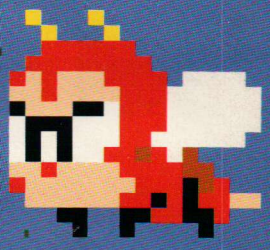
BRITAIN'S BEST-SELLING MAGAZINE FOR AMIGA OWNERS

AMIGA FORMAT

ISSUE 10 / MAY 1990 / £2.95

WORK HARD

Your essential guide to getting down to business



COVER 10 DISK

TWO GREAT PLAYABLE DEMOS

VIVID IMAGE'S ACTION PACKED HAMMERFIST ➤

HOVERBOARD ACTION IN WIPE OUT FROM GONZO GAMES

NO AMIGA COVERDISK?
DEMAND ONE FROM YOUR NEWSAGENT NOW!

PLAY HARD

Is Rainbow Islands the game of the year?

REVIEWS: COLOUR VIDI ■ CLASS OF THE '90S ■ ULTRADESIGN TUTORIALS: DIGITISING ■ GAMES PROGRAMMING ■ COLOUR GRAPHICS

05
9 770957 486004

THE FLIGHT Expe

The ultimate in flight simulation – this futuristic aerial treat offers a choice of two aircraft and four battle environments with dozens of different tactical missions.
Aerial combat, strategic bombings, interactive ground based battles, seagoing carriers ... the list of features is endless. Real time cockpit displays – including "true radar" enhance the feel of this visually stunning simulation, your mission begins.

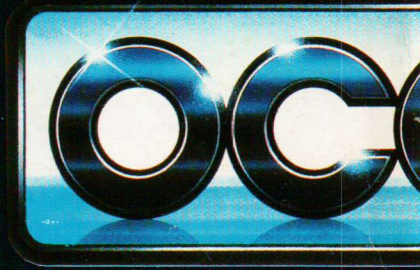
F-29 RETALIATOR – THE SKIES ARE YOUR HUNTING GROUND

"If this is what flying is all about, I want to join the RAF! Retaliator is magnificent ... brilliant action and a scenario that'll leave you gasping in awe." – ZERO.

"Top Gun may have taken your breath away but F29 will turn you blue. The exhilaration experienced is paramount ... guaranteed to thrill." – THE ONE

THE FANTASY on your 16

Enter a mediaeval era in a mystical world where Ivanhoe, our chivalrous hero, pursues a perilous quest ... a quest from which most mortals would run ... an adventure which most men would fear! Strap on your armour, take up your sword and brace yourself to face the magical powers of the most evil of wizards, the plunderous pirates, the most awesome of dragons and a host of hideous 'beings' in this land of legends. Superb animation, by the cartoonist whose brush gave us the Asterix movie, and beautifully executed graphics create a visual impact as yet unseen in the media of interactive entertainment. Ivanhoe – Fight for your life ... and legend!

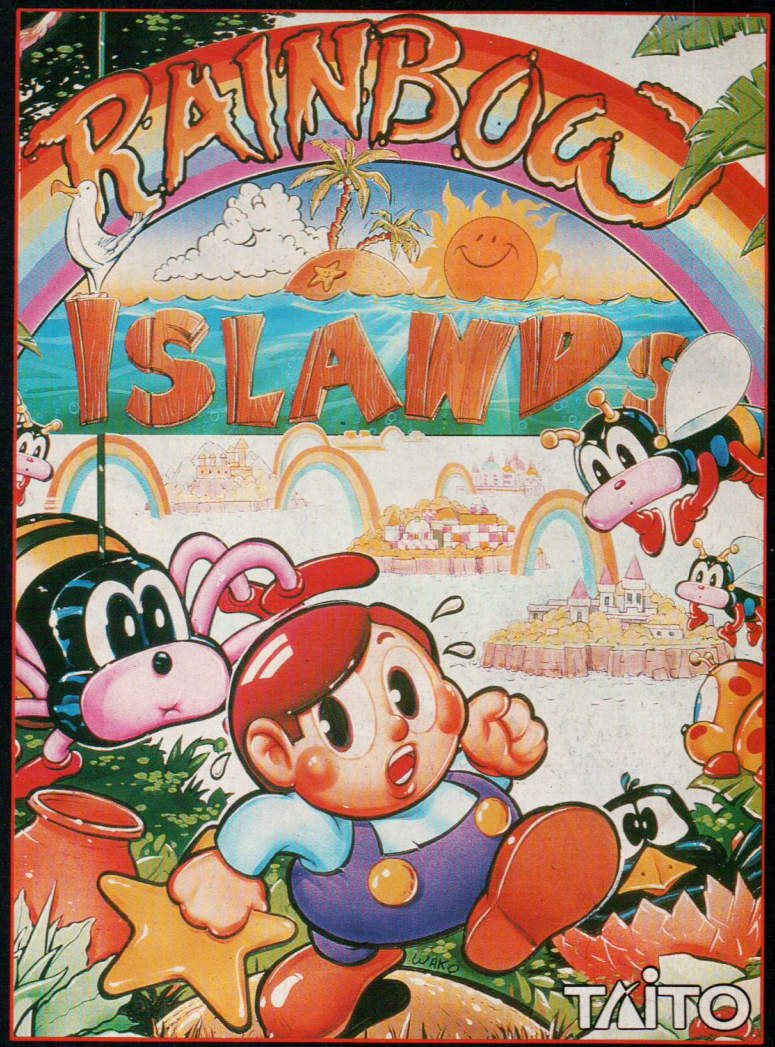


ALL AVAILABLE FOR YOUR CBM AMIGA

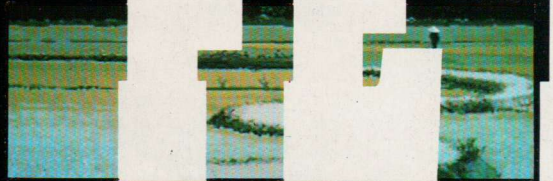
Ocean Software Limited · 6 Ce
Telephone: 061 832 6633 · Telex:

rience THE FUN

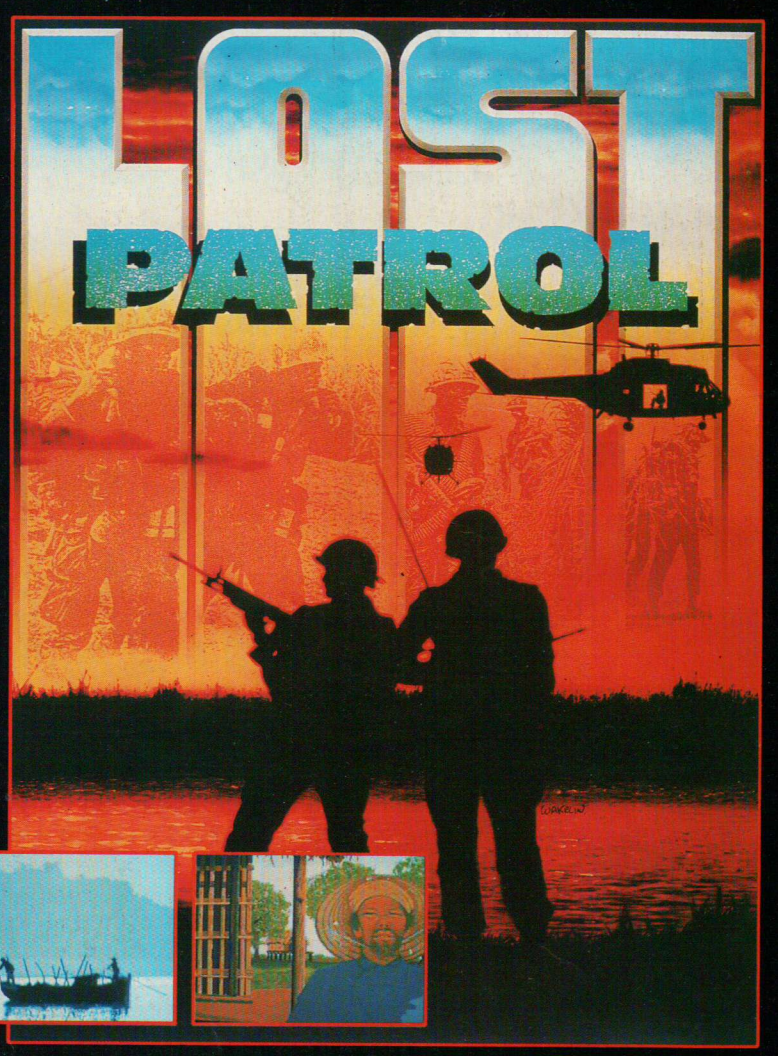
Slip on your magic shoes, practice throwing a rainbow and head for DOH'S ISLAND. Attack Doh as he himself sprays you with an onslaught of bullets. You'd better be quick . . . the water's rising!
There may only be one way to defeat the vicious creatures on INSECT ISLAND . . find the Cup of Destruction – you'll have to be pretty slick with your rainbows so as to overcome the Bees, Ladybirds, Spiders, Caterpillars and YIKES!! . . . the Bee Hive!!
Oh no! now I wish I'd stayed with the bees! They're just buzzing babes compared to these tanks, planes and 'copters on COMBAT ISLAND. Yes, it's time to beat these guys at their own game and take to the air . . . now where's my Box of Wings?
Next stop – MONSTER ISLAND – well you can just find out for yourselves – when Ghosts, Trolls, Skeletons and Vampires invite you to supper . . . it's time to hit the yellow brick road!
The very best in original game play featuring all 7 islands, faithfully reproducing the fun and excitement of the Arcade hit.



Bit Machine THE FEAR

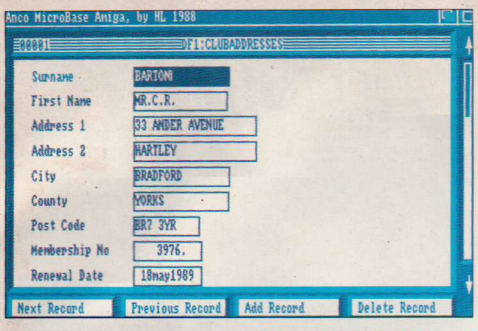


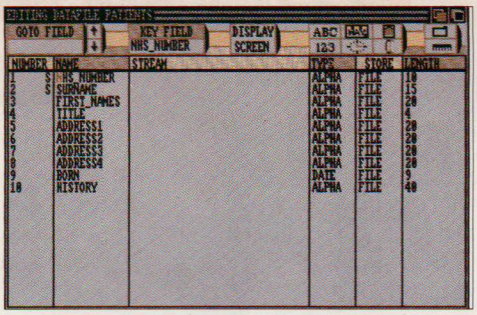
We were glad to be going home . . . seven weary survivors looking forward to a real cup of coffee and a piece of mom's apple pie. But then it happened . . . our chopper took a hit, tailed-out and our pilot managed a crash landing – but he won't be seeing 'I Love Lucy' again. Now we're foot-slogging a wide, flat trail but its slow, dangerous curves are flanked by impenetrable bush. I know Charlie knows we're here – maybe we can surprise him, maybe not . . . that's just *one* thing that helps our insomnia . . . that and the psycho in my squad – I gotta figure out who it is before the morale factor becomes our worst enemy.

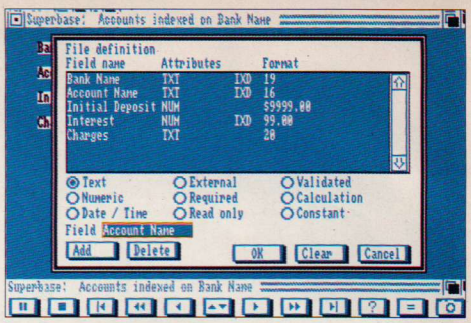


Street · Manchester · M2 5NS
7 OCEANS G · Fax: 061 834 0650

ALL AVAILABLE FOR YOUR ATARI ST







WORK HARD... DATABASES P 77

AMIGA FORMAT TEN MAY 1990

EDITOR Bob Wade **PRODUCTION EDITOR** Damien Noonan **REVIEWS EDITOR** Andy Smith **TECHNICAL EDITOR** Jason Holborn **STAFF WRITER** Maff Evans **ART EDITOR** Angela Neal **DESIGN ASSISTANT** Marcus 'Dr.' Dyson **DISK EDITOR** Richard Monteiro **CONTRIBUTING EDITORS** Jon Bates (Music), Brian Larkman (Graphics) **CONTRIBUTORS** Mark Smiddy, Tim Smith, Dave Jones **CELLULOID IMAGE REALISATION** Adrian Price **ADVERTISING MANAGER** Jennie Evans **AD SALES EXECUTIVE** Paul Steer **AD PRODUCTION** Fiona Milne **AD SERVICES** James Leach **PUBLISHER** Greg Ingham **ASSISTANT PUBLISHER** Jane Nolan.

PHOTOGRAPHY Ashton James, Bradford-upon-Avon **COLOUR ORIGINATORS** Swift Graphics Ltd, Southampton **PRINTERS** Riverside Press Ltd, St Ives PLC, Gillingham **DISTRIBUTORS** SM Distribution, 6 Leigham Court Road, Streatham, London SW16.

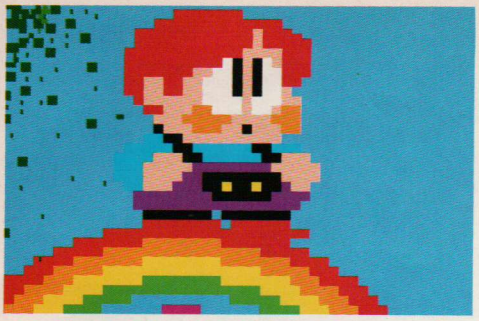
© FUTURE PUBLISHING 1990

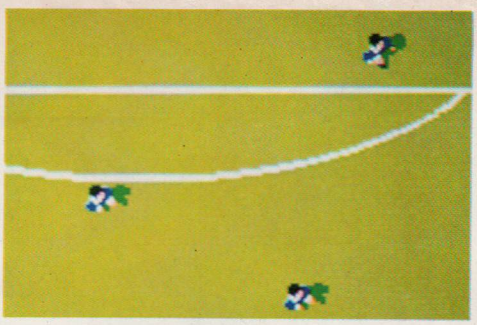
EDITORIAL/ADVERTISING
30 Monmouth Street, Bath, BA1 2AP. ☎ 0225 442244 FAX: 0225 446019

SUBSCRIPTIONS/MAIL ORDER
The Old Barn, Somerton, Somerset TA11 7PY ☎ 0458 74011

COVERDISK HOTLINE
☎ 0225 765086 between 4pm and 6pm weekdays only

We welcome written enquiries, but regret that we cannot offer advice, guidance or information on a personal basis, either by telephone or post. We welcome contributions from readers but unfortunately cannot guarantee to return material submitted to us, nor can we enter into personal correspondence. We take great care to ensure what we publish is accurate but we cannot accept liability for any mistakes or misprints. No part of this magazine may be reproduced in any form without our permission.

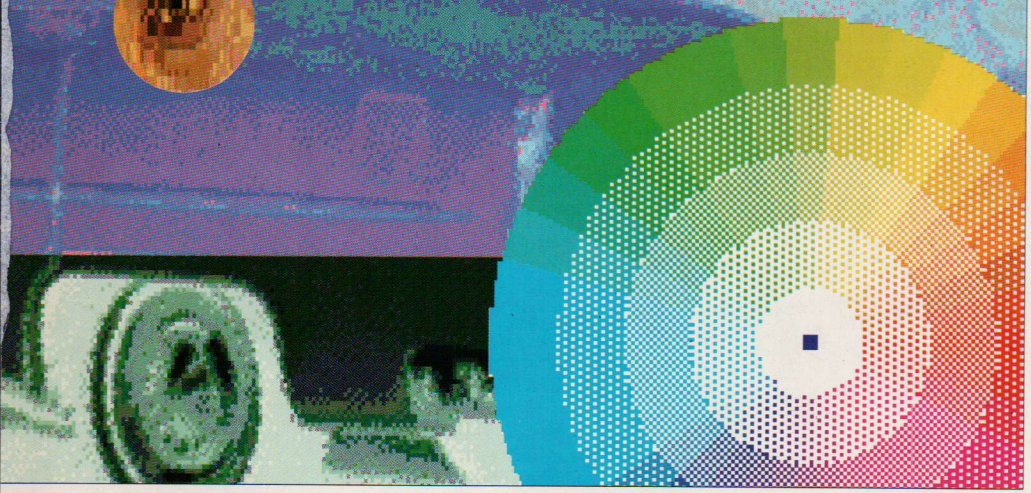




PLAY HARD... SCREENPLAY P 31

THE BEAUTY OF graphics

Graphics: Using Colour P 15
Digitiser Masterclass P 21
VIDI-Chrome reviewed P 27



DISK EXTRA 103

HAMMERFIST

SCHIZOPHRENIC CYBERNOIDS FROM VIVID IMAGE

WIPE OUT: Playable demo of Gonzo Games' hoverboard challenge ■ **BIRDS SAMPLER:** Real Things' latest animation pack for DPaint III ■ **PONTER ANIMATOR:** Heaps of fun with animated mouse pointers ■ **KEYBIZ:** Add typewriter sounds for that real journo feel ■ **GAMEBUSTERS:** Devious pokes for Mutant Camels II, Captain Fizz, Interceptor, Joe Blade I & II ■ **MEGA WB:** Huge scrollable Workbench screen.

SPECIALS

DIGITISER MASTERCLASS	23
A SERIOUS BUSINESS PART 1: DATABASES	91
GAMES PROGRAMMING PART 4: ALIENS	85
DTP: HAND SCANNER	153

REGULARS

NEWS	7
PREVIEWS	12
GRAPHICS	17
PD UPDATE	111
MUSIC	129
WORKBENCH	139
GAME BUSTERS	157
LETTERS	169
GURU	178

SCREENPLAY

FORMAT GOLD

RAINBOW ISLANDS	36
PLAYER MANAGER	65

REVIEWED

HEREWITH THE CLUES	39
PARIS-DAKAR	39
TYPHOON THOMPSON	40
MANIC MINER	40
SHERMAN M4	43
HIGHWAY PATROL II	43
INFESTATION	47
WARHEAD	48
TV SPORTS BASKETBALL	50
BLACK TIGER	55
688 ATTACK SUB	56
ATOMIX	59
GRAND NATIONAL	59
MANCHESTER UTD	62
ITALIA '90	62
CRACKDOWN	66
SCRAMBLE SPIRITS	66
KID GLOVES	69

REVIEWS

VIDI-CHROME	29
CLASS OF THE '90S	72
TV•TEXT PRO	77
SOUND BLASTER	116
TRACKBALLS	116
ULTRADESIGN	121
DISTANT SUNS	124

ABC
Member of the Audit Bureau of Circulations
40,371 Jul-Dec 1989

688 ATTACK SUB

- New standards of realism, 3D graphics and excitement
- Command a billion dollar US Los Angeles class submarine, or a top secret Soviet Alfa in some of the World's most notorious hot-spots
- 10 different scenarios with infinite play possibilities

For a FREE brochure, please write to the below address, stating machine type (Amiga or IBM only) and the magazine in which you saw this ad. The first 100 applicants will also receive an exciting 688 mobile!

AMIGA £24.99 IBM £29.99
IBM & AMIGA only.

Dept. 688,
Electronic Arts,
11/49 Station Road, Langley, Nr. Slough,
Berks. SL3 8YN.
Tel: 0753 49442

Screenshots represent IBM version, we think the Amiga version looks even better!

ELECTRONIC ARTS™

A500 IS FLYING HIGH

Commodore have launched a new A500 bundle that will undoubtedly keep the Amiga riding high through the summer months. The bundle is called 'Flight of Fantasy' and contains an A500, F29 Retaliator *and* Rainbow Islands *from Ocean, Escape from the* Planet of the Robot Monsters *from Tengen/Domark, and* Deluxe Paint II *from Electronic Arts.*

This new bundle costs £399.99 – the same price as the Batman pack, which has been out for six months. It does not mark the end of the Batman pack either – that is being continued at the same price and is to be re-promoted to coincide with the launch of the Batman movie on video.

