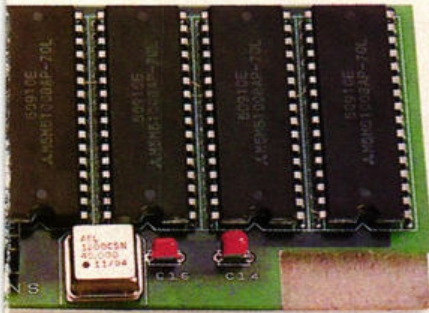
At the time of this review, two pieces of extra software hadn't yet materialised. Once again, Titan and BSS have squirreled themselves away to carry out last-minute improvements. *FalCUBE* is a small demo which captures incoming video from Exposé, and maps it across the surfaces of a 3D cube. Moving the mouse rotates the cube, and the moving video stays mapped to the surface.

FalCAM Tripod replaces

Titan's original plans to enhance the digitising code in APEX to cope with even higher resolutions. A separate program, *Tripod* is capable of grabbing at resolutions of 768x576 (PAL broadcast) and 384x288 (quarter-size PAL), although Titan and BSS may go for higher resolutions as well. As the name implies, *Tripod* is intended for ultra-high quality work with a camera or digital freeze-frame video recorder.



Gah! How did this get here? Just when you thought ST FORMAT was a Trek-free zone...



DIN connector accepts the cable from Exposé, and the splitter runs from a 12V power supply – which is provided for UK models. Recessed potentiometers to adjust vertical sync and NTSC hue (for American users) are provided, so you can't knock them out of line accidentally – full marks. Connecting the splitter to Exposé takes no time, and a small LED alerts you that the splitter is powered up.

APEX Media

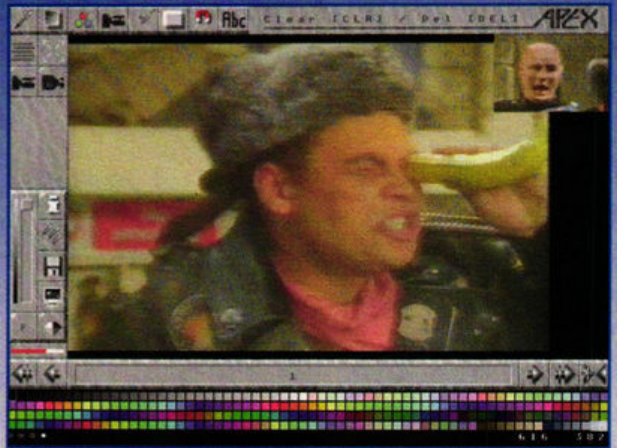
As we mentioned, *APEX Media* has the code to grab from Exposé built in already. Pressing [F4] or clicking the camera icon takes you to the *APEX* Digitising Interface. From here you can control image resolution and set up the software for grabbing. The two cameras will both perform a grab – one 'cinematic' quality, one 'photographic'.

Choosing Cinematic dis-

WHY FALCON ONLY?

Why does Exposé need to be Falcon specific? The answer is in the interface. Most other grabbers connect to your Atari via the external cartridge port. This isn't terribly fast and it cuts down on both the screen sizes and colours that can be captured.

Exposé manages its high resolutions and frantic speed by talking directly to the Falcon's hardware. The video signal is passed from the VCR or camera to the Exposé hardware, where it's converted to a digital format. Exposé then passes the image directly across the Falcon's expansion bus, and *APEX* displays it directly to the screen. Unlike other grabbers which often need to mix the RGB components back together, Exposé does it in a startlingly short time – instant grabs at a very high quality.



For quality like this, Exposé needs the hardware only the Falcon can provide.



Help! We just can't stop watching old *Star Trek* films with *FalCAM*!

plays the moving video at whatever resolution you're currently in. Clicking the left mouse button grabs a single frame instantly, and clicking and holding grabs successive frames into the *APEX* animation buffers. The number of frames you can grab depends on how much memory is available. On a 4MByte Falcon with the grabs at the small 120x80 size, *APEX* grabbed an average of 60 frames, at a rate of 25 per

second. At this speed, the motion is totally fluid. As the grab size increases, the frame rate drops, resulting in only six per second at a resolution of 512x256. The rates are actually slightly higher when using an RGB monitor, due to the monitor's frequency.

Photographic grabbing takes a single frame, and *APEX* uses a supersampling technique to produce the high-

est quality possible at your chosen grab size. We even managed clear grabs from moving video at 640x400 – that's how fast

Exposé really is. Photographic grabbing produces much sharper results, as you can see from some of the images dotted about the page – all taken from moving video.

Time for telly

A supplied extra, *FalCAM*, is great fun. Running as an Accessory, it opens a GEM window displaying the incoming video from Exposé. It runs in any of the Falcon's video modes, and dithers the colour display in real time. TrueColour provides the best results, but 256- and even 16-colour modes are acceptable. Be warned, though: we didn't do any work for ages while we watched *Star Trek*. You can also connect the video's sound to the Falcon's input, and use *SND_THRU.PR*G (available from PD Libraries) to route incoming audio straight out via the headphone sockets. Yes, now you can blow your

nose at AV-Mac users, because we can do it too, and at a fraction of the cost.

Conclusions...

Exposé could be considered expensive if you just plan to muck about with it. Its design and performance are technically excellent and, basically, Exposé stamps all over the opposition, wearing dirty great hob-nailed boots.

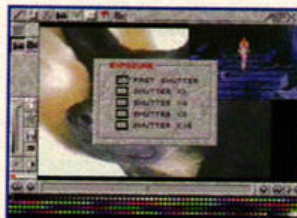
After a lot of thought about value for money, we still couldn't help giving Exposé a Gold award, ultimately because it's unlikely it'll ever be beaten. It may be the most expensive digitiser around, but for sheer performance it's money well spent. *stf*

FRANK CHARLTON

Product: Exposé
Price: £279 for Exposé, £379 for Exposé/APEX bundle
Contact: Titan Designs
Tel: 0121 6936669
Min system: Falcon030 only, 4MByte required

MOVING OR STILL

While the manual recommends you use a camera or video recorder with a perfect freeze-frame, we found that extremely high-quality images could be taken even from moving video sources. Using *APEX* at a resolution of 320x200 and with Interlace switched on, we grabbed full-screen images with no distortion or 'colour noise'. Other grabbers will often snap the red, green and blue elements separately, and a moving image results in that characteristic coloured blur. Exposé grabs so quickly that high-speed moving images produce a 'motion blur', just like using a real camera with a slower shutter speed, while



APEX offers a range of shutter speeds just like a real camera – you need to use still images with the higher ones.

those taken during normal movement give you crystal-clear TrueColour images. For higher resolutions, adjusting *APEX*'s electronic shutter speed and using a still image produces great results.

Exposé

HIGHS

- Produces superb results
- Very, very fast
- There's nothing else to touch it

LOWS

- It's expensive for the casual user

In short...

Stunning – probably the most impressive thing you can plug into your Falcon.

96%

VERDICT • SIF-VERDICT • SIF-VERDICT

Mastering Papyrus

"Good evening, sir. I'll be teaching you *Papyrus* tonight." Unlikely? Not with this new personal tutor, it isn't. Relax, help is at hand.

Papyrus is a fine program. A word-processor with DTP capabilities, it's a lot easier to learn than some of its big DTP brothers. The manual is a bit clinical in places, though, so a system designed to show you how to get the most from all facets of the program would be a great help...

Mastering Papyrus is the latest release from American company Spar Systems, following on from its similar help system for *AtariWorks*. It comes in three parts – a hypertext help Accessory, a manual, and a generous collection of example files.

IN THE BOX

- ## Mastering Papyrus has an excellent icon toolbox:
- 1 
 - 2 
 - 3 
 - 4 
 - 5 
 - 6 
 - 7 
 - 8 
 - 9 
 - 10 

Installing to your boot disk or hard drive takes a few minutes. The master disk is compressed, and the help index takes up 400K – so if you don't have a hard disk, you'll need some judicious disk-swapping to use it alongside *Papyrus*.

Side by side

The on-line help Accessory runs happily alongside *Papyrus*. Its main window has a duplicate of the main *Papyrus* menu bar – if you need to know exactly what a menu option does, opening the duplicate in

Mastering Papyrus provides a clear and concise explanation.

While *Mastering Papyrus* isn't a true hypertext system – there aren't any links on the pages – the easy-to-use icon toolbox enables you to skip quickly to any related topics.

A considerable amount of thought has gone into making the interface intuitive. A full index can be called up, and clicking on a topic takes you straight there. You're not stuck with reading from the screen either - files can be output to the GEM clipboard, a disk file, or the printer.

Some of the examples provided are very sophisticated, if a little... unusual. Little green men, anyone?

Little of the manual is devoted to the Accessory itself, a testament to its ease of use. Most of it is given over to tutorials on using *Papyrus*, and jolly good they are too. The author has obviously spent a lot of time learning the ins and outs of even the most obscure functions. Areas covered include creating master pages, using paragraph tags and

getting to grips with micro-spacing.

A single file unpacks to provide you with a massive 690K of example

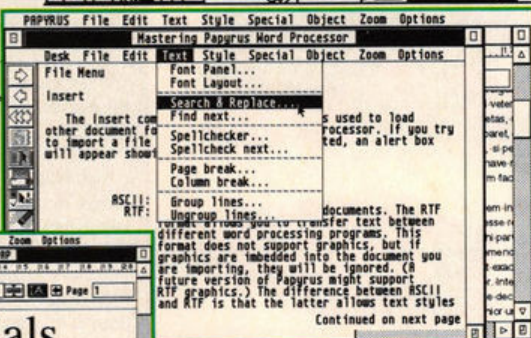
The easy-to-use icon toolbox enables you to skip quickly to any related topics

documents – everything from style templates to load and use yourself through to complete newsletters, business cards and brochures. The quality is high, and studying them is an excellent way to learn.

Hand in hand

A lot of the entries in the Accessory are cross-referenced to examples on disk. When you find a reference, you can open the document in *Papyrus* for further study. The integration between Accessory, manual and examples is excellent.

Mastering Papyrus also includes 137K of clip-art in IMG format (including the graphics used on this page). There isn't a massive amount, and some images are too tiny



The menus duplicate those of *Papyrus* exactly, making *Mastering Papyrus* easy to follow.



to be realistic, but it does provide a good starting point for experimenting with *Papyrus'* image handling facilities.

Looking up information in *Mastering Papyrus* is much faster than using the manual, and the indexing and cross-referencing makes finding related information a snap. If you're a newcomer, it eases the learning curve considerably, and even old hands will learn a thing or two from the examples and tutorials. *Mastering Papyrus* is a well-researched product – let's hope Spar updates it for the forthcoming *Papyrus 4*. *stf*

FRANK CHARLTON

Product: Mastering Papyrus
Price: £26.95
Contact: FaST Club
Tel: 0115 9455250
Min system: Any ST/STE/TT or FalconQ30

Mastering Papyrus

HIGHS

- Covers all aspects of *Papyrus*
- Runs alongside *Papyrus*
- Takes only 100K of memory

LOWES

- Soon to be outdated by Papyrus 4

In short...

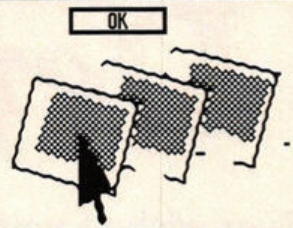
A well-researched, user-friendly tutor for both old and new Papyrus users.

83%

Mastering Calligrapher

Mastering
Calligrapher
3.0

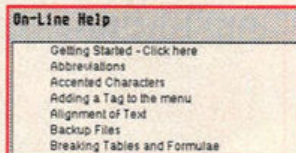
The Guide Book At Your Fingertips!!!



Despite Calligrapher's built-in help system, FaST Club is sure that you need *Mastering Calligrapher*. And what do you know, you just might.

An on-line help program for Calligrapher might seem a strange idea at first. After all, the program has its own built-in help system. However, other than as a quick reference tool, it's little use to the beginner.

Enter *Mastering Calligrapher*. Like *Mastering Papyrus*, reviewed opposite, it runs as an Accessory, and provides a comprehensive tour of the program based on its menus. It's easily called up,



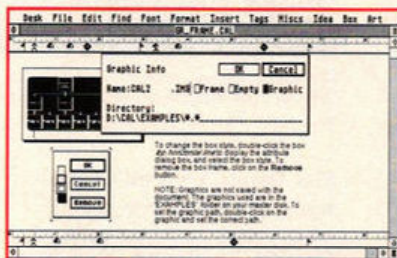
Calligrapher's built-in A-Z help system is much less comprehensive than *Mastering Calligrapher*. It's not much help to beginners either.

easy to navigate your way around, and easily dispensed with once you're done.

Further reading

Once you've reached the end of a particular help topic, you are referred to the appropriate pages in the Calligrapher manual for further information. This is certainly preferable to sitting at your desk with your document displayed on screen, desperately leafing through the manual.

The example files provided with *Mastering Calligrapher* turn out to be



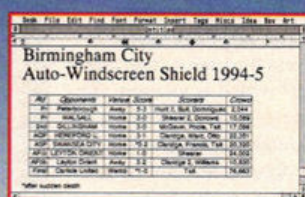
The example files tell you what you're doing wrong in Calligrapher. Even better, the program also tells you what to do to get it right!

WHY CALLIGRAPHER?

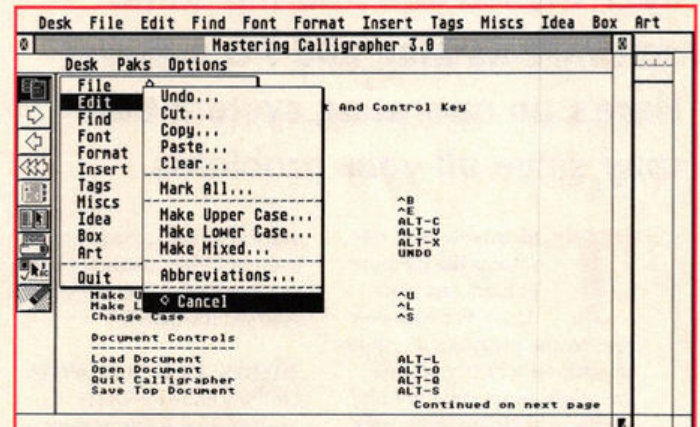
Calligrapher, a document processor that supports vector fonts, was first published by Working Title in 1992 (STF 31 85%).

Its unique feature was its support for different 'paks', or extensions to the program, which, like Calamus SL's modules, can be loaded or unloaded as required. About two years later it was updated and re-released as *Calligrapher Gold* with seven of the paks included (STF 51 88%). Not long afterwards, Working Title disappeared and the program was discontinued. Although it's very slow (unless you run it with a

hardware accelerator) and restricted to its own peculiar style of fonts, Calligrapher is still well worth a look - try placing a reader ad (see page 70).



Although not as powerful or popular as *Papyrus* or *Calamus*, Calligrapher is still capable of some sparkling DTP.



Although the style of *Mastering Calligrapher*'s menus don't ape those of the main program (unlike the *Mastering Papyrus*), learning about them is still straightforward.

similar to those included with the other titles in the series. This makes moving between applications much easier - if you've seen it done in one package, it won't take as long to recognise similar elements in another. If you haven't, well... if the method works for *Atariworks* or *Papyrus*, why change it for Calligrapher?

Clip art?

Unfortunately, there is no clip-art with the program, which makes it difficult to experiment with different graphics unless you have your own files (try Cover Disk 70 for some examples).

Mastering Calligrapher is far more comprehensive than Calligrapher's built-in help system. It's well-structured too - if you're stumped on a particular option from the menus you can get a solution very quickly (with welcome cross-referencing to Calligrapher's own manual to boot). The example files also give you a good idea of what the program can do.

Although a little expensive at £25, *Mastering Calligrapher* is a good investment for those of you serious about exploiting this golden-oldie package to the full. Calligrapher's built-in

help system makes it a little less vital than *Mastering Papyrus*, but it's an impressive package for beginners all the same. Now, if only it could give Calligrapher a boost in the speed department. *stf*

NICK PEERS

Product: *Mastering Calligrapher*
Price: £24.95
Contact: FaST Club
Tel: 0115 9455250
Min system: Any Atari running Calligrapher

Mastering Calligrapher

HIGHS

- Much clearer than the built-in help
- A thorough introduction to the program

LOWS

- A tad expensive
- Awkward on a floppy system

In short...

Expensive, but much better than Calligrapher's sketchy built-in help system.

80%

OMEn and the Developers' Kit

Ever wished you had the same software as Mac and PC owners? Here's an operating system that may solve all your problems.

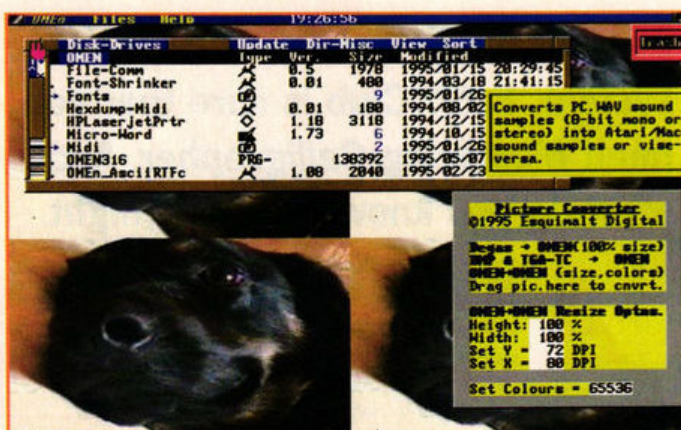
The trouble with software is the plethora of hardware standards. For each new release, the programmer needs to consider which machines are worth supporting. If only we had a standard where one piece of software could run on all computers with little or no extra work for the programmer. Think of the benefits for us, too: we could use the same

version of WhizzoSnap 4 as everyone else, instead of being left wondering if it will ever be released for the ST.

Signs and portents
OMEn stands for Open Multitasking ENvironment. Described by the authors as an 'Omni-Computer Componentware Operating System', OMEn is a full operating system, just like TOS or Windows.

The philosophy is simple – create a standard O/S with versions for all major platforms, and develop it so a single program will be able to run on any version of OMEn with no changes required.

OMEn achieves this by being modular. The 'system core' is the basic O/S, and runs differently on each individual platform. Everything beyond that – screen display,



OMEn runs in all resolutions, right up to Falcon TrueColour. Nice doggie, good doggie.

input and output, sound and MIDI support and the like – is handled by I/O (input/output) channel managers. These are written separately for each computer, and enable a program to communicate with hardware, such as the keyboard or serial port. The advantage here is that you

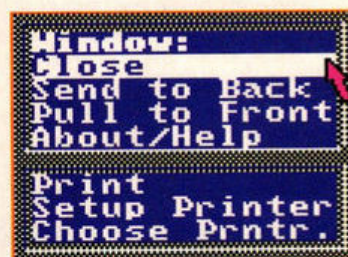
write your software to call these managers using a standard format, and when the program is run under a

OMEn will run as many programs as memory allows, simultaneously

different version of OMEn, it simply calls the Managers installed on that machine. It's a complex idea, but makes the cross-platform nature possible.

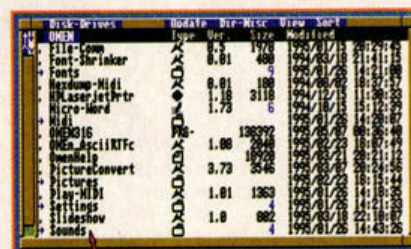
OMEn is unlike any Desktop you've used, and its closest relative is probably XWindows on UNIX systems. There are no icons on the Desktop, just a menu bar. Disk access is done through a 'file selector' which is vaguely similar to the ST's. There's no double-clicking, either – programs are launched with a single click.

One of the most startling things is the way programs load and save



Clicking a Window's Close Box icon isn't like GEM. You can even bring a hidden window to the foreground using this dialog.

files. Despite being called a file selector, it doesn't pop up when you need to load a file. Since OMEn is multitasking, you keep a selector open on screen as you work. To open a file in a word processor for example, you pick it up from the file selector and drop it into the word processor's window. An unusual way to work, but one which makes a lot of sense after a few minutes.



OMEn's file-selector lies at the heart of the system. Here you launch programs, copy files and load data files into programs. It's also multi-tasking.



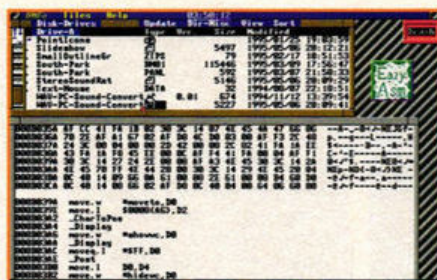
Virtual screens mean more programs can be seen – here we're running ten programs at once!

ACROSS THE PLATFORMS

The first thing that you need to know is that OMEn doesn't run standard Atari GEM or TOS software. Programs must be specially written or adapted for OMEn. This applies to the other versions too, and it remains to be seen whether PC and Mac owners will be willing to move away from their expensive software

collections. Still, you can easily quit back to GEM.

Currently, the Atari version of OMEn is the most advanced. The PC and Gemulator versions are almost finished, the Mac version is proceeding after a few hiccups, and versions for the Amiga and PowerPC/PowerMac are promised for future release.



Easy-ASM makes assembly language in OMEn painless enough. You'll need the Developer's Kit though.

Virtual Reality

OMEn runs in all resolutions, including the enhanced Falcon screens. It can happily switch resolutions as you work, with any open programs and files staying open. The screen also supports virtual displays, and scrolls as the mouse reaches the bottom of the screen.

The disk filing system works with standard ST disks and hard drives, but OMEn files can use longer filenames than the standard eight characters. File management uses the selectors again, and you can copy and delete by dragging.

OMEn is a true multitasking system, and will run as many programs as memory permits. It's fully pre-emptive too, so all programs run simultaneously. All windows are active at once, with keyboard input recognised when you move the mouse over a particular window.

The software supplied with OMEn is disappointing, consisting of a fairly basic text

editor and word processor, *Micro-Word*, and a few ancillary utilities such as picture converters and sound players. *Micro-Word* is by far the most advanced of the supplied applications, but it isn't likely to persuade you to dump 1st Word Plus, let alone PC users to abandon *Microsoft Word*.

Given that OMEn doesn't run existing software, it needs to have a substantial software base available at release to back it up. Esquimalt really should have thought this through, and at the very least had one major application ready at launch time. As it stands, after half an hour with OMEn you may already be feeling limited by the meagre selection of software.

Developer's Kit

Esquimalt has put together a separate *Developer's Kit* to encourage third-

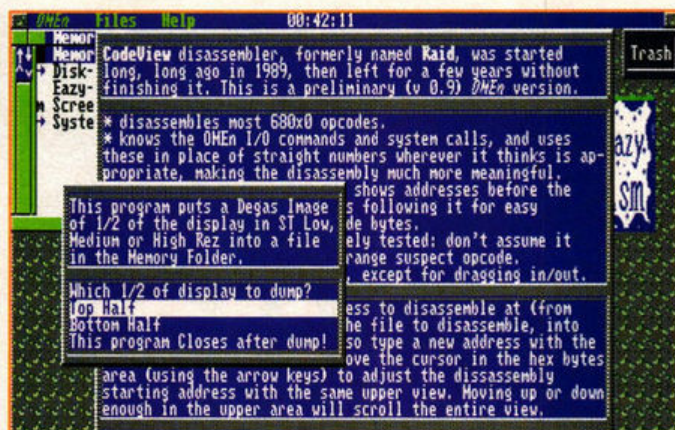
party developers to release OMEn-specific versions of their software. It consists of an OMEn-based structured 68000

assembler called *Easy-ASM*, a full set of System Equates for inclusion, library files for C programmers and full documentation on disk.

To assemble a file, you drag it from a file selector, and drop it on the icon

Easy-ASM is a full 68000 assembler for developing OMEn specific software.

Taking advantage of OMEn's multitasking nature, it has no internal editor. Instead, you edit your source code in *Micro-Word*,



There are lots of assembly examples provided, like this screen grabbing program.

and simply drop the file on to the *Easy-ASM* icon to assemble it. It's a user-friendly system, and OMEn's built-in 'crash-catcher' traps rogue programs before they can shut the system down.

Assembly isn't the most portable language though, so why provide the assembler before an OMEn C compiler? C programmers are currently forced to use a cross-compile

system - you compile under a standard GEM compiler, then run the program under OMEn. It's hardly the most produc-

tive way to develop, and a C Compiler should have been much higher on the list of Esquimalt's priorities.

What's up, Doc?

The documentation comes on disk in OMEn text format, and runs to hundreds of pages. It's a swine to read from screen, so you do need to print it from *Micro-Word*, or convert it to ASCII and print from GEM. Supplying a printed manual would have escalated the price - something which Esquimalt wanted to avoid - but professional developers from the Mac and PC markets are used to having piles of well-indexed printed documentation to hand. The manuals are very extensive though, covering OMEn programming from the ground up.

\$64,000 question...

As an operating system, OMEn is robust, usable and fast. In theory, it's a wonderful idea, but in the cold light of day it's doubtful that OMEn can succeed. You need to be incredibly brave or incredibly

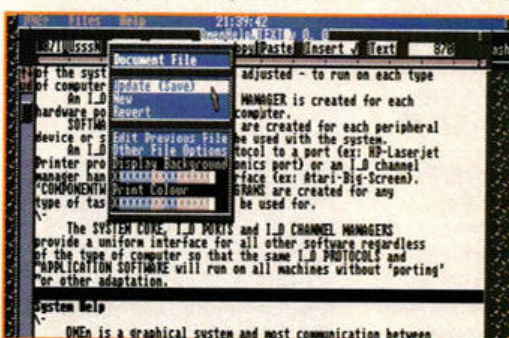
naive to be targeting this kind of product at a market as well-established as the PC market. PC users are so entrenched in the Windows way of life that it's very doubtful they'd ever seriously consider a product like OMEn.

Likewise, one of the Mac's selling points is the wonderful MacOS, and the thought of moving to an alien system like OMEn would be horrifying for most Mac users. Add to this the thought that most PC and Mac users and developers probably couldn't give a flying fig if ST users can run their software, and you're starting to see what OMEn is up against. *stf*

FRANK CHARLTON

Product: OMEn
Price: £20
Contact: FloppyShop
Tel: 01224 586208
Min system: Any ST/STE/TT or Falcon030 with 512K

Product: OMEn Developer's Kit
Price: £12
Contact: FloppyShop
Tel: 01224 586208
Min system: Any ST/STE/TT or Falcon030, OMEn required



Micro Word is OMEn's largest application - a basic word processor with scalable font support. It's not much cop though.

WHY THE LOW SCORE?

Esquimalt's confidence in OMEn is admirable, but with the other versions still in development - the Mac version can't even read Mac disks yet - we have very grave doubts about OMEn's ability to live up to the hype. The unfinished nature of the other versions, coupled with the scant *Developer's Kit*, means it's

unlikely you'll ever see major developers working with OMEn.

We have no doubt that a lot of hard work has gone into OMEn, and it's a polished system, but we can't recommend it unless you're a die-hard propeller head. It's doomed to suffer a cult following - a sad, but unavoidable, consequence of market forces.

VERDICT • ST/VERDICT • ST/VERDICT

OMEn

HIGHS

- Excellent multitasking

LOWS

- Little software available so far
- Very little chance of succeeding

In short...

A nice concept, but OMEn is unlikely to penetrate the PC and Apple Mac markets.

67%

HL-660 printer

Brother's new laser printer gives you high resolution 600dpi printouts, but doesn't have a correspondingly high price.



Up to 600 dpi printing at six pages a minute, and all for under £550. The HL-660 is one mean printer!

The days of the poor old home user having to be content with a dot matrix or inkjet machine are fading fast, with laser printers now available for under £400. The cheaper machines have traditionally been cut-down, low-spec versions of the expensive models, but the latest Brother laser printer is having none of this downmarket stuff.

Oh, brother!

Visually, Brother's HL-660 is almost identical to the HL-630 (STF 73, 90%) – only the name badge is different. But on the inside it's a different story: the HL-660's print engine can work at 600 dots per inch (dpi), as opposed to the 300dpi

of the HL-630.

Like its sibling, the HL-660 has no power switch – it's always 'On', but shuts down into sleep mode when it isn't actually printing.

Setting up the printer is very simple: hinge up the bonnet to install the laser drum unit, and slot the toner cartridge into place. The automatic sheetfeeder, which holds up to 200 sheets, plugs on to the top.

There's no need to program or adjust anything – all of the printer's features are controlled via ST software.

We tried the HL-660 out on the ST FORMAT Test Page, an A4 page containing sixty lines of text in various styles. Printing the test page from *Protext* took a respectable 25 to 30 seconds, with subsequent run-on copies taking only ten seconds each. The best results were obtained in LaserJet emulation mode,

and there are plenty of fonts available (see the Fonts panel).

We checked out the Brother's graphical abilities with *Imagecopy 4* (reviewed on page 35), which has a built-in LaserJet driver. Even the 300dpi output is pleasingly

The 300dpi output is clear and detailed although 600dpi is better for photos.

clear and detailed, although printing at 600dpi is much better for photographs.

Our BBQ advertisement, laid out in

Papyrus, took only two minutes to output at 300dpi, but a lengthy 17 minutes at 600dpi. In terms of appearance, there's not much difference between 300 and 600dpi output when you're using *Papyrus*' smooth Speedo fonts.

The Brother HL-660 has a number of praiseworthy features, including its simplicity and the facility to re-print the last page printed at a touch of a button. We also like the straight paper path, which helps you avoid paper curls and jams, and the separate toner unit should

Fonts

If it's fonts you want, it's fonts you get with the Brother HL-660. It gives you access to 39 LaserJet 4 Intellifont-compatible scalable fonts, ten Windows TrueType-compatible fonts, and seven bitmapped fonts. If you plug in the optional BR-Script ROM board, you get a further 35 PostScript-compatible fonts. With the right software (*Protext* is particularly good), the scalable fonts can be used at any size.



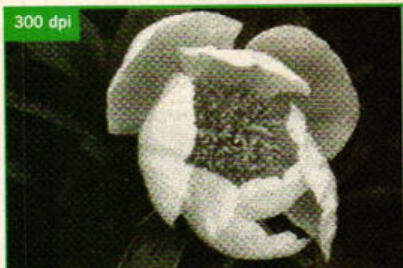
The 600dpi version of this *Papyrus* page took eight times as long to print as the 300dpi version.

keep costs down, as you don't have to replace the entire drum assembly. On the minus side, the fan is a little noisy, and you can only control the printer via software.

Overall, this is a powerful little machine, and at just over £500 provides a lot of features for your money. *stf*

PETER CRUSH

Product: Brother HL-660 printer
Price: £546.38
Contact: Crown Computer Products
Tel: 01704 895815
Min system: Any ST



These photos of flowers have been expertly dithered by *Imagecopy* and beautifully printed by our little Brother at both 300 and 600dpi.

