

ATARI

ST REVIEW

WHAT'S NEW, WHAT TO BUY, WHAT TO PAY

A MUSICAL BREAKTHRU!
1 MEG ONLY

ATARI ST REVIEW

BREAKTHRU

Yes, it's a breakthrough in music sequencing - a 64-track sequencer which can also play back up to four samples through the ST's stereo outputs! Create and edit your songs on this demo using the on-screen keyboard and the piano-roll style graphic editor! Produce an 'album' with the Jukebox facility! 1 Meg only!

NO EXTRA EQUIPMENT NECESSARY!

11 BASS NOTES

ATARI ST REVIEW

INVADERS!

TELEBOOK

EXCLUSIVE FULL GAME!

TELEBOOK - Create and maintain an address and telephone book with this exclusive program unit. (Disk necessary!)

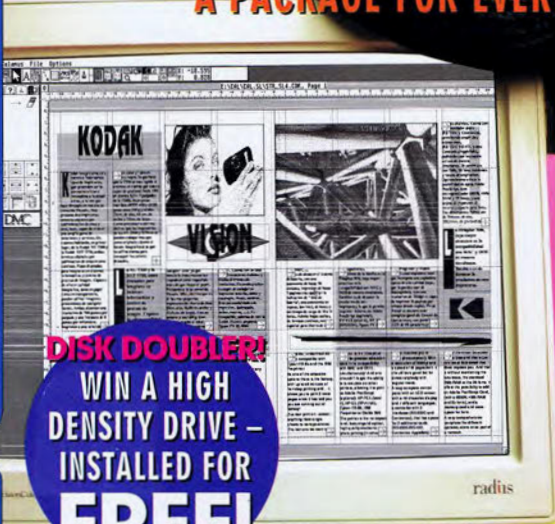
PLUS!

- GRAND PRIX MANAGER Manage a Formula One racing team; recruit your drivers and set your strategy as best as this fully animated game.
- ROADSTY Use those car wheels and set the ACES speed to your life's rhythm.
- SPRINT Exchange identical quest episodes.
- THE TURT Counts empty lines to let the sun cook your interdimensional...
- SAGE COMMANDS Second part of the 16MHz BASIC command set.
- AND MORE...

16MHz BASIC COMMAND SET

OLE!!

PROFESSIONAL DTP SPANISH STYLE!
A PACKAGE FOR EVERY POCKET!



DISK DOUBLER!
WIN A HIGH DENSITY DRIVE - INSTALLED FOR FREE!

CIVILIZATION

MICROPROSE'S
BLOCKBUSTER HITS
THE ST!



ON DISK: BREAKTHRU USABLE DEMO INVADERS - COMPLETE GAME TELEBOOK ADDRESS BOOK - EXCLUSIVE! READER 2 - CHECK YOUR README FILES SPRINT - FAST PRINTER SPOOLER AND MANY MORE! INSIDE: DTP - A PROGRAM FOR EVERYONE HIGH DENSITY INTERNAL DRIVE STEP-BY-STEP 16MHZ PROCESSOR FOR ANY ST AND LOTS OF TUTORIALS!





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- Star SJ48 Autosheet feeder.....£49.99
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4 page laser, 1 years on site maintenance

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ultra quiet 9 pin colour, 192 cps draft, 38 cps NLO
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ultra quiet 24 pin colour, 192 cps draft, 64 cps LQ, 32 cps SLQ
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- NEW!! Swift 200 Colour.....£217.99
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- Canon BJ10ex.....£219.99
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WARNING: Before you purchase a monitor make sure it has a full UK spec. You might be buying what you think is a similar monitor at a lower price but it is likely to be a "GREY" import & does not comply with British safety standards or covered by an official warranty

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where the quality counts

The Deluxe range of RAM expansions by Frontier for the older STEF must be the best available on the Atari. Expandable to 4Mb by the use of 1/8" SIMMS modules, the 512k expansion is ideal for the user who may need more RAM later-on.

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NEW! LOW PRICE!

NEW! LOW PRICES!

NEW!

PRINTED IN THE U.K.

Atari computers are making inroads into the world of professional publishing. We take a look at one Spanish company with serious designs on the ST - turn to page 24.

ST REVIEW ISSUE 11
MARCH 1993



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Cover Disk Returns: Page 13

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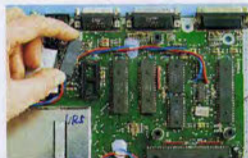
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Left: Even if you don't have a MIDI keyboard you can still use Breakthru. All you need is an ST with at least one Meg.

Right: Increase your ST's storage capacity by installing a high density disk drive. We show you how in another easy-to-follow step-by-step guide.



ON THIS MONTH'S COVERDISKS

BREAKTHRU

Music for everyone! This highly usable 64-track sequencer demo works in mono or colour and needs a Meg of memory. Create your own rhythms with the included percussion samples - the only limitation is your imagination!

INVADERS

A superb version of the classic arcade game from our resident games programmer - even if he is on the other side of the Atlantic!

ALSO ON THIS MONTH'S DISK

Programs and utilities galore, including...
TELEBOOK - An exclusive program which allows you to maintain an address and telephone book.
G_PRIX - Manage a Formula One team for a season! Watch your drivers win... and your company go bust with this excellent demo.
READER2 - Updated version of the program given away with issue six - lets you read text files while running other programs.
RENAMEIT - Use lower case and other ASCII characters in your file names.
BIG_TEXT - Create large, fancy text for letterheads in Degas Elite format.
SPRINT - Excellent, exclusive fast printer spooler.
CHCACHE - For use with the Problem Solved article on page 84...
MACHINE GUN - At the end of your tether? Vent your anger on the ST's screen with this desk accessory...



FEATURES

24 POWER TO YOUR PAGES

Who says that the ST can't be used by a professional publishing house? Our trip to the Costa Del Print shows just how wrong this assumption is! From DTP to heavy metal, **Zona 10** in Spain proves that being the best doesn't mean hammering the bank account. And not a Mac in sight...

34 JET SET

A printer on the move... Hewlett Packard has followed up its incredibly successful Deskjet range with a portable version. Does it deliver? Is it worth the money? We give you the facts...

34 MORE IN STORE

Fed up with having your room swamped with disks? A high density disk drive could halve the number of disks that you use. Our step-by-step guide takes you through the installation of an internal drive - a true disk doubler!

38 SOUND & VISION

Ever wished that you could take your favourite TV pictures and make them appear on your ST monitor? Dream no more - with Microdeal's **Video Master** digitised animation package you can create your own demos including high quality sound!

42 CACHE YOUR CHIPS

The ST's old 8MHz processor is getting rather long in the tooth; how about a 16MHz version for less than £100? It even plugs straight into an STe...

REGULARS

6 NEWS

Movement on the hardware front with three new monitors from Silica, Gasteiner and Analogic along with news of the latest Seikoshia 24-pin dot matrix printer.

13 COVERDISKS

Gajits' **Breakthru** is given the star treatment this month with four pages of tutorials to get you up and running, starting on page 14. The second disk has **Invaders**, a superb version of the original **Space Invaders** arcade game, along with our usual selection of programs and utilities.

45 SCREEN SCENE

This month sees the arrival of Sid Meier's ground-breaking **Civilization** and US Gold's eagerly awaited conversion of the arcade smash, **Streetfighter 2**. Readysoft also has two new titles in the offing with the visually stunning **Dragon's Lair 3** and **Guy Spy**, which they reckon solves the playability problems which dogged their previous games. There's also the usual round-up of budget releases in VFM and reports on forthcoming titles in First Impressions.

74 PD ZONE

To go with this month's cover disk, we've got reviews of the best PD games, demo programs and utilities currently available, as well as a round-up of what's selling and our usual set of coupons to make your buying that little bit easier.

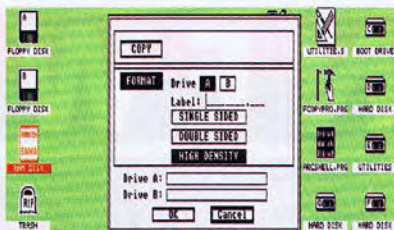
84 PROBLEM SOLVED

The latest in our series aimed at helping you to understand your ST. This month we look at getting the best out of your auto folder programs with **Cold Hard Cache** as our example - check it out on our second cover disk.

103 MIDI MONTHLY

First there's **Midgrid Professional**, an innovative sequencing program for those who want to create music without the headache of learning lots of screen commands. Next up is Yamaha's QY20, a pocket-sized synthesizer and sequencer rolled into one. Finally, we look at **Jazz Chord**, a program which can help you to create jazz and blues with your ST.

WIN A HIGH DENSITY DISK UPGRADE!
DOUBLE YOUR ST'S CAPACITY TURN TO PAGE 105 NOW!



Find out how to double the capacity of your floppy disks on page 34.

SCREEN SCENE

Play to win with the best games round-up anywhere...

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ST BUYER

Everything for the ST enthusiast in one section. This month we look at auto folders...

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Fancy your hand at making movies? Check out VideoMaster on page 38.

WHAT A DEAL!
CHECK OUT OUR READER OFFERS ON PAGES 42 & 43

NEWS

This issue of ST Review has one of the most interesting features ever printed in an Atari magazine on a subject area which is likely to interest many of you, our readers. Desktop publishing used to be the domain of 'serious' computers but current software on the ST is making many small companies rethink their attitude. The feature, starting on page 24, highlights a Spanish publishing house which uses Atari computers exclusively and includes detailed reasons behind their decision. To put the whole issue into perspective, there are brief reviews of five of the current DTP programs for the ST; a package for every pocket.



Cover disks; love 'em or loathe 'em, ST Review readers have had an exceptional deal from the pair on our cover each month - Timeworks, Cyber Studio, Paint and Control, First Word Plus and HiSoft BASIC to name but a few. This month we've included a great demo version of Gajits' Breakthru sequencer - and you don't need any equipment beyond your ST and monitor, so get started with our easy-to-follow tutorial on page 14.

Another month, another mag... see you same time, same place next month!
Vic Lennard

PICTURE THIS



Silica's new ViewTek VT12 greyscale monitor.

A cheaper alternative to using your television is now available from Silica Systems.

The ViewTek VT12 greyscale monitor is fully compatible with the ST and it works in low and medium resolution. A high resolution software emulator is supplied. The 12-inch monitor features stereo speakers, pale grey colouring to match the ST and a small footprint to make it easy to fit in a confined space. Priced at £69 including VAT, it's now available from Silica Systems, 1-4 Hatherley Road, Sidcup, Kent, DA14 4DX, telephone 081 309 1111.

VIRGIN SCORES DINO

Virgin Games has signed Dino Dini to write a follow-up to his monster-smash *Kick Off 2*. As Anco Software holds the copyright to the original game, the new one has been provisionally titled *Goal!*

Goal! takes the *Kick Off* series a stage further and promises many features not previously seen, including enhanced perspective and further refined gameplay.

Dino said: "I'm looking forward to this new and exciting relationship. I believe Virgin can do for soccer what they've done so effectively for snooker".

Next month, we feature a two-page preview of *Goal!* and an interview with Dino Dini.



Dino Dini (right) and Virgin Publishing Director

SWIMATHON RAISES MONEY FOR CHILDLINE

Usually mixing computers with water is a bad idea, but one Atari fan has found a way to turn it to his advantage and raise money for the charity Childline.

George Nash from Consett, County Durham contacted several companies for sponsorship and then swam 5000 metres of his local pool, complete with his Atari swimming cap. So far, the total raised is £150 with several pieces of donated software still to be sold and added to the final tally.

Companies such as Compo Software, HiSoft, Cambridge Business Software, Liassoft, The ST Club and ourselves sent a cash donation and Microprose, Electronic Arts, Coombe Valley Software, GST, Cambridge (again) and Atari Workshop donated software. Atari themselves offered George a payment of £15 for each time their name appeared in a national publication in association with the swim and £30 for each time the highly fashionable cerise Atari swimming cap appears. Canon UK loaned George a BJ20 printer for a month to send out all of his letters, too.



Above: A Mega and an STFM with monitors, the Canon BJ20 and, of course, the Atari swimming hat.
Left: George and the now famous cerise Atari swimming hat.

MIDI MAKES MORE MUSIC

Forget all your new-age dance music stuff, the classics are now available on MIDI.

Four new disks of MIDI classical music are available from Words & Music. The disks cover everything from classics like Tchaikovsky's Russian Dance to a collection of Spanish Guitar pieces.

The files are standard MIDI File Format and can be played through virtually any sequencer which supports these and can be easily adapted to play on any MIDI instrument. Each disk costs £10.95 and comes complete with a four-page instruction guide and a leaflet giving more information about each file.

For orders and more information, contact Words & Music at 26 Newark Drive, Whitburn, Sunderland, Tyne and Wear, SR6 7DF, telephone 091 529 5327.



SCREEN SEEN

Gasteiner has announced a replacement for those hard-to-find Atari mono screens. The new 14-inch screen is similar in quality to the SM124/5 and the price is £149. It comes complete with a 13-pin DIN plug for direct connection to your ST.

For more information, call Gasteiner on 081 365 1151, or write to: Gasteiner Technologies Ltd, Unit 12A Millmead Business Centre, Millmead Road, London N17 9QU.

MORE MONO MONITORS

New from Analogic Computers is another cheap replacement mono monitor. Retailing at £129.99, you get virtually all the same features as an Atari SM monitor, bar the hassle of tracking it down.

The address for Analogic Computers is Unit 6, Ashway Centre, Elm Crescent, Kingston-upon-Thames, Surrey KT2 6HH. Telephone 081 546 9575.

Another company offering an alternative high-resolution monitor is First Computer Centre in Leeds. It's supplied complete with leads to connect it to your ST and is fully compatible with all high-res programs.

The new screen is available for £119.99 from First Computer Centre, Dept STR, Unit 3, Armlay Park Court, Off Cecil Street, Stanningley Road, Leeds LS12 2AE, telephone 0532 319444.

LOW-COST COLOUR FROM SEIKOSHA

Seikosha has taken the lead in bringing good quality colour printing at an affordable price.

The SL-95 is a 24-pin colour dot-matrix printer which costs just £249. It has a super draft print speed of 240 characters per second and 64 cps in letter quality mode. It also supports Epson LQ860 and LQ850 emulation and has a 43 Kilobyte buffer as standard.

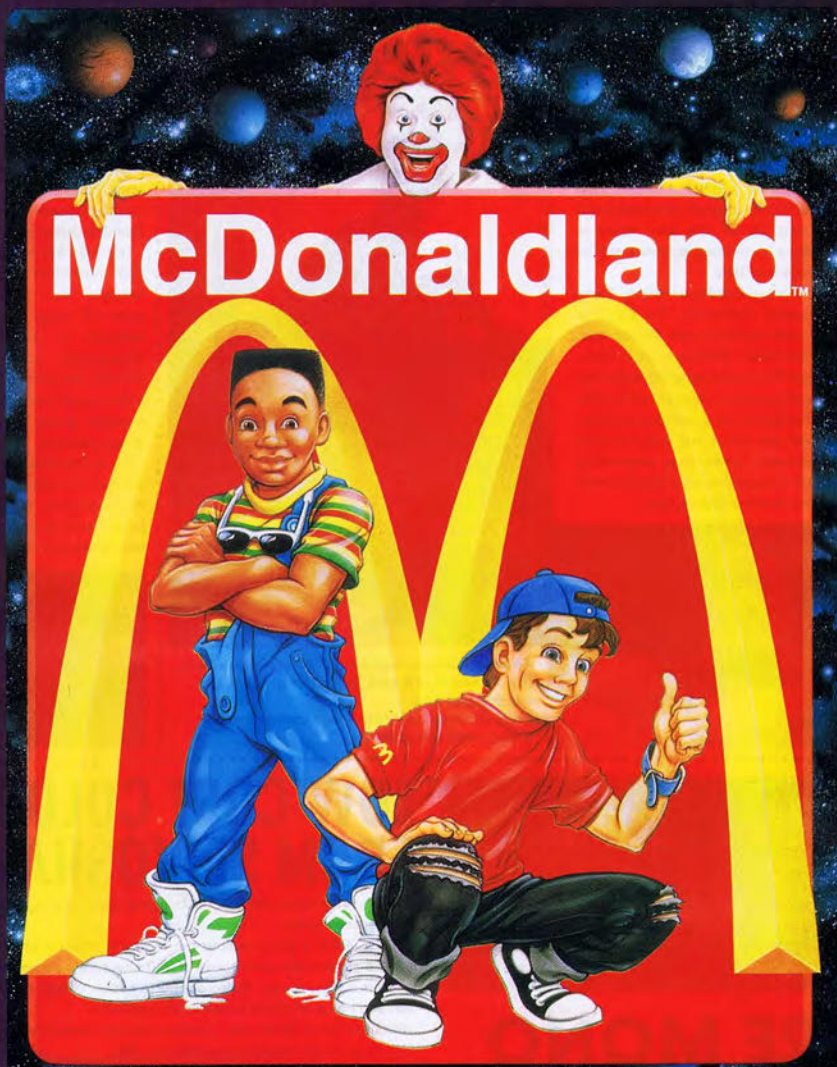
Retail price is £249 with optional on-site warranty for an additional £10. A cut sheet feeder is available for £82.

For more details, contact your local stockiest or Seikosha direct at Unit 14, Poyle 14, Newlands Drive, Colnbrook, Slough, Berkshire SL3 0DX, telephone 0753 682036.



Seikosha's new low-cost SL-95 24-pin colour printer.

1 Cool game, 2 Cool Kids



Screenshots may be taken from a different version.

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LEARN THE ST WAY

LCL has added a new course to its extensive range of educational software. **Micro Science** takes beginners to GCSE standard and encourages students to carry out National Curriculum and GCSE level experiments using household objects.

Micro Science alternates between fun and serious learning to keep the student motivated throughout the course. Biology, physics and chemistry are all covered in the package and the courses include digestion, ecology, genetics, electricity, force and motion, atomic structures, chemical equations and much more.

Micro Science is available from all major educational stockists for £24 or direct from LCL who can be contacted on 0491 579345.



Learn science the LCL way.

PARTY FOR FUN SCHOOL

Europress Software recently held a party to celebrate half a million sales of the **Fun School** range of products. The day started with a presentation to the press and local Information Technology advisers, showing the full range of educational software including **Paint and Create**, **Spelling Fair** and **Merlin's Maths**. The **ADI** range was also shown, together with the latest addition to the line-up, **ADI Junior**.

Then the children arrived and found plenty to keep them amused. In fact, one four-year-old took a copy of **ADI Junior** to play on his own and couldn't be moved all afternoon! Following a tea party, all the kids were given copies of the **Fun School** Specials and packed off with smiles on their faces.



ADI, part of the extensive educational range from Europress.

MORE SLEEPLESS NIGHTS!

They're back to keep you awake! **Lemmings 2** from Psygnosis is the latest in the saga created to make you aware of the plight of the little furry creatures, or blow them up if you're that way inclined.

All of the Lemmings that you saved in the first game have survived and formed 12 tribes. There are Eskimo Lemmings, Beach Bum Lemmings and many others, all with their own special talents. For example, the Beach Bums can swim and surf and the Eskimos can skate and ski.

This eagerly awaited sequel should be with us soon, so we recommend that you get some sleep while you still can!



AN 'L' OF A WAY TO LEARN

Rip It Up is the latest release from Aztec Software designed to help you pass your driving test by teaching you the road signs and symbols used in the Highway Code.

Tests can be run as multiple choice or without any help and there are over 150 questions provided on the disk. All of the signs and symbols are copyright and permission has been given by HMSO to use them in the program.

Rip It Up costs £4.95 and is available direct from Aztec Software, 11 Beaulieu Place, Peel Common, Gosport, Hants, PO13 0QP.

CHARTS

As expected, **Streetfighter II** has leaped straight into the number one slot this month, despite its early compatibility problems. Here's the top twenty...

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2 Sensible Soccer	Renegade	£27.99
3 Fire and Ice	Renegade	£25.99
4 Jimmy White's Snooker	Virgin	£29.99
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10 James Pond	GBH	£7.99
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13 Lotus III	Gremlin	£25.99
14 Little Puff	Codemasters	£7.99
15 Flight Simulator II	Sublogic	£34.95
16 A320 Airbus	Thalion	£35.99
17 Lemmings	Psygnosis	£25.99
18 SEUCK	Hit Squad	£9.99
19 Dizzy's Excellent Adventure	Codemasters	£7.99
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Charts supplied by Silica Systems.

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COVER DISKS

WORKING WITH YOUR COVER DISKS

USING
BREAKTHRU
PAGE 14

We have a Breakthru for you this month with a great music package demo along with the usual mixed bag of utilities, accessories, games and general gadgets

We have a great usable demo version of *Breakthru* from Gajits on disk this month. It's memory hungry, so it requires a full Megabyte of RAM to run. Still, we have plenty more to satisfy everyone's taste. If you can't run *Breakthru* and other one Meg programs, why not take advantage of the memory upgrade offer on page 42?

The game of the month is another exclusive from Dave Munsie in the USA. This time it's classic *Space Invaders*. If intergalactic death-dealing isn't your kind of thing there's a fully playable demo of *Grand Prix Manager*. Manage a Formula One team for a season and watch your drivers win or your company go bust!

You'll also find some useful printer and file utilities, an address book, and a machine gun screen-saver to vent your frustrations on your ST!

BACK UP THAT DISK!

Our cover disks are guaranteed virus-free. To keep them that way follow our guide to backing them up.

STEP BY STEP



BACKING UP YOUR DISKS

This guide is based on a single disk system. If you have two floppy disks, place a blank formatted disk in drive B and proceed as shown. For a single disk system, follow the instructions. You will be told when to swap the disks. In both cases, make sure you have a blank formatted disk ready before you begin

1 Format a double-sided disk by placing a new disk in the floppy disk drive. Click on floppy drive A and go to the File option at the top of the screen. Click on Format and then click on OK for both of the next two dialogue boxes. Write protect the cover disk (but not the blank disk) so that the disk cannot be written to by the ST, moving the small black notch on the back of the disk so that you can see

through it. This will prevent mistakes later on. Place the cover disk in the drive.

2 Click on Floppy Disk A to highlight it and hold the left mouse button down.

3 Use the mouse to drag the floppy disk icon towards Floppy Disk B until that is also highlighted. The computer will treat the floppy disk drive sym-



bol as being A for the source drive (the cover disk you are copying) and B for the destination floppy disk drive (the blank disk you are copying to). Don't worry, the ST's not going to expect you to have another disk drive connected.

4 Release the mouse button. You should then be presented with a dialogue box telling you that the computer is



copying disk A to disk B. It will also tell you that all of the info on floppy disk B will be erased. As you have just formatted disk B there is nothing to erase.

5 Click on OK and another dialogue box will appear with the word Copy highlighted. Click on OK again. The computer will read as much as it can from disk A and hold it in memory before it asks you to insert disk B. Swap the cover



disk for your blank formatted disk and then click on OK. You must remember that disk A is always the cover disk and disk B is your blank formatted disk.

6 Swap the disks as requested and you will end up with a copy of the disk on your blank formatted disk. Make sure that you put the original disk somewhere safe and work with the copy. In the unlikely event of anything subsequently going wrong with your cover disks, you'll have the original to refer to whenever you need it.

WHAT TO DO IF YOU HAVE PROBLEMS WITH YOUR COVER DISKS

DON'T PANIC!

In the unlikely event that your cover disk won't load or gives you any other problems at all, remove all cartridges and peripherals and try again. Please note that to restart the computer, you must SWITCH IT OFF for at least five to 10 seconds to clear all traces of resident programs before continuing.

If this doesn't solve your problem, return your disk, with a brief note of the problem and a stamped

addressed envelope to P.C. Wise Ltd., Dowlais Top Business Park, Dowlais, Merthyr Tydfil, Mid Glamorgan, CF48 2YY. They will test the disk and send a replacement as soon as possible. You can contact the PC Wise Helpline with any urgent problems. Please note that they will deal with faulty disks only and not general enquiries. They can be contacted by telephone on 0685 350505 between 10.30 and 12.30 on weekdays.

HOW DOES A COMPUTER RECORD SOUND?

Breakthru incorporates a sample replay facility but how can a computer achieve this?

To understand how this happens, we need to take a look at sound itself. Sound is a continuous quantity. If you looked at one of the most common building blocks of sound, a sine wave, you would see a perfectly smooth curve which is moving smoothly through its cycle. The distance between its highest and lowest points is known as its amplitude. Sound made from such curves can't be precisely recorded by a computer as it's unable to handle continuous information. It has to record the changes in movement as steps by digitising the sound using an Analogue to Digital Converter. The more steps it uses, the more accurately it can reproduce the original sound.

The number of bits that are used (usually known as the resolution) refers to the number of steps which the amplitude is divided into. Eight bits means that 28 steps are available, a total of 256. However, 16-bits means that 216 steps are used, a total of 65,536! This is why 16-bit samplers are more expensive than 8-bit ones - they can reproduce the recorded sound more accurately.

The other important factor is the sampling rate. The higher this value, the more accurate the recording, but the more memory used. CD-quality means that a computer is recording the amplitude of the waveform 44,100 times per second - the reason why CDs have very good audio quality! *Breakthru* supports various playback options including Microdeal's Replay 8 and Replay 16 (8- and 16-bit cartridges respectively), the ST's monitor and the STE's stereo outputs. Palette page options let you playback up to four simultaneous samples, and to pitch-shift them - useful for creating special effects.

BREAK ON



This month's cover disk gives you a usable version of Gajits' latest sequencer. It's definitely a breakthrough - and here's your starter for some great music...

Breakthru really has a lot going for it. For starters it has numerous editing screens, including score and drum editors. Then there's the jukebox facility which allows you to create an album of songs and play them through your ST. But the real breakthrough is in the fact that you can use various sampling cartridges, including Microdeal's Replay 16, to provide sample playback at the same time as sending notes to your MIDI synth.

What can this demo do? It can play the demos on the cover disk, including one

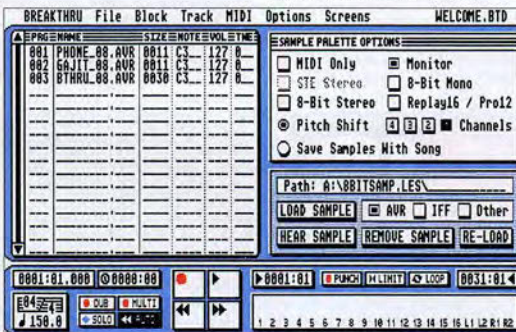
which doesn't need any MIDI equipment at all. You can edit them note by note from the Step Editor screen with its piano roll-style display, change the order of bars in a song from the Song Arranger and even change the speed that the song plays at - all of these functions work perfectly in this demo version. You can also load the demo songs into the Jukebox and set a time between the end of one and the start of playback of the next. All you need for this and more is an Atari ST of any kind with any screen and one Megabyte or more of memory.

If you create a song and load it back in, you'll only get the first 12 bars (48 beats) back on screen. This is the demo side of *Breakthru*. That said, you should still be able to create, edit, playback, save and load up a complete section of a song. Longer songs are saved in their entirety and if you buy the full version, any you have recorded will load back in full. If you edit any of the musical information of an example song, make sure you save it to a separate disk, otherwise the next time you try to load the example, you'll only get 48 beats worth.

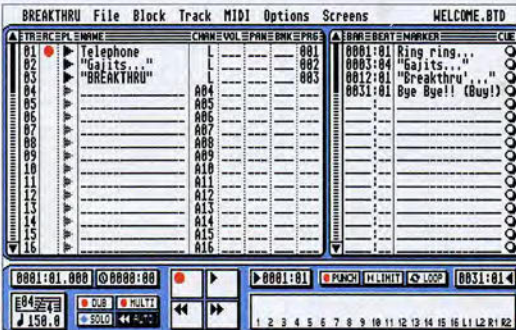
The sample replay facility is truly astonishing. Up to four samples can playback at the same time and up to 128 samples can be in RAM simultaneously (if you have enough memory). With a standard 1040 ST, you're looking at around 10 seconds of high-quality 16-bit samples and double this for lower quality 8-bit versions. Needless to say, some samples are included on the cover disk.

GETTING STARTED

To load the demo double-click on BREAKTHRU.PRG and wait while it loads. You'll be presented with a couple of information screens - have a quick read but don't worry if you miss anything as the same pages appear each time you load. Once these are out



On loading the WELCOME.BTD demo, the palette screen should look like this. If you're using an STE, the STE Stereo option won't be greyed out.



A quick press of the F3 function key and you're looking at the Track Screen where the right-hand side is used to show you important cues and their bar numbers.

THRU



of the way, you'll be presented with the Track Screen which is in two halves. To the left is a scrolling list of the tracks you can record to while on the right is a similar list of markers, or cue points.

Breakthru is a 64-track linear-based sequencer which means that it behaves just like a tape recorder. Each track is independent of any other but you can copy recorded bars anywhere. Each one has space for a name and you can also specify a MIDI or sample channel, initial volume, stereo pan, instrument bank and program setting. This means that you can set the level and stereo position for each sound you use, and even select the sound itself from your synth using the bank and program change numbers. The right-hand side of the Track Screen gives you 64 cues where you can enter the starting bar number for each part of a song or music project and click on the Cue button to set the song position locators to the correct place.

If you've used a tape recorder, the Transport controls will be second nature to you. The record, play, fast-forward and rewind buttons are in the centre; right and left locators for recording are to the right while the song position locators are to the left, as are the controls for tempo and time signature. The Level meters show the velocity of notes on each individual MIDI channel with the four to the right being for the sample playback facility. All on-screen values can be changed by using the mouse or keyboard. Both the left and right mouse buttons are used, or you can double-click on a value and imagine that there's a slider in front of you and move it up and down.

INSTANT GRATIFICATION

The Welcome demo uses sampled sounds. Go to the Load Song option in the File

SYSTEM EXCLUSIVE LIBRARIAN

One interesting feature of **Breakthru** is a System Exclusive (SysEx) librarian. SysEx is a method to allow manufacturers to save sound data for their synths on any device capable of recording MIDI information, which includes most sequencers. The version on the demo of **Breakthru** allows you to send and receive SysEx information from a MIDI device but doesn't let you save it to disk. In other words, you can check out that it works but can't actually use it.

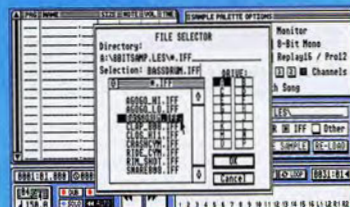
menu and load WELCOME.BTD from the Songs folder. The on-screen cursor changes to a clock while this happens. Press function key F4 on the ST to take you to the Sample Palette screen where you'll find that the mode has been preset for the ST monitor. If you're using an STM, STF or STFM, you can go right ahead and play the demo, but if you have an STE you can make use of the stereo outputs on the rear of your computer by connecting them to a hi-fi system. Choose STE Stereo mode and then click on "OK" when the dialogue box appears asking you if you want to reload the samples. If you happen to own any of the Microdeal or AVR sampling cartridges, select the correct one as required. Click on Pitch Shift, which allows a sample to be played at pitches other than the one it was recorded at, and one channel to play samples at the best quality. Finally, click on the Play button to hear the demo - don't forget to turn the volume up on the monitor if you are using it. If you go back to the Track Screen via the F3

STEP BY STEP SAMPLE PALETTES

Before you set about creating your musical masterpiece, you have to load in the instruments. Here's how to do just that...



1 Remove all current samples by clicking on the Remove Sample option.



2 Select IFF format and click on /nrd Sample to bring up the ST's File Selector. Select the BASS-DRUM.IFF file.



3 Click on slot one and the bass drum sample appears, with information about its size and characteristics.

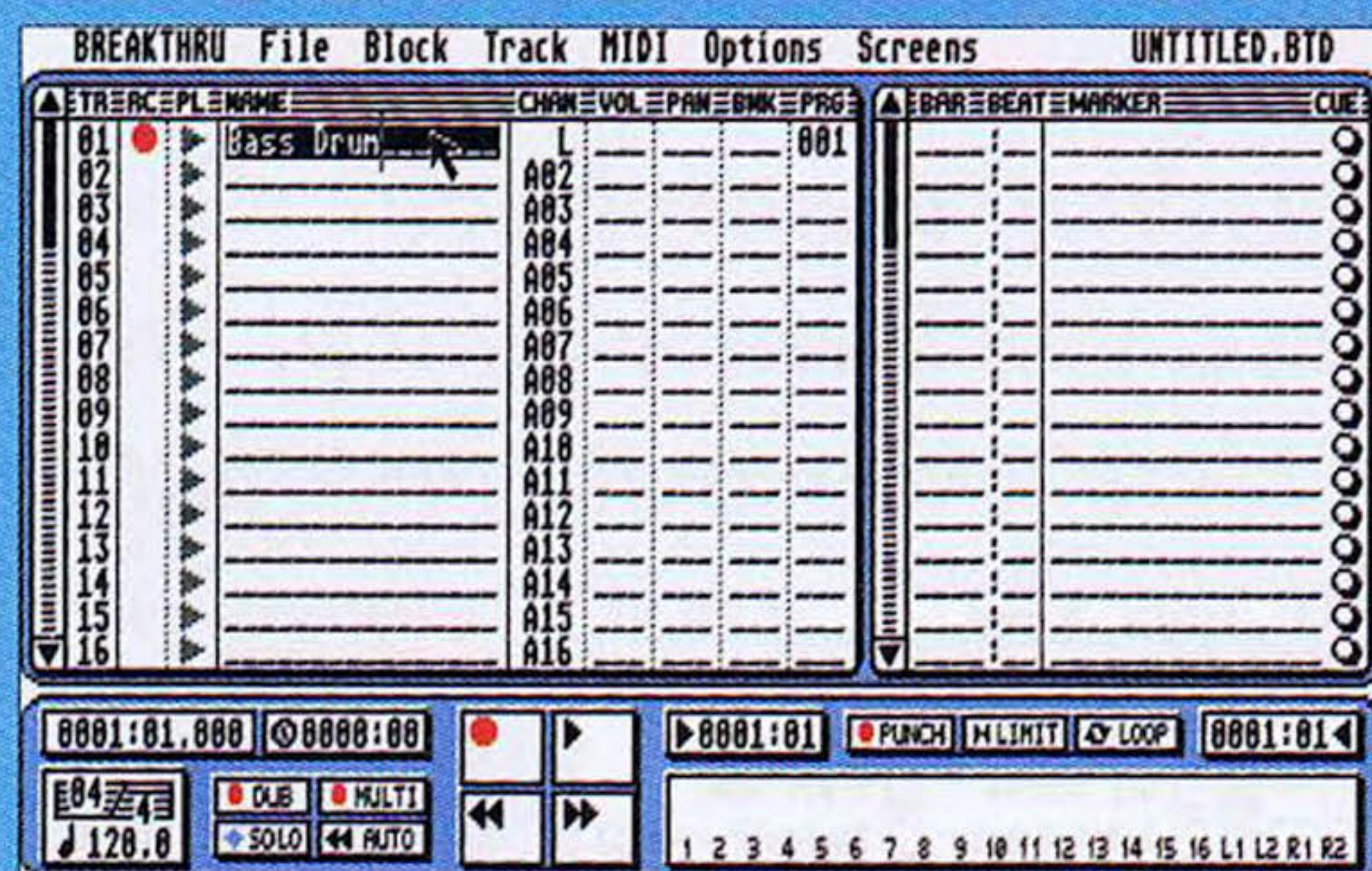


4 Load up a total of seven samples before moving onto the next part - creating a rhythm track.

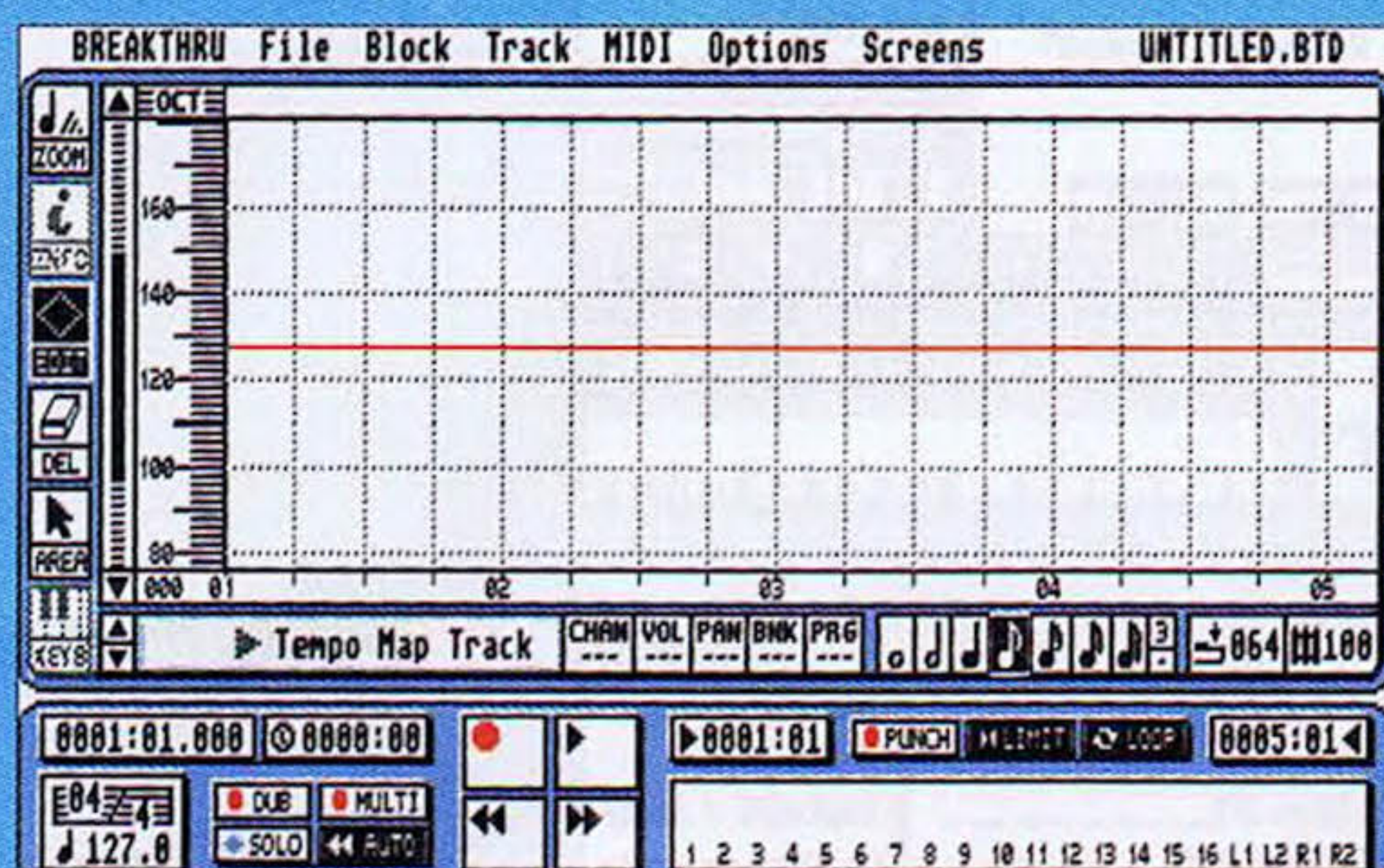


5 If you forget to click on the four-channel option or set the correct playback mode, don't worry - Breakthru simply reloads the samples when you do.

STEP BY STEP

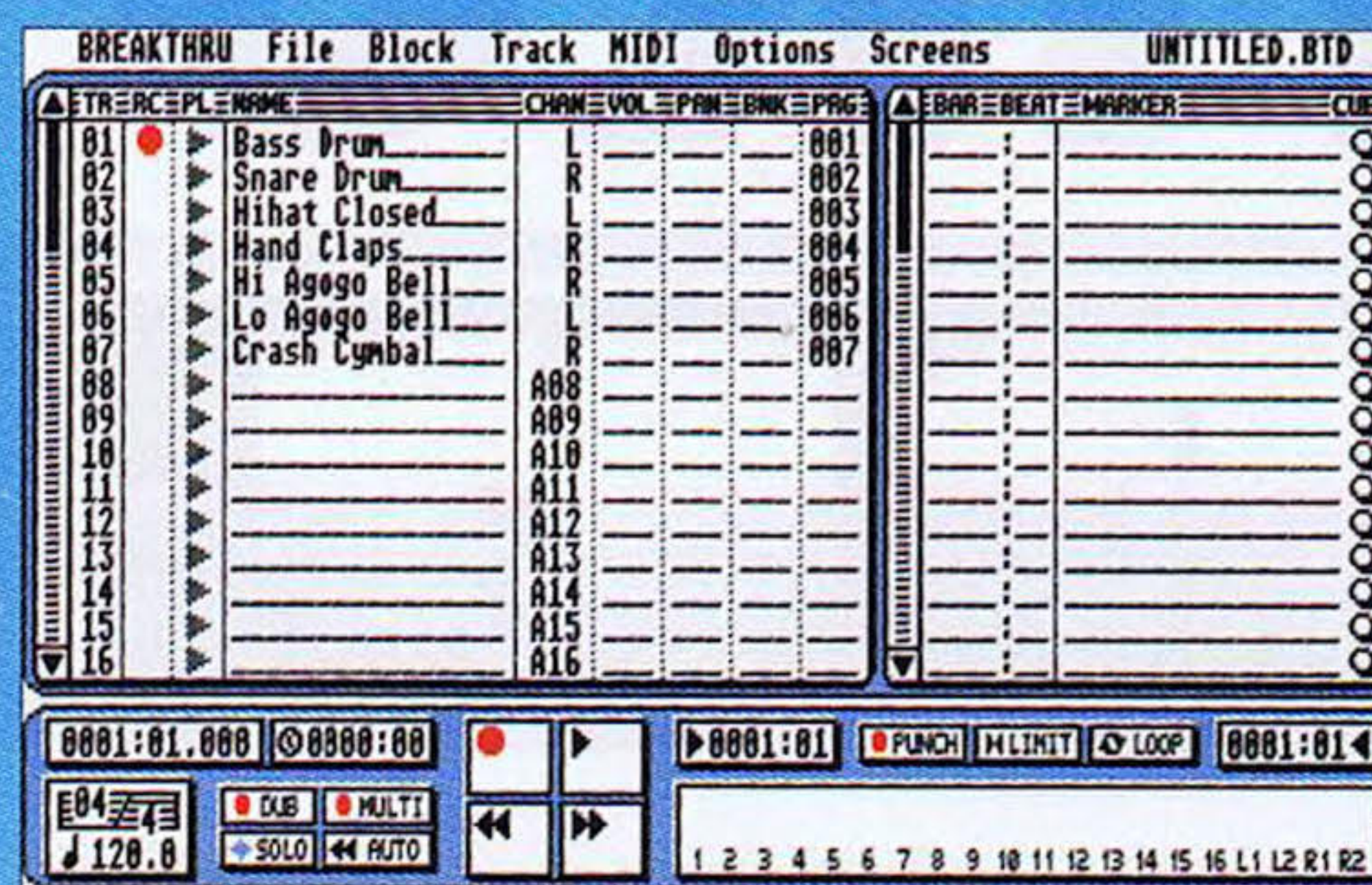


1 Name the first track "Bass Drum", set the Channel to L and the PRG number to one.

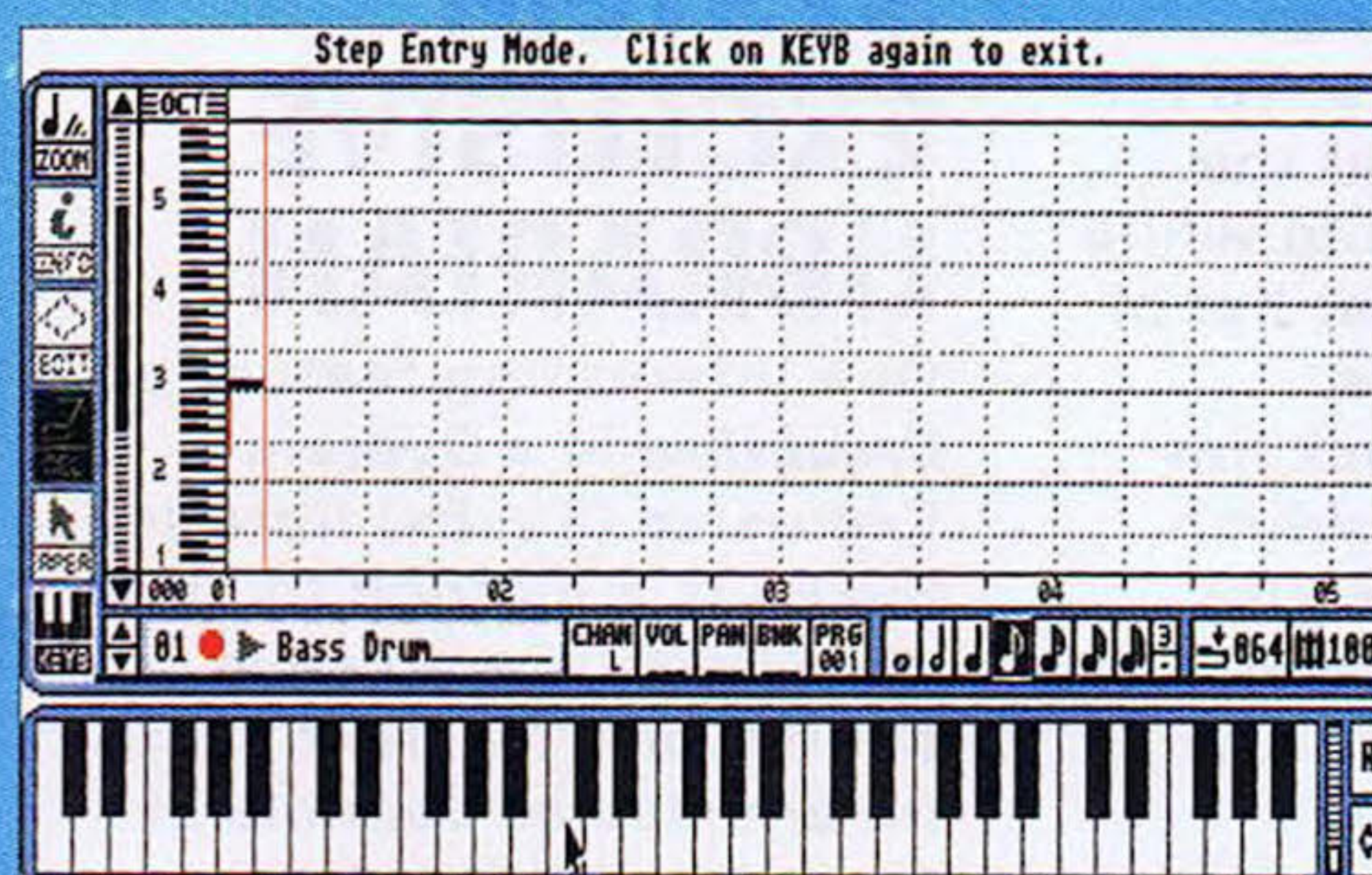


4 Enter the Step Editor and set the Tempo to 127 Beats Per Minute – the red line on the Tempo Track shows this as a straight line.