This latest launch is yet another coup for Commodore, capturing some of the most exciting recent game releases to make this the most up-to-date and interesting bundle. It's also an indicator of the success of both the Amiga and the bundles that Commodore can have two identically-priced packages out at the same time – a move previously unheard of on the personal computer scene.

A quick look at the software contents of the bundle tells you all you need to know about its value for money. *F29 Retaliator* is one of the most eagerly-awaited games of the year and is set to be a classic battle/flight simulator. *Rainbow Islands* is already a recognised success, as you will see from this issue of *AF*, and should prove even more of an attraction than *New Zealand Story* did in the Batman pack. *Escape from the Planet of the Robot Monsters* is also a bang-up-to-the-minute game that rounds off the game side nicely. Then, of course, there is *Deluxe Paint II*, which was also in the Batman pack, and is still an excellent art package.

Commodore's new A500 bundle which (minus the flying goggles) will take you on a Flight of Fantasy with *F29 Retaliator, Rainbow Islands, Escape from the Planet of the Robot Monsters* and *Deluxe Paint II*.

Meanwhile, the Batman video that will be hitting the small screen soon features an advert and competition from Commodore on the front of the tape. The competition consists of riddles to answer, giving you the chance to win one of 10 Batman Packs.

At *Amiga Format* we are delighted with the new bundle, because Commodore has once again delivered what the public wants – the best computer with the best and, more importantly, most recent software with it. It's also good to see them continuing with the Batman pack, giving the public the choice between the two – not forgetting the Class of the '90s pack, intended for the more educationally-minded.

Where does the Amiga 500 go from here? The signs are that there will be another new offering for the Christmas period, and there is talk now of further 'specialist' packages. We would certainly like to see bundles aimed at music and video, areas into which the Amiga is exploding with great success already. ■

THE YEAR ACCORDING TO MIRRORSOFT

Mirrorsoft recently whisked various respected members of the computer press off to France to brief them on what they and their affiliated labels are up to this year. And an awful lot it is too...

IMAGEWORKS

This is Mirrorsoft's own main label on which all sorts of goodies pop up, from coin-op conversions like Blasteroids to original games like Interphase. In the packaging of selected Imageworks and PSS games you will soon find a new 'Great Escapes' offer – collect five vouchers and you get a free holiday for two in England, Scotland, Wales or Jersey.

BACK TO THE FUTURE – PART II

This is Mirrorsoft's first film licence, but not the last – they already have the rights to *BTTF III*. It's still some way off release, but, as you can see from the screenshot, the game is coming together as a diagonal scroller.

Back to the Future – Part II.

GRAVITY

The new game from Ross Goodley, previously responsible for games like *Meltdown* and the Amiga *Bombuzal* – but this one is an original. Check out the next issue for a full review.

The Bitmaps' latest, *Cadaver*.

THEME PARK MYSTERY

An arcade adventure set in a theme park, where you get to play all sorts of wacky games while trying to solve the mystery. It has been written by Brian Howarth, whose adventure-writing career goes all the way back to 1981 and encompasses the Scott Adams adventures and *Heroes of the Lance*, the AD&D game.

CADAVER

The latest from the Bitmaps is a real departure because it's an isometric 3D arcade adventure – very Ultimate. There's a lot of puzzling involved, all of which is controlled using the joystick. It's a big game too, five levels of a castle, each with 100 rooms. Not forgetting their usual high standard of graphics and effects. Expect it soon.

Want to know where the real computer enthusiasts get together?

Write here

Please send me my **FREE** *copy of the Micronet brochure and show me how to really get 'in touch'.*

Name _____

Age _____

Address _____

_____

Tel No _____

Machine type _____ C AF1

FREE MODEM * If you pay for a year's subscription in advance we'll give you a modem free when you join.

› *Send the coupon now to: MICRONET, P.O. Box 1351, London, NW2 7HZ.*
OR phone **FREE** *on* ***0800 200 700*** *for your* **FREE** *Micronet brochure.*

› *Micronet is* **the** *place where* **thousands** *of computer enthusiasts* **get together**. *You can* **talk** *to other members with your computer, hold conferences and send* **electronic mail**, *telex and fax.**

› *Up-to-the-minute hardware and software news, reviews and features keep you right* **up to date**.

› *You can download the programs of your choice from our constantly expanding selection of* **FREE software** *programs.*

› *If you enjoy a* **challenge**, *Micronet is* **the** *place to be for today's* **best multi-user games**.

› *And* **direct** *access to the huge* **Prestel** *database gives you a wide* **variety** *of on-line information, from share prices to theatre bookings.*

› *When you join, your* **FREE** *comprehensive* **welcome pack** *tells you all you need to know, and quarterly mailed copies of* **LOG ON**, *the Micronet members magazine, will keep you up to date and in touch.*

› *From about* **25p per day** *(plus local phone charges*), this is an offer that shouldn't be missed – get* **in touch now** *for full details.*

FREE DEMONSTRATION

Using a modem and view-data software, dial 0272 250000 using the ID 4444444444 and password 4444, for a Micronet demonstration – you can look up a local phone no. once on-line.

In touch. Informed. In a word ...

MICRONET

* *FAX is an optional extra via the INTERLINK gateway. Cheap rate local phone charges are less than 1p per minute inclusive of VAT.*
Free modem offer available in the UK only to new members while stocks last.

CHECKMATE'S A1500 ARRIVES

Is it a bird? Is it a plane? Is it a new machine from Commodore? No, none of those – although Commodore have expressed a strong wish to take a look. This is the prototype of Checkmate Systems' adaptation of the Amiga 500, known as the A1500.

The machine will be available complete – it goes into production even as you read these words – but the basic idea is that A500 owners can buy the necessary parts and perform the conversion themselves. It can be assembled, Checkmate promise, "by most confident people". Alternatively, you can send your A500 off and have Checkmate do the conversion for you, in which case they will provide a new warranty themselves, its length dependent on the age of your original machine.

The A1500 is incarnated in a sturdy metal CPU case with a separate keyboard, reminiscent of the Commodore 128 or even the original Amiga, the A1000. The disk drive is moved to the front, with space for a second internal floppy drive, and the mouse or joystick ports are also placed handily at the front of the machine. The standard edge connector from the left-hand side of the Amiga is retained to ensure compatibility with any add-ons you may already have, but there is room inside the case for any half-height hard drive unit, such as the A590, to be installed instead of a second floppy. Badging is distinctive and the general look is very much that of an official Commodore computer.

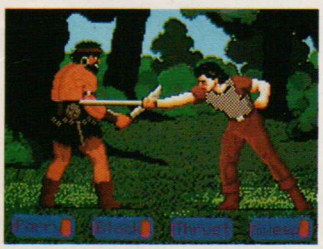
The A1500, an adaptation of the A500, offers a separate keyboard and brings disk drives and joystick ports to the front.

Options include a full Amiga video slot (for use with Flicker Fixer boards or genlocks) or a full MIDI interface, both of which will fit internally. An expansion unit can be fitted on top of the base to provide space for any three A2000 expansion cards, including processor accelerators – extra expansions can be added for more cards or for more half-height hard drives. Finally, both the base unit and expansions will fit in standard 19" racks, which could open up a whole new market for the Amiga in professional musical use.

Pricing details for the kit, the adaptation and the complete machine have yet to be confirmed, but you can expect to pay around £200 to have your A500 converted and uprated to a near-A2000 spec. Checkmate on 01 923 0658 can tell you more. ■

RIDERS OF ROHAN

Plunge yourself into the world of JRR Tolkien, with this game based on a part of the second of the Lord of the Rings trilogy, The Two Towers. It may be the first of a series.



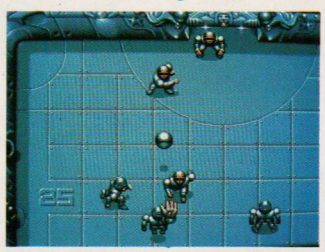
***Riders of Rohan* – new role-playing from Lord of the Rings.**

SPEEDBALL II

It's back, bigger and nastier than before. The playing area of this future sport has doubled in size and there are more weapons to choose from too. There is also much more control over the players attributes – a sort of *Kick Off Player Manager* with blood.

PSS

PSS are well known for their war games and have been introducing more and more graphic elements. Their up-and-coming titles continue to branch out into new areas with *Battlemaster* (a fantasy role-playing game) *Harpoon* and *Red Phoenix* (based on works by Larry Bond, the co-author of Red Storm Rising) and *Wolfpack* (which simulates the naval events of 1942 in the North Atlantic).



More futuristic rough stuff on the way in *Speedball II*.

DUSTER

Realtime are another prestigious programming team working on a game for Mirrorsoft, featuring their renowned filled-3D graphics. Their new one combines these with a fantasy role-playing section to create the bug-hunting mercenary world of *Duster*.

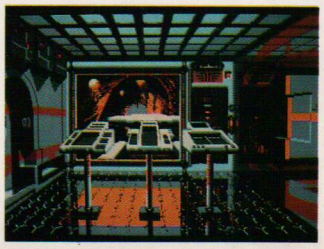
KILLING CLOUD

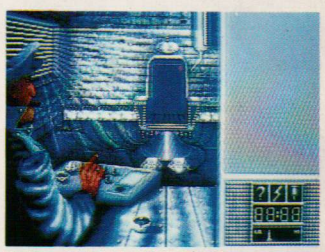
Vektor Grafix are also best known for their 3D flight sim *Bomber*, but their new game is an action adventure using the graphic techniques they've developed, but in a different context.

DYNAMIC DEBUGGER

This one has been a long time coming, but problems with developing a HAM game mean there's no release date yet. Watch this space for info on when it's finished.

BELOW: The latest game from Realtime – *Duster*.





Killing Cloud – latest from Vektor Grafix, authors of Bomber.

FTL

FTL are the people behind *Dungeon Master* and with a bit of luck we will be seeing the add-on game disk *Chaos Strikes Back* fairly soon – but you will still need a 1 meg machine to run it. They are also working on *Dungeon Master II* and there is even talk of a game design program. Don't hold your breath, though – they will not release anything until they

are totally happy with it. And why won't they do an Amiga version of *Oids*?

CINEMAWARE

Cinemaware are one of the most prestigious software houses around and they have big plans for the year. There are two more in the *TV Sports* range – *Baseball* first and then *Boxing*. Closer is *Antheads*, the data disks for *It Came from the Desert* to take you on another '50s B-movie jaunt.

Wings is another new area for Cinemaware, because it's a flight sim, though done in their inimitable graphic style. It's set in World War One with over 300 missions to fly.

SPECTRUM HOLOBYTE

Spectrum Holobyte had a massive success last year with *Falcon* and the first *Mission Disk* and they look set to follow it up equally impressively with the second *Mission Disk* and the new "full-blown battlefield strategy game" *Flight of the Intruder*. The game is set in

Flight of the Intruder.

Vietnam in 1972 and, unusually, is based on a book. There is even a film, starring Sean Penn, under production, which could make a fascinating tie-in.

Also planned for the Autumn are *Vette!* and *Tank*, sports car racing and tank simulations respectively. That's a pretty full release schedule for specialists like Spectrum Holobyte.

MILLENNIUM

Another addition to the Mirrorsoft stable is a deal with Logotron to market their new label Millennium. All Logotron games will now be issued under the new name. The reason for the change is simple enough – Logotron have long had connections with both business and leisure software and as they've recently dropped the business side they no longer wish to be associated with the business sector. Their first game is *Kid Gloves* which is reviewed in this issue. Following that are some 3D vector games that look to have some stunning routines. They are *Resolution 101* and *Thunderstrike*. Nearer to release is *Cloud Kingdoms*, a cutesy puzzle solving test of reflexes and mind.

DRIFTING ON AN AMIGA

Coming soon from Impressions will be a wargame based on one of the most famous battles in British history, the battle of Rorke's Drift. In 1879 when the Empire was at its height 137 British soldiers fought off an attack from approximately 4,000 Zulus. The battle was so fierce and the British fought so well that a total of 11 Victoria Crosses were awarded. Soon you'll have the chance to control all the British soldiers, to test your powers of strategic planning and to win a battle against odds of almost 30-1.

NEW KIDS ON THE BLOCK

Outside eyes have been gazing in on the games industry and seeing pound signs. Electrocoin, the long-established arcade machine manufacturers and distributors, have recently set up a company called Electrocoin Software with the intention of converting arcade games to home machines. With over 15 years' arcade industry experience Electrocoin Software look to be in an enviable position when it comes to grabbing the big licences and could well prove to be stiff competition to the likes of Ocean and US Gold. The first game, a conversion of the SNK game Time Soldiers, *looks likely to be here fairly soon as ES have five in-house programmers already working on the conversion. See just how good a job they did in a forthcoming issue of* Amiga Format.

MORE CHRONO

Following the success of their adventure game Chronoquest, *Psygnosis have decided to release a sequel.* Chronoquest II *(imaginative lads the Psygs) will be icon-driven and will follow on directly from the first game, in which you were travelling through time to find your father's murderers. Unfortunately, it looks as if you're not going to get home as soon as you thought you would – because the damn time machine has run out of fuel. Only skilled puzzle solvers need apply to be involved with this one.*

'BIRDS' TAKES WING

In keeping with their promise to release one new Real Things package every four months, RGB Studio's Real Things – Birds is about to hit the streets – or if the realism is to be believed – the shoulders of passers-by!

Continuing the hierarchical structure of RGB's *Horses* package, *Birds* is much more than clip art – and though the 'educational' label will inevitably be attached, it is also much too much fun and far too useful to be just educational.

Like *Horses*, *Birds* is designed to be used with *Deluxe Paint III* or any other package that supports IFF pictures, Anim animations and AnimBrushes. It is *Deluxe Paint III* that really brings it to life allowing complex choreographies of background, foreground and several animated brushes to intertwine on the screen.

The package contains a dozen species of birds – predominately water birds – in great detail, and includes over 40 animbrushes. Some of these are of "flocks" at a distance to give static pictures 'life', but the majority are detailed studies of the various species in their habitats, feeding, preening etc. There is also a 'self-drive' demonstration of how bird flight works that gives great insight into the motion patterns of birds as they flap their wings.

To complement the bird images is a full set of brushes and backdrops that allow DIY scenery to be constructed. Among these are the two best rendition techniques for water that have yet been produced on the Amiga – both are stunningly realistic.

Overall the package is much bigger than *Horses*, filling two disks – this will be reflected in the price, £29.95 instead of £24.95. A full review of *Real Things – Birds* will be the main feature of Issue 12's graphics section.

Brian Larkman

The Kingfisher is a fine sample of the new *Real Things – Birds*.

AMAZING OFFER !
D/S D/D 3.5" Discs (fully guaranteed)
Boxed in 50's. ONLY £29 inc P&P.

CATALOGUE ON OTHER PRODUCTS AVAILABLE

SEND ORDER TO:
DUKES MARKETING (Mail Order),
25 Wyndham St., Bridgend,
Mid Glamorgan, South Wales, CF31 4RB
Cheques payable to: Dukes Marketing M/O
Access - Visa - Eurocard No: 0656 - 767153

PLAY CRIBBAGE LIKE A KING...

- World's strongest Cribbage-playing algorithms.
- Play Two-handed, Four-handed, or Five-card Cribbage.
- Seven distinctive computer opponents.
- Ask for advice from any computer opponent.
- UseSetup Mode to devise scenarios for analysis.
- Play "duplicate" Cribbage. Replay later using the same cards.
- Special setup allows computer players to compete against each other.

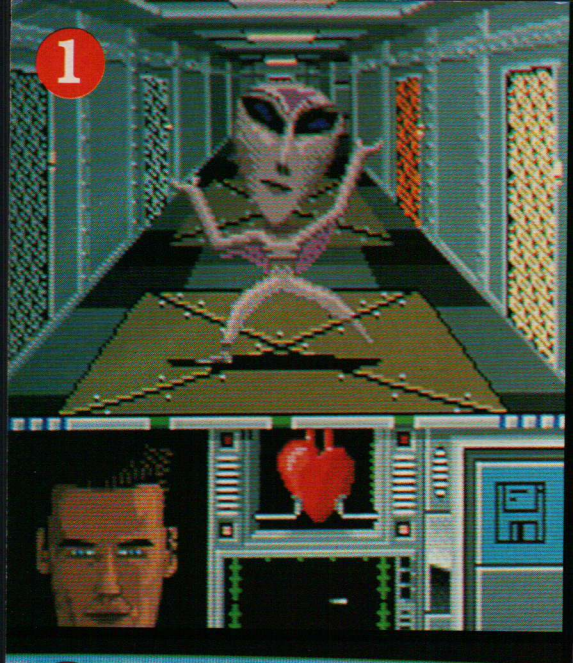
MINDSCAPE

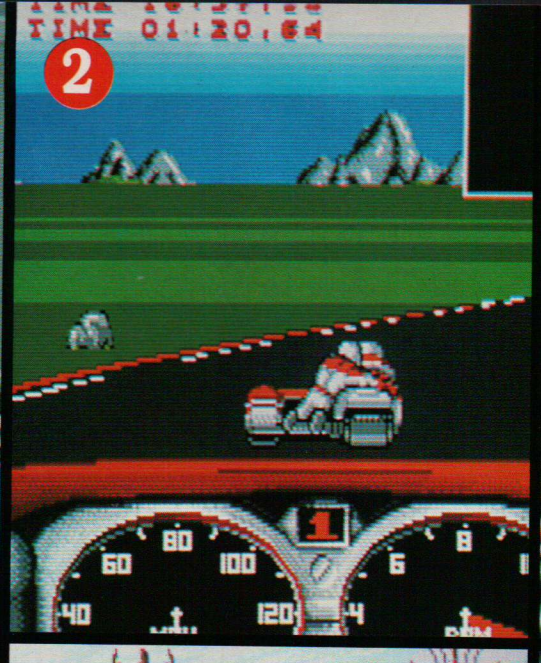
For further information on Mindscape Products and your local dealer contact:
Mindscape International Limited, PO Box 1019, Lewes, East Sussex BN8 4DW. Tel. (044 486) 545/547

PLAY GIN LIKE A MASTER...

- World's strongest Gin-playing algorithms.
- Play Standard Gin or Oklahoma Gin.
- Seven unique computer personalities.
- Ask for advice from any computer player and reciève hints and analysis in easy, conversational sentences.
- Use Setup-Mode to formulate scenarios for analysis.
- Play "Duplicate" Gin. Play again later with the same cards.
- Set up "Computer Play " games where computer personalities play against each other.

THE SOFTWARE TOOLWORKS





COMING ATTRACTIONS

Noticed just how good games are getting over the last couple of months? Want a sneak preview of what's still to come? Read on!

1 Federation Quest One – BBS Jane Seymour

Sheffield lads Gremlin have been really busy lately: *Venus* is coming along very nicely thank you and it looks like *Federation Quest One – BBS Jane Seymour* is about to arrive in the near future. This curiously-titled game sees the player in the role of a high-ranking space commander about to set off on a rescue mission to the biological survey ship Jane Seymour which is stuck somewhere in the Orion arm of the galaxy. Spooky, huh? Get there and you'll have to repair the ship, round up any aliens that may have escaped and then bring her home.

2 Combo Racer

If that's all far too far-fetched for your intellectual brow and you prefer to find your excitement on good old terra firma then Gremlin have a first that may get your juices flowing. "A first!" you cry. Yes indeedy, The Grems, in 1990, have managed to find something that hasn't been done before – combination motorbike and sidecar racing. Combo Racer (imaginative lads the Grems) gives you eight tracks to race around, all in super-smooth 3D, and includes an editor so you can build your own.