SPECIFICATION

Size: 365mm wide, 183mm high, 363mm deep, weight 7.5kg.
Power: 480W printing, 55W standby, 12W sleep mode.
Speed: Six pages per minute.
Resolution: 300 or 600dpi.
Emulations: HP LaserJet 4, Epson FX-850, IBM Proprinter XL.
Options: BR-Script 2 (PostScript Level 2 emulation).
Printing: Separate drum and cartridge.
Media: Handles all standard and custom paper sizes.
Economy: Prints 3,000 pages of A4 text per toner cartridge.

Brother HL-660

HIGHS

- Great value
- Cheap to run
- Lots of built-in fonts

LOWS

- Noisy fan
- Only controllable via software

In short...

Upmarket features at a low price make this printer a great all-round choice.

91%

VERDICT • STIF VERDICT • STIF VERDICT • STIF VERDICT • STIF VERDICT

Imagecopy 4

Want to convert image files, or print pictures in colour? You'll love *Imagecopy 4*, FaST Club's latest all-singing utility.



Anyone who is into graphics will already know all about *Imagecopy*, one of the best utilities for dealing with ST and Falcon images. Initially, *Imagecopy* was a fairly simple screen grabber, but it soon developed into an all-encompassing application capable of displaying pictures, converting them from one format to another, and printing to a range of printers. We last



All the viewing tools are now accessed from the ST's numeric keypad. For example, pressing [-+] repeatedly zooms in on your image.

looked at *Imagecopy* in issue 67, where version 3.5 CD received an impressive 93%.

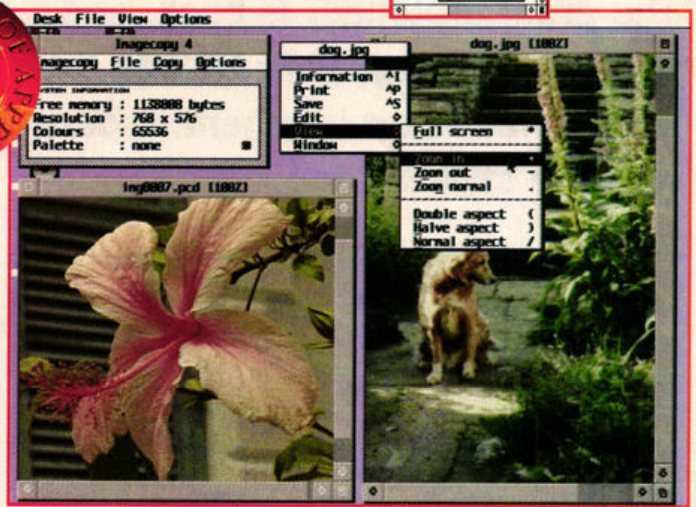
FaST Club has just released a new version, *Imagecopy 4*. It comes on three double-sided floppies, with a 48-page supplementary manual which explains all the new features (you also get the main manual, which covers features from previous versions). It can be run as a program or an Accessory, but be warned: it's 400K, so you'll need a 1MByte machine to run it.

Double glazing

There are many new features (see the New, New panel), including noticeable improvements in window handling. Clicking on a window containing an image brings up a new pop-up menu which offers a number of options. For example, you can flip the picture vertically or horizontally, or both. The transformation is almost instantaneous.

Programmer Jeremy Hughes has also moved some of the keyboard shortcuts. This seems annoying, until you realise the new ones are more logically arranged. For instance, all the controls for viewing your image are now on the numeric keypad.

Imagecopy seems to be



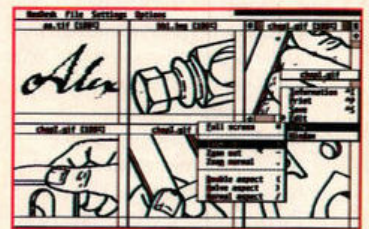
Imagecopy 4 can display a dithered version of a TrueColour grab on any ST, any monitor.

moving towards full-blown page layout, and it wouldn't take much more to move it into DTP territory. FaST Club's *Textstyle* program (STF 57, 80%) is thrown in free of charge (unless you are upgrading, in which case it costs £5), enabling you to enter text in any *Calamus* or GEM font, re-

size it, apply shading and fills, and save it as an IMG file. Couple this with the Page Layout option, and you can assemble text

and pictures for printing. If you have a CD-ROM drive, the CD version enables you to display and print PhotoCD images, too.

Imagecopy 4 is jam-packed with novel and useful features,



Like the previous version, *Imagecopy 4* can 'tile' a number of images.

and it's a joy to use. If you have any of the previous versions, don't think twice, upgrade straight away. *Imagecopy 4* ranks among the top ST programs ever. *stf*

PETER CRUSH

NEW, NEW!

Page layout option: You can assemble collections of images on a virtual page. Pictures can be re-sized, colour-adjusted and moved around, and the page can be saved to disk or printed out.

Interactive cataloguing: When cataloguing your images, the program asks if you want to add images, edit titles or re-sort images by name or file extension.

Loads images with incorrect file extensions: Even if the file extension is wrong, *Imagecopy 4* will recognise the format.

Faster decoding of compressed images, faster dithering and mapping: It's much faster than previous versions, especially on GIF images which used to take ages. All loading, saving and conversion operations are really speedy now.

Transparent colours: If you're designing Web pages, you may need transparent colours, which allow the background to show through your graphic.

Better user interface: Hey, man, it's really cool. Seriously, *Imagecopy* is now a joy to use, and all the new features can be accessed effortlessly.

Pop-up menus: The new menus that appear under your mouse pointer give it a slick, modern feel.

Choice of thumbnail sizes: You can adjust the size of those tiny thumbnail images.

Better window handling: You can do all kinds of new things to your *Imagecopy* windows via pop-up menus and keyboard shortcuts.

UPGRADES

To upgrade, return your original program disk, (plus CD if applicable) with the appropriate upgrade fee.

Version	Upgrade
3.5	£6.95
3.5CD	£6.95
3	£7.95
2	£17.95
1.5	£22.95
1	£24.95

Add £5 to all fees (except from v3.5CD) if you want the CD version, and a further £5 for *Textstyle*.

Imagecopy version 4

HIGHS

- It's fast
- It's feature-packed
- It's fantastic on a Falcon

LOWS

- Nothing

In short...

You'll be hard-pushed to find a better way to print or display your pictures.

94%

Gemulator 4

The great pretender is back, and this time it brings your ST into the PC's *Windows* environment. It does it rather stylishly, too.

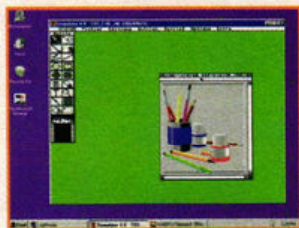
The big improvement that Gemulator 4 brings is that it now runs under *Windows*. This makes it much easier to use, and gives your new ST access to the same hardware that *Windows* uses, including all your PC's drives.

It will run on a 386 PC, but really requires a much beefier machine – a fast 486 or Pentium is recommended. You also need 8MByte of RAM and *Windows* 3.0, *Windows* for Workgroups or *Windows* 95.

The remarkably sparse board provides eight sockets for your TOS chips. The configuration to go for is the two-chip TOS 2.06 set, but it will take older six-chip versions. This is only recommended if you have programs that insist on it, though.

Installation

Installing the board is simple enough: open up the PC and slot it in. Copy across the software to your PC's hard drive, then boot up *Windows*, run the Gemulator program and, wonder of wonders, you now have an ST running inside a *Windows* window. You then simply switch control from your PC mouse to your emu-



Software support is limited to legally programmed packages that don't address the hardware. The big applications are fine, but much of your ST software won't have it at all.

lated ST mouse – it's as simple as that.

Unlike the previous version, Gemulator 4 provides

free access to your PC's hard drive. You can put your ST software where you like, and can even have an Auto folder in the root directory as normal. You can also use *Windows* virtual memory, so your new 'ST in a PC' can have anything up to 14MByte of memory.

Gemulator will run in all ST resolutions and even has a utility that enables you to go right up to an incredible 1600x1200 pixels in 16 colours. However, it will all be horribly slow, and you'll get occasional screen glitches, so your best bet is to run it at normal ST resolutions.

If your PC has a CD-

Your new 'ST in a PC' can have anything up to 14MByte of memory

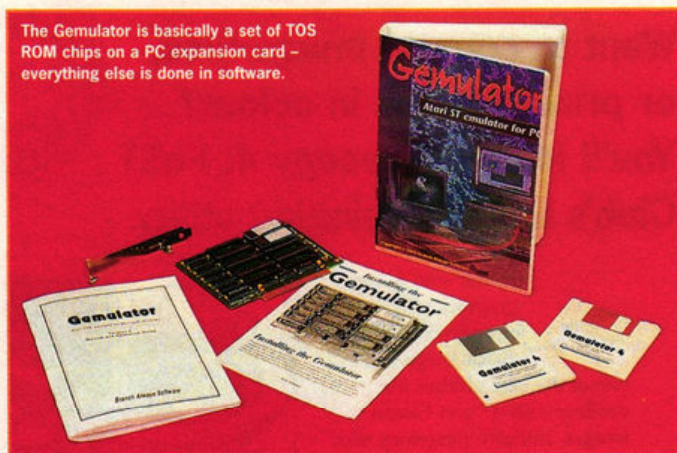
ROM drive you can use that too. It also claims to be able to use a PC sound card, although our review machine failed to recognise the sound card and was reduced to mere beeps. Getting a PC to think like an ST is no mean feat, and it takes a relatively powerful PC, such as our 100MHz 486, to match an ordinary ST. When we used *GEMBench* to compare the Gemulator with a standard STE, it returned a relative speed

Software woes

A system like this stands or falls on software compatibility, and Gemulator can be very fussy. Since you've no real ST hardware, any program that

attempts to talk to it will fail, as will anything using internal timing routines. You need well-behaved GEM programs, such as *Calamus*. However, software updates and patches are in the pipeline to increase the compatibility.

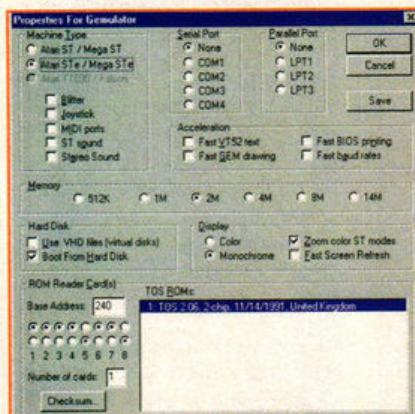
The Gemulator is basically a set of TOS ROM chips on a PC expansion card – everything else is done in software.



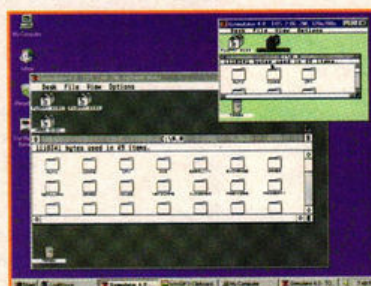
Gemulator 4 is a considerable improvement on version 3, and the price has even gone down a bit. If you have a powerful PC and fancy owning a high-power ST as well, it's a winner, and it's certainly cheaper than upgrading your ST. It's no substitute for the real thing, though, and you'll have to trim your software collection significantly. Games are out the window, for starters. Still, it can give you the ST you've always dreamed of, and at an excellent price. *stf*

CHRIS LLOYD

Product: Gemulator 4 for Windows
Price: £119 without TOS, £158.95 with TOS 2.06
Contact: FaST Club
Tel: 0115 9455250
Min system: 386 PC, 8MByte RAM, Windows 3.0



The properties box, where you decide what kind of ST you want – how about a 14MByte Mega STE? Falcon and TT versions are also planned.



The Gemulator performing the decidedly impressive feat of running two virtual STs at once. One is in high and the other low resolution.

Gemulator version 4

HIGHS

- Wonderfully simple operation
- Can access all your PC's resources, including memory and drives

LOWS

- Screen can be very slow
- Software compatibility not brilliant

In short...

A brilliant trick, and an excellent buy if you have a PC that can do it justice.

82%

VERDICT • STIF VERDICT • STIF VERDICT • STIF

Calamus Font Set

Looking for high-quality fonts on a low-quality budget? Here's the low-cost, high-class solution.

Calamus is still widely thought of as the market-leading ST DTP package. The entry level version is currently available for just £59 (JCA Europe, ☎ 01734 452416), making the world of high-quality DTP accessible to people with the most limited of budgets.

One problem that remains, however, is the prohibitively high cost of commercial Calamus fonts, which can set you back as much as £40 each. Add together the cost of a few fonts to make a complete set (Bold, Italic, Light, Condensed and so on), and the financial problem becomes clear.

PD problems

At this stage, most people contact their favourite PD library to see what is on offer in the Calamus font department. Many libraries and BBSs have large stocks of Calamus fonts, which vary tremendously in their quality and content. PD

fonts often have letters and punctuation missing, making finding the good ones a veritable nightmare.

But fear not, Oxieware has come to the rescue with a boatload of Calamus fonts which are both cheap and functional. Almost every font is a full character set, including standard punctuation, currency

designators (including £) and many other signs and symbols. Some of the fancy fonts, which are intended for display effects do not have all the extras included, but you will still be pleasantly surprised by what is available.

Oxieware is a Swedish company which has gathered together fonts from various sources (all PD) and converted them into Calamus format. Extensive work has been done to make them compatible with all versions of Calamus, and to include as many characters as possible. The result is sixteen disks of fonts which are ideal for semi-professional or even professional use, without the staggering price tag.

By any other name

Many of the fonts are versions of well-known fonts with well-established names. Copyright restrictions mean that the familiar names cannot be used, so an appropriate 'near miss' name is used. For example, the font you may know as Mistral becomes Mistress and Swiss becomes Schweiz. A text file on each disk



Okay, clever clogs, we know there are only 14 disks shown here, but the full set of Oxieware fonts includes all 16 disks, honest.

informs you of nearly all of these name changes.

Displaying fonts on the screen is always a problem – they invariably look better printed. This is because of the resolution of your ST's screen is much lower than that of your printer. Consequently, it's good policy to more or less ignore the look of fonts on screen, as long as the general proportions are correct.

The Oxieware fonts are no exception in this respect. Many

look rather ragged on the monitor, but print out quite beautifully. The illustrations dotted around the page, showing a selection of the Oxie-

ware fonts, were printed using a Hewlett Packard Deskjet 560C and Calamus SL. The results are crisp and pleasing, and even the X-Mas font – which looked terrible on screen – printed very nicely, with caps of 'snow' on top of each letter.

Choosing fonts

Given that there are sixteen disks in the set, you may be wondering how you can choose the disk that you need. Fortunately, a complete demo list of the fonts is available on an A4 sheet from JCA Europe. There are never less than twelve fonts per disk, and fonts with several versions (condensed, italic and so on) have been kept together.

If you are looking for an

Oxieware in ST Format!
OXIEWARE IN ST FORMAT!
Oxieware in ST Format!
Oxieware in ST Format!
Oxieware in ST Format!
OXIEWARE IN ST FORMAT!

Allegro
Beatnik
Bernie Tango
Bookend
Calzone
Boston

excellent font set, but don't want to spend too much money, the Oxieware font pack is for you. The £99 price tag for all sixteen disks is superb value for money for 246 fonts, and you save £20 on the combined price of the individual disks. Bear in mind that 246 commercial fonts could cost as much as £9,840. If, on the other hand, you want to build up your collection more slowly, £7.50 per disk is easily affordable. Oxieware has put quality Calamus fonts within the reach of everyone. *stf*

ANDY CURTIS

Product: Oxieware Calamus Font Set
Price: £7.50 per disk, £99 for all 16 disks
Contact: JCA Europe Ltd
Tel: 01734 452416
Min system: Any program that can use Calamus fonts

Oxieware in ST Format!
Oxieware in ST Format!
OXIEWARE IN ST FORMAT!
OXIEWARE IN ST FORMAT!
OXIEWARE IN ST FORMAT!
Oxieware in ST Format!

Mistress
Freehand
Paper Boy
Ulla Bella
X-Mas
Schweitz

Σ £ ' ® † ¥
ø π β © μ ~
Ω ™ # § ¶

Extra symbols like these are included in nearly every font in the set. Now there's no need to use an inferior font just because it has a pound sign.

Oxieware in ST Format!
OXIEWARE IN ST FORMAT!
Oxieware in ST Format!
OXIEWARE IN ST FORMAT!
Oxieware in ST Format!
Oxieware in ST Format!

Broadcast
Comedy One
Chic
Keyboard
Krautman
Mistress

Oxieware Calamus Font Set

HIGHS

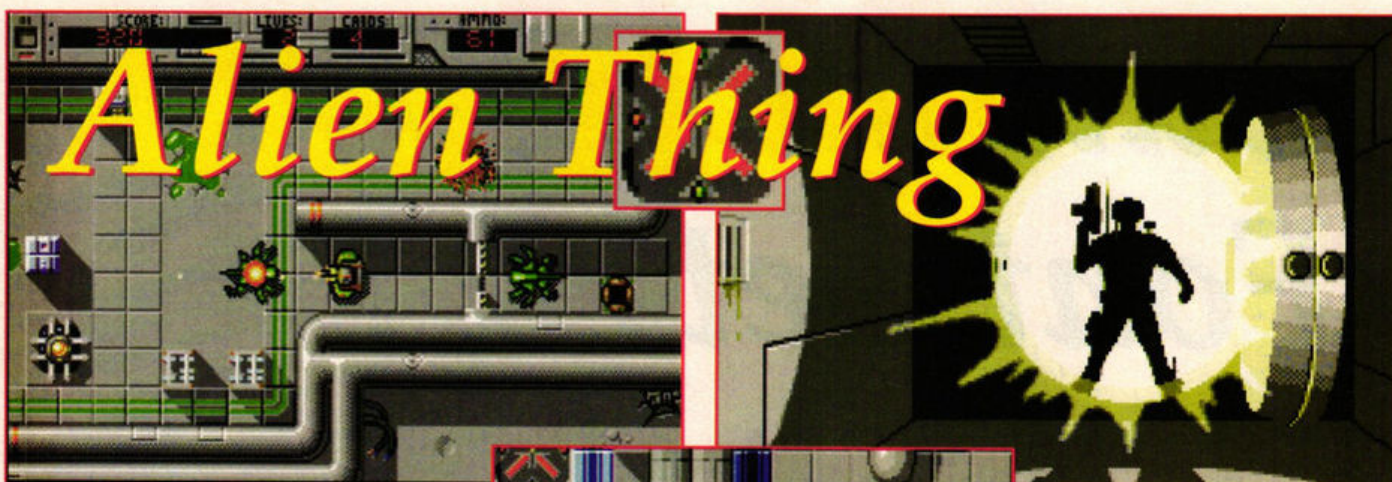
- No missing characters or symbols
- Fantastic price

LOWS

- Are you kidding?

In short...

Quality Calamus fonts, complete with symbols, at a really incredible price. **89%**



"Eat death, alien scum!" Subtle you're not.

You've seen the film, read the book, and bought the T-shirt. Now there's another **Alien eggstravaganza...** get ready to hammer that joystick.

Okay, it's time to don your army-surplus jacket and jackboots once more, adopt a drawling Yankee accent, and reduce your ordinarily rich vocabulary to a limited assortment of monosyllabic interjections. Yep, it's *Alien* again, courtesy this time of 999 Software.



Don't try this at home kids, you'll need rubber lips and asbestos teeth.



"Eat death alien sc... Geroff... Geroff... Aaaaaaaaaaaaaaargh!"

As you may have gathered from issue 71's Cover Disk demo, *Alien Thing* is an overhead arcade shoot-'em-up. A large spaceship of alien origin is found on the edge of the solar system; your task is to intercept and destroy it. To facilitate this objective and, more to the point, satiate your ruthless

thirst for mass genocide, you are equipped with an Uzi, laser cannon and flame-thrower.

Is it the latest in Nikon telephoto technology, or just a Can(n)on?



WHAT WENT WRONG?

Alien Thing is incredibly playable and the graphics and sound are great, so why the low score? It's because there just isn't enough to challenge the hardened gameplayer. There are so many extra lives lying around the ship that we found ourselves carrying

ten or more extra lives into the last level. This is unacceptable when the asking price is a smidgeon under £20. If Top Byte sort out this error in a future version, *Alien Thing* will be well worth a look. Otherwise, approach with caution.

Ammunition is found aplenty in lockers around the ship. Quite why the aliens have littered their ship with guns they can't use is beyond us, but their carelessness enables you to waste as many eggs and aliens as you fancy.

Suicide pills replenish your supplies – at the cost of a life

There are 11 levels, each with different tasks. The early levels are simple see-it-shoot-it missions as you pick up extra access cards, lives and ammo. Rooms are sealed by sliding doors, which can only be opened with one of your flexible friends. This enables you to keep the aliens at bay until you are ready to execute them, but becomes frustrating if you run out of cards before you've completed the mission. Thankfully, you carry suicide pills, which replenish your ammo and card supplies – at the cost of a life.

Later missions demand complicated DIY tasks, such as draining the ship of flood-water, re-activating the oxygen regulators and fixing the lighting systems. Once finished, you must position explosives in the engine rooms and vacate the ship.



Put on your jackboots and stomp all over the aliens in *Alien Thing*.

Although the backgrounds could have been better rendered, the chunky sprites are well-animated and responsive. Where the game really excels is in the sound effects, which create a convincing and tense atmosphere (the siren in the last level is really terrifying).

A minor criticism is the lack of a two-player option, which would have been more appropriate to the *Alien* theme. More levels would also have been welcome, especially as the game fails to present much of a challenge (see below).

All things considered, *Alien Thing* is a competent recreation of the classic Ridley Scott scenario. If you're after an arcade-style shoot-'em-up, complete with varied weaponry, power-ups and guardians, this is the Thing. *stf*

STEVEN RAYNES

Product: *Alien Thing*
Price: £19.99
Contact: Top Byte Software
Tel: 01622 763056
Min system: All Ataris, 1MByte and joystick required

VERDICT • STIF VERDICT • STIF VERDICT

Alien Thing

HIGHS

- Great sound effects
- Diversity of levels

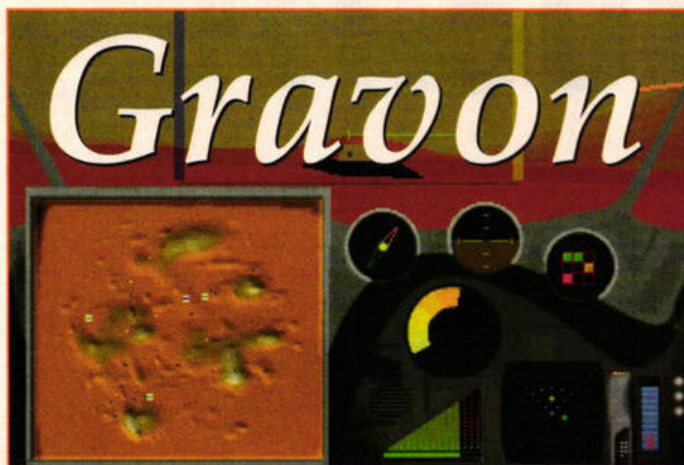
LOWS

- It's too easy

In short...

A good blast, but not a challenging one. Great graphics and sound, though.

68%



Action stations! Here you're coming up on an enemy gun turret. This is where tactics come into play. If it's not protecting one of your mission objectives, avoid it.

If you've been wishing for a hovercraft sim, then wish no more. Unless you haven't got a Falcon, in which case carry on.



High-speed hovercrafts are very difficult to control. How do we know? Because we've played *Gravon*, and if it's anything like real life they are absolute swines to corner.

On the plus side, the hovercraft in *Gravon* have laser cannons and shields. You need these because, as usual, there are a host of other craft intent on sending you home in wooden box.

Gravon is an original Falcon game, which originates from the Czech Republic, where they evidently have some under-used talent. The action takes place in a 3D world generated using vector graphics, and it runs in True-Colour mode.



There are a couple of refuelling points on each mission - you need to steer under the canopy. If you hit it, it falls over.

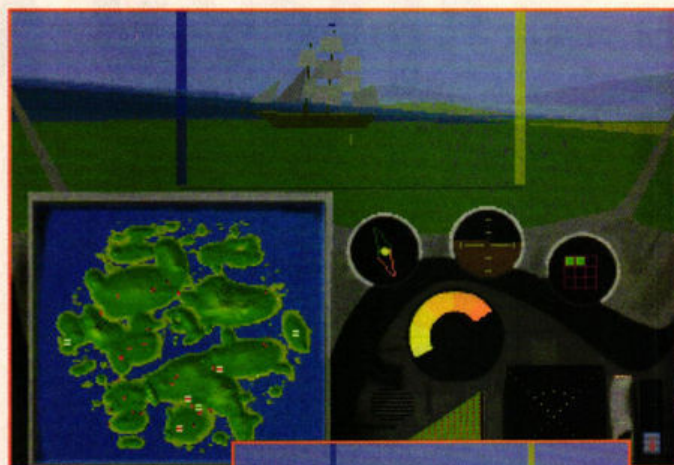


Here you're zooming towards an unsuspecting village. You don't have to blow up the buildings, but what the hell.

Your instruments include a radar, a compass and a handy map showing the targets. The landscapes appear to be generated randomly, so if you play the same mission twice you get different terrain each time. You can view your armoured chariot from various different angles, none of which, sadly, do anything for your driving or combat abilities.

Your first task is to complete the training mission. This is not as easy as you might think. You have to drive through a series of gates; if you miss one, you are taken back to the start to do it again.

Once you're trained, you can embark on a series of proper missions, the first of which involves picking up three objects hidden in villages. The



One of the more impressive 3D objects is this fully-rigged sailing ship. For the most part, though, you travel a barren but undulating world.

second mission introduces your combatants, which include enemy hovercraft, tanks and helicopters.

Gravon isn't a game you can leap into for an instant blast - you need to master the controls and do a lot of tedious manoeuvring first. The mouse controls the rudder and aims your lasers, while you set the throttle with either the keyboard or a joystick - simple enough. It's the flight characteristics that get you, though.

Your hovercraft isn't just difficult to control, it's incredibly frustrating as well. You fly towards your target, zoom straight past it, execute some erratic waltzing manoeuvres and then have to line up for a second go. The effects of inertia and momentum make even simple corners tricky, although you do have special inertia-dampening brakes which help.

The music between missions is excellent and the sound effects are reasonable, although your hovercraft sounds like a tube train. A comforting female voice informs you of low fuel and enemy attacks. The graphics are attractive, and the landscapes recede into the mist very nicely. The world isn't exactly packed with other objects though, and all the shapes are pretty simple.

The main trouble is



A village. If you're moving at any kind of speed, this is where you crash straight into a house. Steering takes practice, and more practice...

that it's just not enough fun, and you need to put in a fair amount of hard work just to master the controls. If you want a good Falcon 3D blaster, *Steel Talons* is a much better bet. If you have always hankered after a hovercraft simulation, and can live with the controls, by all means get a copy. Just don't start complaining when you smash into your refuelling station at the end of a mission.

CHRIS LLOYD

Product: *Gravon*
Price: £35
Contact: Access Information
Tel: 01628 721173
Min system: Falcon, 4MByte RAM, 8MByte hard drive space

VERDICT • STIF VERDICT • STIF VERDICT

Gravon

HIGHS

- An original Falcon game
- Some good effects and music

LOWS

- Your hovercraft takes some mastering - to put it mildly
- A little crude in places

In short...

An enterprising game, but ultimately it's only satisfying for the dedicated hoverpilot.

64%

"HOW MUCH?"



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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.

Easy to install and dead simple to use, scanners enable even the most

artistically challenged ST user to add graphics to newsletters, posters and reports. They make it easy to produce professional-looking illustrations... and they're great fun.

But what exactly does a scanner do?

Scanners are optical devices that 'look' at



Last month's cover image, captured by the PowerScan hand scanner (left), the AlfaScan (centre), and Epson's GT-8500 flatbed scanner (right).

scanned artwork is more original and interesting than making do with clip-art, and you can tweak the images with art software.

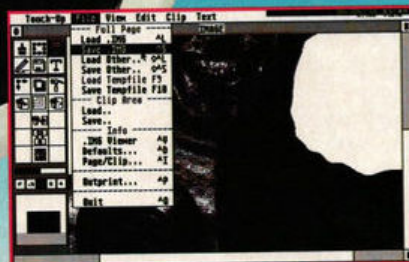
● Adding textures to artwork:

All kinds of objects can be scanned, producing attractive textures that can be used as fills and brushes in ST artwork. Scans of woodgrain, leather, suede or a woven fabric like one of Karen's old cardies can add interest to an otherwise flat and boring piece of artwork.

● Optical Character

Recognition: OCR software can save you hours of typing. You simply scan any printed or typewritten text, and your OCR software interprets the image and extracts the text. You can then import the resulting ASCII file into your word processor or DTP package.

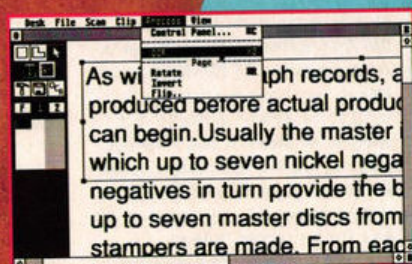
One of the main advantages of using a scanner is speed. It can take ages to produce even straightforward illustrations in an art package, but a scanner will transform your hand-drawn graphics into image files in seconds. The highest scanning resolutions give you clear, detailed pictures, so it's easy to be accurate, too. The final clincher is convenience – anyone can use a scanner.



Scanned images can be saved to disk and then imported into your word processor or DTP package.



Scan your art work with scanned textures, which can be used as fills or brushes.



OCR software enables you to extract the text from a scanned document and save it as an ASCII file.

any drawing, page or photograph, and convert the printed information into digital signals that are fed into your computer. The result is a digital picture that can be saved to disk as an image file, fine-tuned in an art or drawing program, and imported into your word processor or DTP documents.

The more imaginative you are, the more things you can do with a scanner. But to give you some ideas, the most common applications are:

● In desktop publishing or word processing programs:

Scanners are great for adding photographs and illustrations to your work. Using your own

Q&A

Q Can I use a PC or Mac scanner with my ST?

A The scanners supplied for Macs and PCs cannot be plugged into the ST. In many cases the scanning heads are the same as those used on ST models, but the electronic interface and software are quite different.

The only exception is System Solution's flatbed scanner package (opposite). It can be used with any of the Epson scanners employed by Mac and PC users.

Q Are ST scanners compatible with the Falcon?

A Sometimes. The AlfaScan hand scanner only works with STs, and won't work with a Falcon. Likewise, the PowerScan is not claimed to be Falcon compatible.

System Solutions' flatbed scanner works with both the ST and the Falcon, but needs different connections for the Falcon. The Naksha ST scanner is also supposed to be Falcon compatible, but we couldn't get hold of one to confirm this, and they aren't being produced any more.

Q Can I scan large pictures, such as A4 posters?

A Scanning A4 pages is no problem with a flatbed scanner, as it will accept paper in any size up to just over A4. If you have a hand-held model, you can make a scan of any length (memory permitting) but the maximum width is only 105mm (4inch).