ROCK 'N ROLL



2 Name the next six tracks according to the samples, evenly distribute them among the left and right channels and set the relevant program number from the Sample Palette.



5 Click on the KEYB icon to bring up the keyboard and then click on the middle C note to make a small rectangle appear – you should hear the bass drum sound at this point.

INSIDE INFO

HISTORICALLY SPEAKING...

Breakthru is Gajits' third sequencer. Their first, *Sequencer One*, achieved immense popularity due to its low price and good features. It was followed by *Sequencer One Plus* which added a sample replay facility along with the jukebox and the 'diamond' Step Editor. *Breakthru* has now added a further 32 tracks and compatibility with Microdeal's *Replay 16*, giving you four-voice, 16-bit sample playback capability.

THERE'S A PLUS...

If you're impressed with what you've seen but still want more, you'll probably be interested in *Breakthru Plus*. This is a special version of *Breakthru* which supports 32 MIDI channels instead of the normal 16, which is very useful if you have more than one MIDI instrument. A hardware interface is included to provide an extra MIDI output socket which simply plugs into the modem (serial) port of the ST. For more information, contact Gajits on 061 236 2515.

function key, you'll see the track and cue lists in use. Feel free to have a good look around the various screens, even while the song is playing back.

The second part of the Welcome demo involves the Juke Box, accessed via F10. This allows you to put together an 'album' of songs and control the time gap between playing back successive tracks.

Click on Add Song, load WELCOME.BTD from the Songs folder and click on slot one. Now click on Add Song again and repeat the procedure, placing WELCOME.BTD in slot two as well. Set the Song Delay to whatever you want and click on the Start/Stop button – both songs will then play with a gap in between. If you want to stop playback, just click on the right mouse button.

A PALETTE TO TASTE

Included with this demo disk are nine percussion samples. These consist of bass drum, snare drum, rim shot, closed hi-hat, handclaps, two agogo bells, ride and crash cymbals – enough to create an entire rhythm track!

If you play the Welcome demo, you'll find that the first three sample slots in the Sample Palette (F4) are taken up by the three samples used in this demo. Click on Remove Sample and then on OK in the 'Remove All Samples' alert box to leave you with an empty palette. In the Sample

Palette Options to the right, click on the method of replay you want to use, make sure Pitch Shift is turned on and select '4' for the number of channels so that up to four sounds can be used at the same time. Now click on IFF for the sample type and then on Load Sample which brings up the usual Atari file selector. You'll find the samples inside the folder called 8BIT-SAMP.LES; double-click on BASSDRUM.IFF and then click on Program one – you'll see instructions for this along the top of the screen. The information to the right of the name tells you how big the sample is (in Kilobytes); the bass drum only takes up six Kbytes of memory. Now follow the same procedure to load up the SNARE808, CLOS_HI1, CLAP_808, AGOGO_HI, AGOGO_LO and CRASHCYM into slots two to seven respectively. At this point, you should have a total of seven samples loaded into memory. You're now ready to put a tasty rhythm together.

I GOT RHYTHM...

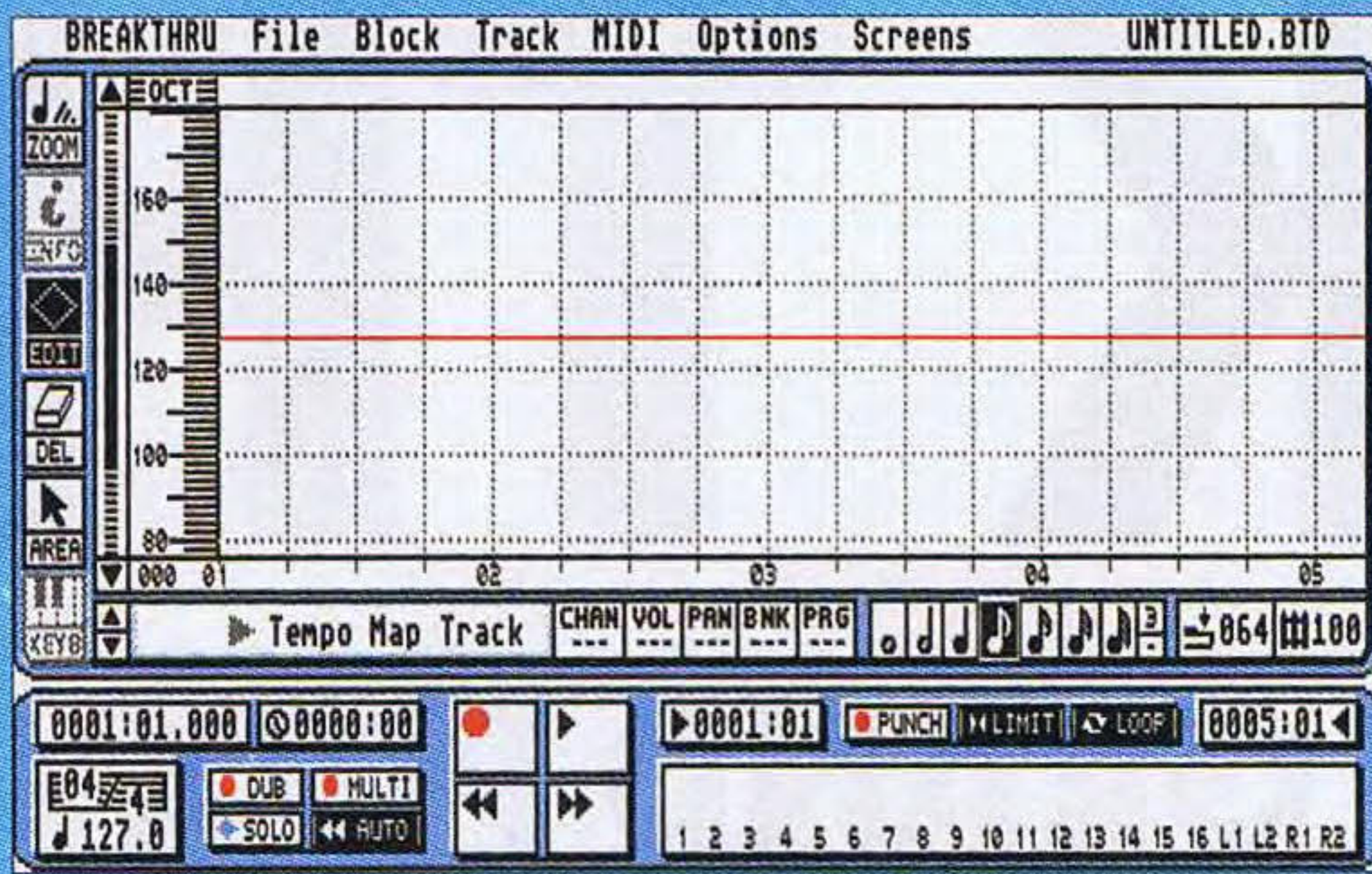
First, get rid of any song currently in memory – go to the File menu and select New Song. Press the ST's F3 function key and you're back to the Track Screen; click on the name section for the first track, type in "bass drum" and set the CHAN(nel) to "L". This means that the bass drum will play via L1 or L2, the two left-hand sample

channels. Now enter the names of the remaining six samples on subsequent tracks so that each percussion instrument has its own track – distribute them evenly between the left and right channels and enter the correct Program number from the Sample Palette.

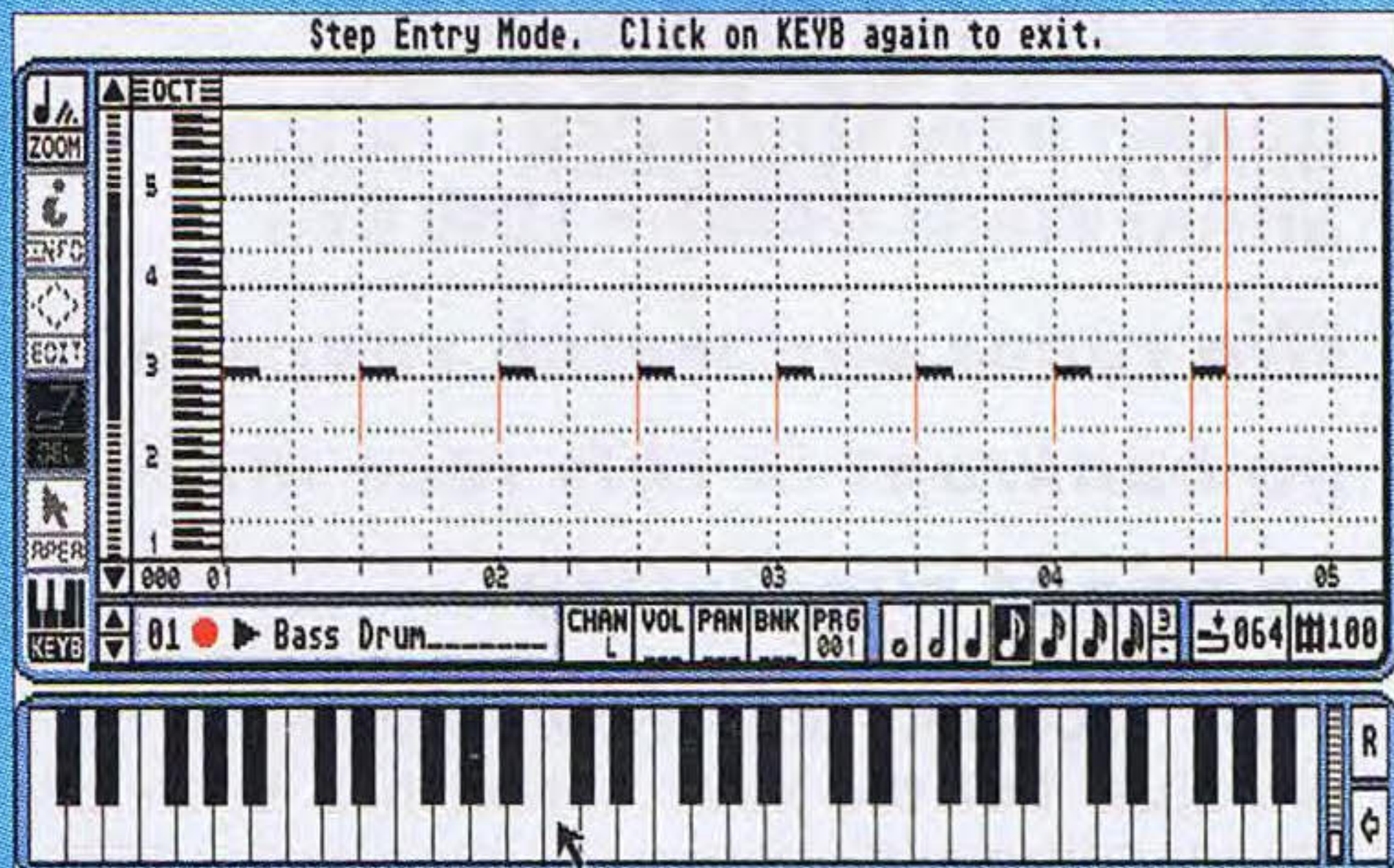
To create a four-bar section, set the right locator (just above the indicator box) to five bars and then turn 'Loop' and 'Auto' on.

Press the F5 function key and you'll be confronted with the Step Editor. Just beneath the grid, to the left, is the Track Selector with a couple of arrows to select the track to view. Upwards from track one takes you to the Tempo Map (also accessible via F9), which for our rhythm will be set to 127 Beats Per Minute. Go to track one, for the Bass Drum, and click on the KEYB icon to bring up a keyboard at the bottom of the screen. Now click on the middle C of the keyboard and you should see a small black rectangle appear and hear the bass drum sound. Hit the space bar three times to advance the vertical red line to the third beat of the first bar and click on middle C again. Carry on doing this until you have eight bass drum beats. Click on the KEYB icon again to get rid of the keyboard and then click on the play icon – a black bar should rise and fall on the "L1" indicator and the bass drum track will loop

Follow this guide to using the supplied percussion samples...



3 Click on Auto, Loop and set the right-hand locator to 5:01 to create a four bar section.



6 Create eight bass drum beats by using the space bar to move along and click on the middle C to place a note.

round. Hit the space bar to stop it.

Now go to track two and create a snare drum track; have a look at the step-by-step guide for an example but feel free to do your own thing. Get rid of the keyboard and play again - this time you'll hear the bass and snare drums together.

Carry on in the same way adding other instruments. If you have a MIDI sound module or synth, load MAPLERAG.BTD from the Track Screen and check through the notes that are flashed up on the screen. The Program Changes are preset for a Roland CM-64, but you can alter the PRG numbers for each instrument to suit your MIDI set-up.

Note that the Cue Sheet is used practically as a notepad for information. Play through the song to check what it sounds like.

EDITING YOUR DITTY

Click on the EDIT icon and then on any note. You'll be presented with what look like a bunch of flags. Each one represents a note, with the flagpole showing where the note starts and the length of the pole indicating the velocity, or volume in the case of a sample. The length of the flag shows the length of the note, as would be expected. Click and drag the diamonds to transpose a note, move it in time, make it longer or louder.

Next to the Track Selector is

the same information as in the Track Screen, followed by note lengths for entering notes on the grid, Velocity and Gate Time, which sets the length of a note as a percentage of the full note value. Double-clicking on this with the left mouse button makes the numbers invert in colour and you can move the cursor up and down the screen to set the value. This method can be used with any on-screen numerical value.

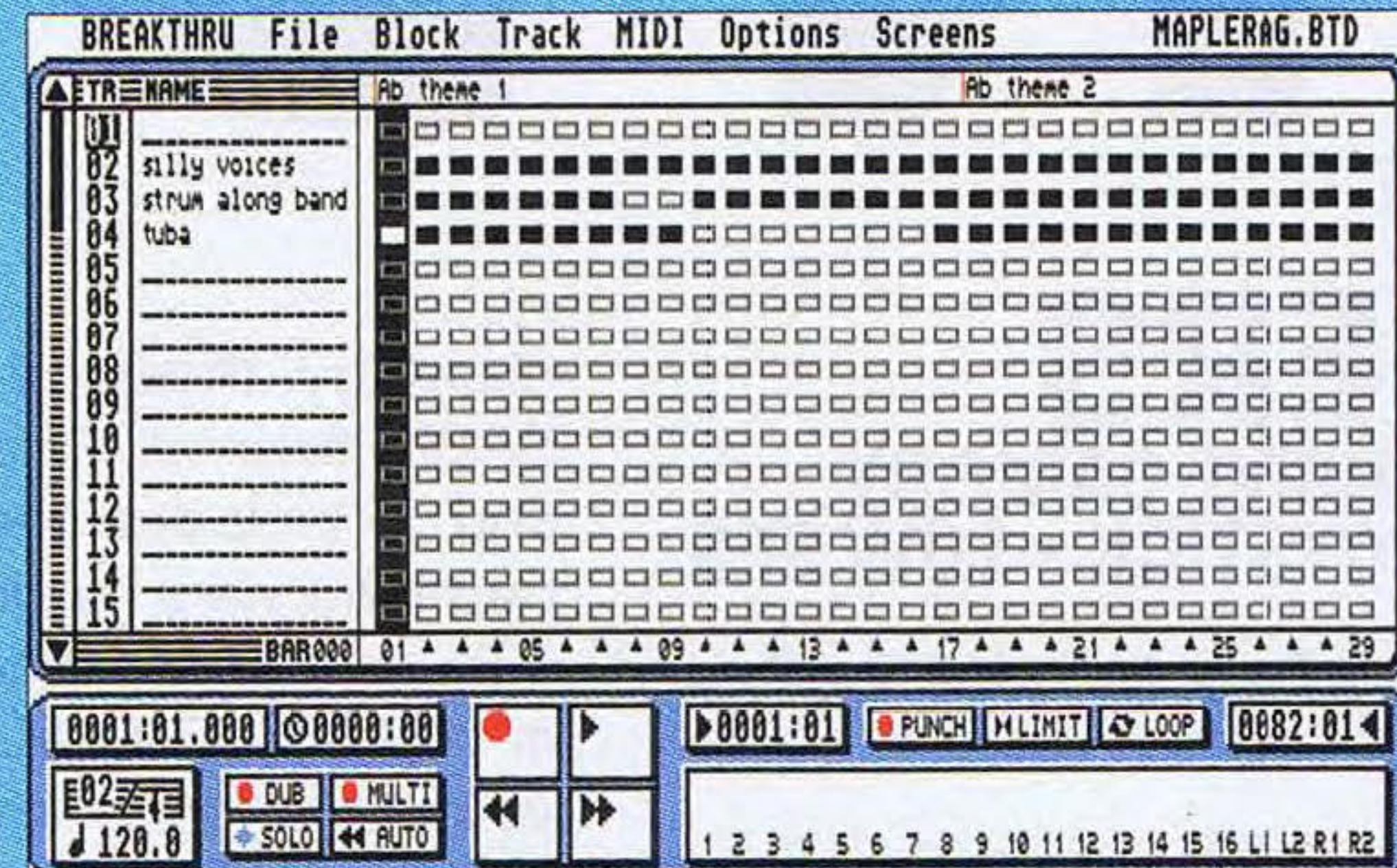
To the left of the grid is the toolbox. Zoom magnifies the grid while Info lets you see all aspects of a MIDI event. Del(ete) erases an event, Area allows you to grab a number of events, scrolling past the edge of the screen if necessary, and Keyb(oard) is for step entry of notes. Edit allows you to change any attribute of a MIDI event. Select this and then click on a note; four diamonds and a blue box appear. Grabbing and moving any of the diamond affects the pitch, starting point, length or velocity of that note while the blue box leads to a menu for further actions.

Experiment to your heart's content, you'll find that informative comments appear at the top of the screen as you work. Save to a formatted disk frequently, but remember that only the first 12 bars will load back in. Next month we'll be taking a look at using Breakthru with MIDI. Until then, have fun!

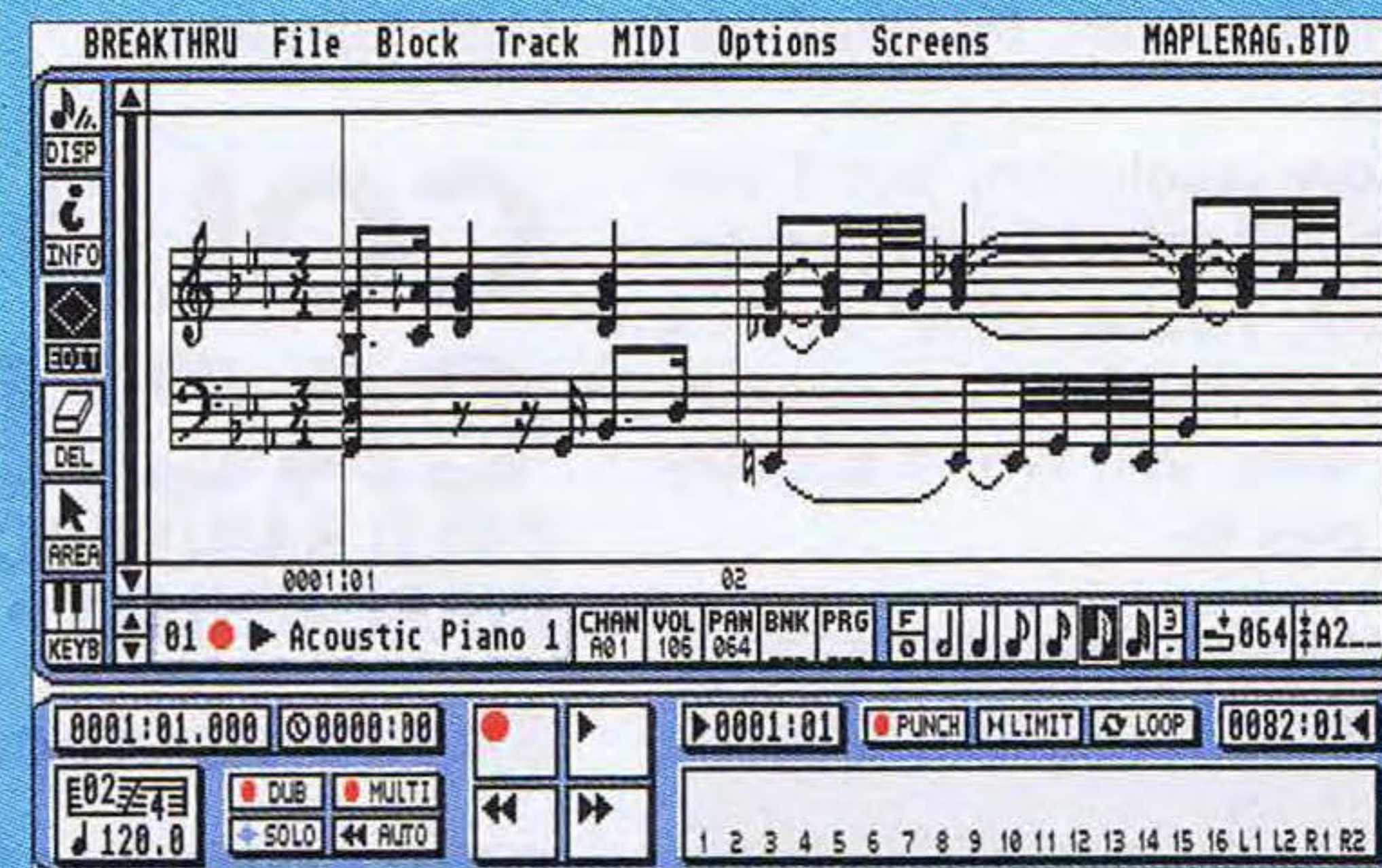
STEP BY STEP

PUTTING IT ALL TOGETHER

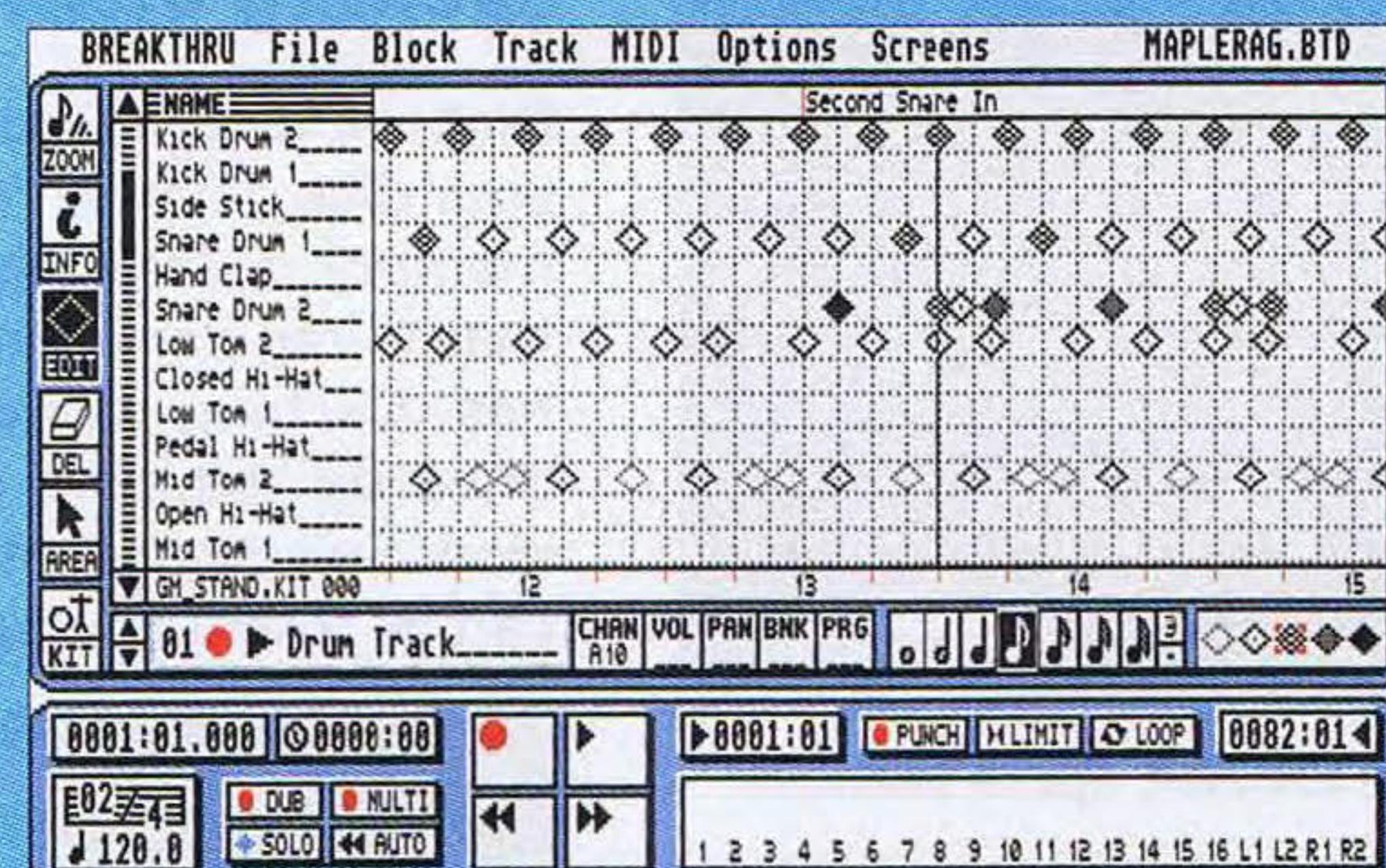
The final stage of creating a track is the editing...



1 The Arranger allows you to cut, copy and paste bars to create a song.



2 As you might expect, the Score Editor gives you a treble and bass clef for editing in notation form. This demo only has a non-functional version.



3 The Drum editor allows you to enter and edit percussion parts with ease. Again, the demo of Breakthru only has a non-functional version of this editor.

Return your disk with this coupon to claim your £20 discount on a fully functioning version of Breakthru!

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Closing date for this offer is 13th March 1992.
This coupon cannot be used in conjunction with any other Gajits offer.
Send to: Gajits Music Software, Imex House, 40 Princess St, Manchester, M1 6DE. Tel: 061 236 2515.

When you've finished playing with Breakthru, check out what we've got on disk two...

ON DISK TWO

INVADERS

INVADERS • EXCLUSIVE GAME BY DAVE MUNSIE • JOYSTICK • LOW RES

A superb ST version of the coin-op classic

Invaders is a conversion of the classic *Space Invaders*. Shoot the aliens as they descend - blasting the spaceships which fly overhead gives you bonus points.

This game runs in low resolution, but if you run it from medium, it will select low res automatically. It definitely needs only half a Megabyte of RAM, so although the document file says it needs one Meg, you won't actually need an expansion to play it.



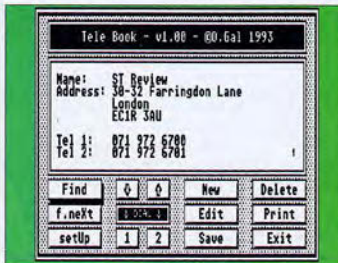
Classic Arcade action from the USA, *Space Invaders* with a difference.

TELEBOOK

TELEBOOK • EXCLUSIVE UTILITY BY OFIR GAL • MEDIUM RES

The finished version of the address book as seen in the tutorial

Two versions are provided to run as either a program or an accessory. This is a very simple address book database which will be recog-



nised by those of you following our HiSoft BASIC tutorial. This is the completed program and it includes the facility to dial telephone numbers via a modem.

To run, just double-click on TELEBOOK.PRG or copy TELEBOOK.ACC to the root directory of your boot drive and reboot the computer to use it as a desk accessory. The program is very easy to use and there is a text file on the disk with full details.

COLD HARD CACHE V4

COLD HARD CACHE V4.0 • SHAREWARE UTILITY • ALL RESOLUTIONS

Speed up access and other disk operations with this handy caching utility

Disk caching improves the operating speed of your disk drive by reserving an area of the ST's memory specifically to store disk information that is regularly called upon, such as directories. Caching can extend the life of your disk drive by reducing disk access in a worksession. Full details on how this procedure works can be found on page 84.



Changing the settings for Cold Hard Cache 4.0 with the accompanying configuration program.

To get *Cold Hard Cache* running on your ST, place CACHEV4.PRG in a folder called AUTO on your boot disk and CHCSTAT.ACC in the root directory of the same disk. Reboot the computer and the program should automatically install itself.

Move the mouse to the Desk menu and you should be able to call up the configuration screen where you will be able to alter *Cold Hard Cache*'s settings.

The main screen from *Telebook*. This will look familiar to those of you following the HiSoft BASIC tutorial.

GRAND PRIX MANAGER

GRAND PRIX MANAGER • DEMO SHAREWARE GAME • LOW RES

Win races and watch your team go bankrupt in this race management simulation

This excellent shareware game is fully playable, but the save option has been disabled. Full details of how to register are in the document file on the disk.

Choose your team, drivers and staff and compete for a full racing season. The fun is seeing if you can survive and make a profit. It's easy to get the best in all fields and you may even win a few races, but you'll go bankrupt very quickly. This is one of those addictive games that consumes time faster than a Ferrari on the straight at Brands Hatch.

HPDUMP

HPDUMP • PRINTER UTILITY • ALL RESOLUTIONS

A trio of utilities for HP DeskJet and LaserJet owners

Open the folder PRINT_UT.ILS and you will find two more. The first is *HPDUMP*, containing three utility programs which can handle screen dumps to a Hewlett Packard DeskJet or LaserJet printer. To use one of these, place it in the AUTO folder of your boot disk and reboot the computer. Pressing the Alternate-Help keys will now dump the current screen to your printer. Don't use these programs unless you have one of the specified printers.

SPRINT

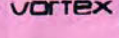
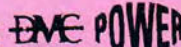
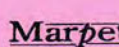
SPRINT • EXCLUSIVE PRINTER UTILITY BY KELVIN UNSWORTH • ALL RESOLUTIONS

Don't wait for your printer, spool the data and carry on while it prints your document

Also in the PRINT_UT.ILS folder is *SPRINT*. This spooler will capture documents sent to the printer and free the computer for other tasks while it outputs the file. It works by setting an area of memory aside and storing the information there.

To use *Print*, place SPRINT.PRG in your AUTO folder or run it from the desktop when needed. You can configure the spooler using

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With official Atari MEGA STE KIT	
Atari Host adaptor and Formatting software	
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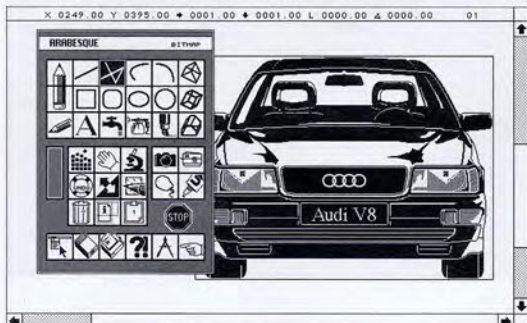
Small consumables & Software items	Despatched by post please check charges when ordering.
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NEXT MONTH

SERIOUS SOFTWARE!

It's been a while since we've seen any serious programs on the ST – perhaps programmers have been waiting for the Falcon! That said, next month will have reviews of two of the most powerful pieces of software to surface in the last couple of years – **Arabesque Professional** and **Wordflair**.



Arabesque Professional gives you the best of both worlds with a bitmap art program containing a comprehensive set of tools coupled with the power of an extensive vector graphics section. Potentially the most powerful program of its type on the ST. How good is it? Find out next month!



Wordflair is an integrated document processor with DTP-style features, built-in database and a graph generator. Facilities such as automatic hyphenation, a spell checker and thesaurus place **Wordflair** in a practically unique position in the ST market. But is it actually worth buying? Read the review in the next issue to find out!



Save your sweetheart from a giant gorilla in **Kid Kong**.

Classic **Centipede** comes to your **ST** in the form of **Bugs!**



ONLY THE BEST IN ST REVIEW!

Next month's incomparable editorial pages will include...

MORE ACTIVE TUTORIALS!

ST Review continues to help you get the best out of your ST with our step-by-step tutorials. Next month the Problem Solved series looks at how to get the best performance out of your disks and there's a photographic walkthrough of how to install Plus Cache ST, the sub-£100 16MHz accelerator which is reviewed this month.

ALL THE REGULARS!

The latest news and the best reviews including the Kodak Diconix printer and a preview of the long-awaited MultiTOS.

CLASSIC ARCADE GAMES FEATURE!

Have you ever noticed how many of the classic arcade concepts have been resurrected in modern games on the ST? We have, and next issue we'll be taking a long, hard look at various commercial games and their public domain equivalents in our arcade games special.

To add to that, there'll be a couple of superb, commercial-quality, arcade-style games on the cover disk – the pictures on this page should be enough to whet your appetite!

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GET READY 4 THE INVASION

COMIC RELIEF

HAVE AT LAST GRASPED THE FACT THAT ALL THE PEOPLE WORTH COMMUNICATING WITH THESE DAYS BUY COMPUTER GAMES - AND IT'S A REVELATION WHICH THEY HOPE IS GOING TO MAKE THEM A BLOOMING FORTUNE TO PLOUGH INTO BRILLIANT PROJECTS IN AFRICA AND THE UK.



C64 (DISK & CASS.)

ATARI (STE ONLY)

CBM AMIGA

IBM PC



PLAY
THE
GAME
FOR...

COMIC
RELIEF

HERE ARE SOME IDEAS ON HOW YOU CAN GET ONTO THE SLEEPWALKER SPONSORSHIP TRAIL: BUY SLEEPWALKER - A DECISION YOU WILL NEVER REGRET - THE GAME IS VOICED BY LENNY HENRY, AND WORKED ON BY SOME OF BRITAIN'S FINEST COMIC MINDS (and a couple of girls who happened to be round that evening). A DONATION FROM THE SALES OF SLEEPWALKER WILL GO DIRECT TO COMIC RELIEF.

TAKE PART IN THE GREAT SLEEPWALKER CHALLENGE, WHICH WILL BE INVADING ALL THE BIG RETAIL CHAINS DURING THE WEEKS BEFORE RED NOSE DAY - MARCH 12th 1993. ORGANISE YOUR VERY OWN SPONSORSHIP CHALLENGES LIKE: BEATING YOUR HIGHEST SCORE - TAKE ON YOUR DAD, OR YOUR TEACHER, OR EVEN YOUR SCHOOL IN A SLEEPWALKER CONTEST. DREAM UP YOUR OWN HIDEOUS CHALLENGE TO HARRANGUE YOUR FRIENDS.

ocean

POWER TO YOUR

Professional publishing has long been regarded as the exclusive domain of the Macintosh, but now the ST is making serious inroads into this area. Join Nial Grimes, hot on the Atari trail...



The ST is one of the most popular semi-professional DTP systems in Europe – and little wonder when you look at the price and quality of the software available. Despite its prominence amongst small businesses, however, the top-end limelight that Atari so richly deserves has up until now been stolen by the more expensive Macintosh range.

At least part of this has been due to a lack of sufficiently powerful hardware, but that's all about to change with the release of the

Falcon. It can handle colour publishing, at a price that will put it within the reach of even the smallest business. Does this mean that Atari computers are about to steal the coveted DTP crown from under Apple's nose? And more importantly, is an ST system capable of being used for professional DTP?

Zona 10 Publishing seems to think so – it's just one of many European press houses waking up to the affordable option offered by the ST range. Zona 10 produces a total of 13 Spanish newsstand magazines using Atari ST and TT computers and most without the help of an Apple-badged machine. We tracked down editor Natalia Kim to find out why Atari has been the system of success for Zona 10.

THE HARD LINE

The company is based in sunny Barcelona and all bar one of the magazines it produces are music-related. The exception is their concept title *Atari DTP*, which is a chronicle of their experience with *Calamus SL* and is steadily working towards full colour. Circulations of the magazines range between 10,000 and 25,000 copies and each possesses all of the flare and artistic design usually associated with a Mac-produced title.

So why did they choose an Atari system? Natalia explains: "We've used Atari's for all our layout since 1987

and our reasoning has never changed. As far as we can see STs and TTs can do everything the Mac can, but for far less." It's only once you begin to look at a larger company that the economy aspect of using an ST system really starts to manifest itself. Two to three hundred pounds saved on one machine might seem negligible, but add up the extra cost of furnishing a whole office with Macs and even the staunchest advocate will find his sense of brand loyalty fading!

The power level demanded by full-colour DTP is very high and this is reflected in Zona's hardware line-up. Two TT 030s – one with 20 Megabytes of RAM – are the main work-horses and these are backed up by a myriad of STs and STacy portables. More is involved here than meets the eye, as Natalia explains:

"Everything is proofed on a Deskjet 500, before being sent to our in-house DTC Imagesetter. This is responsible for the final copy on all our magazines and is linked directly to a TT via SCSI." The DTC is capable of 3000 dots per inch (dpi), 10 times the quality of your average laser printer, and we are told that it works like a dream with *Calamus SL*.

One problem many people experience with any computer system is the cost of professional peripherals, particularly scanners that can do justice to a 3000dpi image-

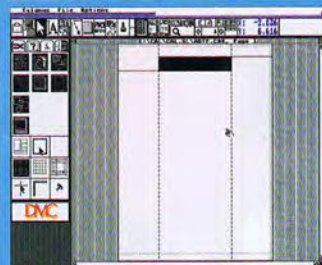


Fired by their enthusiasm for STs, Zona set up *Atari DTP*. Although the magazine is produced on a TT, coverage is also given to PC, Amiga and Macintosh DTP developments.

STEP BY STEP



Follow our guide to creating pages like Zona's on your ST



1 Having roughed out the design concept, the basic building block is laid in. *Calamus*' 'magnetic frames' are used to achieve pixel-perfect alignment.



2 The frames are grouped, copied and the headlines typed in. A raster frame is put at the bottom of the page for the 'mast-head'.



3 Next some text styles are set up – one for the mast-head, one for the sub-headline and another for the article descriptions.

PAGES

THE DMP BLUES

There are literally dozens of companies who make their living from printing desktop published files - all you have to do is choose the quality and pricing to suit your pocket! At the bottom end of the scale, you can have your work sent to a laser or inkjet printer at 300 dpi. This is adequate for price lists, newsletters and so on.

The next step up the ladder is the professional typesetter who will usually insist on documents being in **PostScript** or **Calamus** format. **PostScript** files can be produced by most desktop publishers, including **Timeworks** and **PageStream 2** and all STs are capable of writing to the required PC format disk. Resolution will vary between 1270 and 2540 dpi and as for quality, you would have trouble distinguishing output from this page! Below is a small selection of services.

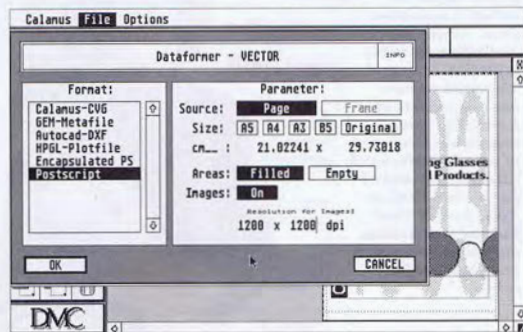
The ST Club,
2 Broadway,
Nottingham,
NG1 1PS
Resolution: 300dpi Laser
Media: Copy Paper
Formats Handled: PageStream and Timeworks

GraphiService London,
20/21 Cato Street,
London
W1H 5HR
Resolution: 800 to 2540 dpi
Media: Bromide, film, slides and paper
Formats Handled: PostScript

Halco Sunbury Ltd.,
Unit 4, Headley Park 9,
Woodley,
Reading,
Berks.
RG5 4SQ
Resolution: 1270 & 2540 dpi
Media: Bromide & Film
Formats handled: Calamus, S & SL



Most ST desktop publishers are capable of speaking PostScript, the language of the professional typesetter!



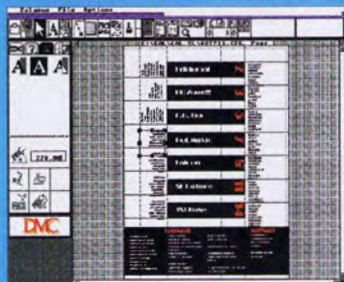
setter. Even this problem has been skillfully negotiated without resorting to expensive machines. They have found that by using Sony's FotoVix to transfer images to high-quality video tape, DMC's Code-a-Chrome video digitiser can be used to achieve almost perfect results at a fraction of the cost of a professional scanner. Natalia goes on: "It was an exciting moment when the package arrived and even more so when we had it hooked up to the TT. Even the first 300dpi printouts looked very photolike. It's a marvellous feeling to be able to use it right with in **Calamus** and you really begin to appreciate the advantages of a modular desktop publishing system."

But Zona is quick to point out that it doesn't believe in 'brand-name religion': "We take advantage of any system we can - it just so happens

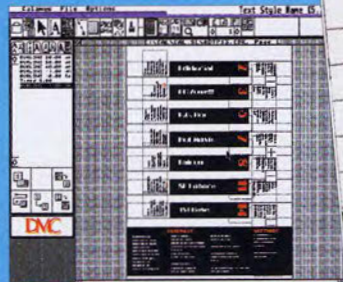
The Dataformer module adds an unrivalled level of compatibility to Calamus SL.

that an Atari set-up does everything we need right now!" It's partly this philosophy that led them to choose the ST/Calamus combination in the first place and, as they point out, even if Atari never releases another machine, the TTs are quite capable of publishing their magazines for the foreseeable future.

The sum-total of the flexibility and power afforded by their ST set-up is that over 90 per cent of the magazines' production is carried out in-house - no mean feat for any publisher, let alone one using non-standard hardware! Naturally, the hardware alone would be useless without quality software, so some of the success achieved by Zona 10 has to be attributed to the latest generation of ST soft-



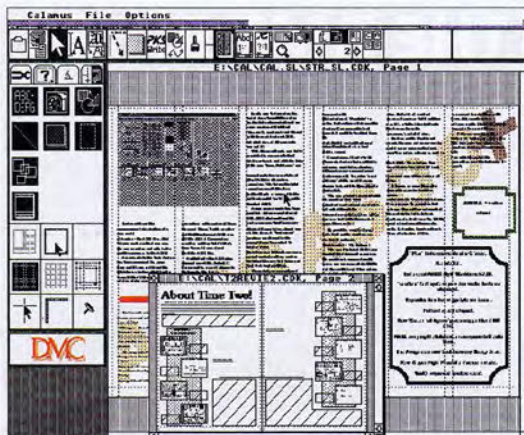
4 The comments are entered and the frames rotated through 270°. Text rulers are tweaked to give left and right justification.



5 A mini drop-cap is added to each of the descriptions by adding another text style and the results colour separated.



6 And finally the finished article, printed at 2540 dpi from Zona's imager. Professional quality and not a Mac, PC or PostScript printer in sight!



Calamus SL and two large capacity TTs form the heart of Zona 10, but don't forget, most desktop publishers are just as happy to run on a 1 meg ST!



The high-powered image editor, Cranach Studio, is an important member of the Zona team, making up for any deficiencies that SL has in the colour-separation department.

From left to right: More mature pop is given an airing in RPM, Zona's middle of the road music magazine.

If your favourites include Lawnmower Deth, Thrash Zone or Zombified, Metaliko is for you. The major requirement for readers of Reptil Zine is that nobody else has heard of your favourite band. All tastes are catered for in Movimiento de Rock, from Michael Jackson to Metallica, and steady progress is being made to full colour.



ware, in particular Calamus SL.

SLEIGHT OF HAND

Calamus has always been Zona 10's choice of DTP software. They are currently working with SL, but the affordable 1.09n is still used for some of the black and white titles. To many people the obvious option for professional design is the Quark/Mac combination, so why go against the grain? Is an Atari system worth the effort? We put it to Natalia...

"Once again, it's partly down to cost. When the original Calamus was released it was the best desktop publisher on the market, and at a reasonable price. SL seemed

the natural progression and also has the potential of being the best DTP system available."

The word 'potential' suggests that there have been problems. "The main trouble when we first started using SL was that the manual explained things the software just wasn't capable of doing. Bombs during colour separation were quite a regular occurrence, but we've been getting updates from DMC and it's now 99 per cent complete and almost bug-free." While £600 may seem a lot to spend on a desktop publisher, for a package that supports a multi-national business, a Calamus-based system is good value.