3 Impossamole

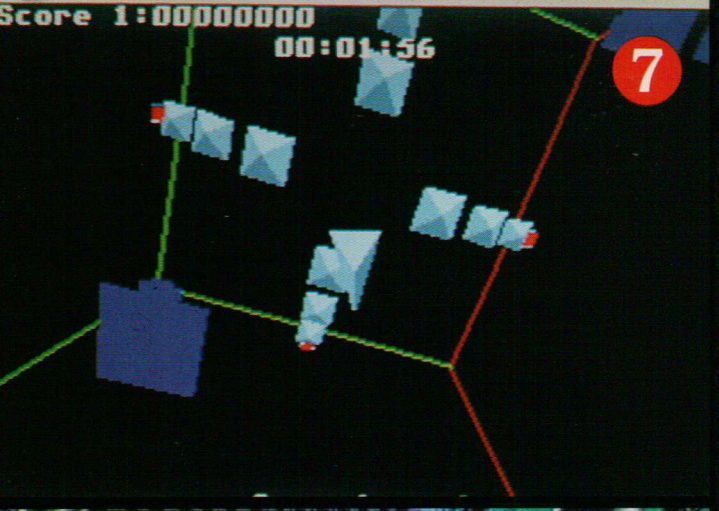
Last month we broke the news that the loveable sprite Monty Mole was due to make a return and as we know perfectly well that you're all waiting with bated breath we thought we'd show you just how his latest game is coming along.

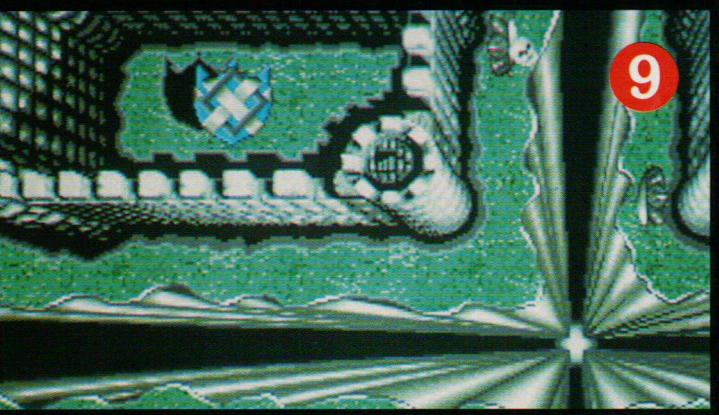
4 Astro Marine Corps

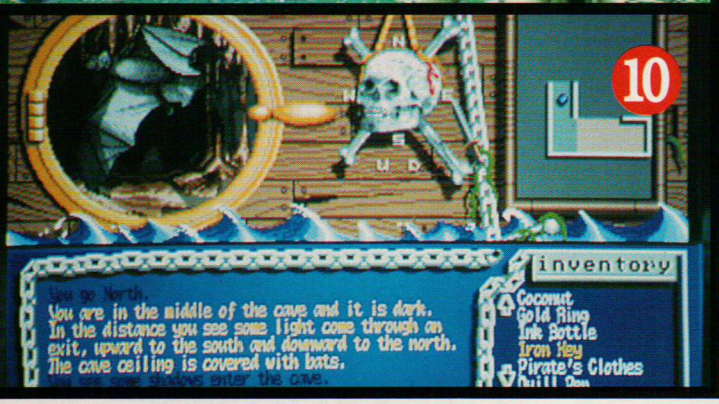
From Dinamic comes this arcade blast giving the player the chance to get his sweaty mitts on nine super-powerful weapons with which to go out blasting criminals. Seems a bit heavy handed? Not really, when you consider the crims in question are a mixed bunch of alien races hell-bent on taking over the galaxy. In fact the only way to stop them is to blast them to kingdom come – and the only man for the job is a member of the AMC.

5 Colorado

After the brilliant *Dragons Breath*, what will French lovers Palace follow up with? The answer is another French game, this time from recent signees Silmarils. *Colorado* is an arcade







adventure sending the player back in time to nineteenth century Colorado (imaginative lads the Silms) and into the shoes of drunk and womaniser David O'Brian. Now ol' Dave has happened across an ancient map which will lead him to the lost goldmine of the Cheyenne – but only if he can get there, because the journey will be fraught with dangers including hostile indians, trappers and wolves. There are plenty of arcade sequences to take part in and more than just a couple of logical puzzles to solve.

6 Flimbo's Quest

System 3's *Last Ninja II* is coming along nicely as is the new game *Flimbo's Quest*. It's a beautifully-animated cartoon platform game for fans of the genre, featuring seven levels created by a mad professor who's captured Flimbo's girl. The levels are infested with all manner of meanies created by the professor, so sharp wits and bravery are the order of the day.

7 Fatal Gravity

A novel puzzle game from Infogrames. The player controls a triangle and the game is played by guiding the triangle through several rooms. Unfortunately, the only way to get out of most rooms is through doors halfway up the wall. The player must bounce onto suspended platforms and bounce from one to the other to exit the room. Wacky stuff that's not only good looking but promises to be a bit of a mental excercise too.

8 International Championship Wrestling

Grapple fans will think all their Christmases have come at once when they get their hands on Hewson's latest. One or two players can get to grips with international stars like Ivan 'The Bear' Trotsky (imaginative lads the Hews) and wrassle them all around the ring – oh! Just think of the hours of fun you'll be able to have as you go after that elusive Championship Belt (handbags for hitting your fave baddie are not included in the packaging).

9 Lords of War

Arcade action with a medieval flavor is on its way in *Lords of War* from Gainstar. Four knights get together to go biff a nasty dragon 'cos whoever succeeds in doing this will inherit a kingdom. However, only one will get the chance and to find out who that will be, the lads in shining will battle with each other first. You are one of those knights – and with a little luck, lots of courage and a bit of magic it just might be you that gets the booty.

10 Island of Lost Hope

There's more treasure to be found in this Gainstar graphic adventure, which gives you the chance to wear the boots of a young seafaring captain in pursuit of the treasure of Forgotten Souls. Things were going well until you ran into the infamous pirate Captain Black (imaginative lads, the Gainies). Sea dogs and adventurous types should sign up and climb aboard real soon.

11 Dan Dare III – The Return

Forty years on since his first appearance in the Eagle, Dan Dare is back on the monitor in *Dan Dare III – The Return* from Virgin (imaginative lads, the Virgs). Danny boy has escaped from the Mekon after being captured and transported to a huge satellite for 'Treenisation'. All he has to do now is explore the satellite and find enough fuel to power his escape rocket, which just happens to be lying around. Dan fans, prepare.

Virgin are also cashing in on the World Cup in a couple of months' time with the release of *World Cup Soccer '90*. An arcade footy game featuring all the usual bits and bobs plus a couple more, such as injured players being stretchered off the pitch. Mmmm... sounds like fun!

STOP PRESS

Limited offer only

Available only while stocks last, two incredible PHOTON PAINT software specials!

PHOTON PAINT I
(Limited to first 15 customers only)
ONLY £10.95!

PHOTON PAINT II
(Limited to first 35 customers only)
ONLY £39.95!

MERLIN

New Flight of Fantasy Pack now available - Inc F29 Retaliator, Rainbow Island, Escape from the Planet of the Robot Monster. Please phone for details

AMIGA A500 BATMAN PACK

Now you can laugh as much as Joker and cash in with some GREAT QUALITY GAMES...The Amiga Batman Pack includes, ALL OF THE FOLLOWING...

Amiga A500 with Modulator, Mouse, 1 Meg Internal Disk Drive, 512KRAM All Connecting Leads, Kickstart 1.3, 4096 Colours, Multi-Tasking, Built-in Speech Synthesis, Workbench 1.3 System Disk, & Operation Manuals.

A REAL 'BAT-BARGAIN' AT ONLY...

£369

Inclusive of VAT and Postage!

Plus Free... BATMAN THE MOVIE, F 18 INTERCEPTOR NEW ZEALAND STORY & DELUXE PAINT II

MONITORS *Including FREE Amiga Leads!*

COMMODORE 1084S 14" Stereo High Res. Colour	**£269**
COMMODORE 1084P Mono Sound Version of 1084S	**£225**
PHILIPS CM8833 14" Medium Res. Colour Twin speakers, Green screen switch, with tliting stand.	**£249**

CHECK FOR LATEST PRICES & AVAILABILITY ON ALL MONITORS

FREE...12 Months on site Maintenance with CM8833's

DISK DRIVES

A 590 20Mb Hard Disk	**£379**
VORTEX 40Mb Hard Disk	**£499**
CUMANA CAX 354 1 MEG. 3.5" Single	**£89**
CUMANA CAX 1000 1 Meg. 5.25" Single	**£129**

NEW! Roctec 3.5" Drive Only...£85!

PRINTERS *Including FREE Amiga Leads!*

STAR LC 10 Mono	**£169**
STAR LC 10 Colour	**£209**
STAR LC 24 10	**£249**
STAR LC 10 MkII	**£185**

Genuine Star Ribbons now Available!

ACCESSORIES

10 - TDK 3.5" BLANK DISKS		**£14.95**
DISK STORAGE BOXES...	**40 Capacity**	**£6.95**
	80 Capacity	**£8.95**
MOUSE MATS		**£4.95**
MOUSE HOUSE		**£2.95**
AMIGA KEYBOARD DUST COVERS		**£5.95**
CM 8833 DUST COVERS		**£5.95**

MORE AMIGAS

AMIGA Class of the 90's Pack	**£529**
AMIGA Batpack Pack+CM8833	**£608**
AMIGA Batman Pack+CM8833 +Star LC10 Colour Printer	**£809**

CHOOSE ONE OF OUR 5 SORCERORS PACKS!

ORDER SC-M1

AMEGIS
WIZBALL
BUGGY BOY
BARBARIAN
MERCENARY
TERRORPODS
ART OF CHESS
THUNDERCATS
INSANITY FIGHT
IKARI WARRIORS

TEN GREAT GAMES AND A FREE JOYSTICK

ORDER SC-M2

12 MONTHS SUBCRIPTION TO AMIGA USER INTERNATIONAL FREE MAGAZINE BINDER AND A MOUSE MAT

ORDER SC-M3

MOUSE MAT, DUST COVER, LOCKABLE 80 CAPACITY DISK STORAGE BOX 10 BLANK DISKS & JOYSTICK

ORDER SC-M4

Official - Commodore "Gift Shop" Products

COMMODORE BARREL BAG & DISKETTE HOLDER, + COMMODORE KEYRING.

NOW AVAILABLE

A CHOICE OF 5 GREAT NEW SORCERORS PACKS WHEN YOU BUY AN AMIGA, BUT ONLY FROM MERLIN EXPRESS!

ORDER SC-M5

Official - Commodore "Gift Shop" Products

COMMODORE - QUARTZ ANALOGUE SPORTS WATCH, MUG, KEYRING, BALLPEN AND SOLAR POWERED CALCULATOR

AMIGA BATMAN PACK (As listed at top of page)
Plus **Your choice of 1 Sorcerors Pack from the 5 listed above**

(Individual Sorcerors Packs [ie without the A500] are available to purchase depending on our stocks, phone for prices and further details quoting the relevant SC number)

£394

Inclusive of VAT and Postage!

24 HOUR HOTLINE
0602 42-44-44
Access VISA

ALL OUR PRICES INCLUDE V.A.T. AND POSTAGE (UK Mainland)

Whilst every effort is made to ensure that the information shown on our advertisements is correct, you should ALWAYS confirm any Offers, Prices, Availability etc. prior to placing orders. Because our advertising is booked so far in advance, Merlin reserve the right to alter equiopment specifications, withdraw any product/offer or update prices (either up OR down), without prior notice. ALWAYS CHECK DETAILS PRIOR TO ORDER. Merlin will NOT supply anything that has been subject to change without the customers prior permission.

ORDERING: Just phone our 24 hour order line using your Access/Visa card, OR, send a cheque/postal order with your requirement details. (Cheques need clearance prior to despatch)

DELIVERY: You choose either, by post at no extra cost, or simply add £5 per large item for next working day courier service. (UK Mainland)

WARRANTY: Goods that prove faulty within 30 days will be exchanged for NEW. After 30 days, & within 12 months, faults repaired at our expense.

MERLIN
EXPRESS LIMITED
DEPARTMENT **AMF**/M4, 5 REDWOOD COURT
SALISBURY STREET, NOTTINGHAM NG7 2BQ
Telephone: 0602 424444 FAX: 0602 420813

GREAT VALUE, THAT'S THE MAGIC OF MERLIN

New Products

HiSoft BASIC

A host of new features in Version 1.05

HiSoft BASIC on the Amiga has already proved its worth for thousands of people because of its speed, its compatibility with AmigaBASIC and QuickBASIC on the PC and its ease of use. Now we've added features that make HiSoft BASIC irresistible. Version 1.05 gives you:

- Even more compatibility with AmigaBASIC making it simplicity itself to compile all your existing programs into super-fast, stand-alone machine code.

- Linking with assembler and C programs. Now you can use external functions and sub-programs from either assembly-language or C programs, giving BASIC a power you will find hard to believe.

- Extended editor for 1M users with automatic upper-casing of BASIC reserved words as you type them in, making for clear, easy-to-understand program listings.

Remember that HiSoft BASIC is not just an incredibly fast compiler producing compact, very fast machine code but it is a complete programming environment - you create and edit your programs just like you do with an interpreter but then, when you run your program, it is *automatically* compiled to give the best of all worlds. ***One package, one price***. HiSoft BASIC 1.05 still costs only £79.95 inclusive. Upgrades are available to existing registered users at £5.

Extend

Invaluable libraries for HiSoft BASIC

The Extend package is available at last! The Amiga is a difficult computer to program and AmigaBASIC offers little help in using the gadgets, menus and requesters that the operating system supports. Extend gives you an extensive library of sub-programs and functions that is available from both AmigaBASIC and HiSoft BASIC that fills these gaps.

Extend allows full control over the system gadgets, menus and sub-menus, requesters, windows, IFF-format files and much more. It comes complete with over 50 pages of documentation packed with clear examples of the usage of the library and, of course, the library itself with examples) on disk. All for £19.95 inclusive.

Now you can extend the power of your BASIC on the Amiga with this brand-new, value-for-money package.

Both Shipping Now!

Also available for the Amiga are: HiSoft Devpac version 2 (£59.95), the most complete and reliable system for assembly language programming on the Amiga and it works on all Amigas (unlike some other assemblers we could **argue** about!); Lattice C 5.04 (£229), the ultimate C package - very fast with everything you need including a global optimiser and extensive, 2-volume documentation.

All software should be available from your local dealer. In case of difficulty, you can order directly from HiSoft by phone, using your Access or Visa card or by mail, using Access, Visa, a cheque or postal orders. Our prices include VAT and shipping within the UK.

HiSoft, The Old School, Greenfield, Bedford MK45 5DE.
Tel: (0525) 718181, Fax: (0525) 713716

HiSoft

HiSoft
High Quality Software

NINJA SPIRIT

ATARI ST SCREENS SHOWN

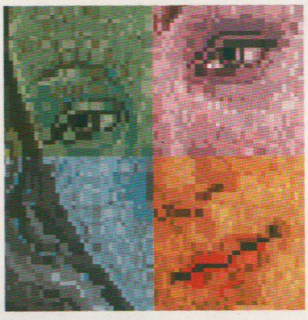
ACTIVISION

NINJA SPIRIT © 1988 IREM CORPORATION. LICENSED TO ACTIVISION (UK) LIMITED.

Consumer Support Tel: (0734) 310003

Mail Order: Intermediates Ltd. P.O. Box 847, Harlow CM21 9PH Tel: (0279) 600193

BRIAN LARKMAN throws away the oils and turpentine to show how important use of colour is...



Venus RISING FROM THE palette

After working with a Quantel Paintbox for BBC2's "Painting With Light" series, the well-known American painter Howard Hodgkin criticised 'electronic painting' for being so quick and clean, depriving him of time to think! Obviously for some people the mixing and cleaning time is a period of thought and contemplation – something we all need to indulge in as often as possible. But usually, when we just want to express an idea as quickly and cleanly as possible, what a hassle it is mixing colours the conventional way – bottles of oil and turps or pots of water, tubes of paint, dirty rags, dirty brushes, messy palettes, all taking up space and time with the constant cleaning, mixing and remixing – just to get the right colour!

We don't have the vast facilities of the Paintbox, but even with an Amiga the chance to select the exact colour and shade you want from a large range and get on with the painting can be a liberating experience. Nevertheless, electronic colour is still a difficult medium to handle effectively so for this next tutorial we are going to concentrate on colour – what it is, how it works and how to use it.

Learning about Colour

If the Amiga were of no use for anything else it would have great value as a way to learn how colour works. Almost from the moment that you turn on it starts the educational process. The first clue comes when you set the screen preferences for yourself: the colours are controlled by three sliders

Forcing The Palette

that vary the amount of red, green and blue present in each colour. We have all set up our own lurid screen display by trial and error, but how do the sliders really work?

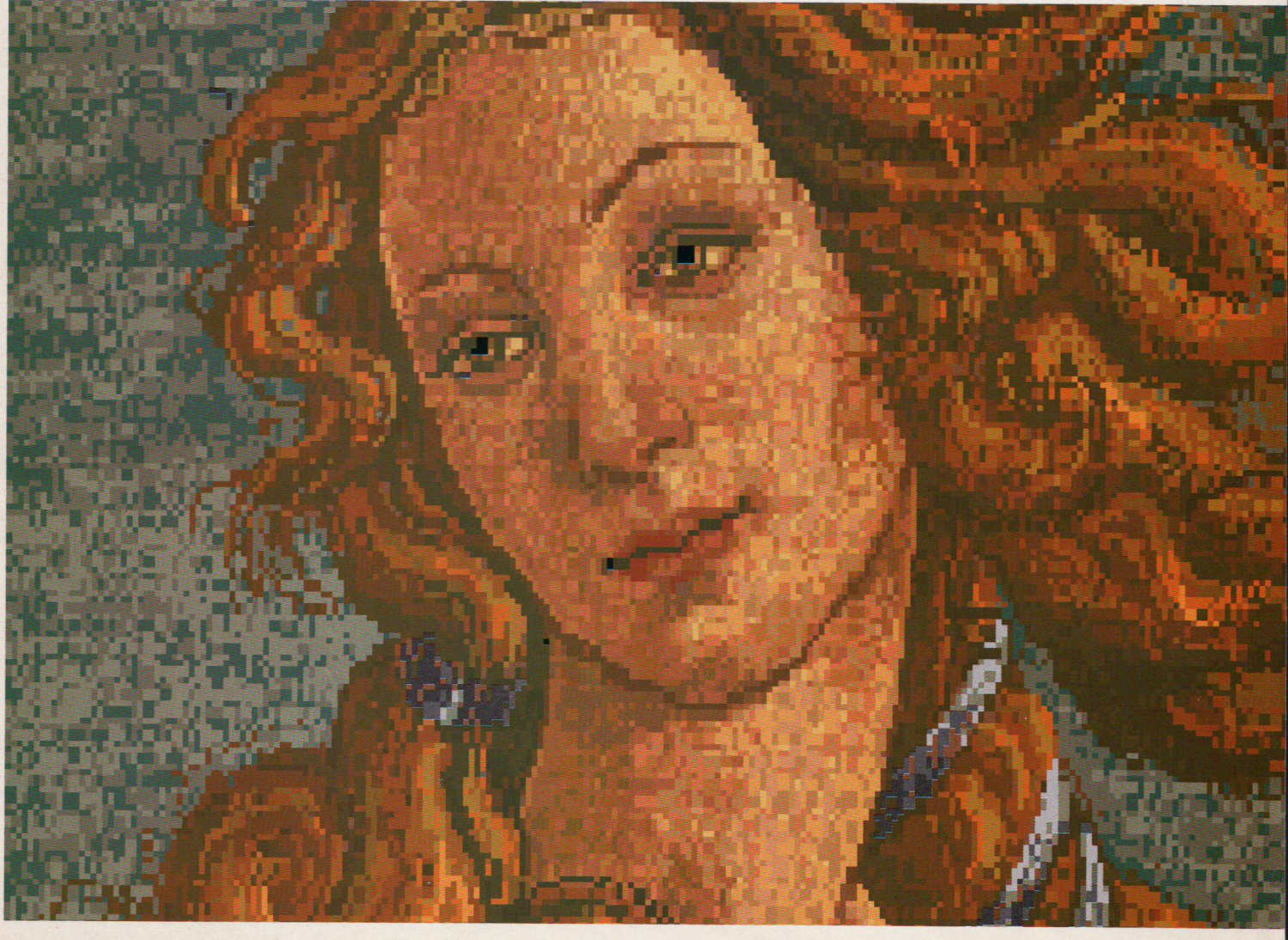
The screen display of virtually all colour computers – and all TV sets as well, for that matter – is determined by the relative values of red, green and blue light, known simply as RGB to the cognoscenti. These three colours of light are the so-called 'additive' primary colours which can be mixed together in varying amounts to produce light of any colour. When all three of the pure primaries are mixed, the result is white light. Although a little knowledge of physics tells us different, it always seems strange that white light is made up of the complete spectrum of the colours. How can such distinctive primary colours as red, green and blue apparently cancel each other out and produce what common sense tells us is the absence of colour? But, of course, they do: the addition of these three primaries, red green and blue light, forms pure white.