Luckily, both the ST hand scanners reviewed here come with software that enables you to join scans together, so you can merge a scan of the left-hand side of an A4 page with one of the right-hand side. Alternatively, you can take a number of scans of a really big picture, and import the image files into your favourite art program. With a little patience, it's possible to cut and paste the separate bits into a composite image.

Q Can I scan in colour? Are there any colour hand scanners?

A The ST hand scanners operate in monochrome, although scans can be saved in greyscale formats, too. However, the System Solutions flatbed scanner scans in mono, greyscale and colour.

At one time there were a couple of colour hand scanners for the ST, one of which was from Migraph, producer of the excellent *Touch-Up* and *Full OCR* software. Unfortunately, these scanners are no longer available in the UK, so if you want colour you'll have to splash out on a flatbed, or use a scanning service (see the Services panel, opposite, for details).

SCANNING HARDWARE

You'd like a scanner, but you don't know which one to get? Read our guide to new and second-hand ST scanners.

There are two kinds of scanner: small hand-held ones which are 'wheeled' across the original artwork by hand, and larger flatbed scanners which do the scanning mechanically. Here's a run-down of the three scanners currently available for your ST.

PowerScan

£99, Power Computing Ltd
☎ 01234 273000

The PowerScan hand scanner comprises a 105mm-wide scanning head, connected by a 2m cable to an interface which plugs into your ST's cartridge port. A 13A power supply unit is provided, but you have to supply a plug.

There is a four-position switch on the right-hand side of the scanner to select the scan resolution. On the opposite side, another switch enables you to select between line art and three photographic modes (as described in the By Hand panel, opposite). On the underside you'll find two little rollers and one large one, and scanning is activated when you press a large thumb-operated button on the left side of the head.

The PowerScan is easy to control – the rubber rollers provide a sure grip and prevent the scanner head from sliding sideways, even on glossy surfaces. Conveniently, a little toggle switch on the interface enables you to turn the scanner off without having to disconnect it or turn off the mains power.

STF RATING: 89%

The PowerScan is a light grey moulded plastic gismo for scanning by hand. If you move it too quickly or too slowly, the warning light flashes at you.



AlfaScan

£99, Golden Image UK Ltd
☎ 0181 9009291

Alfa Data's scanner is very similar to the PowerScan model. You get the same type

of scanning head, it's also capable of 105mm-wide scans and the controls are virtually identical. You can choose between the standard four dpi settings, and have line art or three photographic settings for

BUYING SECOND-HAND

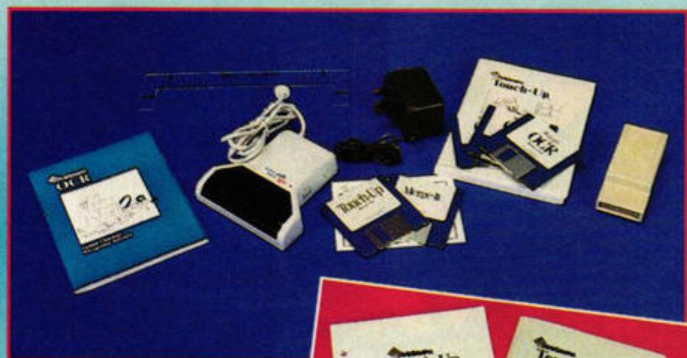
Although there are now only two hand-held scanners available for the ST, in the past there were many more, and *ST FORMAT* has looked at all of them over the years. As some models are available on the second-hand market, here's a brief resume. Don't pay too much for a second-hand scanner, though – you can get a new scanner with the latest software for just £99.

The Golden Image Scanner had the honour of being among the first pieces of ST hardware to be awarded an *ST FORMAT* Gold rating, way back in issue 18. It used to be widely available, but sadly is no more. It was a reliable piece of kit, the first really popular peripheral, and a bit of ST history. Golden Image UK now supplies the Alfa Data scanner instead.

Zydec is a brand name that seems to have disappeared, although you still see its external

disk drives around. The Zydec scanner was okay, but don't forget that you will need software to go with it – check that any second-hand unit comes with a suitable program. We reviewed this one in issue 44, and gave it 79%.

The Naksha scanner scored an impressive 91% when it was reviewed in issue 44. It used to be supplied with *Touch-Up*, making a fine package indeed. Unfortunately, Naksha has vanished too, but you sometimes see leftover stock on sale at computer shows, usually at knockdown prices. Make absolutely sure that the interface is the right way up before you plug it into your cartridge port, as plugging it in the wrong way round can damage both the scanner and your ST. It has been reported that the Naksha scanner works with the Falcon, but we haven't been able to verify this.



The AlfaScan scanner looks much like Power Computing's hand-held machine, but handles slightly differently, and is switched on via the software, rather than manually.

your scans.

Like the PowerScan, the AlfaScan connects to your ST via an interface which plugs into the cartridge port on the left hand side of your machine, and the connecting lead is again 2m in length. However, the AlfaScan's three rubber rollers are not as good at gripping the paper as the PowerScan's rollers, so you have to take more care to prevent it from slipping sideways.

As a special deal for ST FORMAT readers, the £99 AlfaScan package includes Touch-Up and Merge-It software. If you want Migraph's OCR software as well (see the Optical Character Recognition panel on page 45), the whole package is currently only £119, instead of the usual £139.

STF RATING: 85%

BY HAND

Scans can be made in four resolutions: 100, 200, 300 and 400dpi. The greater the resolution, the more detailed the image, but the trade off is that huge chunks of memory are required, and your picture files get very large and unmanageable. In practise, 200dpi is fine for most purposes.

Once you've selected the appropriate resolution, there are four scanning modes to choose from. 'Text' is suitable for any black and white image, or text. The other three settings are for scanning photos or coloured pictures. They produce dithered images, which use patterns of dots to represent the various shades. Finally, the contrast control on the scanner enables you to adjust the sensitivity of the scanning head.

Selecting the most suitable settings for a particular picture is a matter of trial and error – keep tweaking the settings until you get the effect you want.

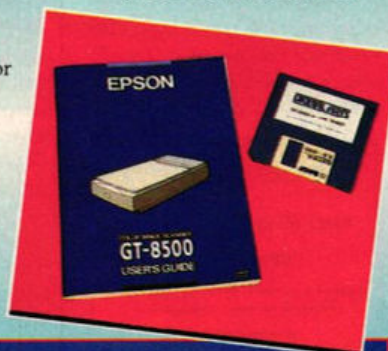


Epson GT scanners

£699-899, System Solutions
☎ 0181 6933355

The Epson GT6500, GT8500 and GT9000 flatbed scanners look like small desktop photocopiers. They're all very similar from the outside, but the more expensive models have better optics and can scan at higher resolutions.

At the back is the mains cable, and a SCSI connector (with a knob for changing the ID). This connection is for Falcon and TT owners. If you have an ST, the scanner connects to your computer via a special parallel lead, which plugs into the ST's printer and MIDI or serial



Epson's GT9000 flatbed scanner is part of System Solutions' top-of-the-range scanning package. It scans in mono, grayscale or colour.

SCANNING ACCESSORIES

If you're using a hand scanner, here are a couple of accessories to look out for:

Scanning trays help you obtain a straight scan. They are moulded plastic trays into which your scanning head fits. Your artwork clamps into place on the base of the tray, and the built-in runners enable you to glide the scanner over it in a nice smooth, straight pass. Migraph makes one, but none of the usual ST suppliers have any in stock at present. You will see them from time to time, though – they cost anything from £40 to £60. They're a bit expensive, really, but they make a huge difference if you have a lot of scanning to do.

At just £9.95, **scanning mats** are much less expensive. They are a cross between a mouse mat and a scanning tray, and are well worth the money, if only because they



This scanning mat holds your artwork still, making it easier to get good results.

hold your artwork still as the scanner runs over it.

The mat is made of the usual neoprene-like foam, and has a clear plastic flap that you place your artwork under. A perspex T-square is also provided, to help you to keep your scanning action straight. It's not as good as a scanning tray, but it is affordable, and available now. Contact Golden Image on ☎ 0181 9009291 for more information.

ports. Note that the Epson scanners are widely available, but as yet only System Solutions does interfaces and software for the ST and Falcon.

Once you've placed your artwork and closed the lid, the scanner does all the work for you – no more pressing buttons or wheeling the unit over your artwork. Everything is controlled via the software.

Obviously these larger, automatic, more accurate

and extremely refined scanners are better for heavy-duty professional use, but you can get most acceptable results with hand scanners too, and at much lower cost. This is just a brief overview of the Epson scanners – look out for a full in-depth review of the GT6500 in a future issue.

SERVICES

If you can't afford to buy your own scanner, you could send your artwork or photos to a bureau. The staff will scan your material and return the image files to you on disk. The three bureaux listed below all offer scanning services, so phone them and have a chat about your requirements. They use flatbed scanners, so you'll get high-quality scans.

- The CY Services Imagesetting Bureau, ☎ 0115 9605377
- AL Publishing Services, ☎ 0181 9920636
- Sumner Type, ☎ 0181 6933364

Make sure the disks they send back to you are formatted for an ST or a PC – your ST reads either of these formats, but can't cope with Macintosh disks. You might need to use Imagecopy or Touch-Up to convert the images into a format your DTP package can use.

These are professional companies and their services don't come cheap (expect to pay a few pounds per scan). If you often need scanning done, you probably ought to consider getting a cheap secondhand scanner of your own.

SCANNING

Here's how to get more than your money's worth from your scanner:

1 Don't use too high a resolution, the results don't always look better. Believe it or not, 200dpi is a good all-round setting, and the resulting image file won't be too large to store on floppy disk.

2 Do move your hand scanner smoothly and slowly – you'll get a better scan. Keep trying until you get the result you want. The only cost involved here is your time, so persevere.

3 Adjust the contrast control on your hand scanner to suit your artwork. The correct setting will depend on the colours and texture of your source material – too high or low will give poor images.

4 Keep the scanning head, and your artwork, clean and dust-free. The rubber rollers will tend to attract and collect fluff, and you certainly don't want any of it getting into the works.

5 Save disk space by using a space-efficient image file format, such as TIF or IMG, which are supported by *Touch-Up* 2.5. Avoid the more ancient, bulky image formats, such as *Degas* and *Neochrome*.

6 If your scanning software can only save in a few older formats, why not use *Imagecopy* 4 (reviewed on page 35) to convert your files to a more modern format? *FaST Club* (☎ 0115 9455250) also supplies earlier versions at very reasonable prices.

7 To avoid 'jaggies' in your scans, make sure that you scan parallel to any vertical lines in the original artwork. A scanning tray or mat makes this easier. Without these, it's down to trial and error.

8 Use a photocopier to reduce large pieces of artwork down to more convenient dimensions before you scan them. Aim for a 4inch-wide image that you can scan in a single pass.

9 The thing most likely to spoil your scans is sideways movement of the scanning head, leading to broken lines and uneven jerky results. Practise smooth, sweeping, downwards movements, or use a scanning tray.

COPYRIGHT & WRONG

Don't get carried away with your scanner – you can't just copy anything you fancy. You could find yourself in trouble under copyright law if you reproduce any material owned by others.

The legitimate use of scanners is to digitise your own

pictures and photos, not rip off other people's work. Always seek the permission of whoever holds the copyright to the image you want to use (usually the artist or photographer), and check with a lawyer if you're using it for commercial purposes.

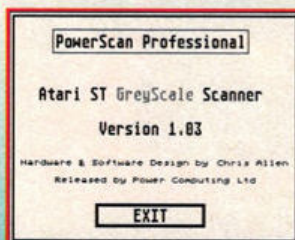
SCANNING SOFTWARE

Scanners are just lumps of opto-mechanical circuitboards without the right software to bring them to life. Here's what you need.

PowerScan

The *PowerScan* software requires only 512K of RAM, and works in all ST resolutions. However, if you use it in ST low resolution with a colour monitor or television, it has the unusual ability to save images in simulated greyscale. It's not 'real' greyscale technically – the software uses the ST's 16-colour palette to represent 16 shades of gray. This facility could be useful for the ST user who doesn't have a mono monitor, but is interested in working with photographic images.

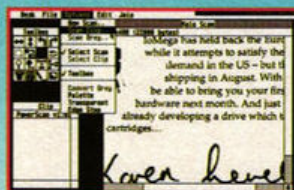
The *PowerScan* software is fairly utilitarian, and hasn't the wealth of features and power found in *Touch-Up* or *GT-Look* 2. However, it's very quick and



The *PowerScan* software can save images in simulated greyscale.



The *PowerScan* software at work on the issue 74 cover, which was scanned at 200dpi, using the finest of its three photographic dithering settings.



See what you miss by not being a subscriber? The *PowerScan* has made a pretty good job of Karen's *Between the Covers* subscribers' newsletter.

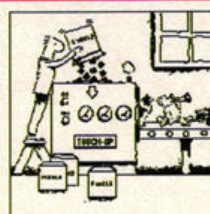
easy to use, and there's nothing wrong with a bit of simplicity. Your scans can be saved in *PowerScan* PWS, *Degas* or *IMG* format, or as C source files for programmers.

The ability to join scans together is built into the software. You can take an unlimited number of scans down your artwork and combine them, but you have to be quite accurate to get everything to line up properly. Images can be inverted, flipped and so on, but the rudimentary pixel editing facilities mean that you'll have to export your scans into an art program for any major image manipulation.

STF RATING: 75%

Touch-Up

The *Alfa* data scanner really scores on the software front, because it comes with the



Touch-Up Copyright © 1994 Migraph, Inc. V2.52

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Authors: Paul Mazurek & Brian Harder



Touch-Up is widely acclaimed as the best program for hand scanners.

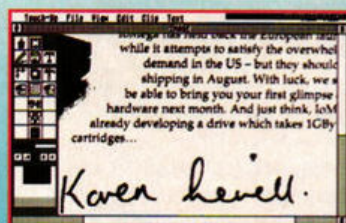
latest version of *Touch-Up* (which now incorporates *Merge-It*). Originating from Migraph, an American software house specialising in serious applications, it is generally considered the best program for hand scanners. The processing power of *Touch-Up* is amazing, and it can even be used as a mono drawing program. It saves images in virtually every graphic format, including those used on the PC and the Macintosh.

Touch-Up 2.5 requires an ST with 1MByte of memory and a double-sided disk drive. The *AlfaScan*/*Touch-Up* combination produces monochrome (black and white) pictures only, so it works best with an Atari SM124 or SM125 monitor; however, it can still be used with a colour monitor or television screen.

When you consider that the whole *Golden Image* package, comprising the scanner plus *Touch-Up*, costs only £99,



Part of the front cover of issue 74, scanned at 200dpi. Dragging the black oblong (lower left) enables you to move around the image.



Text mode on the AlfaScan produces good images too. If necessary, you can adjust the contrast control on the scanner head to get a darker or lighter image.

you'll realise what excellent value this package is.

Golden Image also supplies *Touch-Up* as a stand-alone program (£35). It works with a range of other hand scanners, and can also be used as an art program, so you might want to treat your scanner to a copy.

STF RATING: 92%

GT-Look 2

This top-of-the-range software comes with System Solutions' Epson flatbed scanner packages, and makes life really easy. Produced by the people who brought you *DA's Layout* and *DA's Vector*, it runs on any ST, TT or Falcon.

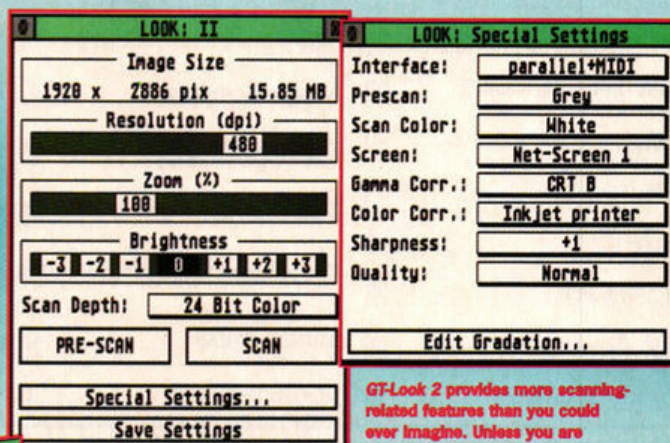
The really good news is that even a 512K machine can

run it with no problems. Scanning usually needs lots of RAM, because large images take up lots of memory, but this software cleverly enables you to scan direct to disk. Because your Atari doesn't have to hold the image in RAM, it only needs enough memory to run the program. You can scan in mono, grey-scale or full colour, in a wide range of resolutions. The software further enhances your images by simulating 'virtual' resolutions of up to 1200dpi.



GT-Look 2 enables you to 'pre-scan' your artwork, then zoom in on the area you want and fine-tune all the settings before you take the final scan. As well as saving your scans in a range of standard ST formats, it supports TIC. This format is specific to DA's range of artwork software, and enables you to load a 'vir-

The pre-scan facility enables you to pick out the particular area you wish to scan.



GT-Look 2 provides more scanning-related features than you could ever imagine. Unless you are extremely imaginative, that is.

tual' image, without importing the whole picture file. A representation of the image is displayed, saving memory and speeding up operations.

On the down side, both the software and the manual are in German. However, it's still very easy to use, and English translations are expected soon. Watch for a full review in the near future. *stf*

FINAL SCORES

PowerScan package	80%
AlfaScan package	91%
AlfaScan with Full OCR	92%

OPTICAL CHARACTER RECOGNITION

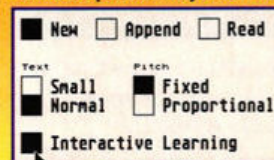
Migraph's *Full OCR* is available from Golden Image UK, either on its own or bundled with the AlfaScan. It 'reads' printed text from a page and translates it into a text file, which you can import into a word processing or DTP application. It's very useful if you have a lot of boring re-typing to do.

Full OCR requires an ST with 2MByte RAM and a hard disk. The text to be translated has to be scanned first, but you don't actually have to own a scanner, as it can import any IMG or TIFF file, even if it originated on another computer. You can also run a scanner directly from *Full OCR*. The best resolution depends on the size of the text: 10- to 18-point text is best scanned at 300dpi, but smaller or larger text can be dealt with by scanning at 200 or 400dpi.

When you have some text on the screen, you can select the area you want to process by drawing a re-sizeable frame around it. Cleverly, the frame does not have to be rectangular in shape, enabling you to cope with text which contains illustrations.

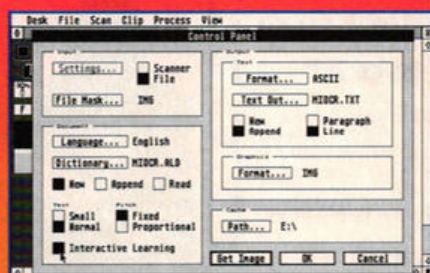
Full OCR recognises many common typefaces automatically, and can be trained to read new ones - this requires some assistance and input from your good self. The program cannot cope with major variations of size within

the text - for example, a large heading in the middle of a chunk of smaller text will confuse it.

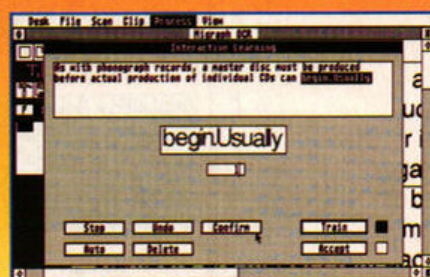


Full OCR is a superb program: it works quickly and smoothly and, despite its power, is terribly user-friendly. It used to cost over £200 on its own, so as part of Golden Image's £119

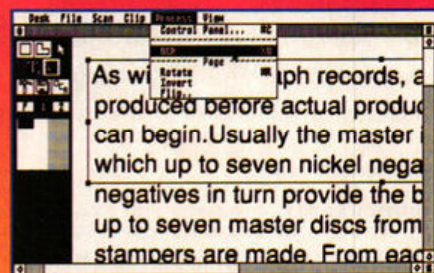
scanner package - which also includes a hand scanner and *Touch-Up* - it's a fantastic bargain. You can also purchase it separately for £49.95. **STF RATING: 87%**



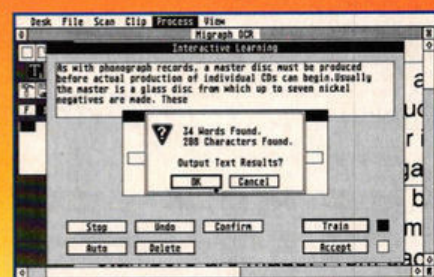
1 *Full OCR*'s Control Panel enables you to set various options. You can also specify the name of the text file that is output once the text has been translated.



3 The closely spaced 'll' in the word 'usually' might cause problems, but *Full OCR* gets it dead right. In training mode you are asked to confirm its decisions.



2 Draw a frame around the portion of text that you want to read, then click on OCR in the menu. The software will start processing the enclosed text.



4 Once the software has read your text, just save the file to disk. *Full OCR* is multilingual - English, French, German and Dutch dictionaries are supplied.

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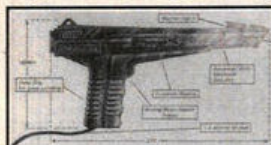
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PD & Shareware

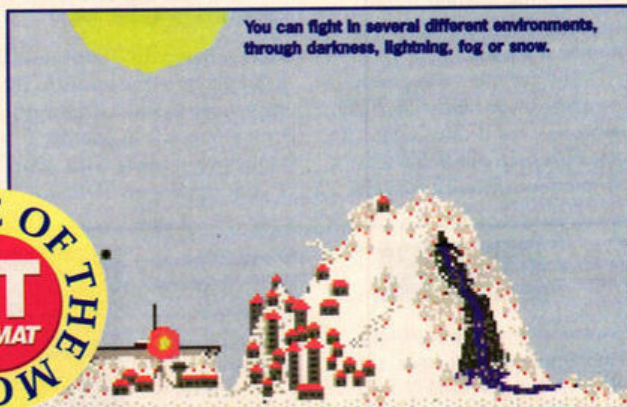
Nick 'The Boy' Peers brings you another collection of praiseworthy PD and splendid shareware. And he's not bitter. Well, not really...

Skyduel

Floppyshop, Disk GAM4951c
All Ataris (except STs with
TOS 2.06), joystick required

Skyduel is a fantastic game for one, two or three players. It pits two desperate forces against each other in a battle for supremacy.

Both sides have helicopters, fighter planes and cannons at their disposal. You can either aim your



cannon at the opposition, or launch your airborne vehicles to do battle with machine-gun fire, missiles and bombs.

Watch out for some annoying distractions: alien spacecraft attempt to whisk you off into space, high-powered jets keep getting in the way, and the occasional balloon drifts over. The balloons can be made invincible, and a third person can take control of them, bombing either side (or both, if he is so inclined).

The graphics are a little small and crude, but the back-

drops are detailed enough and play an important part in the game. The sound effects are best on the STE/Falcon, but it's in gameplay and addictiveness that *Skyduel* scores its points. Whether you take on the computer or a friend,

you'll soon get hooked.

The controls are a little unresponsive, but well-defined. Although flying the plane will take a lot of practice, the other (less powerful) forces are easier to control. If you choose the helicopter, you won't have too much trouble lifting off, landing and navigating the skies while blowing your opponent to pieces with your guns, bombs and missiles.

From the slick opening menu and options to the actual battles themselves, this is a well-thought-out and brilliantly executed game. *Skyduel* is something you'll return to over and over again. In fact, I think I'll have another quick blast myself (*Oh no you don't, it's my turn - Karen*).

STF RATING: 92%



Rat-a-tat-tat!
"Take that Hairy,
you screamin'
blood-thirsty scoundrell
Whoops, that was the hill." (Calm down,
Nick. It's only a game - Karen).

WHAT GOOD VALUE

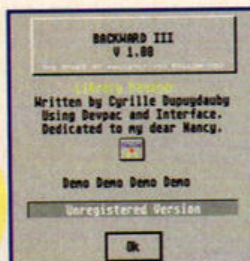
For good measure, this disk also contains *Bugs* - Dave Munsie's well-executed *Centipede* clone - and *Tanx*, a slickly presented two-player game where you and a mate blast hell out of each other on a grid. But let's be honest, *Skyduel* is worth all the acclaim on its own. Don't forget to register - it's shareware.

Backward 3

Wonder Disk 75 or Merlin
PD, Disk MPD 2314
Falcon only

Backward 3 is the latest version of the acclaimed ST emulator for the Falcon. Although not absolutely foolproof, it does enable Falcon owners to access a large number of those old ST games which would otherwise be gathering dust.

Backward in its latest incarnation comes complete with several preset configurations for use with specific games. The demo version only provides 20 configurations, but registering (Fr100, or about £13) gets you



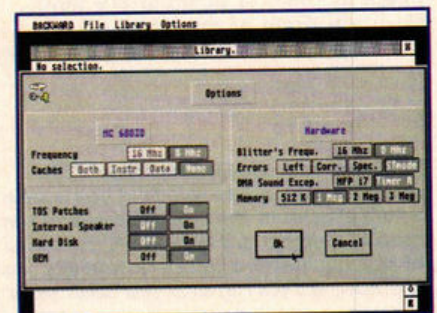
extra presets. The full version also enables you to store up to 2,000 of your own configurations, so it's worth having.

Backward is quite easy to use - the preset configurations should give you some idea of how it works, but it's a case of trial and error when it comes to discovering just how much of your

Registering shareware products is the best way of combating the 'there are no new releases for my Atari' syndrome. You know it makes sense, so just do it.

software it will enable you to use. It's certainly better than a kick in the teeth, and is excellent value for money for Falcon owners who are missing their old ST games.

STF RATING: 88%



If there isn't a preset configuration for your favourite ST game, it's easy to create your own. The full version enables you to store up to 2,000 configurations.

Sands of Mars

LAPD, Disk L124 (£3)
All STs

Sands of Mars is essentially a strategy game. It pitches the might of Earth's Martian Mining Corp against 'alien' Martians who have, surprisingly, taken exception to your efforts to rid the red planet of all its natural resources.

You start off by allocating resources – in the form of cities, spaceports, factories and mines – before setting up a complex industrial organisation.

Most of the game is spent ferrying raw materials from one place to another, where it is



converted into profits for your employers, or extra facilities for your people on Mars. Your population requires extra cities as it grows, and defences to protect them. You also need a supply of medical kits in case the dreaded Martian plague hits.

After a while you'll find yourself under more direct attack from the Martians, but don't worry, you have plenty of firepower to see the aliens off. Crumbs, anyone would think the wretched creatures owned the place.

Sands of Mars is superbly presented (spot those *Star Trek* samples), but it can all get a little confusing, not to mention monotonous. Until the aliens



"The cruel barren landscape opened up to Flight Cadet Peers and his hopper. It was the perfect place for a bitter man..."

attack, all you do is shift raw materials from the mines to the cities, factories and spaceport, in an attempt to juggle the population's needs with those of your employers. If you're

into such games, or still miss the days of the British Empire, it's worth a look. However, if you prefer lots of action, you'll be sorely disappointed.

STF RATING: 69%

Sentences

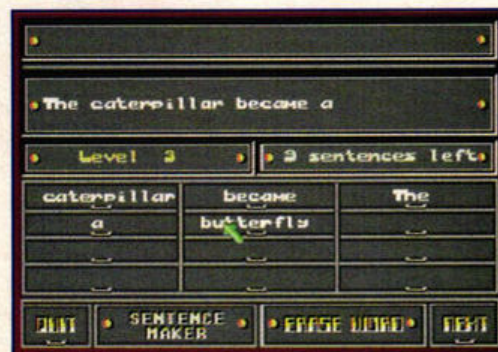
Floppyshop Disk FWG20c (£3)
All STs (TOS 2.06 machines
and Falcons require STOS Fix
from Cover Disk 67), colour
monitor required

Sentences is a simple educational program for small children. A list of words is provided, and you must click on them in the correct order to form the sentence at the top of the screen.

There are four levels of play: the first two give you a sentence to copy and the correct number of words; level three removes the sentence at the top of the screen; and level four adds several

superfluous words (none of which ever change) to the bubbling pot.

Sentences is well presented, but there are several niggling problems. The main one is that it fails to erase the last word in a sentence when asked to do so, which causes confusion. Also, because the sentences are picked at random, they sometimes repeat themselves. Other sentences are difficult to construct because they can be written in two ways (for example, *Sentences* recognises, 'A tad-



After the birds and the bees, we move on to the caterpillar that became a butterfly and fluttered off into the sunset.

pole is a young frog,' but not, 'A young frog is a tadpole').

A nice try, but not a stunning success. The fact you can construct your own sentences will give it some longevity, but it's severely flawed.

STF RATING: 59%



An interesting concept, but *Sentences* needs a lot of work done on it if it's ever to become a classic.

DATABASES

There are a number of databases designed for a specific purpose in the public domain or licencedware fields. Here are three of the latest.

PERSONAL GOLF BASE
Floppyshop, Disk FWG35c (£3)
All STs (TOS 2.06 and Falcon with STOSFix 3.0),
colour monitor

This licencedware effort is designed for golfers who like to keep precise records of their exploits in the golfing world. You enter the details of your favourite course(s), and then record your results for posterity. There's a section for recording your best shots, and you can enter your handicap, or even keep a record of your golfing equipment and reminders.

Personal Golf Base is limited in that each time you wish to view a course or game you



The main screen of *Personal Golf Base*. Nice set of clubs, shame about the program. Now, where are my groovy checked trousers?

must load it in from disk. Even if it's already resident in memory, you must re-load it from disk. As you can imagine, this quickly becomes annoying. The printout is also nothing to write

home about, and certainly not worth putting on your wall. Although the program looks polished, even diehard golfing fans may find it disappointing.

STF RATING: 58%

FISHERMAN'S DATABASE
LAPD, Disk M175
All STs (TOS 2.06 or Falcon
with STOSFix), colour monitor

This fisherman's database promises much, but falls down on several key points. The presentation is awful, and the

main program itself shows a distinct lack of planning and forethought.

You enter each fishing trip separately, with information ranging from the venue itself,

Counter Atak and Amaze

Floppyshop, Disk GAM5122c
Counter Atak: all STs,
 joystick required
Amaze: all Ataris

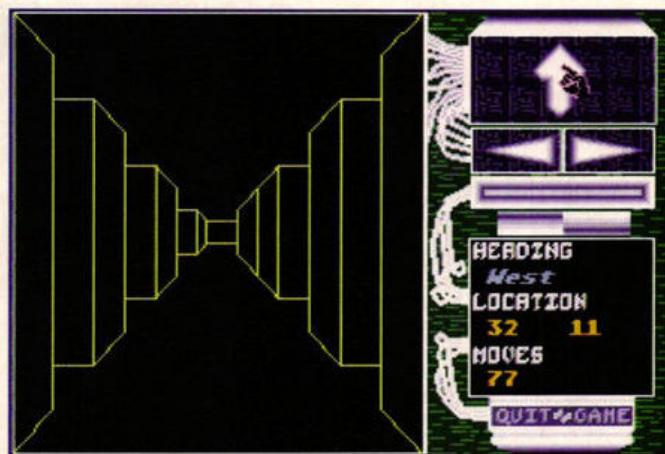
Counter Atak is a colourful and intriguing strategy game. You must place counters of varying colours on to the 10x10 grid, ensuring that no two counters of the same colour sit next to

each other. Depending on the level you select, you must avoid placing these counters horizontally, vertically, diagonally, or in various combinations thereof. There's a time limit as well, so don't dither.