THE ATARI OPTION

We'd all like to think that an Atari is a sensible option, but is it really a cost-effective one? In search of the facts, Atari ST Review put two systems capable of basic colour desktop publishing - one from Apple, one from Atari - head-to-head in a battle to the death. Prices quoted are those you'd pay on the street...

Atari Falcon 030
 Processor: 16Mhz 68030
 RAM: 4MB
 Digital Signal Processor: 32 MHz Motorola 56001
 Hard Disk: 65MB
 Operating System: MultiTOS
 Video: 16-bit True-Color (32767 Colours)
 Monitor: 14" Atari 1435
 Software: Calamus SL
 Total System Price: £1676.49

Macintosh IIsi
 Processor: 20Mhz 68030
 RAM: 5MB
 Digital Signal Processor: None
 Hard Disk: 80MB

Operating System: System 7.1
 Video: 8-bit (256 Colours)
 Monitor: Apple 14" High Resolution
 Software: Quark XPress 3.1
 Total System Price: £2478.08

Atari's claim has always been 'power without the price', and this is certainly borne out in the Falcon. Put aside the superior sound and graphics specification and you can still count on a saving of well over 40 per cent! Add to this the lower cost of software in general and you have a deal that's very hard to beat.

In its favour the Macintosh has a huge following in the professional publishing world and has always echoed the *PostScript* battle cry, but the tide does finally seem to be turning. Calamus SL and Didot Professional are both now capable of driving *PostScript* devices and have a power rating that could make any Apple user think twice!

Other professional Atari software is also fast catching up with that available for the Macintosh. And let's not forget the very real prospect of Macintosh emulation which appears to be just around the corner - why not have the best of both worlds?!

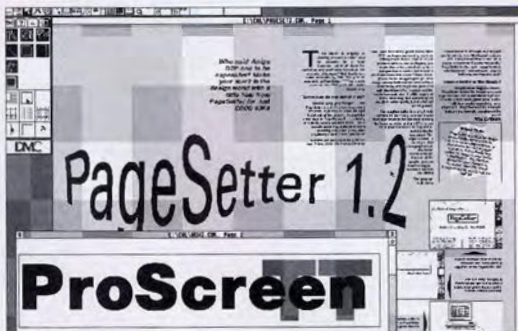
Prices courtesy of The First Computer Centre (Atari) Tel: 0532 319444 and Camelot (Mac) Tel: 0734 591500.



Another much under-estimated advantage of using SL is its revolutionary 'Soft-Ripping' technology. All Macintosh systems rely on a typesetting language known as PostScript for output and as much as its users would like you to believe it's a good thing, in reality it means paying more for 'licensed' printers, more for fonts and much more for already expensive imagesetters. While **Calamus SL** is also capable of driving PostScript through its 'Data-former' module, 'Soft-Ripping' means a TT can be linked directly to an imagesetter for fast, high-quality output without the help of an expensive PostScript raster image processor!

Cranach Studio is another package that Zona uses to devastating effect in the production of its magazines. It adds to SL's competence in the colour department and is best compared to **Photoshop** on the Macintosh, providing colour separation and adjustment in an easy-to-use GEM interface. This program and others are just an indication of the direction that ST software is taking and is capable of some truly stunning effects. But excellence doesn't come cheap - with its sister package **Vektor**, **Cranach** costs over £900.

You may think that with thousands of pounds worth of software at their fingertips they'd have become blinded by the power of top-end software, but Zona is also very complimentary of other, more affordable ST packages: "We recommend **PageStream 2**,



which is capable of some effects that even more expensive packages can't achieve." They even go as far as comparing the package with **Calamus SL** in terms of power and it's true to say that when it comes to desktop publishing, most ST packages belie their low pricing. You may be surprised to learn, for instance, that at least one news-stand magazine is put together using **Timeworks DTP** and an inkjet printer.

Calamus has over 30,000 registered users world-wide and that number is growing rapidly, but what of the future? Will the Falcon really be able to catapult Atari into the professional DTP scene, and what will these machines mean to the average man in the street?

TIME WAITS FOR NO MAN

The Falcon has the potential of being the affordable DTP machine of the 1990s. As if the powerful 68030 processor and easy expandability weren't enough, its Digital

For mono publishing the 19-inch ProScreen is unbeatable. It allows two whole pages at actual size to be shown on-screen and the quality is just superb.

Signal Processor is ideal for the image processing demands of modern desktop publishing. The price is also a major advantage and a basic Falcon-based colour publishing machine is likely to come in at under £1100 including a monitor - considerably less than an equivalent machine from either the Macintosh or branded PC folds.

The ST's open architecture has also been used in the Falcon and it shouldn't be long before emulators for both Macintosh and PC appear, making it possible to run **Quark XPress**, **Timeworks 3** and **Calamus SL** alongside one another on the same multi-tasking, Atari-powered desktop! This is largely speculative, but judging from the products in the pipeline, this sort of power could be with us before the end of this year.

As much as we'd like to believe that the Falcon can turn the publishing world on its head, marketing forces and the perceived image of the ST comes into play and it's here that Atari is likely to face its biggest challenge. As a company using Atari computers professionally, how does Zona feel about the image of the ST in business circles? "An executive close to Atari UK summed it up at Düsseldorf when he said of our Atari DTP magazine, 'What makes you think that there's a market for a magazine about Atari and DTP?'"

But Atari seems dedicated to making the Falcon a huge success. With the 68030 model in the shops and a possible 040 design peeping over the horizon, the future has never looked better for the ST series.

GO FOR IT!

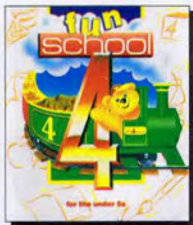
Atari computers are more than just a good choice for semi-professional DTP - they have the potential to take you right to the top. But don't think for a minute that you need thousands of pounds worth of equipment to get involved in publishing. A standard one Megabyte ST with a good quality dot matrix printer will take you a long way. Push the memory up to two Megabytes, add a hard drive and inkjet printer and you will have one of the most powerful and cost-effective desktop publishing systems on the market! As Natalia tells anyone who might dare to doubt the capability of their STs: "Just take a look at the magazines!"

SCHOOL'S

IN

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SOFTWARE

EDUCATIONAL SOFTWARE



FUN SCHOOL 4
For the under 5's.



FUN SCHOOL 4
For 5 to 7 year olds.



FUN SCHOOL 4
For 7 to 11 year olds.



FUN SCHOOL SPECIALS
Paint and Create.
5 year olds and over.



FUN SCHOOL SPECIALS
Merlin's Maths.
For 7 to 11 year olds.

Parents of the world, rejoice.

Your child might soon be dashing home from school to reach not for the latest megakiller computer game, but for their homework.

It's no dream, thanks to Europress educational software.

We heard how worried you were to read what so many people are saying about falling standards in schools. And we saw just how much children loved computer games at home.

So we sat down and created the best of all possible worlds: an action-packed range of educational software that's so compelling, homework will give even Ninja Turtles a run for their money.

Naturally, every title in the range follows the guidelines of the National Curriculum to the letter, but engages the imagination of your child to the full.

Our Fun School range covers stacks of general topics, while the Fun School Special packs focus on subjects such as Maths and Spelling.

For GCSE children, our ADI range is every bit as entertaining but has a more academic approach.

ADI covers English, Maths and Le Français and helps children sail through their exams with the greatest of ease. And now ADI Junior gives tots as young as four the start they need to make reading and counting as easy as 1, 2, 3.

Europress. We've started a new trend in education. To learn more, and about formats available, please contact us at the address below.

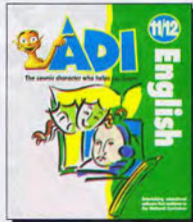
europress
SOFTWARE

CREATIVE EDUCATION

Europress Software, Europa House, Adington Park, Macclesfield, SK10 4NP.
TEL: Technical/Admin: 0625 859333. FAX: 0625 879962.



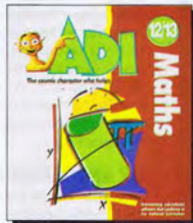
FUN SCHOOL SPECIALS
Spelling Fair.
For 7 to 13 year olds.



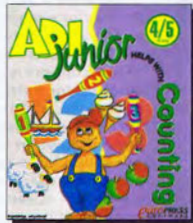
ADI ENGLISH
For 11 to 15 year olds.



ADI FRENCH
For 11 to 15 year olds.



ADI MATHS
For 11 to 15 year olds.



ADI JUNIOR COUNTING
For 4 to 7 year olds.

If you've got designs on DTP, check out the top packages in our round-up of the desk-top greats...

DESIGN

PAGESTREAM 2.2



In TT medium resolution PageStream really comes into its own, although colour representation is less effective than SL.

In a world of boring uniformity, PageStream 2 is a breath of fresh air. It firmly kicks frame-based DTP tradition in the teeth and opts for its own totally unique approach to layout, which reaches into all areas of the package.

Never again will you have to worry about creating a frame for a simple headline – just position the cursor and type away. What's more, text can be scaled by simply stretching it to the required size. Importing graphics is a simple one-stage manoeuvre and the number of formats supported is enormous. Add to this a spell checker, complete macro language and multiple documents in memory and you have one very well thought-out package.

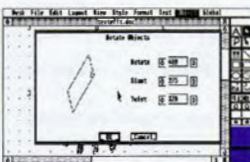
UP AND RUNNING

Installation is manual and is relatively hassle-free on floppy disks. Hard disk owners may be in for more of a headache in that all of the load paths – fonts and so on – initially point to drives A and B! It's not a major problem and is easily solved when you realise what's happening.

Font support is superb, catering for Soft-Logik, CompuGraphic, and the ever-popular PostScript formats. It's when you begin to use these fonts that you come across PageStream's main downfall – speed, or rather the lack of it. Laying out a page of text can be painfully slow, although upgrading to

four Megabytes helps enormously. There are also a few problems when using CG fonts in large sizes, but for most work it's not noticeable. Effects are amazing for a package in this price bracket and text can easily be rotated, skewed, reversed, mirrored and distorted in a whole manner of other ways.

If you think you can cope with the original layout approach and have the hardware to use it, PageStream 2 comes recommended.



If effects are high on your list of priorities, you won't be disappointed with PageStream – any object can be rotated, twisted or distorted to your heart's content.

"Although inherently slow to use, it adopts a flexible layout approach"

NAME: PAGESTREAM 2.2

COMPANY: FIRST CHOICE

CONTACT: 0532 319444

PRICE: £139.99

RELEASE DATE: OUT NOW

MIN MEMORY: 1 MB

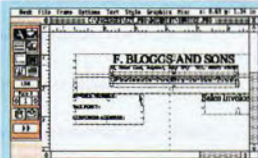
EASE OF USE ★★★★★

DOCUMENTATION ★★★★★

SPEED ★★★★★

VALUE FOR MONEY ★★★★★

OVERALL **85%**



Invoices and other stationery are a piece of cake with Easy Text Professional, as the tutorials are only too keen to point out!

EASY TEXT PROFESSIONAL

At just £39.99, Easy Text Professional is probably the cheapest functional desktop publisher on the planet, but don't think for a minute that because the price is low, the product is in some way substandard.

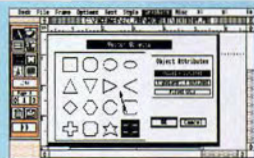
EASY INSTALL

In use the package is very reminiscent of Timeworks, and in fact shares the same Atari GDOS font system. Installation is bliss, being fully GEM driven and very easy to understand even without the help of the clearly written guide. Printer drivers are supplied for most popular models and the appendix goes thoroughly into the basics of GDOS and how to add extra fonts to the ASSIGN.SYS file which is good news for beginners. Four fonts are supplied as standard, and up to 10 typefaces can be used at any one time.

Vector drawing tools are one of the highlights of the package and with a little effort extremely effective designs can be produced. Most major graphic formats are supported, although the pictures must be mono.

STORMY WATERS?

By far the biggest problem with Easy Text Professional is its lack of view sizes. Although a full page preview is included, it is, unfortunately, no real substitute for the



A very Calamus-like dialogue heads up Easy Text Pro's range of vector-objects.

flexibility of working on the whole page.

Niggles aside, the program seems very stable and as quick as you can expect any GDOS application to be. Unlike some other packages, Easy Text Professional runs well on a one Megabyte machine and is not likely to demand much more. Considering that it costs less than some games, this is a perfect package for beginners.

"The cheapest DTP package for the ST includes vector drawing tools"

NAME: EASY TEXT

PROFESSIONAL

COMPANY: ZZSOFT

CONTACT: 0254 672965

PRICE: £39.99

RELEASE DATE: OUT NOW

MIN MEMORY: 1 MB

EASE OF USE ★★★★★

DOCUMENTATION ★★★★★

SPEED ★★★★★

VALUE FOR MONEY ★★★★★

OVERALL **84%**

N B R I E F

CALAMUS SL

After years of speculation and promises **Calamus SL** is finally with us in a usable form. The claims are certainly impressive for this latest release – built-in word processor, virtual memory, almost unlimited magnification and full-colour separation from a palette of over 16 million colours – but how does it perform?

The famed icon-driven interface remains more or less intact, although the program is now fully modular and therefore infinitely expandable. **PKS Write**, a full-featured word processor, is now part of the standard package and optional modules include 'Vector', for in-program editing of object graphics; 'Speedline', an auto-tracer; the 'Dataformer' which gives **SL** PostScript compatibility; plus several others aimed at the professional typesetter.

MANUAL LABOUR

The manual is much improved over the original **Calamus** and includes a tutorial which covers the fundamentals of DTP. All of the files are archived with an obscure German command-line utility – no instructions anywhere. All the frustration melts away, however, when you load up one of the most powerful pieces of software available for the ST. There's very little that can't be achieved with **SL**.

In terms of speed, it's only fractionally slower than **Calamus**.



Calamus SL uses very effective dithering techniques to give the appearance of far more colours than the 16 offered by TT medium resolution.

mus 1.09. Start paging chunks of memory to disk and things slow down drastically. **Calamus S**, a slightly lower specified version capable of only spot-colour work is available as an upgrade for £145 – pound for punch, probably the best buy on the market!

Calamus SL now fulfils most of its many promises and at last seems stable enough for serious work.



Power incarnate – tricky to use it may be, but when it comes to professional page design there's very little to touch Calamus SL.

"A fully professional, colour DTP package with a host of powerful features"

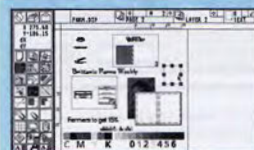
NAME: CALAMUS SL
COMPANY: HALCO
CONTACT: 0734 441525

PRICE: £587.50 (Calamus S £145)

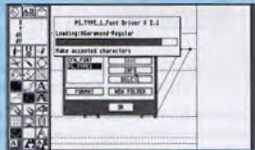
RELEASE DATE: OUT NOW
MIN MEMORY: 2 MB (AND HARD DRIVE)

EASE OF USE ○○○○○○
DOCUMENTATION ○○○○○○
SPEED ○○○○○○
VALUE FOR MONEY ○○○○○○

OVERALL **85%**



Didot's unique pasteboard approach makes design easy.



Importing a Type 1 PostScript font.

DIDOT PROFESSIONAL

Didot Professional is a professional standard page design and layout package. It is available in two versions, monochrome and colour, and it boasts an impressive array of facilities including a built-in font editor, bitmap to vector conversion module and its own text editor.

The interface is vaguely reminiscent of **Calamus**, with a similar multi-icon approach, but in fact nothing could be further from the truth. It uses the pasteboard approach, allowing users to simulate the pasteboard of the traditional graphic design studio.

MAKING THE RIGHT MOVE

Moving around the work area takes some getting used to as there isn't a scroll bar in sight. The left mouse button selects an area for magnification. **Didot** comes on three disks with three typefaces. Fortunately it can also import and use PostScript and **Calamus** outline fonts.

Printer support is thin and aside from a few specialist devices, users are limited to PostScript printers, Atari laser, HP Laserjet II, HP Deskjet, Star LC-10 and NEC P6/7. It will happily produce industry standard PostScript files, however, giving it a significant edge over **Calamus**.

Didot has two main failings. Firstly the manual is very poor for such an expensive program – it doesn't deal with any topics like colour in much depth. Secondly it is choosy

about what it will import – ASCII only for text, CVG for vector graphics and TIFF images.

The minimum configuration is a two Megabyte ST/STE with a hard disk and monochrome monitor. Overall **Didot Professional** is an excellent program that neatly integrates vector graphics, outline fonts and page layout into a powerful DTP system.

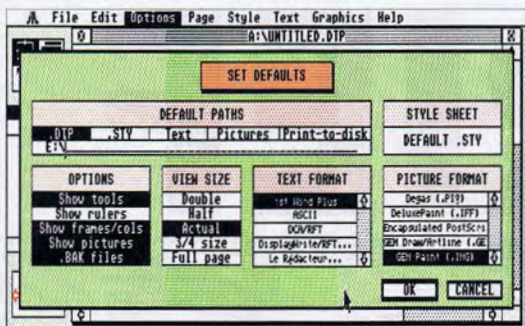
"Good for design intensive work where other frame-based programs are at a disadvantage"

NAME: DIDOT
PROFESSIONAL
COMPANY: CGS
CONTACT: 081 686 8121

PRICE: B/W £488.80
COLOUR: £661
RELEASE DATE: OUT NOW
MIN MEMORY: 2 MB

EASE OF USE ○○○○○○
DOCUMENTATION ○○○○○○
SPEED ○○○○○○
VALUE FOR MONEY ○○○○○○

OVERALL **78%**



Timeworks has always rated highly in the ease-of-use stakes and saveable defaults are just one of many additions that go to make version 2 even more user-friendly.

TIMEWORKS DTP 2

On its release back in 1987, *Timeworks* caused a storm on the infant DTP scene, and understandably so. Here was a package that could rival almost anything on the market at a price that had Aldus executives cringing behind their desks!

Timeworks is beginning to show its age, although its legendary ease-of-use has gained it many dedicated followers. At least part of this simplicity is due to the interface which, although frame-based, is very easy going and imposes no restrictions on what a frame can be used for.

WORKING WITH TEXT

Text handling has always been *Timeworks'* forte and when it comes to laying out newsletters or newspaper-style documents, it still finds no rival on the ST. The 'automatic layout' included in version 2 only goes to

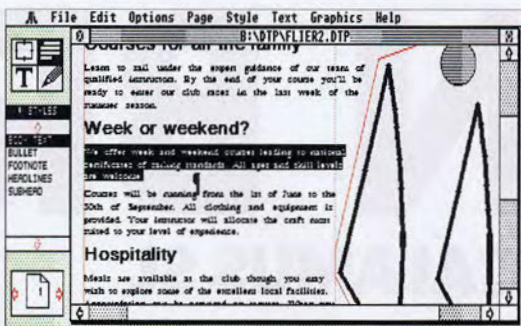
improve this reputation - create one page and the rest of the document can be laid out with a single mouse click! Unfortunately, fonts are bit-mapped only thanks to the use of *GDOS*.

Basic vector drawing tools are included and bit-mapped graphics are easily edited in-program. The majority of popular text and graphics formats on the PC and ST are also supported including Degas, TIFF, *First Word Plus* and *WordPerfect*.

WOT NO EFFECTS?

It's on the effects front that *Timeworks* runs onto stony ground. Although most of the problems can be put down to the archaic *GDOS*, the text rotation, colour and vector fonts used by so many modern designs are all in the realms of fantasy for a *Timeworks* user!

On the plus side, the package runs on a half Meg



Special effects might be a little lacking, but for mountains of text you still can't beat *Timeworks'* easy-to-use paragraph tagging system.

machine, although more memory is recommended, and a hard drive improves performance no end.

The graphics printing problems that were so prevalent in version 1 seem to be solved thanks to a new version of *GDOS*. Also worth a mention is the superb manual - all aspects of the package are explained clearly and in over a year of usage there has been nothing that couldn't be sourced from the index.

CONCLUSION

Timeworks 2 is a good package. Its lack of effects needn't worry you if your demands aren't too great and it remains the best beginners' choice thanks to the interface and excellent manual. On the other hand, if you are looking for an upgrade, a little more money would buy *Calamus S*.

This package is ideal for creating posters and letterheads. Anyone considering producing a magazine or a regular commercial publication should aim for either *Calamus* or *Didot Professional* though.

"Simple to work with - a natural choice for the beginner"

NAME: TIMEWORKS 2
COMPANY: GST SOFTWARE PRODUCTS
CONTACT: 0480 496666

PRICE: £139.99
RELEASE DATE: OUT NOW
MIN MEMORY: 1 MB
(RECOMMENDED)

EASE OF USE
DOCUMENTATION
SPEED
VALUE FOR MONEY

OVERALL **85%**

BUYERS GUIDE

	EASY TEXT PROFESSIONAL	TIMEWORKS 2	PAGESTREAM 2.2	CALAMUS SL	DIDOT PROFESSIONAL
PACKAGE PRICE	£39.95	£139.99	£139.99	£587.50	£661/£488.80
POWER RATING	**	***	****	*****	*****
VECTOR FONTS	NO	NO	YES	YES	YES
VIEW SIZES	2	6	VARIABLE	INFINITE	VARIABLE
TEXT EDITOR	IN-FRAME	IN-FRAME	ON-PAGE	SEPARATE/IN-FRAME	SEPARATE/IN-FRAME
SPELL CHECKING	NO	NO	YES	YES	NO
GRAPHICS IMPORT	6 FORMATS	10 FORMATS	21 FORMATS	22 FORMATS	4 FORMATS
TEXT IMPORT	7 FORMATS	17 FORMATS	10 FORMATS	5 FORMATS	1 FORMAT
POSTSCRIPT	NO	YES	YES	DATAFORMER REQUIRED	YES
COLOUR SEPARATION	NO	NO	YES	YES	YES

WORTH
NEARLY
£300!



Breakthrough is the first game available in the fourth year Maths package.

WIN THE ENTIRE RANGE OF ADI EDUCATIONAL SOFTWARE

The complete set of ADI educational programs is up for grabs, courtesy of MJC Computer Supplies

ADI is a unique range of educational programs that make learning English, maths and French fun. There are 11 packs aimed at secondary school years one to three for English and one to four for maths and French. Our winner will receive the complete set and the three runners-up will each have their choice of one package from the range.

THE ADI ADVANTAGE

The central character, ADI, is a three million year-old alien who guides the student through the exercises, offering games as rewards for completion. ADI saves detailed progress reports on disk, enabling parents or teachers to check on the child's performance.

Each package has nine animated documents which cover a wide range of topics, and nine games are included. ADI won't allow you to play them until you've finished the exercises, when he releases them one by one.

Although ADI is aimed at school students, it's also

suitable for adults. The material used is written by a team of educationalists with the National Curriculum in mind, so it's the perfect tool to brush up on forgotten skills.

The ADI range of educational software is available at discount prices from MJC Computer Supplies. For more information on MJC, see their advert on page 40.



ADI's lesson structure is designed to take you easily from step to step. However, if you don't fancy working through the lessons, there are some excellent tutorials available.

HOW TO ENTER

All you need to do to win is answer the following questions.

1. How old is ADI the Alien?
2. What are the three subjects available?
3. In what year did MJC Computer Supplies start selling discount software?

Write your answers on a postcard or the back of a sealed envelope and send it to: ADI Competition, **Atari ST Review, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU** to reach us by 14th March 1993. Don't forget to include your name and address. Also, please tell us which runners-up prize you'd like if your name is selected.

MJC Computer Supplies may wish to send you details of ADI and other discounted products. If you don't wish to receive anything from them, let us know on your entry.

RULES

The competition is open to all readers of **Atari ST Review** except employees of EMAP Images Ltd or of MJC Computer Supplies and their relatives. Prizes will be awarded to the senders of the first correct entries picked after the closing date. There is no cash alternative to the prizes offered. The editor's decision is final and no correspondence will be entered into.

John Mallinson
checks out Hewlett
Packard's latest
portable
innovation...

JET SET

Printers tend to be either portable, or for desktop use, but with its DeskJet Portable Hewlett Packard is aiming for the best of both worlds. Designed to be equally useful in the office or on the road, the DeskJet Portable measures just 12 by two and a half by five and a half inches and weighs two kilos (not including its external power supply). At the right side are sockets for the 10.6V power line and a parallel computer cable. On the left is a slot for credit card sized font cartridges, although these aren't available yet.

There's a large panel on the front which hides the ink cartridges, and the switches which alter the default settings (page length, character set and so on). The portable uses the same ink cartridges as the DJ500 except that you can't fit the newer, high-capacity, more economical ones, so it will be rather more expensive to run.

IN CONTROL

The control buttons are clearly labelled and the machine is easy to operate. There are four internal fonts (mono-spaced Courier, Letter Gothic, and proportionally spaced Times and Univers). Each has bold and italic versions and can be used in a number of sizes from six to 19 point. The 'Font' button on the control panel is used to switch between normal-sized, landscape and condensed versions of the default Courier. All other font changes have to be made from software.

The print quality is excellent, both with the internal fonts and when printing in graphics mode with DTP or art software. It outputs at the same speed as the DJ500, which is significantly faster overall than any of the other portables on the market.

BATTERIES NOT INCLUDED

It may seem outrageous to sell a portable printer and then charge another £40 for batteries, but this is what HP, and most other manufacturers, have decided to do. You can either use HP's own unit or other camcorder rechargeable batteries. Charging time is six to 10 hours and you can then print up to 200 sheets - this should be quite enough for a few days' work, so you probably wouldn't

need to carry the charger/mains unit around all the time.

Paper comes out at the front and a pair of hinged 'arms' hold each sheet off the desk to give time for the ink on the previous page to dry. The paper is then dumped in an untidy pile as there is no tray to catch it.

There are eight other portables on the market. The DJ portable is likely to cost more than any of these alternatives: by our calculations it would cost about £765 for printer, battery, sheet feeder and VAT. If so the Canon BJ10ex and BJ20 still have to be the best buys as they are smaller, substantially cheaper, and the BJ20 has more internal fonts. Having said that, neither is as fast or seems as sturdy as the DeskJet.

VERDICT

If you're looking for a portable that is powerful enough for office use then the DJ makes sense. Its main competitors as a desktop printer are HP's own DeskJet 500 or machines with a similar spec like the Canon BJ200. For office use it's less convenient than the DJ500 as it has no paper catcher and the paper tray doesn't hold as much, but in all other respects it seems very similar.

Hewlett Packard DeskJet Portable
Draft mode abcdefg
Courier abcdefg
Times abcdefg
Letter Gothic abcdefg
Univers abcdefg
Italics, bold, underlined

The DeskJet doesn't have many internal fonts, but the ones it has are high quality. There are plans to bring out font cards to expand those built into the printer.

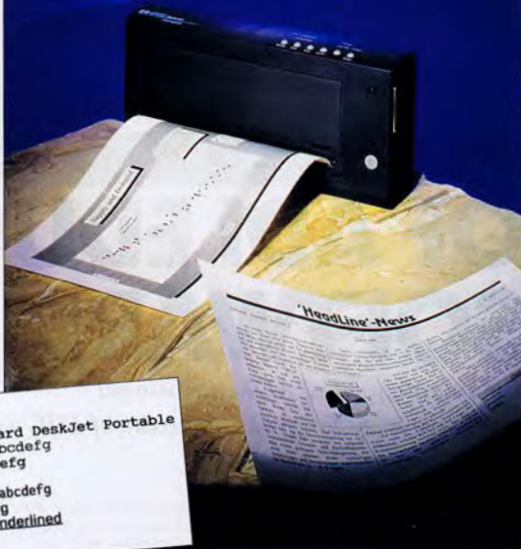
FEATURES

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Fitting a high density disk drive is a tough job. Tony Kaye visited Atari Workshop to find out what's involved

MORE IN

The complete upgrade kit including high density drive, eICo module, leads, software and instructions.



HIGH STEPPING

Step rate is the speed at which the drive head goes from track to track. The step rate for a standard ST drive is three milliseconds at 8MHz. As a high density drive works at 16MHz, the speed is increased by a factor of two. The step rate for the new drive is therefore set to six milliseconds, giving an effective rate that can be comfortably handled by the computer.

Since the ST was first released, people have been finding ways of increasing the capacity of disk drives. The 1.44 Megabyte drive has been available for Mega STes and the TT as well as PCs for some time, and it is now possible to add one to your ST.

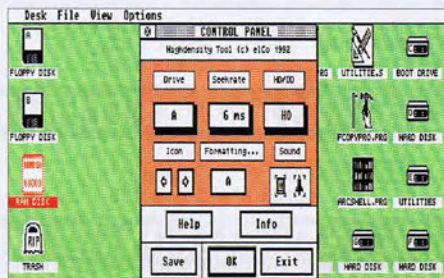
High density disks store twice as much data as a standard double density disk, so theoretically you can halve your disk collection and still store the same amount of information. Unfortunately, simply

swapping the drive won't help matters much. The ST runs at 8MHz, whereas the new drive requires 16MHz to work correctly.



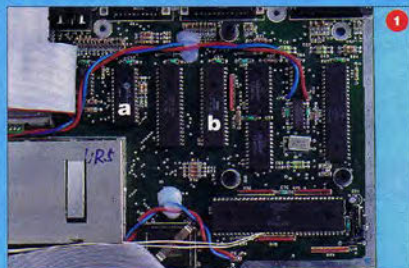
CHIPS

The solution is to fit a high density disk drive module that will tell the floppy disk control chip what speed to run at. This poses another problem as the device is designed to work with the standard ST at 8MHz. The most common controller is the WD1772 chip, version 02-02 or

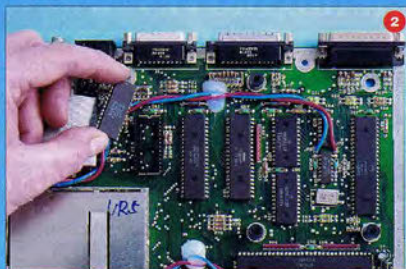


The eICo CPX showing the formatting options.

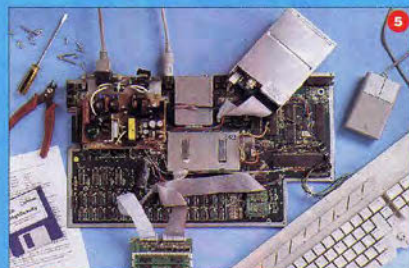
STEP BY STEP



1 Switch the power off and open your ST. Remove the mother board from the case, locate the floppy disk drive controller (a) and the sound chip (b).



2 The controller in this machine is the VL1772, so it is being changed for a WD1772 02-02 chip. The original chip has been removed and a socket has been soldered in place.



5 When all the wires are soldered, it's time to test the new drive. Using extreme caution, connect the power and monitor leads and the keyboard.



6 When everything is working, disconnect the power and re-assemble the computer. The brown lead can be connected to the disk drive itself or to the lead that plugs into the back of it.

STORE

00-02, the latter of which doesn't support the upgrade. Also found in some STs is the VL1772 and the latest STes have the Atari C302434 'Ajax' chip. The 00-02 and 80 per cent of the VL models are not compatible, whereas 95 per cent of the 02-02s and all of the Ajax chips are.

There's no way of telling from the outside which is in your machine - you have to strip it down to find out.

High density disks are identified by the HD marking on them and an extra hole on the opposite side to the write protect switch. This

is read by the drive and the information is then passed to the computer via pin two on the drive data bus. The eCo module reads this and switches the system into HD mode.

The drive works as normal with single and double density formatted drives, so no compatibility is lost, but the extra storage space is ideal for large programs, hard drive backups, archival storage and general day-to-day running.

If you are giving data disks to others, you should remember that unless they also have a high density disk drive, they won't be able

Disk Requirements				
Under the currently selected backup options, the backup paths contain 75 directories, 472 files, totaling 6103939 bytes and requiring 6537 free disk clusters or 6489088 free bytes. The total disk requirements for floppy disks are!				
Sides	1	2	2	2
Tracks	BR	BR	BR	BR
Sectors	9	19	18	9
	10	17	16	9
	18	NA	NA	5
OK	20	NA	NA	5

Diamond Back II disk requirements. Fewer high density disks are needed to back up six megabytes of information.

to read them, so you'll need to keep some 720K disks handy.

HIGH DENSITY SWITCHING

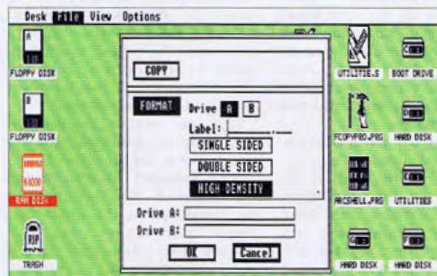
Three methods of high density switching are used by various manufacturers and systems. Atari Workshop supplies the TEAC drive mechanism which sends a signal to the eCo module via pin two of the drive bus when a high density disk is detected. This system is better as it also lets you use a PC emulator without any problems because no software is needed to switch the controller.

The second method of switching is the same in reverse. A signal is sent from the computer to the drive via the same pin telling it to go into HD mode. The third type of drive has no sig-

nalling. This is common in most PC configurations, where the operating system automatically decides which density to use.

The module and software provided can handle all three types of drive and the wiring will change slightly. Advice is available from Atari Workshop if you're unsure.

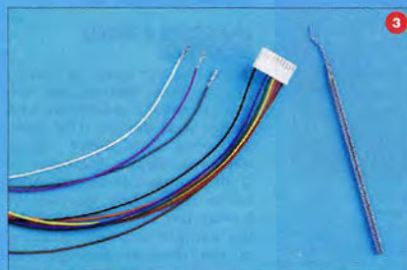
● Thanks to Karl Brandt at Atari Workshop for his help in preparing this article.



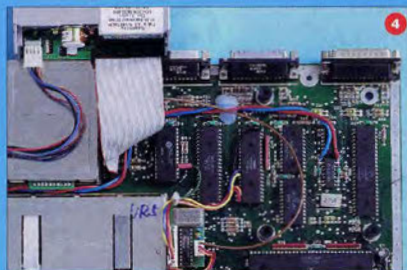
TOS 2.06 revealing the audio choice

DISCLAIMER

This step-by-step guide shows how the upgrade is fitted by Atari Workshop. Unless you are very confident of your own abilities with a soldering iron, we suggest that you have the upgrade fitted by a professional. We can accept no responsibility for any problems arising from attempting to fit this upgrade.



3 Using the TEAC drive as supplied and recommended by Atari Workshop, three wires are not required and are easily removed from the loom with a pointed tool.



4 Make sure there is enough clearance for the plugs when the drive is in place. The brown wire is connected to pin two on the drive itself.



7 Mark the side of the case so that you have an overall height of one inch and a rectangle at the base. Remove the excess plastic using a hacksaw and file down the edges.



8 The case can now be screwed back together. Run the AUTO program and the CPX or accessory to format your first high density disk.

Video and audio sampling has never been easier. Tony Kaye grabs his director's cap and starts the cameras rolling...

SOUND & VISION

The main problem with any kind of home video or audio work is the cost involved. MicroDeal has come up with one potential solution in the shape of **VideoMaster**. For the very reasonable sum of £69.95, this package brings a whole new realm of experimentation and entertainment to the ST. It's a cartridge-based package that will link any composite video and audio source to your ST and enable you to sample both, make animated sequences and create stunning visual effects. When

that's done the whole thing can be saved out as a stand-alone demo.

THE HARDWARE

VideoMaster consists of an L-shaped cartridge, software and a manual. All you need to add is a video and audio source (your video recorder or camera, for example) and the necessary leads.

Connecting it up is simple, and the end results can be stunning. With the ST switched off, the cartridge, which is fitted with two audio/video inputs, slots into the cartridge port on the left-hand side of the ST. You need

to ascertain what connections you have on your audio/visual source and make or buy a lead to connect the two. Most modern videos have phono connections or use a Scart socket, so to get the optimum picture quality you need to adjust the black level (the amount of black in the picture) and the contrast from within the software.

You can record pictures in real time at intervals ranging from time lapse (one frame every second) to 25 frames per second. You are limited by memory, so the more you have, the longer you can record for. As each frame takes up about 8K, a standard 1040 can only record a few seconds of full-speed playback before running out of memory, but there are some tricks that will make it seem like you're using more memory than you really are.

GRABBING A VIDEO SEQUENCE

Once the computer is linked to your video source, you can start to record sequences and create your demos. The manual goes into detail about what you require, but basically all you need to select is the frame rate - the number of frames per second - at which the sample is taken. Bearing in mind that an average disk will only hold around 80 frames, the slower the sampling rate, the more you can squeeze on. To find out the best rate to sample at, experiment with the speeds, play them back and decide on an acceptable compromise.

AUDIO SAMPLING

Sound can be recorded, mixed and added to bring your video to life. You can import sounds from your own soundtrack library too. At the bottom of the screen is a waveform display, which is



A digitised camcorder from **VideoMaster's** title screen.

STEP BY STEP

Here is a quick step by step guide to creating your very own cinematic masterpieces on the ST with **VideoMaster**...



2 Process the sound using the Audio Card. Fade, squash and mix the soundtrack until it suits the picture.



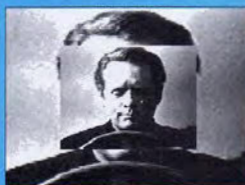
4 The video editing card. This is for adding, removing or re-ordering individual frames to produce effects and save space.



1 The Video Card is used to take the samples. Pictures are displayed in the box on the left-hand side and the audio track is shown at the bottom.



3 Using the Sequencer Card you can combine the pictures and the sound to produce a complete stand-alone video.



5 The finished article. Obviously, we can't show you the whole thing, but you can add a full size backdrop to your images and Number Six lives!

blank with a line through the middle when you first load the program as no sound is held in memory yet. When you import or record sound, the display fills with vertical lines or waveforms.

There are two cursors, one at each end of the window. By clicking and holding these, you can move them to the position you require. The space between the markers is the area of the sample that will be edited, while clicking the Listen button plays it.

A facility called Audio Scrub allows you to play samples directly from the waveform display by dragging a cursor across it. This lets you find the exact piece you want to edit or where to add more samples. You can alter the speed of the sample in 1KHz steps up to 16KHz, and sounds can be played in reverse and edited as required.

PLANNING A SEQUENCE

The manual states that "unless you are a true genius or very lucky, a good sequence will require a lot of advanced planning". This is very important when you consider that a normal double-sided floppy disk only holds around 720K of information without a soundtrack! The size of the sequence needs to be kept to a minimum, so you can put as much as possible in the space available. For this reason there's an option to change the speed of each frame and sound sample, which is why *VideoMaster* has separate keys assigned to each frame. For example, a swinging pendulum could have a frame rate of three or four per second as the action is repetitive and fairly slow, whereas a running man would need to be higher.

Starting with a clear memory, reload the whole video



The complete VideoMaster package. All you need to add are the video and audio sources plus the leads.

and audio track files. Locate each piece of video using the Frame Slider and define each single block using the Start and End buttons. Next, select the frame rate and Video Loop where appropriate. Choose your sound and match it with the video and, again, select the sample speed. If needed, the Audio Loop button can be used to repeat blocks of sound.

PUTTING IT ALL TOGETHER

Once you have all of the segments, you can start assembling your film. Press the button marked Rec and then press the recorded sequence keys in the order that you want them to appear. When you've finished, pressing the left

mouse button takes the program out of recording mode. Press Play Film and the whole thing will be played back, showing exactly what mistakes you've made. You can now edit the film and should end up with a very professional result.

If you want to distribute your finished film, a program called Vidiplay is provided which runs your demo.

CONCLUSIONS

VideoMaster is great fun to use. It is very versatile and the inclusion of video and audio in one package is a real plus point. If you want to get serious, however, you'll need to invest in good-quality video equipment, but this is not essential for beginners.

Video and audio in one
Easy to use
Comprehensive

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PRICE: £69.99
RELEASE DATE: OUT NOW
MIN MEMORY: 1 MB

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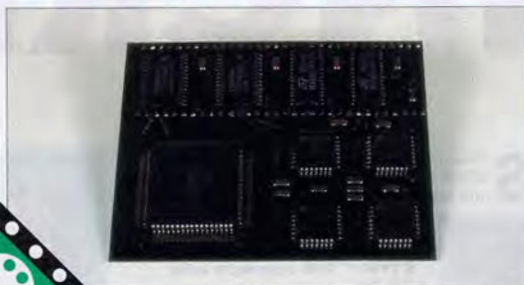
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CACHE YOUR CHIPS

At last there's a cheap 16MHz accelerator for the ST. Ofir Gal finds out if the price outweighs the performance...



The world of computing is a fast-moving one. New products are announced almost daily and programs are becoming more complex. With the arrival of the 386 and 486 micro-processors, PC users can upgrade their main processors at a relatively low cost. A typical PC now has a 33 or 50 MHz processor, with 68MHz becoming popular and 100MHz 586 units on the horizon.

This means that PC programmers can rely on their end users having very fast machines putting less emphasis on the efficiency of their programs.

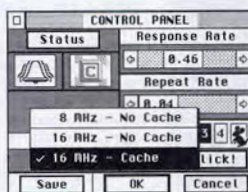
In contrast, the ST has seen no major change from its original 8MHz processor which was considered extremely fast back in 1985 when the original ST was launched. The Mega STE featured a 16MHz main processor which

could even be switched back to 8MHz for compatibility with some older games. ST programmers always see the efficiency of their programs in terms of speed and memory usage. This, coupled with an extremely efficient processor, means that most ST users can run their favourite programs without having to worry about speed. This situation is now changing with power-hungry applications such as *Calligrapher*, HST Modems and DTP packages arriving on the ST scene. Multi-TOS is almost impossible to use on an 8MHz ST.

While there are several products available that improve the ST's performance - such as the ICD ADSpeed (16MHz) and Turbo 25 (25MHz) - these have been priced out of the reach of most ST users. The latest offering from System Solutions - a high-quality 16MHz replacement processor for under £100 - may change all this.

INSTALLATION

The 16MHz processor is surface mounted on a PCB slightly smaller than a floppy disk with eight additional micro chips. While the board is rather large, it is very thin, so you can install it in a standard STFM or STE without having to cut the metal shield. With the STE all you have to do is to open



The Atari Control Panel can be used to switch speeds and disable the cache.

the case, gently remove the old processor and push the new board in its place. Pre-STE owners will have to get their soldering iron out or, better still, let System Solutions install it for them. Installation on a pre-STE involves removing the old CPU and soldering in a socket where the Cache Plus board fits. Two jumpers are provided which enable you to set the default options of the board.

IN PRACTICE

On the accompanying disk are several utilities. A small auto program lets you switch processor speed at any time by pressing ALT- for 8MHz and ALT+ for 16MHz. A desk accessory is also included where more parameters can be set and, uniquely, the cache can be disabled as on the Mega STE. This enables you to run programs which are not com-

ATARI ST
ESSENTIAL BUY

Plus Cache ST enables you to improve your ST's performance without spending a small fortune.

patible with the full 16MHz speed without having to resort to 8MHz. A small patch program modifies the General.CPX module for XControl so it recognises the new speeds and allows you to switch between them via the Control Panel.

A major problem with any hardware modification is the compatibility. We tried running many programs with the board set to 16MHz and they all worked, except some MIDI packages which ran better at 16MHz with the cache switched off. Screen redraws were faster and even printing times with *Calligrapher* were improved. If you set the board to default to 16MHz at boot time, even the boot process is speeded up.

Tests with several benchmark programs show that speed increases by 70 per cent to 100 per cent - exactly the same as with ICD ADSpeed.

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There's very little to say
against it

HOW FAST IS YOUR ST?

The ST, like the Commodore Amiga, is based around the Motorola 68000 CPU (Central Processing Unit) which was also used on earlier models of the Apple Mac. The 68000 is an extremely efficient CPU which explains why it can outperform other processors running at twice its speed. While Motorola has since developed superior CPUs that not only run faster but are also more efficient, Atari has stuck with the 68000 for the ST range. The Falcon will be based around a Motorola 68030 running at 16MHz and the TT uses the same processor running at 33MHz.

The CPU speed is not the only factor that determines the overall performance of your computer. Later STs were equipped with a Blitter chip which takes some of the workload off the main processor, resulting in improved performance. Simply replacing the CPU with a faster one does not give the expected results, mainly because many of the other components inside your ST are running at 8MHz, so a popular technique is to add a small and extremely fast memory cache, typically 32K to the CPU. This enables the new CPU to work much faster, storing data in the cache instead of waiting for the rest of the system to catch up. A small proportion of ST programs are not compatible with a CPU cache. Running a 16MHz CPU with the cache disabled will effectively give a 30 to 40 per cent improvement in speed.

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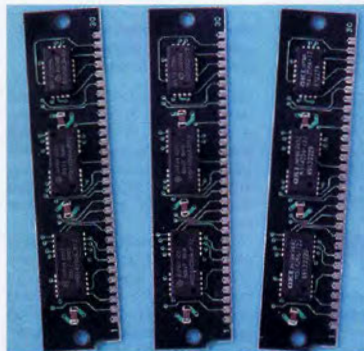
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SCREEN SCENE

Streetfighter 2 has finally made it through its early tribulations and you can find out just how good it is on page 60. If you fancy something a little larger, you could turn your hand to empire building in Microprose's *Civilization* which is reviewed on page 48.

FIRST IMPRESSIONS

46

Previewed this month is Ocean's house of horrors, *Universal Monsters*, and Core's new isometric adventure, *Darkmere*.

CIVILIZATION

48

Sid Meier, of *Railroad Tycoon* fame, is back with an even bigger game. Build an empire and watch it flourish or flounder or go the whole hog and capture someone else's.

SPACE CRUSADE DATA DISK

52

The original *Space Crusade* too easy for you? Gremlin has packed a whole new army of monsters and missions on one easy-to-manage disk.