Red, Green and Blue Ham!

If you have *DigiPaint 3* or *Photon Paint* you can experiment with this effect to understand it better. Clear

Near Right: "GoldVenus" Top, "OchreVenus" Bottom. Far Right: "PinkVenus" Top, "PinkVenusDGV" Bottom.

An easy way to change the mood of a picture by just changing its colours is to force it to fit a new palette. This is only really possible in a non-HAM system. So that you can copy these effects exactly from this tutorial a standard picture, available from every version of *Deluxe Paint* has been used – "Venus". To produce these changes of character, various other 'standard' pictures were loaded into the spare screen after "Venus" had been loaded to the main screen. The new palette is loaded with the new picture and "Venus" initially looks a mess. This is immediately rectified by selecting Remap from the Picture/Change Color menu. The results are shown alongside. "GoldVenus" uses the "KingTut" palette, "PinkVenus" uses that from "Gorilla", and "OchreVenus" the "Africa" palette. As you can see, the success of this method depends on the number of suitable colours in the new palette. A different but sometimes more effective method of forcing palettes is to use *DigiView*. A proper description of the use of *DigiView* for this purpose will be given in a future Digitising Tutorial. Briefly, the method is to load the new palette first using *DigiView*'s convenient Load Palette menu selection, then Freeze the palette on the Palette Control Panel. The correct number of colours must be chosen on the Color Control Panel (32, 16, 8 etc – not 4096!) and then the picture loaded. The effect can be seen in "PinkVenusDGV" which again uses the "same "Gorilla" palette but with a quite different result.



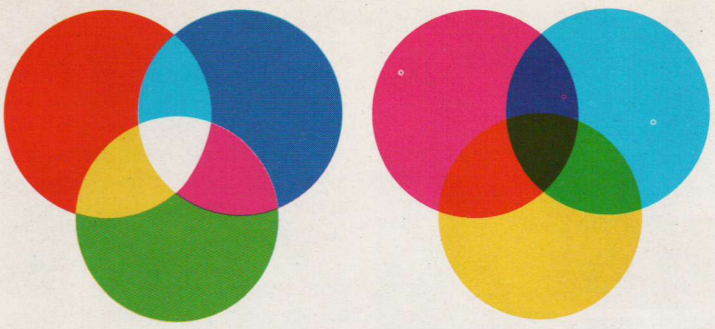


DIAGRAM ONE: 'RGB – CMY'
On the left are the 'additive primaries', red green and blue. These three colours of light combine to produce white, but mixed in different proportions will give any other shade.

On the right are the 'subtractive' primaries, cyan, magenta and yellow. These three colours of paint or dye can be combined to produce almost any other shade. All three together should give a reasonable black.

the screen to black and choose 'OR' from the Mode menu. With a circular custom brush about 3cm across (and, with *Photon Paint*, 'Trans' and 'Solid' selected on the brush menu), try painting pure red, green and blue (F00, 0F0, 00F), partly superimposing them as in Diagram One, 'RGB – CMY', above. (If it helps, imagine that you are in a theatre and have three circular spotlights focused on a blacked-out stage). Where they overlap, notice the colour effects. Red and green make yellow, red and blue make magenta, blue and green make cyan and all three make white; suprising, but true.

Almost as strange is the behaviour of paints or dyes on paper or cloth. This time the primary colours are Cyan (blue/green), Magenta (blue/red) and Yellow – the 'subtractive' primaries. Many people remember mixing blue, red and yellow paints at school to get almost any shade – this is a reasonable approximation of the effect of cyan, magenta and yellow. Since these primaries are subtractive, a mixture of all three results in the absence of all colour – black – though in the printing process used for full-colour magazines like this one some pure black ink is used as well to get a good, deep, opaque black. Again the process can be simulated using a HAM paint program, this time using the 'AND' mode on a white screen (also shown in "RGB – CMY"). Here cyan and yellow make green, yellow and magenta make red, magenta and cyan make blue and all three together make black.

In theory this is how most print processes create a full-colour picture – superimposing various shades of cyan, magenta and yellow – though in reality the process is very difficult to manage effectively. This explains why it is so difficult to get a good screen-dump in colour, even from the most expensive printers; the printer is blending CMY ink on dull paper that can only reflect light, but the screen display is mixing illuminated RGB values, literally 'painting with light'.

The Saturated Value of Hue!

Although the pure, rich primaries of RGB and CMY have been used for the examples so far, the screen and the printer both use a whole range of 'values' and 'saturations' of these hues to achieve a broad spectrum of colours. The 'Colour Wheel' illustration over the page shows a range of about 72 of the fully-saturated hues that the Macintosh can display. These fully-saturated hues are around the outside. *(Apologies for using a Macintosh example, but it makes life easier since we use Macs to lay the mag out – Ed.)*

On the inner rings are shown various shades of the colours achieved

HAM AND SHAM

In a HAM display very few pixels have their own uniquely-defined colour. Instead, they derive their component RGB levels from the pixels adjacent to them. The advantage of this is that many different colours can be displayed, by a sort of 'domino' effect; the disadvantage is that updating a changed display can be quite slow. To understand how HAM works we need to get a bit technical.

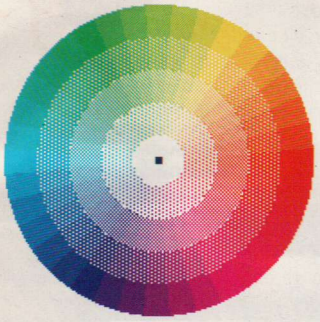
To display a picture on screen the colour of each pixel must be stored as a list (the 'bitmap') in memory – starting at the top-left pixel and ending at the bottom-right. Each colour used must have a unique 'code' to describe it, and the more colours the more complex the code. On the Amiga and other 16-bit machines, four bits are usually used to define this code. In binary, this equals 16 unique colours chosen from the 4096 available and these are kept in a 'table' or register of the colour palette currently in use. With some hardware and software tricks this number can be increased to 32 or 64 – above this the 16-bit bus cannot normally cope.

In HAM mode, 6 bits are used to define the colours. The first two – the 'significant' bits – can have four binary values, 00, 01, 11, or 10. If the value is 00 the next four bits define one of the 16 'normal' colours in the register. These can be used anywhere on the screen without causing problems. If the value is one of the other three possibilities, 01, 10, or 11, the colour of the pixel is instead derived from that of the one before it. Now the colour is the same except that one of its RGB components is different – 01 changes blue, 10 changes red and 11 changes green. The remaining four bits define the value of this changed component.

In effect this means that if two very different colours are to be adjacent there must be a 'fringe' two pixels wide between them. For example between Black (000) and White (15,15,15) will be Red (15,0,0) and Yellow (15,15,0) unless white is one of the 16 'register' colours. It is this fringeing or 'ramping' that is the great limitation of HAM. Nevertheless careful choice of the register colours can almost eliminate the effect and several sophisticated programing tricks have been developed to overcome it though the application of these slows down operation.

SHAM or SuperHAM is a software technique that has been used on the Atari ST for some years to provide a HAM-like 'omni-colour' mode. In effect it involves palette switching 'on-the-fly'; every line of the screen display can have a different 16-colour register that is switched at the start of each horizontal raster scan. Such a technique allows all 4096 colours of the Amiga to be used on screen simultaneously in the highest resolution without any ramping; it is also very memory intensive and locks up the processor almost completely. The latest version of NewTek's digitiser software, DigiView v4 and ASDG's 'ScanLab 100' scanner software both use versions of SHAM to produce 4000-colour hi-res pictures.

DIAGRAM TWO: 'COLOUR WHEEL'



by varying the saturation and value. In simple terms, the addition of white to a colour decreases its SATURATION and the addition of black decreases its VALUE. Most computer painting systems will allow you to vary the Hue, Saturation and Value (HSV) as well as the proportions of Red, Green and Blue in a colour, but not *DigiPaint 3* which uses a different, though equally valuable, system. Experiment with the Hue, Saturation and Value sliders in your favourite program. The "Waterfall" Tutorial below is a reasonable starting point.

Colour Cubed

The colour wheel, although it illustrates the relationship between the various saturated hues quite graphically, is too large to use for selecting colours in the course of working. *(Try telling that to the AF art department: they have to use colour wheels on the Mac – Ed.)*

Instead, the developers of HAM drawing systems have very sensibly devised or adapted the 'Colour Cube'. *Photon Paint II* and *DigiPaint 3* both have similar 'colour selection' squares which represent sections through the cube along the three axes, red, green and blue. In use the squares are better thought of as holding the proportion of one colour steady – the left square red, the middle green and the right blue; try it and see for yourself. Holding down the left mouse button and moving the pointer around within the left square changes the green and blue values but leaves the red alone. If this is still a bit too much to grasp don't worry. It is, in any case, practice that is called for and this method of selecting colours 'by eye' quickly becomes intuitive if you use it often.

Palette Management

DigiPaint, going its own unique way as usual, also provides a 'Tone' selector showing all of the tones or 'values'

Waterfall

"Waterfall" (above) is one of the pictures included on the *Deluxe Paint III* Art Disk. It is a beautiful example of computer art, showing a bright waterfall flowing through dark and mysterious undergrowth into a pool. To show the way that the Value slider could be used to change a 'ready-made' picture, "WaterfallLight" (left) was produced. Now the pool and surrounding vegetation is dappled with light and even the moss is glowing in the sunshine. A simple effect but it has to be handled with care and subtlety otherwise it will just look as if you have turned up the brightness knob on the monitor. In this case the foreground leaves were made much brighter green and those in the background together with the moss much less so. The blues in the water were given more Value but the greys of the rocks were left exactly the same. Using the same picture from your disk, or another, try to get the same effect.

In contrast, "WaterfallWierd" (bottom right) shows a much more dramatic transformation after meddling with the Hue slider. Initially, the intention was to produce a moonlit scene, but the red vegetation looked so strange that the effect had to be heightened by making the water green. In this way the mood of a picture can be completely changed with little effort. The trick is not to overdo things!

available for each of the 16 register colours (see sidebox 'HAM and SHAM' on the previous page), and a 'Range' selector showing the spread of 8 colours used for the Range drawing mode. *Photon Paint* provides instead a palette of 48 colours in addition to the 16 register colours. These can be defined by the user to set up a more limited or 'working' palette that can be returned to frequently and used throughout a painting so as to impose a visual style and continuity.

This is a traditional painting technique that will be familiar to conventional artists and designers, and provides a useful transition for users of *Deluxe Paint* moving to HAM painting. Sometimes choosing from the full range of 4096 colours is more than a bit formidable.

Non-HAM painting systems like *Deluxe Paint* or Zoetrope are constrained to a total of 32 colours maximum so the concept of a limited or 'managed' palette must be accepted and absorbed without delay. *Deluxe Paint* and *Photon Paint* both provide several tools that aid palette management. Individual colours can be modified with the RGB/HSV sliders and moved or exchanged with others on the palette. A spread of tones between two colours can be produced based on RGB values (and even on HSV values in *Photon Paint*).

In *Photon Paint* it is usually easy to find exactly the right colour from the colour squares, but in *Deluxe Paint*, with only the sliders, it can be quite difficult. One way to produce the colour you want is to make a spread of four or more shades between the two colours that are closest, then choose the most suitable of these new shades to modify with the sliders. In this way a range of earth tones can be formed from black and orange, or sky blue from pure blue and cyan. Gradually in this way a palette with three or four ranges of colours is built up before you even start painting.

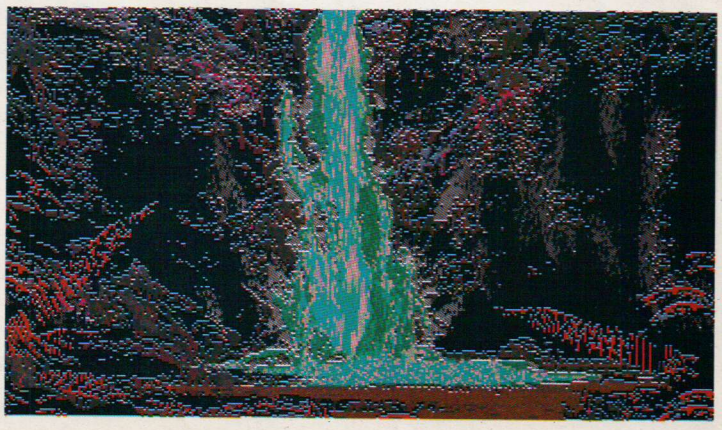
When you create a particularly good palette you might find it useful to save a small brush from the painting with a suitable name – Earth & Trees – Flesh Tones – Sea & Sky, or whatever. Create a 'Palettes' drawer which you can keep permanently at your disposal.

As you produce more paintings and gain greater skill you will build up a whole range of palettes that will save time later. In the meantime, look at the colours used to produce the pictures on the Art Disk that accompanied the program that you use. These can be carried over to your own paintings or used to start new works. Alternatively, before you start your own work try changing the palettes of pictures on the Art Disk. This can be very informative and is the basis of this month's tutorials.

Conclusion

Using the Amiga, some good painting software and the techniques described here we can make a good start on any picture. Nevertheless, to return to dear old Howard Hodgkin, it really is neccessary to take time to contemplate what you are doing.

All too much of the artwork produced on computers by amateurs and professionals alike is dross – slick and plastic and meaningless. In many ways this is a product of the medium itself. Its very accessibility and speed mean that many more images can be produced and even quite unskilled people can paint slick-looking objects. This is where we need to be quite selective – don't always go for the bright, smooth look. Let your pictures look rough and 'worked'. Use more of the rich, deep tones and not just the saturated ones – or alternatively try painting with pastel shades, or a mix of the two; that way you will introduce more 'depth' into your work. Contemplate your palette! ■

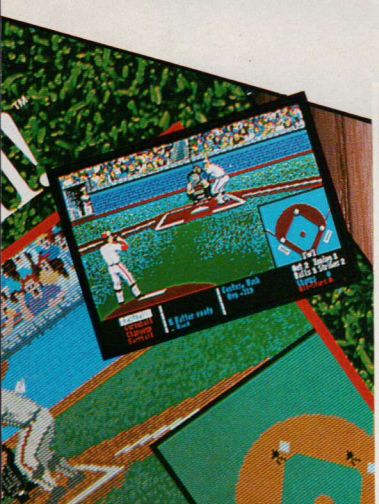


ACCOLADE™

All time favourites

The best in entertainment software.™

A compilation of all time favourites including Test Drive, Hardball, Mini-Putt, Apollo 18.
Available on:
IBM PC £29.99
CBM 64/128 Disk £19.99



The best in entertainment software.™

A compilation of all time favourites including Test Drive, Mean 18, Famous Courses Volumes I & II, Hardball.
Available on:
Atari ST £29.99 Amiga £29.99

The best in entertainment software.™

Accolade Europe Ltd., Unit 17, The Lombard Business Centre,
50 Lombard Road, London SW11 3SU. Telephone: 01-738-1391.

HAMMERFIST

TGM STAR PLAYER

THE REVOLUTION BEGINS

2245AD.

The people are no longer free.

Their lives and destinies are controlled by a powerful corporate body, Centro-Holographix, that seizes suitable humans for transformation into holographic images, indistinguishable from their solid counterparts. Their unknowing minds and holographic bodies are programmed to perform any task the Masters should require.

Two of the deadliest, Hammerfist and Metalisis were ready for assignment; to dispense death and destruction under the evil instruction of Centro-Holographix.

They were political puppets, dangerous and skilled murderers who followed their binary politics to the letter – their masters didn't even consider the possibilities of a malfunction... especially one that would turn Hammerfist and Metalisis against the hand that fed them...

ACTUAL AMIGA SCREENSHOTS

CONSUMER SUPPORT TEL: (0734) 310003
MAIL ORDER: INTERMEDIATES LTD. P.O. BOX 847 HARLOW CM21 9PH
TEL: (0279) 600197

digital MASTERCLASS

CARL YOUNG of Photofile, professional digitisers to the crowned heads of Europe, shows how to get the very best from your digitising set-up.

There are two qualities that colour digitisers either do or do not have. The first quality is real-time grabbing: if they are real-time, they can grab still pictures of moving objects, which generally means they must work at about the same frame rate as a video recorder, 50 frames a second. If they are not real-time, they must grab from a static object.

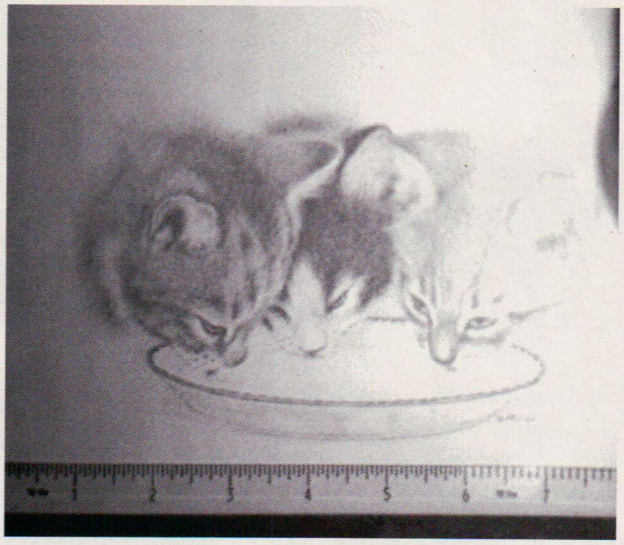
The second quality is full-colour: if they are full-colour, they can read a colour composite signal from a video camera, but if they are not, they must build up a colour image from three separate red, green ad blue images. Now, though the technology involved in a full-colour real-time digitiser is well impressive, the results are not necessarily going to be superior to a good, old-fashioned jobbie possessing neither of these qualities.

So, for the purpose of this feature we'll assume that you've been out to the shops and come home with what I consider to be the best digitiser on the Amiga market – Newtek's Digi-View 4 at around £150. You have also purchased a black-and-white video camera with a composite signal. At Photofile we use a Vidicon camera made by Norbain Imaging, but a Panasonic WV 1410 is ideal at about £220. Right, so what's next?

Before you do anything else, put that stuff down, go back to the shops, take out your whimpering wallet and get yourself one or two more rather important things.

Don't Skimp on Lighting

Firstly, and possibly most importantly, you'll need good lighting. For the best results at least three and preferably four separate light sources should be used. Anglepoise lamps are ideal – they are easily adjustable and can be swung out of the way when not in use. If you can, try to get two sets of two lamps with one set having a wider spread of light than the other.