Behind the slick presentation and clear sampled effects is a game that's intensely frustrating, but in the best

possible way. It's certainly a worthy addition to your puzzle collection.

Amaze is a slick re-rendering of the old *Maze* game that owners of 8-bit machines, such as the BBC and Spectrum, will remember. There is, after all, only so much you can do with a wireframe 3D

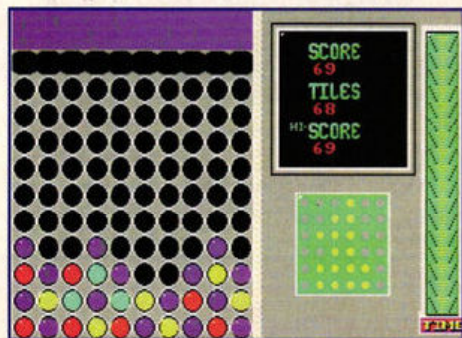


The ultimate in frustration. If only I had a ball of wool, it would be easier to avoid retracing my steps. Some cotton wool in my ears would be good, too.

maze, and this game does the best it can with the concept. The sound effects which accompany every move quickly become annoying, but it's good for ten minutes of enter-

tainment. Some keyboard shortcuts would have been welcome, though.

STF RATING:
 80% (*Counter Atak*)
 57% (*Amaze*)



One more pink counter and I'm stuffed. Guess what colour the next counter turned out to be...

The Curse of Bolda

Floppyshop, FWP49c (£6)
 All STs (not TOS 2.06),
 1MByte, joystick required

Kev, from the platform game *Kev's World* (STF 73, 76%), is back! Thankfully, this time around his girlfriend is nowhere to be seen.

In *The Curse of Bolda* you progress from level to level simply by grabbing the required number of gems and flicking enough switches to make the exit accessible. However, there are loads of



extra features that make *The Curse of Bolda* much more than a sequel to the original. It

features eight-way scrolling, and you can shoot baddies and collect loads of bonuses and power-ups – such as temporary invincibility, a jet pac, and a pick axe to enable Kev to scale walls. Once again, however, the gameplay is somewhat sluggish, even on an STE.

A nice touch is the inclusion of level codes, which enable you to skip earlier

Let's all go climbing with Kev, hero of *Kev's World*, and now *The Curse of Bolda*. His next adventure is probably going to be *Kev III: Conquest Everest*.

levels. Each level is well planned, too – not all the switches improve your position, and quite a bit of logical thinking is required in order to make progress.

The Curse of Bolda is a colourful game let down by

slow gameplay. The graphics are well drawn and the sound is bearable (STFM owners only get the music). However, £6 is a lot to shell out for a game which suffers from a severe lack of speed.

STF RATING: 66% ➔



through the cost of a day ticket, weather conditions and method of fishing, to your best catch and general comments about the trip. Unfortunately, there are no set criteria for each

field. The example files provided with the program expose this massive shortcoming, with entries for the temperature ranging from 'Hot' through '8 degrees' to 'Cold'. Similarly, the depth measurements are given in feet in one record and metres in another.

What this program requires is a more controlled means of entering your data. So, for example, you could be given five choices when selecting the water conditions, ranging from clear through cloudy to dirty or even polluted. Back to the drawing board, I'm afraid.

STF RATING: 40%

FUCHSIA DATABASE
 LAPD, Disk M176
 All STs

This program takes custom-designed databases to their limit, but unless you're a fuchsia fanatic,

you won't want to be within ten miles of it. This is a pity, because it's undoubtedly the best of the databases reviewed here. It's

well presented, possesses a powerful search engine – custom-built for the task at hand – and has a definite polished and finished feel to it.

Nevertheless, it has the same drawback as the *Fisherman's Database*: you can't enter data by selecting from a list of possible entries. This leads to confusion if you don't establish strict rules for your data. It also takes ages to load in records from disk.

Nevertheless, the program should keep fuchsia fanatics happy. It might even be worth bribing the author to produce a slightly different database if your interest lies in azaleas, hardy perennials or plastic palms.

STF RATING: 64%



Fuchsias my foot! I want a database to keep a record of my bonsai tree collection (But, Nick, you don't have a bonsai tree collection – Karen).

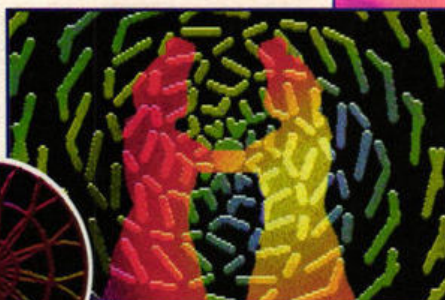


The Lost Blubb

Floppyshop, disks S-F
5239-5242 (four disks)
Falcons, 4MByte RAM and
7MByte of hard disk space
required (VGA compatible)

The winner of the recent Fried Bits Coding Convention III, *The Lost Blubb* is a superbly produced demo that lasts four minutes. Visually stunning, it even impresses in the audio department. The dance music is surprisingly palatable and clearly sampled.

The focus is on a young woman dancing, usually in silhouette, although



occasionally more detail can be seen. A wide variety of backdrops are employed to flesh out the demo, and it works well. With a little more polishing, it could almost be released as a pop video.

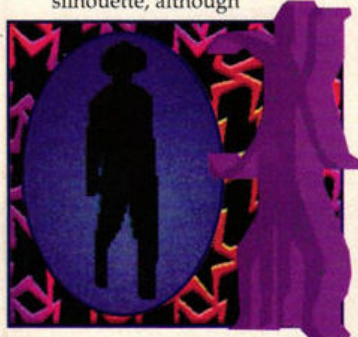
The only drawback is the



size of the whole thing. Although you're getting a very impressive four-minute demo, you might think twice about shelling out £7 for a non-interactive experience.

Nevertheless, if you're a Falcon-owning demo junkie, this is one composition you ought to have.

STF RATING: 88%



Rockin' MOD Tracks

STellar Atari Club, Disk MOD84
All Ataris, STE/Falcon recommended

Oh wow! At last, a MOD disk with some heavy guitar sounds on it. This is a collection of MOD tunes for rockers. There's a Led Zeppelin track (undoubtedly the highlight of the selection), plus

another five tracks that exude rock, and the odd bit of funk (*NSP Racer*) and ambience (it's got a devil in the title). *Rockin' MOD Tracks* is low on quantity, but high on quality, so get your blow-dried poodle David Coverdale haircut out and re-invent the cult of the air guitar.

STF RATING: 73%

Total Trek Disk

Locutus PDL, Disk LFC4
All Ataris (except the
games), colour monitor

Remember the *Dr Who* disk which scored 55% in issue 74? This is more of the same, except that it features *Star Trek*. Again, the text files offer a detailed overview of both the classic and the *Next Generation* series, although it

seems to only reach the beginning of the fifth series of the latter before jumping to a brief resume of the latest movie. *Deep Space Nine* and *Voyager* aren't mentioned at all.

There are also six *Degas* PII pictures, eight clip-art files and two games. As with the *Dr Who* disk, the pictures are not particularly

brilliant, although the clip-art images of the various ships are well scanned.

The two games are both variants on the same theme – the second (which requires dearchiving to a blank disk) features the crew of the *Next*

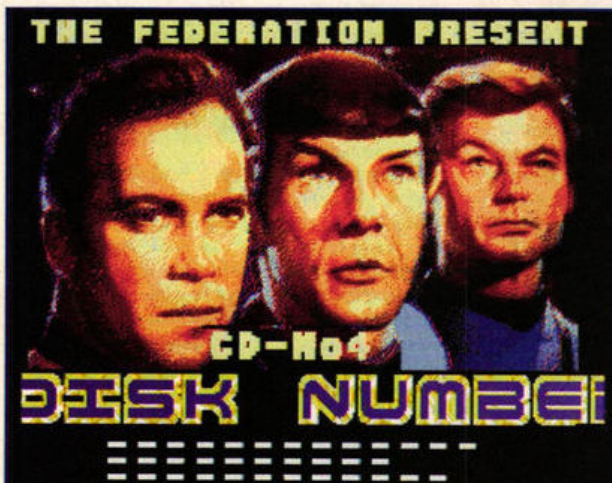
Generation in its first appearance on the ST. Unfortunately, the age of the game shows – it won't run on the STE or Falcon. It's also rubbish. Ready phasers, arm photon torpedoes, fire.

STF RATING: 46%

PD & SHAREWARE ROUND-UP

Missed a recent *ST FORMAT*? Once you've chastised yourself with a large stick, check out our guide to the best programs reviewed in the past few months:

TITLE	PD LIBRARY	TYPE	ISSUE	RATING
ST Guide 1.3	HENSA	Hypertext	73	95%
GEMBench 4.03	HENSA	Benchmark utility	72	93%
Speed of Light 3.8	Cover Disk 72	Graphics utility	71	93%
NovaDisk 6	NovaDisk	Disk magazine	71	92%
Warp 2	Keefy's PD	Disk magazine	73	92%
MultiCAD	Floppyshop	CAD package	72	91%
Bombzai	Comp Dungeon	Game	73	90%
Freedom 1.14	HENSA	File selector	71/74	90%
Power 26	Power PD	Disk magazine	72	89%
Asteroidia	LAPD	Game	72	86%
Toys on Disk	GL-PD	PCX clip-art	71	86%
Thing 0.54E	HENSA	Desktop	74	86%
KIVI 1.41	HENSA	Off-line reader	74	85%
Grafix PD Demo	Power PD	Program demo	71	84%
OASIS	Demon	Internet shell	73	84%
Square Off	Comp Dungeon	Game	73	84%
525 v2.1	HENSA	Sample convertor	73	84%
ESSCode 6.4	HENSA	File convertor	74	83%
Cartoon Capers	Power PD	Game	74	82%
Stone Cold Sober	Floppyshop	Game	72	81%
Ghostlink	Riverdene	Network utility	71	80%



Do not approach this disk. It is quarantined. Using this disk will not enhance your life as a Trekker. You have been warned.

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ST Answers

Clive Parker dons his 1983 C&A anorak and gets all technical about STs, add-ons and the Internet...



NO JOY

Q I have a problem with my joystick: the down function doesn't work. I have checked its internal connections and they seem to be okay, so I suspect that it's a hardware problem with my ST. What do you think?

Kevin Tennant, Salisbury

A There are two possible causes for this problem. First, the wires inside the joystick cable near the 9-pin D-plug may have broken. This is the most common problem. To check for broken wires, all you have to do is plug in another joystick to see if it works okay. Borrow one from a friend and test it – if his works, all you have to do is replace your old joystick.

If the second joystick shows the same symptoms, you have a problem with the connections inside your ST. Repeated plugging and unplugging of joysticks can cause the soldered connections to break. Contact a local computer repair centre, or if there isn't one near you, contact one of the ST repair centers (see STF 71, page 22). It's a good idea to ring around and see who offers the cheapest quote, because prices can vary. The repair should cost you around £20 at a local shop, or anything up to £50 if you send it away for repair.

SERIAL KILLER

Q I have an old Castle printer with a serial port. Can I convert it to a parallel printer so I can use it with my ST?

James Hindle, Sheffield

A Oh dear, James. I hope you didn't pay too much for the Castle printer, because it's unlikely you'll ever be able to use it with your ST.

When buying a printer for your ST, you must always ensure that it is a parallel (Centronics) printer, and it's a good idea to make sure that it is no more than two years old when you buy it. This is to ensure that it has a built-in Epson emulation, or other common emulations that are supported by ST software.

Call First Computer Center on ☎ 0113 2319444 for details of its range of ST compatible printers. You can buy a new Star LC90 printer for just over £100.

DOWN, BOY

Q How do I get a Fidonet address, and do I have to pay for it?
Steven Palmer, Durham

A All you have to do to get a Fidonet address is to join a local BBS (bulletin board service) that acts as a

Andy Curtis and Frank Charlton proudly present...

[illegible]

NEW USERS: Registration is FREE!! Please Enter your FULL NAME below.
PLEASE NOTE: First AND Second name required, NO ALIASES accepted!!

There has been a terrible accident recently

Despite recent problems with vindictive flashes of lightning knocking out his hard drives, Andy Curtis is determined to restore the Ad.Lib BBS to its former glory.

Fidonet node. Any messages that you leave in the Fidonet area are automatically sent over Fidonet. Call the Ad.Lib BBS on 0191 3702659 – it's quite close to you and has links to numerous networks dealing with the ST.

VGA MODE

Q I have bought a PC VGA monitor and I want to know if I can use it to display the high res mode of my 1040 STE. And if so, what kind of cable I should get? I have a Taxan Super Vision 14-inch monitor, model SV-780EV.

Birnie Kee, London W2

A Yes, it should be possible to use the monitor in high res mode. Contact Meedmore (☎ 0151 5212202) with details of the monitor and your STE. If Meedmore doesn't have a ready-made lead, its staff can make one for you. The lead should cost around £15-£20, depending on the connectors.

BUY A FALCON

Q Can I get a 68882 coprocessor and fit it into my STE? I want to know if it will speed games up so much that they become unplayable. And what's this I hear about a 16 million colour

ON THE INTERNET AND AROUND THE WEB

I'd like to thank you for your Internet feature in issue 65, it was actually quite useful and easily understandable. That is, up to the point when you started talking about Demon Internet services, which I've never heard of.

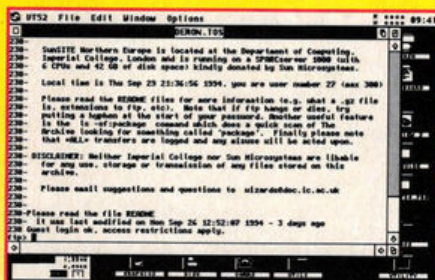
I have a 520 STFM, modem, phone line and some decent comms software. Yet this company tells me that I can connect to the Internet via its service for a monthly cash fee. Do I really need anything else? And what the hell is this TCP/IP, KA9Q, e-mail, Usenet, Telnet and FTP software supplied by Demon? Do I really need it to connect to the Internet?

And do I need to upgrade to 1MByte of memory? I've been getting along okay with 512K for a while now.
Heikki Mylläri, Kuivaskylä, Finland

stf: Demon internet is a UK company which provides access to the Internet. It enables you to connect to the Net by dialling into one of its connection points, known as a PoP (Point of Presence). You can't connect to the Internet unless you have an account with an Internet provider. Unfortunately, I'm not familiar with any Finnish access providers, but you should be able to find one by checking through some of the Finnish PC magazines.

And you do need the TCP/IP and KA9Q software to connect to the Internet, because all Internet services use their own unique transfer protocols. These are called Transfer Control Protocol and Internet Protocol (hence TCP/IP) and are essential if you want to use the Internet. You should have at least 1MByte or memory for

accessing the Internet, and a hard drive is advisable. It doesn't cost that much to upgrade.



You need special software to access the Internet. You can't do it with an ordinary comms program.

graphics board? Do some games use it?

R Birks, Pontefract

A You can't fit a 68882 co-processor into the STE because there's nowhere for it to be installed. The Falcon030 has a built-in socket for the co-processor, but there's no similar slot in the STE.

Graphics cards are rather expensive and are primarily designed to work with serious image manipulation software, not with games. Because so few STs have added graphics capability, no ST games have been written that use more than the standard palette of the STFM and the STE. Falcon030 games are written to support 256 colours.

If you want more power, you may be better off getting a Falcon – an ST graphics card will cost about as much as a Falcon. Call System Solutions on ☎ 01753 832212 for details of its graphic cards, and for Falcon030 prices.

SURROUND ME

Q Many Falcon030 programs say they can use surround sound. How

would I go about connecting up four or five speakers to my Falcon?

Robert A'Court, W Midlands

A You wouldn't, not directly. What you need to get is a surround sound decoder with built-in centre and back speaker amplifier, and the centre and back speakers. You'll also need a reasonable stereo system with a good amplifier and speakers.

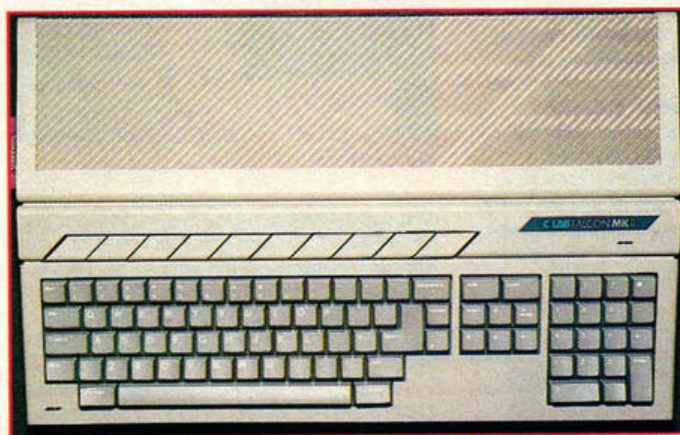
You connect the stereo sound output from your Falcon030 to the stereo input on the decoder. A pair of cables for the main speakers run from the decoder to an auxiliary input on your main hi-fi system, while the centre and back speakers are powered directly from the decoder's built-in amp.

You can get a Sony surround sound decoder and three speakers from Dixons for around £250.

By the way, I'm curious: which Falcon030 programs have surround sound?

ST NETWORKS?

Q Do you know where I can get network hardware for my STs? I



A new Falcon030 computer costs about as much as an ST graphics card with 16.7 million colours, so choosing which one to buy is really a question of your needs.

Will there ever be a graphical Web browser for the ST or the Falcon030? I would like to know because I have both machines. There have been a lot of rumours and hints, but nothing concrete has appeared yet. Will we have to give up our beloved Atari machines just so we can get on the World Wide Web?

Jason Munter, Swindon

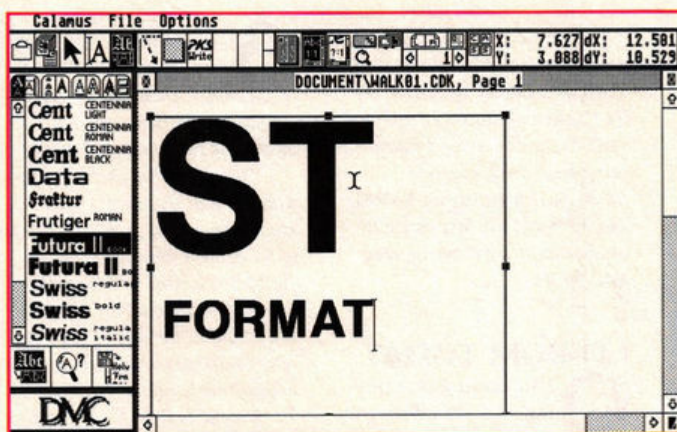
stf: You'll be glad to hear that two Web browsers for the ST are almost ready – they should be available by the end of September.

Meanwhile, System Solutions is about to unleash Linux for the Falcon and TT030. Linux is a version of UNIX, but it needs an 68030 processor to run which restricts it to the two Atari 030 machines. Linux for the Falcon is supplied

on a CD-ROM disk with a completely GEMed installation program – in English – and all the files you need to get up and running on the Net.

The disc also includes X-Windows for Linux, a graphical interface for UNIX. This means that you can use the UNIX Netscape Navigator Web browser on your Falcon030 or TT030. This is all very early news, so keep an eye on the News pages for more detailed information.

You might also like to check out our two-page special next month where we'll be looking at all the various browser options in more detail.



Calamus 1.09n is the cheapest way to get into DTP, and it's a great program too.

remember a feature you wrote in an old issue of ST FORMAT talking about something called PowerNet (I think) from Ladbroke Computing, but it no longer sells that system.

Adrian Jones, Cardiff

A My latest information is that ARMAC Software can supply PowerNet, MIDINet and LanNet. Call ARMAC on ☎ 01798 342250 for pricing and availability.

DTP MAN

Q I need a decent word processor program so I can create good looking documents. What do you suggest? I want software good enough to create something that looks like a newspaper, but I can't afford to pay out too much.

Simon Boyle, Reading

A There are a couple of options for you, Simon. Papyrus Gold and That's Write 3.1 are document processors that enable you to mix text and graphics on the page, but they are not true DTP (desktop publishing) applications.

Papyrus Gold costs £129.99 from HiSoft/AVR (☎ 01525 718181) and That's Write 3.1 costs £129 from Compo Software (☎ 01487 773582).

Another, less expensive option is Calamus 1.09n from JCA Europe. It only costs £59 and it's a true desktop publishing program with a multitude of features and functions. You will need at least 1MByte of memory and a high resolution monitor for Calamus, but this is the case with all DTP packages or document processors. Call JCA Europe on ☎ 01734 452416.

DISK SPACE

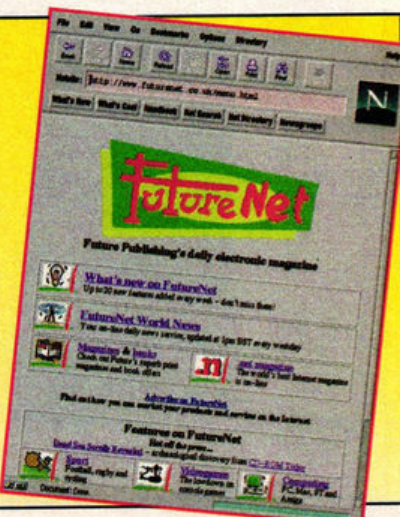
Q I have some disks in my box which are labelled 1MB disk. Does this mean I can store 1MByte of data on them? Can I use higher capacity disks on my 1040 STE?

James Bonham, Norfolk

A You can format 1MB disks to 720K from the desktop of your STE, or to about 800K if you use a disk formatting program from a Public Domain library.

If 800K per disk isn't enough, ▶

This is the UNIX version of Netscape Navigator running on our Sun workstation at FutureNet. It could soon be running on your Falcon.



you'll need to install a high density (HD) disk drive. This enables you to use HD disks (1.44MByte, sometimes marked as 2MB). See the Customise Your ST feature in issue 71, or if you don't fancy doing it yourself, contact Analogic Computing on ☎ 0181 546 9575 and ask how much it would cost to have the upgrade done for you.

CD-ROM TODAY

Q I am considering buying a CD-ROM drive for my STFM, but I am a bit concerned about the lack of software support. After all, several discs of PD software isn't exactly a great leap forward in the world of multimedia, is it?

What I want to know is this: are there any plans for ST-based full-motion video games or encyclopedias? And if not, why not?

Gareth Hughes, Glynceiriog

A Unfortunately, it's unlikely that there will ever be any specific ST-based games, encyclopedias or similar applications on CD-ROM, for two very good reasons.

The first is the user base. It's unlikely that there will ever be more than a very small percentage of ST owners who own a CD-ROM drive. This will limit the potential sales of a CD, and it's unlikely that the software developer could ever hope to recover his development costs.

Second is the ST's resolution. Full-motion video games and encyclopedias require lots of colours at high resolutions, which the ST patently does not support. And, with the dearth of Falcons in circulation, and no more being manufactured, it's unlikely that any Falcon-specific applications of this type will appear.

It's not all gloom though, Silmarils has produced CD-ROM versions of Robinson's Requiem and Ishar 3 for the Falcon featuring

ing full-motion video (contact System Solutions, ☎ 01753 832212, for more information).

It's All Relative has also produced several utilities which make it possible to read files from PC CD-ROM disks (see the News pages for more details) and we'll be reviewing the SARA/Grolier Encyclopaedia CD next month.

BOOK ME

Q I am trying to write a program which utilises the extra hardware capabilities of the STE. The only problem is that I am stuck because I can't find any information about the STE hardware. What I need is a book that describes the ST and the STE hardware, and how to access it, in detail. I have the Atari Compendium from HiSoft, but it only covers the subject lightly.

Do you have any suggestions? Steve Ward, Weymouth

A The only book I can think of that covers Atari hardware is called ST Internals. However, it only covers the Mega ST and STFM machines, and it's been out of print for several years.

Your only other option is to contact Atari UK and ask for its software development documentation for the STFM and STE - if it still has any. It will probably charge you for the documentation, too, and it's likely to cost you about £100. You can contact Atari UK on ☎ 01753 533344.

E-mail your questions and tips to Clive at: cparker@futurenet.co.uk or clive@netmag.cityscape.co.uk (please put STA in the subject line), or post them to: ST Answers, ST FORMAT, Future Publishing, 30 Monmouth St, Bath, Avon, BA1 2BW

A FALCON IS THE HAND IS WORTH...

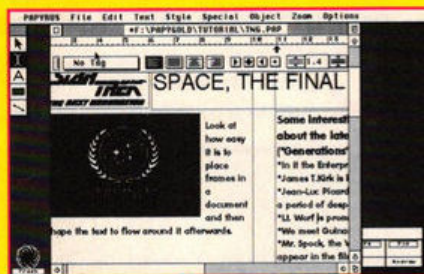
I am thinking of trading in my STFM for a Falcon030 and getting a decent printer and That's Write 3.1. I have a few questions:

1 Is That's Write 3.1 fully Falcon compatible? 2 Does That's Write 3.1 have printer drivers for the HP-520 inkjet and the Star LC-20 printers? 3 Can you tell me where I can buy That's Write 3.1. I haven't seen it advertised. 4 Is the HP-520 a reasonably good mono printer? 5 Does First Word Plus work on the Falcon? 6 Do languages like ST Basic and STOS work on the Falcon? 7 Do art packages like Canvas work on the Falcon? 8 Does Backwards only work with games? 9 Will some ST games run on the Falcon without Backwards?

10 The Falcon definitely multitasks, doesn't it? B Ahern, Glasgow

stf: 1 Yes, That's Write 3.1 is fully Falcon compatible. 2 That's Write comes with loads of printer drivers, but you have to buy an extra disk for HP inkjet printers. 3 You can buy That's Write from Compo Software on ☎ 01487 773582. 4 The HP-520 inkjet is an excellent printer, perfect for document processing.

5 First Word Plus does work on the Falcon, but why would you want to use it? It is ten years old, after all. 6 ST Basic and STOS do not work on the Falcon. However, HiSoft Basic 2.10 was specially written with 68030 libraries for



Papyrus: high res on the ST or VGA mode on the Falcon.

developing software on the Falcon. You can get HiSoft Basic 2.10 from HiSoft on ☎ 01525 718181. 7 Canvas doesn't work on the Falcon, but there are several Falcon-specific art programs, such as TruePaint (£39.95) from HiSoft (☎ 01525 718181) and Pixart (£34.95) from the FaST Club (☎ 0115 945 5250).

8 Backwards is primarily for games use as it resets the Falcon to load auto-running games. 9 Many games developed in the last 18 months work on both the ST and the Falcon, although you should opt for Falcon-specific versions. 10 Yes, the Falcon definitely multitasks.

I've decided to upgrade to a Falcon030 and am wondering about software to run on it. When a program is listed in ST FORMAT reviews as ST mono only, how does it run on the Falcon? Will it run in Falcon VGA resolutions? I am thinking specifically of Papyrus and Steinberg Pro 24. Colin Daniels, Havant

stf: Almost all ST high resolution software runs on the Falcon030 in either the ST high resolution emulation mode or in the Falcon's own high resolution VGA mode. You just have to test each of your high resolution applications to see which ones work.

Papyrus is designed to run on both the Falcon and the ST, so it works perfectly in VGA mode on the Falcon. Steinberg Pro 24 runs in ST high resolution emulation mode.



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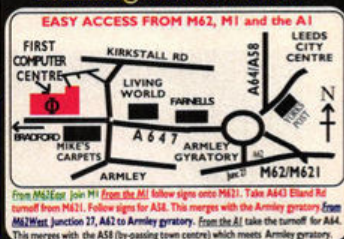
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Mac Marsden boots up, reserves some memory for his Accessory programs, and runs through the answers to your GFA Basic problems.

GFA Workshop

OUT OF MEMORY

Q When I upgraded my GFA Basic software from 3.03 to 3.5E, I had difficulty with the execution of the compiled PRG files.

Compilation and linking with version 3.5E appeared normal. However, when the resulting PRG file was executed, an alert box appeared indicating ERROR 008. I have tried compilation and linking and execution under a variety of conditions, including using GFA files which successfully executed under 3.03, but the PRG files of 3.5E continue not to execute. I would appreciate any comments or assistance you might be able to offer.
LA Martin, Tanajib, Saudi Arabia

A You mention that your system is an Atari STE, upgraded to 4MByte, and I suspect that you have TOS 1.6 or 1.62.

I also suspect that you have a setting set incorrectly within GSHELL. The error message you are receiving indicates that you are running out of memory. If your other (commercial) programs are working correctly, then I would guess your memory is okay. If you are having problems with other programs as well, think about having your computer serviced.

The only time I have run into memory problems was when I was writing Accessory programs, and then the solution was to reserve just enough memory for the program to work in. This is achieved by adding the following line at the beginning of your programs:
`$B0000`
where xxxx is the amount of memory you wish to reserve.



If you're having problems with GFA Basic, try checking your GSHELL settings.

Another method is to use RESERVE. This command can be used in three different ways:

- RESERVE n% - reserve n% bytes for GFA Basic, release RAM up to HIMEM

- RESERVE n% - reserve last n% bytes of RAM up to HIMEM

- RESERVE - restore to original

If you are going to use RESERVE, only use it once, as it will continue to reserve memory until you have none left. I hope one of these suggestions solves your problem.

TRUE OR FALSE?

Q One thing keeps cropping up which I cannot understand:

Boolean algebra. Can you please explain in simple terms what this is and how you would go ahead and use it?
Mark Coulson, Scarborough

A Boolean algebra put simply looks at whether a condition is true or false - that is, 0 or 1. The syntax for using this form of maths in GFA Basic is the exclamation mark (!).

A useful example would be to use it as a switch to see if something had been done within your program, say, data saved to disk. If the variable FLAG! is set to 1 if data has been saved, and has an

initial value of 0 if no data has been saved, the following small listing could be used to test the condition:

```
IF FLAG!=TRUE
  ' DATA HAS BEEN SAVED
END IF
IF FLAG!=FALSE
  ' GO TO SAVE DATA ROUTINE
  ' SET FLAG! TO 1
END IF
Another way of expressing this is as follows:
x=0 ' SET X TO 0, NO DATA
      SAVED (one line)
' REST OF PROGRAM
```

```
IF x=1
  ' DATA HAS BEEN SAVED
END IF
IF x=0
  ' GO TO SAVE DATA ROUTINE
  ' SET x TO 1
END IF
```

Basically, Mark, that's all there is to it. The reason for using Boolean algebra, rather than just a variable as in the second example, is that it is quicker in execution and requires less memory.

FILE HANDLING

Q I would like to include a routine or command within a program I am writing to allow the person using the program to rename a file on disk. I would also like to enable the user to delete a

file or files from disk.