CAMPAIGN

54

Take the gunner's seat in a Second World War tank or a field marshal's epaulets and take command of the D-Day landings in this historical wargame from Empire.

NIGEL MANSELL'S WORLD CHAMPIONSHIP

56

Take control of a turbo-charged Formula One car and attempt to emulate our Nige's success.

STREETFIGHTER 2

60

Travel the world, meet interesting people, then beat them senseless. Check out the weird and highly violent fighters and see how it matches up to the coin-op.

DRAGON'S LAIR 3

64

Dirk returns for his third outing. It looks just as good as the previous *Dragon's Lair* games, but is it any more playable?

GUY SPY

64

Readysoft's second release of the month casts you as an American James Bond, out to right wrongs and battle evil Nazis.

DUNGEON MASTER/CHAOS STRIKES BACK

66

Two ST classics are staging a come back thanks to Psygnosis. How have they stood the test of time?

DYNA BLASTER

67

Get to grips with five-player action in this explosively addictive game from Ubi Soft.

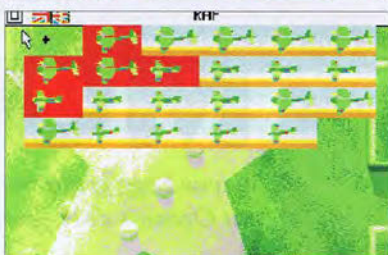
SLEEPWALKER

69

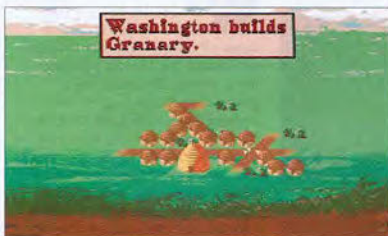
Ocean's game of the charity promises thrills, spills and a helping hand for Comic Relief.



Daring Dirk is back in his third adventure; this time he's out to save his other half.



It's D-Day all over again as you take command of the allied forces on the June 4th landings in Campaign.



Build an empire or capture someone else's in Microprose's stunning Civilization.



Just what is this guy doing? You can find out in our red-hot review of Streetfighter 2.



Remember the golden age of Universal horror movies? Probably not, but here's your chance to be well and truly terrified in our preview of Ocean's forthcoming Universal Monsters.

VFM

PIPEMANIA
ROBOCOP 2
BUBBLE DIZZY
SMASH TV
PIT FIGHTER

71
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FIRST IMPRESSIONS



UNIVERSAL MONSTERS

Wayne Legg grabs his crucifix and heads for the dungeons to check out Ocean's dark secret



The inventory screen.



Get keys to open doors.



Hitting spikes deplete energy.



Hazards can be jumped over.



With its latest licence Ocean is taking us back to the bygone days of classic horror movies produced by Universal Studios, when Dracula was played by Bela Lugosi and Frankenstein by Lon Chaney. Rather than simply buy the rights for one character, the Manchester-based software house has acquired all Universal's major monster stars.

Universal Monsters is being designed by veteran programmer Simon Butler, who gave us the low-down on how the game is shaping up. "It starts with the death of Professor Van Helsing - the aged Vampire hunter - his grandson Alex inherits his job. Tradition has it that Alex has to travel to a secret place to perform the rite of the Blood Stone, a ceremony which keeps all the evil monsters in another dimension."

Unfortunately Alex is delayed and the ceremony is not completed; as a result all of the evil monsters escape into this dimension. Just to make matters worse, the Blood Stone - the only item that can keep them in their dimension - has been split into six pieces which are hidden in six different locations.

All looks lost, but Dracula, being a sporting kind of chap, visits Alex and tells him where the six parts of the Blood Stone are hidden. He challenges our hero to obtain

all six parts, which are being guarded by hordes of evil monsters. A time limit is imposed - if he succeeds, all his creatures will return to their dimension once again.

BACK TO THE FUTURE

The game is a throw-back to mid-80s platform gaming, as Simon explains: "The game is played from a three-quarter, top-down, isometric perspective, similar to games such as *Knightlore* or *Head Over Heels*. Additionally, each room is designed to scroll and is more than one screen wide."

The version we saw contained four levels, The Tower Grounds, Dracula's Tower, The Dungeons and The Pyramid, each containing at least 120 locations! "Our aim," confirms Simon, "is to ensure that the game contains over 500 locations, and I am confident that we will reach that target by our deadline."

The gameplay is a mix of joystick skills and puzzle solving as you attempt to overcome the game's denizens and track down the Blood Stone. Simon adds: "There are leaps to make, moving platforms to overcome, puzzles to solve, keys to find, special items to uncover, magic scrolls to read, magic potions to drink and, most importantly, lots and lots of monsters to kill!"

"The finished game will contain every type of evil monster

imaginable including skeletons, zombies, hunchbacks, wizards, undead knights, vampires, wolves, spiders, rats, bats to name but a few. Moreover, the end of each level will be guarded by some of Universal's most fearsome monsters: Dracula, Frankenstein and his Bride, the Werewolf and the Mummy plus the Creature from the Black Lagoon."

LARGE AS LIFE

One of the most notable features is the graphics, which really do the characters justice. Not only are they well detailed but, almost as important, they're large. Simon explains: "In the initial demo the monsters were fairly similar in size to Super Mario - small, but with big heads - but Universal Pictures suggested that their monsters should be represented as what they really are: big and frightening. So it was back to the drawing-board, where we redesigned almost every creature to the size they are now - large! Obviously, the larger we made them, the more difficult they became to animate, but we worked really hard to make them move realistically and we're very pleased with the results."

Universal Monsters is shaping up to be a really great game, and you can find out more about it in the review next month.



Is Core Design really attempting to resurrect the isometric adventure? Tony Dillon takes a look. . .

DARKMERE



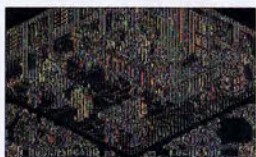
Highly detailed graphics bring...



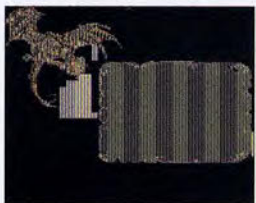
...isometric viewpoint graphic...



...adventures screaming and...



...kicking into the nineties!



OLD HAT?

Isometric adventures, such as *Cadaver*, have never enjoyed the level of success on 16-bit machines that they had on the Spectrum and C64. Core has provided one of the exceptions to that rule with *Heimdall*, and they're following it up with a game that they think will top even that.

For the last six months they've been beavering away at *Darkmere*, a game with more than a few twists up its sleeve. The story is much the same as any other fantasy adventure you care to mention. You are Ebryn, the son of an Elven King who was once banished from his own race for having the audacity to slay a dragon. 'Interfering with human destiny' was what his villagers called it. He left the village and found another, where he was well liked and was finally elected King. Because this new village was a haven of peace and tranquillity, all you could find to do was to practise your sword skills and eat very expensive food.

But then things went wrong. For some reason, the town had become a magnet for evil, and soon found itself reeling under an onslaught of violence and corruption.

The townfolk fled, leaving only you and the old King, who's now so advanced in years that he's no good in a fight. So naturally it falls to you to save the day.

TALKING POINT

To help you in your quest, your father lends you his dragon slaying sword, and a magical crystal, and all you

have to do is discover the secret of the curse. To do this, you have to talk to people, torture the less co-operative folk, attack others and ignore anyone who looks like they'll feed you a red herring.

The entire game will be joystick controlled and there's absolutely no need to scramble for the keyboard at any point because a clever menu system will handle all the conversation and interaction duties for you.

You begin the game with a limited vocabulary, and as you travel around and meet people, they will tell you of other happenings in the village, which will increase the list of topics you can discuss. Not everyone will have something to tell you: a lot of people will want nothing but a fight and as you can see from the screenshots on this page, there are some fairly nasty things to fight.

At the moment, the graphics look nothing short of stun-

ning. The use of dark shades and subtle toning adds real visual atmosphere, and the assortment of more adult images, such as the grotty pubs and the nymphs - naked women who sit in not too revealing poses - make the game look a lot more 'grown up' than previous efforts in this genre.

A lot of thought has gone into the sound for *Darkmere*. Rather than use the same old hack, slash and grunt samples, Core has come up with a completely new sound driver, namely the Direction Orientated Sound System - DOSS for short - which uses a clever volume system to alter the sounds in each room. The closer Ebryn is to a sound source, the louder it is. Similarly, it's louder if he is facing it than if he is facing away.

Darkmere looks set for a release in the next two months and who knows, it might put paid to the rumour that isometric adventures are old hat.



ATARIST REVIEW
ESSENTIAL BUY

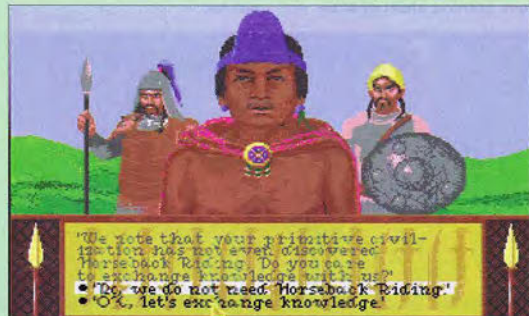


With a string of hits under his belt, Sid Meier returns with his biggest game yet. Mark Patterson checks out his potential classic...



No empire has succeeded in standing up to the rigours of time; indeed, all that remains of most of them are piles of rubble loosely termed 'ruins' for the tourists. Now you get the chance to succeed where Julius Caesar, Napoleon, Genghis Khan, Alexander the Great and many other historical leaders all failed, by building an empire that will out-live the history books.

The game starts in the year 4000BC where you, as leader of a small tribe, have to guide them through the trials of



Trading technology can be beneficial to both civilisations, although significant advances such as the discovery of gunpowder are best kept under wraps.

An on-line help system can be called on at any time, but it doesn't take long to work out what the various icons represent.



The higher the difficulty level the faster your opponents develop and the longer it takes your people to acquire technology.



CIVILIZ

civilisation by surviving the agricultural revolution then steering them to a position on the world stage. The first step is to find them a good place to settle and start building. Cities near rivers have always flourished, so it's best to head for one. At this stage, each turn represents 20 years, and as each move takes one turn it's best to settle as soon as possible or be left behind by your rivals.

MILITIA MEN

Initially the object is survival. Building a militia force to defend yourself and to attack other settlements is essential. Once that's done the next step is to acquire technology. This is done when your science adviser comes to you and asks what you want his team to go to work on. To begin with, basic skills such as pottery and bronze working have to be mastered, and it's gaining technology first that makes or breaks a civilisation. Acquiring the musket while your enemies still have bows, or discovering the automobile to make tanks while everyone else is pottering around on horseback will give you a huge advantage.

There are other ways of gaining technology. Firstly, if

a city is captured the invading force can steal one of the previous owner's advances. Alternatively, technology can be exchanged or extorted from other civilisations. It's amazing what people will give you when you place a large invasion force on their door step.

Developing a good system of government is essential. The despotic system that you use to rule your people by at the start of the game doesn't encourage them to be productive. The next step up the ladder is a monarchy, but this isn't much better. The last three are communism, the republic and democracy. The benefits of these are that the people produce more food, raw materials and, in the case of the republic and democracy, improved science which speeds up the discovery rate. You should aim for a democratic society, as this eliminates corruption which dogs cities further away from the centre of government.

WAR CRY

No matter how peaceful you intend to be, there will always be someone out to cause trouble. Early in the game armies consist of chariot and legion units which are

people stop paying taxes. Worse still, if there's a nuclear power station in the city, it runs the risk of melting-down because no-one can be bothered to look after it. To remedy the situation you can either give in to their demands and cut taxes, build an improvement like a cathedral, which automatically makes four unhappy people content, or take a person out of the work force and turn them into an entertainer. In this form they no longer con-

tribute to the running of the city, but every entertainer makes one member of the population happy. Additionally, entertainers can be turned into tax collectors to increase the money collected in the city, or scientists to boost the knowledge output.

Another key element in building a successful empire is the construction of wonders. These are grouped into three epochs – ancient, which include the Pyramids and Hanging Gardens of Babylon, the Middle Ages which feature Michelangelo's chapel and Darwin's voyage and the industrial age which incorporate the Apollo program and the Manhattan Project. There are 27 in total and each wonder has a two-fold benefit. It cheers up the people who inhabit the city it was built in, and it has a feature unique to it. Possessing the Colossus, for instance, increases



Different kinds of terrain contain different benefits, such as increased food and resource production.

EXTRA! THE LOVE KING'S LATEST POLL RESULTS. EXTRA!
The Washington Tribune
 January 1, 2400 BC 10 cents

American government changed to Republic!

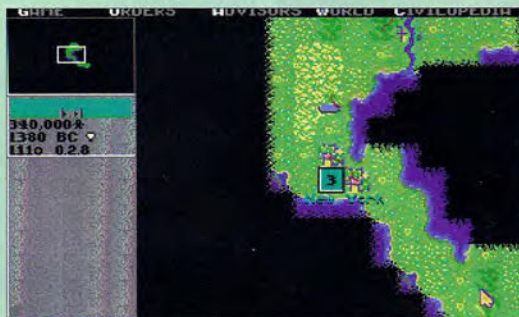
New Cabinet:

DEFENSE MINISTER	DOMESTIC ADVISOR	FOREIGN MINISTER	SCIENCE ADVISOR

One of the first things you should aim for is a decent system of government. A republic increases food and resource production without causing too many unhappy citizens during a campaign.



Rivers are always good places to build a city, mainly because they generate plenty of trade.



The coloured squares near the city represent land irrigated by settlers. This increases food production in that area.

THE GOOD, THE BAD AND THE MAD

You can choose to have anywhere between three and seven rival civilisations on the planet at any time. Here's a breakdown of some of the people you might face

HAMMURABI – BABYLONIAN

Apart from coming up with the first recognised code of laws, the Babylonians were also responsible for the famed Hanging Gardens and a Boney M song.

QUEEN ELIZABETH – ENGLISH

Good Queen Bess built an empire based on trade and getting the natives of conquered countries to co-operate with her armies. In the game she tries to expand her empire in the most aggressive way possible, although she can't start until her people have discovered the boat.

MONTEZUMA – AZTECS

Not to be out-done by the Egyptians, Montezuma also had a nice line in pyramids. Because of the fertile South American land his people usually flourish early on in the game, building large cities and making many technological breakthroughs. You can expect him to expand aggressively once his empire has run out of free space.

GENGHIS KAHN – MONGOLS

The only advance that Genghis is interested in is horse-back riding. Once his people have mastered it they spread like flu in a warm office. All their resources are ploughed into producing military units and settlers.

NAPOLEON – FRENCH

Like real life, Napoleon concentrates on establishing a large empire. If you're playing with five or more civilisations, his lot normally get trashed by the Germans or Romans around 2000 BC. If he survives he'll try to conquer existing cities rather than establish his own.

JULIUS CAESAR – ROMANS

Julius has big ideas about conquering Europe, although Rome's location on a peninsula severely limits his resources and his empire is normally sacked by the Germans about 1000 years too early. However, if Caesar does manage to move into central Europe early enough he becomes a formidable foe.

FREDERICK THE GREAT – GERMANS

For some reason the Germans never seem to create a big empire, although they do grab all the best spots by the swimming pool. Frederick's empire usually lasts until late in the game as he packs his cities full of soldiers and closes all the doors.

GANDHI – INDIANS

If left alone, Gandhi will build a nice little empire consisting of a few moderately well developed cities. He rarely attacks, but often fortifies units on irrigated land, which makes it unusable. It's worth letting him last until 1900AD, then claiming his cities for yourself.

Civil Disorder in Washington! Mayor flees in panic.



A city falls into civil disorder when the number of unhappy people exceeds happy ones. During disorder all production stops and your government could collapse.

Washington builds Colossus.



Wonders are status symbols for cities. Possessing the Colossus increases trade in all of your cities.

ABRAHAM LINCOLN – AMERICA

Surprisingly, democracy isn't high on Abe's list of developments, although the manual reckons it is. He'll normally introduce himself as King Lincoln. Despite this he's a good egg, and will only attack if you're standing in his way.

MAO TSE-TUNG – CHINA

Armed with a little book and plenty of land, Mao soon expands to create a formidable empire. He usually keeps himself to himself, but with the Mongols as next door neighbours, who can blame him?

STALIN – RUSSIANS

If you make peace with this guy, prepare to be attacked in the next few turns. He can't be trusted. If he survives the Mongols he'll push into western Europe.

RAMASSES II – EGYPTIANS

Left unchecked, Ramesses will form a large empire consisting of strong cities and large armies. If you protect the border between Asia and Africa you should be able to check his progress and leave him to fight for territory against the Zulus.

SHAKA – ZULUS

Based in the fertile south of Africa, Shaka soon establishes a large empire. He's not too hung-up on developing new technology, but he'll do his best to steal and extort advances from other civilisations.

ALEXANDER THE GREAT – GREEKS

If you come across Alex be prepared for war. He's out to create the largest empire on the planet, but if you can get to Athens early in the game it's possible to wipe out a large part of his force and capture the city.

trade in all the cities of your civilisation by one point, while having the Hoover Dam increases resource production by 50 per cent and cuts the risk of pollution. The effects of all the ancient wonders and most of the Middle Age ones can be cancelled by technological advances. For example, the Great Wall makes your enemies offer peace during negotiations, but this stops working after the advance of gunpowder and the cannon.

Apart from looking nice and generating plenty of cash, a large city with several wonders can also attract the attention of a rival civilisation's people. If this happens the population of one of their cities can revolt and declare itself part of your empire. While gaining a city without a fight is good, any that you acquire in this way are likely to be surrounded by enemy armies and towns. This means that there's a very good chance it will be invaded, so your enemy could gain a vital piece of technology from you.

GREENHOUSE EFFECT

Global warming is another hazard which faces every civilisation. Once the industrial revolution has occurred, factories start appearing and big cities with large car-owning populations produce loads of pollution.

The upshot of this is environmental damage which occurs randomly near pollution-generating cities. Settlers can clear up this damage, reducing the resources produced by that square. If too much pollution goes unchecked for a number of turns global warming can occur. When this happens the sea level rises and good grassland becomes plains, plains become deserts and deserts just keep growing. This leads to famine and a great reduction in the global population. Nuclear weapons can also contribute greatly to global warming; if one is detonated it can pollute up to six squares, and it only takes

"One of the best strategy games ever"

NAME: CIVILIZATION
COMPANY: MICROPROSE
CONTACT: 0666 504326

PRICE: £34.99
RELEASE DATE: OUT NOW
MIN MEMORY: 1MB

GRAPHICS ○○○○○○
SOUND ○○○○○○
VALUE FOR MONEY ○○○○○○
PLAYABILITY ○○○○○○

OVERALL **93%**

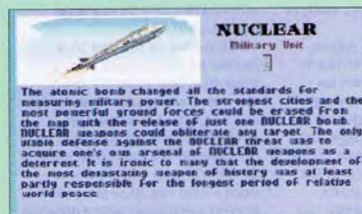
seven or more to trigger a temperature rise.

SPACE RACE

The game ends in one of three circumstances. The first is when your allotted time runs out, which is some time in the 21st century. It also ends if you wipe out all the rival civilisations or succeed in colonising another world. Your score is calculated from the amount of happy citizens under your control, the number of years of peace and the amount of wonders your empire has.

Civilization has been available on the PC for ages, and when it first arrived it received a rapturous welcome. It's nice to see the ST version matching it almost blow for blow. Although it's playable from floppies, the access time gets longer as the size of your empire increases. I found it best to switch the animations off to speed things up, which is a shame as this detracts from the atmosphere.

That aside, Sid Meier has done it again. *Civilization* is without a doubt one of the best strategy games ever to grace a computer.



The Civopedia is an on-line database outlining all the different types of units, civic improvements and terms used in the game.



Orders are issued on the plan-view screen. The scanner shows nearby aliens as stars.



The game switches to a 3D view for combat. Unfortunately the animation here is very simple.



The 10 missions culminate in a battle with the alien queen.

SPACE CRUSADE: THE VOYAGE BEYOND

One disk, dozens of aliens and plenty of destruction. Mark Patterson checks out *Space Crusade* part two...

Expansion disks have become increasingly popular in recent years as companies look for ways to extend the longevity of their products and make money from old titles. *Space Crusade: The Voyage Beyond* is one such disk. It bolts on to the original *Space Crusade* to provide it with 10 new, and very difficult, missions.

The basic idea is the same. You control a team of space marines who are out to destroy aliens from the chaos dimension. It's set some time after the first game, and starts where that finished. Soul Suckers, the toughest creatures in the first game, are the least of your worries in this one. They appear early on, but are soon followed by Space Ogres and other unfeasible creatures. There's also a nasty space bacteria floating around, which reduces armour, then transforms the marines into a liquid mass if they come into contact with it for too long.

There is some good news, however. Your original team from the first game can be loaded in and taken through the missions, which gives you a definite advantage on the early levels. As your commander increases in rank he can pick up new weapons and armour which makes his



job easier. Unfortunately the type of rank he needs to acquire these can only be gained if he's completed the missions in the first game.

IN THE BEGINNING

Space Crusade is licensed from Hasbro's board game of the same name. Along with their more traditional *Heroquest*, they tried to make RPGs more accessible. While the traditional pencil and graph paper *Dungeons And Dragons* fans found the game lacking in detail, it sold remarkably well, which prompted Gremlin to buy the licence.

Working on the theory that simplicity equals accessibility equals sales, *Space Crusade*'s programmers designed the control system to have the same level of ease which made the board game so attractive. All the commands are entered through a point-and-click system, which eliminates any fussy keyboard controls.

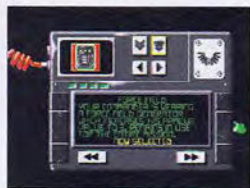
The game is played in a series of turns: you move your platoon man by man, then the computer moves its aliens. What you see on screen is limited to what can be viewed by your marines. So aliens can hide behind doors and lay in wait around corners without you knowing.

Up to three players can participate at any one time. Each of them controls a team of four marines plus one commander, and they have to decide whether they want to co-operate with the other players or shoot them and steal the glory.

Because of the difficulty of the new levels, it's advisable to take a hard party on the quests. You need to complete some of the original missions first, so that the characters build up experience points.

It is possible to finish the data disk using a novice party, but it's very difficult as the creatures you face are tougher, larger and better armed than anything encountered before.

If you enjoyed the original *Space Crusade*, then you can't afford to miss this. Personally, I just see this as more of the same. Even at £10, there are many good budget titles which will keep you occupied longer than this mini-sequel.



Your team can only carry a small amount of equipment, so it's important to distribute items evenly between them.

"Good for fans, but really just more of the same"

NAME: SPACE CRUSADE: THE VOYAGE BEYOND
COMPANY: GREMLIN
CONTACT: 0742 768581

PRICE: £9.99
RELEASE DATE: OUT NOW
MIN MEMORY: 0.5 MB

GRAPHICS ○○○○○○
SOUND ○○○○○○
VALUE FOR MONEY ○○○○○○
PLAYABILITY ○○○○○○

OVERALL **80%**

Cheap

PROS AND CONS

Money for old rope
 For fans of the game only

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This is a tactical overview of a tank battle. Enemy units only appear when one of your vehicles spots them.



Opt to drive a tank, which is dull, or take the gunner's position which is much more fun.

CAMPAIGN

Can a wargame also be a simulation?

Mark Patterson grabs his flak jacket and heads to the battlefield...



Wargames are becoming less and less common nowadays, with companies opting for simulations in preference to strategies. **Campaign** tries to combine both elements and a whole lot more besides.

The game spans the whole of World War II. Battles take place in Europe, North Africa and Russia, and you take command of Axis or Allied forces. Several scenarios are provided, including the D-Day landings and the conquest of Italy.

Depending on the size of the campaign that you select, you'll be put in charge of anything from 30 medium tanks to an invasion force consisting of 3,000 vehicles.

ORDER, ORDER

Issuing orders is simple. Clicking on a unit highlights it, then clicking on part of the map instructs it to either go there or bombard the area. If a ground unit comes within two kilometres of the enemy they automatically engage them. If you don't fancy putting too much effort in, each group can be set to computer control, where the ST works out where they should be going and when to avoid or enter combat.

Should you get bored with the hands-off job of field marshalling, you can get right down to the nitty-gritty and take command of a tank on the battlefield. Here you either drive it or control the gun and issue orders to the individual vehicles. It's best to leave the orders to the computer, as the average tank platoon consists of 40 vehicles, although only 16 can participate at any time.

TANKS A LOT

Driving a tank is dull, especially if it gets hit and has its speed reduced. Sitting at the controls of a 105mm gun is usually the best position. The drawback with big guns is that they take an age to load, whereas the smaller guns reload quickly, so trigger-

Mixes strategy and simulation
Decent scenario editor

PROS AND CONS

Simulation mode is slow
Not detailed enough

happy types should stick to small armoured vehicles rather than great lumbering tanks. As tanks are destroyed you have to bring new ones in from the reserves. If the battle goes badly you might find yourself outfitted with a couple of armoured cars and several dozen burning wrecks. After a battle the combatants usually require eight hours' rest before they're fit to fight again, although they can be ordered to a new location.

There are over 150 different types of vehicle, ranging from armoured cars to 22-ton tanks. One of the keys to a successful campaign is using them correctly. Artillery, for instance, should be kept at the back of the field, fast, light vehicles are good for reconnaissance, while heavy and medium tanks are best for crashing through enemy lines. Some units include jeeps, which seem a bit pointless in this game as they're slowed down by their



Above: Take control of a friendly tank then guide it towards the enemy.

Right: Units can be given orders manually, or left in the hands of the ST. Keeping track of all your vehicles is difficult on some of the larger scenarios, so it pays to use the automatic control feature.





Issue orders to your units on the main map screen. Enemy units are hidden until they're spotted by one of your tanks or aircraft.



Ground units are broken up into heavy armour, artillery and mechanised infantry units.



A description of available vehicles can be called up at any time during the game.



Click on an airbase for an overview of the aircraft stationed there. Bombers are perfect for bombarding dug-in units, but they're vulnerable without fighter support.



The scenario editor allows you to alter the parameters of the pre-built missions.



If a battle is going badly you can always alter the odds by giving yourself a few extra tanks.

heavily armoured companions and can do nothing more than run in a battle.

Unlike many wargames, you don't actually get reinforcements; instead you have to order factories to produce replacement vehicles.

It takes several days for a factory to fill its quota, and should you decide to change the type of unit midway through production the factory has to spend five days modifying their equipment to meet your new orders.

Aircraft come in handy for a number of reasons. Firstly, you can send them ahead of your troops to hunt out enemy positions. Fighters can provide aircover during battles, and bombers can be summoned to pummel enemy positions before your troops strike. The enemy also have aircraft at their disposal, so it's important to keep fighters on standby.

STRIKE OUT

The early scenarios are very simple, placing you in command of one squad going up

against a squad commanded by the ST. Here the object is simply to wipe the opposing army out or beat them until they surrender.

As you progress to the more advanced campaigns and gain command of more troops and machines, other factors also need to be taken into consideration. Replacement vehicles have to be built in captured factories and air support and artillery have to be brought into play. The enemy are also busy building new equipment and positioning forces, so it's worth stirring things up with airstrikes against railways and convoys to disrupt supplies to the front lines.

The graphics on the tank simulation are very, very slow, often updating at one frame per second. Even on the minimum detail setting it's still painfully sluggish. This also affects the keyboard response time, so you have to hold down a key for a few seconds for the command to be registered, which makes it impossible to react in some

situations. Another problem with the simulation mode is that it takes ages to finish a battle. If you leave your forces in the computer's hands it does a quick bit of number crunching and the battle's over in seconds, although I think it cheats as I lost loads of skirmishes against weaker computer squads.

On the wargame side, *Campaign* just doesn't go into enough depth. There may be a great variety of motorised units, but there aren't any troops. As far as I was aware, soldiers made up the greatest part of the allied forces during the second world war. Only being able to issue one command at a time makes the large campaigns very confusing. An option that would allow you to split units would have come in handy, as would a feature to enter multiple orders.

BATTLING ON

What this game lacks is presentation. While there's a map editor, there's precious little else. As soon as you clear the copy protection you're dumped straight into the battle field facing off against German fortifications. There are 20 preset scenarios on the disk, although most of them are merely training missions which are made up from one or two small skirmishes. The manual isn't much cop either. Although it's a decent size and tells you about the game's various elements, it doesn't actually

tell you how to access most of them. It took me the best part of an afternoon to work out what everything did and how to enter the battle mode.

All in all this is a good concept which is deeply flawed. The packaging is good, coming with two books, two reproduction World War II postcards and two posters; in fact, the single disk containing the game is apt to get lost amongst all these extras. If you think you can handle a dose of heavy-duty strategy and don't mind giving the simulation side a miss, this should keep you occupied for a while.

"Good idea let down by poor implementation"

NAME: CAMPAIGN
COMPANY: EMPIRE
CONTACT: 0268 541126

PRICE: £34.99
RELEASE DATE: OUT NOW
MIN MEMORY: 0.5 MB

GRAPHICS: ○○○○○○
SOUND: ○○○○○○
VALUE FOR MONEY: ○○○○○○
PLAYABILITY: ○○○○○○

OVERALL **73%**

COMBAT DESIGN

Although some of the preset games are very complex and will take a long time to complete, there's also a scenario editor which lets you create your own missions.

You start off with just a blank map and a bank of icons representing villages, rivers, roads bridges and mine-fields. The next step is to create the friendly and enemy units by determining what vehicles they contain and how many of each they have.

The editor can be brought into play during a preset mission, so if the battle is going badly you can give yourself an extra column of tanks and take a few away from your enemy.

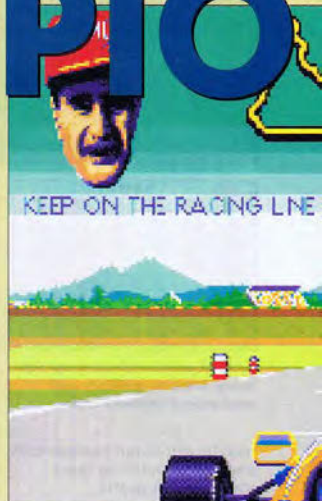


Has Gremlin tried its luck once too often, or will Nigel Mansell come through with yet another major win? Tony Dillon tucks his hair into his helmet

NIGEL MANSSELL CHAMPION



Overtaking isn't as easy as it looks. The car ahead could pull out in front of you at any moment, just when you are taking a really bad line through a corner.



Gremlin has made a fine name for itself with its driving games. It captured the market with *Super Cars*, slaughtered the motorcycle arena with *Team Suzuki*, and who can mention any of the *Lotus* games without wanting to rush home and load one up? A problem is becoming apparent, however. It's just a whisper, but it's one that's been heard for both *Lotus 2* and *3*. It goes somewhere along the lines of "What, another one?", and that same whisper is being heard all over again.

Here we have the officially endorsed Nigel Mansell computer game. Despite Mansell's recent career difficulties, Gremlin firmly believes that his name will shift the product in droves.

The basis of the game is far from unique: it's yet another Formula One racing simulation. The player competes in a world championship alongside the best in the business, aiming to come out on top. That isn't all there is to it, but it's certainly the basic idea. You could be forgiven for instantly thinking of Microprose's *Formula One Grand Prix*, but this game has a few obvious differences. For a start it isn't a true driving simulation. Grand Prix games have reached their peak, so

there seems little point in trying to improve the format until faster processors become the norm. On the other hand, it isn't a straight arcade racer either. Would there be any logic in releasing an arcade-based game in a field that was over-saturated ages ago? This game has been pitched between the two, aiming to provide sufficient action to satisfy the *Lotus* freaks, while adding enough realism to guarantee solid entertainment for the Geoff Crammond fanatics.

WONDERS

Upon loading you are given a quick menu for all the wonders hidden within the game. The core of the program is the racing, and you can choose to

practise on any of the 16 circuits, race on any of the same, or take part in the entire championship, where you race on every track in turn, collecting points for your finishing place in each. The player with the most points at the end of the season wins a picture of a cup. Just in case you find it all a little too difficult, Gremlin has included two coaching segments, namely the driving school and 'Improve With Mansell'. The former is for the absolute beginner and provides instruction on taking corners and handling the car.

The world map displays the location of all 16 courses, while a small map at the side shows the layout of each course.

INSIDE INFO

Nigel Mansell started his racing career at the ripe old age of 10, in a karting race, which he lost due to the engine falling off the kart. Could this be indicative of what was to come? He moved on to greater things with Formula Ford (1976), won that championship, joined Lotus' Formula Three team, clocked up some impressive times for them, and then joined the Williams team and started his Formula One career. He's had his setbacks

(the infamous 'wheel nut incident'), suffered various broken bones and injuries, and yet still managed to set a record in last year's season, becoming the first driver ever to win nine Grand Prix races in one season.



'S WORLD CHAMPIONSHIP



The main menu, and a perfect example of how well presented this game is.

'Improve With Mansell' lets you learn from the star himself, driving round your chosen course.



The start of the race, and the worst possible grid position.



In the driving school you are given a low-powered car and a generous time to beat. After that, you can take on the world!



You have to qualify in order to get a decent starting position. Thankfully all the other cars have terrible drivers, so it isn't too hard to get pole position.

After selecting the course that you wish to be taught on, you are given a car with a fixed top speed, which is generally 50 per cent of what the car is actually capable of. Then you are given a lap time to beat. Driving at a reduced speed lets you see how the car reacts to the various corners and gradients, and if you beat the designated time, your car is given a little more kick and the lap time is reduced. By the end of each session you'll be driving like a professional and should have no problem taking corners in excess of 300 kilometres per hour.

DRIVING LESSONS

'Improve With Mansell' is a lesson from the great man himself. In this section, Mansell drives around the track, showing you the best racing line through corners, along with hints on which gears you should be in and when. It's all academic though - you'll probably forget everything he tells you once you climb into the cockpit yourself.

Up to this point the presentation is excellent. On loading you are presented with a huge rotating globe, and that same orb is used to display the locations of each of the tracks. The whole look is clean and professional, with minimal clutter and a sensi-

bly organised, easy to understand menu system.

The first real problem that you encounter once the game has started is your incredibly low view on the road. There can't be any more than 50 pixels between the top of the steering wheel and the horizon. Does Mansell really drive this low down? Can he really not see a corner until it's upon him? Mind you, he probably finds it a lot easier because there are many more roadside objects.

IN THE HOTSEAT

As with the menu screens, the presentation is clear and instant. Situated at the bottom of the screen is your cockpit - it's completely useless, although it does have a nice animation of a mysterious pair of hands turning the steering wheel for you, and at the top you have your lap counter, current position, lap time, speedometer, tyre indicator, rev counter and gear indicator. In the middle are masses of empty sky and a little bit of road.

Driving the car is as easy as falling off a log, provided you stick initially with the predefined settings (automatic gears, hard tyres and a middle airfoil setting). Pressing fire accelerates, pulling back brakes and steering is too obvious to mention. All you need to concentrate on is

WHEELY GOOD!

Bored with playing with the same old joystick? Fancy trying something a little unusual? Then why not get your hands on a Free Wheel? This is a unique joystick that looks and behaves exactly like a steering wheel, to add extra realism to your favourite driving game. Nigel Mansell's World Championship fully supports this novel gimmick, and even strongly recommends that you use it.



Top: Before you start, you can 'tune' your car. Here you can change tyres and set the airfoils at three different heights. If you're lucky they might just let you change the colour.

Top right: It isn't all sunshine and smiles. Here, in France, it rarely stops raining although this is only a light shower.

staying on the road, which is not an easy task.

CAN'T SEE A THING

The problem is that your view on the road is minimal, making it extremely difficult to anticipate corners. One minute you're cruising along at 320 kilometres per hour, the next you've hit a pole as a sharp bend has come out of nowhere. There is a map at the top of the screen, which shows your current position, but try following that and you'll spend more time off the road than on it.

The controls are very sensitive indeed. If the graphic of the turning steering wheel is to be believed, then you can only turn hard left or hard right. This is fine for attacking really sharp bends on a bad racing line, but it's not much good when trying to negotiate less sharp turns at

high speeds. The tracks are narrow, and you can cross from one side to another in under a second, so just straightening yourself coming out of a bend is hard work. On top of all this, you'll have to deal with the other cars on the track.

You do have an advantage, though - your souped-up Williams Renault can travel at least 50 kph faster than any other car that it goes up against, which means you won't have too much trouble taking the lead when qualifying, and therefore won't have much overtaking to do.

MONUMENTAL TASK

Overtaking is a monumental task by comparison with cornering. All the other cars seem to be around 15 foot wide, which doesn't make things easy, and judging by the way they swerve along straights, the drivers have had one too many in the private bar. What they are probably trying to do is to block your overtaking moves, by warping all over the track and then braking hard.

Surprisingly, collisions don't damage your car at all that. You'll lose a fair bit of speed, of course, but the



CAR ALTERATIONS

To try and attract the more simulation-minded gamers among us, *Nigel Mansell* allows you to customise your car for each race, letting you change tyres (choose from three different types, hard for longer races, soft for better cornering and wet for when it rains) and change your airfoil settings between three presets, altering the car's speed and grip. Admittedly, that isn't a lot for those of us who are used to wind tunnels and exact gear ratios, but it's better than nothing.

Left: Prior to each race, you are given a quick run-down on what to expect, including a very sketchy weather report.

Clear menu system.
Excellent presentation

PROS AND CONS

Abysmal graphics
Over-responsive controls
Compete lack of realism

"A poor attempt at a big name licence. A surprise flop for Gremlin"

NAME: NIGEL MANSSELL'S
WORLD CHAMPIONSHIP
COMPANY: GREMLIN
CONTACT: 0742 753423

PRICE: £25 99
RELEASE DATE: OUT NOW
MIN MEMORY: 1 MB

GRAPHICS ★★★★★
SOUND ★★★★★
VALUE FOR MONEY ★★★★★
PLAYABILITY ★★★★★

OVERALL **61%**

worst that can happen is tyre damage. At the top of the screen are four tyres which gradually change colour as you collide with other cars and roadside objects alike, a feature that is strangely reminiscent of the C64 classic, *Pitstop 2*. If you take too much damage the tyres will blow. Thankfully, there is a set of pits where you can change tyres, but this uses up valuable time.

Visually, the game is disappointing. It's not so much the sleek Formula One beast that you'd expect to see, but more a sort of battered and rusty 2CV. True, the track does pop along at a cracking pace, but its actual movement is far too jerky to be convincing. The other cars are seriously disproportioned and only increase in size about five times between the farthest and the closest perspectives, making the whole thing even less convincing.

Racing games are ever-popular, and it's perhaps surprising that so many have been so successful. Unfortunately, *Nigel Mansell's World Championship* doesn't match up. It looks like, this time, Gremlin won't be taking the victory lap this time.

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STREET FIGHTER

No arcade machine has ever arrived on the scene and broken as many records as Capcom's *Streetfighter 2*. Garth Sumpter fights his way through US Gold's epic beat-'em-up...



It's been said before that some of the best games have the simplest plots. If this is the case, then

Streetfighter II is over-qualified for its entry in the gaming history books. The object of the game is straightforward: travel the world, see other cultures and meet the best fighter that each country has to offer before attempting to beat them completely senseless, thus becoming the greatest street fighter on Earth.

Before you begin your quest for personal glory, you need to go through the mundane routine of setting the options. You can set the controls for either joystick, keyboard or a mixture of both, and a head-to-head mode lets you play against a pal, which most people find to be the best version of the game.

Every fight has a time limit which can be switched off. When it's on, if matches are not resolved when the counter reaches zero, then the person who has inflicted the most damage takes the round. You can even handicap an opponent by reducing the amount of damage they can inflict, allowing people of varying ability to have evenly matched games.

If you choose tournament play you're put up against the computer to fight each of the 11 other fighters in turn. After deciding which of the eight preliminary fighters you want to control, it's straight to the action. That's once you've swapped the four game disks around to load each character's data and a colourful backdrop of a fighter's home country.

LAAADIEES AND GENTLEMEN!!

Finally, the fight is on. Street fighting is not a gentleman's sport and characters punch, kick, throw, gouge, burn, butt and even bite their opposite number in order to win. Each contender has an energy bar at the top of the screen which depletes each time they're

hit. If a fighter's energy reaches zero, they keel over and their victor gains a point. With each contest consisting of only three bouts, the first person to win two goes forward to the next match. When the first seven opponents are beaten, you go on to face the four Grandmasters. These guys make everyone who came before them look like a bunch of amateurs, and the real test is beating M Bison, the deadliest fighter in the game.

The control system seems straightforward enough on the surface, with just eight basic positions available. However, complex, finger-blistering combinations of joystick and fire button movements which can be supplemented by the keyboard, are often required to execute some of the more complex attacks.

YOUR MOVE

Each contestant has their own particular strengths and weaknesses. Some are fast and agile but lack the strength and stamina of some of the bigger contenders and all have a couple of surprises up their sleeves in the shape of special attacks. These consist of moves unique to each character which allow them to attack at a distance or cause huge amounts of damage in a relatively short space of time. Most of these special

moves require complicated multiple joystick movements to trigger them, and even then it's easy to mess them up at a crucial point and pay the price as your opponent makes the most of your mistake.

AT THE END OF THE DAY

Streetfighter is a phenomenon. Its success on other formats is a testament to the ability of its programmers. Unfortunately for ST owners, the game makes the best use of the hardware available in arcade machines and game-specific consoles, where the game's quality is unquestionable. Whilst the ST version is commendable, the game is let down for all the reasons that make it so popular on other formats. The graphics on the ST version are excellent - if you have a colour monitor - but much of the detail is lost when playing through a TV. The music is rather catchy, but once you begin pumping wildly at your fire button, the sound effects break it up and the option to switch the music off looks very attractive. This is redeemed somewhat by the excellent sampled sound effects which add much to the feel of the game.

The most dramatic short-coming is the scrolling. STs weren't designed to move big sprites across a scrolling background and so as you

INSIDE INFO

Streetfighter started out life in 1991 as just another Capcom arcade machine, but with its great looks, idiosyncratic controls and excellent music, it has become one of the most popular coin-ops ever. Not since the days of *Space Invaders*, *Defender* and more recently *Gauntlet*, has the public taken a game to heart so easily and so completely. In fact, the response to *Streetfighter* is so immense that a

Japanese film company is currently casting a film based upon the game characters. Such is the popularity of the game that while there's no official sequel, hackers have already 'doctored' some versions to include weapons as in *Streetfighter Turbo*, and in one called *Streetfighter Champion of Champions*, double fireballs and superfast action.



Here's one of the Grand Masters that you'll have to face if you vanquish the first seven opponents.

FIGHTER II

You might think that a pure beat-'em-up might suffer from a lack of variety, but each fighter has their very own character and moves...



RYU

A veteran of the original Streetfighter game and a pure martial artist, trained by Master Sheng Long. Devoted to his art, he has no home, no family, no friends and gets his kicks from testing the skills he has spent his life learning against other fighters.

Special moves: Fireball, Dragon Punch and Hurricane



ZANGIEF

This huge Russian is the slowest of all the contestants, but his outrageous strength allows him to take punishment and recover quickly. He specialises in energy-sapping throws and his devastating spinning piledriver move.

Special Moves: Spinning



EDMOND HONDA

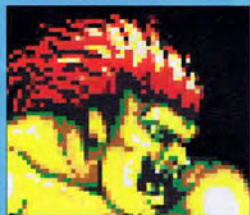
A 100 per cent pure Sumo wrestler, he's a 'Yokozuna' or Grand Champion and uses Sumo techniques in combat. His strength, incredible speed and bulk make him an awesome adversary.

Special moves: Hundred hand slap, Sumo head butt.



CHUN LI

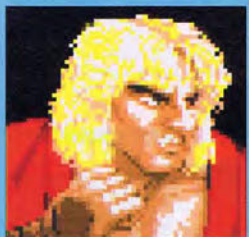
Not fighting for personal glory, Chun Li believes that one of the four Grandmasters was responsible for her father's death so she must defeat all other fighters to confront the murderer. The only woman in the tournament, her real strength lies in her acrobatic ability, speed and the strength of her kicks.



BLANKA

Appeared out of a Brazilian jungle one day and challenged anyone to fight him. Fast and agile, his animalistic attacks can cause heavy damage to unwary opponents.

Special moves: Electricity, Rolling attack.



KEN

Sharing the same mentor as Ryu, this man is a natural fighter and a born show-off. Although arrogant and egocentric, his moves are fast, colourful and virtually identical to Ryu's. Like Ryu, he is a force to be reckoned with.

Special moves: Fireball, Dragon Punch and Hurricane Kick.



DHALSIM

Through deep meditation and yoga, Dhalsim has managed to control his limbs to the extent that he can stretch them to several times their length. This, coupled with his amazing patience, means that Dhalsim's greatest ability lies in keeping his opponents at a distance and using his greater reach to



GUILE

This airforce major has a variety of blistering moves including mid-air throws and a devastating somersault kick. His versatile nature makes him a good choice for beginners.

Special moves: Sonic Boom, Flash Kick.

ON THE STREET

SPECIAL MOVES

The real joy of Streetfighter lies in the variety of special moves.

Here are a few of the best...



Rapid pounding on the fire button releases Blanka's electrical charge. A shockingly effective defence.



The spinning attacks should be used sparingly as they leave Dhalsim too close to his opponent.



Ryu and Ken share similar abilities and the Fireball is just one that Chun Li is about find out about.



With no etiquette in the Brazilian jungle, Blanka's face bite would get you thrown out of any restaurant.



Guile's Flash Kick is a backflip which creates an almost impenetrable wall of energy.



The Hurricane Kick will stun you if you Ken or Ryu manage to clobber you with all three rotations.



Fast and deadly, Chun Li's lightning kick can easily wear down even the biggest of her adversaries.