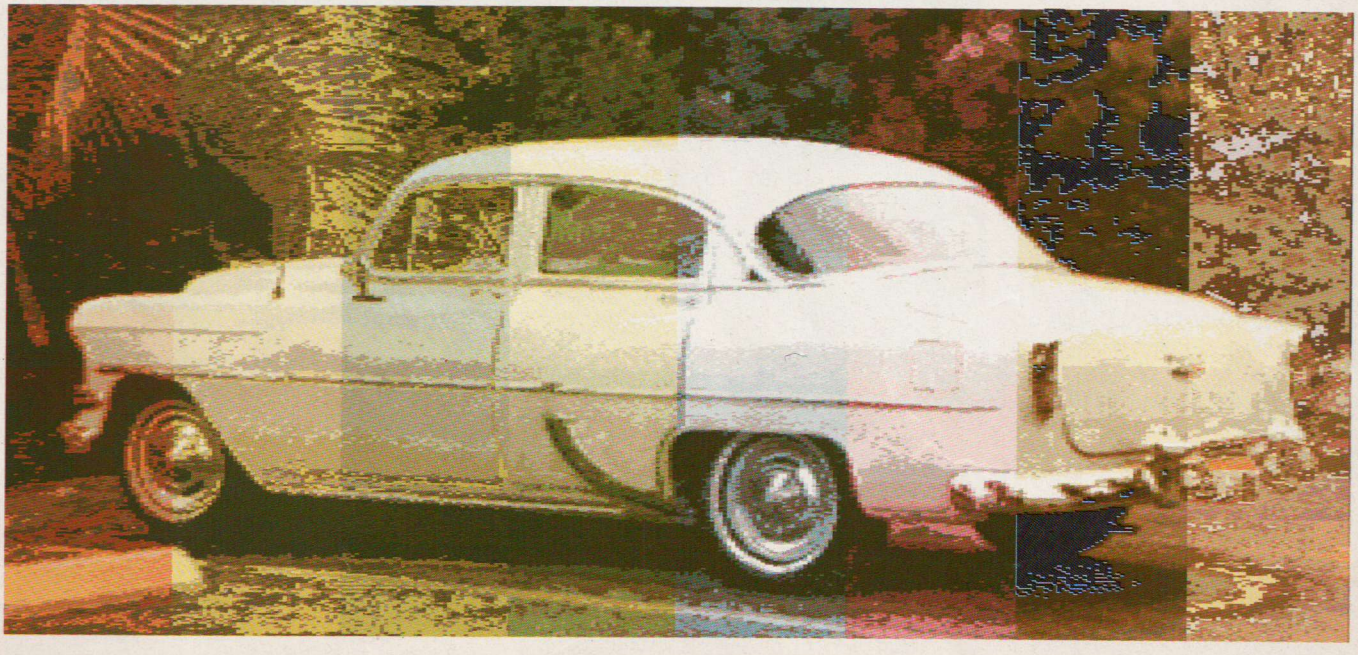


Above: LIGHT FALL-OFF

Sometimes pictures or objects will benefit from different light intensities, but rarely enough to warrant using different bulb wattages.

Next, you need some light bulbs. This may sound like obvious advice but, believe me, light is the key to good digitising. Digitisers pick up and exaggerate gradations of light intensity which you wouldn't notice on your original picture, but which become clearly visible on your digitised image. (See the picture on the left called "Light Fall-off"). What's more, normal household light bulbs actually give off yellow light, so when digitising large white or very light areas, shades of white tend to become shades of pale yellow!

Fortunately, there are ways around these problems. The first is to



use the sort of anglepoise lamp which takes small fluorescent tube lights. These give a much more even spread of light. However, you might have to pay up to £20 each for these tubes!

There is another alternative, one which we favour at Photofile. We use special light bulbs that simulate daylight. They're the sort used by artists when natural light fades and their advantage is that they show true colour. That is, they are fitted with a special colour correcting tinted glass that acts as a filter emitting an enhanced spectrum. The only problem is that these bulbs come from France and don't seem to be widely available here.

We tracked down a supplier in Loughborough called Spencely Barker who import these wonderful things and sell them to us for about £4.00 each. Spencely Barker supply bulbs by mail order: you can contact them on (0509) 231945. Ideally, use 75 watt bulbs: don't go for bulbs of over 100 watts or you'll have the corners of your pictures curling up from the heat! A piece of glass placed over the picture will stop this, but may cause you problems with reflections from the lights and camera.

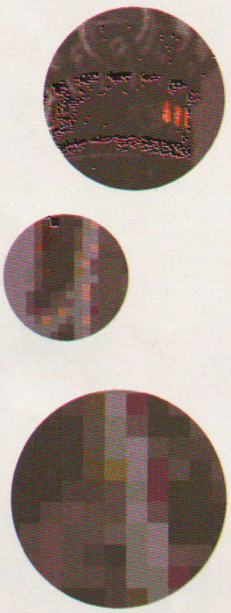
A Steady Hand

When digitising you must keep your camera absolutely steady for up to five minutes at a time, so it's no use balancing it, teetering, on top of a pile of books! Copy stands are handy but very expensive and illuminated ones even more so. You can pay anything up to £500 or more for a top-of-the-range, four light-point model.

A cheaper and in many ways better alternative is to get yourself a tripod. You should be able to pick up a decent one for well under £50. Make sure it has a pan-and-tilt head for easy adjustment and can be pointed directly downwards at a subject. Tripods also have the advantage of being portable, unlike huge and unwieldy copy stands.

Digi-View 4 and other digitisers of this genre utilise a coloured wheel comprising of a red, green and blue filter. The wheel is manually rotated during the digitising process and one shot of the subject is taken through each of the coloured filters. The digitiser's own software then very cleverly combines the three shots to produce a full colour picture from a black and white camera. A problem can arise here when manually rotating the filter wheel. If the camera or target image is accidentally jarred and moved even a millimeter, then the target will be displayed with a red, green or blue halo around it and you will have to start the whole process again! (See the picture of the halo effect above, called "Halo Effect).

Above: HALO EFFECT



Below: 3D

A simple but expensive way round this problem is to get yourself an RGB splitter such as the Print Technik model, available from HB Marketing for £99 plus VAT. The splitter device is simply inserted in the cable line between the camera and computer and eliminates the need for a filter wheel altogether by doing its job for it electronically. Another advantage of the splitter is that with it you can digitise colour pictures from a video (provided the video has a good still frame).

Another option, which is open to Digiview users only, is to use a Digi-Droid. At around £60 this little chap connects to your joystick port and, via a long lead, turns a motorised filter wheel which is attached to your video camera. When told to do its stuff, the droid will scan red, move the filter wheel round and repeat the process for the other two colours while you put the kettle on. Not only does this save time, it also removes any chance of you jarring the set-up.

If the floor is not completely steady even the vibrations caused by someone walking near the active digitiser can be enough to cause the halo effect, so try to choose a solid floor for your new studio. Check the firmness of your floor by placing a glass of water on your digitising table, then walk around the room watching for ripples. You can actually make use of the "halo technique" to create an interesting effect. Try digitising a small object through the red filter, move the object slightly and digitise it through the green filter. You will have created a 3D image suitable for viewing through 3D glasses. (Again, see the picture below called "3D").

Less is More

The easiest subjects to digitise are photographs and the smaller the piccie the better. The smaller the area to be digitised the closer the camera can be positioned to the target and

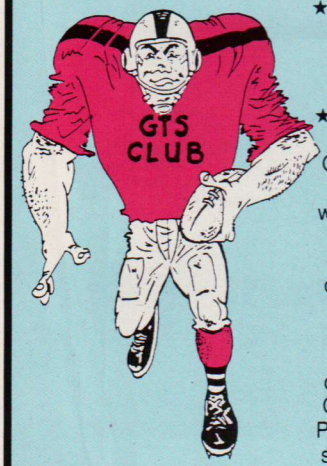
G.T.S.

GEORGE THOMPSON SERVICES

SOFTWARE EXCELLENCE

Presents Some Easter Surprises !

**** GTS CLUB ** GTS CLUB ** GTS CLUB ** GTS CLUB****
"HAVE YOU JOINED THE LEADING PUBLIC DOMAIN CLUB FOR AMIGA ENTHUSIASTS? CONSIDER THE ADVANTAGES"



★ **RECEIVE THE LATEST AND THE FINEST PD FROM THE U.S.A AND EUROPE**
★ **PAY LESS FOR HARDWARE AND SOFTWARE**
★ **TALK TO 'AMIGA ONLY' ENTHUSIASTS**

Since the early days of the Amiga, George Thompson Services have made available to Amiga Owners all over the world the latest PD disks from the U.S.A. and Europe. Couriers deliver material each week to our offices where we first carefully check them for virus. They are then catalogued and released to the duplicating rooms for labelling and copying onto top quality branded TDK disks. As a member of this very Special Club you will not only benefit from lower PD Software prices but also discounts on specialized hardware. Send only £15.00 annual subscription now and you'll receive by return:

★ Our Double Library Disk Pack detailing the contents of 100's of PD disks.
★ A 'Find me a Programme' disk for the Fish Library.
★ The latest issue of JUMPDISK the best selling magazine on a disk in the world.
★ Two brand new disks from the TBAG / SACC Libraries.
★ £5.00 PD Discount Voucher for use against the purchase of 10 or more individual PD disks at £2.75 each. You can also choose one free!
★ A copy of our bi-monthly 'PD Newspaper'.

To become a member of the "GTS CLUB" just send a cheque, P.O or place a credit card order using Access/Visa and we'll send this pack immediately!

**** NEW...NEW..."GRAPHICS MANAGEMENT"** £5.99 (£5.49 Members)**
A Special 2 disk set that includes just about everything you'll need for managing and manipulating graphics on your Amiga. Many of these programmes are not readily available in the UK.

****NEW...NEW..."VIDEO APPLICATIONS"** £5.99 (£5.49 Members)**
To compliment 'TV Graphics' we've released two disks packed with utilities and programmes that will give your productions the 'Professional' look. Invaluable for Genlock users.

****"T.V GRAPHICS"** £5.99 (£5.49 Members)**
Two disks that provide a variety of original Video Fonts and Backgrounds for Video Titling. As reviewed in Amiga Format and PD News.

****NEW...NEW..."SOUND APPLICATIONS"** £5.99 (£5.49 Members)**
This two disk set took months of research. Now available it includes a collection of top programmes that will enable you to manipulate sounds in programming, slide shows and much more

****"PD SPECTACULAR"** £4.99 (£4.49 Members)**
As reviewed in Amiga Format. Features over 40 top quality PD programmes. Andy Davidson crunched, squeezed and compressed them onto a single disk and then presented them in a way Chet Solace would be proud of. If you've never bought a PD disk, at least buy this.

****"BREAKOUT CONSTRUCTION SET"** £4.99 (£4.49 Members)**
If you find 'Brickout' games addictive this disk won't disappoint you. The highlight is a game, written by Paul Stevens, with a complete design editor. Easy to use and fast to play and beautifully presented. As reviewed in Amiga Format.

**** "MEGA GAMES PACK VOL III"** £19.99 (£17.99 Members)**
These 7 disks are packed full of the best games that have recently arrived on the PD scene in Germany and the U.S.A. The programmes include card, adventure, puzzle, role playing, action and platform games. A full review is published in the latest issue of 'PD News'.

***** NEWS *** NEWS *** NEWS *** NEWS**
Welcome to our first quarterly Amiga Format advertisement. The disks listed here are just a small selection of thousands of programmes in our collection. If you would like to know more about the world of PD for the Amiga just send 50NP for the latest copy of "Public Domain News", a bi-monthly newspaper dedicated to PD and Shareware programmes for the Amiga. Better still join the "GTS CLUB" and receive it free!

***** EASTER SPECIAL *** EASTER SPECIAL*****
- SPACE TRILOGY -
Conquer space, become rich, battle against all odds, in this special 4 disk pack. It features the latest, incredible, 2 disk version of 'Star Trek', the excellent space trading/combat game 'Return to Earth' and the true test for reflexes, 'Blizzard' - as reviewed in Amiga Format. Interested? Just to convince you that it's the 'Bargain of the Month' we will include a free copy of 'Space Blitz' and a pair of 3D Specs for any order received before the end of May 1990. This FREE disk is packed with space games. Just beam £10.99 to us and we guarantee to ship a pack out to you within 1 Moon Hour! All above available separately at £3.00 per disk, 'Star Trek' is £5.99 inc.

****"DOSLAB"** £14.99 (£12.99 Members)**
Learn how to use the CLI and AmigaDOS V1.3 the easy way. No heavy manuals, just let the Amiga do the teaching with 2 interactive disks.

****"EDUCATION WITH THE AMIGA PT I"** £12.99 (£11.49 Members)**
The very best Educational programs we could find are featured in this 5 disk set. Includes programmes on Evolution, World Geography, Metric Conversion, Languages, Elements, Forecasting the Weather and much more. As reviewed in Amiga User International

**** NEW...NEW..."LEARN AND PLAY" ** £5.99 (£5.49 Members)**
This 2 disk set features programmes for the very young. Ideal for children who are just starting to use the computer. Includes simple maths, a painting programme, word puzzles and much more. It's our first in the series "Family Computing"

****"DESIGN FACTORY"** £8.99 (£7.99 Members)**
A 3 disk set that includes the finest PD programs we could find for design work. If it's CAD, FRACTALS, MANDELBROT or PRODUCTION DESIGN you are interested in, this pack is just what you are looking for. It now includes a ROOM/FURNITURE PLAN DESIGNER.

**** "THE WORLD OF ASTRONOMY"** £8.99 (£7.99 Members)**
Three disks for all Amiga Stargazers. You only need the telescope!

****"HOME BUSINESS PACK"** £19.99 (£17.99 Members)**
Our best selling 8 disk pack includes a Word Processor, Spell Checker, Database, Spreadsheet, Appointment Scheduler, Home and Business Accounts and much more. There is even a programme that will test your Amiga from top to bottom! A full review is in this months 'PD News'.

****"DTP ACCESSORIES VOL.1"** £5.99 (£5.49 Members)**
Two disks packed with Original Fonts, and the best selection of colour/b&w Clip Art we could find.

****"HAM RADIO SPECIAL"** £12.99 (£11.49 Members)**
Five disks packed with programmes related to HAM Radio/FAX/Coms. Includes text and pics.

****"K/O THE VIRUS V2.0"** £3.99 (£3.49 Members) - NEW VERSION**
This disk features the most effective methods of detecting and removing the latest Amiga Virus. Full instructions on disk + "Icon Voucher" allowing you to update for only £1.00 when V3.0 is released.

**** "HARD DISK SPECIAL"** £3.99 (£3.49 Members) - NEW VERSION**
This disk features the best Utilities we could find for managing your Hard Disk Drive. Includes a choice of Backup Programs, FixDisk and more. Now includes "Icon Voucher" for £1.00 updates to latest version.

****NEW...NEW..."AVOIDING THE CLI!"** £3.99 (3.49 Members)**
If you have no interest in the CLI or find it difficult to use, this disk is for you. Easy to use programmes that make file management, disk copying, arcing and de-arcing, locking files etc. a doddle.

**** "FAMOUS BOARD GAMES VOL 1"** £8.99 (£7.99 Members)**
Three disks that include Amiga versions of all the well known board games - Chess, Backgammon, Checkers, Othello, Sorry, Clue and more.

Our Promise to you, the customer, is to provide top quality programmes, professionally presented, on the best media - TDK DS/DD branded disks - at value for money prices. We send all software in 'bubble envelopes' by first class post. Our keyword is "Customer Service" with a smile.

Access

WE ARE GEORGE THOMPSON SERVICES.

VISA

Our address is: DIPPEN, BRODICK, ARRAN, SCOTLAND, KA27 8RN. (077082) 234.

Please send a cheque (with your Bank Card No. Expiry Date on reverse), a PO or just telephone your Access or Visa Card details to us before 1pm and we will despatch your order immediately

the more detail can be captured. Also the possibility of uneven lighting is quite simply minimised.

When digitising rectangular pictures, such as photographs, it's often better to move the camera closer to the target and crop the picture horizontally or vertically to eliminate borders. If you have to leave a border around the picture and the backdrop is going to be exposed, there is an important point to remember and one which will make a lot of difference to the result. If you're digitising a picture that uses a lot of greens, make sure your backdrop is green, for oranges use orange and so on.

This is because the digitiser, in anything but HAM mode, is using a very limited number of colours and will use the most prominent ones. If you use, say, an orange backdrop behind a picture with no orange in it, you are wasting colours which could have given your picture more detail. You may even find that some of the lesser-used colours in your picture have been changed to that of the backdrop. (A startling example of this is shown by the pictures "Backdrop Right and Backdrop Wrong").

Top: BACKDROP RIGHT

Left: BACKDROP WRONG

Green for Envy

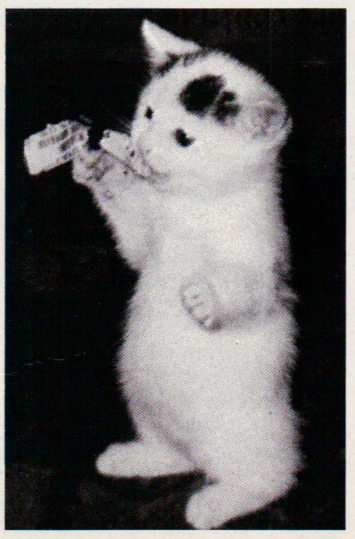
When digitising high-contrast monochrome pictures you will find that light grey detail is lost in areas of bright white. Adjusting the contrast and brightness control will help, but it's a fiddly job and you may find that the white area has to be darkened too much before the grey detail is plainly visible. A much better result will be obtained by digitising the picture at a brightness slightly greater than you would normally use, but through the green filter on your colour wheel. The green filter picks up the grey detail well and darkens the bright areas slightly. Try it, it really works. (Again, see the samples on this page, "Cat Clear and Cat Green").

Hold to Slide

Slides can also be digitised, but frankly it's hard work. Cine-to-video transfer devices such as those which back-project a slide onto a screen, via a half-mirror, won't work. This is because, though you won't be able to see it beforehand, your image once digitised will appear extremely bright in the centre, darkening steadily to the outer edges. The same problem will occur if you digitise from a slide viewer. Pictures obtained simply by digitising an image projected onto a screen produce terrible results.

If you really need to digitise slides you will have to replace the lens on your video camera (probably 8 or 16mm) with a 25mm lens (£50 up). This will produce an undistorted picture from a 35mm x 24mm slide. You will also need something to hold the slide while it's digitised. The type of slide copier that attaches to the end of a camera lens is excellent but, unfortunately, no good for colour shots because there is nowhere for the coloured filter wheel to be fixed between the lens and the slide.

Of course, if you have an RGB splitter, you're laughing because you don't need a filter wheel and a standard slide copier is all the equipment you need to buy. If you're not that fortunate you must use your ingenuity to construct something to hold the slide. A 25mm lens should give you a distance of about three inches between lens and slide, leaving plenty of room for the filter wheel. You will need to place a piece of light-diffusing glass (available from any photographic shop) between the slide and your light source. Your slide projector uses a halogen bulb and is an ideal light source. Try to avoid projecting the light from a projector directly into your eyes. If you do, your poor old peepers will probably fall out!



Far Left: CAT CLEAR

Near Left: CAT GREEN

Of course, if you can't afford a digitising set-up of your own or you only need the occasional picture, Carl and the chaps at Photofile are happy to digitise your pictures for you. You can find details of their digitising service in their advertisements.

Meanwhile, now that you know how to digitise well, look out for Brian Larkman's forthcoming tutorial in which he will explain how to use, improve and generally play about with your digitised images to best effect. ■

Sullivan Bluth's

DRAGON'S LAIR® II: ESCAPE FROM SINGE'S CASTLE™

The Adventure continues...

The Evil Shapeshifter has stolen Princess Daphne and to save her you will have to outwit the Evil One in totally new encounters never before seen in the original Dragon's Lair.® New scenarios and characters combine to make *Escape from Singe's Castle* the best sequel to the largest selling animated fantasy adventure of all time... Dragon's Lair.®

Muster all your skill and cunning to free Daphne from deep within the labyrinthian dungeons of Singe's Castle.

Lead on Brave Adventurer, your quest awaits!

Amiga Screens Shown

ESCAPE FROM SINGE'S CASTLE™

- Installs on any hard drive for quick loading.
- Compatible with all 68000, 68010, and 68020 processors.
- Multitasks peacefully with any 1Mb Amiga.
- New Burstloader™ technology loads 10 times faster!
- Three selectable skill levels.
- Room flipping option increases difficulty.
- Directional arrows guide you during game play.
- Saves and restores up to 5 previously played games.
- Links with the original Dragon's Lair for the ultimate playing experience.
- Now requires only 512K RAM!
- Never the same game twice.

Visionary, Ltd., a division of Media Technology Limited
15235 Shady Grove Road, Suite 100, Rockville, MD

Dragon's Lair® and Escape from Singe's Castle™ are trademarks of Bluth Group, Ltd., and are used under license.
© Copyright 1989 Bluth Group, Ltd. Character designs © Copyright 1983 Don Bluth. All rights reserved.

Currently for the Commodore Amiga
Coming soon to:
Atari ST and Apple Computers

Empire Software, Unit 4, Stannets, Laindon North Trade Centre, Basildon, Essex, SS15 6DJ Tel: 0268 541126.