I have tried using various commands (including DELETE a\$ and RENAME a\$ b\$) to try and achieve both, but without any results at all, please can you help?
Barry Atlas, Richmond, North Yorks

A Andrew, the command you need to delete a file on disk from within GFA Basic is KILL a\$ where a\$ holds the full pathname and filename, for example:

```
KILL "C:\ST\FORMAT\PROGRAM.PRG" (one line)
Be careful with this command and include options within your program for the user to change his/her mind, because once the file is gone, it's gone for good.
```

On your second point, you were very close with RENAME a\$ b\$. The actual command syntax is RENAME a\$ AS b\$. Again both a\$ and b\$ must contain the full path and filenames including extensions:
`RENAME "C:\DESKTOP.INF" AS "C:\DESKTOP.BAK" (one line)`
would rename the first specified file (desktop.inf) to desktop.bak. You may want to include a file listing (DIR a\$) for the user to pick his file from, rather than having him try to remember what file he wishes to KILL or RENAME.

If you have any questions, please write to Mac at GFA Workshop, ST FORMAT, Future Publishing, 30 Monmouth St, Bath, Avon BA1 2BW or e-mail him at mac@mentor.demon.co.uk. Include your full name and details of your computer.



There's light at the end of the tunnel for Falcon owners. Frank Charlton peers down the track and takes a look at forthcoming STOS extensions.

STOS Corner

Hot on the heels of your recent questions about the performance of STOS on the Falcon030, here's news of two forthcoming STOS extensions which take advantage of the Falcon's graphic and sound capabilities.

First up is the *STOS Falcon Extension*, currently being developed by Anthony Jacques of STOS Mailing List fame. Anthony's extension includes lots of different Falcon-related commands, including general stuff like reading the Cookie Jar and finding out whether a program is running on an RGB, VGA or mono monitor, or a TV set. There's also a handy command to read a Jaguar PowerPad.

Sound support is good too, with nifty commands for playing standard 4-channel MOD music as well as the multi-channel DTM modules produced by Frontier's *Digital Tracker 030*. Both use the DSP

chip for minimal slowdown, and sound great. Sampling via the DSP is also catered for – both recording and playback are possible via the Falcon's built-in hardware.

Graphics support is excellent, with commands for everything from drawing Gouraud-shaded vector shapes to displaying 256-colour and TrueColour images on the screen. Replacements for the regular STOS palette and fade functions are provided so you can work with the expanded palettes and resolutions. There's even an early version of a TrueColour sprite engine.

You can contact Anthony via the STOS Mailing List, by e-mail at: jacquesa@cs.man.ac.uk, or by post at: 70 West Avenue, Oldfield Park, Bath, Avon BA2 3LF.

FAB FOUR

Next is a suite of four extensions which is being developed by Anthony Hoskin to

exploit the Falcon's capabilities – the *System Control Extension*, the *GRAFIX Extension*, the *DMA Sound Extension* and the *MODule Player Extension*.

The versions that we saw were still being developed, and may well change quite a bit before they are released. Anthony intends to make the interpreter extensions freely available, but the compiler versions will only be available to registered users.

The *System Control Extension* currently features 23 commands that control the Falcon's system features. It provides some interesting and unusual functions, such as switching the processor cache on and off, and switching the Falcon's system bus into STE-compatibility mode.

The *GRAFIX Extension* doesn't yet support TrueColour video modes, although Anthony is working on it. Currently, you can load, unpack and display 256-colour images in the ILBM (InterLeaved BitMap) format common to the Amiga. Registered users will receive image conversion utilities to help with this. *GRAFIX* also provides a healthy helping of commands to manipulate the expanded palette and blit text to the screen using regular GEM fonts rather than the old STOS format.

The *DMA Sound Extension* plays back sampled sound via the DMA sound subsystem, and accepts samples in the common AVR and WAV formats as well as raw sound data. The commands are very flexible, with every individual parameter available for tweaking. You can even adjust



The DMA Sound Extension provides a simple but effective sample player program as well.

the gain of each stereo channel individually, if you want to – excellent stuff indeed.

Finally, the *MODule Player Extension* will replay standard 4-channel MOD files via the DMA system – there's no DSP support currently. Sound quality is good, and it differs from Anthony Jacques' player in that it doesn't need a separate program to be loaded into a memory bank first.

For more information about all these extensions contact Anthony at: 45 Wythburn Road, Newbold, Chesterfield, Derbyshire S41 8DP.



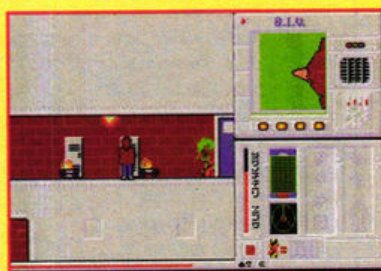
Source code with the MODule Player Extension shows how to play MOD files via the DMA.

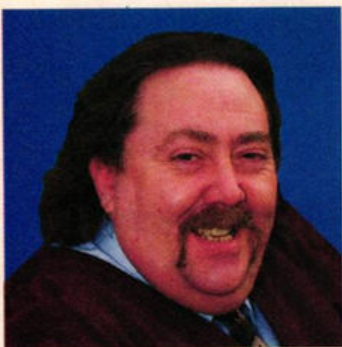
HERO FREEBIE

Remember the animated platform game, *HERO*? Programmers Tony Greenwood and Bob Goodfellow spent a lot of time making sure it didn't look, feel or play like a generic STOS game, and it was generally very well received.

Seemingly it didn't sell in massive amounts though, and after a brief scuffle behind the bike sheds, the authors have decided to release it as freeware. What's the catch? Well, in order to keep the size down, Tony has removed the excellent animated intros and end sequence, and the in-game

sound samples have been given the chop. Still, it's a damn fine game, and well worth looking at if you want to see just how polished a STOS game can be. Check your PD Library, or pick up *HERO* from Ad.Lib BBS on 0191 3702659.





Which came first, the chicken or the egg? How long is a piece of string? Mac Marsden doesn't know, but he can solve your C problems.

HiSoft C Centre

PRESS A KEY

Q I enjoy your column, but why in your examples do you persist in adding the `evnt_keybd()` statement? The interpreter has a menu function to pause after execution.

John Wright, Newcastle

A Relying on the interpreter to halt the program after execution before returning to the operating system is, in my opinion, bad programming practice. If you get used to using this method, and then move to another system you will become very frustrated when your program is run and the screen output disappears because you have developed a lazy habit.

SYMBOLS IN C

Q I am planning a text database that also uses symbols (font-like characters). However, I am not sure if they can be 'written' from inside a program, without using any more memory than standard STE fonts.

I'm worried that they'll have to be similar to graphic sprites, and will take large amounts of memory. Unfortunately, the number of symbols is high, and it would be impractical to 'design' them individually.

I can write the program, the problem is one of memory capacity and being able to read the symbols quickly (some will only have a few pixels

switched on) and move them around the database.

A Halliday (Bert), Glasgow

A Bert, I am not really sure what you mean by 'font-like characters' or what you'll using the symbols for.

If you want to load your own fonts, each character will actually take up eight bytes of memory (each byte is made up of eight bits). For example, the character 'A' is shown below:

```
BYTE 1 00000000
BYTE 2 01111110
BYTE 3 01000010
BYTE 4 01000010
BYTE 5 01111110
BYTE 6 01000010
BYTE 7 01000010
BYTE 8 00000000
```

In decimal notation, this is 0,126,66,66,126,66,66,0.

There are two main ways to store or initialise numerical data in C. One is to use a globally declared static array, where you would type your data straight into your program (see page 310 of the manual for more information).

Alternatively, you could use your favorite font designing program and load the characters in as binary files using `fopen` ("filename.extension", "rb") where the "rb" indicates a read of a binary file.

No matter which way you look at it, the symbols will certainly take up a fair amount of memory if your program is going to hold a lot of them. I estimate that just with the ASCII set (127 characters) the memory requirement will be 1K. If each set of symbol charac-

ters uses the full 256 characters, you are looking at 2K of memory for each font. This will eat into your database space.

C IS FOR CURSOR

Q I'm writing a small text editor and wonder if there is a function that will return the current position of the cursor on the screen, and a set of commands to manipulate the cursor?

John Browning, Dumfries

A John, I have the listed the cursor control functions in the order you requested. First:

```
int vdi_handle;
short row, column;
VQ_CURADDRESS (vdi_handle,
&row, &column);    (one line)
returns the current address into
row and column.
Second, the following commands
move the cursor:
int vdi_handle;
V_CURDOWN (vdi_handle);
moves the cursor down one line.
V_CURHOME (vdi_handle);
moves the cursor to the top left of
the screen (home position).
V_CURLEFT (vdi_handle);
moves the cursor one character to
the left.
V_CURRIGHT (vdi_handle);
moves the cursor one character to
the right.
```

TIP OF THE MONTH

Why not brighten your programs by using dialogue boxes for data input? Check out the listing below, which will draw a dialogue box in which you can enter a new date.

The function `edit_box()` is very versatile. The array "999999" declares the parameter list for it - see the panel (right) for details.

These parameters allow certain character data to be input. For example, if you only want numbers to be entered, then enter a '9' for each character, as below.

```
int box, edit;
char *date;
main()
{
    box = init_box(33, 7, 3);
    button_box(box, 14, 5, " OK ", 7);
    text_box(box, 1, 1, " Please enter today's date ");
    edit = edit_box(box, 11, 3, "250689", "_/_/_", "999999", 3);
    draw_box(box);
    date = readstr_box(box, edit);
    puts(date);
    evnt_keybd();
}
```

The edit_box parameter list:

```
9 Only 0-9
A A-Z and space
a A-Z, a-z, 128-255, :?*_
F A-Z, a-z, 0-9, 128-255, :?*_
f A-Z, a-z, 0-9, 128-255, ?
N A-Z, 0-9 and space
n A-Z, a-z, 0-9, 128-255 and space
P A-Z, a-z, 0-9, 128-255, \:?*_.
p A-Z, a-z, 0-9, 128-255, \_
x All characters allowed
```

Write to Mac at HiSoft C Centre, ST FORMAT, Future Publishing, 30 Monmouth St, Bath, Avon BA1 2BW or e-mail him at mac@mentor.demon.co.uk. Please include your full name and ST details.



ST Answers newcomer Andy Gisby, of Zero-5 fame, dons his helpful hat and welcomes you to an assembler workshop with visible results.

Assembly Line

Most games and demos contain many megabytes of graphics. To save space, this data needs to be compressed. *Degas Elite* offers an excellent compression technique (see panel), the rules of which also work well with sound samples.

EASY SQUEEZY

The data is divided into 'control' and 'data' bytes. The compression is performed on each bit plane per scan line. Each plane within a scan line is treated separately (there are four per scan line in low resolution). The first byte is always a control code. A control byte is either positive or negative up to a value of 127 (-127 to +127). A value of 128 is treated as No Operation, that is,

ignore it.

If the control code is positive, we copy the next 'code+1' data bytes literally (image data). If it's negative we copy the next data byte '-code+1' times (replicate data).

The program excerpt in Panel One shows the decompression of these control and data bytes (the complete routine, STF0001A.S, can be found on the Cover Disk).

The decompression is simple: using our control code rules (D0 is loaded with the control code), we first check to see if the byte is a No Operation (cmp.b #128, d0). If D0 does not contain 128, we see if the control code is posi-

tive. If it is, we need to copy 'code+1' bytes serially (.bitplane_2). If it is negative, we need to negate D0 (make equivalent positive value), and replicate the next data byte '-code+1' times (.bitplane_3).

Note that each plane is decompressed into a temporary store area called 'scanline'. The data is only transferred to the target area when a whole scan line bit plane is ready (cmp.l #scanline+40, a1).

When the temporary store is transferred, an assembler directive, 'rept', is used

word data from address A0 to address A1...

```
move.w #19, D7 [8]
.loop move.w (a0)+, (a1)+ [12]
      DBRA d7, .loop [10]
```

```
rept 20
move.w (a0)+, (a1)+ [12]
endr
```

The second version is much faster than the first. Simple maths will explain why.

The 'rept' directive (this is a *Devpac* assembler feature, not a CPU command) causes the code between 'rept' and 'endr' to be repeated - 20 times, in this case. Each command takes a certain number of clock cycles (as indicated by values in []). Adding up the clock cycles in the first version gives 448, compared to 160 cycles for the second version.

If you are not using *Devpac* and do not have an equivalent rept command, you could type `move.w (a0)+, (a1)+ 20 times`.

You will find an invaluable decompression routine in the program source file called STF0001B.S on the Cover Disk (see page 9 for more details).

DEGAS ELITE PC1 FILE FORMAT

The *Degas Elite* file format for any picture resolution is made up as follows:

1 word (2 bytes)	Resolution Flag (0 = Low, 1 = Medium, 2 = High). Note that if the high order (leftmost) bit of this word is set the image data is compressed (so \$8000 = Low Res)
16 words (32 bytes)	Colour Palette
up to 32,000 bytes	Image Data
16 words (32 bytes)	Degas animation data

PANEL ONE PANEL

```
.bitplane_1    moveq.l #0, d0      * Clean register please
               move.b (a0)+, d0    * Get Command Code
               cmp.b #128, d0      * No Operation?
               BEQ.s .bitplane_next
               tst.b d0
               BPL.s .bitplane_2    * Read bytes serially?
               neg.b d0
               BRA.s .bitplane_3    * Replicate bytes!

* Image...
.bitplane_2    move.b (a0)+, (a1)+
               DBRA d0, .bitplane_2
               BRA.s .bitplane_next

* Replicate...
.bitplane_3    move.b (a0), (a1)+
               DBRA d0, .bitplane_3
               LEA 1(a0), a0

.bitplane_next cmp.l #.scanline+40, a1 * Any more decompression?

               BMI.s .bitplane_1

* Paste Scan line to target...
               LEA .scanline, a2
               move.l .target, a1
               rept 20              * Speed up, but sacrifice
                                   * code compactness...
               move.w (a2)+, (a1)

               LEA 8(a1), a1
               endr
               RTS
.target        dc.l 0
```

HINTS

Using the 'rept' directive increases your program's speed by sacrificing code compactness (so your program is bigger, but faster).

Take a look the two following pieces of code, which both move

If you have any queries about assembly programming, send them to Andy Gisby at Assembly Line, ST FORMAT, Future Publishing, 30 Monmouth St, Bath, Avon BA1 2BW.



It's good to talk, but it's better to send an e-mail. Frank Charlton explains how to make use of the message bases on your favourite BBS.

alt.comms.stf@

Here's something a lot of BBS System Operators have asked me to provide: a rough guide to posting messages on a BBS. Most SysOps don't have a lot of time to invest in explaining the bare bones of message posting to new callers, so let's have a look at the basics.

There are four basic types of message base: local, echoes, private e-mail and netmail. Note: these all refer to a BBS, and not the Internet – we'll cover that in a future issue.

LOCAL BASES

A local message base is one which doesn't go any further than the BBS it was written on.

Only users who call this particular BBS will be able to read and reply to messages posted here. These bases are generally used for chit-chat, special interest areas and the like.

Normally, local bases are public – anyone can read and post in them, and private messages aren't usually allowed. One possible exception is a base set aside specifically for feedback to the SysOp, which will generally be private. The SysOp sets the rules for local bases, and should be able to guide you if necessary.

ECHO BASES

Any messages posted in an echo base will be sent to all other BBSs which belong to the same network (such as NeST, FishNet, AtariNet or FidoNet). Most are set up so it's obvious that a base belongs to a network, using names like 'NeST Comms Echo' or our own 'FishNET ST Format Echo'. These bases are public too, and private messages aren't allowed; nor are scrambled or

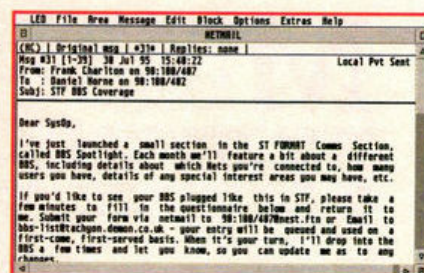
encrypted messages.

One thing to consider when posting in an echo is that your message will often be seen right across the world, so never use these bases for local chatter. Be considerate before you reply to a message, too. Quoting the entirety of a four-page message and adding something like 'I agree!' at the end is guaranteed to get people's hackles up. Keep your quotes down to a few lines here and there.

If you're in any doubt about the suitability of an echo for your message, check with the SysOp before posting.

PRIVATE E-MAIL

This is sometimes activated from the BBS's Message menu, or more likely from the Main menu. It's exactly what it says – a completely private system for users of that BBS to exchange person-to-person mail. It's local, so you can usually only mail other users on your BBS. Some systems enable you to send e-mail out



Netmail is private, and directed at one specific person.

to users on the Internet, but you need to check with your SysOp about this.

NETMAIL

Netmail is similar to private e-mail, but works in conjunction with the networks we mentioned earlier. Each BBS in a network has a node number, which looks something like 90:100/407@nest.ftn. If you know a friend frequents a certain BBS, you can send him private mail over the BBS network, as long as you know the node number.

However, some BBSs don't allow netmail, or may charge a small amount for the privilege – check with your SysOp. As with echo mail, remember every message you send is adding to the telephone bill of your SysOp, and the SysOp of every system it passes through – so be considerate, and don't post huge netmails. *stf*



Most bulletin boards have lots of international echoes that you can participate in.

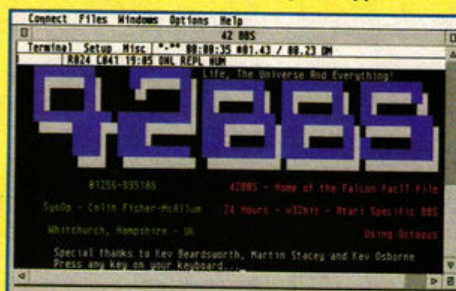
BBS SPOTLIGHT

This month we start an irregular section that gives BBS SysOps a chance to plug their systems. If you have a favourite BBS you'd like to share with the world, contact me via the usual channels.

42 BBS

This BBS was recently launched by Colin Fisher-McAllum, who runs the Falcon FacTT File user group for Falcon030, TT and PAK/3 owners. As well as being a forum for FFF members to stay in touch, 42 BBS has a lot to offer everyone. It is linked into mail networks like NeST and FishNet, and has plenty of files to download, with a good selection of Falcon PD. With the demise of The Falcon's Realm, 42 BBS could

soon become the hub of activity for Falcon owners. It runs 24 hours a day at speeds up to 14,400. Drop by on 01256 895106 and offer your support.



Send your comms queries to: alt.comms.stf, ST FORMAT, Future Publishing, 30 Monmouth St, Bath, Avon BA1 2BW, or e-mail your questions to: frank@tachyon.demon.co.uk (please put STA in the subject line).

Cyber Talk

FutureNet

With flash new browsers arriving on the scene faster than Ben Elton's punch-lines, it's time you checked out FutureNet and the all-singing **ST FORMAT** home page.

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.

Now, I know what you're thinking: why tell us about it? Well, it seems that at long last the new graphical browsers we've all been waiting for are on their way (see the New Web Browsers panel). 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 take out a subscription to your favourite magazine, order back issues 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.

Or what about having a natter with other like-minded souls via the magazine's chat forum? Yep, it's coming soon to FutureNet, so if you want to stay in touch, stay connected...

Karen Hewell.

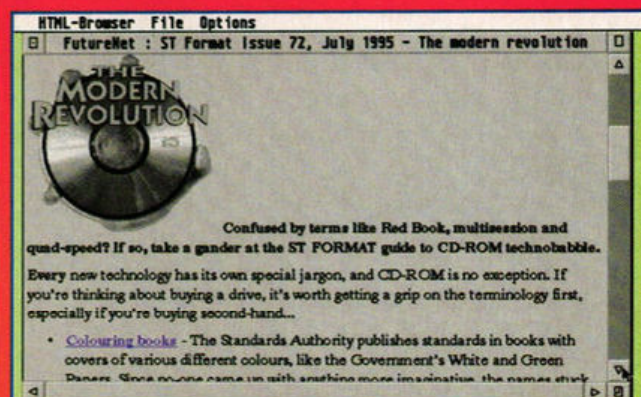


NEW WEB BROWSERS

If you long for the full graphical access to the World Wide Web that PC and Mac owners enjoy, your dream could come true real soon now... Internet software on the ST, TT and Falcon is finally coming of age, with graphical software in the works as we speak. As well as standalone

GEM-based software, there are alternative operating systems such as *MinT* and *Linux* offering browsers to those with the power. Make sure you get a copy of next month's *ST FORMAT* for a look at what's available and what's on the way - your view of the Net could well be changing...

ST FORMAT DIRECT



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

Dr Clive Parker 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

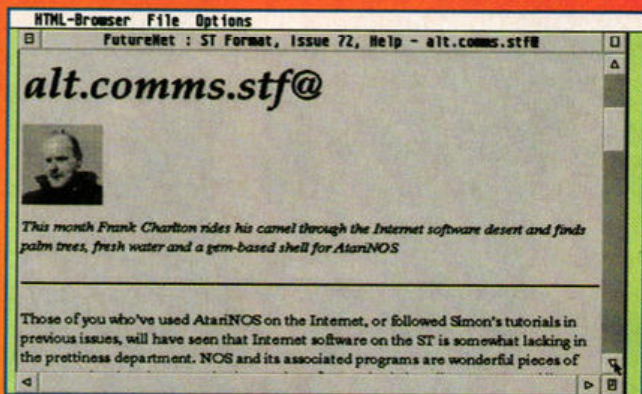
Discover exactly how to take your ST or STE apart - and put it back together again - with our practical guide to fitting a composite video port. Or how about designing your own 3D game? We show you how.

● 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

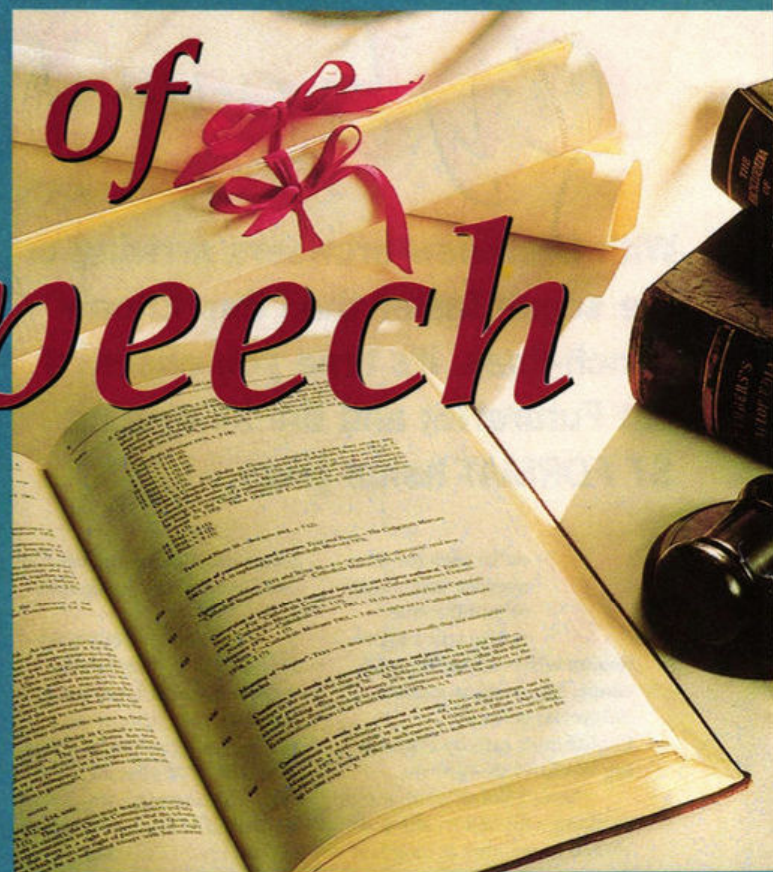
Order a back issue, submit a subscription or take advantage of our reader offers, all without ever leaving the comfort of your ST.



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...

The price of free speech

With Internet-related libel cases becoming more common, Clive Parker presents a timely guide to the pitfalls of being abusive on-line.



You may think that the messages you post to a bulletin board or Usenet newsgroup escape the normal laws of libel. After all, it's unlikely that anyone you make any libellous comments about is going to look at the newsgroup or chat area where you made your comment, isn't it?

Well, maybe. But word has a way of spreading out across the Net, and the person you make the comment about may get to read it. To paraphrase the clarion call of the Internet age, information wants to be spread. And it will. In the USA, there have already been well over 100 cases of Internet-related libel, and there have been a number of cases here in the UK, too.

Protect yourself

To avoid being sued, you've got to act as though anything you write as a message to a public forum is being printed in a newspaper for all to see.

It doesn't matter

if it's in a Usenet newsgroup, a message forum on CompuServe or on any BBS or on-line service, you've got to treat any message you write as being 'published.'

Most lawyers now look at on-line services as a form of publishing, and treat the content in exactly the same way as they would treat an issue of *ST FORMAT*, or your daily paper. Ignorance of the law is not a defence – you can't stand up in court and say, "Sorry, but I didn't know about that."

If a newspaper reporter wants to say something about a specific person, such as "John Doe is a drunk and a drug addict," he or she consults the paper's

legal department for advice. To be on safe ground, the reporter must be able to prove that the allegations about John Doe are in fact true.

Most lawyers now look at on-line services as a form of publishing

The same goes for your posts to the Net. If you say something defamatory about someone, you had

better be able to back it up. In court, probably.

What is libel?

The technicalities of libel are all couched in the usual impenetrable legal jargon so proudly bantered about by judges and lawyers. So we won't bother with them.

Basically, libel is any statement about an identifiable person, or persons, that could lower them in the estimation of society, make them an object of

BRITISH CASES

Probably the most famous UK Internet libel case took place after one physicist made allegedly defamatory remarks about another in a Usenet newsgroup. Dr Laurence Godfrey sued nuclear physicist Dr Hallam-Baker, but the case was settled out of court in June.

The other notable case

concerns an alleged libel on the internal mail system at Asda, which isn't even accessible to the public. Asda paid £10,000 in an out-of-court settlement to a police officer who claimed he'd been libelled, showing even private e-mail systems are subject to libel law.

More cases are being prepared for court over the next few months.



This person may not know that I have been writing about, and using, STs for over seven years. Because writing about STs is part of my job, saying that I know nothing about them is defamatory, and could affect my chances of getting work from publishers in the future. The author of the message about me is guilty of libel. Even more money goes into my account.

And there's more

You don't have to make a definite statement to get yourself into trouble, either, all you have to do is imply that someone is doing something. The statement may be defamatory, and once more you're in trouble. This is called innuendo.

For example, suppose I'm posting regularly to a newsgroup about *Star Trek* videos, and someone remarks that I do a roaring trade in second-hand video recorders at car boot sales. The remark may be made as a harmless joke, but it still implies that I'm selling stolen video recorders. Karen, call my lawyer.

You can also be sued for libel if you repeat a libel printed somewhere else. Many newspapers have fallen into this kind of trap, repeating a libellous story printed in a rival paper and getting sued themselves. And, if you print the libel twice, you can be sued twice. Isn't this fun? So, if you see a remarkably witty (but defamatory) comment about someone on the Net, and you post it to another area, say, a CompuServe forum, you too can be sued for libel.

You may have noticed that many newspapers seem to get away with defamatory comments about people in the

ridicule, an object of contempt or hatred, cause them to be avoided in their job, occupation or business. And it doesn't have to actually cause any of the above. The fact that the statement might have this effect is enough.

So, if someone wrote in a newsgroup that I have a violent nature, I wouldn't have to prove that people are thinking of me as a violent person (which I'm not, since the electric shock therapy), but that people might think I was violent after reading the message. Case proved, several thousand pounds are deposited in my bank account. Good, isn't it?

Similarly, someone could reply to a message I've posted about the ST and say that I know nothing about the ST and I'm talking a load of crap.

Being circumspect could save you a lot of problems. And quite a bit of money

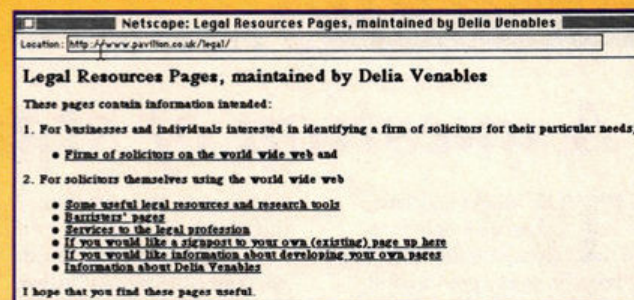
public eye. These are usually opinions by the writer, based on facts known about the subject of the story. This is known as fair comment. For example, a sports writer could call a

goal-keeper incompetent for missing an easy save. Based on the goalie's previous form, and the writer's knowledge of the game, this could be a fair comment. This is also the reason you see politicians being accused of blunders, mistakes, cheating, lying and misleading people. It all comes under fair comment.

WHO YOU GONNA CALL?

There seem to be legal pages popping up all over the UK Internet these days, and it's a good way to contact a lawyer or solicitor, or get legal advice. Here are a couple of useful addresses:

Delia Venables is a computer consultant with special expertise in computers for solicitors. She has published the *Guide to the Internet for Lawyers* at a wallet busting £117.50, and her Web page of links to legal resources is at: <http://www.pavilion.co.uk/legal/>. You can e-mail her at: venables@pavilion.co.uk



"I am the Law", said Judge Dredd. If you disagree, check out the legal resources Web at: <http://www.pavilion.co.uk/legal/> and contact a solicitor.

Nick Lockett is a barrister who specialises in computer, BBS and Internet legal issues, and he runs the Netlaw service on the World Wide Web at <http://ftech.co.uk/~netlaw/>. You can also contact Nick by phone on 0171 3532501, or e-mail him at: Netlaw@Netlaw.co.uk.

Other Internet sites that can explain the perils of Internet libel for you include <http://www.kbs.citri.edu.au/law/defame.html>, a full hypertext document about libel. Another good read, which asks if a service provider is responsible for libels found on their system, can be found at: gopher://gopher.eff.org:70/00/CAF/law/libel/. You can also try the following newsgroups: uk.legal, misc.legal and alt.lawyers.sue.sue.sue

Be safe

Before you start a defamatory on-line rant, pause and think. Don't imply that people intend to do things, or that they performed an act for a specific reason. Even vague innuendo can get you into trouble.