A whip of his arms and Guile creates a sonic boom which flattens anyone it hits.



Shouting "SHO-RYU-KEN" unleashes the power of the Dragon Punch. Don't try to take this on the chin!



The whirlwind kick has all the deadliness of a pair of helicopter blades wrapped in a pair of stockings.



This is the man to give you a real slapping. Lightning fast and very effective if he corners someone.



It looks daft but Zangief's Spinning Clothesline hurts others and defends him from fireballs.



There's nothing mystic about Dhalsim's long range Yoga Fire. Touch it when you're not defending and you burn!



Looking like a large zepelin, Honda puts everything he's got into his head butt.



Possibly the most brutal move in the whole game, the Spinning Piledriver is a real headache.

leap and spring from left to right, the screen scrolls with the smoothness and fluidity of a car running on lumpy petrol. This certainly detracts from what is a conversion of the best beat-'em-up of all time. It's a crying shame because all the other elements of a hit game are here - the graphics have lost their variety of colour yet are still pleasing to the eye. Sound is good with a liberal smattering of sampled speech and atmospheric effects. Even the original music has been employed to add to the realism of its arcade ancestor. Most importantly, all the special moves that are such a hit on the coin-op are there. It's purely the jerky playability of the game that detracts from it and will certainly mean that any fans of the coin-op might be seriously disappointed with the end result. **Streetfighter II** will be the champion on most other formats. The ST version, however, will be known as the also ran.

Large, chunky graphics
Faithful reproduction of the arcade

PROS AND CONS

Jerky animation
Difficult control at first
Disk swapping

"An excellent conversion that's poorly suited to the ST"

NAME: STREETFIGHTER II
COMPANY: US.GOLD
CONTACT: 021 356 3388

PRICE: £27.99
RELEASE DATE: OUT NOW
MIN MEMORY: 1 MB

GRAPHICS ○○○○○○
SOUND ○○○○○○
VALUE FOR MONEY ○○○○○○
PLAYABILITY ○○○○○○

OVERALL **79%**

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192 CPS 136 COLUMN

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- Parallel Interface
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- Epson, IBM, NEC P6 & Citra Emulation
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Dirk the Daring appears on our screens once more, but will this one be any better than the last two? Tony Dillon blocks and parries

The previous two *Dragon's Lair* games looked brilliant. No-one can say otherwise. Beautifully adapted from the laserdisc originals, they featured some of the most stunning visuals ever seen on the ST. However, they were about as playable as a brick. The control system, which involved selecting moves way in advance and then watching the action, left them about as interactive as a video recording. Strangely enough, the extreme pricing wasn't enough to put people off, nor were the countless poor reviews. People still



DRAGON'S LAIR 3

Just like Alice, Dirk must go through the looking glass if he is to succeed in his mission.

bought them in droves and were duly disappointed.

The first game was touch-and-go. You were given little indication of where to move, so most people gave up until the cheats were published. The second went some way towards rectifying that, adding a small indicator on the easy levels which showed you which way to move the joystick, but only let you play a few scenes in this mode. A minor improvement, but one that made people look forward to the third incarnation. Has Readysoft got it right this time?

FRUSTRATING

Not on your life. Gone is the indicator box and back are the frustrated attempts and re-attempts on the same scene as you again find your-



One of the more logical parts of the game. The witch shoots a stream of fire at you, and pressing up makes Dirk jump.

Has Readysoft made a playable game? Tony Dillon rubs his hands with anticipation

Guy Spy And The Crystals Of Armageddon, to give it its full name, is possibly the most ambitious thing that Readysoft has embarked on to date, and let's face it, most of their software is ambitious enough anyway. Who else would try to convert the laser disc wonder *Dragon's Lair* onto a 16-bit machine? But then, we all know about the problems that that particular game suffered from.

LASER DISC

If you don't, here's what happens. While watching each animated scene, you had to move the main character around to stop him from being killed or to get him to a certain door or whatever. The problem was the controls were the worst ever, rendering some scenes impossibly easy, while others just remained impossible. Rather than having fluid control,



GUY SPY

each scene required a sequence of moves to be made at the appropriate points of the animation. You weren't told what these moves were, or when to make them, so it was all trial and error.

Guy Spy is Readysoft's attempt to rectify that.

This time you do have fluid control, but with the same stunning cartoon-quality graphics that grace all of Readysoft's games. The game has been designed so that the main character reacts like any sprite-based one would.

GLOBAL EXPLOITS

The hero, Guy Spy, is one of America's leading espionage agents, and his mission in this game is to stop the escape of one of the leading Nazis, Von Max. It's a chase that takes you from Switzerland to Egypt to Peru and across the African deserts, finally to confront Von Max in his jungle hideout. All the way through the game, Von Max's goons appear to halt or at least impede your progress. All you need to do



The game starts in Berlin's railway. Sadly, Guy just wasn't quick enough on the draw.

self in trial and error mode. Like the others, the game comes on a whopping seven disks, each holding about 25 seconds of game. Work that out and you've got less than three minutes of animation, not including disk loading time. Is this really worth it?

The story is more of the same. Dirk The Daring has rescued his beloved Daphne, only to have her kidnapped again, this time by the wicked witch Mordread. This time he travels through Wonderland (of *Alice* fame) and then into the world of a giant-sized Beethoven and his cat, who aren't pleased to see him.



Mordread escapes thanks to her handy time machine, but luckily you manage to grab a hold.

is survive long enough to give VonMax a good hiding.

On loading you are given the standard Readysoft menu (three difficulty levels and sound selection), although unusually for Readysoft, selecting an easier level doesn't mean that you don't play all the scenes. Click past that, and it's into the first scene - a shootout in Berlin's main railway station.

DISAPPOINTING

It's at this point that you notice two important aspects about the game. Firstly, the graphics are nowhere near as good as you thought they were going to be, with the animation being extremely poor by comparison with the *Dragon's Lair* titles. Secondly,

STUNNING

The graphics, as always, are astounding. The game is remarkable to watch, if not to play, but then it does come from Don Bluth studios, the team who brought you *All Dogs Go To Heaven*. There are no levels as such, just a run through the cartoon broken down into 27 scenes.

The sound, too, is incredible. Packed to the brim with samples, the atmosphere created is perfect.

The manual says you should look where there is for Dirk to move out of danger, and then push the joystick in the corresponding direction. What it

doesn't tell you is that you have half a second to see where to leap to, and then a further quarter of a second to move the joystick. Unlike the previous titles, where you could move the joystick way in advance and then watch the results, *Dragon's Lair 3* requires precision timing - not an easy thing to do when you have no idea where you're supposed to be going.

Dragon's Lair 3 is just as bad as the other two. Breathtaking graphics and magnificent sound make the game the perfect demonstration of what the ST can do. As a game though? Forget it.

Sumptuous graphics
Perfect sound

PROS AND CONS

Desperately unplayable
Far too short
Very frustrating

the controls are atrocious. They're so slow and sticky, it's hard to say whether they are any improvement at all.

Back to the first scene. You are standing in the foreground, looking out across the tracks to the far platform, where Von Max's henchmen are waiting. As they jerk slowly onto the screen, you have to step as slowly as you can to avoid their bullets while trying to shoot them with a gun that just won't aim where you want it to. Hitting them results in a satisfying scream of agony as they slump to the ground, but you have no instantly recognisable way of telling when they are hitting you. Sure, you have an energy meter that tells you how badly you

have been hit, but unless you want to keep watching that, you can't tell when Guy's been shot.

HORRIBLE

The controls really are that bad. Yes, Guy does move where you want him to, in more or less the same minute that you move the joystick, but the reaction time is so slow it renders the game frustrating. Thankfully the game is very, very slow anyway, so you have plenty of time to make your moves, but is that really any way to address the problem? *Guy Spy* doesn't even work as a nice demo of ST graphics. Hopefully Readysoft can learn from their mistakes and produce a playable cartoon-style game.

"Looks good, plays terrible, nothing's changed"

NAME: DRAGONS LAIR
COMPANY: READYSOFT
CONTACT: 0268 541126

PRICE: £34.99
RELEASE DATE: OUT NOW
MIN MEMORY: N/A

GRAPHICS ○○○○○○
SOUND ○○○○○○
VALUE FOR MONEY ○○○○○○
PLAYABILITY ○○○○○○

OVERALL **50%**

"Slow and unplayable. One of the worst Readysoft games so far"

NAME: GUY SPY
COMPANY: READYSOFT
CONTACT: 0268 541126

PRICE: £29.99
RELEASE DATE: OUT NOW
MIN MEMORY: 0.5MB

GRAPHICS ○○○○○○
SOUND ○○○○○○
VALUE FOR MONEY ○○○○○○
PLAYABILITY ○○○○○○

OVERALL **41%**



She's a whole lotta Rosie, and she's out to give you a good slapping. Get past her, and you're free, but with a woman that size, it won't be easy.

Attractive link animations
Fast disk loading

PROS AND CONS

Terrible Graphics
Terrible Sound
Terrible Controls



ATARI ST
ESSENTIAL BUY



Far left: The hints section will tell you about the monsters you'll meet in the dungeon, but not how to kill them.

Left: Chaos Strikes Back places you in the thick of things right from the start!

DUNGEON MASTER/ CHAOS STRIKES BACK



Our very own wandering monster, Tony Kaye, goes for a rumble in the dungeon with a pair of ST classics...



When building your party, choose a mix of fighters and magic users.



The utilities disk gives you the option to edit your characters as well as gain hints.



The first monster you encounter is fairly easy to kill, but later...



...when they come mob-handed, they're not so easy!

Despite being five years old, FTL's classic RPG **Dungeon Master** has been given a new lease of life, alongside its follow-up, **Chaos Strikes Back**.

When **Dungeon Master** first appeared in 1987, it was hailed as the best RPG ever. It broke the mould for this type of game, which was previously limited mainly to text adventures. It gave the player the freedom to explore the game-world at their own pace, as well as solve puzzles and do battle with all sorts of 'denizens of the underworld'.

GAMEPLAY

The object of the game is to find and destroy Lord Chaos, who inhabits unlucky level 13 of a rank dungeon. In addition to the hack 'n' slay element, puzzles have to be solved and maps made to locate the exit to each level.

Before all of that you have to assemble a party. The first room you enter is a rogues' gallery of heroes and heroines, with their pictures hanging on every wall. Clicking on one calls up a screen showing that character's strength, health and mana, the latter being the power to cast spells. When you've chosen your party it's time to enter the dungeon. The first monsters that you meet are Screechers. These are slow and easy to kill. It's a good idea to practise sword-play on them as the more crea-

tures you kill the more experienced you become.

As you work your way through, the enemies become harder to kill and the puzzles more complex.

CHAOS RETURNS

Chaos Strikes Back, was not quite the success that **Dungeon Master** was. It takes over where the first game left off, and the biggest difference between the two is the difficulty level. **Chaos** boasts tougher monsters and deadlier traps, so it's fortunate that you can use your characters from the first game to give yourself a chance.

It's not wise to go straight in to **Chaos** without playing **Dungeon Master** first. You won't last long on the first level without some seasoned characters. Apart from the puzzle solving and combat, characters need to be fed, rested and equipped. Fighters, who are always first into combat, naturally pick up

most of the wounds, and it's down to the magic users to weave a few spells to patch them up again.

Neither of these games show signs of aging. Anyone who has had an ST for more than a couple of years probably has one of these games in their collection. If you don't, and like a challenge, this pack is a must.

"Good sound, graphics and gameplay make this a quality package"

NAME: DUNGEON MASTER/CHAOS STRIKES BACK
COMPANY: PSYGNOSIS
CONTACT: 051 709 5755

PRICE: £29.99
RELEASE DATE: OUT NOW
MIN MEMORY: 0.5 MB

GRAPHICS: ○○○○○
SOUND: ○○○○
VALUE FOR MONEY: ○○○○○
PLAYABILITY: ○○○○○

OVERALL: 91%

Challenging and addictive
Good sound and graphics

PROS AND CONS

Dungeon Master only uses one disk drive

ATARI ST
ESSENTIAL BUY



Blow up the exit before the nasties are destroyed and it becomes a monster generator.

Short animated scenes introduce the game.



Collecting power-ups increases the size of the explosions and lets you drop several bombs at once.



The exit is beneath a wall; when you've killed the nasties you still have to plant some bombs.



The multi-player game – blow up the other participants, avoid monsters and collect bonuses.



The skulls appear in the multi-player game and have a random effect when collected.

DYNA BLASTER

Now the ST has its answer to Mario and Sonic – the Dyna Blasters!
Wayne 'Danger UXB' Legg investigates...



Dyna Blaster puts a cute face on carnage, with the most explosive action yet seen on the ST. Armed with an unlimited supply of bombs you simply have to blow up everything on a level to progress.

A-MAZE-ING

Dyna Blaster can be played with one to five players, and Ubi Soft has thoughtfully included an adaptor which gives you two extra joystick ports. The aim of a one-player game is to simply complete 65 various screens. You start off outside a castle, stuck in the corner of the first maze. Unfortunately the clots who designed the mazes made it impossible to complete them, so the only way to reach the exit is to blow up the walls.

Also trapped with you in this maze are various monsters which are released when you destroy a wall. In turn these have to be destroyed with yet more bombs. The trick is not to get caught in your own explosions; this is made more difficult when you collect power-ups which increase the size of the explosions.

SKULLDUGGERY

As you progress through the screens you will find various icons that will either hinder or help you. While some increase your speed and others allow you to drop bombs faster, the icons to watch out



ROUND 1

for are those shaped like skulls. These have a random effect and can bring about your destruction in seconds.

Once you've killed every monster on your level, a blue door opens up which leads to the next stage. A word of warning here, if you catch an unopened door in a blast before you've killed off all of the monsters, it turns into a monster generator, sending out a vast number of nasties.

FIVE-ALIVE

Participating in a five-player game of *Dyna Blaster* is one of the most entertaining gaming experiences you are ever likely to have. The aim is simply to win five games in a row by blowing the other players up!

Ubi Soft has come up with a sure-fire winner that deserves to go down as an all-time classic. It contains all the elements that go to make up a great game, including excellent graphics, smooth scrolling, addictive game-play and good sound. Even better, it's simple to play, easy to pick up and extremely difficult to master.

After the first set of mazes, there are 60 more levels to get through.

Comes with joystick adaptor
Very playable
Extremely challenging

PROS AND CONS

Seems too simple at first

"Completely addictive. One of the best games on the ST"

NAME: DYNA BLASTER
COMPANY: UBI SOFT
CONTACT: 081 343 9055

PRICE: £25.99
RELEASE DATE: OUT NOW
MIN MEMORY: 0.5 MB

GRAPHICS ○○○○○○
SOUND ○○○○○○
VALUE FOR MONEY ○○○○○○
PLAYABILITY ○○○○○○

OVERALL **94%**

INSIDE INFO

Dyna Blaster first appeared in the arcades under the name *Bomber Man*. That was a few years ago and since then it's appeared on the NES, PC Engine, Game Boy (as *Bomber Boy*), PC, Amiga and finally the ST. While the name varied, the basic game remained unchanged. Let's hope that Ubi Soft keeps in with *Bomber Man*'s programmers, Hudson Soft, so we can see more Japanese games of this quality heading our way.

Hudson is the largest producer of PC Engine software and has a massive back catalogue. Seeing that NEC never released the Engine, or its hand-held brother the GT, in this country, they've got nothing to lose by letting some kind soul convert a few of their games for us poor Brits.

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Calamus CVG support coming soon.	

SLEEPWALKER



Ralph can block Lee's path, turn him around, or give him a kick up the rear to make him leap over hazards.



Ralph's not entirely dumb – he does take time out to preserve his own skin.

When Lee goes for a walk in the dark, only man's best friend can save him. Mark Patterson digs out his pooper-scooper and goes in hot pursuit...



your own fund-raising events. The game centres around Lee, an unfortunate kid who has a penchant for wandering around in his sleep. As he lives quite high up in a busy city, strutting around the roof tops with his eyes closed is a rather dangerous business, and in true *Lemmings* style Lee strides around oblivious to danger. Fortunately for him, his dog Ralph spots him leaving through his window and sets out to defend him from whatever the big city throws at him. This isn't an ordinary city though. For some reason many of the buildings have elevators on the outside, and in the sewers underneath are barrels of toxic waste and strange green blobby creatures which electrocute whatever they touch.

A DOG'S LIFE

Ralph makes Lassie and Rin Tin Tin look like rejects from Battersea Dogs Home. For starters he's virtually indestructible, which comes in handy as he gets squashed, blown-up, burned, electrocuted and impaled during the course of his quest.

All of these actions result in a quirky little animation, which prevent you controlling Ralph for a few seconds, allowing Lee to wander into something nasty.

Ralph's job is to disable traps to prevent Lee from

waking up, which appears to cause him to die from a very sudden and violent heart attack. Initially the puzzles are very simple – close a few trap doors, move a few blocks and give Lee the occasional shove to keep him going in the right direction. But the later levels hold more hazards, many of which are designed to slow Ralph down as well as wake Lee up. Using his natural doggy instincts and a rather large club, Ralph can batter some of the large hazards such as the dog catcher and the night club bouncer, removing them from that level until the next game.

LEVEL HEADED?

Games are often criticised for being too small, but in this case the problem is exactly the opposite. Each level is so vast that frustration sets in before the end. Just when you think you've negotiated the last of the objects, something else appears to make life even tougher.

The graphics are great throughout. While some of the backdrops are simple, the characters are well drawn and animated. The humour is based squarely in the realm of 1950s MGM cartoons, with typically humorous animations every time something bad happens to Ralph.

Even without the Comic Relief connection *Sleepwalker* would still be an excellent game. It's addictive and very, very challenging.

Colourful
Very challenging

PROS AND CONS

The levels are too big

"A strange, but playable and challenging puzzle game"

NAME: SLEEPWALKER
COMPANY: OCEAN
CONTACT: 061 832 6633

PRICE: £24.99
RELEASE DATE: OUT NOW
MIN MEMORY: 0.5 MB

GRAPHICS ○○○○○
SOUND ○○○○○
VALUE FOR MONEY ○○○○○
PLAYABILITY ○○○○○

OVERALL

85%



Ralph has a shocking encounter with some toxic waste in the sewers.

Eagle Software



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Once more the intrepid Alan 'Cheap 'N' Nasty' Dykes descends into the realm of budget releases...

PIPEMANIA

TOUCHDOWN • £9.99 • 0268 541 126

IN BRIEF: This is probably the world's first plumbing simulation! *Pipemania* takes place on a seven-by-ten grid containing a randomly positioned tap which emits a slimy substance called flooz. On the left-hand side of the screen is a column of five squares showing a variety of pipe sections. The idea is to start with the pipe at the bottom of this column, then the next and so on, and lay as much continuous piping on the grid as possible. You get a period of 20 seconds to start plumbing before the flooz starts flowing. Then it's a race against time to plot out the longest possible route for the flooz in order to score maximum points. However, once it catches up with you the game is over unless you have scored enough points to get onto the next level.

ATARI ST
BUDGET BUY



ST REVIEW COMMENT: "*Pipemania* is frustrating to begin with, until you get to grips with the logic of laying pipes and learning to think well in advance. Once you're used to this, however, the game becomes completely addictive. You can blow up undesirable sections of pipe, get help from reservoirs which slow down the slime, pick up icons and generally become completely obsessed. Good, clear graphics, plenty of levels and supreme playability make it a classic puzzle game."

ROBOCOP 2

HIT SQUAD • £7.99 • 061 832 6633

IN BRIEF: If you haven't already seen the movie you've missed a spectacular bloodfest. The game doesn't really do it justice, although the storyline remains essentially unchanged. Robocop, 21st century Detroit's crime-fighting hero has been such a success that the OCP corporation has decided to build a bigger and generally more ruthless version - *Robocop 2*.

The game consists of three types of level, platform shoot-'em-up stages, puzzle levels, where you must figure out the correct series of circuits to repair Robo's shattered memory banks, and target practice, where you get behind Robo's battle-scarred sights to shoot baddies and avoid hitting grannies. Things finally come to a head



Blast the gang members in the sludge factory and collect the drugs they drop to earn bonus points.

when Robocop 2, whose human-based mind is that of a vicious drug dealer, goes berserk in the final level and you're required to polish him off.

ST REVIEW COMMENT: "If you're a big shoot-'em-up fan you'll get hours of enjoyment out of *Robocop 2*. OK, it's an old Ocean formula-licence game, we've seen the likes countless times before, but it is immensely playable and just difficult enough to keep players absorbed until the end. The variety of level styles also contribute greatly to the playability. It's guaranteed to have you glued to your joystick as you shoot, arrest and puzzle your way into the high scores table."



BUBBLE DIZZY

CODEMASTERS • £7.99 • 0926 814 132

IN BRIEF: Here's one for the bed-time story books. Dizzy, the world's favourite egg, is at sea with an evil pirate, Captain Blackheart. Everything boils over when the old sea dog steals Dizzy's pearl necklace, a present for his girlfriend. Since the little chap has no money left to shell out for another, he



cracks up and jumps off the starboard bow, aided by Cap'n Blackheart's sword. However, the waters below contain lots of pearls so Dizzy has a chance to make his own necklace - if he can collect enough of them. Luckily the sea is fizzier than a bottle of Perrier water and Dizzy can get from ledge

to ledge and eventually back out of the water by travelling on bubbles which rise up. Against him are a plethora of nasty sea creatures with an appetite for drowned eggs.

ST REVIEW COMMENT: "Every time a Dizzy game comes into the office it tends to be deemed as kids' stuff. Almost invariably, though, most people are impressed upon closer



inspection. *Bubble Dizzy* isn't the most complicated game ever, but it is fun to play. The graphics are colourful and the gameplay is simple in concept but challenging enough in practice. It doesn't have that all-important hook to keep you interested for a long time. All in all *Bubble Dizzy* is a pleasant distraction for those fed up of brutal shoot-'em-ups.

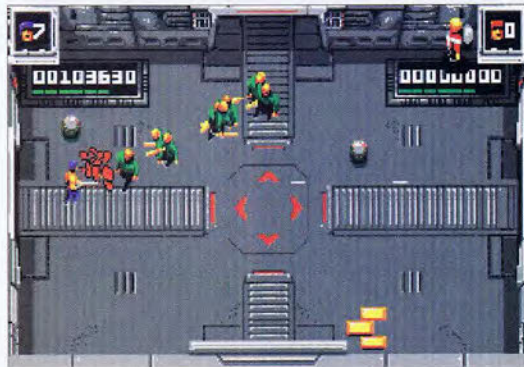
SMASH TV

HIT SQUAD • £7.99 • 061 832 6633

IN BRIEF: If you've ever seen or heard of the TV shows *American Gladiators* or *Gladiators* (our very own home-grown version) you'll know that it involves members of the public taking part in challenges against tough professional opponents, dressed in varying degrees of padded clothing. Compared to *Smash TV*, *Gladiators* is the sport of wimps. The basic idea is the same though: challenge the pros for TV entertainment. The price of failure in *Smash TV* is death as you are set upon by hordes of maniac mutants and robots. There are four game zones, each with a vicious end-of-level baddie and your final opponent is the game show host himself - no, not Bruce Forsyth, more like a giant, psycho Bob Monkhouse with an awesome arsenal of weapons.

ST REVIEW COMMENT: "If destruction and carnage are your forte you'll enjoy this game. There are more than enough enemies to kill and multi-weapon power-ups to keep the average military dictator happy for years. Each room is viewed top-down and the graphics are clear and colourful. The gameplay is good, although it's not as fast and furious as the coin-op.

Smash TV's best point is its two-player mode which makes the game easier to play and intensifies the action."



PIT FIGHTER

HIT SQUAD • £7.99 • 061 832 6633

IN BRIEF: One of the most impressive looking arcade games of recent years was Tengen's *Pit Fighter*. It uses digitised characters instead of cartoon-style graphics. Although it manages without the real actors and film sets of arcade games like *Mad Dog McGraw*, the overall effect works. You take on the role of one of three fighters with a variety of martial skills. The object is to fight your way through eight opponents using fists, feet, weapons and throwing the odd motorbike or innocent bystander at them.

ST REVIEW COMMENT: "Graphically it's difficult to fault *Pit Fighter*. Gameplay-wise the coin-op original lacked playability which is something that has carried across to the ST. So much effort seems to have been put into making the game look good that it plays rather slowly. Nevertheless, it's a serious looking beat-'em-up that's worth considering now that it's available on budget."



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PD ZONE

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The graphics are ripped and the plot is as old as the hills, but Nostram has enough playability to keep it ahead of the crowd.

NOSTRAM

MERLIN PD • DISK NO: MPD1182 • 99p • MEMORY: 0.5MB • SHAREWARE

IN BRIEF: Dark lords from the end of time, intent on universal domination, have taken charge of your world, and it's your mission to free the planet of the oppressors and restore order, in a platformy, laddery type of way. The ultimate aim of the game is to collect five crystals and free the universe from the baddies.

In common with Powerfist's other production, *Hunchy*, most of the graphics have been 'borrowed' from another game, in this case the Bitmap Brothers' *Gods*, and it has to be admitted that they fit in well with the game. The controls are much better than *Hunchy*'s, although precision can still be a problem.

Whereas missing a platform in *Hunchy* spelt instant death, in *Nostram* it's just a minor inconvenience. Unusually for shareware, there's an atmospheric intro sequence complete with original graphics and a soundtrack!

ST REVIEW COMMENT: "Nostram is streets ahead of *Hunchy* in terms of playability and presentation. Some original graphics would have improved things further, but if you like platform games this one comes highly recommended."

★★★★



The atmosphere is set with a very flash rolling intro – a first for PD games perhaps!



Simple graphics and non-existent gameplay make Platform Capers a game for hardened Donkey Kong fans only!

PLATFORM CAPERS

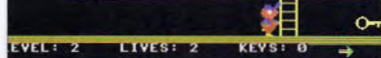
THE ST CLUB • DISK NO: GBU.107 • £2.95 • MEMORY: 0.5MB • LICENCEWARE

IN BRIEF: Take the layout of *Donkey Kong*, extract any form of originality whatsoever, shake well, and you have *Platform Capers*. The hugely complex two-line plot has your little Mario character running around the screen collecting four keys before escaping to the next remarkably similar level – yawn! There are, of course, the statutory baddies to avoid and barrels to jump over.

The main problem with the game is the control system which seems to have a mind of its own most of the time, move up a ladder and your man is just as likely to hurl himself off as move in the right direction! As far as the graphics go, the main character itself is well animated, but the rest of the cast look like they've been taken from a 1980 *Invasions* machine!

ST REVIEW COMMENT: "Most Budgie games are well worth the extra pound or so that they cost, but unfortunately *Platform*

Capers doesn't make the grade. Average graphics, STOS sound and mediocre playability combine to make this game totally forgettable."



LEVEL: 2 LIVES: 2 KEYS: 0



LEVEL: 1 LIVES: 4 KEYS: 1

Collect the keys and avoid the baddies – Platform Capers wouldn't be all bad if the control system behaved itself.

GNU CHESS

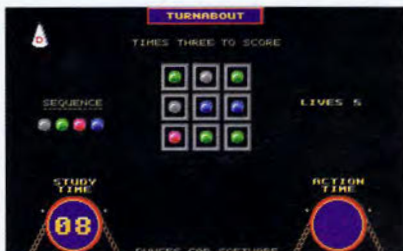
GOODMAN ENTERPRISES • DISK NO: GD.1863 • £2.75 • MEMORY: 1MB • PUBLIC DOMAIN

IN BRIEF: Love it or hate it, chess remains an incredibly popular game. *GNU Chess* is the latest in a long line of public domain chess challenges and dumps any frills and fancies in favour of a good, solid game.

The board is represented in two dimensions with play just a matter of clicking and dragging the pieces. Ten skill levels are available, each increasing the amount of time it takes the computer to move. This ranges from around 10 seconds on level one to an incredible 10 hours (yes hours!) on level 10! In terms of features, *GNU* is no slouch – moves can be reversed, hints given, moves timed, or you can just go the whole way and rearrange the board, adding new pieces as you go! A two player mode has yet to be implemented, but don't worry, the CPU will provide more than enough challenge!

ST REVIEW COMMENT: "*GNU* may not be the prettiest sight on earth, but it plays a wicked game of chess. The difficulty can be adjusted to almost grand-master level and the interface is a joy to use. Now where's the cheat mode?"

○○○○



Reflexes, perception and skill are all given a thorough brush up in *Turnabout* – just one of *Outrageous Fortune's* eight levels.

OUTRAGEOUS FORTUNE

CALEDONIA PDL • DISK NO: GM-137 • £2.50 • MEMORY: 1MB • SHAREWARE

IN BRIEF: This little brain-teaser is split into a number of mini-games, each supposedly pushing your skill and manual dexterity to the limits. The idea of the first level, named *Turnabout*, is to clear a grid of nine pieces by switching colours to form straight lines in an allotted amount of time. It may sound easy, but you just try it. The rest of the levels follow a similar style and are all unique.

As with previous DCS offerings, the sound is spot-on, with numerous samples playing throughout. Presentation is a little simplistic, but it's not nearly as bad as *Mindlock*. Of the eight levels, four are playable in the shareware version, beyond that point a registration fee of £3.99 is requested.

ST REVIEW COMMENT: "As brain teasers go, *Outrageous Fortune* is very good. There's certainly plenty of variety and most of the puzzles are challenging rather than annoying. A winner!"

○○○○



Banish all the W's from the grid within the time limit and receive unlimited glory, power and wealth (or at the very least you'll move on to the next level).

ROLLING BLASTERS

NEW AGE PDL • DISK NO: GAME.103 • £1.50 • MEMORY: 0.5MB • SHAREWARE

IN BRIEF: Those of you who remember 8-bit classics such as *Boulder* and *Trailblazer* will be instantly at home with *Rolling Blasters*. You take the role of a trusty football in a quest to move from the top to the bottom of the screen without falling off an all-too-thin causeway. And very simple it would be too, if it were not for a ridiculously tight time limit and suicidally fast controls! As the levels progress, the ball gets even quicker, the time limit shorter and you're going to need patience by the bucket-load to pull through!

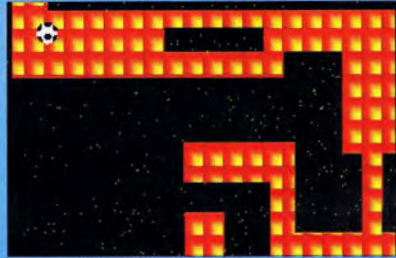
Some superb samples brighten up the game and graphically it's pleasing enough. The introductory music is excellent – for the first 10 seconds. Beyond that, it loops, and loops, and loops – leave it any longer and you're going to feel like throwing your ST through the nearest window! Four skill levels do little to ease what must be one of the most testing games of the year!

ST REVIEW COMMENT: "Yet another game that hides an incredibly simple concept behind flash graphics and sound. It's repetitive and frustrating to play, but somehow strangely addictive. Gluttons for punishment look no further!"

○○○



Admire the well drawn graphics, then press the fire button quickly before the repetitive intro music drives you completely mad!



The concept is simple, but actually getting your *Rolling Blaster* to the bottom of the screen would try the patience of a saint!

PD ZONE

GROTESQUE

CALEDONIA PDL • DISK NO: STE.46 • £2.50 • MEMORY: 1MB • STE ONLY • PUBLIC DOMAIN

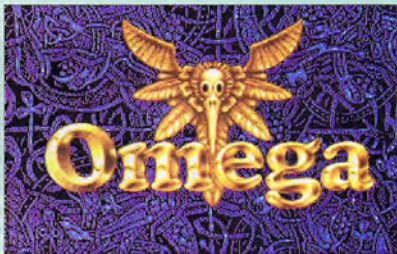
IN BRIEF: OK, turn down the lights, move your telly to the nearest field-based marquee and get ready for *Grotesque* – without a doubt the closest thing to a rave video your STE is ever likely to see!

Move past the brief intro sequence and your ears are greeted by an explosion of sound complete with digitised animations, shadows of ravers partying in the background and eye-stinging colour shows. Add to this some surreal 3D graphics, including a drum beating in time to the music, and you have one of the most original demos for a long time.

The sound quality, as you'd expect from the STE, is superb, not a crackle or a hiss in sight, and the show lasts for ages! Omega have come up trumps here!

ST REVIEW COMMENT: "*Grotesque* is one of those rare demos that manages to be both original and entertaining to watch. Rave fans will be in their element, but even if your musical taste is less severe you can't help but wonder at the presentation!"

★★★★★



If the volume on your Hi-Fi is adjusted correctly, the walls will be shaking at this point.

LIGHTNING DEMO

CALEDONIA PDL • DISK NO: D.105 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN

IN BRIEF: Fans of technical effects will be in heaven with this offering from the Pendragons. The main attraction is the menu system, which has to be the most impressive ever seen on the ST. It's fully overscanned, stretching into all of the borders. Guiding your blob around the maze to find some of the more elusive is fun.

The demos themselves are standard issue scrolly, wibbly-wobbly affairs, with one or two notable exceptions. The Plasma screen demonstrates a 'Z-distortion' technique not previously seen on the ST and the *Shadow Of The Beast Demo* pushes the ST to its limits in duplicating the intro sequence from the said game on the Amiga – minus the borders!

ST REVIEW COMMENT: "Aside from the plasma screen, the *Lightning Demo* is not incredibly original, but there's no shortage of scrollers to read and the full-screen main menu is technical perfection!"

★★★★★



A huge main menu and a great reset demo combine to make *Lightning* an essential purchase.

Brace yourself for a dose of the weird and wonderful as we enter the world of PD demos...

IF PIGS COULD FLY

FLOPPYSHOP • DISK NO: DEM.3468 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN



Vector objects, within vector objects, what next? All incredibly complicated and utterly engaging for, oooh, all of two minutes.

way through the presentation and features some hypnotic full-screen, multi-coloured plasma. On the sound side, the tracks are pleasing enough, but some digital effects would have improved things no end.

ST REVIEW COMMENT: "If 3D is a favourite of yours, this demo will not disappoint. Most of the ideas have been seen before, but the execution is good and the running commentary is a nice idea."

★★★★★

POV 99

TOWER PD • DISK NO: POV.99 • £1.50 • MEMORY: 0.5MB • PUBLIC DOMAIN

IN BRIEF: Persistence of Vision, rather than being a true demo crew, produces 'compacts', or in other words squeeze several demos written by other people onto a single disk together with a colourful intro.

Compact number 99 features four demos, namely *Life's A Bitch*, *The Trolls New Year Demo*, *The Stuff Demo* and *The KGB Demo*, plus the statutory disk copier. By far the best of the bunch is the Lost

Boys' excellent *Life's A Bitch*, featuring screens from many old hands including TEX, The Gigabyte Crew and ULM. The music is superb and the samples are nothing if not original! Particularly good are the Colourshock and Beat Nick screens, the latter featuring the smoothest 3D I've ever seen on the ST. The rest are really nothing more than space fillers.



"Roll up, roll up – four juicy demos for the price of one, all courtesy of Persistence of Vision 99."

ST REVIEW COMMENT: "There's little point in getting this disk if you already own *Life's A Bitch*, but if you don't you're missing out on a treat! The graphics and sound are up to usual Lost Boys standard, although it's short on originality."

★★★★★

HIGH FIDELITY DREAMS

FLOPPYSHOP • DISK NO: DEM.3398C
• £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN

IN BRIEF: *High Fidelity Dreams* may appear at first to be just another selection of tunes, but bung the disk in an STE connected to a Hi-Fi and the story changes completely. The quality of this music is incredible!

A lot of the instruments have been taken from top-end synths, the pan pipe being a prime example. Some of the tunes are a little repetitive and unfortunately there's no animation (or even a scroller) to keep you occupied while the music is playing. However, there's no denying the superb quality and it should while away one or two long evenings.

ST REVIEW COMMENT: "As a demonstration of the STE's sound capabilities, *High Fidelity Dreams* is very hard to beat. The quality is truly superb, although a little extra action on-screen wouldn't have gone amiss."

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The graphics reach a peak at this point, beyond here it's only your ears you need keep open!

MATHEMATICA

FLOPPYSHOP • DISK NO: DEM.3472C • £2.50 • MEMORY: 1MB • PUBLIC DOMAIN



Mathematica makes an entertaining afternoon's viewing.

IN BRIEF: *Mathematica* is a selection of mini-demos all based around the use of pure mathematics to produce visual effects. The show starts with some keftales (that's wobbly circles to us) and progresses through spine-lines to an 'IFS' fractal generator. A guest screen featuring "the largest 3D, real-time vector objects to run in one VBL" ends the show.

The presentation is superb. The music and graphics also add to the atmosphere and the end-screen is well worth waiting for.

ST REVIEW COMMENT: "*Mathematica* is an original idea, but it has virtually no lasting appeal. However, the built-in fractal generator is fun."

○○○○

TOP TEN DEMOS

1 GROTESQUE • CALEDONIA PDL • DISK NO: STE.46 • £2.50 • MEMORY: 1MB • STE ONLY • PUBLIC DOMAIN

The STE struts its stuff once again in this explosive rave demo from Omega. Crisp stereo sound is used throughout and the visual effects are mind-blowingly colourful. Synchronisation is also superb – in fact, at points you can almost believe you're watching a video!

2 SYNTAX TERROR • CALEDONIA PDL • DISK NO: D.33 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN

An oldie, but goodie, *Syntax Terror* is mega-demos at their very best. In addition to a plethora of flashy effects, the demo includes no fewer than two free games. Both are extremely addictive and more entertaining than many commercial offerings! Your collection is not complete without this one!

3 EQUINOX EMB DEMO • FLOPPYSHOP • DISK NO: DEM.3469 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN

Equinox demonstrates once again that demos needn't be

limited to two dimensions. The highlights of the show include a rotating scroller, 3D fractals and flexible vector balls. The three-in-one and caged starfield screens are also impressive, but beware of the bad language!

4 HIGH FIDELITY DREAMS • FLOPPYSHOP • DISK NO: DEM.3398C • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN

This superb sound demo from Aura really comes into its own on the STE. The tunes are all original and the samples used make a change from the usual hackneyed electric guitar and hi-hat effects. The graphics are limited to a simple introduction, but the sound quality goes a long way in making up for it.

5 THE LIGHTNING DEMO • CALEDONIA PDL • DISK NO: D.105 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN

This is an enormous demo with an equally enormous overscanned main menu. The presentation is so polished it shines and makes up in some way for the lack of originality. *Lightning's* 'Dist' screen also takes the 'most unreadable scroll-line' award with ease! Not the most original

demo ever, but watchable all the same.

6 POV 100 • TOWER PD • DISK NO: POV.99 • £1.50 • MEMORY: 0.5MB • PUBLIC DOMAIN

In celebration of its 100th disk, POV has come up with this commemorative, mega-demo style compact. In addition to the small *Wings of Death* music demo the disk contains a catalogue of the previous 99 releases, complete with a little picture of each! Essential stuff for POV collectors.

7 THE GENIUS DEMO • CALEDONIA PDL • DISK NO: D.131 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN

Another European demo crew proves that when it comes to presentation, they just can't be beaten. There's little to put *Genius* above other mega-demos in its class but the lack of originality is made up for by a corker of a reset screen!

8 THE PANDEMONIUM DEMO • LAPD • DISK NO: D.335 • £1.50 • MEMORY: 0.5MB • PUBLIC DOMAIN

Chaos takes the helm in this mega-demo which amongst

other things introduces texture-mapped 3D to the ST. The menu adopts a fairly standard approach and while it's not quite as polished as some European demos, most of the screens are entertaining enough.

9 ULTIMATE GFA DEMO • SOLENT SOFTWARE • DISK NO: DEMO.92 • £2.00 • MEMORY: 0.5MB • PUBLIC DOMAIN

The Overlanders make it known that special effects needn't be limited to assembly language with this superb demo written in GFA BASIC. Most of the parts are rip-offs of assembler demos including the impressive parallax effect first seen in the *Union Demo*.

10 PRETTY WOMAN & TOTAL RECALL SLIDESHOW • NEW AGE PDL • DISK NO: ART.109 & ART.110 • £3.00 • MEMORY: 0.5MB • PUBLIC DOMAIN

A huge bumper collection of pictures from two of this decade's biggest films. The quality is a little under par at times, but shots of all the main scenes are included and the Spectrum 512 format used ensures that there's no lack of colour.

PD ZONE

Organise your life or finances with help from the PD Zone...

GEM-VIEW 2.01

GOODMAN ENTERPRISES • DISK NO: GD.1857 • £2.75 • MEMORY: 0.5MB • SHAREWARE

IN BRIEF: The first Falcon shareware has arrived! But don't worry, it runs on STs too. Many of you will be familiar with the original *GEM-View* - version 2 is every bit as easy to use as its predecessor, and adds a whole range of new features.

The number of recognised picture formats has been boosted to over 25, including IFF, GIF and Windows 3 formats. MultiTOS is now supported, as is the new Atari clipboard protocol and images can now be displayed in over 32,000 colours on the Falcon. But even if your hardware isn't up to true-colour the program makes an excellent job of dithering pictures down to a more manageable 16 in ST low-res.

ST REVIEW COMMENT: "*GEM-View 2* is the very best picture conversion utility available for the ST. The interface is easy to use and the dithered results are almost as good as the 256 colour originals."



ATARI ST ESSENTIAL BUY



Trivia on tap and a database of national holidays makes Almanac 2.1 one of the best ST organisers available.



Presentation is also very good, although the colour scheme in medium resolution could do with some attention.

ALMANAC 2.1

CALEDONIA PDL • DISK NO: AU.132 • £2.50 • MEMORY: 0.5MB • SHAREWARE

IN BRIEF: If you are one of those people who suffer from a complete lack of organisation in their lives, maybe it's time you got yourself a copy of *Almanac*. This little gem is a day-by-day organiser very similar to Harlekin's *Diary* in style: just click on the month and day, then type in the event.

The program comes ready-prepared with several national holidays including those celebrated in other countries. But the thing that makes *Almanac* special is a supplementary utility called *Alma View*. Simply pop it in your AUTO folder and each time you boot up you will be presented with a list of tasks and national holidays for that day.

ST REVIEW COMMENT: "Switching on your ST to be greeted with a list of reminders for the day is quite an experience. It's a shame the program doesn't run as a desk accessory, but if you're willing to sacrifice that flexibility, *Almanac* is definitely worth a look."



GEM-View 2 is way ahead of the competition.



Conversion is only one of the program's many talents.

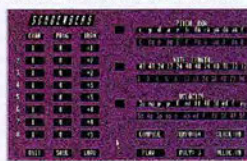
SCHOENBERG

MELVILLE MARRIOTT MUSIC MEDIA • DISK NO: BY NAME • £2.50 (+85P P&P) • MEMORY: 0.5MB • SHAREWARE

IN BRIEF: Do you ever find a few catchy notes floating around your head, but don't quite know how to transform it into a full melody? This could be for you.

Schoenberg takes a series of notes and turns them into a melody. The results from the same set of notes will be different every time you click the 'compose' button, but you do have some control over certain elements such as tempo. Each of the eight computer players can be assigned an individual MIDI channel and the registered version comes with a high resolution mode capable of saving standard MIDI format files.

ST REVIEW COMMENT: "Don't expect miracles, but with perseverance you can achieve some nice results. It's much easier than sitting in front of a blank sequencer screen waiting for inspiration!"



Apart from note entry, Schoenberg is entirely mouse-controlled and is incredibly easy to use!



Lacking inspiration? Let Schoenberg's mathematical mind work out an easy ride to rock stardom!

CONNECTIONS

GOODMAN ENTERPRISES • DISK NO: GD.1865 & GD.1866 • £5.50 • MEMORY: 1MB • MONO MONITOR REQUIRED • FREWARE

IN BRIEF: *Connections* is a media presentation pack that allows pictures, sampled sounds or animations to be linked to a stack. Being high-res only imposes limitations, but the documentation promises a colour version. Creating your own stacks is easy, thanks to the built-in editor and quick start guide. A package capable of saving Degas P13 pictures is needed for creating your own files.

ST REVIEW COMMENT: "As an educational tool, *Connections* is ideal. If only it ran in colour!"



Stacks can be edited or created at any time from within the program and the demos are ideal starting points for experimentation!



Sound, vision and animation are easily combined with Connections, although a mono monitor is required.

THE FINANCIER

CALEDONIA PDL • DISK NO: AU.161 • £2.50 • MEMORY: 0.5MB • SHAREWARE

IN BRIEF: With multiple accounts, credit cards and direct-debit cards becoming increasingly popular, it's probably time you enlisted the help of your ST to keep track of your finances. *The Financier* is designed to help you do just that by storing a simple credit and debit file for each of your accounts.

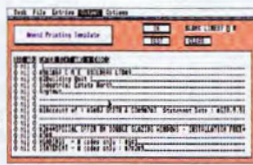
The program is packaged in the standard GEM manner and data entry is via easy-to-use dialogue boxes. Unfortunately this simplicity also extends to the feature-list, which is thin by today's standards. There are one or two redeeming features such as graphing and invoice templates, but it's not nearly enough to push the program anywhere near the competition. Give *The Financier* a try by all means, but take a serious look at *Double Sentry* first.

ST REVIEW COMMENT: "The *Financier* is easy to use and the graphing is nice but the positive aspects are spoilt by its inability to store more than one account in memory."

☆☆☆



Plotting the success of your business is an ideal application for your ST, but the public domain has better to offer.



One of The Financier's better features is its invoice templates.

CALAMUS FONTS 1

THE ST CLUB • DISK NO: FON.121 • £1.45 • MEMORY: 1MB • PUBLIC DOMAIN

IN BRIEF: There's nothing more annoying than coming up with a DTP design that can't be realised because you haven't got the right typeface. *Calamus* users have it easy thanks to the huge range of fonts available in the public domain, but quality can still be a problem.