ACTION, ADVENTURE AND STRATEGY

IN THE DRAGONLANCE® WORLD OF KRYNN

The first fantasy role-playing epic set in the legendary game world of Krynn.

CHAMPIONS OF KRYNN

CHAMPIONS OF KRYNN improves on the award winning game system used in SSI's mega-hits POOLS OF RADIANCE and CURSE OF THE AZURE BONDS.

The war of the lance is over, but evil is a BAD loser ... with the Dragon armies defeated and the lands to the east reconquered, the forces of good have withdrawn and settled down to a well-earned rest. Evil forces however, never rest and have been quietly plotting a cataclysmic return to power! Their goal: nothing short of establishing the Dark Queen, Takhisis, as undisputed ruler of Krynn!

A DRAGONLANCE™ FANTASY ROLE-PLAYING EPIC. VOL. 1

CBM 64/128 DISK
AMIGA (1 meg only)
IBM PC
+ CLUEBOOK AVAILABLE

OFFICIAL

Advanced Dungeons & Dragons®

COMPUTER PRODUCT

ADVANCED DUNGEONS & DRAGONS, AD&D, DRAGONLANCE and the TSR logo are trademarks owned by TSR, Inc., Lake Geneva, WI, USA and used under license from Strategic Simulations, Inc., Sunnyvale, CA, USA.
© 1990 TSR, Inc. © 1990 Strategic Simulations, Inc.
All rights reserved.

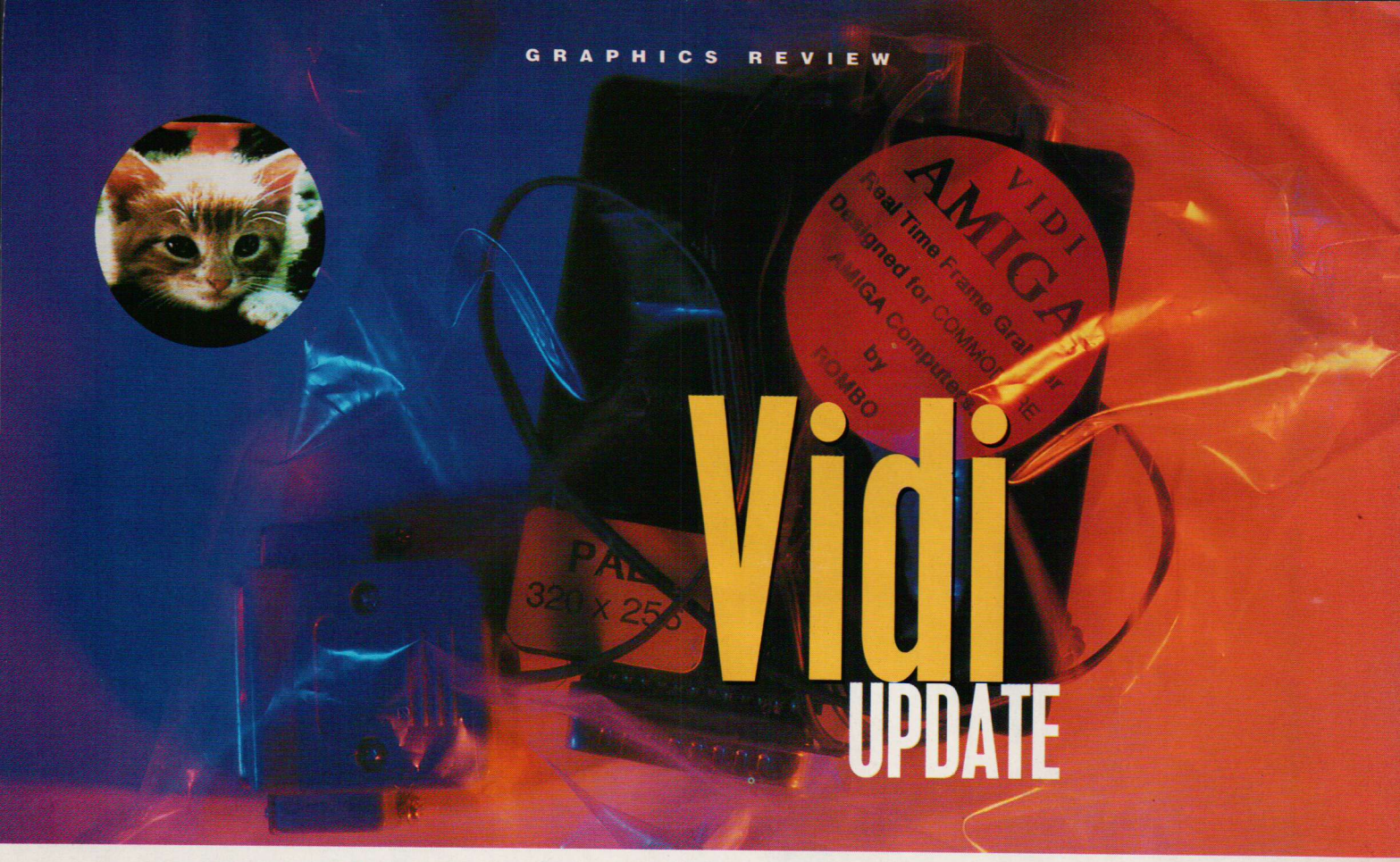
TSR™

DragonLance®

U.S. GOLD

SSI™ STRATEGIC SIMULATIONS INC

U.S. GOLD LTD.,
Units 2/3 Holford Way,
Holford, Birmingham B6 7AX.
Tel: 021-625 3388.



Vidi UPDATE

JASON HOLBORN takes a look at Rombo's latest upgrade for their highly successful Amiga videodigitiser, VIDI-Amiga.

Since our review of the VIDI-Amiga video digitiser in Issue 3 of *Amiga Format*, Rombo have been hard at work producing upgrades to what was even then an excellent product. The first of these upgrades to arrive comes in the form of *VIDI-Chrome*, a software-based package that promises to bring colour to your digitised artwork.

VIDI Overview

The original VIDI was a mono affair that could only grab images in NTSC resolution with 16 grey-scales. Since then the VIDI hardware has been upgraded to support a much more useable PAL-resolution screen. Other changes to the VIDI hardware include the change of power supply source; the original VIDI drew its power from the joystick port, but the new VIDI has now been updated to draw power from the external disk-drive port. According to Rombo, this change was neccessary because some Amigas (mostly newer models) are unable to supply the extra 50mA required to power VIDI.

With the arrival of *VIDI-Chrome*, your mono VIDI digitiser can now grab images in marvellous technicolour. The VIDI-Chrome package consists of a single program disk containing the *VIDI-Chrome* software, a couple of demo pictures, a brief manual (or should that be pamphlet?) and a set of three colour filters.

As you have probably already guessed, *VIDI-Chrome* employs the famous system of red, green and blue filters to grab separations of the same image. These separations are then combined to produce the resulting image. Thanks to VIDI's impressive speed of operation, this usually tedious process is made considerably less tedious.

Colour Control

If you buy VIDI Amiga as a complete system comprising of the VIDI hardware and *VIDI-Chrome* software, you actually get two separate versions of the grabbing software. The first, which is bundled with the VIDI hardware, grabs images in 16 grey-scales and the second (which arrives in a separate package) handles colour grabbing.

Grabbing a colour image with *VIDI-Chrome* is simplicity itself. Just like Digi-View, red, green or blue separations may be grabbed simply by choosing the appropriate menu option. However, unlike Digi-View, VIDI

ABOVE, MAIN PIC: The VIDI hardware is a small, harmless-looking piece of kit.

The images on this page and overleaf are all produced by *VIDI-Chrome*: some here at *Amiga Format*, others by Rombo.

continuously grabs frames until you click the mouse button to stop, therefore allowing you to alter the brightness and contrast of the incoming signal to produce the best possible separation. Once you've grabbed all three separations, clicking on the 'Display HAM' menu option will combine the three separations into the final image.

The digitising process is made considerably simpler with the inclusion of a 'Grab HAM' option which allows you to grab all three separations from a single menu option. Click on Grab HAM and VIDI starts to grab

red frames – once you're happy with the separation being displayed, click the mouse button and VIDI then starts to grab green frames – click on the mouse again and VIDI starts to grab the blue frames. A final click of the mouse button ends the digitising process and the final image is produced.

On the whole, the HAM images that VIDI produces are of high quality. However, VIDI images do seem to suffer from HAM fringing, something that the original Digi-View suffered from. With the additional purchase of an image processing package such as Progressive's *PIXmate*, this can be reduced. Although the captured images aren't up to par with those produced by NewTek's digitiser, the trade-off in quality is compensated for by its fast operation – being able to adjust the brightness and contrast of the digitised image while the digitiser continually grabs frames in real time can be a real time-saver. With NewTek's unit, you could never quite be sure if the image you were grabbing was precisely what you required – if you wanted to adjust either the brightness or constrast of the incoming signal, the only practical way of doing this was to feed the video signal into the back of your monitor and use your monitor's CVBS switch to display the signal directly from its source.

Conclusion

VIDI-Amiga is ideally suited to the home user who owns a single drive Amiga 500 with a half megabyte of RAM and wishes to grab images from their home video recorder. While the basic mono VIDI will happily grab images from a video recorder, don't think for one minute that VIDI will grab colour images from that same video recorder – you'll need to buy a RGB splitter (£100) before you can even start thinking about such things (the same is also true of Digi-View). If do you wish to use the extra facilities available within the *VIDI-Chrome* package to grab colour images, you're going to need to purchase a mono video camera.

Due to the nature of the A/D converter used by VIDI, the images that it produces can never hope to compare to those produced by Digi-View, although they do get close! However, Digi-View has the disadvantage of being somewhat unusable without at least a megabyte of RAM (even then, you still won't be able to use NewTek's new Dynamic screen modes as seen in the latest release of Digi-View!) Even though Digi-View can be used in conjunction with a video recorder, images of acceptable quality aren't really obtainable without the addition of a monochrome camera such as the Hitachi MV-720K.

Digi-View has the added advantage of being able to grab images in just about every resolution under the sun. If you can name a combination of colours and resolution, chances are that Digi-View can grab an image for you in that format; 2, 16, 32, 4096 or even 22 million colours (for output to a video frame buffer), Digi-View can

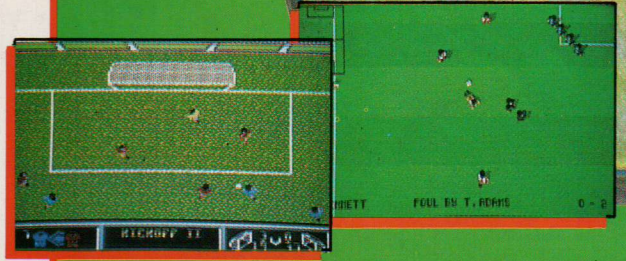
handle the lot! VIDI images are unfortunately limited to low resolution only.

If your primary reason for purchasing a video digitiser is to grab images in full colour, then there is still only one real choice for under £150 – Digi-View. NewTek have managed to refine their product to such a high degree that it has become almost unbeatable.

Although Digi-View is slow (unbearably so, at times!) the images that it produces cannot be touched (even JCL's SuperPic and Marcam's FrameGrabber cannot produce images of such quality). If, on the other hand, you need to be able to grab mono images from any composite video source and will occasionally want to grab colour images using a video camera, then VIDI Amiga is well worth considering.

VIDI-CHROME
£19.95 ■ All Amigas ■
Rombo (0506) 414634

KICK OFF 2



ANCO

MAY RELEASE
AMIGA - ATARI ST - IBM PC
CBM64 - SPECTRUM - AMSTRAD

ANCO SOFTWARE LTD., UNIT 10, BURNHAM TRADING ESTATE ROAD,
DARTFORD, KENT. Telephone No : 0322 92513/92518. FAX No : 0322 93422

HARWOODS

YOUR FIRST CHOICE FOR AMIGA

POW

Po

NEW! AMIGA POWERPLAY PACKS

At Gordon Harwoods we've yet again improved our Great Value Amiga Offers with the launch of our LATEST & GREATEST EVER POWERPLAY PACKS; there's EVEN MORE SOFTWARE, *Plus...* our brand new PACK 5!

Just look at the 11 NEW SIZZLING SOFTWARE TITLES, EXCLUSIVE TO GORDON HARWOOD COMPUTERS, and we're giving them away ABSOLUTELY FREE in our new games packs. Remember, though, you can only get all this when you buy your Amiga from Harwoods.

ALL OUR PACKS CONTAIN AMIGAS WITH THE FOLLOWING STANDARD FEATURES:-

- 512K RAM
- 1Mb Disk Drive
- 4096 Colours
- Multi-Tasking
- Built-in Speech Synthesis
- Mouse
- 3 Operation Manuals
- Workbench 1.3 System Disks
- Kickstart 1.3 Built-in
- All Connecting Cables

EXCLUSIVE SOFTWARE WITH HARWOODS GAMES PACKS AVAILABLE NOW!

ALL OUR PRICES INCLUDE VAT AND STANDARD DELIVERY SERVICE

NEW! NEW! NEW! NEW! NEW! NEW!

Amiga POWERPLAY PACKS

NEW! Amiga PACK 1 / PACK 1 / PACK 1 / PACK 1

THE COMPLETE PACK FOR THE GAMES ENTHUSIAST AVAILABLE RIGHT NOW!

Our ALL NEW Amiga Powerplay Pack 1 now includes some great up to the minute software and extras, just look at the savings you're going to make!!!

- Escape from the Planet of the Robot Monster
- F29 Retaliator
- Rainbow Island
- Commando
- Running Man
- Nebulus
- Menace
- Chessmaster 2000
- Trivial Pursuit
- Tetris
- Phobia
- Voyager
- Archipelagos
- Pacmania
- Deluxe Paint II
- Microswitched Joystick
- Tailored Amiga Dust Cover
- Tutorial Disk
- TV Modulator (Packs 1 & 5 ONLY)
- Mouse Mat

SEE WHAT WE MEAN ABOUT A COMPLETE PACK!

You won't need to buy any more games for ages and you'll be able to start using your Amiga the moment it's unboxed!

£399*

* OR SPREAD THE COST WITH OUR FINANCE FACILITIES

NEW! Amiga PACK 5 / PACK 5 / PACK 5 / PACK 5 / PACK 5 / PACK 5 / PACK 5 / PACK 5 / PACK 5

HARWOODS ALL NEW COMPLETE STUDENTS PACK

- Amiga A500
- Publishers Choice (DTP- Includes Kindwords V.2)
- Midi Master I/Face
- Dr. T's Midi Rec. Studio
- BBC Basic Emulator
- Maxiplan 500 S/sheet
- Superbase Personal D/Base
- Amiga Logo
- Deluxe Paint II
- Microswitched Joystick
- 10-Blank 3.5" Disks
- Disk Wallet
- Mouse Mat
- 1Yr Subscription to AUI
- TV Modulator

PLUS 14 GREAT GAMES TOO!!! (See Pack 1 [➡] for details of titles)

Superb Value from Harwoods...

Only... £549*

NEW! Amiga PACK 2

Containing the Super Powerplay Pack 1, AND a Philips Stereo CM 8833 Monitor PLUS a Free Tailored Monitor Dust Cover...

See Those Games for Only...

£619*

NEW! Amiga PACK 3 / PACK 3 / PACK 3

NEW AMIGA AND COLOUR PRINTER PACK

Take our Powerplay Pack 2 and add Star's fantastic LC10 COLOUR PRINTER, to give you the ultimate colour home entertainment computer system!!!

Or, if you prefer an alternative printer from within our range, just deduct £209.95 and add the price of the printer you require. (Any printer can be chosen)

Superb Value...

£819*

NEW! Amiga PACK 4 / PACK 4 / PACK 4

NEW POWERPRO PACK 4 CONSISTS OF...

Amiga A500, Star LC10 Colour Printer, Philips CM 8833 Stereo Colour Monitor "Protext" Version 4.2 Word Processor "Superbase II" Database "Maxiplan 500" Spreadsheet Deluxe Paint II, Mouse Mat Ten 3.5" Blank Disks & Library Case Quality Tailored Dust Covers for Amiga, Monitor & Star Printer

If you prefer an alternative printer from our range, deduct £209.95 & add the price of the alternative

We Mean Business! At Only...

£849*

HARWOODS THE NAME YOU CAN TRUST

Access VISA

FINANCE FACILITIES

Gordon Harwood Computers offer facilities to pay by our budget account scheme for most items. APR 36.8% (Variable) Credit sale terms are available to most adults of eighteen years or over, subject to status. Simply phone or write and we will send written details along with an application form. Applications are required in advance and are available to full time U.K. mainland residents only.

Written quotations available on request.

* **Credit sale terms with or without a deposit, can be tailored to suit your needs.**

ORDERING MADE EASY - COMPARE OUR SERVICE

ORDER BY PHONE: Phone our Order Hotline using your Access, Visa or Lombard Charge Cards quoting number & expiry date.

ORDER BY POST: Make cheques, bankers-building society drafts or postal orders payable to GORDON HARWOOD COMPUTERS. (NB. Personal or business cheques require 7 days clearance from date of receipt before goods can be despatched)

Please send Name, Address, and most importantly if possible a Daytime Telephone Number along with your order requirements.

FREE POSTAL DELIVERY: Goods in UK Mainland (5-7 day delivery). OR COURIER SERVICE...Add £5 per major item for next working day delivery, UK Mainland. (Orders normally despatched on day of receipt of payment or cheque clearance).

If you wish to pay by Credit Giro Transfer at your own bank this can be arranged, simply phone us for details (Normally takes 3-5 working days).

Remember after you've purchased from Harwoods we'll still be here...

TECHNICAL SUPPORT: You will be given our Exclusive Technical Support Phone Number to call should you need help or advice once you've purchased from us.

12 MONTH WARRANTY: If goods prove to be faulty within 30 days of purchase they will be replaced with a NEW UNIT. For the remainder of the guarantee period, all warranty repairs will be made completely FREE OF CHARGE!

COLLECTION FACILITY: Any faulty computer or monitor can be collected from your home FREE OF CHARGE during guarantee period (UK Mainland only)

FULL TESTING PROCEDURE: All computers are tested prior to despatch, and all items are supplied with mains plug and leads as required.

ERPLAY
ctfolio

MONITORS

PHILIPS CM 8833 STEREO
Full 14" Stereo High Resolution Colour Monitor

- SCART Euro-connector fitted as standard
- RGB/AI, TTL, Comp. Video & stereo audio inputs
- Can also be used as a TV with tuner or VCR
- Features fold down tilt-stand ❑ Twin Speakers
- FREE lead for computer of your choice
- ONLY FROM HARWOODS...12 Month replacement warranty for major faults *

All this and a Free Tailored Dust Cover... **£249**

COMMODORE 1084 S
Full 14" Stereo High Resolution Colour Monitor

- RGB/AI, TTL, Composite Video & Audio Inputs
- Can also be used as a TV with a tuner or VCR
- Features fold down tilt stand
- Twin Speakers
- Supplied with cables for A500, CGA PC, C16-64-128

With Free Tailored Dust Cover... * **£259**

GRAPHICS HARDWARE

DIGIVIEW GOLD 4.0
NEW VERSION 4.0 ENHANCED SOFTWARE
Digitises static images in Black and White or FULL COLOUR (using filters provided) and all resolutions supported (memory permitting). Creates IFF and HAM files. Uses B&W (or colour with B&W mode) video cameras.
£139.95

VIDEO TO RGB SPLITTER
Takes standard video signal, separates red green and blue. Enables standard video recorder or colour camera to digitise in colour with Digiview Gold (requires clear picture pause with recorder) **£109.95**

HITACHI VIDEO CAMERA
Mono, 650 scan lines. **£249.95**

SUPER PIC
Real time frame grabber and Genlock. Instant colour frame grabber from moving video. Capture superb digitised video images in a range of resolutions from standard composite video source such as domestic video recorder or video camera in 50th of a second. Includes Genlock to overlay Amiga graphics onto moving video.
Super Price.....£539.95

COLOUR PIC
Same as the SUPER PIC programme but without the Genlock
Great Value £439.95

RENDALE GENLOCKS
8802 SEMI-PROFESSIONAL **£159.95**
▲ NEW LOW PRICE ▲
8806 PROFESSIONAL **£749.00**

STORAGE DEVICES

HARD DRIVES

COMMODORE A590 20Mb HARD DISK DRIVE FOR AMIGA A500, WITH FREE 0.5 Mb MEMORY
Commodore's own hard drive for the A500
- Autoboot with Kickstart 1.3
- Sockets for up to 2Mb RAM expansion
- Can be expanded in 512K blocks
- DMA access
- External SCSI port
- SUPPLIED WITH FREE 0.5Mb MEMORY EXPANSION (As detailed below "Hard Disk Upgrade")

SUPER LOW PRICE ONLY...£399.00

A590 HARD DISK WITH 2Mb MEMORY
- Expansion fitted and Ready To Go!