If you do have to say something that could be considered libellous, say something like, "In my opinion, John Doe is nothing but a crook," rather than, "John Doe is a crook." Being a bit circumspect could save you a lot of problems. And quite a bit of money, too. *stf*

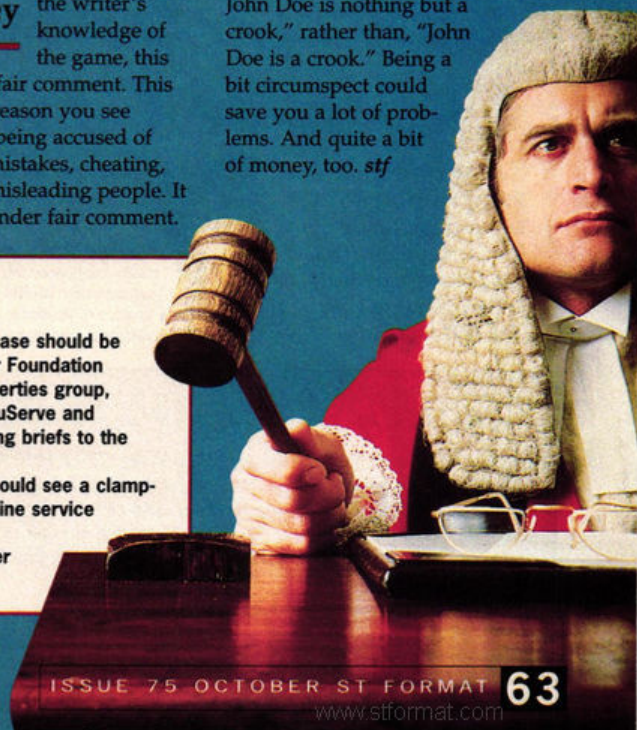
PRODIGY IN THE DOCK

In the US, the on-line service Prodigy is contesting the New York State Supreme Court's ruling that Prodigy is the publisher of material posted in its bulletin board areas. In July, the court allowed a New York investment bank, Stratton Oakmont, to sue Prodigy for \$200 million over remarks on the stocks and finances bulletin board.

Prodigy feels that it shouldn't be regarded as a publisher, because it acts as a conduit for sharing a range of information and opinions, in the same way that a library or a book shop does. Prodigy has put

forward a motion that the whole case should be re-argued. The Electronic Frontier Foundation (EFF), a US public interest civil liberties group, supports the motion, as do CompuServe and America Online, who are submitting briefs to the court in support of Prodigy.

If Prodigy lose the case, we could see a clamp-down on the content of BBSs, on-line service areas and newsgroups by service providers afraid of being sued over messages from subscribers.





The Score

Meanwhile, down in the basement, Andy Curtis has been listening to MIDI files. Treat your ears to eight of the best tracks in his sweet sounds round-up.

A question of standards

The MIDI musicians' cherished dream of compatibility has long been on shaky ground, but recent developments look set to make matters even more complicated. To understand the problems likely to besiege us in the future though, you first need to understand the history behind today's so-called standard formats.

Originally, GM was to be the answer for people who needed to port their MIDI data between different MIDI setups. In reality, the competition between different manufacturers resulted in each one developing its own version of GM.

And while the struggle for improved sound quality, greater ease of use and sales led initially to more realistic

GM sounds, this situation didn't last.

Roland, you see, decided to take the format further, with the GS standard, which provided a greater range of sounds. Now, while GS uses exactly the same program change numbers as standard GM, it also enables bank switching. But with this extra flexibility, come compatibility problems, and some synths react badly to the extra MIDI data, so GS files have to be edited for those machines.

Not an ideal situation, but MIDI musicians coped. Now though, they're suffering more compatibility woes with the arrival of Yamaha's MU80 synth module.

The MU80 has built-in

HELP IS AT HAND

If you have any synth or module with a GM badge on it, then you will be able to replay any GM or GS file. However, it may be necessary to remove all references to MIDI controllers 0 and 32.

The other problem is that sequencers deal with MIDI files in

different ways. Some, notably Cubase, fail to load some SysEx data, resulting in your GM synth not being properly reset. If a MIDI file plays in a weird way, and you don't know how to reset it via SysEx, simply turn your synth off and then on again.

compatibility with nearly all GS data, but it also responds to the hybrid XG data as well. The Yamaha XG system enables a greater number of banks to be accessed, providing a total of 537 sounds. The XG standard also encompasses extensive SysEx and MIDI controller options, and while this is great for musicians with the new modules, those with

GM synths will have problems playing XG files.

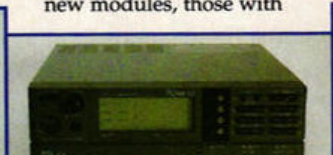
The saga doesn't end there though, because Roland, refusing to let Yamaha have all the glory (and, of course, sales), has just announced GS level 2... Call us cynical if you like, but we're beginning to think there may never be a de facto MIDI standard.



Although Korg's 05R/W entry-level module is fully GM-compatible, many of the MIDI files aren't, so you'll need to make some adjustments to get them to play correctly.



Yamaha has boxed clever with the new XG module. It will respond correctly to most Roland GM/GS data, and has a greater number of banks than most, providing 537 sounds.



The Sound Canvas is the one of the industry standard GM modules. If you have a GM or GS MIDI file it will play back correctly on the SC88 or SC55.



If you fancy a big-time MIDI workstation, then the Korg X3R is for you. It has tremendous power and great sounds. Its General MIDI capabilities are, however, exactly the same as the 05R/W's.

Cut-price Condensor Microphone

Australian company RØDE has produced a top-quality studio condenser microphone to compete with the legendary Neuman U87. The NT2 looks very



similar to its esteemed counterpart, and features

The RØDE NT2 is a top-quality studio condenser microphone for a bargain price. It offers home users a chance to produce commercial-quality vocal performances.

a large capsule with gold-plated membrane, output connector and internal head pins. Its performance is said to be absolutely outstanding, making the NT2 a realistic competitor in the top-quality studio microphone field.

Sound Control has imported a significant number of NT2s into the country and is

NO KORG X3 CARDS

Korg will not be making any sound cards to support the X3 and X3R synthesizers. These superb workstations feature excellent sounds and built-in sequencer engines as well as General MIDI, but Korg will not be making X3-specific cards. Instead, it will be relying exclusively on the 03/W cards already in production. This will be a great disappointment to X3 owners, who were promised the more compatible X3-specific cards.

offering them for just £499, which about a quarter of the price of the U87. Sound Control can be contacted on 0191 2324175.

MIDI FILES AND LYRICS

With the current changes in copyright law in the UK all MIDI file prices are subject to sudden changes, at least for the time being. The latest change is that lyrics will be paid for as an add-on when buying MIDI files. The charge from most companies will be just enough to cover the extra copyright payments, which will have to be paid to the Mechanical Copyright Protection Society.

MIDI FILES HEAD TO HEAD

Four of the UK's most successful MIDI file retailers sent us some of their top

tracks for review. We selected our two favourite MIDI files from each set and tested them on a variety of different GM MIDI modules to see which was the ultimate MIDI file king.

THE SCORE

If you have any MIDI related questions write to: The Score, ST FORMAT, 30 Monmouth St, Bath, Avon BA1 2BW or e-mail Andy at: andy@adlib.co.uk.



We took the best MIDI files in the UK and put them to the test on the finest GM synths money can buy.



MIDI MAGIC

Tel: 01792 642381
Price per track: £7.50

Dreadlock Holiday
By 10CC
This track is executed almost perfectly. The tricky reggae percussion is handled with variety and correct syncopation



throughout. Strummed guitar effects sparkle and are completely convincing, and judicious use of reverb preserves the tight reggae feel required. This track has not been thrown together, it has been honed to perfection.
STF RATING: 93%

It must be love By Madness

This track is a nightmare for the MIDI composer, containing a whole host of complex and changing rhythms from beginning to end. To its credit, MIDI Magic's rendition is quite simply superb, playing back perfectly on all the GM synths used during the test, and bringing to life a gentle ballad from a great band.

STF RATING: 88%

Attention to detail is important if you are relying on tracks to support you when singing live on stage. MIDI Magic offers a completely reliable service to musicians who need ultimate accuracy and faithfulness to the original. None of the tracks faded out at the end, and each track is 100 per cent GM compliant. There are no GS controllers used anywhere, making these tracks the most compatible we tested.

HANDS ON MIDI

Tel: 01705 783100
Price per track: £4.95-11.95

Turn On, Tune In, Cop Out by Freak Power

This is a very competent and moody performance with a strong soul feel. The melody is played beautifully on saxophone, and a trombone solo also features. The strumming is very convincing, probably input using a guitar with a MIDI pick-up. The overall sound is believable and solid, making this an outstanding MIDI file.

STF RATING: 89%

beginning of the arrangement is more than compensated for by the richness achieved towards the end by generous use of reverb and careful scoring. The tempo may sound a bit slow at first, but we checked and it was exactly the same as the record.

STF RATING: 86%

Overall, these are pleasing tracks put together by musicians, not machines. Because of the GS data included in some of the Hands On tracks, you may need to hack the files to get them to work properly if

you have a non-GS synth. If you do happen to own a GS synth, the Hands On tracks will be very attractive. All the tracks sound very professional with a high level of musicianship.



Think Twice by Celine Dion

Once more, Hands On has captured the moodiness of Celine Dion's Number One hit, making it come to life even as a MIDI file. The emptiness at the

PROFILE ENTERTAINMENT

Tel: 0115 9245454
Price per track: £5.88

Save The Best Till Last by Vanessa Williams

When an artist performs with a live orchestra, it is possible to pull the tempo around, slow down, speed up and miss the odd beat. However, problems arise when this live performance has to be converted to a useful sequencer file.

This version of a fantastic ballad is a tribute to Profile's skill. The dreamy atmosphere of the original has been preserved, while some of the pauses are made a little more predictable. Careful selection of instruments and reverb levels make it a charming backing track with which to work.

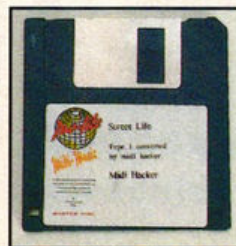
STF RATING: 90%

Street Life The Crusaders

Virtuoso use of a breath controller and clever keyboard work combine in this truly phenomenal track. The long saxophone solo is utterly convincing, and limited only by the synth on which it is played. The track sounds great on all synths we used in the test and, despite the shatteringly high standard of all the tracks reviewed, it is the best.

STF RATING: 94%

Profile's tracks all feature the same level of musical integrity and faithfulness to the original, and the jazz-influenced compositions are in a class of their own. General MIDI versions of most Profile's tracks are available.



LABYRINTH MIDI MUSIC

Tel: 01254 678915
Price per track: £6

The Power of Love by Huey Lewis and the News

This song has a strong rock feel, requiring overdrive and distortion guitar effects which are hard for synthesizers to emulate. Labyrinth has done well to make

this track sound convincing. If you have one of the better GM synths, such as the Yamaha MU80, the improved guitar quality really makes a difference.
STF RATING: 87%

Love is a Wonderful Thing
by Michael Bolton
Pinpoint precision programming

makes this track one of the tightest and most well-syncopated pieces we heard. The guitar fills are spot on, as are the quick brass stabs, and the whole effect is very punchy. The drumming is fluid and full of variety from beginning to end. A thoroughly professional and enjoyable piece.
STF RATING: 91%

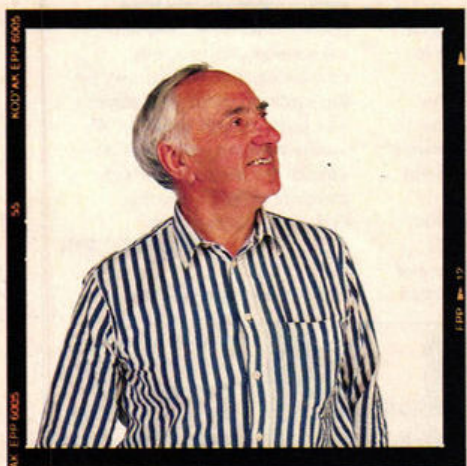
Every Labyrinth track we played worked first time on all the machines we used during this test. There are no obvious errors in the MIDI code and the arrangements are faithful to the original in terms of both 'feel' and notes. GS as well as General MIDI versions of most Labyrinth tracks are available.



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a PC magazine loaded with **entertaining features** rather than endless reviews;



a PC magazine written for **real people**, not spotty nerds. At last, **PC Guide**.



Don't miss out on issue
three of **PC Guide**, on
sale Thursday
10th August

The PC magazine that speaks your language.



Project DSP



In the second instalment of our DSP programming series, Paul Hills introduces the 56001's innards.

So, you think you're an assembler programmer? Well, you ain't seen nothing yet! This isn't meant to scare you - 56001 assembler isn't any more complicated than 68000 assembler, but it is certainly quite different.

RISC

In 68000 assembly language, there are instructions to do a whole variety of things, and a set of addressing modes so bewildering few people can remember what the more complicated ones actually do. The 56001, on the other hand, is a RISC (Reduced Instruction Set Computer) processor. This means that instead of large areas of the microprocessor being dedicated to instructions and addressing modes that are hardly ever used, the area is used to make simple, common instructions run faster.

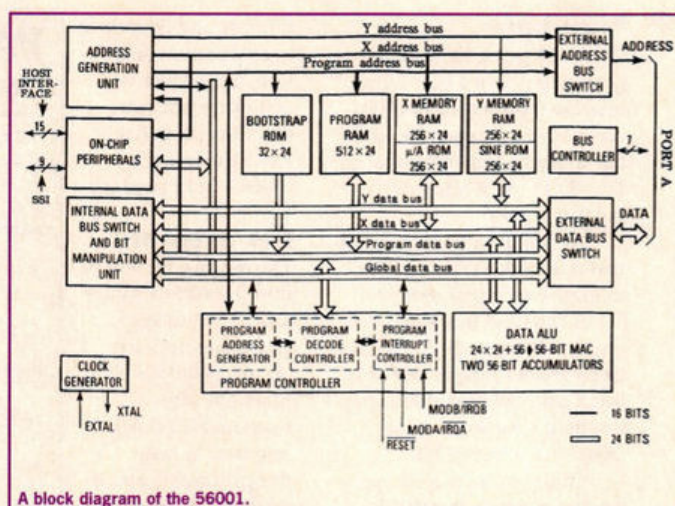
One such instruction is Multiply. Whereas the 68030 takes 28 clock cycles to multiply two 16-bit numbers, the 56001 takes 2, and it can do an Add and two Moves at the same time.

Harvard style

The second major difference is in the way memory is used. It seems natural for us to think of the program sat in memory somewhere, with some data just above or below it. However, this idea of having programs and data in the same block of memory (called von Neumann architecture) wasn't the original way computers

were built. The early computers had a Harvard architecture (developed at Harvard University), where data and programs are kept in separate memories.

The 56001 takes this one step further, and has two data



A block diagram of the 56001.

memories and a program memory. The advantage of separating the memory up like this is that each memory can be read or written to at the same time. Whereas a von Neumann computer must fetch an instruction from its memory, then fetch the data afterwards, a Harvard comput-

er can fetch both at the same time. The 56001 can therefore fetch an instruction and some data concurrently.

The other major difference between the 68000 and the 56001 memory arrangements is the width. The 68000's memory is 32 bits wide, while the 56001's is 24 bits wide.

FIXED POINT NUMBERS

You should be familiar with the way numbers are represented in binary. Each digit can be given a heading, like this:

Headings: 128 64 32 16 8 4 2 1
Bits: 0 0 1 0 1 0 1 0

Although the numbers are actually twos complement numbers, I have shown them as just positive numbers here for simplicity (if you don't know about twos complement numbers, look in any book on 68000 assembly language). If you add up the headings which have a 1 under them, then you get the digital number, which is 42 in this case.

The headings may be rewritten as powers of 2, that is 2 multiplied by itself so many times. For example, 2^4 is $2 \times 2 \times 2 \times 2$, which is 16. Likewise, 2^2 is 2×2 which is 4, 2^1 is 2, and 2^0 is 1 (just believe me). So we can rewrite the headings as:

Headings: 2^7 2^6 2^5 2^4 2^3 2^2 2^1 2^0
Bits: 0 0 1 0 1 0 1 0

Now it's fairly obvious how we can continue this to the left, but what happens if it is continued to the right? We get:

2^7 2^6 2^5 2^4 2^3 2^2 2^1 2^0 2^{-1} 2^{-2} 2^{-3}

What are these extra numbers? What is meant by multiplying 2 by itself -2 times? Well, nothing when you put it like that, but when the maths all works out (which it does), 2^{-2} is just 1 divided by 2^2 . This comes to 0.25. So let's rewrite the headings once more, in the same format as we originally had them:

Headings: 32 16 8 4 2 1 0.5 0.25 0.125
Bits: 0 1 1 0 1 0 1 0 1

Note the 'binary' point between the 1 and 0.5 headings. In decimal, a decimal point is placed between the 1 and the 0.1 headings; a binary point is placed in the equivalent place, between 1 and 0.5. The number displayed above is:

$16 + 8 + 2 + 0.5 + 0.125 = 26.625$

Now, let's consider negative numbers. In integer assembly language, we form a negative number by taking the twos complement. Effectively, this means

the first heading is negated. The first example in this section was:

Headings: 128 64 32 16 8 4 2 1
Bits: 0 0 1 0 1 0 1 0

which was 42 in decimal. In twos complement format, the headings are:

Headings: -128 64 32 16 8 4 2 1
Bits: 0 0 1 0 1 0 1 0

and the value shown is still 42. To represent -42, we would need to add up -128, 64, 16, 4, and 2:

Headings: -128 64 32 16 8 4 2 1
Bits: 1 1 0 1 0 1 1 0

Now we can get to the 56001's number format. It has no headings to the left of the binary point. The headings are:

2^0 2^{-1} 2^{-2} 2^{-3} . . . 2^{-23}

The most positive number possible is 0111...1, which is 0.999999941. The smallest number is 0000...1, which is 0.0000000059. The most negative is 1000...0 which is -1.0. This 24-bit fixed point fractional format is the most common data type used.

There is also a 48-bit fixed point data type. This is formed by 'concatenating' two 24-bit fixed point registers (that is, sticking one at the end of the other). One register holds the 24 most significant bits, while the other holds the 24 least significant bits, and the headings go from -2^0 to 2^{-47} . This data type can hold values from -1 to 0.9999999999999999289, and the smallest value is 0.000000000000000071. These 48-bit fixed point values can be held in memory and in the internal registers of the 56001.

There is one final type that can only be held in the accumulator registers. This is normally used for the intermediate stages of calculations, and is a 56-bit fixed point number (which probably explains the part number, MC56001). Instead of being extended right to increase precision, it is extended left to increase range. It is made by concatenating an 8-bit register to a 24-bit register to another 24-bit register. The headings go from -2^8 to 2^{-47} .

Numbers

We're not going to go into great detail about how numbers are represented in 68000 assembly language. The 56001 has integer registers similar to the 68000, but it also has fixed point registers.

We are used to seeing decimal numbers, such as 0.2989, in high level languages. The 56001 can hold this value in a register, because its 24-bit registers are not integer registers, but fixed point registers. They can hold a signed number from -1 to 0.999999941.

This may seem a bit limited, but how this number is interpreted is up to you, the programmer. The main reason for it is that if all your numbers are this size, the result of a multiplication will always be smaller than the original numbers, so you won't get an overflow error.

The 24-bit fixed point format is explained in detail in the Fixed Point Numbers panel (see page 67). After reading the panel, have a think about the difference between fixed point numbers and integer numbers. They are only meanings that you give to the actual binary contents of the register.

In binary, what happens when you add two 8-bit binary numbers together?

```
01000000
+00100000
01100000
```

These two numbers would be 64 and 32 if they were in integer registers, and the result would be 96. If they were in fixed point registers, they would be 0.5 and 0.25, and the result would be 0.75. So, this sum works in integer or fixed point arithmetic.

Although you've probably never thought about it before, there's nothing to stop you from thinking about the 68000's 32-bit data registers as being 32-bit fixed point registers. It is up to you to decide how to interpret the binary contents of the register.

What happens if you try multiplying or dividing the binary numbers? If you look at the binary contents of all the values and results, the operation is similar. The explanation is rather complicated, and is not worth going into now, but if you treat the numbers as

integers and execute a multiplication instruction, the answer will be twice what you would expect, that is, twice the result a 68000 would produce.

For example

The register set will be introduced in a future article, but to keep you going, let's try out the 56001's maths functions (on fractional fixed point numbers to keep things simple), and its ability to do more than one thing at once. Take a look at the listing in Panel One (right).

Let's go through this program and try to make some sense of it. The data isn't loaded using the immediate (#) addressing mode this time. Instead, the data is loaded into memory by the assembler before the program starts. To do this, the define constant (dc) instruction is used. The DSP never sees this instruction, it just tells the assembler to put a certain value in a particular memory address. Look at the bottom of the listing and you will find the four dc instructions.

`org X:$1000` is similar to the `org` instruction in the last article, but this one loads data into the X memory, not the program memory, and the address is 1000 hexadecimal. The next line starts with a label, `bv`. Since this is immediately after the `org` instruction, the label will be given the value \$1000.

Next, there is a `dc` instruction, followed by the constant data to be put at that location—in this case 0.5. So the value 0.5 will be placed in the memory location `X:$1000`. This item of data takes up one 24-bit memory location (as do all data items in the 56001).

On the next line is another label, `dv`. Since the previous line defined one item of data, this next line must be at address \$1001. The `dc` instruction places 0.75 at that address.

The next block does a very similar thing, but places the data in the Y memory instead. Now all the data is in place,

PANEL ONE

```
; Example listing
; =====
; In this example, we calculate the answer to the equation
; A = (bv * cv) + (dv * ev)

      org P:$40                ;Start program at $40(hexadecimal)
Start move #bv,R0              ;Point to X memory
      move #cv,R4              ;Point to Y memory
      nop                      ;Pause for pipeline
      move X:(R0)+,X0          Y:(R4)+,Y0      ;Get first two numbers
      mpy X0,Y0,A              X:(R0),X0      Y:(R4),Y0      ; Multiply
      mac X0,Y0,A              ; Multiply and add to previous
Finish jmp Finish              ; Stay here

;Now for the data storage area

org X:$1000
bv dc 0.5
dv dc 0.75

org Y:$1000
cv dc 0.625
ev dc 0.5

end
```

let's have a look at the actual code, line by line:

`move #bv,R0`
R0 is a 16-bit address register, so this instruction moves the address of the label `bv` into R0. In other words, R0 is loaded with \$1000.

`move #cv,R4`
R4 is another 16-bit address register. R0 and R4 will now both contain \$1000.

`nop`
One of the reasons the 56001 is so fast is that it does something called pipelining, which will be explained in a later article. However, if one instruction changes a register, and the next instruction uses that register, it may not be ready in time, so sometimes a 'no operation' instruction is needed in between.

`move X:(R0)+,X0`
`Y:(R4)+,Y0` (one line)
This long line does two things in parallel. The `X:` tells the 56001 to use the X memory. The `(R0)` tells it to use the location pointed to by R0 (in X memory). The `+` tells it to increment (add 1 to) R0 after using it. So in total, this loads the X0 register with the number stored at \$1000 in the X memory, then increments R0 to point to \$1001 (which is where the next data item is). The `Y:(R4)+,Y0` does the same thing with the Y memory, R4, and Y0.

`mpy X0,Y0,A` `X:(R0),X0`
`Y:(R4),Y0` (one line)

This multiplies X0 and Y0 together, and puts the result in the A accumulator. At the same time, it does a parallel move. The move is similar to the last move. However, this time the memory locations pointed to are `X:$1001` and `Y:$1001`, since both R0 and R4 were auto-incremented. This time there is no need to increment R0 and R4.

`mac X0,Y0,A`
Mac stands for Multiply and Accumulate. That means multiply X0 and Y0 together, and accumulate (add) the result to what was already in the accumulator, so $A = A + X0 * Y0$. The equation we started with has now been calculated.

`jmp Finish`
Stop the DSP here.

Coming soon

This listing has introduced you to two more of the 56001's arithmetic instructions, the signed number multiply, `mpy`, and the signed multiply and accumulate, `mac`. It has also brought into play some addressing modes, using the address pointer registers. These will be described in more detail in a later article in this series. We'll also be taking a look at the other registers.

From this short example, considering that each step takes one eighth of a millionth of a second (or less), you can appreciate what this processor is capable of. *sf*

Boot disks

A boot for a MIDI session can be radically different from your usual boot set, as Andy Curtis explains.

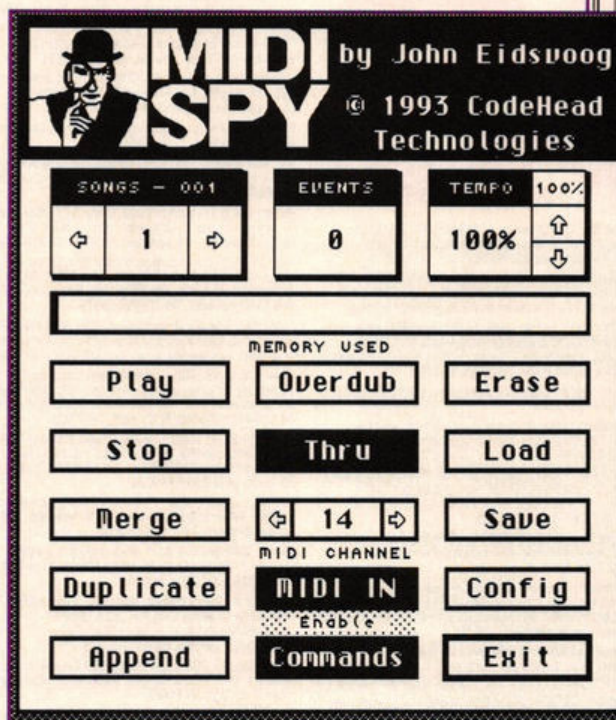
MIDI sequencers are notoriously demanding programs to run, because they utilise nearly all the processor time as well as much of your ST's available memory. Many seemingly harmless accessories and Auto folder programs can clash with sequencers too, so would it be better to simply boot with nothing else in memory? Many people do work this way, but there are a number of programs which can enhance your sequencing sessions.

Auto programs

If you have 2MByte of RAM or less, memory is your chief concern. It is, however, still worth installing a replacement file selector. Early versions of *Notator* and *Cubase* use the GEM file selector, as do a great many other sequencer packages. However, the GEM file selector only enables you to select files, and it struggles even with that relatively simple task sometimes.



Beatcalc, a calculator which is ideal for those tricky moments when you need to calculate a beat. And it's an accessory too!



Unique amongst utilities, *MIDI Spy* records MIDI input in the background ready for playing back and saving later, enabling you to use your Atari in a different way.

A replacement file selector, such as *Selectric*, will give you the freedom to copy, move, delete and rename files, as well as enabling you to create new folders for your sequences as you save them. *Selectric* makes moving through folders very quick, and merely typing the first two or three letters of a file will almost always locate it within a folder. It also includes a fast file searcher, and can perform many other neat little tricks. If you normally use the GEM file selector, it will change the way you deal with sequencer file management forever.

NVDI 2.5 is very popular with MIDI musicians, because it speeds up screen re-draws as the sequencer plays back or records. And if you are sequencing with a Falcon, NVDI 2.5 is vital if you want to see anything other than the less than spectacular system font on screen.

Be warned, though: earlier versions of *Cubase* were

extremely incompatible with NVDI. Fortunately, these incompatibilities have been ironed out in present versions. Generally speaking, if your sequencer was bought in the last two years you're okay. If you are unsure, ask around before you buy a copy. If you are using an old version of

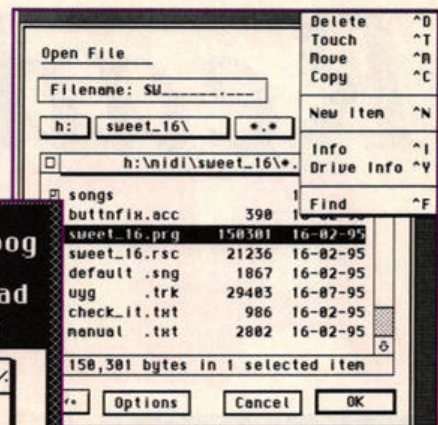
Notator or *Cubase* then you should get one of the many inexpensive upgrades on offer.

There are a number of programs which can enhance your sequencing sessions

Accessories

If you have a 4MByte machine, which is highly recommended for sequencing, there are more possibilities. Some synths, such as the Evolution synthesis EVS-1, come with librarian and voice editors which run as accessories. It is well worth including these in your boot set, as they will give you easy access to sound editing as you record.

MIDI Spy is a unique MIDI utility which also loads as an



Selectric is a stonker of a file selector. It enables you to perform many desktop functions as you save or load files.

accessory. It enables you to record and play back MIDI sequences in the background. *MIDI Spy* will not operate while your sequencer is loaded, but it is active as soon as you quit, enabling you to use the MIDI thru and record functions to access your MIDI setup. For example, if you have a large printing run to do, you can use the time productively to compose tunes or just to mess about on your synths. The results from *MIDI Spy* can be saved and loaded into your sequencer for editing and expanding.

Number crunching

Beatcalc is another 'must have' if you work with delay or samples in your music. It enables you to work out the delay needed to make the echo in time with your music. Simply input the beats per minute (BPM), and out pops a screen full of delay times.

As well as taking the guesswork out of delay timing, *Beatcalc* also helps you calculate time stretching for samples, so they fit with your music. This is one utility that pays for itself time and again by making you more efficient and giving you more time to spend making music rather than fiddling with settings.

Next month we look at another area where boot programs and accessories can help to boost your Atari's performance. *stf*



SUMMARY

- A replacement file selector.
- NVDI 2.5 if compatible with your sequencer.
- Any editors/librarians for your synths.
- *MIDI Spy* - to use as a sketch pad.
- *Beatcalc* - to work out delay times.

Reader ADS

SALES

Complete set of ST/Amiga Format. 13 issues with cover disks. Offers about £25 plus postage. Also ST FORMAT issue 7, any offers? Phone Marcus on 01307 818679.

ATARI 1040 STE and colour monitor with PRO 24 sequencer, Stereo Master and quartet. Plus some good games including Lemmings 2, Civilisation, Premier Manager 2. £250. Tel: 01263 823246 (Norfolk).

Compo 500MByte STE power CD-ROM disk. All sorts of German and English programs. Only £15, not including P&P. Phone: 00 353 21 778168.

ST owner migrating to Mac hence video digitiser, audio sampler and boxed software for sale. SAE for list: A Murchie, 32 Silverknowes Brae, Edinburgh, EH4 5PQ. Chessbase 4.0 Atari ST version. Improve your chess rating with this fabulous database. Contains thousands of master games. Complete with openings and middle game analysis. £100. Tel: 01949 831206.

Citizen Swift 24PIN colour printer - paper, cable, software inc £55 ono. Calligrapher Junior £20 ono. Both £65. Games - Monkey Island, Hunter, Jimmy White's, £5 each. Phone Kris on 01932 352552.

For sale 1 odd disk full of Spectrum snapshots on PC format. Over 100 disks available. £10. Phone Matthew on 0181 5424326 or 0973 301882 (mobile).

ATARI Megaflo 30 hard drive. Recently serviced, Cubase 3, loads of software. £150 ono. Phone Lee: 0151 2840363.

Falcon 030 1MByte. Brand new with calatop, mouse, disks and mags. £300 ono. Tel: 01759 306675.

4 MByte Mega STE, mono monitor, hard drive, SLM 804 laser printer, hard scanner, PC-compatible 1.44MByte floppy and software, provides a complete DTP system. £400 ono. Telephone Mark. Slough: 01753 572482.