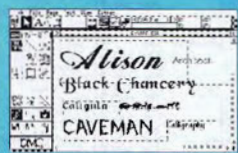
Calamus Fonts 1 is part of a series of disks containing typefaces converted from the PC and Macintosh. All have been designed to an extremely high standard and look excellent in print. Most are display faces but some unusual fonts such as 'Farsi' are also included. Unfortunately there seems to be a problem with loading some of the files - at least a third seem to create an 'Illegal Font Version!' error message!

ST REVIEW COMMENT: "If display fonts play a large part in your designs, this collection should suit you."

☆☆☆☆



About a third of the collection seem to result in 'Illegal Font Version!' error messages!



Calamus Fonts 1 is bound to contain something to tickle your fancy.

TOP TEN UTILITIES

1 GEMVIEW 2.01 • GOODMAN ENTERPRISES • DISK NO: GD.1857 • £2.75 • MEMORY: 0.5MB • SHAREWARE

This has to be the definitive ST picture conversion utility. *GEM-View 2* can handle virtually any picture format that you may care to throw at it and even when colour needs to be compromised the results look superb.

2 CRANACH DEMO • THE ST CLUB • DISK NO: DRG.53 • £1.45 • MEMORY: 1MB • MONO MONITOR OR TT REQUIRED • BANNERWARE

ST graphic designers who find themselves drooling over *Photoshop* on the Mac would do well to check out this superb German demo. Aside from the save option, everything is fully functional and there's even a demo picture for you to play with.

3 CONNECTIONS • GOODMAN ENTERPRISES • DISK NO: GD.1865 & GD.1856 • £5.50 • MEMORY: 1MB • MONO MONITOR REQUIRED • FREWARE

This is a very capable multi-media package from the States which allows you to combine still pictures, digitised sound and animation into one easy-to-use presentation. It is totally

mouse-driven and two good examples are provided on the disk to get you started.

4 ZAPENU • THE ST CLUB • DISK NO: DMG.32 • £1.45 • MEMORY: 0.5MB • SHAREWARE

A GEM-driven program-launcher which makes handling an over-crowded hard disk child's play. All of your applications can be given a slot on the menu and can then be executed with a single mouse click. New menu assignments can be loaded from disk, or created on the fly.

5 PREMIER PACKERS • LAPD • DISK NO: U.48 • £2.00 • MEMORY: 0.5MB • PUBLIC DOMAIN

No room on your ST? Running out of hard disk space? Then you need the *Premier Packers* collection. All of the old favourites are here, including *Automation*, *Pack-It*, *Pompey* and *Atomic* and most will be quite happy to squeeze your program files to a fraction of their original size!

6 JONDOS • THE ST CLUB • DISK NO: DMG.31 • £1.45 • MEMORY: 0.5MB • FREWARE

Deleting BAK files is just one of the many tasks that can be made miles easier by the use of a CLI, or a Command Line Interpreter. *Jondos* is one of the best examples to appear for quite some time, sporting loads of powerful features ripped directly from DOS 5, such as aliases and file redirection. At only 24 Kilobytes, the program is also quite happy to work with a half Megabyte machine.

7 WORD EXTRACTOR • SOLENT SOFTWARE • DISK NO: UTIL.15 • £2.00 • MEMORY: 0.5MB • SHAREWARE

Word Extractor comes in handy for those infuriating puzzles that have you creating as many words as possible from a given phrase. Operation couldn't be easier, just type in the source phrase and a complete list of words will be dumped to disk!

8 ALMANAC 2.1 • CALEDONIA PDL • DISK NO: AU.132 • £2.50 • MEMORY: 0.5MB • SHAREWARE

Organising your day has never been so easy! With *Almanac* and *Almaview* installed all of your appointments are listed each time you boot your ST.

9 MAC READ • THE ST CLUB • DISK NO: DMG.32 • £1.45 • MEMORY: 0.5MB • PUBLIC DOMAIN

One of the main problems with the Transverter software supplied with *Spectra GCR* is its refusal to talk to anything other than the antiquated 'MFS' disk format. *Mac Read* solves this problem by allowing files to be transferred from any HFS floppy or hard disk to ST partitions. Simple and very effective!

10 COMP 2 • MERLIN PD • DISK NO: MPD.1113 • 99p • MEMORY: 0.5MB • PUBLIC DOMAIN

COMP 2 is the complete office management system. It handles invoicing, addresses, cash-flow and a whole lot more. A few intermittent bugs spoil what could have been a superb package, but it's well worth investigating.

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ST3 1SW

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GEMVIEW 2.01 £2.75

CONNECTIONS £2.75

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Caledonia PDL, 250
Oldtown Road, Hilton,
Inverness, IV2 4PT

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OUTRAGEOUS FORTUNE

£2.50

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THE FINANCIER £2.50

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FROM
The ST Club, 2 Broadway,
Nottingham, NG1 1PS

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PLATFORM CAPERS £2.95

CALAMUS FONTS £1.45

PLEASE SEND ME THE DISK/S TICKED BELOW:-

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FROM
Merlin PD, 11 Grange
Close, Minchinhampton,
Stroud, Glos, GL6 9DE

NAME.....

ADDRESS.....

NOSTRAM 99p

PLEASE SEND ME THE DISK/S TICKED BELOW:-

ATARI ST

FROM
Tower PD, P.O. Box 40,
Thornton-Cleveleys,
Lancashire, FY5 3PH

NAME.....

ADDRESS.....

POV 99 £1.50

PLEASE SEND ME THE DISK/S TICKED BELOW:-

ATARI ST

FROM
New Age PDL, 30
Anderson Estate, Lower
Road, Hockley, Essex,
SS5 5NG

NAME.....

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BUS-16	Calamus Fonts (28 extra fonts)
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BUS-29	EZ-Label/Cardfile/Mailingmerge + 8more/D

UTILITIES	
UTIL-40	MiniMail 2 (+ST CAD + 1 more)
UTIL-34	Mega Utility (31 assist utilities)
UTIL-06	HD util/Ramdisk and 12 others
UTIL-20	Archive Suite (compression prog)
UTIL-21	Sticker III (best disk labeller)
UTIL-22	10 prog for printer owners
UTIL-05	7 suites of various label progs
UTIL-30	Address book/V-Mail/Packer + 12
UTIL-32	MINT (unix type system)
UTIL-33	Superboot 7.2 + 7 others
UTIL-04	Disk cataloger & Labeler + 1 more
UTIL-07	Formatter/Ramdisk + 12 more
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ST BUYER

Welcome once again to ST Buyer, where we get serious and aim to inform and educate you about your ST.

This month we take an in-depth look at AUTO folders – we show you how to install an AUTO program and even provide you with one on the cover disks.

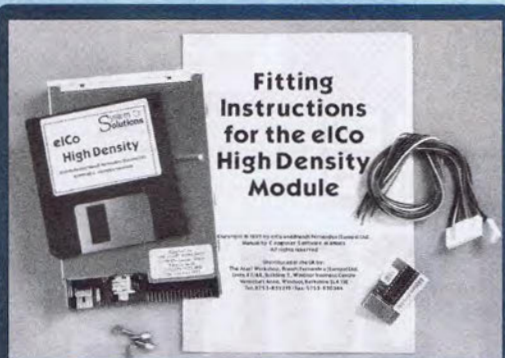
We compare two clip-art packages, Typewrite and Kuma Klip, on page 88, to see what pictures are available to spice up your DTP documents.

Turn to page 96 for the latest instalment of our highly successful HiSoft BASIC tutorial, which continues to teach you how to write your own address book. The complete program is on cover disk two.

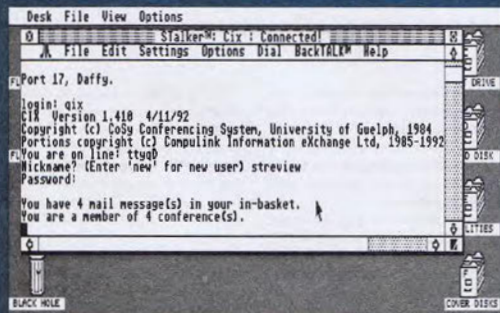
We've got two pages of Comms this month, looking at networking, E-Mail and how to send messages around the various systems. Add to that a review of STalker, a new package from Gribnif Software, and you have one of the most comprehensive guides to the modem scene available.

Having looked at AUTO folders, you'll need an easy way of configuring your system when you switch on. Never fear, Superboot V8.0 is here. A full review of this shareware package is on page 100.

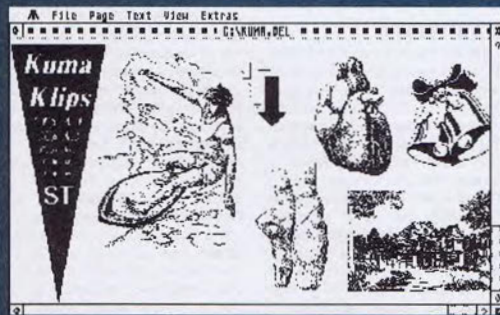
Add to this five pages of MIDI Monthly, a high density disk drive upgrade competition, Ask The Experts, Letters and Learn The Lingo and you have a package to take you right the way to the Blitter End.



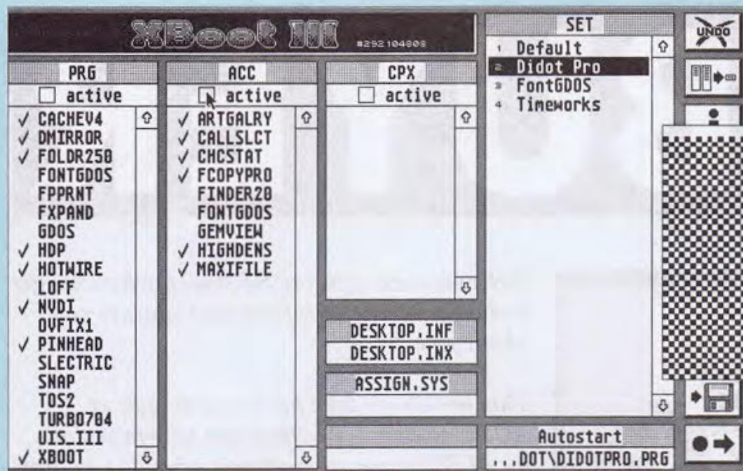
The Atari Workshop will fit a high density disk drive to your ST if you win our competition on page 105.



From the people that brought you Neodesk comes a new way of working your modem. Find out more on page 103.



Check out the latest clip art libraries in our head-to-head review of two of the newest on page 88.



XBoot in action showing which AUTO programs are about to be loaded.

AUTOSORT makes keeping track of your AUTO files easier.

PROBLEM SOLVED

AUTO PROGRAMS

Andrew Wright takes a look at the whys and wherefores of some vital programs...

There's little to complain about in the ST's interface. Its GEM Windows and intuitive disk handling are simplicity itself when compared to other machines, but the truth is that we're all out to drive our STs as hard as we can and AUTO folder programs are the best way of fine-tuning the ST's engine.

In fact, once you know how to use them, many AUTO folder programs can give you so much more power that it's hard to imagine life without them. With just half a dozen programs you can completely transform your ST.

WHAT IS AN AUTO FOLDER PROGRAM?

An AUTO folder program is, quite simply, a program that runs as soon as you switch your machine on. When an ST or an STE boots up, the first thing it looks for on the boot disk is a folder named AUTO. It knows it has to execute the programs inside it before it can do anything else. Only afterwards can it load the desk accessories and read the DESKTOP.INF file to lay out the GEM desktop and set the various parameters stored there.

This means that anything placed in the AUTO folder effectively becomes part of the operating sys-

tem because it will run automatically every time you boot up. It's no use putting any old program in there as it has to have been written in such a way that allows it to run from the AUTO folder. Although you will always find some larger applications that will actually run from the AUTO folder, most won't and you'll have all sorts of problems if you try.

AUTO folder programs are divided into three main types - so-called patch programs, drivers and system enhancements. They all function in much the same way and there is a considerable overlap between them, so it is a fairly arbitrary classification.

Patch programs are written to correct or alter certain parts of the operating system that have bugs or errors in them. Most of them are written and released into the public domain by Atari itself.

Drivers are programs designed to kick-start other software or additional hardware. For example, a high-density disk drive needs a special AUTO program to tell the operating system about the new drive, while some accelerator boards have associated AUTO programs to turn them on or off.

Finally, system enhancements are there to replace bits of the oper-

ating system with something else. For example, replacement file selectors run from the AUTO folder. There are also screen accelerators such as *NVDI* and *Warp 9* that boost the speed of screen redraws, and utilities like *Hotwire*.

You can expect to find all these types of file in the average AUTO folder, but some are more common than others. GDOS is Atari's extension to the operating system that lets you use multiple fonts on screen and print them out on paper. It sits in the AUTO folder but takes its information from a root directory file called ASSIGN.SYS.

ON AUTOMATIC

To get the most out of AUTO folders, you have to know how they work. For a start, early STs (pre-TOS 1.4) have problems loading certain AUTO programs, especially GEM based ones, and they need a patch called AUTOGEM, which is available from PD libraries.

This shouldn't be confused with STARTGEM, an AUTO program which enables these machines to load applications that are outside the AUTO folder on booting up (later versions of TOS can do this by selecting "Install Application" from the Options menu). This is yet another reason why you have to be mad not to upgrade to TOS 1.4 (or better) if you possibly can.

AUTO programs load in rather a strange way - not in alphabetical order but in the order in which they were actually placed in the AUTO folder. This is inconvenient, to say the least, because there's no obvious way of telling just which program was put in first and which was last.

There is a small PD program called *AUTOSORT* that will let you rearrange the order of execution quickly and easily and is well worth getting hold of. Why would you want to do this? Some programs like to be first to execute in your AUTO folder while others like to be last. Additionally, you will find that some have to be rearranged if they are to work properly or avoid conflicts with each other and here it's purely trial and error to get it right. For example, *PINHEAD* speeds up program loading so it's no use putting it last so it runs after all the others have loaded. Similarly, GDOS needs to be installed after *NVDI* for *Timeworks* and *Calligrapher* to function properly.

You could also try the excellent *XBoot* start-up utility, which is a commercial alternative to the popular *Superboot* program. It allows you to choose which AUTO programs to run in and in which order, as well as letting you control desk accessories, ASSIGN.SYS and DESKTOP.INF files.

TEN TOP AUTO PROGRAMS

Here are 10 top AUTO folder programs which will make your ST more efficient. We haven't included commercial utilities like *Hotwire* or screen accelerators such as *NVDI*.

1 FSTPRINT

Most people assume that when they print out a document or a graphics file, the ST will send the data to the parallel port as fast as it can. Unfortunately this isn't true. Most printers can accept data at far greater speeds than the ST can normally send it, owing to the relatively inefficient code in the ST's operating system.

FSTPRINT is a small public domain patch utility (which is an amazingly small 287 bytes long) that considerably speeds up printing, especially when placed last in the AUTO folder. Output speed is vastly improved in DTP programs such as *Pagestream* and *Timeworks* with full-page documents printing in about a quarter of the time!

2 FXPAND

FXPAND is a clever little program that lets you use compressed GDOS fonts in programs like *Timeworks* without having to decompress them first. Compressing GDOS fonts can save space, especially if you use large point sizes and have a high resolution 300 dpi printer.

It is even better for those of you running *Timeworks* from floppy disk as the whole program, overlays and GDOS fonts folder can now be fitted onto one floppy, doing away with all that tedious disk swapping.

FXPAND is available from the ST Club (0602 410241) when purchasing *Trimfont* or *Fontkit Plus*.

3 MAXIDISK

Maxidisk is the near-legendary RAM disk program that compresses any data written to it. It is reset-proof and supports any memory size. It is also compatible with all versions of TOS to date, including TOS 2.06.

The latest version, 2.2, is the result of some changes made by a different author, but the program still works in much the same way. It can be installed anywhere in an AUTO folder and several utilities are supplied with it, including a program which automatically copies selected files into the RAM disk on booting up.

4 SELECTRIC

Selectric is a replacement file selector that can be put anywhere in the AUTO folder. The non-too-friendly GEM file selector is replaced by **Selectric** which can do almost anything from deleting, touching, moving and copying disks and remembering up to 10 pre-defined paths and 10 file extensions to sorting files by any attribute, even in reverse.

5 FONTGDOS

Just about every ST owner has a copy of **GDOS**, which comes with programs like *Timeworks*, *Degas Elite* or *Hyperpaint*. Atari has now released

a new version called **FontGDOS**.

With **FontGDOS**, you can add new fonts at any time – all you have to do is to add the fonts, quit and then reload. This is far easier than the alternative of manually altering the *ASSIGN.SYS* files and then rebooting your machine. It also fixes some **GDOS** bugs and speeds up both the screen display and printing.

6 STE-FIX

If you've got an early STE, one of the most annoying bugs you can experience is the machine's seeming inability to boot up in anything other than low resolution. If you do most of your work in medium resolution this can be really irritating.

STE-FIX is Atari's own patch program to ensure you can boot up in the resolution mode you were in when you last saved your *DESKTOP.INF* file. Note that it won't be necessary if you have a recent model STE (TOS 1.62) or have upgraded to a later version of the operating system such as TOS 2.06.

7 PINHEAD 2.1

PINHEAD is a tiny AUTO folder program that uses less than 1K of memory when installed but the benefits in cutting down loading times are enormous. How does it work? When TOS loads a program, all free RAM is cleared to make way for it. On a four Megabyte ST this wastes an awful lot of time, so **PINHEAD** bypasses the TOS routines and uses its own faster clearing method. It also clears less memory, meaning that the process of loading desk accessories and AUTO folder programs is substantially faster.

8 FOLDNRNN

One of the most famous bugs in the ST's operating system is known as the 40 folder problem. Essentially, if you try to open more than 40 folders in a single session, the ST will crash with a dire warning about internal memory.

Even newer STs aren't completely cured, although STs with blitters (Mega STs) and newer STEs can safely access up to 100 or so folders. The program (*FOLDNRNN.PRG*) is renamed to equate to the number of folders you need – I use 250 folders on my 4 MB machine, but it does use up 33K of memory, which is a lot for a patch that provides no obvious benefit, but it's better than crashing.

9 COLD HARD CACHE V4

CHC is the latest version of a popular disk caching utility. It works with hard and floppy disks and offers quite dramatic improvements in loading programs and copying or deleting files.

Disk caching works by keeping a copy of the most frequently used disk sectors in RAM, resulting in faster disk operation and less wear and tear on the disks and drives themselves. **CHC** comes with a configuration accessory and plenty of documentation so you should have no trouble installing it.

10 MACCEL3

Another source of irritation for some ST owners is the poor performance of the Atari mouse when compared to replacements. Accelerator programs like **MACCEL3** get around the problem by altering the resolution of the mouse, making it appear to move faster and putting less strain on your wrist as you navigate from one side of the screen to the other. It's hard to control at first, which puts many people off, but you soon get used to it.

Select anything you like – Selectric can cope.

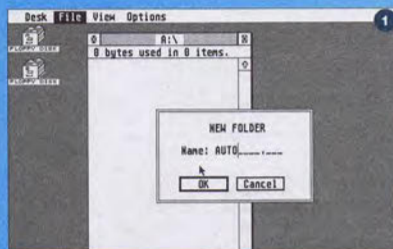
Better than the original, FontGDOS can do everything but make the tea.

Cold Hard Cache – the figures speak for themselves.

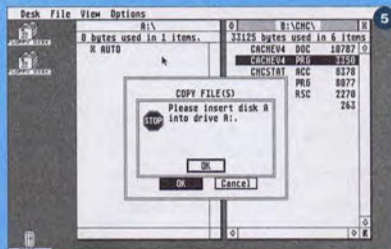
Maccel 3: just watch that mouse fly!

STEP BY STEP

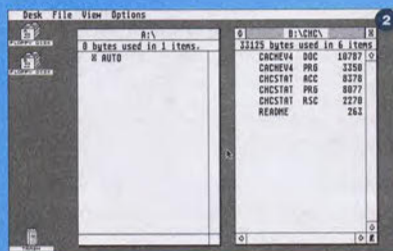
On the cover disk you'll find a folder called *CHC*, short for *Cold Hard Cache*. It's designed to speed up floppy and hard disk operation by copying the most frequently accessed files to RAM. Follow the simple guide below to install it on your boot disk. We'll assume you have a single floppy disk drive and no hard disk.



1 Make a new boot disk by formatting a floppy and creating a folder called *AUTO* on it.



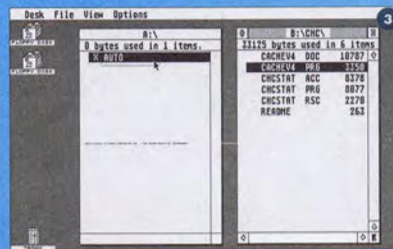
5 You will then be prompted to put disk *A*, the boot disk, in the drive. Do so and press *OK*. Your machine then writes the same file to the *AUTO* folder of the boot disk.



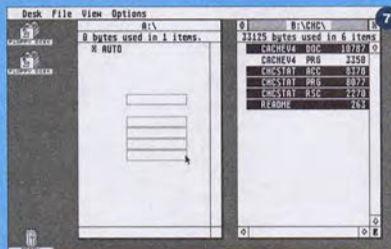
2 Double-click on the drive *B* icon. When asked to put disk *B* in drive *A*, remove the new boot disk and put the cover disk in its place. Now press *OK*.



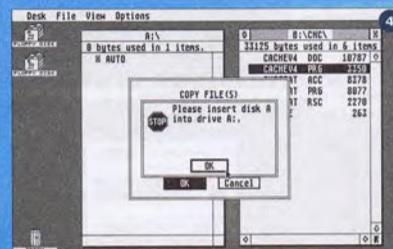
6 You will then be asked to put disk *B* (the cover disk) in again - do so and press *OK*.



3 Double-click on the *CHC* folder and select the file named *CACHEV4.PRG*. Drag it onto the *AUTO* folder in window *A*. This will copy it to the *AUTO* folder.



7 The next stage is to copy the remaining five files into the root directory of the boot disk. Hold down the *Shift* key and select the five files then drag them across.



4 When you're asked to confirm the operation, press *OK*. You will see the disk access light come on as the *ST* reads the file *CACHEV4.PRG*.



8 Insert the new boot disk in the drive and reset the computer. When *Cold Hard Cache* installs itself click on the accessory "*Cache Info*" to change the settings.

If you are paying 99p for 1 program on a disk you must be MAD!!

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ARC14 HOME, and F-ORB 2 super pinball games. GALTIC RANGEL, unusual shoot em up. MONKIES & BADLONS, bounce the clown and burst the balloons. FIRESTORM, another good arcade game rescue the humans. LAZERBALL, super game and interesting version on the pinball theme. Also on this disk LOST TREASURE, WIDOW MAKER, SLALOM & BREAK OUT.

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ARC 04 TETRIS, superb tetris game (see review in issue 1 of this mag). KLAX TRIX, WELTRIS & FETSID. 3 more good games on the tetris theme. MR DICE, COLLAPSE & BURGER, 3 more good games to fill this super value disk.

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ARTFUL DODGERS

Pretty fonts and a stylish layout are all very well, but without good artwork, your designs will lack any real impact. Nial Grimes investigates two economical solutions

"Clip art; isn't that free?" you may say. Well yes, the ST is fortunate in having a huge range of public domain clip art available, but picking the wheat from the proverbial chaff can be a real headache. It's far better, when you're looking for quality and speed, to splash out on a collection of commercially produced art. These may cost a bit extra, but will be usable right down to the very last clip – at least, that's the theory. In practice, you do have to be careful about what you buy.

This month sees the release of two new collections of semi-professional clip-art for the ST in IMG format. Both are scanned, both claim to be of the very highest quality and both are cheap – which should you choose? Read on...

INSIDE INFO

There are two types of clip art – vector and bit-mapped. The collections reviewed here are bit-mapped – each pixel is represented by one 'bit' in memory (a one represents a black dot, a zero a white dot). This presents limitations when you use the art in your DTP package. For example, enlarging the clip too much will give it a nasty jagged edge.

The quality of the scan – the density of the dots – is known as the resolution and understanding the way size affects quality can improve results. Quartering the size doubles the resolution. If you scan a 12x12cm picture at 150dpi, you need to reduce it to 3x3cm in your DTP package to increase the printed resolution to 300dpi. *Calamus DTP* and *Easy Text Professional* have options to adjust the size of a picture to suit the connected printer.

TYPWRITE

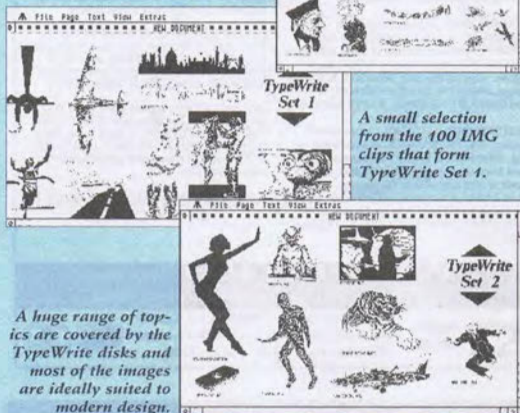
The TypeWrite series is supplied in three sets, each containing a total of 100 scans

Unlike some clip art, these pictures are not categorised, so it's just a case of putting your money on the table and hoping for the best.

You are unlikely to be disappointed, however, there's something for everyone in here!

In terms of resolution, things are still looking good. The art has been scanned at a very respectable 300dpi, which gives plenty of room for manoeuvrability even on laser and inkjet printers.

One small niggle is the name of the scan, which appears as a part of every clip. This doesn't pose a problem in DTP packages, where the offending portion is easily



TypeWrite 3 is not quite up to the standard of the other two sets in the series.

A small selection from the 100 IMG clips that form TypeWrite Set 1.

A huge range of topics are covered by the TypeWrite disks and most of the images are ideally suited to modern design.

KUMA KLIP

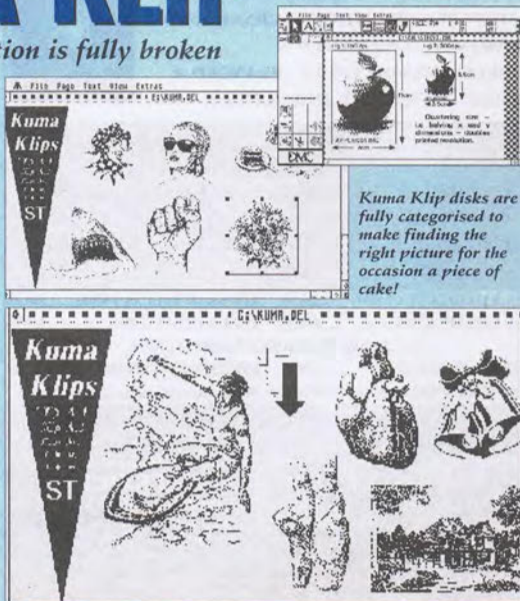
The Kuma Klip collection is fully broken down into 24 distinct categories spread over 36 disks

Rather than forcing you to buy the whole lot in one go, a catalogue for *Kuma Klip* is available for £5, from which you pick the clip you need and order the relevant disk. At £15 a throw it's not quite as economical as *TypeWrite*, but that's the price you pay for flexibility.

The topics covered include fish, food, religion, medical, trees, birds, cartoons, Christmas and many more. All are scanned at a very high resolution and this is reflected in the small number of clips on each disk, which averages between 10 and 15. Although the resolution is very welcome in most cases, it can

The high resolution of the Kuma Klip scans is welcome, although it can cause loss of detail at small sizes on some printers.

'Jaggies', or the rough edge caused by oversizing bit-mapped graphics, can be avoided with a little know-how!



Kuma Klip disks are fully categorised to make finding the right picture for the occasion a piece of cake!



cropped out, but *First Word Plus* users won't find things so easy.

With one or two notable exceptions, the scans are all eminently usable and have been touched up to perfection.

Sets one and two are perhaps of a slightly higher standard than the third, which is very 'cartoony' in style. Those still dubious might find the £2.95, loose-leaf catalogue handy, as it contains a printout of the entire collection, but when you consider that four disks of PD art can cost upwards of £10 it hardly seems worth the effort!

Superb value for money
Wide range of topics

PROS AND CONS

Picture name in scan can
cause problems
Not categorised

ATARIST REVIEW
ESSENTIAL BUY

"Something for everyone, this represents real value for money"

NAME: TYPEWRITE CLIP

ART

COMPANY: ST CLUB

CONTACT: 0602 410241

PRICE: £8.95 (PER SET)

RELEASE DATE: OUT NOW

MIN MEMORY: 0.5MB

EASE OF USE: ○○○○○○

DOCUMENTATION: ○○○○○○

QUALITY: ○○○○○○

VALUE FOR MONEY: ○○○○○○

OVERALL **90%**

mean losing some of the detail on dot-matrix printers, and sometimes even 300dpi lasers!

PRACTICALITY

Kuma Klip's biggest problem is its practicality. Most of the clips are practical to the point of being boring and lack any of *TypeWrite*'s inspirational qualities. Maybe this will suit some older style publications, but some atmospheric, way-out or just plain wacky clips would have been welcome.

Having said that, though, providing that you've got the catalogue, you can't really go far wrong - after all, you've seen the printed effect before you even consider reaching for your wallet!

Fully classified
Excellent printed catalogue

PROS AND CONS

A bit pricey for home use
Detail can be lost on dot matrix printers

"A little on the staid side but this package's flexibility is a real plus point"

NAME: KUMA KLIP

COMPANY: KUMA

COMPUTERS

CONTACT: 0734 844335

PRICE: £15 (PER DISK)

RELEASE DATE: OUT NOW

MIN MEMORY: 0.5MB

EASE OF USE: ○○○○○○

QUALITY: ○○○○○○

DOCUMENTATION: ○○○○○○

VALUE FOR MONEY: ○○○○○○

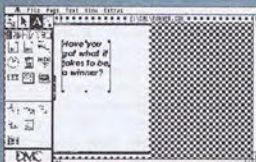
OVERALL **79%**

STEP BY STEP

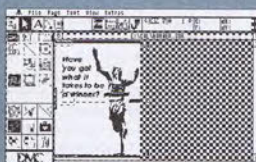
Using clip art can turn a dull-looking document into an exciting page; follow our tips to find out how. . .



1 A standard text-only page - the design isn't bad, but it could be improved dramatically with some well-placed clip art. We're using *Calamus* here, but similar results can be expected from most desktop publishers.



2 First lay in a headline. It helps to have an idea of the effect you are trying to achieve; in this case, we want the chosen clip of an athlete to dominate the page and instantly grab the reader's attention.



3 Now for the art itself. Adjust the image to suit the facing of the page using a good graphics package (such as *Butterfly Artist*). Tweaking the headline to follow the picture is also a good idea.



4 Next, flow the body text around the graphic by positioning a number of empty frames and switching 'repel' on - this method can be used with both *Timeworks 1* and *Calamus 1.09*. The 'drop-cap' is produced in a similar manner.



5 The finished effect - a lot more eye-catching wouldn't you say? Don't forget, modern designs thrive on space, so don't feel that you have to fill every square inch with text. Happy desktop publishing!

ART FOR ART'S SAKE?

So which collection should you go for? That largely depends on what you want to use it for. For general DTP, you can't beat *TypeWrite*. Even though it's not fully classified, the quality is very good and some of the clips are just begging to be the focus of a page.

If your needs are more specific, the *Kuma Klip* catalogue is well worth picking up. For £5 you get a 76-page booklet and three free example disks containing a selection of scans from the series! Although the subject matter is not life-threateningly interesting, the quality is superb and the high resolution means that the scans are usable at virtually any size.

Both collections prove that commercial clip-art needn't cost an arm and a leg. True, similar clips may be available in the public domain, but weigh up the time and money that you'll spend finding them and I think you will agree - *Kuma Klip* and *TypeWrite* are hard to beat in terms of value for money!

MIDI MONTHLY

MIDIGRID PROFESSIONAL

ATARI ST
REVIEW
ESSENTIAL BUY

Functioning both as a performance instrument and as a sequencer, Midgrid Professional presents creative possibilities which you won't get with conventional music software

With sequencing software, you can tell your computer to play your instruments, but in most cases you can't actually play the machine as if it were an instrument itself. **Midgrid Professional**, incorporates many of the standard functions of a top-end sequencer, and is likely to attract serious interest from those who may previously have dismissed it as a novelty.

The grid pattern on the screen functions as a musical instrument which can be played using the mouse. Unlike a conventional sequencer which uses numbered tracks, **Midgrid** enables musical information to be assigned to or recorded to the boxes that make up the grid. The boxes may contain single notes or musical sequences – exactly what they contain is always up to you.

You can select the grid size, with a minimum of one and a maximum of 400 boxes (20 rows by 20 columns). Changing the size of a grid is a display operation only – it does not destroy the contents of any boxes which already contain musical data. The boxes can be shaded with different fill patterns and may contain text.

PLAYING THE GRID

There are various ways to 'play' the screen. Click on a box once with the left mouse button and the note or sequence sounds. Drag the mouse around the screen whilst holding down the right mouse button and the contents of each box is heard as the mouse cursor passes over it. If you click and hold with the left button on one box, that box will continue to sound for as long as the left button is held down, leaving you free to play other boxes with the right button.

So what's the point of it? The best way to answer this question is to look at a few examples of **Midgrid** in action. The program disk comes with a number of ready-made grids which are intended to give an idea of what's possible. One of the simplest ones is called Harp, and consists of an eight by 10 grid, with each box containing just one note – a plucked harp string.

The clever part is how the notes are arranged. Each horizontal row consists of 10 notes belonging to one chord, with the lowest note on the left and the highest on the right. Holding the right button and dragging it horizontally across the screen plays an arpeggio (the effect of sweeping your hand over the strings of a real harp). The chord around which the arpeggio is based depends on which row you have chosen. A left to right mouse movement gives an ascending arpeggio, right to left a descending one. Vertical mouse movements take you up or down an ordinary scale.

You can think of the Harp grid as a kind of two-dimensional piano keyboard. Because the basic chords are laid out for you, it doesn't take much effort to sound like a real harp player (I managed a reasonably convincing rendition of **Greensleeves**). A grid doesn't have to be a harp – it can be anything you want it to be.

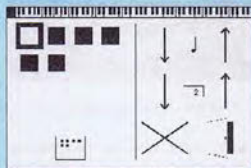
MAKING A GRID

The first step in designing a grid of your own is usually to select an instrument and an initial MIDI channel. For this, as with the

majority of **Midgrid's** functions, no typing is required – just select the Change Instruments icon and use the mouse to select a channel number and a sound.

The next step is to put some individual notes into some of the boxes. Select the keyboard icon and up comes a graphic of a musical keyboard.

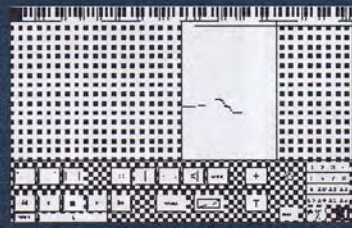
Move the mouse to the note that you want and right-click on it, then right-click the box into which you'd like to put it to complete the operation. By repeating this process, you can build up any arrangement of notes in any order in the boxes. More than one note can be placed into a box if you want that box to play a chord.



Each note can be changed by selecting it with the right mouse button, then using the icons in the large box on the right to affect its pitch or MIDI channel. Notes can be added or deleted.

THE PIANO-ROLL EDITOR

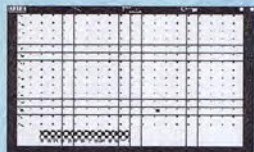
Boxes containing sequences are edited using the piano-roll editor. Transport controls are at the bottom left, and above these are icons for marking blocks of music to be edited. Individual notes may be grabbed and moved around the screen, or altered using the note-editing icons situated above and to the right of the transport controls. Clicking on the plus sign enables notes to be added by drawing with the mouse, and the 'T' is for graphically displaying triggers when you are editing a box which has been set to trigger other sequences. The numbers on the right are for selecting active MIDI channels, and the Edit button gives access to other functions, such as quantise, pitch inversion and velocity scaling. Finally, a click on the little man with the baton takes you to Conducting Mode, where you can record changes in tempo or volume in real time.



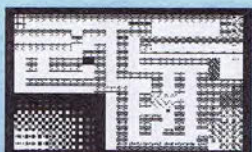
Midgrid Professional's piano-roll editor is used for editing boxes containing sequences.

INSIDE INFO

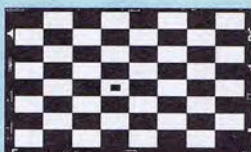
Midgrid Professional was developed by Andy Hunt in conjunction with the Music Technology Group of York University and the Composers' Desktop Project (CDP). CDP began in 1987, and brought together composers, computer scientists and hardware designers to develop the idea of a desktop system based around the Atari ST. Operating as a non-profit-making limited company, much of the project's work is aimed at professional composers. Apart from **Midgrid**, CDP has generally concentrated on software and hardware based around digital sound processing. Further information is available from CDP, 11 Kilburn Road, York YO1 4DF.



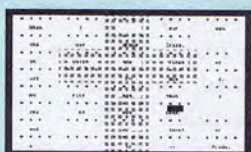
This is an advanced version of the Harp pattern, with more rows and columns. The more detail there is in a grid, the more musical possibilities, but the harder it is to control the mouse movements accurately.



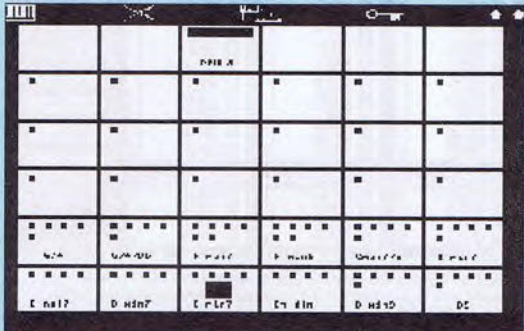
Midgrid as a maze game. Move the cursor along the white path, step off it and you hear a noise. A simple children's game, but not so simple if you select the 'Upside-down Mouse' option, reversing mouse movement.



The black boxes contain short melodic sequences, and the white ones are empty. By clicking on a number of black boxes and then on a white box, all the chosen sequences will play synchronously.



Text was added to the boxes to show the words of a hymn. Each box contains a church organ chord. Clicking on each box in turn, starting at the top left, plays hear the correct chord progression for the hymn.



Different shadings are used in this pattern to signify different instruments. The number of black dots in each box corresponds to the number of notes – so those with more than one dot contain chords. The box with the word 'Drums' and the horizontal black bar contains a sequence.

SEQUENCING

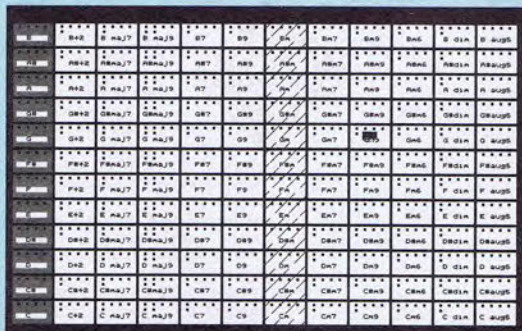
A grid pattern doesn't have to be entirely filled before you can try playing it, and there's a very good reason for leaving boxes empty: by switching record mode on, any performance using the filled boxes can be recorded into a new box as a sequence. This sequence box can then be used as part of a subsequent performance, which may in turn be recorded into another box. In this way, a short, simple performance can be treated as a part of a composition which can then become a part of a larger composition and so on. If you have lots of sequences which start getting difficult to manage with the mouse alone, click on the Sequence Construction icon, and you gain access to what is in effect a sequence sequencer – it enables sequences to be triggered at specified moments.

Because every element and every stage of the work is always immediately available on the screen, it is possible to experiment very freely with musical ideas. For example, it takes no time at all to test whether your music would sound better if certain musical phrases occurred in a different order.

Unlike a sequencer, it isn't necessary to cut and paste sections of music in order to try different arrangements – you can just play around with them, clicking on what you'd like to hear at the time you'd like to hear it.

Unusual though *Midgrid* is, it also enables more conventional ways of working – there's a metronome and count in, and boxes may be copied, deleted, quantised, transposed and edited just as with tracks of a sequencer. A full piano-roll editing system is provided, which is packed with

The Harp pattern: each box contains the sound of a harp string being plucked.



The Chords pattern. Each box is labelled with a chord name and will play that chord if clicked on. This is a very handy way of finding good chord sequences.

features, plus impressive real-time controller editing by mouse. Format 0 and 1 Standard MIDI Files may be imported and exported.

A MIDI keyboard can be used for input to *Midgrid*. In normal operation it will echo through on a desired MIDI channel, and anything you play may be recorded to a box. There's nothing to stop you from playing the grid with the mouse with one hand and the keyboard with the other, if you can manage it; but it may be better to use your MIDI keyboard as an alternative to the mouse for playing the grid. This is done by mapping keys on the MIDI keyboard to boxes in the grid, thus enabling single keys to play entire sequences or chords.

VERDICT

Midgrid Professional offers enormous flexibility as a performance instrument and as a composer's tool. The package is well thought-out and comes with a comprehensive and well-produced manual. ST musicians who are used to using a traditional sequencing package can definitely benefit from it if they are prepared to break a few habits and try a fresh approach. Schools should also look closely at *Midgrid Professional*, because the grid patterns can be created for classroom activities to suit any level of ability and it's very easy to use.

Innovative and flexible
Instantly gratifying
Many powerful features

PROS AND CONS

Requires breaking some
old habits

"Midgrid is much
more than a
sequencer"

NAME: MIDIGRID
COMPANY: DAWSONS
MUSIC
CONTACT: 0925 32591

PRICE: £175.07
RELEASE DATE: OUT NOW
MIN MEMORY: 0.5MB

EASE OF USE: ☆☆☆☆
DOCUMENTATION: ☆☆☆☆
EFFECTIVENESS: ☆☆☆☆
VALUE FOR MONEY: ☆☆☆☆

OVERALL **90%**

Wired up to an ST or just held in the hand, the QY20 portable work station is a miracle of miniaturisation. Steve Wright gets to grips with Yamaha's small wonder...

MIDI ON



Yamaha's original portable workstation, the QY10, astounded many with its massive list of features, including a one-octave keyboard, multi-timbral synth, a drum machine and a sequencer with auto-accompaniment packed into a battery-operated device that was small enough to fit into your pocket. Now they've topped it by cramming even more in its successor, the QY20. Almost every feature of the QY10 has been improved upon in some way, bringing vastly increased power and ease-of-use.

The QY20 is a mere 188mm X 37mm X 104mm in size. It's fronted by a large LCD screen which makes it very easy to see what you're doing, and there's even a graphic mixer display to help you to balance the levels of the eight sequencer tracks.

Remarkably, the QY20 is 16-part multi-timbral—in other words it can create the effect of 16 different instruments playing simultaneously. This is a significant improvement over the QY10, which could only manage eight. It also conforms to the General MIDI (GM) standard, which means that it is 28-voice polyphonic, again a big improvement on the QY10, and its internal arrangement of sounds is standardised. As for the sounds themselves, there are 100 pitched effects plus 100 different drum sounds. The drum samples are organised into eight separate kits, making it easy to pick a selection of drum sounds that will work well with a particular style of music. All

SOMETHING FOR NOTHING

Yamaha will provide free software to ST owners who buy the QY20. The program was not available at the time of writing, but you can expect to allow the QY20's parameters to be altered via MIDI. It is likely to be similar to a program called *Sqyrrrel*, which was available for the QY10. Yamaha has also released *Tony*, a public domain editor for the TG100.

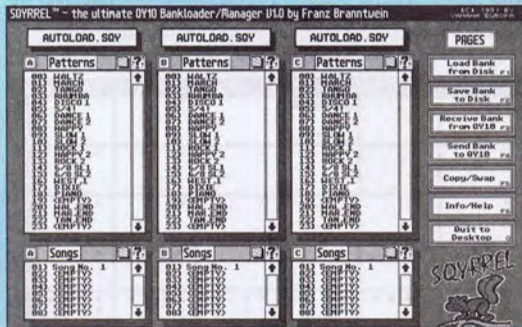
INSIDE INFO

AUTO-ACCOMPANIMENT COMES OF AGE

Auto-accompaniment first appeared in the form of single-finger chord patterns on home organs. In those days, you either liked the accompaniment or you didn't, and unless you were crazy about predictable bossa novas, cha chas and waltzes, you probably didn't. The big breakthrough for ST owners came when MIDI software such as *Band-In-A-Box*, *Freestyle*, *Feeling Partner* and *Session Partner* first appeared.

These packages are still selling well, and although they differ in many ways, they all enable the musician to create original backings and chord lists, both of which can be edited and saved, making it possible to create original music more quickly and conveniently than ever before.

The advances made in software have been mirrored by enhancements in hardware. The QY20 is one of a number of recent devices equipped with a type of auto-accompaniment, which significantly improves on past products by passing more control to the musician.



Y-NOT of Germany wrote the public domain QY10 librarian for Yamaha and is currently programming a librarian/editor for the QY20, which will also be freely available.

the sounds are of a much higher quality than the QY10, though not quite up to the standard of Yamaha's TG100 tone module.

KEY OPTIONS

Obviously the keyboard isn't big enough to facilitate an impromptu performance of *Maple Leaf Rag*, nevertheless it's a strapping two octaves long and polyphonic which makes playing chords easy. Needless to say, if you have a bigger keyboard there's nothing stopping you connecting it via MIDI, although you'll soon be able to buy one specifically for use with the QY20 which is fully portable and battery-operated, with a slot in the top into which the QY20 fits. It's being designed by Novation, whose MM10 keyboard for the QY10 was very successful, and the increased thickness of this model means a new design is needed.