NEW LOW PRICE ONLY...£499.00!

A590 HARD DISK 512K UPGRADE
- Onboard, fit up to 4, in stages, giving 2Mb total
- Up to 3Mb when fitted with A501

GREAT OFFER AT ONLY...£59.95

40Mb VORTEX HARD DRIVE FOR BOTH AMIGA A500 AND AMIGA A1000
- For both A500 and A1000 as supplied
- Autoboots on ANY Amiga

GREAT VALUE AT ONLY...£499.00

FLOPPY DRIVES

EXTERNAL FLOPPY DISK DRIVES
The drives listed below have the following features...
- Enable/Disable switch
- Throughport
- LED Access light, super quiet
- Suitable for A500, A1000, A2000

CUMANA CAX 354 3.5" SECOND DRIVE
- 25mm Super slimline 3.5" drive

A REAL BARGAIN AT ONLY...£89.95

CUMANA CAX 1000S 5.25" SECOND DRIVE
- Amiga DOS and MS DOS compatible

SAVE MORE THAN EVER...£129.95

HARWOODS SUPERSLIM 3.5" SECOND DRIVE
- Extra storage and great value too!

'SUPERSLIM PRICE' ONLY...£69.95

ACCESSORIES

COMMODORE

A501 RAM PACK **£99.95**
GENUINE CBM ram pack with real time battery backed clock. This add-on DOES NOT invalidate Commodore's warranty.

A520 TV MODULATOR **£19.95**

QUALITY ACCESSORIES

QUALITY MICROSWITCHED MOUSE **£34.95**

FLOPPY DISKETTES

QUALITY CERTIFIED 3.5" BULK DISKS (supplied with labels)

Ten, with library case	£9.49
Ten, uncased	£8.49
Eighty, uncased	£49.95
Hundred, uncased	£59.95
Eighty with LOCKABLE storage case	£54.95

PHONE FOR LARGER QUANTITY DISCOUNTS!

PRINTERS

All printers in our range are Dot-Matrix and include the following features...
Standard Centronics parallel port for direct connection to Amiga, PC's, ST etc. and come with... FREE CONNECTOR CABLES!

Free Tailored Dust Cover With Every Star Printer Bought!

STAR LC10 - 120/25 cps
Our most popular Mono Dot-Matrix printer and at a super low price **£169.95**

STAR LC10 MkII - 150/30 cps
Brand new superfast MkII version of the ever popular LC10 printer.
- Multiple font options from front panel
- Excellent paper handling
- Simultaneous, continuous and single sheet stationery **£184.95**

STAR LC10 COLOUR - 120/25 cps
Colour version of the LC10...
- Allows full colour dumps from Amiga
- Superb text quality
- Can use black LC10 ribbons
- Our most popular colour printer! **£209.95**

STAR LC 24 10 - 180/60 cps
24 Pin version of the Star LC Series with
- Exceptional letter print quality **£249.95**

STAR XB24 10 COLOUR - 240/80 cps
Very fast LQ 24 Pin Colour
- Includes FREE on-site maintenance for a FULL 12 MONTHS! **£479.95**

CITIZEN SWIFT 24 PIN COLOUR - 160/50 cps
The MOST competitive 24 Pin Colour Printer available Today!!! **£349.95**

CITIZEN 120D - 120/25 cps **2 YR WARRANTY**
Very reliable low cost printer, interchangeable interfaces available for Centronics RS 232 or Serial Type for CBM 64 etc. **£149.95**

COMMODORE MPS 1550 - 120/25 cps
NEW...NEW...NEW, 9 Pin Colour Printer
- Compatible with both Amiga and Commodore 64/128 Computers **£249.95**

NOTE! All our Star printers are genuine UK specification.
Characters Per Second speeds quoted are Draft/LQ at 10cpi

A FULL RANGE OF PRINTER RIBBONS ALWAYS AVAILABLE

UNTIL THE END OF APRIL DIEGO HAS 'SHOT DOWN' ALL OUR PRINTER PRICES BY A MASSIVE £10!
DON'T FORGET TO ASK FOR THESE SPECIAL LOW PRICES WHEN ORDERING

Amiga SOFTWARE

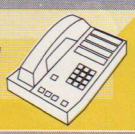
X-CAD DESIGNER **£99.95**
Perfect choice in Computer Aided Design (1 Mb required)

PUBLISHERS CHOICE **£89.95**
Complete solution for DTP needs contains . . . .
Kind Words V2 WP Package, Pagesetter V1.2 with Artists Choice clip art and Headliner Font Pack

AMAS **£89.95**
Advanced Midi Amiga Sampler, High Quality Sound Sampler & Midi Interface
Including all necessary Software

AEGIS **£49.95**
Graphics Starter Kit inc. Aegis Draw, Animate, Images, Clip-Art and Arizack's Tomb (adventure game)

FASTORDER HOTLINE-0773 836781



VISIT OUR SHOWROOM

Please call to see us where our full range of advertised products, AND MORE, is on sale. Come and see for yourself the amazing Amiga and a whole host of peripherals, software and accessories.

REMEMBER, WE ARE NOT JUST ANOTHER MAIL ORDER COMPANY.

All listed prices are what YOU PAY, and there are NO HIDDEN EXTRAS! VAT and postage are included and prices are correct at time of going to press (Pack details may vary from time to time). E & O E.
Offers are subject to availability and are currently advertised prices.

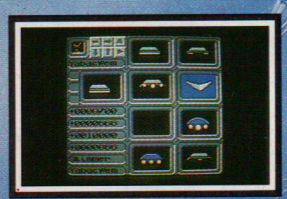
GORDON HARWOOD
HARWOOD
HARWOOD
Computers

GORDON HARWOOD COMPUTERS
DEPT, AMF/B5, 69-71 HIGH STREET
ALFRETON, DERBYSHIRE, DE5 7DP
TEL:0773 836781 FAX:0773 831040

WIPE-OUT

- the story so far

- The World's first Intergalactic Hoverboard Challenge.
- Fast, addictive 3-D action.
- Single or multiple player - play against fiendishly clever computer opponents, or just a friend!
- Over 1,100 stars - each with its own local league, and prizes.
- More than 77,340 possible opponents - each with its own individual characteristics.
- Form your own Interplanetary League
- Great rocking music - neck breaking speed!
- Can you survive the Death or Glory chicken-run challenge? Can you handle the Futon Flip?
- Qualify for the once-in-a-millenium All Time Greats Tournament.
- Have you slimed an Ameboid today?



There really is no feeling quite like turbo-boosting past your hapless opponent, hanging a wickedly fast 180 degree turn and sliming across his path before he's realised what's happening. Be warned - WIPE OUT may be the only game you'll want to play for some time.

GONZO GAMES

GONZO GAMES • SOUTH BANK TECHNOPARK • 90 LONDON ROAD • LONDON SE1 • TEL. 01-922 8856

AMIGA £19.99 • ATARI ST £19.99

OUR ACE REVIEWS SECTION IS THE ONE TO READ

SCREEN PLAY

THE RATINGS EXPLAINED

GRAPHICS
Good graphics are an important part of any game: if the power is there, it should be used to the full. Both static and moving graphics come under scrutiny in this rating, but remember, graphic wonders alone do not a great game make...

SOUND
With stereo capabilities the last thing you want to hear are Spectrumesque beeps, right? Title tunes and effects all add to the atmosphere of a game and good sound can greatly increase your enjoyment.

INTELLECT
How much real thought do you have to put in to play the game? Just because a game is mindless doesn't necessarily mean it's bad, but a game with a high intellect rating says immediately that you'll need to think to gain maximum enjoyment.

ADDICTION
How easy is a game to pick up and play? How much sheer fun will you get from it? Will you keep coming back? Important questions, all answered by a quick look at the Addiction rating.

OVERALL
A percentage mark that takes into account all the ratings, plus extras like lasting interest, documentation and packaging.

THE TEAM
There are two main *Amiga Format* reviewers: Andy Smith is an ex Spectrum owner who's been playing computer games for many years now and writing about them for almost as long, cutting his teeth on *ACE* before moving onto *Amiga Format*. Andy likes any type of game, from shoot-em-up to strategy game, from adventure to arcade conversion.

Maff Evans joined *AF* after doing sterling service for *Zzap! 64*, and he splits his time between playing games and writing reviews for us and our sister magazine *ST Format*. He's another solid all-rounder who's not averse to giving Andy Smith the odd high score contest on the month's best games.

ISLANDS IN THE SUN
Rainbow Islands P.36

Player Manager
Football crazy... again? P.65

Warhead
Explosive stuff P.48

Infestation
Psygnosis's best? P.47

Typhoon Thompson
At last P.40

688 Attack Sub
Sink or swim? P.56

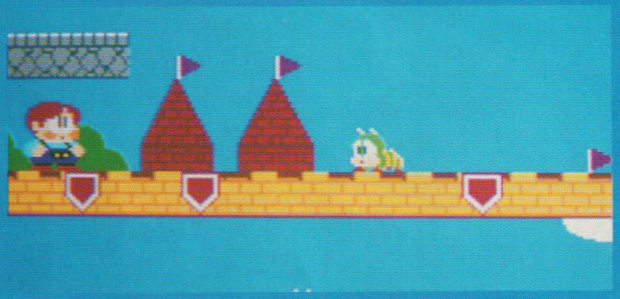
Manic Miner ■ Herewith The Clues ■ Black Tiger

Jumping into exploding stars is effectively the same as a smart bomb: a great way of killing off those really annoying spiders.

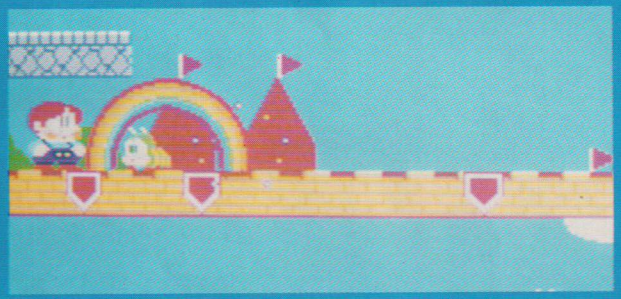
RAINBOW

OCEAN £24.99 ■ Joystick

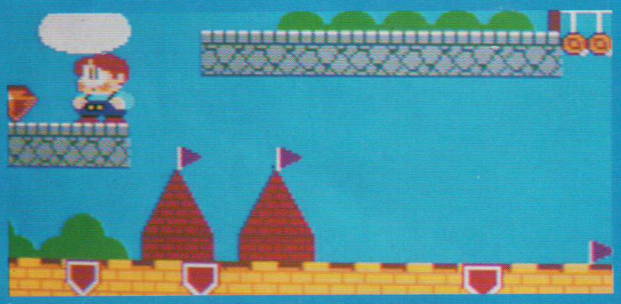
A GEM OF A WEAPON



The start of the game, and a nasty heads towards our hero...



...trap it with a rainbow and...



...jump on the rainbow to turn it into a nice gem.

After much confusion and uncertainty, this fantastic conversion of the Taito coin-op has finally arrived on the Ocean label.

The stars of this one or two player game are two characters called Bub and Bob (no relation) who you may remember from their earlier adventures in a Firebird game called *Bubble Bobble*. They were turned into bubble-blowing brontosauri by the evil Boss of Shadow and only after much struggling did they regain human form. It was then they decided to get away from it all, to live in peace and tranquillity on an archipelago known as The Rainbow Islands.

Unfortunately, the Boss of Shadow found their hideout. With the help of his minions he has rounded up all the inhabitants of the islands and is holding them prisoner. Naturally, only Bub and Bob can rescue them.

There are seven islands in all (one for each colour of the rainbow) and each island is made up of four stages with an end-of-level guardian sitting at the top of the last stage. It's a vertically-scrolling platform game in which you guide your character to the top of each level. Of course it's not that easy as the BoS has loads of his minions running and flying around and contact with any of these causes you to lose one of your four lives.

To combat the baddies you're armed with – guess what? – rainbows. Hitting a baddie with a rainbow causes it to turn into a juicy lump of fruit or cream cake or flower or something of that ilk and collecting the goodies (no relation) scores you points. There's an added advantage in that every third baddie killed turns into a magical item – such as running shoes to speed up your character, or potion bottles which increase the speed and reach of your rainbows (first doubles then triples). Then there are other random items which give you a small fairy drone, and, if you're really lucky, ones that bring huge bags of points flooding from top of screen.

As well as being a weapon, your rainbows are also extremely useful as bridges, so you can shoot them out and walk across them to reach other platforms. There is a problem with the rainbows though – you can't jump onto them and they disappear after a while.

Then there are the diamonds. Occasionally a killed baddie will turn into a coloured diamond which you can collect for extra points (pick them up in the right order and secret rooms are revealed at the end of the island).

Run, jump and work your way up the screen – but don't take too long or the baddies turn red and angry and speed up. If you're really tardy, water rises from the bottom of the screen to drown you when it covers your head.

GRAPHICS	8
SOUND	6
INTELLECT	3
ADDICTION	9
OVERALL	95%

FROM THE START OF COMBAT ISLAND...

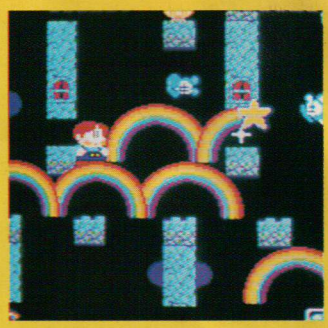
The second island and our hero has found a magic item that gives him the power of flight.

As well as acting as a weapon, these rainbow things are jolly handy for building platforms.

Fleeing a flying nasty. Collect the yellow bottle to speed up your rainbows' firing.

ISLANDS

AMIGA FORMAT GOLD



The third island, and here's a rainbow in killing action.

INGENIOUS DEVILS

The Japanese really have turned coin-op games designing into an art form and they are so devious at it! Remember *Space Invaders*, in which you had to hit the spaceship exactly on every 22nd shot so that you could get a guaranteed bonus of 300 points?

Well, the intricacies of game design have come a long way since those early days, but the Japanese designers are still just as devious. Recently, games like *Super Mario Bros* and *New Zealand Story* have been full of little extras for the player to discover – and *Rainbow Islands* is no exception.

There are warps to find, secret rooms, extra bonuses and a whole heap of sub-games to play once you really get stuck into it. Should you manage to complete the game you can then spend months trying to find all the weird and wonderful tricks that are there: but naturally you're not given any clues to how you can find them.

Just to get you started off, though, here's a little hint. Try collecting all the diamonds in the order of the colours of the rainbow – starting with red, then orange, and so on all the way to violet. Do this all on one world and you can get to the secret room.

Remember, you can determine which colour a diamond will be by killing a baddie on a certain part of the screen, i.e. kill a baddie on the far left of the screen and it'll produce a red diamond – kill one on the far right and it'll produce a violet one. All the other colours are in between the two. ***Andy Smith***

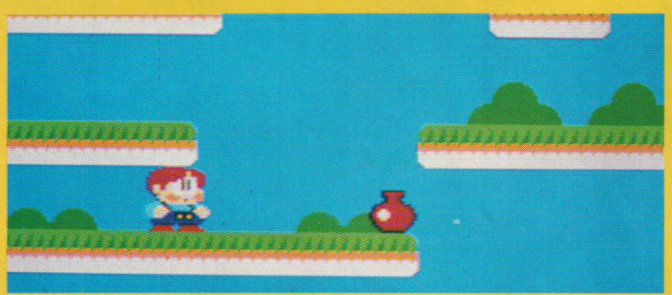
GRAPHICS AND SOUND

As you'd expect, the graphics are very cute – all the nasties look harmless enough until you run into them. They're also very bright and colourful and everything has been well drawn and animated. The jaunty soundtrack is great and the occasional effects are fine. A great cutesy game that's an audio visual treat.

Every third baddie killed turns into a magic item – faster boots, here.

LASTING INTEREST

It's tough, so it will take you ages to play through the seven islands, but practice really does make perfect and once you learn where the baddies are coming from you'll be prepared for them. You'll be playing this for hours at a time and whenever you can.



Collect that bottle to gain further-reaching rainbows...

JUDGEMENT

What a cracking game! It's supremely addictive, completely playable and thoroughly enjoyable. This is a classic game from the Super Mario Bros school of games design that will have you glued to the monitor for a very long time. There's just so much in the game it's a credit to whoever designed the coin-op, and the conversion is superb. For some light relief and solid fun you'd be a fool to pass this by.

SECRETS!

Collect all the diamonds in the right order (left to right) and this happens. Why...?

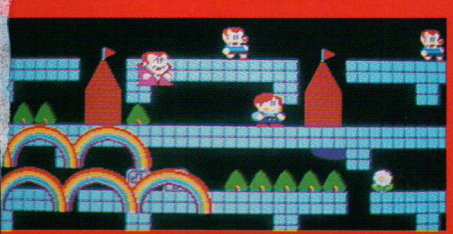
Near the end of the first island and unfortunately time is running out very quickly!

The end-of-level guardian. What's that door in the middle of the picture there for?

Kill off the spider and collect all the treasure, then go through the door to find...

A secret room with loads more treasure!

...TO THE END OF MONSTER ISLAND



Those pink Dracs can be a real pain.

Another magical item turns all your rainbows into goodies whenever you jump on them.

Dracula is the third end-of-level guardian. Believe us, he's one tough cookie to beat!

LOCK & LOAD

MAGNUM 4

AFTERBURNER – You've played the arcade smash – now experience the white-knuckled realism of a supersonic dogfight at home!
Using your heat-seeking missiles and laser anti-aircraft fire, can you be top gun against supersonic swarm?
AFTERBURNER TM SEGA © are trademarks of SEGA ENTERPRISES LTD.

DOUBLE DRAGON – Join in deadly combat with the savage street gang of the infamous Shadow Boss. Use whatever weapons come to hand as you pursue the gang through the slums, factories, and wooded outskirts of the city to reach the Black Warrior hideout, for the final confrontation with the Shadow Boss himself!
© 1988 Mastertronic International, Inc.

4 HIGH CALIBRE GAMES IN ONE PACK FOR YOUR ATARI ST/ AMIGA

OPERATION WOLF – "Not only has all the action and game play been captured, but so has the excitement, making it one of the most satisfying and compulsive shoot-em-ups to have appeared in a long time" ACE
Licensed from © Taito Corp. 1988

BATMAN – The characters and backgrounds are striking – each are superlative – features a soundtrack in glorious remixed stereo. The One
TM & © DC Comics Inc. 1988. All Rights Reserved.

ocean®

Ocean Software Limited · 6 Central Street · Manchester · M2 5NS · Telephone: 061 832 6633 · Telex: 669977 OCEANS G · Fax: 061 834 0650

The doorman, a police plant, photographed suspects as they arrived.

HEREWITH THE CLUES

CRL £24.95 ■ Mouse

Here is a game that is out of the ordinary. It's a murder mystery based on a package presented by Dennis 'The Devil Rides Out' Wheatley. The idea of the pack is that you get a load of photographs, pieces of evidence, letters and other bumpf and have to solve a murder – and once you reckon you know who did it, you open a sealed envelope and see if you've got the solution right.