DTP Dream - Calamus CL, Pagestream, Didot/Retouche, FSP3, DA Vector Pro, Font Designer and font libraries and clip-art (over 550 disks). For more details of this fantastic bargain bundle. Tel: Mark 01564 792398.

PC Ditto 2 disks. £6 inc P&P. Write to: Matthew, 19 Garfield Road, North Chingford, London E4 7DG.

Over 180 mags and cover disks in perfect condition - ST FORMAT/User/Applications/Review. Also clip art/fonts disks awaiting a bargain hunter! Tel: Mark 01564 792398.

1040 STE 2MByte, mono monitor 127MByte hard drive, Cubase V3.02, Pro 24. Loads of software, mags and coverdisks. £550. May split. Tel: Dave on 01452 612438.

Jaguar boxed inc Doom, Alien vs Predator and Cybermorph. Mint condition. £215 ono. Tel: Dave: 01452 612438.

Falcon030: 32MHz, 4MByte RAM, 65MByte HDD, Screen-Caster 2, NVDI 2.5, Truepaint, SVGA monitor, £800. Phone James: 01508 492369 after 7pm.

Mega 4 STE c/w Quantum 105MByte HD, 1.44MByte Floppy, SM125 monitor, software and lots of fonts. £325. Tel: Derby 01332 832829.

ST colour monitor, Thomson, good steady display, £50, no offers - buyer must collect (Eastbourne). Tel: 01323 504711 (evenings) or 0378 654643 (mobile).

Sim City, Super League, Soccer, Tracksuit Manager, North and South, Elvira (arcade version), Kick Off 2, Waterloo, Switchblade 2, Nam, Bordino, Conflict Europe, and many, many more. Tel: 0585 482702.

TOS 205 on two chips (someone must want them). £10. Tel: 0161 6200058.

Calligrapher, Home Accounts 2, Wordwriter, various others. No reasonable offer refused. Phone Steve: 01992 620663.

Mega 2 with 4MByte. Switchable TOS. Mono and colour monitors. 100MByte HDD and second floppy. Cubase and key. Band in a Box. Diamond Back and lots of disks. £600.00. Tel: 01494 815355.

Sensible Soccer, Flight Simulator 2, Dynabusters, various others. No reasonable offer refused. Phone Steve: 01992 620663.

ST software. Excellent condition, boxed with manuals. Over 15 top titles including Elite 2, F-19, Knights of Sky, F1GP, worth £450. Will accept £130 ono. Phone for more details. Steve: 01831 289917.

For sale! A selection of emulators for the Atari ST from £2 each, send sae for list. Matthew, 19 Garfield Road, North Chingford, London E4 7DG. Tel: 0181 524 4326.

Hard drive 52MByte. Brand new, boxed and unused from Power Computing. £130. Cost £170 new. Also Mouse RTTY and CAD £10, £10 and £25. Tel: 01297 23421.

Atari ST games for sale. 4MByte memory external and internal drives, printers, accessories. Price debatable. Please write for list. Andrew Tang, 14 Melmead Drive, Sutton Road, Shrewsbury, Shropshire S12 6DU.

ST Games for sales. Many to choose from. £8 each ono. Also ST User, FORMAT for £20. The 10+. Phone for details: 0117 964 2453.

Atari 1040STE high res SM124 monitor, Philips CM8833 colour monitor, switch box, Star LC10 colour printer, most cover disks up to issue 66, software. Very good condition. £300. Tel: 01525 717573.

Mega STE 2MByte RAM £275. Light home use only. Perfect condition, manuals and box. Tel: 01494 438541.

Atari 520 upgraded 1MByte, DDD colour monitor, printer, joysticks, Gravis mouse, games. Offers: 01753 773562. 50 blank 3.5inch disks with labels and 80-capacity disk box only £14 including postage. Also games, Hard Driving, Streetfighter, Lombard RAC Rally £3.50 each including postage. Phone Mark: 01778 393680.

Quartet boxed with manual £20, STOS compiler with manual £10, STOS Maestro with manual £10, all mint condition. Quick sale! Tel: 0151 5257986.

Personal Pascal version 2 £10. DG base £20 unused. STOS game creator £10. Tel: Nigel: 01329 236062.

R-Type, Borodino, Bismarck, Tank Attack, Major Motion, Gold Runner, Leatherneck, International Soccer, Streetfighter, Lombard RAC Rally. £3.50 each including postage. Phone Mark: 01778 393680.

Original games - Sensible Soccer, Heimdall, Supercars and more. Send sae for list to: A Green, 6 Middlebere Drive, Wareham, Dorset.

2MByte STE, 40 MByte HDD, Atari SM124 high res monitor, base unit, mouse and joystick. Software including Pagestream 2.2, few games, many mags and cover disks. £275. Tel: 0161 2841206.

STE 4MByte, joystick, mouse, colour monitor, scanner, graphic tablet, Rombo interface, Ultimate Ripper, software, games, disks, books. £600. Tel: 01384 423297.

Plug and play dual-speed CD-ROM drive. ICD Link 2. Extends Pro £200. Tel/fax: 01524 381581.

Calamus fonts: 500 Quality OFNs on 720K disks (not PD) £35. Cheque/PO to K Honey, 33 Ingleton Drive, Lancaster LA1 4RA. 01524 381581.

Falcon 030. Philips colour monitor. All boxed as new. £450. Phone Roy: 01332 207156.

STE with 4MByte RAM and Genlock. Has only been used for TV programme development. £300. Offers welcome. Tel: 01480 469300.

Philips CM8833 monitor £100. Every ST FORMAT (and ST Amiga) format to date with disks - offers. Wide range of games - list supplied. Tel: 0161 4839102 evs.

Atari SC1435 stereo colour monitor plus tilt/swivel stand. Ideal for Atari STE/Falcon. Also STFM, Amiga, Archimedes consoles and 8-bit computers. Cost £260. Sell £130 inclusive. Tel: 01935 25974.

Atari 520STFM. SS drive, Casio C2101 MIDI multi-timbral synthesizer, MIDI leads and sequencer, mouse, manuals, magazines and games. £155 inc. Tel: 01935 25974.

From 50p to £5, 100+ original boxed programs; something for every interest, new list. Also 8-bit tapes and disks from 30p. Send A4 sae for list to: D Loughton, 34 Collindale Avenue, Erith, Kent, DA8 1EE.

Atari 520 STFM 1MByte RAM upgrade, mouse, Philips 8533 colour monitor, DTP, personal organiser and games software. £180. 24 issues ST FORMAT (5-41), £3 each. Tel: 01239 710202.

520 STE, 4MByte RAM, TOS 2.06. Tatung Midros colour monitor. External floppy. Some PD. No manuals. £350. No splits/offers. Tel: 01527 62638.

Falcon, 4MByte, TOS 4.04. With speakers, joystick, Devpac 3, Devpac DSP, Trueprint. Boxed. As new. £290. Tel: 01925 631198 after 6pm.

Software for sale including: Multi-TOS, SpeedoGDOS, Calligrapher, Lettice CVS. For prices e-mail: mscxa@scs.leeds.ac.uk or write to: Adrian, 4 Winstanley Terrace, Leeds LS6 1DS.

Atari Mega ST. TOS 2.06. Philips 8833 monitor. Lots of software. All manuals. Bargain. £400 ono. Good working order. Tel: 0191 3734421.

Classic Atari games for sale: Midwinter II, Fire and Ice, James Pond, Borodino, Seven Lates of Jambala. All boxed. Good condition. £10 each inc P&P. Phone David: 01952 615995.

Atari 1040 STE 2MByte RAM, 52MByte SCSI hard drive, ICD Link interface, external disk scart lead, mouse, disks, games, manuals etc £250 ono. Buyer collects or P&P extra. Tel: 01406 540263.

1040 STFM 1MByte, internal 3.5 and external 5.5 FDDs, Forgetme clock, lots of software, joysticks, SCSI interface, ST FORMATS, cover disks. £225 ono. Tel: 01691 670505.

Steinberg Pro 24 II MIDI music sequencer for Atari ST with score edit, grid edit and drum edit. Hardly used. Boxed with manuals. £30. Tel: Kevin: 01293 516854.

Seven games. £5 each or £25 for the lot. ST Basic £5. 1st Word wordprocessor plus spell checker £8. Tel: Kevin 01293 516854.

ST FORMATS with cover disks from Issue 49. £3 each. Tel: Kevin: 01293 516854.

Atari ST software for sale. Many top titles. Phone John: 01354 56803.

Falcon 4/65, 68882 co-processor, multiuse SNGA monitor, Panasonic KXP1123, Devpac 3 and Devpac DSP programming packs: Multi-TOS SpeedoGDOS, Atari GEM VDI, GEM AES, GEMDOS/BIOS programming disks. Falcon 030 developers docs. £800. Call Steve: 0117 9518862.

Unboxed Captain Planet original to sell/swap. Offers to Mr M Gray, 56 Whitley Crescent, Wigan, WN1 2PP. Please enclose sae. Also wanted: O6MO swappers.

WANTED

Wanted: Atari portfolio with manuals/accessories, pay/swap for Sharp IQ1050 organiser. SF2, Chaos Engine, Monkey Island. Contact Andrew: 19 Harle St, Brownie, Durham, DM7 8HK, or phone: 0191 3280934.

Music programmes required, to run MIDI files such as Band in the Box, Concerto Sequence One and Steinberg Pro. Will buy or swap. Contact: 01522 536478.

WANTED: Microprose Grand Prix game for ST. Will pay £20. Ring 0181 6537406.

Bloodwych, Dungeon Master and Captive. Will pay £10 each. Other RPGs considered. Write to: Thomas Wellcome, Wellands Green, Stoke Bliss, Tenbury, Worcester, WR15 8QH.

Wanted: Contacts with satellite enthusiasts. Phone Kevin 0161 6200058 evenings.

Archer Maclean's Pool for STE. Decent price please. Word processor package wanted with manuals, able to import graphics and spell checker. Phone Paul: 0191 4901313.

Sound cards for Roland U220. Reasonable price please. Tel: 01495 752068.

Wanted: Any emulators for the Atari ST. Send lists to Matthew, 19 Garfield Road, North Chingford, E4 7DG. Or phone on 0181 5244326.

I need the second part of the Elvira 2 solution. I will pay for the issue or pay for photocopy. Also - any cheap modems? Bolton/Bury only. Call 0161 7971816.

Help! I need The Secret of Money Island II. I am willing to pay very handsomely! Please help me - contact Sam: 01726 843022 any time.

Manual for Amstrad printer DMP 3000 or DIP Switch settings. Your German documents translated, no charge. PD software to swap, what have you got? Tel: 01268 698433.

ST FORMAT issue 71 required including disc. Phone Keith: 01923 467895.

Jaguar games wanted. Send list and prices to CB Allen, 29 Napier Road, Cowley, Oxford OX4 3HZ.

Millenium 2.2, plus Civilization. Pay original price. Leave message: 01753 521920.

Anyone know any hints for Another World, Coolworld, Captain Planet, etc? Also does anyone have any interactive games? Write to: John Hamilton, 10 Simpson Court, Craik, Anstruther, Fife, Scotland KY10 3SZ.

ST owners into the rave scene to swap demos/tapes etc. Write to: Anthony, 6 Middlebere Drive, Wareham, Dorset BH20 4SD.

Calamus 1.05N with manual. Write Bill Jackson, 68 Martin Street, Buckhaven, Leven, Fife, KY8 1EP or phone 01592 716176.

Any fighting games such as Streetfighter, Pit Fighter for Atari ST 320FM. Tel: Cardiff 762575.

SCSI 2 cable, monitor connector, Extends for Falcon. Also STE/Falcon contacts. Write to: Martin, 32 Grassroyal, Yeovil, BA21 4JW. Tel: 01935 25974.

Videomaster digitizer and Colourmaster RGB splitter for STE. Can pay £35. Call: 0181 2651645 (SE London).

Atari high resolution monochrome monitor. Also Atari STE. Cash waiting. Can collect. Please phone: 01884 257487. May consider whole system.

Can anyone help me! I need a square flat sixteen pin I.C. (surface mounted) for a series one board to upgrade to 1MByte. Phone Danny: 01304 372704.

Falcon. Programmers/hardware manuals, PDS-CDROMs. Seisel Yamaguchi, e-mail yamaguti@mx.or.jp or write to: 1-768 Shirotsuchi Togochi Aichigun/Ken 470-01 Japan, or TECHO001@+81-52-805-8392.

Cover Girl Strip Poker for STFM and Deluxe Strip Poker. Will buy or swap for top games. Tel: 01702 545458.

STOS compiler wanted. Good price. Must have manuals. Ring Oliver: 01392 427147.

Wanted: Sleepwalker and other golden oldies. What have you! Contacts/swaps - Steve Taylor, 1 Bleasfield House, Thurso, Caithness, KW14 6WQ.

Please, please help. Wanted: Sensible Soccer (92/93) or International Edition for ST. Box or manual not critical. Please phone with price: 01484 512190.

Drachen, Chinese tile game and Railroad Tycoon wanted. Please write to: Paul Harvey, 81 Linn Road, Larne, Co. Antrim, BT40 2BA.

ST fax software wanted. Must be in English! Cash waiting. Call Chris: 015987 810243.

Wanted: Copy of session PTNR version 2 (profex). Reasonable. Tel: Eire (+) 353 21778168.

Copy of cover disk issue 18. Atari ST FORMAT 1991. Please phone Tony: 0121-603-7185.

ST FORMAT issue 72 (without disks) as my original copy (I have a year's subscription) was stolen from my stand at the Floodlight show. Phone Paul 0181 5428350.

Wanted, Neodesk4, NVD15, Papyrus, Prodata, commercial or PD games, Head over Heels cheat and contacts! Also wanted Spectrum +2A with external floppy. Write to: 10a St Pauls Square, Preston, Lancs.

Wanted. Sensible Software's Shoot-em-Up Construction Kit. Will pay or swap for a game. Tel: 01942 675659, ask for Graham.

Does anyone know how to get the priest out of the dining room on the game called Crusade for a Corpse? Call John: 01333 450867.

MESSAGES

The Golden Dragon require new members and suppliers. Write to: The Detonator, 6 Middlebere Drive, Wareham, Dorset BH20 4SD.

Impact UK Educational disks now available at AGPD along with over 650 other disks. Write now for a catalogue! A Green, 6 Middlebere Dr, Wareham, Dorset.

Can somebody in the Southend area please help me to put Superbot 8.1 or any other boot manager program on to my hard disk? Tel: 01702 613337.

USER GROUPS

Player's Computer Club re-opens at 7.30pm, Friday, 1st September. Meetings every two weeks. New members very welcome. (Notts/Derby area). Phone: 01773 744525 for details.

New PD library called Master PD is now open. Send sae for a disk catalogue to Master PD, Juteenikku 4475, 70150 Kuopio, Finland.

Great PD games available for a disk full of games and catalogue. Send £1.50 to: Alec Woodford, AJW PD Games, 30 High House Drive, Lickey, Rednal, Birmingham B45 8ET.

Any anglers want to join a Computer Angling Club? Tips and help for coarse fisherman. Send sae and card to: Mark Allington, 19 High West St, Dorchester, Dorset, DT1 1UW.

SWAPS

AGPD catalogue disk V4.1 out now - over 700 disks to choose from. Send disk + sae to: AGPD, 6 Middlebere Drive, Wareham, Dorset, BH20 4SD.

Wanted. Original Frontier Elite 2 complete and boxed for ST. Buy or swap some of my original ST software. Tel: 01935 25974.

Daily Sports Cover Girl Strip Poker or Delux Strip Poker wanted. Will buy or swap for one, two, three or four of over 200 games for STFM. Tel: 01702 545458.

I have a new SNES, 7 games, NES, 6 games, Gameboy 5 games. Swap all for STE. Tel: Gordon: 0161 6880158 for information.

Swap a Eurosonic ES200 LCD hand-held CB, brand new. Unwanted present. Cost £100. Swap for 500HD 3.5inch blank disks ono. Phone Matthew on 0181 5424326.

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 Lexicor Software (Europe) • 00 43 1 36 75 92
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Frank Charlton: frank@tachyon.demon.co.uk
Mac Marsden: mac@mentor.demon.co.uk

Calamus User Group: caluser@cix.compulink.co.uk
CGS ComputerBild: 100042.2312@compuserve.com
Compo Software: compo@cix.compulink.co.uk
Demon Internet: internet@demon.net
Gribnif Software: gribnif@genie.gels.com
HiSoft: hisoft@cix.compulink.co.uk
ICD: icdinc@genie.gels.com or icdinc@delphi.com

Lexicor Software Corporation: services@lexicor.com
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info@lexicor.com
graphics@lexicor.com
Mark S Smith: dlms@nessie.mcc.ac.uk
Oregon Research: res@teleport.com
Sam Trammell, Atari: 75300.3443@compuserve.com

Atari ftp sites:
atari.archive.umich.edu/atari/
ftp.demon.co.uk/atari
micro.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>

USER GROUPS

ADELAIDE ATARI COMPUTER CLUB, PO Box 333, Kent Town, 5071, South Australia
 ATARI USER GROUP OF IRELAND, 3 St Kevin's Park, Kilmacud, Co. Dublin
 ATARI USER GROUP (SCOTLAND), 9/3 North Hill-housefield, Edinburgh, EH6 4HU
 ATARI-YAMAHA USER, 49 Summerfield Road, Wythenshaw, Manchester M22 1AE
 BRENTWOOD COMPUTER CLUB, 29 Station St, Bloxwich, Walsall WS3 2PD
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 SWINDON ATARI USER GROUP, 46 Eastcott Rd, Swindon, Wilts SN1 3LR
 UDDINGTON ATARI/AMIGA USERS, 28 Croft Wynd, Uddington, Glasgow G71 8BJ
 WIGAN COMPUTER CLUB, 1 Lidgate Close, Wigan, Lancs, WN3 6HA

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 A-ONLINE MULTIMEDIA, 1229 East Mohawk Avenue, Tampa, FL 33604, USA • 00 1 813 238 5223
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 AGPD, c/o A Green, 6 Middlebere Drive, Wareham, Dorset, BH20 4SD
 ASCIILUM PDL, 34 Earlswood Gardens, Clayhall, Ilford, Essex EGS 0DF • 0181 550 5572
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ST FORMAT

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comms work, Get the Most out of your Atari ST 2 will enhance your understanding and knowledge of your chosen field, while offering you a gentle introduction to the others. At just £12.99 (including postage and packaging), can you afford to miss it?

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SUBSTATION

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The first attempt at *Doom* on the STE and Falcon scored 75% in issue 72 and "holds its own as a 3D blast-'em-down," according to our reviewer. You must roam the dangerous and unknown world of an underwater energy plant that's lost contact with the surface. Aside from the fast-moving 3D graphics, *SubStation* features the realistic DD-Audio 3D sound system - try playing it through a stereo system for maximum atmosphere!

Description:

SubStation

RRP: £24.95

STF price: £21.95

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Description: GFA Basic collection

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STF price: £59.95

Order no: STFGBA



LEMMINGS & LEMMINGS 2

PSYGNOSIS

Lemmings is one of the most famous games in the history of computing - this pair caused such a stir when they were released that we gave each of them an ST FORMAT Gold award. *Lemmings* runs on any ST; *Lemmings 2* needs 1MByte of RAM. Both are Falcon-compatible.

Description: *Lemmings*

STF price: £9.99

Order no: STFLEM1

Description: *Lemmings 2*

STF price: £9.99

Order no: STFLEM2

Description: *Lemmings* and

Lemmings 2

STF price: £17.99

Order no: STFLEM1&2

OBSSESSION

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£21.95

SAVE £3

Obsession is a technically brilliant re-creation of pinball on the ST that scored a massive 94% in issue 67. There are four wildly different 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," so how come you haven't got a copy? Turn the page and send your order off today!

Description: *Obsession*

RRP: £24.95

STF price: £21.95

Order no: STFOBS

1MByte STEs/
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ISSUE 74

SEPTEMBER 1995

Disk: HyperGEM, Goin' Down, Bombs Away
Inside: Multimedia magic; printers - buyers' guide and tips **Reviewed:** Diamond Edge 2, AudioTracker, Sprite Works, Ultimate Arena
Tutorials: DSP programming, boot disks



ISSUE 73

AUGUST 1995

Disk: Hollywood Hustler, Sweet Sixteen
Inside: Hard drives; Spotlight Show
Reviewed: Cubase Score 2, Cubase Audio 16, Rainbow 2, Steel Talons
Tutorials: KIVI, Disk Opus, boot disks



ISSUE 72

JULY 1995

Disk: SubStation, Speed of Light 3.8
Inside: CD-ROM; Eagle; C-Lab Falcon
Reviewed: Interface 2, Thought! 2.2, TUS HD, DeskJet 540, Team, SubStation
Tutorials: Pablo Paint, STOS



ISSUE 71

JUNE 1995

Disk: HiSoft C Interpreter, Alien Thing
Inside: Upgrading your ST; High-speed comms **Reviewed:** Outside, NVDI 3.0, ExtendOS Pro, Ping 2000, Tessera
Tutorials: C, Pablo Paint, STOS



ISSUE 70

MAY 1995

Disk: Team demo, Pablo Paint, 525 2.02
Inside: DTP guide, plus disk utilities for fine-tuning your ST **Reviewed:** MaxiS hard drive, PAK 68/3, Prima HD/CD
Tutorials: Pablo Paint, World Wide Web



ISSUE 69

APRIL 1995

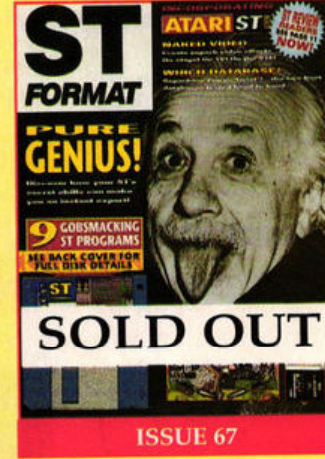
Disk: Obsession table, Chequebook and Hang About **Inside:** The Survival Guide, plus Mix It Up - music special **Reviewed:** Ease, Calamus updates, Hollywood Hustler
Tutorials: AtariNOS, APEX media



ISSUE 68

MARCH 1995

Disk: Magic Storybook and BBS Directory
Inside: A World of Information - Net sites, how to set up your own BBS; MagiC vs Geneva **Tutorials:** KAOSDesk, Twist 2, ST Disk Cat, AtariNOS



ISSUE 67

FEBRUARY 1995

Disk: Smash Hit and KAOSDesk 2.1
Inside: Pure Genius - explore your ST's powers; Twist and Superbase Pro head to head; ProTOS show **Reviewed:** Obsession, Quill 2, Imagecopy Colour 3.5

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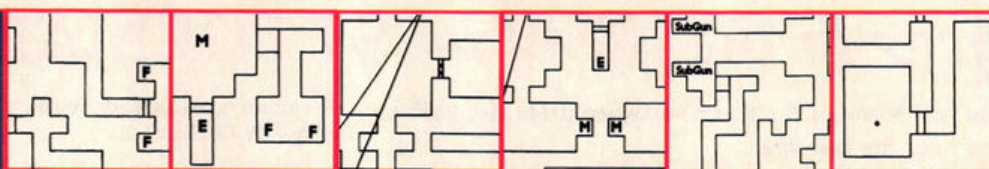


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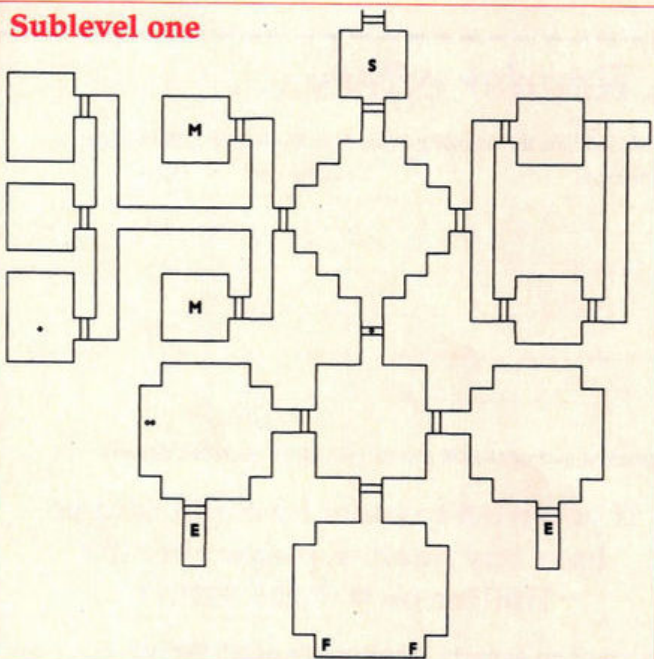
**ST FORMAT, Future Publishing, FREEPOST (BS4900),
Somerton, Somerset, TA11 6BR**



Thanks to the ever-so-helpful people at UDS, this month we bring you the first installment of our complete, three-part solution to *SubStation*.

Gamesbusters

Sublevel one

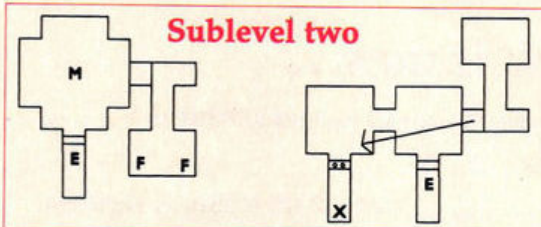


Last month we gave you the complete lowdown on the *SubStation* demo level that appeared on Cover Disk 72. Now, with the help of UDS, we've got the maps from the first six levels of the full game:

LEVEL ONE (ASUKA)

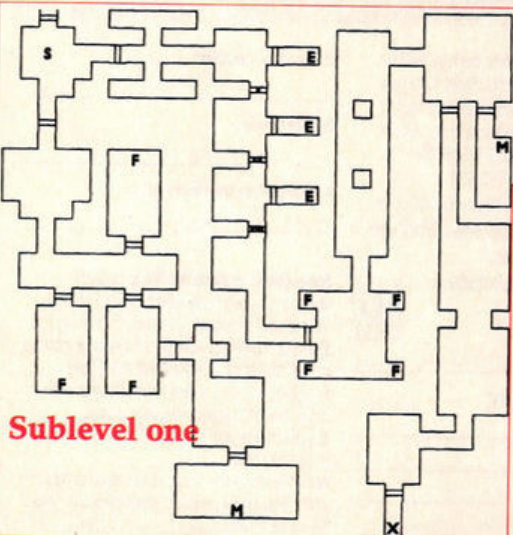
This level is quite straightforward. You'll need to travel between the three sublevels in order to get the right combination of keys to proceed to the following challenge. Opposing you are robots and droids.

Sublevel two

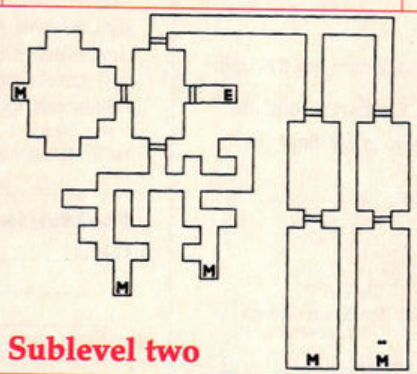


LEVEL TWO (NARA)

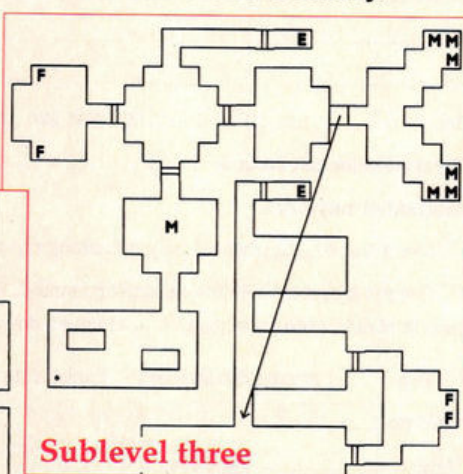
Don't hang around on this level, as you can find yourself out of time if you hesitate too much. Yellsa, which are upright reptiles, join with the robots and droids in attempting to kill you. They take more than one hit to destroy.



Sublevel one



Sublevel two

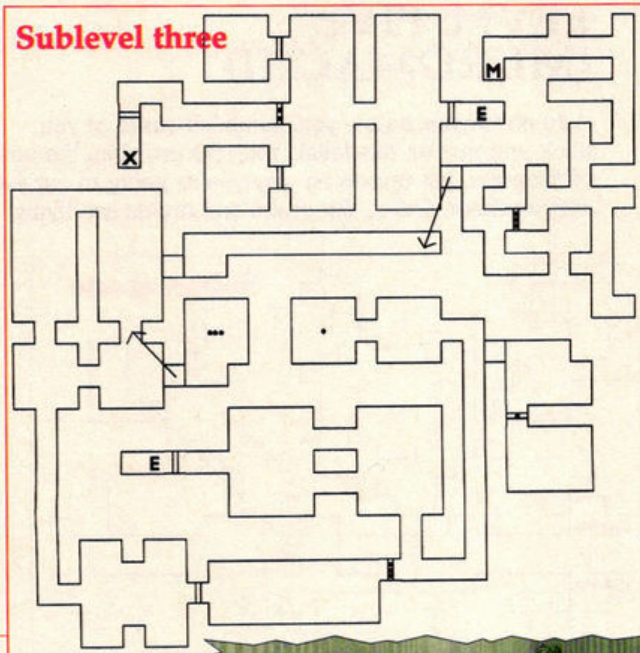


Sublevel three

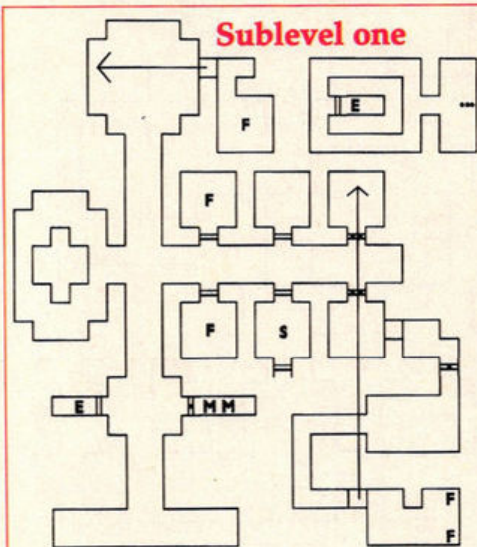
LEVEL THREE (HEIAN)

Get the subgun as soon as possible. With crabs, spiders and knights adding their weight to the robots, Heian is a real toughie to get through. Medikits and food are a real rarity on this level, so use them sparingly, and keep those spiders at arm's length.