The built-in sequencer is capable of recording in excess of 28,000 notes, and storing up to 20 songs at a time. Four of the eight tracks are for normal sequencing and four are for auto-accompaniment. Of the latter, two tracks are for chords, one is for bass and one is for drums. The QY20 also comes complete with 100 preset auto-accompaniment patterns, each of which is broken down into six sections—Intro, Normal, Variation, Fill 1, Fill 2 and Ending.

CREATING ACCOMPANIMENTS

To create an accompaniment, you first tell the QY20 what your chord sequence is, then enter details of

which accompaniment patterns to use in the sequence. For example, if you were creating a jazz song, you could begin by entering the chords (the keyboard buttons double as chord-entry buttons, making this easier than typing the chord names letter by letter), then choosing appropriate sections from one of the provided jazz accompaniment patterns. The result of this very simple procedure is four tracks



THE MOVE

of instant backing, leaving four tracks on which you can record more instruments.

Apart from the preset patterns, there's space for 24 of your own. By using your own patterns in conjunction with your own chord sequences, you can give your music much more style. You simply start by creating short four-track sequences using the tracks reserved for auto-accompaniment, then save them as user patterns - afterwards you can create an endless amount of instant music in your very own style just by entering the chords and specifying your own pre-recorded patterns to go with them. The QY20 can also understand chords played from an external keyboard in real time, so that the chosen backing follows the chord changes as you play them.

Yamaha has given great thought to making the QY20 easy to use. A common problem with small devices is that a great number of tasks have to be performed by just a few buttons, thus increasing the danger of confusion. The QY20 gets round this by using function buttons which are situated on the right-hand side of the LCD. By

pressing the Menu button, the exact task that each function button will perform at that time is displayed in the LCD next to the relevant button. Within a function, there may be subsidiary functions which can be found by pressing Menu again. The Exit button ensures that you can always get back to where you came from.

Editing individual tracks couldn't be easier. The first step is to place the cursor onto the track in question and press the Menu key. The four function buttons are then labelled Job, Edit, Utility and Demo. Pressing the one labelled Edit calls up an event list.

Every note's start time, pitch, duration and velocity is shown here, and each event takes up one line of the display. At this point the cursor can be moved around the screen to alter the data. Moving the cursor to the bottom of the display scrolls it down to show subsequent events.

To add a Program Change event, select Insert mode, press the Menu button again, which changes the top function button's label to EVT. Selecting it now calls up a list of event types. Move the cursor to Program Change, press Enter, and

USING THE QY20 WITH YOUR ST

Although the QY20 doesn't send MIDI clock, it can respond to it through external sync. To transfer QY20 sequences into your ST, first connect the ST's MIDI OUT to the QY20's MIDI IN, and the QY20's MIDI OUT to the ST's MIDI IN. Load your ST sequencing software and put one track into record. When you start your sequencer, provided it is sending clock, the QY20 will automatically begin playing at the tempo set on your ST, while your ST records the music. All the MIDI data will be held in one track on the ST. It may then be possible to separate the recorded data to give each MIDI channel a track of its own. The QY20 can also be used as a 16-channel expander in a sequencing setup by connecting it as you would any other sound module.

the new event will appear. Although this may sound a bit involved, it is actually very simple when you have the QY20 resting in your palm.

VERDICT

The QY20 is small, powerful and easy to use. Perhaps more importantly, though, it is an extremely versatile device. No matter what you specialise in, you shouldn't have too much trouble finding a use for it. If you can get through the psychological barrier of shelling out £399 for something so small, you'll soon realise that it's excellent value for money.

Many potential uses
Very quick and easy to operate
Portable and space-saving
Free ST software available soon

PROS AND CONS

No MIDI Thru

"This is a versatile and powerful pocket workstation - very quick and convenient"

NAME: QY20

COMPANY: YAMAHA

CONTACT: 0908 366700

PRICE: £399

RELEASE DATE: OUT NOW

MIN MEMORY: 0.5 MB

EASE OF USE: ○○○○○

DOCUMENTATION: ○○○○○

EFFECTIVENESS: ○○○○○

VALUE FOR MONEY: ○○○○○

OVERALL: **94%**



Ofir Gal looks at a way to turn your ST into a music guru...

THE RIGHT CHORD

There are more than enough sequencing packages around, but what good are they if you don't know how to construct a tune? **Jazz Chord** aims to help you learn about musical harmony, and in particular blues and jazz chord progressions.

The package consists of one floppy disk and a 72-page manual. The program is copy-protected, and although it's hard disk installable the master disk must be in the drive when loading.

The program has several features, ranging from simple visual or musical demonstrations of topics such as blues and jazz timing to interactive games such as musical dictation, which plays a sequence of notes that have to be repeated on a MIDI keyboard.

CHORDS

There are several sections which deal specifically with chords. All the chords within a specific scale or chords of a specific root note can be viewed. They're displayed in musical notation and keyboard and guitar fingering. Unfortunately, only the simpler chords are shown in the guitar grid. Clicking on a chord name plays it over MIDI, providing you with a quick way of learning how complex chords like Em7+5-9 or A7sus+9 sound. The ability to display all chords in a specific scale is handy as it shows you which chords will fit the mood of a song you are composing. You can switch from one scale to another

by clicking on the buttons at the top of the screen.

Hitting the scale button plays a short demonstration of the scale and the basic chords within it.

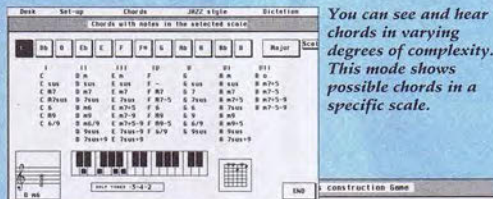
The Chord Construction mode provides an interesting tutorial about inversions. To see how a chord can be inverted you select one from the list then click on the inversion buttons. Each inversion is displayed in notation and on a keyboard at the same time as playing it over MIDI. The Chord Construction Game plays four random chord sequences; you have to recognise these and fill the empty boxes with the notes that make up those chords. A timer is displayed so you can see how well you are doing. This is a good way of improving your ability to recognise chords by their sound.

The Blues Style mode demonstrates both visually and musically how rhythm and harmony give blues and jazz their sound. Five different examples of 12-bar blues are played while displaying the chords on screen. You can, of course, join in by playing your keyboard.

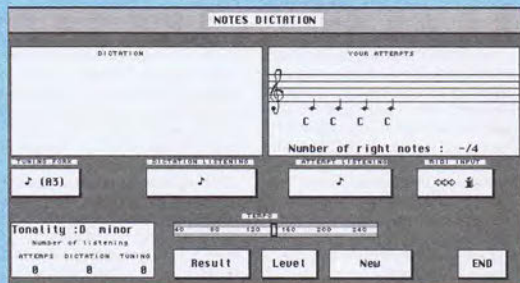
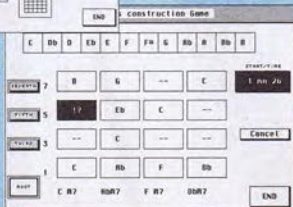
DICTIONATION

Jazz Chord has two dictation windows. The note dictation mode plays a random phrase for you to attempt to repeat on your keyboard. The program counts how many times you had to listen to the phrase and how many attempts you made before playing it correctly. A 'tuning fork' button is

You can see and hear chords in varying degrees of complexity. This mode shows possible chords in a specific scale.



The chord game helps to improve chord recognition.



This mode is designed to improve your musical ear. **Jazz Chord** plays a musical phrase and you try to play it back. The computer gives you a score according to how many attempts you make and how many notes were correct.

provided to remind you what an 'A' sounds like, which helps you to get the right notes. If you want to see the notes on screen you simply click on Result. Clicking on the Level button changes the phrase length and complexity. If you prefer, notes can be entered with the mouse instead of through a keyboard. The chord dictation works in a similar way, starting with simple triads (three-note-chords) and progressing to complex chords.

PLAINLY SPEAKING

The user manual for **Jazz Chord** is rather confusing. It's poorly translated from French and is almost unreadable in places. What's even worse, some of the reference pages at the end of the manual seem only half translated.

Jazz Chord is certainly useful if you have some understanding of music and would like to expand it. It is lacking in many areas – the demonstration of blues could have been more interesting and with General MIDI around, much more could be done with the use of a basic rhythm and bass lines to accompany the chords.



The chord construction mode teaches you about chord inversions, how they work and what they sound like.

"Learn to play Jazz and Blues with your ST"

PRODUCT: JAZZ CHORD

VERSION 1.1

COMPANY: ZONE

DISTRIBUTION

CONTACT: 071 738 5444

PRICE: £55

RELEASE DATE: OUT NOW

MIN MEMORY: 0.5MB

EASE OF USE

DOCUMENTATION

EFFECTIVENESS

VALUE FOR MONEY

OVERALL

75%

An interesting way to learn about music

PROS AND CONS

Complicated in places
Poor manual

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WORKING WITH

WRITE YOUR OWN ADDRESS BOOK – PART FOUR

This month we continue our address book program with a look at resource files...



A resource file is a file containing code that can produce and display AES objects such as menus and dialogue boxes. It normally has the file extension RSC. Many commercial programs use resource files and these are normally created with a resource construction set program. **WERCS**, from HiSoft, is one such package, but there are PD and shareware alternatives.

A typical resource file contains a menu bar, several dialogue boxes, icons and images. These objects are normally grouped into trees, and each tree may contain many objects. A dialogue box is a tree and each text line, button or icon within the box is regarded as part of that tree. A resource file is loaded using the **FNrsrc_load** call which loads the file into memory. Before you can display and use the trees

in the file you must obtain the memory location of the tree you want to use. This is done with the **FNrsrc_gaddr** call which produces a long integer. Once this is known, all object-related AES calls can be used to display, modify and interact with the tree and its objects.

FORM DO AND FORM DON'T

The routine shown in Listing One loads the resource file **ADDRESS.RSC** from the folder **ADDRESS.GEM** on disk A and displays a dialogue box on screen. Before trying this short program, create a folder called **ADDRESS.GEM** on your work disk and copy the file **ADDRESS.RSC** from the cover disk into this folder. On the cover disk you will also find two more files, **ADDRESS.BH** and **HGT.BAS** which you should copy as well. These files will be needed later in this tutorial.

The key AES call that enables us to use the objects is **FNform_do** which is surprisingly simple and takes only two parameters. The first is the memory address of the object tree, in our case the address dialogue box, while the second parameter is the first editable object – normally 0. Insert the following line just before the last line: **but=FNform_do(tree&,0)**

Try to run the program. This time you should be able to type into the name and address fields. Press any of the buttons at the bottom of the box to quit the program.

LOOP-THE-LOOP

FNform_do is a loop. It waits for the user to press a button and while it waits, you can type text into text fields if any are shown. **FNform_do** is a function which returns the object number of the button that was pressed. The object index number is found in the

LISTING ONE

```
DEFINT a-z
LIBRARY "gmaes"

tmp=FNrsrc_load("A:\ADDRESS.GEM\ADDRESS.RSC")
IF tmp=0 THEN
    PRINT "Resource file not found"
    STOP
END IF
dum=FNrsrc_gaddr(0,0,tree&)
form_center tree&,x,y,w,h
dum=FNobjc_draw(tree&,0,10,x,y,w,h)
dum=FNrsrc_free

'load file
'if failed then
'let user know
'and quit

'get memory address
'centre objects on screen
'draw the objects
'remove the file from memory
```

LISTING TWO

```
DEFINT a-z
LIBRARY "gmaes"
$include A:\ADDRESS.GEM\ADDRESS.BH

tmp=FNrsrc_load("A:\ADDRESS.GEM\ADDRESS.RSC")
IF tmp=0 THEN
    a$="(3) Resource file not found [(Abort)"]
    dum=FNform_alert(1,a$)
    STOP
END IF
dum=FNrsrc_gaddr(0,0,tree&)
form_center tree&,x,y,w,h
dum=FNobjc_draw(tree&,0,10,x,y,w,h)
DO
    but=FNform_do(tree&,line1)
    PRINT but
LOOP UNTIL but=quit_but
dum=FNrsrc_free

'include the BH file

'if rsrc_load failed then
'define alert string
'display alert box
'quit

'let the user interact with box
'print button number
'loop until QUIT button is pressed
```

ADDRESS.BH file which was produced with **WERCS**. This file is a standard text file, so you can load it into the BASIC editor and have a look. Don't change it though: if you do, you won't be able to run the example programs shown on these pages. Try running Listing Two to see how the file is used.

You can see how the **BH** file enables you to call objects by name instead of by a meaningless number. Note the **FNform_do** now takes line1 instead of 0, this is the correct way of using the call. Line1 is the name of the first editable object, ie the first object you can type into. Failing to pass the correct object when calling **FNform_do** will normally crash the

HISOFT BASIC

LISTING THREE

```

SUB load_book
SHARED book$( ), items
STATIC i, a$, dum
IF EXISTS("BOOK.DAT") THEN
  OPEN "BOOK.DAT" FOR INPUT AS #1
  DO
    LINE INPUT #1, book$(i)
    INCR i
  LOOP UNTIL EOF(1)
  CLOSE #1
  items=i-1
ELSE
  a$="[1] [ Address book not found. ] [Continue]"
  dum=FNform_alert(1,a$)
END IF
END SUB

SUB save_book
SHARED book$( ), items
STATIC i
OPEN "BOOK.DAT" FOR OUTPUT AS #1
FOR i=0 TO items
  PRINT #1, book$(i)
NEXT i
CLOSE #1
END SUB

```

system. Additionally, if you add more objects to the resource file, the object number may change, but its name will not. This makes further improvements and additions to the program much easier. If you use a hard disk you may, of course, copy all relating files to it and change the paths accordingly. You will also notice that once you have pressed a button it remains selected. The AES does not automatically deselect buttons for you - it is up to you to do that and you will later see how it's done.

INTEGRATING THE DIALOGUE BOX

Now that you know how to load and use a resource file, it can be integrated with last month's program. This involves modifying many of the sub programs. First, all screen output using PRINT is not needed any more because all text will be entered and displayed in the dialogue box. In addition, sub_menu is no longer needed as all options are now available in the form of buttons. What we need to do is to insert the subs one by one, changing them as we go along until the program is fully working. The first and easiest subs to deal with are the load and save subs. In case you do not have the listing for the old program we have included the source code on the cover disk

in the file OLDADDRS.BAS.

The loading and saving subs were previously used to print a message to screen and we will first change these into proper alerts. The subs will now look like Listing Three (above).

We can now convert the main loop. This was based around the user pressing a key which was recorded with the INKEYS function. The loop will now use FNform_do instead, waiting for you to press a button. The new main loop and startup code are shown in Listing Four (right).

Sub info can be used as it is because it simply counts items and displays an alert, just copy it from the original program. The names of the buttons were defined using WERCS and you can use the file ADDRESS.BH as a reference, just like the program itself does. If you now merge the subs info, save_book and load_book, you should be able to run the program. Although you are not yet able to enter new names or even display them in the box, you should be able to click on some of the buttons to call some of the subs and of course, quit the program.

THE HISOFT GEM TOOLKIT

The road to a fully-working GEM program would be a real minefield without the *HiSoft GEM Toolkit*.

This is a collection of **BASIC** routines written by Dave Nutkins which greatly simplifies the use of resource files and other GEM objects such as the file selector and windows. On the cover disk this month is a selection of **HGT** routines, specially adapted for use with our program.

The first problem the **HGT** can solve for us is the deselection of the buttons. First, make sure that the file HGT.BAS is in the same folder as the resource file and the BH file, then add the line: 'Sinclude A:\ADDRESS.GEM\HGT.BAS so it is the third line in the program. Now add the following line just below the FNform_do line in the main loop: **deselect but**

This calls the sub **deselect** and passes it the selected button as a parameter. The sub **deselects** the button and the next time our loop executes and FNbjc_draw is called, the button will return to its normal state. Remember, it is not enough to just **deselect** the button.

The next thing to tackle is entering new names to the address book. Again, we will use one of the **HGT** routines to read the text from the dialogue box. FNform_do enables you to type in the details and the HGT sub **gette_ptext** will help you get the text from the dialogue box. For the curious, the sub works by directly reading the memory location used by the AES to store the text. This memory can-

LISTING FOUR

```

DEFINT a-z
LIBRARY "gemaos"
'Sinclude A:\ADDRESS.GEM\ADDRESS.BH
CONST cell_size=6
DIM book$(100*cell_size-1)

tmp=FNrsrc_load("A:\ADDRESS.GEM\ADDRESS.RSC")
IF tmp=0 THEN
  a$="[3] [ Resource file not found ] [Abort]"
  dum=FNform_alert(1,a$)
  STOP
END IF
dum=FNrsrc_gaddr(0,0,tree8)
form_center tree8,x,y,w,h

CALL load_book

DO
  dum=FNbjc_draw(tree8,0,10,x,y,w,h)
  but=FNform_do(tree8,line1)
  SELECT CASE but
    CASE=save_but
      CALL save_book
    CASE=quit_but
      CALL quit
    CASE=info_but
      CALL info
  END SELECT
LOOP

SUB quit
STATIC a$,but,dum
a$="[2] [ Save address book | before quitting? ] [Save] [Quit] [Cancel]"
but=FNform_alert(1,a$)
SELECT CASE but
  CASE=3
    EXIT SUB 'if cancel then exit sub
  CASE=1
    CALL save_book 'if save then save then
    'continue
END SELECT
dum=FNrsrc_free 'free memory
SYSTEM 'then quit
END SUB

```


LISTING 5

```

SUB new_name
SHARED book$(1),items
LOCAL tmp$(5)
STATIC i,a$,dum,btn
IF items>=599 THEN
  a$="[3][ Book is full. ][Cancel]"
  dum=FNform_alert(1,a$)
  EXIT SUB
END IF
gette_ptext line1,tmp$(0)      'get text from objects and
gette_ptext line2,tmp$(1)    'store in the temporary text array
gette_ptext line3,tmp$(2)
gette_ptext line4,tmp$(3)
gette_ptext line5,tmp$(4)
gette_ptext line6,tmp$(5)
a$="[2][ Store new name. | Are you sure? ][Yes|No]"
btn=FNform_alert(1,a$)
IF btn=2 THEN EXIT SUB      'if answer is no then exit sub
FOR i=0 TO 5                'store temporary text in
  book$(i+items)=tmp$(i)   'the main array
NEXT i
items=items+cell_size
BEEP
END SUB

```

not be accessed with normal **BASIC** calls such as **LINE INPUT**, for example.

The sub is very simple to use and is passed only two parameters; the first is the object number and the second is a text variable which is initially empty.

Thanks to the BH file we can actually call the objects by name instead of numbers. The sub looks at the object and stores the text in that object in the variable. Since there are six text objects in the box, we need to call the sub six times – once for each object. The sub must be called after **FNform_do** which is the part of the program that enables the user to input text into the objects. In keeping with the modular structure we will re-write the sub **new_name** to accommodate this call. See Listing Five.

You also need to add the following lines to the main loop so that the sub is called when the user presses the New button:

```

CASE=new_btn
CALL new_name

```

From a user's point of view, the way to enter a new name in the book is to type it then press new. An alert will pop up asking for confirmation and clicking on the Yes

button will store the name.

CONSTANTS AND VARIABLES

BASIC, and other programming languages, use variables in a way that may remind you of your school Algebra. A variable is given a name and assigned a value as in the example below. You can give a variable any name you like as long as you don't use reserved words such as **PRINT**, **INSTR** or other **BASIC** command names.

A variable name cannot have any spaces or other symbols included in it, you may only use the standard alphabet and the underline character:

```

myvariable=50
another_one=5*15-2
new_var=myvariable*2

```

In **HiSoft BASIC** a variable has a value of zero unless you assign another value to it. By definition, variables may change their value as in the following example:

```

INCR my_variable
IF my_variable=50 THEN my_variable=0

```

Text variables are similar but use the "S" at the end of the variable name. Like numeric variables, you may change the 'value' of text

*The dialogue box is displayed with **FNobjc_draw** and once **FNform_do** is called, the user can type in text into the editable text objects. This text is stored in memory and the program can obtain it via the **HGT** sub **gette_ptext**. The buttons were defined as exit objects so when user clicks on one of them, **FNform_do** exits and the program can then continue accordingly.*



Pressing a button selects it before the form exits. The button must be deselected and the form redrawn manually. Unlike alert boxes, this is not done automatically by the AES.

(string) variables at any time.

Constants are rather different. First, by definition, a constant may not change its value – once a value is assigned to a constant, there is no way of changing it while the program is running.

Additionally, constants can only have short integer values between -32768 and +32767 and there are no string constants. The BH file we used with the resource file contains constants which enables you to use meaningful names instead of numbers.

RECAP

So far in this tutorial you have seen how a resource file is loaded, how the objects in the file are displayed and to some degree how to interact with these objects.

FNform_do is the AES call that

enables the user to type into text objects and click on buttons. The call is similar to **FNform_alert**, except that it offers more flexibility, coupled with more complications – unlike alerts, proper dialogue boxes have to be centred (**form_center**), displayed (**FNobjc_draw**) and only then can you call **FNform_do**.

When **FNform_do** exits, the objects have to be deselected and redrawn. Still, it is worth the trouble; a proper GEM application with menus and dialogue boxes looks much more professional and is easier to use.

Next month sees the final part of this tutorial series on **HiSoft BASIC** and by the end of it you should have a fully working GEM-based address book program.

OBJECT TREES

Objects in a resource file are organised into groups called object trees. These are similar in concept to family trees and are used to access objects separately or in groups. The address book dialogue box is a tree where the buttons and text fields are the 'branches' of the outer box. This enables us to place all objects in the box in the centre of the screen by only centering the 'parent' object – the outer box. There are five types of tree – menus, forms, free images, free strings and alert boxes. While strings and alerts are quite easy to create with **BASIC**, menus are more difficult and forms are almost impossible.

A resource file will normally contain one menu tree and several forms. A form by default is a box which may contain a collection of up to 13 different types of object. These include smaller boxes, buttons, text objects, editable text objects, icons and images. While most objects can only be clicked on, editable objects display a cursor when **FNform_do** is called and enable the user to type in some data. Menus normally contain two different types of objects – title and string objects.

Objects can have different attributes assigned to them and these can be changed by the program while it's running. Attributes may be as trivial as the appearance of the object, or more important such as the ability to select an object or click on it to exit **FNform_do**. You may have noticed that not all buttons in some dialogue boxes exit the box, some are defined as radio buttons so that only one can be selected at any one time while the other buttons 'jump' out.

A program can only access objects by obtaining their memory address after the resource file has been loaded. There are no specific system calls to edit or use the objects, instead an object resides in memory with a specifically defined memory location for each of its attributes. The program can then read and write to these memory addresses. The HGT routines included on the cover disk provide an example of how this is done.

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WARP 9

Formerly Quick ST, this is the latest and greatest software screen accelerator for the ST/TT: graphics and text look the same, but appear with astonishing speed. Includes a host of utilities from Codehead Software: mouse accelerator, desktop pictures, new system fonts, keyboard control over dialogs, and excellent After-Dark-silver modular screen saver. Price: £24.95, upgrades from other screen accelerators (return manual cover): £12.95.

Imagecopy

Copy images from screen, view and convert images, and print images on a wide range of printers, including: 9-pin, 24-pin, BJ Bubblejet, and HP Laserjet and Deskjet. Price: £9.95. -Available now - Imagecopy Colour with support for colour printers: £14.95

The ST Club

64 page

Catalogue out now

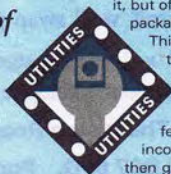
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BOOTS WITH BELLS ON

ATARIST REVIEW
ESSENTIAL BUY

Tony Kaye checks out a cheap and effective way of customising your ST's start-up...



Almost as important as an application is having the right accessories to run with it, but often what's good for one package is bad for another.

This means that you have to go through the painful procedure of reconfiguring the hard disk every time you run a different program to clear incompatible accessories, then go through the rigmarole of filling your AUTO folder with the necessary software.

There is a way around this, though. There are programs to help you get the right configuration at the beginning of a work session with minimal hassle. These are nothing new, but many have gone through revisions since they first emerged, to include new features and cater for the latest software. One of the best is the shareware package *Superboot*.

The latest version, V8.0, is designed to make working with a hard disk easier, but there is no reason why you can't use it with a floppy based system. The operation will be slower, but having one



The welcome screen can even be a picture of the Enterprise!

disk containing all of your startup requirements is convenient.

SUPERBOOT V8.0

Superboot was developed by American programmer Gordon Moore. Its main purpose is to configure the system to your requirements at startup so that it loads specific auto-programs, GDOS and accessories.

It is installed by placing SUPERBT.PRG first in the AUTO folder so that it runs before anything else. Place SUPERBTA.PRG in the same folder last. This provides protection against programs that cause the system to reboot, when installing a RAMdisk for example. Next time you boot the

system with this disk in drive A or with your hard disk, you are greeted by the *Superboot* loading screen or, if you've configured the program to do so, a picture. If you opted for the latter, striking a key will call up the *Superboot* screen. From here you are able to select which AUTO programs and which accessories are loaded. If you want to go a little further, you can configure the program to choose different desktops, GDOS files and any other files you may need. You can hide programs from *Superboot* if you need them every time (be careful!) and you can organise up to 30 pre-defined desktops.

CONFIGURING SUPERBOOT

A program called SUPER_CS.PRG is provided which lets you tailor *Superboot* to your own requirements. The adjustable program parameters include time and date, a welcome screen and sound sample, selectable column sizes for each category, hot-key bypass and many others. In fact, the only thing missing from this excellent package is mouse control. This isn't really a problem, but it may be something to include in version 9. *Superboot* is easy to get to grips with and another of those programs that you wonder how you ever managed without.

A WORD ABOUT SHAREWARE

Shareware is not PD. It is a method of distributing software without the overheads associated with publishers and distributors. Some

Function Key Editing

Create/Edit Function Keys

F1	F2	F3	F4	F5	F6	F7	F8	F9	F10
NORMAL			ALT			CONTROL			

Edit/Copy/Erase Key(s)	Print Function Key Listing
Exit and save changes	Exit with no changes

Function Key Descriptions

F1 Timeworks
F2 CAD3D
F3 1st Word +
F4
F5
F6
F7
F8
F9
F10

You can edit specific setups using the function keys and even auto-run the main programs from this menu.

TALKING BACK

Comms is all about communicating, and conferences are the best way to go about getting your electronic voice heard and keeping up with the latest happenings in the world of Atari, as Mark Baines discovers. . .

There are essentially three types of on-line 'services' - bulletin boards, conferencing systems and information services. The very names are indicative of what they are about: sending and receiving messages. Public messages can be sent in conferences and echoes or private ones in E-Mail or NetMail.



The range of topics covered is huge: CIX, for instance, has nearly 2,000. FidoNet has the most and has 18,000 nodes worldwide. Many of the systems provide 'gateways' into other networks or receive their conferences in read-only mode. CIX, FidoNet and NeST all receive some of the worldwide Usenet conferences.

CONFERENCES

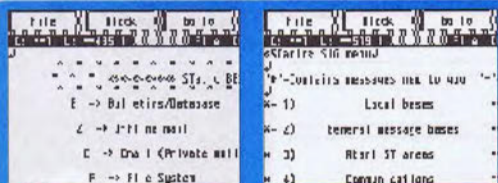
All services have conferences. These are special areas where open discussions and questions are encouraged. Conferences normally have a particular topic, such as Atari computers, comms, wants and sales, and discussion is not allowed to wander from that theme. Each conference has a moderator, an appointed person who watches the discussions, trying to keep peace and hold the conversations to their theme.

Conferences are a great way to exchange views and information and to ask for help. For instance, if you are having problems with your hard disk, a message left in a technical, ST or hardware conference will bring forth all sorts of solutions. If you want to find out the latest on the Falcon, then the Atari conferences are a good place to get this information. As messages only take a few days to wing their way around the world, the conferences contain up-to-date information on most topics. Atari company representatives, developers and programmers all use these networks, giving you direct contact with the experts.

E-MAIL

You can enter private messages in the public conferences in some networks, but this is generally discouraged as users often get frustrated at seeing inaccessible messages. The correct way to send private messages is to send them through E-Mail or NetMail. These are addressed to specific individuals and eventually get routed to the person's point of access or node ready for them to collect when they log on. If your software allows it you can send copies to others and attach files to them. In systems geared to E-Mail, you can discover whether the addressee has received your message.

There are many benefits to using conferences. However, most on-liners only read them and don't contribute. They can seem intimidating and many feel that it would be rude to jump into active discussions. This isn't so: everyone has something to contribute. Many conferences are serious affairs so if you want to let your hair down there are general chat conferences. Many new users find these easier to get into until they gain more confidence and experience.



Look in the Main Menu for the locations of the Message and E-Mail areas.

Conferences are often grouped into Special Interest Groups. Here I'm switching to SIG 5.

GET TALKING

Below is a list of conferences that are of special interest to Atari owners

FidoNet Echoes:

ATARI
ATARIST
COMM/S
C.ECHO
MIDI-NET
ST_PROG
ST_SOFT

Atari Micros
ST Discussions
Computer Communications
C Language Programming
MIDI and Interfacing
Atari ST Programming
Free ST Software Discussions

NeST Echoes:

N_ST
N_MIDI
N_STGFX
N_STPROG
N_CPROG
N_GFA
N_COMCOM
N_DTP
COMP.SYS.ATARI.ST
N_ST_REVIEW
N_JEKYLL
N_MINT

ST General Discussions
MIDI and Music
ST Graphics
ST Programming
ST.C Programming
GFA Programming
ST Communications
ST Desktop Publishing
ST Link into Usenet
Gateway to FidoNet ST_REVIEW
Jekyll Support
MINT Support

TurboNet Echoes:

T_FZTSUP
T_INTECH
T_ATARIS
T_PROGER
T_CCOMMS
T_GRAFIX
T_STMIDI

Freeze Dried Support
International Technical
Atari General Discussions
General Programming
Computer Communications
Computer Graphics
ST Midi and Music

CIX conferences:

atari.st
atari.st.desk
atari.st.neode
atari.st.prog
lynx
mint
arnor
gfa
gst.qa
hisoft
hisoft.devdev
hisoft.tv
compo
prospero
timeworks
atari.gnu

Atari ST
Alternative Desktops
NeoDesk Desktop
Atari ST and TT Programming
Atari Lynx
MINT Support
Arnor Support
GFA Support
GST Support
Hisoft Support
HiSoft Devpac Developer Support
HiSoft Technical Support
Compo Support
Prospero Support
Timeworks Publisher Support
GNU Tools Support

STALKER 3

Tony Kaye forgets his hang-ups and gets wired with a novel terminal package...

ST BUYER

With the highly successful **Neodesk** under its belt, Compo Software has now come up with a terminal package which caters for both novice and advanced comms users.

Stalker 3 comes with some very useful features not seen before in a terminal program. It runs inside a GEM window and in the background. This means that, during a long file transfer, for example, you can use other GEM-based programs. This is probably the closest thing to multi-tasking on a standard ST!

An excellent manual is provided; there are 80 pages devoted to **Stalker** itself and another 134 covering its scripting language, **BackTALK**. The manual covers everything from installing the program to using it with **Neodesk** and other programs.

INSTALLING THE PROGRAM

The installation program copies the software to drives A, B or C. You can install **Stalker** as a program or an accessory, the latter being more flexible. **Stalker** can be run from the Desk menu or by double clicking on the program file.

Stalker has a full GEM interface and all controls are easy to find and

use. The package covers just about every angle: there are keyboard shortcuts for the commands, easy-to-use dialogue boxes and a wide range of features. The system is easy to operate and comms users of all levels should be able to put it to good use.

The dial directory function lets you set up each individual number along with its own attributes and there is enough space for 36 entries with your choice of up to 10 appearing in the automatic dialling menu. It also tells you how long you've been connected, and if you program the rate, it'll tell you how much your call is costing.

Each board can be configured with specific details of comms settings, terminal emulation mode, transfer protocols, login text and **BackTALK** script.

BACKTALK

BackTALK is the scripting language supplied with **Stalker**. It allows you to create routines to cover repetitive tasks such as logging on to your favourite bulletin board, checking your mail and logging off again. It's based on the C programming language, so if you have an understanding of C or Pascal, **BackTALK** should be relatively easy.

If not, don't worry, a full tutorial is provided in the manual.

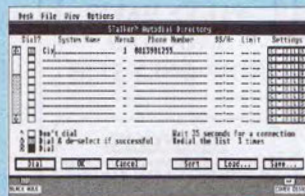
Creating a program in **BackTALK** requires a text editor (a word processor that will save files in ASCII format is fine). There are two tutorials, one for new users and one for those who know a bit about programming. They don't try to teach you everything, but give a grounding in the principles of the language.

The reference section of the manual goes into detail about the commands and the syntax used. Once a program has been written, it is a simple matter of using the supplied compiler to turn it into something that **Stalker** can understand and use.

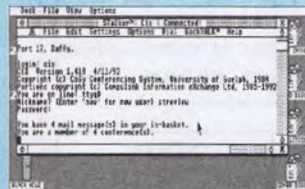
BackTALK gives the ardent comms user the flexibility he or she requires to make operations easier although **Stalker** will run quite happily without the language.

CONCLUSIONS

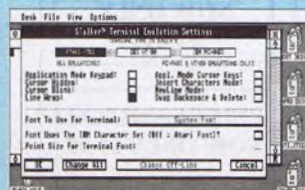
Stalker is, without a doubt, a great terminal package. It's easy to use and understand, even for the novice. At £40, it's a little costly, but as the old saying goes, "you get what you pay for", and **Stalker** is definitely worth paying for.



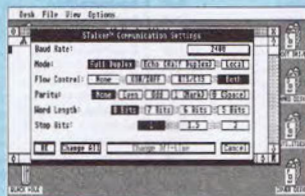
Configuring the Autodial directory. The settings for each board can be altered one by one.



Connection to CIx using Stalker is as simple as clicking on a menu.



Three terminal emulation modes are supported.



General settings are made from the menu or the settings options on the Autodial screen.



Receiving a file during a First Word Plus work session.



Selecting the transfer protocol.

User friendly
Background operation

PROS AND CONS

Can be confusing

"A flexible terminal with many useful features"

NAME: STALKER 3
COMPANY: COMPO
SOFTWARE
CONTACT: 0480 891819

PRICE: £39.00
RELEASE DATE: OUT NOW
MIN MEMORY: 0.5MB

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WIN A HIGH DENSITY DISK DRIVE

WORTH OVER
£120

Double the contents of your floppy disks with this great upgrade. Our winner will have one fitted free by Atari Workshop in London



The TEAC high density disk drive and module that could be fitted into your computer.

In association with Atari Workshop, we're offering you the chance to win a high density disk drive and have it fitted in your ST. The drive will hold twice as much information as a standard double density drive - up to 1.44 Megabytes of information. On page 36, you can see exactly how the upgrade is fitted.

SOLDERING

With the e1Co high density disk drive module, you can read standard ST single and double density disks as well as formatting, writing to and reading the high density disks. Installation is not straightforward. It requires a good knowledge of the ST and confidence with a soldering iron. It's not a job for an amateur: we do not recommend that you try to fit this upgrade yourself unless you are sure that you know what you are doing. Our lucky winner won't have to worry about soldering skills as the module will be fitted professionally by Atari Workshop.

CHIPS WITH EVERYTHING

Your ST has one of three different floppy disk drive controllers. If it

has the wrong one, it will need to be changed to a chip that will allow the high density module to work properly. A new chip would cost £25, but this will also be changed, if needed, for our winner.

Read the article and then answer the questions below. Send your answers to us on a postcard or on the back of a sealed envelope and, if yours is the first out of the hat, your computer will be treated to a first class trip to East Dulwich in London and returned to you with the upgrade fitted. This service would normally cost you at least £129.99.

ATARI WORKSHOP

Atari Workshop is situated in East Dulwich in South East London and stocks a wide range of accessories and software for your ST including accelerators, screen enhancers, emulators, and also carries out general repairs.

HOW TO ENTER

To win the upgrade, all you need to do is to answer the following easy questions:

1. What is the storage capacity of a High Density disk?
2. How can you identify a High Density disk from any other 3.5" disk?
3. What change is noticeable with TOS 2.06 when a High Density disk drive is installed?

Write your answers on a postcard or the back of a sealed envelope and send it to: **Atari ST Review, Priory Court, 30-32 Farringdon Lane, London, EC1R 3AU** to reach us by 14th March 1993. Don't forget your name and address.

RULES

The competition is open to all readers of Atari ST Review, except for employees and relatives of EMAP Images Ltd or Atari Workshop. The first correct entry will receive a complete high density disk drive upgrade fitted by Atari Workshop. There is no cash alternative and the editor's decision is final. No correspondence will be entered into.

ASK THE EXPERTS

Help! That's the cry from most ST owners at one time or another. This page should have Don't Panic written in large friendly letters on the top. Pour your problems onto paper, send them to us, and we'll see what we can do...

SETTLING THE SCORE

I have an STE with a two Megabyte upgrade and I'm looking for a score writing program. I don't have any interest in MIDI, but I am a fairly accomplished organist. All I want is to be able to transfer my compositions onto A4 paper.

I have already tried *Final Score* from Goodmans, but it is a high resolution program and doesn't work with either of my two mono emulators.

I just want a basic score writing program which runs in either low or medium resolution and which will print out the results onto paper. The only ones available seem to be either horribly expensive or only mono.

Keith Simpson, Paignton, Devon

Most serious music software is written to run in high resolution and there are only a few exceptions. If you are going to succeed in your aspirations, you will have to invest in a high resolution mono monitor.

If all you want to do is enter a score on-screen and then print it out, there are a few possibilities. The cheapest is *EZ-Score Plus* from Barefoot Software which gives you three staves and costs £116.30; a call to Atlantic Audio (071-272-8944 x248) will have a demo version winging its way to you. Next up is Steinberg's *MasterScore 2*, a full desktop publishing program which retails at £285 - call Harman Audio on 0753 576911 for more info. Finally, *Take Control* (021 415 4155) has a program called *Music DTP* at £305.50; a call to them will again have a demo disk returned to you.

WHERE ARE MY DISKS?

I've got a problem for you to sort out. I bought your September issue specifically because of the *First Word Plus* cover disk. I put the disk in my computer and the message came up

saying that the data on this disk may be damaged, please try again. I tried and tried and got nothing, so I packed it off in a neat little box and included a letter and a cheque for £3 to cover postage and packing, time and motion and anything else you might want to charge me for, because I know that no-one does ovt for nowt!

It seems to me that no-one is able to open the box, even though I put nearly a quid's worth of stamps and sellotape on it.

Is there any chance at all of getting a pair of working, so-called free disks? After all, I did buy the bl**dy magazine only because I wanted a copy of *First Word Plus*!

Do you really read any of the letters that are sent to you or are all the letters really pseudonyms for the editors?

Is there any chance whatsoever of getting a response? I know I'm only a thick bimbo from the North-East, but I do think I'm entitled to a pair of working cover disks. After all, I paid for them twice.

M Cato, Wallsend, Tyne & Wear

We've searched the office high and low and unfortunately it looks like your disks never actually arrived here! All the disks that we received have been returned to their owners and there are none left over. What address did you send them to? Some disks were sent to us here, and they were sent out as soon as possible. Others were sent to PC Wise, our disk duplicators, and these too would have been sent out immediately. I think the fact that we've printed and replied to your letter indicates that we do indeed read our mail and that the letters we print are genuine.

HOW DO I USE ACCESSORIES?

I have found recent copies of your magazine most interesting and useful, but I have to admit to being baffled by the directions for use of the smaller programs on disk two with the December 1992 issue.

Alarm and *Autobak*, page 25, are to be placed in the root directory

of the boot disk'. I can find no mention of how to do this in the owner's manual or other reference books I have.

Please will you explain what this means, and how I can place them correctly if, for instance, I am using *First Word Plus*?

No doubt there is a very simple answer, but I would be most grateful for your advice, however brief.

J C Kirtland, Cottingham, N Humberside

Hopefully, all of your questions were answered in last month's feature on accessories. To recap, the root directory of any disk is the first window that opens when you double click on the drive icon, that is, not within any folders.

If you can see a file with the .ACC extension, it will be loaded off the disk when the computer is switched on.

To use an accessory in conjunction with any other GEM-based program, simply boot up with the accessory disk and then swap it for the program disk. If, however, you want to run Timeworks, you'll need to copy the accessory to the root directory of the Timeworks startup disk, otherwise GDOS will not be loaded. Without GDOS, Timeworks will not run.

BIORHYTHMS

I was very interested in your reviews of offbeat programs in issue seven (November 1992), especially *Biorhythms*, as I

have been trying to lay my hands on this program for some time. Could you please tell me the best supplier to obtain it from along with the price. I hope you can help.

M Mayes, Sudbury, Suffolk

There is a box at the end of the article with the details of the suppliers. All of the programs featured are available in the public domain, so you should find that they cost no more than around £2.75.

The two companies that supplied the majority of the programs reviewed are: 16/32 PDL (0634 710788) and Floppyshop (0224 586208).

MAC TO ST TO MAC?

I am a student at Kingston University and in our Information Systems Labs, we have a range of Apple Macintosh computers running applications such as

MacDraw II and II and MacPaint. What I would like to know is:

1. Can you port Degas and Neochrome pictures over to the Macintosh?

2. Can the Mac and the ST read each other's disks?

Finally, I am considering buying a hard disk drive. I own a 1040 STE, and have the following questions:

1. Is it true that only Atari hard drives will run with the STE?

2. If not, which hard drive would you recommend?

3. How long do hard disk drives last? I've heard many people talking about hard disk corruptions.

Richard Narine, South Crondon, Surrey

Good news, Richard. You can port programs across using a shareware program on the Mac called Imagery. The program will output .TIFF and .PICT file formats which you can use on the Mac, although MacDraw can't handle anything greater than 8-bit colour files.

The second question is a little more difficult to answer. The ST isn't able to read Macintosh disks as their format is quite different. However, the Macintosh is capable of reading ST disks if you have a program called DOS Mounter.

As there is a need for both machines to be PC compatible, and the STE produces MS-DOS format disks, there is no problem.

Any SCSI drive will work with the STE, but an ST-specific host adaptor is required. This is usually included in a ready-made hard disk drive.

Try one of the Protar range or call the Atari Workshop on 081 693 4919 for more information. Hard disk drives have quite a long lifespan.

The corruptions that you are likely to hear about with hard disk drives are data corruptions caused by other problems and rarely disk faults.



WHICH ST?

I am considering buying an Atari computer, but I am unsure of a few things that I would like to know before I buy:

1. What are the differences between an Atari 520 ST, STE, STM and STFM?
2. What is the difference between a 520 and a 1040?
3. Are their games compatible across all Atari machines?
4. Can you tell me which is the best Atari for running games and word processors?
5. Can you recommend a reasonably priced printer?

Neil Rogers, Newcastle, Tyne and Wear

1. The ST has undergone various facelifts throughout its history. The original was the ST, which needed an external disk drive and a monitor (not a TV). Then Atari added the modulator to run the computer with a television and the STM was born. The STF and STFM were next, having a built-in disk drive (STF) and modulator (STFM). The STE is the latest in the line. It has a Blitter chip for faster graphics handling, 4096 colours, two extra joystick ports and stereo sound capabilities. The operating system has been updated too and the current STE has version 1.62.

2. The simple difference is memory. The 520 has 512Kilobytes of RAM (half a Megabyte) and the 1040 has 1024K (one Megabyte).

3. The majority of software will run on all machines. There is the odd program that won't run, but they are few and far between.

4. Any of the range would suit your purposes, although I'd recommend getting a machine with at least one Megabyte of RAM. A lot of new games need this as a minimum nowadays and utilities will definitely appreciate more memory.

5. There is a good range of printers available these days. Epson produces two excellent machines, the LX-100 9-pin and the LQ-100 24-pin at £189 and £245 respectively. You can, however, get these much cheaper by shopping around.

STARTING MUSIC

I have an Atari 520 STFM and I would like to start making my own music.

The problem is that I just don't know where to start. I would like to know what are the

best music packages available and the best to start off with?

K Everett, Bishops Stortford, Herts.

Take a look at last month's *MIDI Monthly* which had a complete buyer's guide to music sequencing packages.

Do you only have half a Meg of RAM? If so, you'll be limited in the programs you can consider. The best advice is to upgrade to one Megabyte.

If you have never worked with a sequencer, check out *Sequencer One Plus from Gajits (061 236 2515)*, a flexible sequencer with good features for less than £60.

VIRAL INFECTION

I want to congratulate you on producing an excellent magazine. I have bought all your issues and find every one packed with interesting news and reviews.

The only problem that I can find, and so do my friends, is that your cover disks contain viruses.

Every issue I've found myself having to replace them three or four times before I am satisfied, and even then the disks are not right. I was looking through the problem pages and found that other readers of your magazine are having the same problem; A N Walton, Bracknell, Berks and P Luckham, Exeter, Devon (both issue six - October 1992).

You gave a number of reasons for these problems but I know that A N Walton and P Luckham were not doing anything wrong. I have had my 1040 STE for a year and I know it inside out.

Please don't fault me or my computer, it comes down to one thing - there is definitely something wrong with your cover disks. I have no problems with the other magazines, please could you look at the matter more seriously?

N Thomas, Merthyr Tydfil, Mid Glamorgan

We take suggestions like this very seriously, Mr. Thomas. We can assure you that we are the only ST magazine on the news stands NEVER to have had a virus on our cover disks.

I can only suggest that you are not using them correctly. It can be difficult to use a disk if you're not fully aware of the operating system and its little quirks.