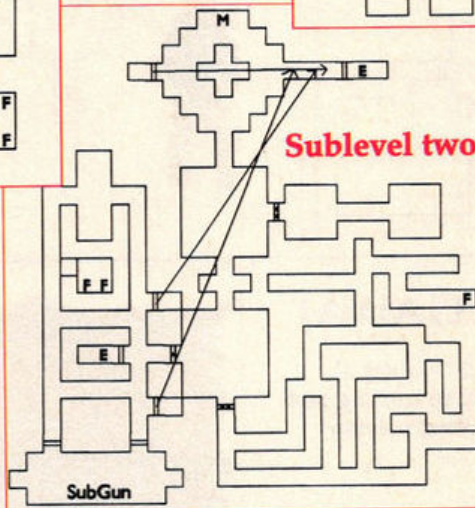
Sublevel three



Sublevel one



Sublevel two



Guide to the maps

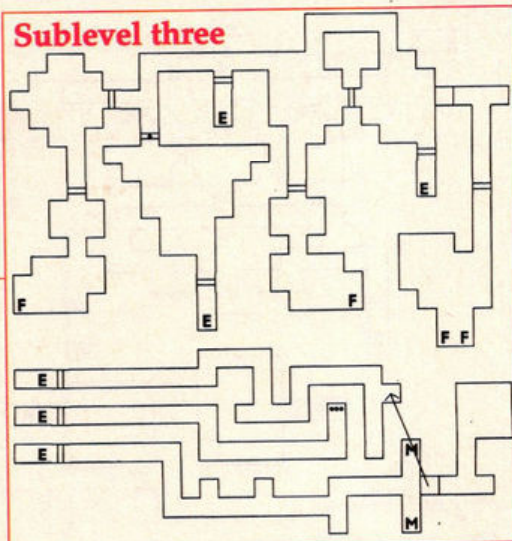
= red key	= green door
= yellow	
= green key	Arrows: access to secret room(s)
= red door	M medikit
= yellow door	F food
	E elevator
	S start of level
	X exit to next level

LEVEL FOUR (KAMAKURA)

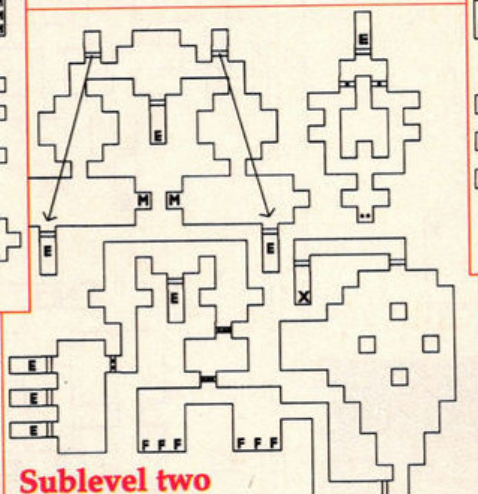
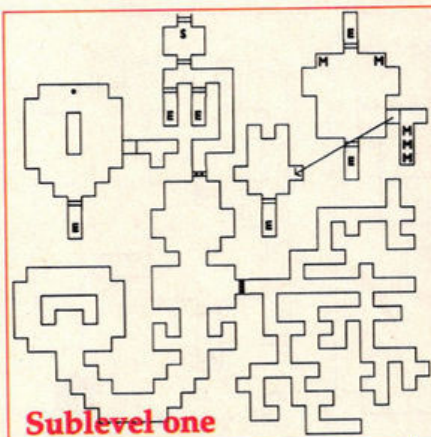
It's all too easy to get lost on this level (which officially doesn't exist), what with the bewildering number of elevators connecting each of the three sublevels. Opposition comes in the familiar form of robots and spiders, while aliens and twin-gobes are introduced with alarming ferocity. You won't think much of your CO's advice either.



Sublevel three



Sublevel one



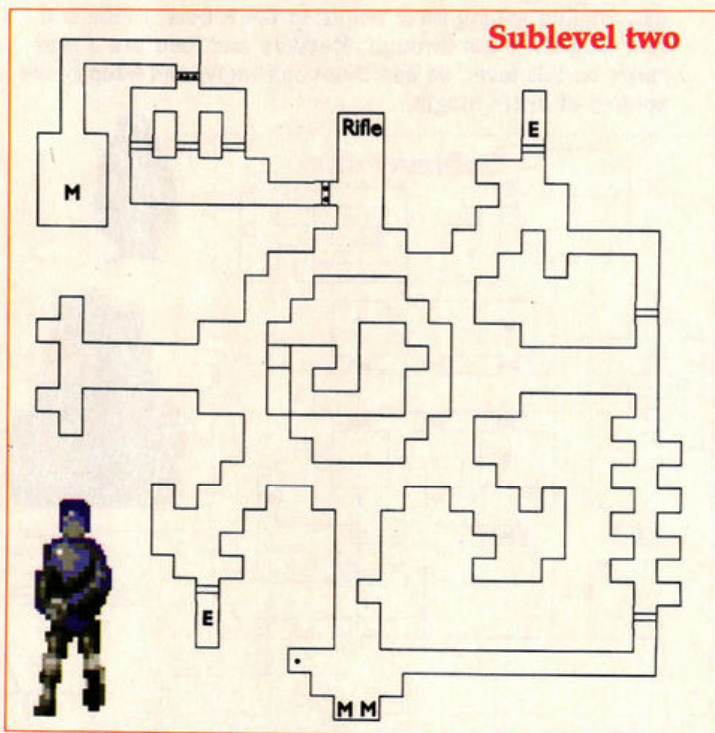
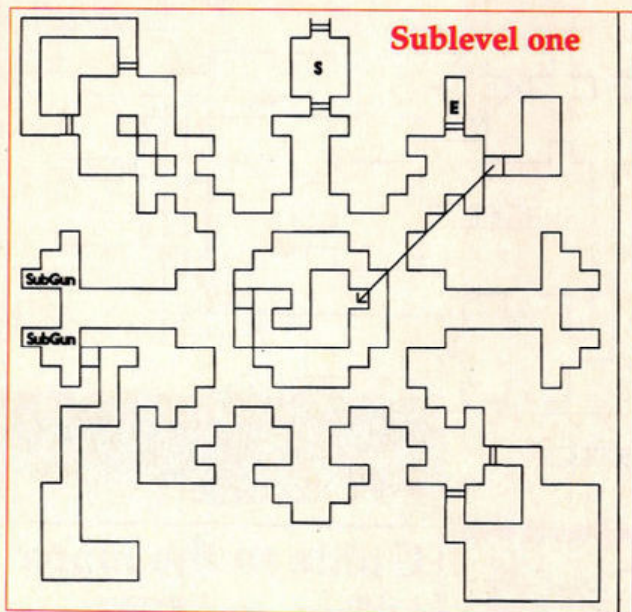
Sublevel two



LEVEL FIVE (MUROMACHI)

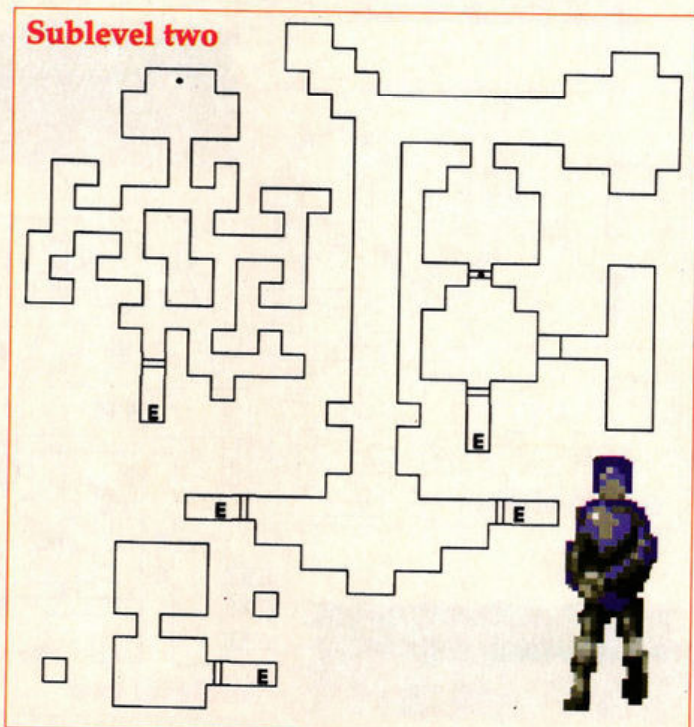
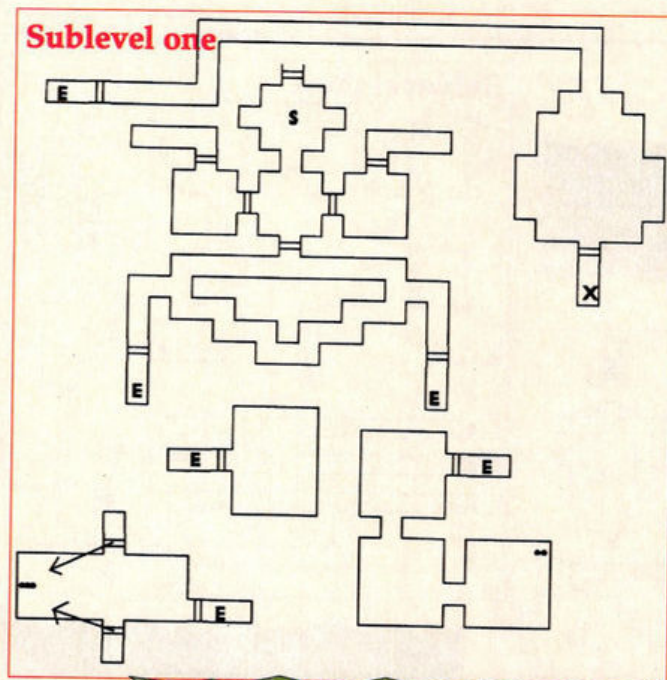
Hold on to your hats – your enemies come at you thick and fast on this level. Your CO prohibits the use of firearms, yet there's no way you're going to survive without them. Aiding the crabs and droids are flying

probes (you need to get some distance on these critters) and xorphers, who fire some kind of energy discharge. It's getting tougher all the time.



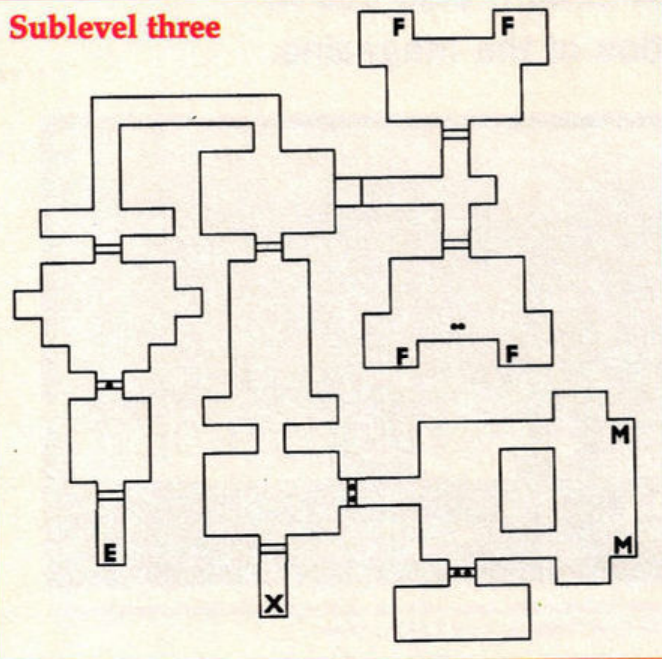
LEVEL SIX (TOKUGAWA)

Xorphers, crabs and droids are joined by a set of lizards on Tokugawa. Start running, keep running and keep that gun firing. Oh, the joys of being cannon fodder in the realms of SubStation!

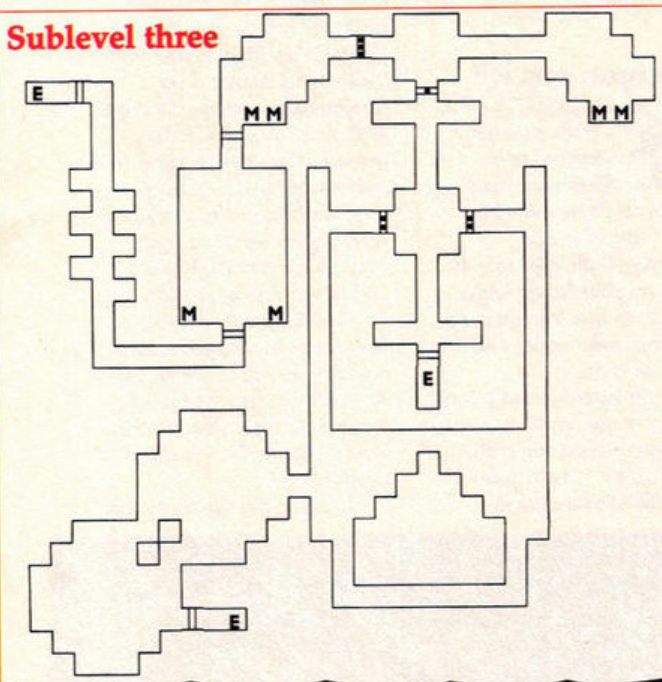


**IF FOOTBALL
IS YOUR
RELIGION,
HADN'T YOU
BETTER READ
THE BIBLE?**

Sublevel three



Sublevel three



I WANT SUBSTATION

If, by some quirk of fate, you don't already own *SubStation*, you can order it from either JCA Europe or Merlin at £24.99. Contact them on ☎ 01734 452416 and ☎ 01452 770133 respectively.



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ST FORMAT
OCT
1995



Feedback

All the latest Star Trek news... yep, you've reached the silly section of the magazine.

Have £££, will send



Please could you tell me the current exchange rate (\$ to £), and the best way to send shareware registration fees from the US to the UK?

Jim Stephens, via e-mail

stf: You can find out what the current exchange rate is by ringing your local bank. As for registering shareware, the best bet is an international money order. Again, ask your bank for details.

Storming PD



I hear that you are interested in finding out what happened to the Portfolio Connection. The bad news is that this service has closed down, but the good news is that almost all the club's software can now be obtained from Any Port In A Storm, 90 Ivy Avenue, Bath BA2 1AN. At the moment there are 48 disks, and more in the pipeline.

A complete list is available on disk, and readers can get hold of it by sending a cheque for £1, made payable to K Swaine, to the above address.

Any Port In A Storm is run to ensure the Portfolio does not fail through a lack of soft-

ware, and any 'profits' made are used to keep the group running, and to investigate new products.

Kevin Swaine, Bath

stf: So now you know...

The firms



Why don't you run an article detailing all the firms supplying, distributing, upgrading and repairing the Atari range of machines; one that includes the full costs of upgrading, say, TOS 1.4 to 2.06 or 1MByte RAM to 2MByte, for example? You could also include a list of turnaround times for the upgrade or component, and even repairs.

While I'm writing, I'd also like to thank you for your continued dedication to all Atari users, your magazine is great. A Terrific Astounding Read Indeed.

Brian McNulty, Bridlington

stf: It's a great idea in theory, Brian. Unfortunately, it's very hard to give a precise turnaround time as every repair and upgrade tends to be different. Still, there wouldn't be any problem listing current costs and labour charges. It might also be useful to have a comprehensive list of who does



So, did your SubStation level design catch the attention of Unique Developments Sweden? Turn to the Cover Disk pages to see if you're a winner.

what. Yes, I think you can expect to see that one...

A unique service



On July 12, I wrote a letter to Unique Development Sweden, congratulating it on its two excellent games: *Obsession* and *SubStation*. Both appeared as demos on your Cover Disks, and I have since bought both programs and installed them on my hard drive.

In my letter I asked if they could give me some hints on disposing of a certain monster in *SubStation*. I also inquired about the level designer.

Nearly a month passed, and I thought my letter had been lost somewhere between here and Sweden. However, on Thursday 3 August I got a tremendous surprise. At about 2.30pm a Parcel Force van arrived, and I had to sign for a rather large parcel. I didn't have the slightest idea what it was or where it came from, until I looked at the invoice and saw it was from UDS.

Grabbing the nearest pair of scissors, I managed to hack my way through the sellotape. At first I thought they'd sent me something to do with the level designer. Or was it the *Combat Pack*?

Imagine my surprise when

PIXEL PAINTING

This month's Pixel Painting winner is Paul Axton from Cheltenham in Gloucestershire. He's sent in a rather fetching picture of an Orc in full

battle armour. Paul created this in *Neochrome*, and it's over to him to explain exactly how it was all put together.



1 I started by drawing the construction lines for the head. These consisted of a series of ellipses. Next, I filled the head and added darker shading around the chin and so on to form the facial features.



2 Here I started to develop the shoulders and chest. I created the chain mail effect by copying and pasting a series of small ellipses on to a grey background. I also decided to reduce the size of the chin somewhat.



3 As you can see, I then continued to develop the arms and pasted a large shield over the character's left arm. Next, I drew a cutlass-style sword and placed it in his right hand to give him a really mean feel.



4 Finally, I finished off the belt and lower body area, highlighting certain areas of his boots to give the illusion of perspective. The drawing was completed by adding the solid black background.

PS OF THE MONTH

PPPS – Don't you hate it when people put in loads of postscripts?

Harry Canter, Wrexham

stf: No, not really.

PS – Except when the person is from Wrexham.

PPS – And has a name like Harry.

PPPS – And didn't bother to write a real letter to go with the postscripts.

I opened the box and an Atari 520STE was staring me in the face. No trick, no joking. Unique Developments had sent me a fully functional 520STE computer, upgraded to 1MByte, so that I could take advantage of the SubStation's two-player option.

I just thought I should write in and let everyone out there know what a superb company UDS is. Can anyone beat this? Unique Development Sweden is the best and, deserves to go far.

Stephen Smith, Worksop

stf: And your good luck doesn't end there, Stephen. We're currently featuring a complete game solution, and the winner of our level-designing competition is on this month's Cover Disk. We will also be giving away the trainer level on next month's disk. Yep, UDS certainly gets our vote as the most generous company in the ST market at the moment.

Star Trek Format



I have noticed a very disturbing trend recently in your publication, and I hope you will rectify it immediately. No, I'm not talking about the price rise or the number of pages, this is far

more serious! Where have all the Star Trek pictures gone? How am I supposed to know what's going on in Deep Space Nine or Voyager if you don't give me regular snapshots and captions? Come on,

people, get your act together – we're relying on you.

Ian Blakely, Northumberland

stf: Erm, sorry about that. We do try, but well, occasionally we feel obliged to show ST-specific screenshots. Anyway, the latest news from Paramount is that Michael Dorn (Worf) is joining Deep Space Nine for the fourth series. Captain Janeway (below) gets our vote for the most irritating voice in Starfleet, although we have to admit to being impressed by her ship, and we believe that the next feature film will feature Next Generation super villains the Borg. We can't wait! ("Oh yes we can," said the office's lone supporter of Babylon 5, before being summarily dismissed. Anyone want to be a Production Editor?)

Super monitor



I use a Falcon030 computer, but find that many of the Cover Disk and

Wonder Disk programs you supply won't run on my SVGA monitor. I suspect they are supposed to be run on a television, but I was wondering whether there are any programs which can convert the output so that I can use my monitor instead.

Jacob Freedman, Sweden



Star Trek Voyager's Captain Kathryn Janeway in typical lecture stance, complete with stupidly irritating voice and, erm, a sound stage full of bubbles. Go figure.

stf: We haven't heard of any such programs, but that doesn't necessarily mean they don't exist. Does anyone out there have a remedy for Jacob's woes? If so, write in and let us know, and we'll pass your solutions on.

Fighting talk



A friend has recently given me an original copy of Street Fighter 2, but it doesn't have any instructions. How can I obtain the instructions? And is it true that most of the ST FORMAT crew support Birmingham City FC? Jamie Kanj, Acton

stf: If it really is an original copy, your friend will have the instructions, so try asking him. Otherwise it's a case of buying a new copy, I'm afraid, as it's illegal to photocopy game manuals – check out the special offer

on page 15. As for Birmingham City, no, we don't all support them, just Nick, but then he's always had a bit of a soft spot for hopeless causes.

As for the rest of us, I'm an Arsenal fan and don't care what anyone says about Tony Adams. Andy's too busy routing round record shops to care, and Mary's foreign and doesn't understand football. Shame, isn't it?

Back it up



I've just bought a 540MByte hard drive from Gasteiner and I'm



Make sure you have a bona fide copy of Street Fighter 2 with our exclusive low price deal – see page 15 for details.

After Peace Friendship

During the War Gordon was an RAF pilot, who afterwards became a metallurgist consultant for a German Steel Combine. One of his colleagues was an ex-Luftwaffe pilot and they became firm friends, resulting in him being Godfather to his two sons.

After a very severe illness, Gordon was able to spend two weeks convalescing at the RAF Association's Nursing Home "Sussexdown" in Storrington.



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NEXT MONTH

Life in the Virtual World – we take a look at how to create 3D models on your ST and give you step-by-step guides to creating, rendering and animating your own virtual objects. Plus, we give you the software to take control of cyber space...



Plus:

The font of all knowledge – we reveal the best formats for you, show you how to convert fonts from different platforms and give you step-by-step guides to creating your own typefaces. We'll also be taking a look at the best commercial and PD font packs.

And:

An in-depth look at the forthcoming crop of HTML browsers, reviews of the Aiwa CD-ROM drive and Zero X – the new professional sampler for the Falcon – and news of MagiC 3.

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ON THE CARDS

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Next month we show you how to back up your hard drive – just remember to line up the kerb with the stickers on the back window.

very pleased with it so far. However, recently I read your article about hard drives, which talked about backing up, but it didn't explain exactly how to do it. I'm very worried that if something goes wrong with the drive I will lose everything. Please, could you tell me how to do it?

Lloyd Hannis, Coventry

stf: No problem, Lloyd. Just pick up a copy of next month's issue and read Clive Parker's definitive guide to making backups.

Satisfied customer



I feel I must reply to Dave Marsh's comments in issue 73. I've been a subscriber for several years now, and in no way do I feel cheated by the recent magazine price increase. Indeed, I think you get excellent value for money by being a subscriber. This year I've taken advantage of the Direct Debit option, which at £30 per year equates to just £2.50 per month. On top of this, you receive an additional monthly disk, free to subscribers, packed with programs, games and utilities, as well as the regular Cover Disk and the informative **ST FORMAT** magazine itself.

So come on, Dave, get things into perspective. If you wish to pay £4.25 per month that's up to you, but you really should consider subscribing to: a) ensure that **ST FORMAT** continues to prosper, thus benefiting all ST owners, and b) save yourself between £18 and £21 per year.

Glen Dorward, Houghton-le-Spring

stf: What else could we possibly add? Turn to page 74 now and save yourself a packet.

The bottom end



It's nice to know that high-end Atari users are catered for with the Eagle (and Medusa, and **MagiMac**, and the Falcon Mk2), but boohoo, sob, boohoo... pause to wipe eyes... there's no new low-end computer like the STE available. Point is, it's the low cost, low-end computers like the STE that enable children, and young people with-

out much money, to get into real computing, and to get to know the great power of the 680x0 processor.

We feel that someone with a big head of STEam, like you, the good folks at **ST FORMAT**, ought to kick those clots at Atari for dumping such good computers just to concentrate on the Jaguar. Yes, we know it has probably saved Atari from oblivion, and we should be grateful for that, because, hopefully, they may yet come back into real computers again. It doesn't pay, in these days where diversity of the product line is one key to ultimate success, to put all your eggs in the Jaguar basket.

However, there's something Atari could do right now to help users of Atari computers: assist someone like GeSoft to go into production and/or development of the STE and Falcon030, or clones. These should be priced so that kids can buy into their, and Atari's, future without being stung for the privilege.

John and Tom Morton, Edinburgh

stf: I couldn't agree more, chaps, but Atari seem absolutely determined to abandon the serious computer in favour of the Jag. According to our sources, they don't even have any STs or Falcons in their own offices anymore. Still, perhaps someone could make them an offer for the STFM and STE specs...

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.

NVDI 3



The fastest display accelerator now comes with the Speedo and TrueType scalable font system. NVDI 3 has highly optimised code, faster than the original. Get a faster display, comfortable font handling and faster printing for all programs using GDOS or SpeedoGDOS. Now you can use all those classic TrueType fonts from the PC or Macintosh.

NVDI v3.0 including 8 Speedo fonts £49.95
100 TrueType fonts on disk £39.95
500 TrueType fonts on CD-Rom £49.95

For update pricing, please phone.

NVDI v2.5 will continue to sell for only £29.95
Best Software Upgrade 1993 & 94 - ST Review.

MagiC



"If you want a multitasking system that works simply and reliably, then MagiC is for you."

ST Review, June 1994.

MagiC is a full TOS replacement; a very fast disk filing system; has accelerated serial, MIDI and printing routines and is, of course, a true pre-emptive multitasking system. MagiC Desk, a replacement Desktop, and a powerful command shell are included. MagiC runs on ST, Mega and TT computers with 512Kb, but 2Mb is recommended for a useful working system. The Falcon version is expected to be available by July 1995.

"It's like running an accelerator and getting the multitasking thrown in for free."

ST User, February 1994

NB: Excellent with Calamus SL. Compatible with Notator Logic, but not with Notator SL and not yet compatible with Cubase.

MagiC (RRP £69.95) Intro Price £59.95
MagiC and Ease £79.95
MagiC and Kobold £79.95
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PAK68/3



Turn your computer into a 32bit system with the PAK68/3 and a 68030 processor. The 32MHz clock, 32bit wide TOS and a 32Kbyte cache will accelerate your system by 775% (Gembench 3.10). This is faster than the Falcon and the TT! Clock speeds of 40 and 50MHz are possible. The use of recycled processors makes this upgrade very affordable without sacrificing reliability. A 32bit 128Mb FastRam board and a 24bit colour graphics card are now available.

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ATARI

WORKSHOP

Kobold



This High Speed File Manager gives unbelievable speed. Copies 1000 files (10Mb) in 45sec (GEMDOS 5:35min!). Use Kobold for backing up; formatting floppies (DD,HD,ED); move, copy and delete files; use the learn function to automate repetitive jobs. Ease calls Kobold automatically for all desktop file and floppy operations.

Kobold 2.5 (RRP £59.95)

Still Only

£39.95

Ease



ST FORMAT Awarded 97%

Use your Atari with EASE. Replace the old Atari Desktop. This program could not be more appropriately named. The right click replaces the double click. Iconize windows for instant access to groups of files. Ease is aware of multitasking and comes with a sophisticated Colour Icon Editor. Works on any ST, all TOS versions, and with any display and graphic card.

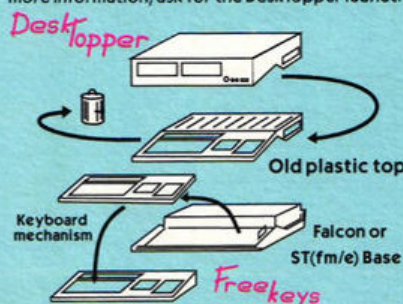
Ease (RRP £49.95)

Still Only

£39.95

DeskTopper

No space for accelerators, TOS boards, hard disks, graphic cards and PC emulators? Convert your Atari into a desktop computer with more space. Simply replace your plastic top with the DeskTopper and fit your keyboard into FreeKeys (or replace with a PC Keyboard using AT-Key). For more information, ask for the DeskTopper leaflet.



DeskTopper - ST(FM/e)/Falcon £69.95
FreeKeys £39.95
DeskTopper and FreeKeys £99.95
AT-Key £49.95
Cherry Keyboard £29.95
DeskTopper & FreeKeys £99.95

T28 & T28e



Tired of waiting for your computer? Then speed it up with a 28MHz processor. The T28 accelerator is now available for STe and STFM computers. Compatible with Cubase and Notator Logic.

Available Now: The MultiBoard, a TOS2.06 IDE and graphic adaptor with 2-8Mb memory expansion.
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SCSI Drives



Best Hard Drive 1994 - ST Review Christmas '94
MiniS hard drives are full SCSI systems, hardware compatible with all Atari, Amiga, Mac and PC computers. They are unrivalled in size, low noise, speed and style. The ST(FM/e) version now comes with the ICD Link II as standard, or choose the Translator with HD Driver. Also included are terminators and all required cables.

We will match prices but won't compromise quality

Gold Award of 93% - ST Format Feb. '94

Essential Buy of 92% - ST Review Christmas '93

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540Mb	Quantum	£279.00	£329.00
730Mb	Quantum	£309.00	£359.00
850Mb	Quantum	£359.00	£409.00
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2Gb	Connor	£799.00	£849.00

Look: Bundle Kobold with any drive for £24.99

CD-Roms



NEW Toshiba 4x Speed CD Rom drive systems:
for the Falcon with SCSI II Cable, or TT £249.00
for the ST(FM/e) with the ICD Link II £299.00

Get a free Mega Archive CD
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★ Multi-session Drive ★ Photo CD compatible
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Suzy B American PD/Shareware (2 CD's) £49.95
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On this month's...

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TESTED FOR MAXIMUM COMPATIBILITY WITH STS
AND FALCONS, AND GUARANTEED VIRUS-FREE.

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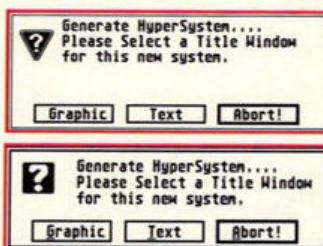
7

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**PLUS
BACK UP
UTILITY**

SUBSTATION LEVEL LET 'EM FLY

Exclusive to
ST FORMAT, the
winning level from
our Underwater Hell
competition. Requires
1MByte Falcon or
STE and SubStation.



Revolutionise your
GEM dialogs – add
keyboard shortcuts,
change the icons
and move them
around. Let 'Em Fly
is freeware.

RESCUE ST

Enhance your ST with
this multi-function
desk Accessory. This
version is exclusive
to **ST FORMAT**.



PICFIB 1.1

View, catalogue
and organise your
picture files with
this handy
graphics utility.

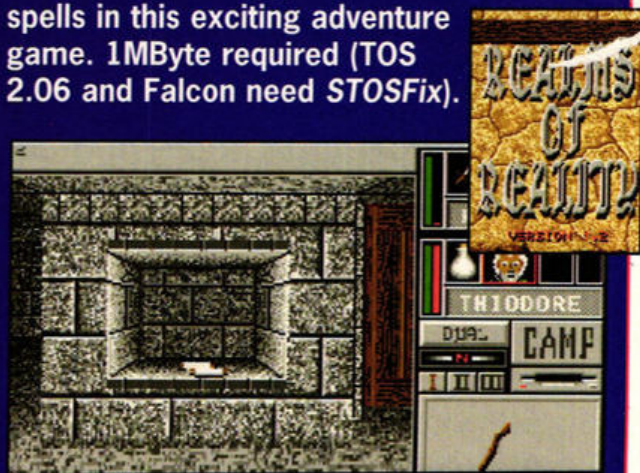
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Special **ST FORMAT**
screen-saver written
for users of **STOS**.
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Compiler required.



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Take on the bad guys with swords and
spells in this exciting adventure
game. 1MByte required (TOS
2.06 and Falcon need **STOSFix**).



DESKCLOCK

Ensure you're on time
with this handy
Accessory that
displays the system
time and day on the

Menu bar.

ASSEMBLY

Save yourself some
typing with these two
assembly files, which
accompany Andrew
Gisby's Assembly

column in **ST Answers**.