Things to check are: have you got a double-sided disk drive?; have you removed the RAMdisk by deleting or renaming it (in the AUTO folder); and have you followed all the instructions

in the magazine pertaining to the disks?

IN THE BEGINNING

As a newcomer to the Atari and your magazine (both of which are brilliant), I would like to upgrade to the Falcon. However, I have a few questions.

1. Will your future cover disks run on the Falcon?
2. Will you be able to get the true colours on a normal television/SC1435 monitor or will you need a VGA monitor?
3. Is it possible that the Falcon could be outdated soon by the release of the Falcon040?
4. Will the mouse plug be in the same (silly) place?
5. Is it possible that you could print the *Lenmings* codes? As a newcomer I'm pulling my hair out!
6. How about more coverage to readers' letters?

Thank you, I look forward to your reply.

K Norman, Leyton, London

As we've said many times before, the Falcon is definitely not intended as an upgrade for the ST. However, a lot of people are considering getting one, whatever their reasons, so here goes with the answers to your questions:

1. Not necessarily. It will depend on how well written each program is. Some programs will run if they have been written within Atari's guidelines, but it is unlikely that games will perform.
2. The true colour mode is available to users of a colour monitor or a VGA monitor. A television is not recommended for this.
3. The Falcon040 is only a rumour at the moment, but if it is developed, it will be nothing more than a faster, more powerful version of the 030. Therefore, with no significant changes in architecture, the 040 will not outdate the 030. Anyway, we're talking well into the future.
4. The mouse will plug into the same port as before on the early Falcons. However, when the case is redesigned in the Spring, the so-called 'consumer version' could well have a better position for it.
5. No. Unfortunately, space does not normally allow us to print this kind of solution for a game.
6. You'll probably already have noticed that we've done just that. By moving the charts page into the news section, we have created a whole extra page that is now devoted to letters.

TO EMULATE OR NOT TO EMULATE

I am planning to buy a PC emulator very soon and have a few questions for you.

1. Do I need more than 512K of memory to run Windows on the emulator?
2. What emulator would you advise me to buy out of PC Speed and AT Speed for the use of Windows plus business and leisure games?
3. What is DR DOS?
4. Do I need to get a hard drive to run Windows or any other programs on the computer?

By the way, thank you for putting *Timeworks* on November's cover disk. I was originally going to get it for Christmas.

Mark Paul, Scarborough, N Yorks.

All we seem to be getting this month are lists of questions Anyway, here goes.

1. Yes. You will need at least two Megabytes to run Windows successfully. PC programming tends to be sloppy, as memory is a lot cheaper than programmers' time. This means that the average PC program is much bigger than its ST counterpart and a lot of memory is required.
2. Neither. For the kind of use you are describing, I'd advise you to buy a cheap PC clone. You are trying to squeeze a quart into a pint pot and emulators will always only be a compromise. You need at least a 386 based machine to run most PC games, so a cheap clone will save you money in the long run.
3. DR stands for Digital Research. They are the company that developed the Disk Operating System (DOS). This is the alternative to MS DOS (Microsoft).
4. Yes. Answer two applies here. Most PC programs are large and, although most can be run from disk, it's very limiting and will soon wear you down. Any serious use of a computer, be it ST, PC or any other, requires a hard disk.
- Thanks for the compliment, too. You can use the money you saved to get a subscription to ST Review and even send for *Timeworks* 2!

PROBLEMS OF EPIC PROPORTIONS

I've got a problem with Ocean's space saga, *Epic*. Basically, it refuses to run. I returned it and rushed the



replacement home to give the Rexon Empire a bashing, only to find that it refused to load. This seemed a bit unlikely, so I rushed it round to a neighbour who has a one year old 1040 STFM. It loaded with music, titles and action. After prising it from their disk drive, I rushed it round to another friend to try it on his 520 STFM. Again, I experienced more of the same (without the music this time, of course).

I left to words like "I'll swap it for a blank disk", and "maybe your machine doesn't feel the force, Luke" - which is strange as my name's not Luke!

Well, since then, my one Megabyte upgrade from your Special Offers section arrived. To anyone worried about fitting it, go ahead, it's not as difficult as you might think.

Alas, still no success with *Epic* and there was I, dressed in my silver suit and crash helmet ready to save 60 million civilian lives. You can imagine the sniggers and giggles I had to endure from my wife and children when all I now got was a blank red screen. I never even got to clear the windscreen of my *Epic* fighter.

I'm awash and out of my depth with Ocean's game. Any suggestions for getting the game space-borne?

Using *Which ST?* I have discovered that I have a 520 STFM with TOS 1.00 and dated 20/11/85, with one Megabyte of memory. I changed the disk drive last year for a Sony drive which I purchased from Power Computing and I've had no problems with any other disks, so where is this one going wrong?

Brian Dicker, Poole, Dorset

We've spoken to Ocean about this problem and they are not aware of anything specific that might be wrong. However, if you return your original disks to Ocean, they will check them out for you.

Return them to: Testing Department, Ocean Software, 2 Castle Street, Castlefield, Manchester M3 4LZ and enclose a brief note explaining the problems.

Do you need an answer? Can we help you? If so, drop us a line at Ask The Experts, Atari ST Review, Priory Court, 30-32 Farringdon Lane, London, EC1R 3AU. Please help us by putting the nature of your enquiry on the outside of the envelope.

Unfortunately, we cannot guarantee a reply and we are unable to enter into personal correspondence, so save your SAEs.

TIME TO UPGRADE



I need some advice. I have a 520 STFM (or rather, my son has) and he keeps wanting to play games on it. Quite natural, I suppose.

I have two keyboards, a Roland E15 and a Casio CT770 and I use the Concerto sequencer, *First Word Plus*, *Music Construction Set* and *Timeworks*, amongst others. I have a Star LC10 printer.

What I would like to know is, if I bought a two Megabyte Mega STE, will these programs run? Will I need a monitor, or will a TV work on the Mega?

Alternatively, would I be better suited with a 1040 STE upgraded to two megabytes, although I would like the keyboard to be separate to the computer as on the Mega ST?

D.M. Priestley, Carmarthen, Dyfed

There should be no problems with the Mega and the software that you have described. All of the programs should run with no problems at all.

The Mega range does not have an RF modulator, so it won't work with a normal television. You would need at least a television with a Scart input, but ideally you should invest in a monitor.

The Mega has a faster processor speed (16 Mhz as opposed to eight on the STE) and comes with TOS 2.06.

The Mega STE has a high density disk drive as standard. This means that you can format your own disks to hold as much as 1.44 Mb on them, but they will not be able to be read by the 520.

If it's a simple choice between an upgraded 1040 and a Mega, our preference here would be to take the Mega, but you should bear in mind that you will have to slow the machine down for ST games and there will be a few that won't run. As I've already stated, you will also need a monitor.

STREETFIGHTER II PROBLEMS



After reading the hype preview in your excellent magazine for *Streetfighter II*, I rushed to the nearest computer store clutching an assortment of five pound notes, pound coins and fifty pence pieces and purchased the game. I then rushed to my humble abode and put my "Do not disturb until 1994 or until the Falcon costs £199" sign on my door and prepared to do eternal battle with Ryu and Ken, but to my dismay, it didn't work.

After unplugging everything bar the power supply and joysticks and attempting to load the game 10 times, I returned to the store and aired my grievances and was given another copy of *Streetfighter II*.

I then returned home and again with trembling hands placed the disks in my faithful 520 STFM (TOS 1.02, one meg), sat through the title screens and waited to do battle. But, to my dismay yet again, I was left staring at my TV displaying 11 bombs, with my joystick in hand and tears in my eyes. I returned to the store and was told by the infinitely wise store man-

ager: "It's probably your non-Amiga computer or your memory upgrade or it only works on STEs. Here, take this crap game and come back when you've got a decent computer."

Could you please enlighten me before I slit my wrists and go to rest in that big computer heaven in the sky? Is this true or just a bad dream?

My friend who owns a 520 STFM with the same setup as mine has the same problem with this game. Have STFM owners been overlooked by US Gold, or are both our computers knackered?

Desmond Lee, Huddersfield, W. Yorks.

There is nothing wrong with either machine, the fault lies with the software. It seems that the first copies of the game to hit the streets were incompatible with older versions of TOS. This problem has been rectified and by the time you read this the updated version will be on the shelves.

Dannielle Woodyatt at US Gold tells us that if you return your copy of the game to her, she will replace it for you. The address is: Units 2/3, Holford Way, Birmingham B6 7AX.

TONY KAYE

Technical help and general problems.

Our own Tony Kaye will look at any problems related to the day-to-day running of your ST. He can help with technical matters, disk drives and DIY projects. He can also help with your consumer problems.



OFIR GAL

HiSoft BASIC and general programming

What Ofir doesn't know about *HiSoft BASIC*, *HiSoft* doesn't know! If you've got a problem regarding *BASIC* or 68000 programming, Ofir's your man.



VIC LENNARD

Music, MIDI and sound recording

Our very own Associate Editor is also Director of the UK MIDI Association. There's no-one more tuned in to the MIDI music scene than him. He can help with all of your music related problems, from playing to recording.



Are you new to the ST? Having trouble understanding some of the terminology? Our guide should help you. This month, we've included some explanations from the world of music...

ACCESSORY

An accessory is any program with the extension .ACC. It is loaded from the disk in the drive when the computer is switched on, provided that it is in the root directory of that disk (ie not in any folder).

BLITTER

Acronym for Block Image Transfer. This is an extra chip found in the STE that speeds up graphics handling. This means that it improves the performance of your computer. The Blitter chip is also found in the Mega ST and the TT.

BOOT DISK

This is the disk that is in your computer when you switch the machine on (drive A). It should contain any accessories or auto programs that will be needed for the work session.

CACHE

This is an area of memory that is set aside specifically for remembering the directories of disks. Later TOS versions do this automatically and it saves having to read the disk every time you need to see the directory.

DOWNLOAD

Transferring programs from a bul-

LEARN THE LINGO

letin board to your computer is known as downloading.

ERROR MESSAGES

Error messages occur when something is wrong in the system or you try an illegal procedure. An error message is not always a complete disaster and the problem often has an easy solution.

FORMAT

A disk has to be formatted before use. This means dividing it into sections so that the computer can store and retrieve information.

GEM

Stands for Graphics Environment Manager. This is the system of windows, icons and mouse pointer that is used with the ST.

HARD DISK

A hard disk drive is a fast, convenient method of storing programs and provides a reliable alternative to a floppy disk drive. It has a much larger capacity, but it is considerably more expensive to buy and is less portable.

ICONS

Icons are the pictures that depict programs and files. These can be changed on the latest versions of the operating system, but not on the STFM and STE.

JOYSTICK

Mostly used for games playing, the joystick is an alternative method to the mouse of controlling movement on the screen.

K

K is often used as an abbreviation for Kilo and, in computer language means Kilobyte. A Kilobyte is 1024 bytes (one byte being one character of information or a space).

LASER PRINTER

A laser printer provides a high-quality form of printing using laser technology. The principle involved in laser printing is roughly similar to that of a photocopier. An image is created using a photo-sensitive drum and is then transferred onto the paper.

MIDI

Acronym for the Musical Instrument Digital Interface. It was created by American and

Japanese manufacturers in 1982 and is used in millions of pieces of music equipment to provide compatibility between bits of kit from different manufacturers.

NUMERIC KEYPAD

The numeric keypad is the extra set of keys on the right of the keyboard, and was initially designed to ease the inputting of numbers. It has a variety of uses in game and simulation controls.

OCTAVE

A musical scale consisting of eight notes represented by the letters A to G.

POLYPHONY

The total number of notes which a MIDI synth is capable of playing. Not to be confused with 'voices' (see below).

QUIT

Quit is the command that is used by the majority of programs to exit and return to the desktop.

RAMDISK

A RAMdisk is an area of the ST's memory that is set aside to emulate the characteristics of a very fast disk drive. Anything that has been stored using the RAMdisk will, however, be lost as soon as the computer is switched off, so it's vitally important to make sure that you save anything that has been temporarily stored in it to disk before turning the power off.

ROOT DIRECTORY

The root directory is the list of files that can be found in the first window opened on a disk. An Auto folder and any accessories need to be in the root directory of the disk that you boot up with, otherwise they will not load.

SOUND MODULE

A sound module is, simply, a synth without the keyboard. It usually has a small screen to see the name (or names if multi-timbral) of the sound(s) playing. A sound module may let you edit the characteristics of the sounds, or may simply be a preset sound player.

TRACKBALL

This is a ball device that can be used instead of a mouse for moving the pointer around the screen.

UTILITY

These are programs that are designed to help you with other tasks - RAMdisks and formatters are utilities.

VOICES

The number of voices usually matches up with the number of sound generators in a synth, but more than one voice may be used to create a sound. For instance, a sound called 'piano-strings' will probably use two voices, one for piano and the other for strings. If such a synth had 24 voices, and two of these were being used for each sound, this would give a polyphony of only 12 notes.

WYSIWYG

This is an acronym for What You See Is What You Get. In other words, what appears on the screen is what will be printed.

X-CONTROL

Atari's new configurable Control Panel is called XControl. It allows you to edit the environment for comfort in terms of colour, mouse response, keyclicks, bell and other options. This panel is able to configure other programs using files called CPXs.

Y MODEM

A transfer protocol used for transferring data by using a modem on a telephone line. There is also X modem and Z modem (the latter being the fastest).

ZOO

Zoo is a method of archiving that is used to store programs and it is often used to send programs via a modem.

MUSIC AND MIDI

Have you noticed how most important words in MIDI start with either an 'S' or an 'M'? For instance there's MIDI itself, Master or Mother keyboard which is a soundless synth used to control a MIDI system, Multi-timbral, a term for a sound module which can play many sounds at the same time, and Modulation wheel, a control which most synths have and which adds a degree of 'wobble' to a sound.

As for 'S', there's Synth, Sound Module, Sequencer, Standard MIDI File - which allows you to create a song on one sequencer, save it and then load it into a different sequencer, even on a different computer - and Sampler, a device which records audio and converts it into a digital form for editing and storage.



Now it's your turn
to have your say.
Have you got a
gripe or something
positive to say?
Drop us a line at
Points Of View -
you could even win
a prize for the letter
of the month

LETTERS

PUTTING IT SIMPLY

Having only just upgraded to an Atari ST from a Spectrum +3, I was delighted with the *Paintpot* program that was on the cover of your October issue.

I have, of course, purchased the November issue and once again, I am delighted with the content of your magazine and the cover disks. It must be difficult for you to please all of your readers all of the time, but you seem to have struck the right balance.

Having used *Tasword* for many years on the Spectrum, *First Word Plus* seems to be difficult and complicated. Is there a less complicated word processing program available for the occasional letter writer? However, I am still feeling my way with the Atari, and up to now, I have been more than pleased with the results.

For my home finances, I have purchased *Home Accounts 2*. This is a wonderful program and really user friendly. I am currently looking for a spreadsheet to replace *Tascalc*, which I used on my Spectrum.

It's a pity that the software is not transferable as I also need a simple database program for an address book. I was interested to read young 55 year-old Dave Sumner's letter in the November issue. I too have wasted many

hours typing in those listings, which, as you commented, rarely work. Waste no more, Dave, get *Scrabble*, *Chess Player 2150*, *Jimmy White's Whirlwind Snooker* and *Microprose Golf* and really sit back and enjoy life. With, of course, a copy of Atari ST Review!

Cecil Ockenden, Dunstable, Beds.

Sorry we were unable to show your picture, Cecil, but it was appreciated. It's nice to see that people are getting enjoyment out of our disks and magazine.

First Word Plus is probably the best word processor for the uses you describe. As with any program when it's new, it takes a little while to get used to, but you'll soon be writing like a professional.

There are many spreadsheets available for the ST, such as K-Spread. Try one of the advertisers in this magazine for more advice about which one to buy. An address database is being written by Ofir Gal in our HiSoft BASIC tutorials, so this may be worth checking out as it will cure your love of typing in listings too!

As for your suggestions for games, I've heard of armchair sportsmen but this is ridiculous! Why not go the whole way and include Formula One Grand Prix, Lotus III, No Second Prize and Trivial Pursuit!

HARD WORK MADE EASY

I'm a regular reader of your magazine and I own a hard drive. One thing that has been bugging me ever since I bought it is the fact that so few games are hard drive installable. It seems very unfair that some games for the PC and Amiga can be installed, but the Atari version can't.

However, to my surprise, I've found that some games, which the manual states can't be installed, actually can.

Here is an example of how to install *Ishar - Legend Of The Fortress*. Note that all operations will be done from the desktop. The method used will work for other games too.

First of all, write protect all original disks!

1. Choose a partition on your hard disk drive that you want to install

the game. Create a folder called ISHAR.

2. Open this folder so that you know where you are dragging your files to.

3. Insert disk A into the drive and open it. Then drag all the files and the AUTO folder to the Ishar folder to copy them.

4. When you're ready, copy disk B in the same way. You will notice that some of the files have the same name and a message will appear when copying disk B to the folder. Neither will affect how the game runs, but you'll save time if you choose cancel from the dialogue box as the computer doesn't have to delete and copy an existing file.

5. When you have copied all of the files into the Ishar folder on your hard drive you can take the original disks out of your computer for a while. Open the AUTO folder that is now on your hard disk. In it, you'll find a program called START.PRG. Click on it once and then click on Show Info from the File menu. You will now see the details of START.PRG. Change the name to ISHAR.PRG.

6. Now you should move the new file to outside the AUTO folder and delete the folder.

7. Finally, insert your original disk A into the computer and click on ISHAR.PRG on the hard drive. The game will now run from the hard disk. It is important to have disk A in the computer as the system will read the disk for a few seconds to check that you do indeed have the original game and not a copy. After this check, the game will run as normal, but it will use the hard disk all of the time.

Your saved games will be saved to the hard disk as well. The game is a real joy to play for a famished *Dungeon Master* fan like myself.

Stefan Schmidt, Goteborg, Sweden

What a great tip. We haven't had a chance to try it here, but it does seem to make sense.

Two recent additions to the list of programs that can't be installed on your hard disk are Microprose Golf and F1 Grand Prix. Both are hard disk installable on other formats, but not on the ST. Do the software houses think that we cannot afford hard drives? It can't be for copy protection reasons, as

A WORD OF PRAISE

MJC Computer Supplies of Latchworth must surely win the award of Most Efficient Software Supplier Of The Year!

I ordered their special offer of the *Superbase Professional* package at 10.00am and was told that since they were out of stock, I should expect delivery in no more than 10 days. I received the package the next morning!

In view of the current changes taking place in the Atari software market, I thought that they'd appreciate a little positive feedback, so I rang them to thank them for such a speedy service. I was told that they'd received a delivery just after I'd placed my order and had simply "done their best as usual".

I sincerely hope you'll publish this public recognition of a company whose best surely cannot be battered. They deserve the support of all of us. No, I'm not on commission, but I do have a vested interest - as a keen upgraded Atari 520 STF/M owner - to keep the good companies going.

It's good to see Atari ST Review establishing a well-judged, balanced style. Since I'm currently in 'recognition mode', I hope you and the team can keep up the good work.

Andy Tagger, Pontefract, W Yorkshire

How nice it is to get positive mail praising companies instead of gripes all the time. If you want to publicly praise a company, let us know and we'll do our best to include it.

LETTER OF THE
MONTH

they nearly always include some form of manual protection as well. If enough people write to them and request this feature, maybe we'll see it more often.

MORE OLD TOS

I am trying to purchase a new 520 STE with TOS 2.06 fitted. According to your article 'A Load Of Old TOS' (Nov '92), these should be available.

However, the dealers that I have contacted insist that this is not true and that TOS 1.62 remains the standard.

Clearly, I do not wish to buy now only to find in a few weeks time that it is in fact available. Dealers can, of course, supply this as an upgrade now.

I would appreciate it very much if you could clarify this point, and thank you in anticipation of your help in this matter.

Alan Bolton, Nottingham

There are no plans to put the new TOS in the STE as far as we know. TOS 2.06 is only available in the Mega STE and not the standard machines. Some games are incompatible with the new TOS and it would be unwise to exclude new buyers from these.

You can purchase the new TOS as an upgrade in one of two ways. Either just buy the chips and swap them or buy a switchable version, which will still be compatible with all of your software.

I hope this clears things up for you.

OWN GOAL

I have been a reader of your magazine from the beginning and have always found it full of good reviews, useful hints and tips and a good read. This was until the December issue appeared, and in particular the article on the upgrade (or so you led us to believe) for Renegade's **Sensible Soccer**. Being a keen player of this game, I was interested to read what had been done to improve what was already an excellent game. I'd nearly read the article and was ready to part with my £5 and send for my upgrade until I read the last section of your article, and I quote: "Cities involved in the European Cup have been added - including Leeds, Sheffield United, Hearts and Lazio". I put my £5 back in my wallet in disgust.

May I ask, was it your specific intention to antagonise three quarters of the population of Sheffield, or was it just a simple mistake that could have been made by anyone? I am referring to the fact that you included Sheffield United in the list of European clubs when it should have read Sheffield Wednesday. But let's not dwell on the fact. Mind you, having said all that, the only

way that United could get into the European Cup is probably by a typing error. So for a big boost in Public Relations to the people of Sheffield, I think an apology is in order, don't you?

Andrew Senior, Penistone, S Yorks.

How can we apologise when you've just been so rotten to all those United fans? Oh, all right then, we admit to a little factual error - and the person responsible for this foul has been asked to take an early bath!

A FOREIGN AFFAIR

After reading Opinion and Letters in issue seven, I see that cover disks are continuing to cause some controversy.

Cover disks are of great benefit to the user by providing a means to try software that may be hard to justify buying. I've got several complete applications with recent ST magazines including **Timeworks Publisher ST**. To be honest, issue seven was the first ST Review I bought and the presence of **Timeworks** on the cover disk was the reason I bought the magazine.

So, the users benefit from the cover disks but what about the developers? Sure, the cover disks contain earlier versions of applications with the developer hoping that those who try the program will upgrade to the latest and greatest version. **Timeworks Publisher 2** is a good example.

Unfortunately, with the Atari market continuing to dwindle, the cover disks may help the extinction of the Atari ST.

I have several thousands of dollars invested in my Mega ST2 system and hope it will not collect dust along with my Texas Instruments TI99/4A. I think the cover disks are popular because it allows users to use CAD, DTP and other programs without risking further investment in ST software. With the folding up of Atari Canada and local dealers abandoning the ST, my willingness to spend more money on software and hardware is decreasing.

So surely the availability of commercial programs on cover disks will have an influence on whether or not a user really finds it necessary to upgrade to the newest version. Users, including myself, may find that an older version is all that is needed.

I hope that the Falcon reverses Atari's falling popularity, but I'm not very optimistic. I've used my Mega ST2 for almost four years now and don't think I'll ever regret it because it's a terrific computer. Too bad Atari Corporation hasn't taken the ST/TT/Falcon as seriously as the loyal ST users. I saw an advert on CNN for the new Amiga 4000, what are the odds of a Falcon ad on CNN? We can thank

Atari's marketing division for its current market share.

By the way, I also bought ST Review number eight the other day. I always wanted the Cyber series of software but couldn't justify the cost.

Ken Hartlen, Ontario, Canada

The decline of the ST can't honestly be blamed on the content of cover disks. There are deeper reasons why the machine is not quite as popular as it once was, although there is still a very healthy interest in the ST, as our mailbag shows.

As you say, cover disks usually carry older versions of programs with upgrade paths available. These are arranged in conjunction with the software houses themselves and the upgrades are very popular. Ask **GST**, who distribute **Timeworks 2**. The people who make do with the older version probably wouldn't have bought the package in the first place, so there's very little lost, and the sales of the upgrade more than make up for those anyway. Sure, some people will make do, but that's just human nature.

People make computers successful, not ad campaigns. It's up to you, the buyer to make the Falcon a success. If you buy the machine and the software, more developers will see a market and more products will be developed. This may be a Catch 22 situation, but it's one that we could all benefit from.

THE EYES HAVE IT

Firstly I must congratulate you on an excellent publication, with some very good software on your cover disks.

I do, however, have two small areas to gripe about. The first is that of the quality of paper/printing used for the ST Buyer section at the rear of the magazine. Which lunatic in your design group thought up the colour combination of white text on a blue background and also black on a dark blue background? Unless the magazine is being read in the best of lighting conditions, these sections are very difficult to read, given that some of the text with these colour combinations gives the impression of being out of focus.

What with being hunched over the keyboard into the small hours of the night, I run the risk of needing a white stick soon. My eyesight is quite bad enough already, thank you very much.

My second gripe is with you in particular and magazines in general. Why do you insist on placing special offer cut out sections on the back of very useful tutorials, which means I have to cut them up to send away for the item in question? A prime example is the recent

Timeworks upgrade offer. Why can't they be printed on the back of adverts? I'm sure nobody would mind cutting those out of the magazine, or, at the very least, be allowed to send in a photocopy of the coupon in question.

Paul Jackson, London, SW11

Firstly, it is not our intention to blind our readers. The problem lies with our printers, not with our design department, and it's down to the two films that form these pages not being aligned accurately prior to printing. It is something that we are currently addressing with the printers, and hopefully you'll see an improvement very soon.

On your second point, we have always suggested that you send your orders and competition entries on plain paper or a photocopy if you don't want to cut up your magazine.

STFM CONFUSION

I own an STFM computer. When I bought it last Christmas for £300 the shopkeeper said it was a very well supported computer. But this year, the shops are selling them at £200 and the shopkeeper said that no-one wanted them and they were making room for the STE. When I bought the STFM I didn't think there was a big difference between it and the STE. In a back issue you told one person who had an STFM and wanted to upgrade it that he should get the deluxe boards in case he wanted to upgrade to an STE. Has the STFM died or something?

Another thing, I am a games player and I can't find a magazine that mostly reviews games. I never know when a game is coming out or if it's any good.

I would like to know when **Streetfighter II** is coming out for the ST and is it any good?

Kevin Sharry, Co. Westmeath, Ireland

The STFM was replaced by the STE over two years ago, but the FM is still quite capable of running most ST software. There are probably more programs that won't run on the STE than the other way around. As far as the upgrade is concerned, the reply referred to a memory upgrade and nothing else. The XtraRAM Deluxe board is capable of being upgraded to four megabytes (as is our offer board). This is what was mentioned in the letter you are referring to.

New ST games are reviewed in the magazine that you are holding in your hands at the moment. You'd be hard pushed to find a better value magazine on the newsagent's shelf and our games reviews and previews are second to none.

LOOKING FOR FRIENDS

I have been into computing for the past two years and I have a 520 STFM upgraded to 1 Mb. I also use a Citizen 120D printer.

My interests lie in the more serious applications of computing rather than games, mainly DTP, programming and other similar pastimes. I find that I am missing out on a lot of satisfaction due to being very inexperienced with a lot of the programs that I use.

In programming with **GFA BASIC** (v3.5), I can produce very simple routines but I find that I get stuck when I try to move on to something more complicated. I have the same problem with STOS.

What I would like is to get together with someone who is more experienced and pick their brains. I'm 62 years young this year, but I have a very young outlook on life and love a joke.

Is there someone out there who lives in my area who I could get together with and have a chat, perhaps over a drink? I'm sure there must be plenty of ST users in the area as I find that the ST magazines soon disappear from the newsagents' shelves each month. May I finish off with my thanks for a good magazine that I find very well balanced and informative.

James Hornby, Abbey Wood, London SE2

We could have the forming of a new Atari User Group here. If you'd like to contact James, drop us a line here at ST Review and we'll pass your details on.

If there is already a group operating near Abbey Wood, then again, let us know and we'll get you all together.

If you would like to join a group or even start one up yourself, write to us and we'll try to publish your details.

CD QUALITY?

First of all, let me say what an absolutely great magazine you have built up. It is excellent in covering all aspects of the ST, but here's the bad bit. In your report on the new Falcon (issue eight, December 1992), you said that CD uses a recording frequency of 44.1 KHz - the Falcon is capable of above CD quality. What an absolute load of tripe that is!

I am a qualified CD system engineer and, as you say, CDs are recorded at 44.1 KHz, but the laser quality system and SM250 chip in most Hi-Fi systems outputs at 69.3 KHz. I don't know who your technical adviser is, but he needs a good kick up the backside. Try to get your facts right, otherwise thanks for the best magazine on the shelves. Keep up the good work.

Richard Jones, Littleborough, Lancs.

Strong words, indeed, but read the article again, Richard. It states that the Falcon is capable of recording sound at a higher frequency rate than CD, which is 50 KHz as opposed to 44.1 KHz. In this respect, the piece was technically correct. As you will be aware, the higher the frequency of the sample, the better the quality of the recorded sound. Any output is governed by the equipment being used (it's no good outputting high quality audio through a £50 stereo system!).

COVER DISK CHEATS

While recently playing *Slug* (cover disk, issue eight) I discovered a cheat mode where you can have a sound effects test, graphics test and smart keys. To do this, simply waggle the joystick left, right, left, right on the screen that enables you to choose between one or two players.

Also on *Evador*, if you press F1 while playing the game, you can skip levels up to level 24.

Would you please tell me which is the best game to buy out of *Epic* and *Monkey Island*?

Daniel Millington, Nottingham

*Thanks for the tips, Daniel. We haven't had time to test the *Slug* cheat, but we know that the *Evador* hint works.*

*As for the games, it's always difficult to decide for someone else, but the feeling here is that *Monkey Island* is the better game and will give you the most pleasure.*

BACK ISSUES

I have recently bought an ST and started to buy your magazine. I read, with interest, some of your tutorials and decided to get some back issues. I was informed that nothing before issue five was now available. Is there any way I can get hold of these?

Ian McFinney, Bradford, Yorkshire

Sorry, Ian, but we can't get hold of them ourselves. It seems that back issues are in demand and several people are in the same position as you are.

The only way, it seems, that you can guarantee a copy of your favourite magazine every month is to order it from your newsagent.

MORE GAMES, PLEASE

I have been reading your magazine since the very beginning. It was great at first, with the right balance of games and hardware reviews, but since then, it has gone rapidly downhill. Your hardware reviews are very good, but there are just too many of them, sometimes leaving a meagre three or four pages for game reviews.

I was just about to give up and go back to only reading my old magazine (ST Format) when along came the January edition of ST Review, still with great hardware reviews, but also at least 20 pages on games.

There were also two great games on the cover disks, which was a relief from your usual word processing, desktop publishing and art programs that were becoming decidedly boring.

Keep your magazine like the January edition and you can't go wrong.

Peter Lee, Grays, Essex

We get so many letters telling us to increase or decrease our games coverage that sometimes it's hard to know what to do for the best.

We are maintaining a policy of informing you of new games and what we think of them, but some months are better than others for game releases. Instead of filling pages with mindless drivel about games that are unlikely to see the light of day, we try and vet them to show you the best (and worst) of what's out there. If we were to fill the magazine with rubbish, then I'm sure we'd lose more readers than we'd gain!

PROGRAMMER'S FORUM

Please, please print this letter in your magazine as I'm sure that there are many more readers out there who have experienced the same sort of problem as I have right now.

I need some advice as to how to go about putting an idea forward to a software house regarding a game that I have had ideas for for the past seven or eight months.

I have spent a lot of time scribbling down ideas that have popped into my head while at work or on the loo or whatever and the more I think about it the more I feel certain that this game is bound to be a winner.

Now we come to the crunch, I have absolutely no programming knowledge whatsoever and I don't know anyone who even resembles the type of programmer needed to write a complex program that will be needed for this game. Obviously, I'm keeping the nature of the game a secret for the moment, this is how confident I feel about it and I have no idea how to go about seeking a copyright.

I have thought about creating a portfolio and approaching software companies that way or is this the wrong way to do it?

Liam Furr, Wood Green, London

If your idea really is that good, then you have nothing to lose by approaching the software houses. Write to them with an outline of your game. You can't

expect them to want to publish it if they don't know what it is. Keep back some of the more vital details, but tell them enough to whet their appetites. A telephone call may help and you can get a name to send it to as well.

Make sure that you have fully thought the game through. Do you think that it can be done? Will it appeal to a wide audience? What factors make it a winner? Is there anything else on the market like it?

The chances are that without the programming ability, there is very little you can do, but if you are that positive and can convince the software companies that it will make money, then you may succeed.

ODE TO ATARI

A solemn prayer...
Oh Sony (or Yamaha or other large Japanese corporation)

Who art a mega-corporation
World famous is thy name
Thy time has come
Show us what can be done
In computers as in music
Acquire ye this day
Atari Corp

(a bargain because of its losses)
Throw your mighty resources
behind the Falcon
Lead it not into limbo
But deliver it from bad marketing,
planning, finishing, packaging,
bugs...

And thine will be the profits, and
the power and the gratitude of all
Atari users everywhere
For quite a long time until the competition
catches up which they
may never do if you play your cards
right
Amen.

W Hon, London, SE11

Well, there's not a lot that we can add to that, is there? A laugh at the expense of a company dear to all our hearts, but also a heart-felt plea to the powers that be.

Send your letters to Points Of View, ST Review, 30-32 Farringdon Lane, London, EC1R 3AU. The sender of the best letter each month will win software of our choice to the value of £50.

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The powerful database can be viewed instantly at the click of a mouse button. Marriage partner(s), children and parents are all easily and instantly accessible. A built in powerful search function enables fast cross referencing and multiple scanning.

On line help and information are available at all times, you don't have to worry about losing your place, the program remembers it for you. The printing section supports both graphics and text output.

To order your copy of Family Roots, send a cheque or postal order for £24.95 to the address below. UK postage free, please add £1.50 for Europe or £3.00 for the rest of the World. Credit card orders welcome.

A disk with useable demos of Family Roots, Around The World and Professional Virus Killer is available for only £1.00.

Around The World

Floppyshop are pleased to announce the release of their first commercial game. Around The World is an arcade adventure in which you assume the role of Phineas as he negotiates his way through 40 taxing levels of sheer enjoyment and addiction.

During your adventure you will face many dangers and surprises including toxic waste in the Oceans and rock falls in the Jungles. Locate concealed switches to unlock additional caverns and search for keys which will reveal hidden treasures and further your quest. Can you rise to the challenge and survive this epic journey by completing all 40 levels?

The game features a large playing area, devious puzzles, creeping fungus, rock falls, explosions, an original soundtrack, 50 entry high score table, 40 levels of increasing difficulty, over 40 colours on screen and much more!

Around The World was programmed over more than a year by The Pixel Shop, better known for their many Badgie UK titles under the name of The Happening Boy.

To order your copy of Around The World, send a cheque or postal order for just £9.95 to the address below. UK postage free, please add £1.00 for Europe or £2.00 for the rest of the World. Credit card orders welcome.

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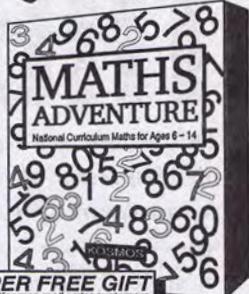
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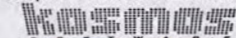
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THE BLITTER END

This month, we have a special word from the proprietor of HiSoft and a list of repair centres for expert service

This will be the page you write. We're on the lookout for anecdotes and stories related to the ST. Send yours to **The Blitter End, Atari ST Review, Priory Court, 30-32 Farringdon Lane, London, EC1R 3AU**. You could see your name in print and your work may even be rewarded. Please bear in mind, though, we cannot guarantee to use your submission and artwork cannot be returned, so don't send an SAE and don't send us anything you really don't want to lose.

HISOFT AND THE FALCON

As the debate about the Falcon continues and we all await its arrival with bated breath, we talked to an industry expert about the machine. Here, David Link, proprietor of HiSoft, outlines his company's reasons for supporting Atari's new machine

"The only reason that we have had a Falcon for a reasonable length of time is because we wanted it and wanted it badly. We did a lot of early work to show that we took the idea of a new Atari machine seriously and that we would want to code for it and support it. We were rewarded for that investment with an early Falcon.

"Most of our in-house software worked the first time that we tried to run it on the Falcon without any modification at all. This includes *Devpac*, *Lattice C*, *HiSoft BASIC 2*, *Proflight*, *Highspeed Pascal*, *WERCs*, *KnifeST*, *Diamond Back II*, *Superbase 3*, *K-Spread 4* and so on. Even *Metaomco ST BASIC* worked!

"My general feeling about the Falcon is that it is a damn good machine with a hardware design that throws down the gauntlet to both hardware and software engineers to produce exciting and innovative packages that will breathe new life into the stagnant general-purpose home computer market.

"I don't want to compare it to an ST because this is 1993, not 1984. I certainly don't want to play games on it - STs are quite good at that.

"We will support the Falcon because it is different, interesting and fun. I am not trying to convert anybody else to do the same - each to his own. If you like PCs, stick with them - that's fine by me. Why try to shoot down the Falcon - diversity is life?"

DEAR MR NEWSAGENT

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* Delete as necessary.

GET IT FIXED!

Is your ST in need of repair? Check out our list of repair centres

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Analogic Computers, Unit 6, Ashway Centre, Elm Crescent, Kingston-Upon-Thames, Surrey, KT2 6HH. Tel: 081 546 9575

Atari Workshop, 17-19 Blackwater Street, East Dulwich, SE22 8RS. Tel: 081 693 1919

HCS Engineering, 144 Tanner Street, London, SE1. Tel: 071 252 3553

Hawkwel Electronic Services, 2 Wymans Cottages, Mount Bovers Lane, Hawkwel, Hockley, Essex SS5 4JB. Tel: 0702 207593

Silica Systems, 1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX. Tel: 081 309 1111.

NORTH

ACS Electronics, R. E. C. Eldon Street, South Shields, Tyne & Wear, NE33 5JE. Tel: 091 455 4300

First Computer Centre, Unit 3, Armley Park Court, Off Cecil Street, Stanningley Road, Leeds, LS12 2AE. Tel: 0532 319444

Ladbroke Computing, 33 Ormskirk Road, Preston, Lancs, PR1 2QP. Tel: 0772 203166

Please note: ST Review does not necessarily recommend any repair centre on this list and we can accept no responsibility for complaints that may arise.

WINNERS GALORE!

Have you won a prize? We offered a Philips CM8833 Mk II colour monitor plus five copies of Lotus III, The Ultimate Challenge and a TOS 2.06 upgrade in recent competitions. Here are the winners...

PHILIPS MONITOR

First, the answers to the questions set are as follows:-

1. The current Formula One World Champion is Nigel Mansell.
2. The flag waved to end a Grand Prix race is the black and white chequered flag.
3. We rated the CM8833 Mk II at 88% in our tests.

The winner of the monitor, a copy of Lotus III and the chance to win a trip to the British Grand Prix or a remote control Ferrari Testarossa is Graham Johnson from Greenford, Middlesex.

Five runners up each receive a copy of Lotus III, The Ultimate Challenge. They are: Stephen Moorhouse, Norwich, Norfolk; David Feneley, Grantham, Lincs; Mrs V. O'Brien, Oldham, Gtr. Manchester; P Tandy, Telford, Shropshire and Jeremy Sibson, Mill Hill, London.

UPGRADES

In the same issue, we offered you the chance to win a TOS 2.06 upgrade and a half-meg of extra memory. All you had to do was to come up with the following answers:

1. The current maximum memory that you can have in your ST is four Megabytes.
2. SIMM stands for Single In-Line Memory Module
3. The Analogic advertisement appeared on page 50 of that issue.

The winner of the TOS 2.06 and memory upgrade is Mark Kozlowski from South Norwood, London who has a 520 STE. Runners up are B Jennison from Hull (STE TOS 2.06 upgrade) and C Tamcken from Newport, Isle Of Wight (STFM memory upgrade).

Congratulations to all of our winners. Prizes will be with you very soon.



Devpac 3 £79.95

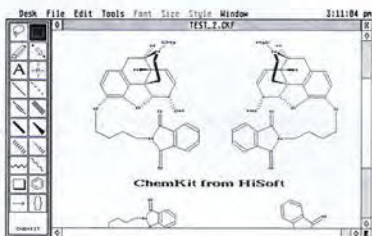
HiSoft Devpac 3 is the latest version of the popular assembler / debugger package for all Atari 680x0 computers. Packed full of features, it is the ideal programming environment for beginners and professional programmers alike.

Improved and extended, the Devpac 3 macro assembler is now often 40% faster than its predecessor (without using pre-assembly), has many extra, switchable optimisations and, with the ability to pre-assemble files for inclusion, can now claim to be the fastest assembler on the Atari computers. It produces 68000 up to 68030 code (via a user option) & supports the maths co-processors.

Devpac 3 is supplied with a professional 350-page, wire-bound manual, all the necessary include files for your system (ST/STe/TT/Falcon030). GST and Lattice linkers, various utilities, example programs and a complete 68000 Pocket Programmer's Reference Guide. Call or write for more details.

ChemKit £39.95

A new package that many chemists and students of chemistry have been waiting for; ChemKit allows the easy creation, amendment and printing of any chemical structure.



Using a wide variety of flexible drawing primitives together with GDO's text, this package is a boon for anybody involved in producing chemical drawings. ChemKit runs on any ST/TT/Falcon030 and needs 1Mb of memory.

Books from HiSoft

We have a number of excellent books for the ST in stock at the moment. These include *C-manship* by Clayton Walnum, ideal for the C enthusiast or the beginner; *Program Design Techniques* by Paul Overran, an informative book on how to write well-structured programs in most languages; *Real-Time 3D Graphics* by Andrew Tyler, shows you how to create vivid solid 3D colour graphics while the *Motorola 680x0 Programmer's Reference* is the bible for 680x0 assembler programmers. Please call us or write to us for pricing details on these titles.

The Serious Page

The HiSoft Promise

While many other companies are abandoning the Atari market, we are moving forward, acquiring and writing new titles, many of which are detailed on this page.

Rest assured that we will continue to offer you the best software at truly competitive prices with a range of customer support options to ensure that you can use your Atari 680x0 computer, and our software!, with confidence and ease.

We are very encouraged by the Falcon030, believing that it will breathe new life into the general-purpose microcomputer market, which has often been driven by the computer enthusiast, who will find this new machine both fascinating and exciting.

We will sticker all Falcon030 product with Atari-approved labels for convenience and clarity; there are three such labels - *Falcon030 Exclusive, Enhanced* and *Compatible*, watch out for them.

TruePaint £39.95



TruePaint is the first art package to take advantage of the true colour capabilities of the Falcon030 computer. Some of the highlights of the product are:

- Works in all screen resolutions including 768x480 True Colour
- Easy-to-use multi-window environment with menus, toolbox and keyboard shortcuts
- Full range of drawing tools
- A large variety of effects including shear, wrinkle, smooth, rainbow etc.
- Zoom, full screen mode with edit, colour picker, bezier curves
- Animation, FSM/Speedo GDOs support, wide variety of file formats including IFF, TIFF, JPEG, Targa, IMG, Neochrome and more

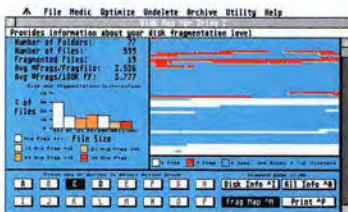
We have re-scheduled the release of TruePaint to coincide with the general availability of the Falcon030 computers - the package will now be available on 18 February 1993. Please contact us to be sent a TruePaint brochure when this is available.

HiSoft BASIC 2, Harlekin 2, Lattice C 5.5, HiSoft C, HighSpeed Pascal, FTL Modulo-2, KnifeST, WERCs, HiSoft Devpac, HiSoft BASIC 2, TruePaint, Wordfair, Diamond Back, Superbase, Diamond Edge, K-Spread, K-Data, FirST BASIC, HiSoft FORTH, ProfFlight, ChemKit, Tempus 2 ...

All prices include UK VAT and P&P within the UK. Please call for export prices, educational discounts etc. E&OE. Specifications and prices may change.

Diamond Edge

£49.95



From the authors of Diamond Back, the popular hard disk backup program, comes a new package that is essential to any serious user of an Atari 680x0 computer.

Diamond Edge is a complete set of management, optimisation, diagnostic, repair and data recovery tools for use with floppy disks and hard disks.

Please note the new price of £49.95 for Diamond Edge; the poor Sterling/US Dollar exchange rate means that we can no longer hold the price down.

XBoot 3 £34.95

We are pleased to have acquired the exclusive rights to version 3 of this package, which provides comprehensive management of your AUTO folders.

New features include independence from any video hardware, selection of CPXs, definition of links between related files, new batch editor, integrated parameters dialog, a complete new function to change the running order of your programs and more. Please enquire about upgrades if you have an earlier version of XBOOT.

XBOOT is an efficient, easy-to-use program and comes with a well-written and useful manual.

Superbase Professional £99.95

Following the sale of the ST and Amiga versions of Superbase to Oxix Inc with whom we are working closely on a project for the Falcon030, we are pleased to be able to offer the superlative Superbase Professional (Version 3.02) at a substantial saving over its previous recommended price.

All HiSoft's products should be available through your local computer dealer. If you have difficulty in obtaining a title you can order directly from HiSoft using your credit or debit card - just call Julia, Sallie or Marlyne on 0525 718181.

HiSoft
High Quality Software

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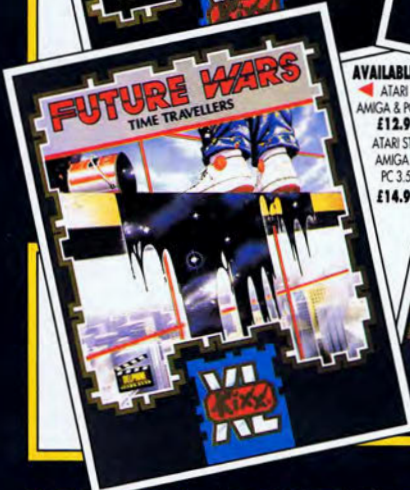
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