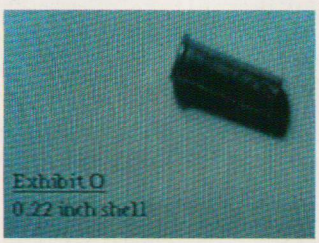
So how do you play this on a computer? Well, what CRL have done is digitise all the info from the pack and the player accesses the info by clicking on various parts of the screen which shows all the stuff laid out on a table.

The plot, then. You are the Assistant Commissioner of the anti-terrorist squad in pre-war London. A murder has just been committed in a nightclub. This proves to be messier than it at first sounds: the anti-terrorist squad has been watching the premises for a while because some known IRA sympathisers have been using the club, which has a secret room at the rear, for their meetings.

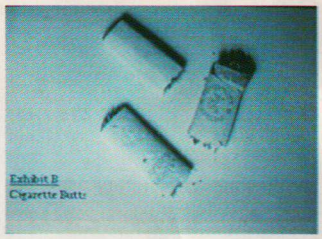
The murdered man is one Serge Orloff, owner of the club, who's also in with the gang of 16 subversives. The problem was, Serge had been helping the police with their inquiries because he was afraid of being deported back to Russia for other crimes.

After reading the reports from your assistant, who believes the murder was committed by a member of the group, you're left with two things to do. Firstly, identify the murderer and secondly, discover which members of the group were in the secret room at the time of the murder. The second part of the task is necessary because explosives and so on were found in the secret room: so they can then be charged with 'conspiracy and complicity in the manufacture of infernal machines for felonious purposes'.

Once that's done, you'll have to get in touch with CRL who'll enter you into a competition and reveal the solution. ***Andy Smith***



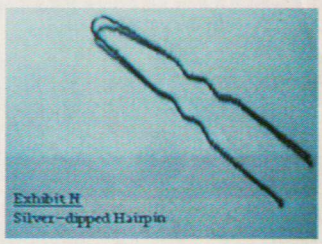
A shell recovered from the hallway where Orloff was shot.



More evidence, which was found in the secret room.

LASTING INTEREST

You can really get your teeth into this. It's going to take you a while to correlate all the clues and come up with the answer so prepare yourself for some pretty heavy sleuthing.



Another photo of evidence in the case: harmless enough??

JUDGEMENT

Be prepared to put some work in and you'll have loads of fun – to save on disk – swapping a second drive is a real bonus. Well put together, a great mystery to solve and something a bit out of the ordinary: well done, CRL!

GRAPHICS AND SOUND

There are a few spot sound effects, which comes as a bit of a surprise. The digitised pictures are fine although a couple are a bit dark. Looks just as good as it needs to look.

GRAPHICS	6
SOUND	5
INTELLECT	7
ADDICTION	7
OVERALL	80%

PARIS-DAKAR

TOMAHAWK £24.99 ■ Joystick

The start of the race – keep between the stones and go as fast as possible.

French house Coktel Vision are certainly milking the Paris-Dakar licence: they released a game last year called *African Raiders* that was based on the famous race, and now they present another one.

There are three skill levels to this driving game in which all the action is viewed from the cockpit. That means you can choose between three cars that have increasingly better performance and increasingly worse handling. It's a six stage game in which you have to finish each stage in the fastest possible time.

Normally the route you should take is marked out with small stones. However, stages two and four are across country, so you just head in the general direction of the finish and try not to bump into too many boulders or other big, solid obstacles along the way.

As a driving game it's not the best to have appeared and with only six stages it's not going to take long to complete: then you're just left with trying to improve your times. Far too shallow and lacking in gameplay to merit much attention. *Andy Smith*

GRAPHICS 7 / SOUND 5 / INTELLECT 2 / ADDICTION 5 / OVERALL 37%

"You WILL go and be a hero... NOW!"

Oh dear! Doesn't look too happy, does he?

TYPHOON THOMPSON

BRODERBUND/DOMARK £24.99

■ Mouse and Keyboard

The year is 2124 and men have boldly gone where no man has gone before, out into the far reaches of space. Even passenger craft make trips to distant galaxies. But it pays not to be too blasé about space travel where the ocean planet of Aguar, in the Omega sector, is concerned.

Aguar was the last known location of Inter-galactic Flight 396, which left a faint signal as hope of survivors. Many trips have been made to Aguar to find the survivors, but all have been destroyed by the mischievous and deadly sea-sprites. Those that managed any communication told of a single child held prisoner by the sprites and of the strange spirit guardians that tried to help them rescue the child (without much success).

You play Typhoon Thompson (no relation), a reluctant hero who has been tricked into attempting a rescue. Riding a small Jet-Sled and armed initially with a laser cannon, you must tempt the sprite flyers out of their islands, blast them and pick them out of the water before they can swim back to safety. Once all the sprites have been caught you can hold them hostage until the head sprite of the village gives up one of the four artifacts you need to rescue the baby. Returning the artifacts to the spirits gives you another weapon to help you defeat the sprites, such as scatter bombs, sprite magnets or freeze-bombs.

Once you have all four artifacts, you can take on the sprite-flyers of the last village before freeing the child. ***Maff Evans***

GRAPHICS AND SOUND

Despite their diminutive appearance the graphics are full of character and humour. Every object and action in the game has such realistic animation, as well as a few additional touches to add a little extra polish.

The start sequences and end-of-level scenes are extremely funny, especially if your sense of humour is a bit on the silly side! The 3D motion and scrolling is also excellent, both smooth and effective, giving a true feeling of skipping over the sea's surface. The sound consists of a few warbling ditties and pings which, while fitting the game very well, won't exactly set the Amiga music enthusiast's pulse racing.

LASTING INTEREST

Every time you play the game the animation sequences are altered, so that it's like watching an ever-changing slapstick cartoon. Once the novelty of the cute animation has worn off, you find a thoroughly playable action game which screams out for more than its fair share of attention. The game is a little easy to complete after practice, but it's such a joy to play that you'll be unable to tear yourself away from the machine until you do!

A single flyer causes problems on Level One.

JUDGEMENT

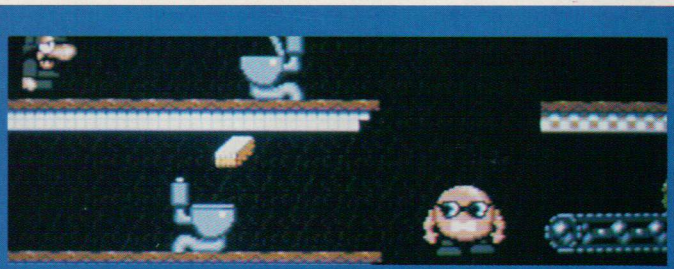
Typhoon Thompson is one of a rare breed – an original and playable arcade game. The game has more feel and atmosphere than many current coin-ops and film tie-ins – mainly because it's written with humour and entertainment in mind, rather than just trying to get you to put another 10p piece in the slot. If you'd like a change and have a fun sense of humour, then give *Typhoon Thompson* a 'spin'.

GRAPHICS	7
SOUND	4
INTELLECT	3
ADDICTION	7
OVERALL	80%

MANIC MINER

SOFTWARE PROJECTS £9.99

■ Joystick



Time waits for no man, and neither does the toilet.

One day the poor but happy Miner Willy discovered a long-lost mine under his back garden. With pound signs in his eyes, he ventured into the mines to see what treasures he could find. Unfortunately he took a wrong turn: now he has to collect enough objects to make the trip worthwhile and negotiate the twenty treacherous caverns that lie between him and safety. The caverns are inhabited by automated creatures that have long since given up their tasks and march up and down in long worn tracks. Miner Willy must avoid these creatures otherwise it's off to the big coal-face in the sky!

The Amiga version of *Manic Miner* features a direct clone (!) of the original 8-bit game along with a 16-bit upgrade. The upgrade features scrolling screens and colourful animated sprites in place of the single-screen single-colour originals. Unfortunately the scrolling means that you have to be pretty *au fait* with the original to get anywhere, since you can't see what's coming or plan your routes acordingly.

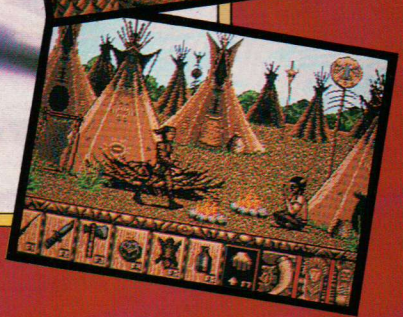
Timing is the essence of the game, but as the suped-up version's sprites trundle out of view frequently it gives the mining novice quite a challenge to get this right. Fans of the original are in for a disappointment: the feel has been warped to extremes. The timings are off, the methods barely work and the conveyor belts don't act as in the original, so that screens like 'Miner Willy Meets the Kong Beast' are now virtually impossible.

It would have been nice to play *Manic Miner* again just for a bit of nostalgia, but this version has none of the spark that made the original fun. ***Maff Evans***

GRAPHICS 5 / SOUND 3 / INTELLECT 5 / ADDICTION 2 / OVERALL 25%

COLORADO

**100 SCREENS OF BEAUTIFULLY ILLUSTRATED 3D ARCADE ACTION.
CANOE THE DEADLY WHITE-WATER RAPIDS OF THE COLORADO AND
AXE, KNIFE, SHOOT, AND BOMB YOUR WAY TO A FORTUNE!**



Colorado 1880. David O'Brian, a penniless trapper, canoes up the South Platte river in search of adventure and riches.
Deep in the wilderness, he meets a dying Cheyenne Indian. Vowing to bury him in the style of a Warrior, O'Brian is rewarded with an ancient map showing the way to the legendary Lost Gold Mine of Pocahontas.
The route will lead him through Pawnee territory, the most fearsome of Indian tribes, across hostile wolf-infested land... and means he must shoot the terrifying white-water rapids of the Colorado in a flimsy Buffalo-hide canoe.
But there is no going back now for O'Brian is haunted by the scent of Gold.

Silmarils

AMIGA · ATARI ST · IBM PC

MARKETED BY

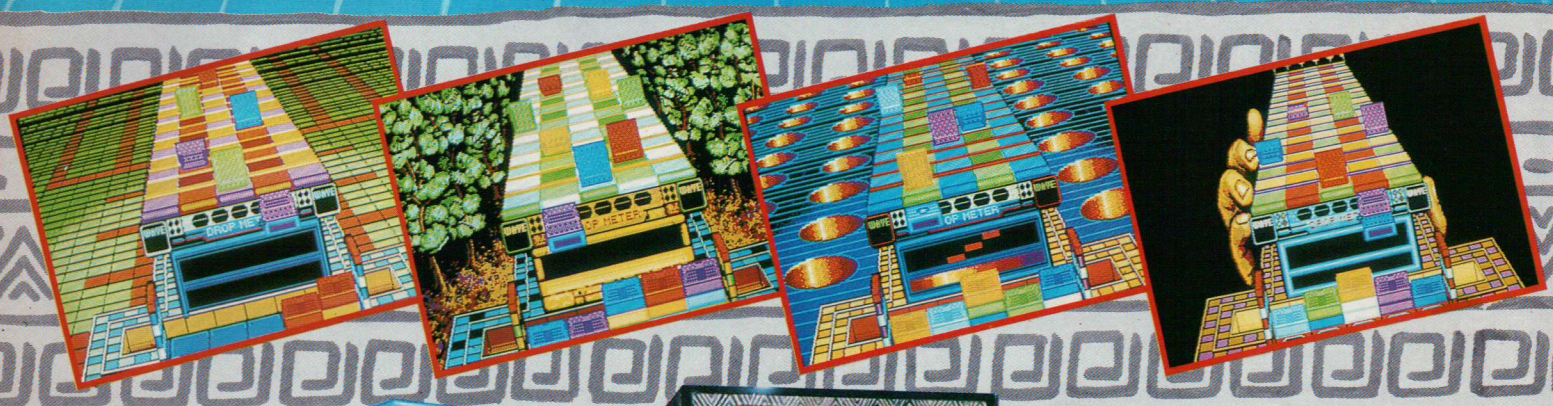
PALACE SOFTWARE

THIS IS THE 90's
THIS IS KLAX™

THE TIC-TAC TILE GAME

It's simple in concept and easy to play. Catch the coloured tiles with the paddle and flip them into the bins to make same coloured stacks, diagonals and rows of three. Sounds easy? It is! The hard part is pulling yourself away from the game.

- **The latest craze from California!**
- **99 waves of sheer fun!**
- **The fastest selling coin-op ever!**
- **Addictive and challenging.**
- **Make multiple klaxes for massive points!**
- **Challenge your friends in head-to-head action.**



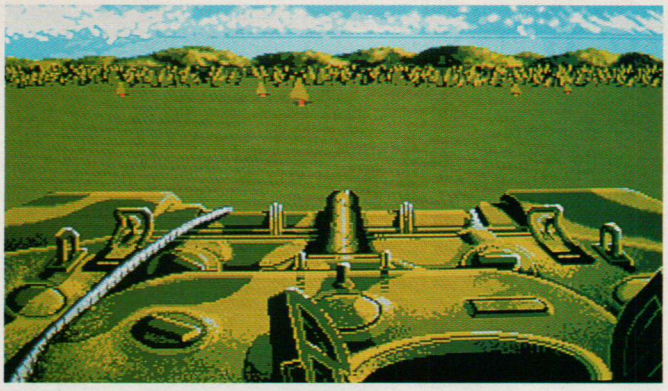
TENGEN

The Name in Coin-Op Conversions

DOMARK

Available on: Atari ST, Amiga, IBM PC 3.5" & 5.25", Commodore 64 (cassette, disk) Amstrad (cassette, disk) Spectrum +3, Spectrum 48/128

Programmed by: Teque Software developments Ltd. **Atari ST Screenshots**



Moving out from base camp.

SHERMAN M4

LORICIELS £19.99 ■

Joystick and Mouse

The American Sherman tank and all its variants did sterling service for the allies during World War II, so for all those of you who've dreamt of getting to grips with one of the ugly brutes, here's your chance.

It's a one player game containing three scenarios based on actual battles and campaigns in which Shermans played an important part. The first is The Normandy Landings, in which the Sherman is in an aggressive role: five single scenarios can be played individually in any order or all five can be played one after the other to form a sort of campaign game. The other scenarios are The Ardennes, where Hitler launched a massive tank offensive, so your role is far more defensive; and North Africa, where things are much more strategic.

Once you've decided which to play, you can alter the game's perameters to suit; that is, alter the enemy's difficulty levels and so on. Do all that and you then get your instructions from the Sarge before setting off.

Playing the game involves managing four tanks and achieving the specified objective. The first Normandy mission requires you to knock out a couple of enemy bunkers and then take control of an enemy camp. A map of the location is provided – giving orders to the tanks is simplicity itself. Simply select the destination and the tank goes trundling towards it – once all four are away you can jump into the command seat of any one of them simply by pressing a key. Then you can take control if you wish and fight the enemy yourself or just sit and watch. The autopilot can be switched back on just as easily.

Remember when playing the campaign game that you only have four tanks with which to complete the game and once one tank is out of action, it's out of action for good. That's not a problem if you play the scenarios one after the other however, because you're given four at the start of each regardless of how well you did in the last scenario. ***Andy Smith***

GRAPHICS AND SOUND

The graphics really are very good – very fast filled 3D with options for other views as well as the usual driver's eye view. The sound isn't so hot, but it's adequate. Fast and well animated – a good looker.

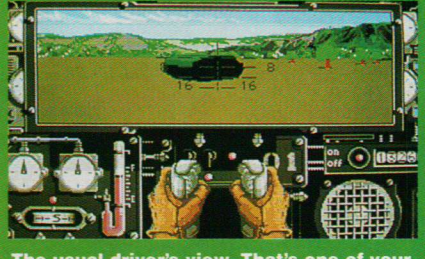
LASTING INTEREST

With 15 missions and the ability to 'limit set' yourself by bumping up the enemy's difficulty ratings, prepare yourself for some long playing sessions. You don't have to play for hours on end, though, because some of the scenarios can be played quickly.

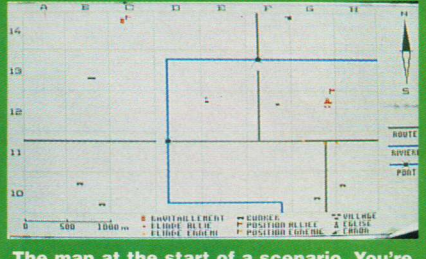
JUDGEMENT

It's not going to have seasoned strategists running out to the shops because it's too limited in the strategy department and is a bit too close to a *3D Battlezone*. Arcade fans who like to think occasionally will be pleased with it. Good fun.

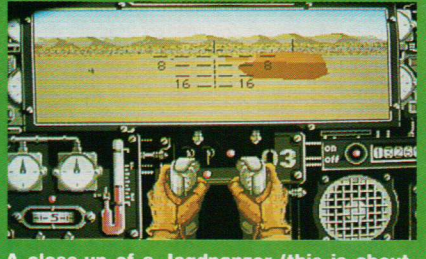
GRAPHICS	8
SOUND	6
INTELLECT	6
ADDICTION	7
OVERALL	77%



The usual driver's view. That's one of your knocked-out tanks up ahead.



The map at the start of a scenario. You're in G12 and must take the camp in C14.



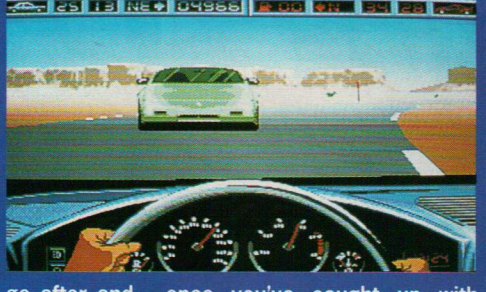
A close-up of a Jagdpanzer (this is about as close as you want to get to it!)

HIGHWAY PATROL

INFOGRAMES £19.99 ■

Joystick

Aaargh! Turn right! Turn right!



Criminals are tough to catch in a high-speed car, even through the leafy lanes of sleepy England, just imagine the work the Americans have to do in deserted places like Arizona where the roads are long and straight and go on for ever. Reckon you could fare better than the average cop? Well, now's your chance to find out.

Highway Patrol II (who knows what happened to *HP I*?) plonks you firmly in the open spaces of one such American state. Your desk is full of 'Wanted' sheets, so select who you would like to go after and jump in your car.

At the top of the screen the map coordinates of the crims and yourself are displayed. Drive as fast as you can towards the criminals, remembering to fill up with petrol if necessary along the way, and once you've caught up with them convince them to pull over so you can book 'em.

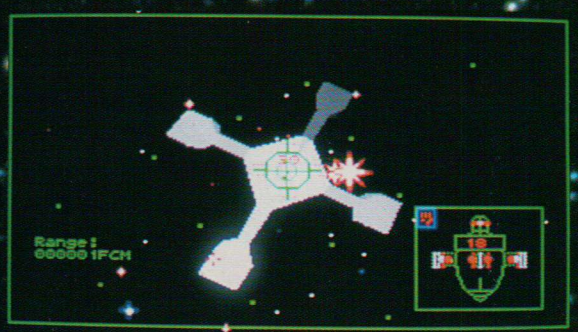
It looks fine but most of the time it's just a case of steering left-right , which becomes very boring after a while. Far too little to do to keep you very interested. *Andy Smith*

GRAPHICS 8 / SOUND 4 / INTELLECT 2 / ADDICTION 5/ OVERALL 48%

A '57 fighter pilot's day starts with a read of the orders.

Then it's time for another mission.

...the automatic docking computer takes over.



Line yourself up with the centre of Solbase and when you're close enough...

Once the fun's over it's time to dock again

Load up with some weapons and you're almost ready to go.

WARHEAD

ACTIVISION £24.99 ■

Mouse

The Future. Earth has suffered a severe attack from a group of insect-like aliens from the nearby star system Sirius. Reasons for the attack are totally unknown. The resulting nuclear winter has caused terrible suffering and so the remaining peoples of the Earth have banded together in self-defence to form the Fist Of Earth World Government.

The alien enemy was more technologically advanced than were we, so work had to be started quickly and now, at last, Earth has an answer: the FOE-57 attack spacecraft.

A space station called Solbase has been set up in the Sun's orbit and will be your home for the next few months as you help the Fist Of Earth defend the motherland from these six-legged aggressors.

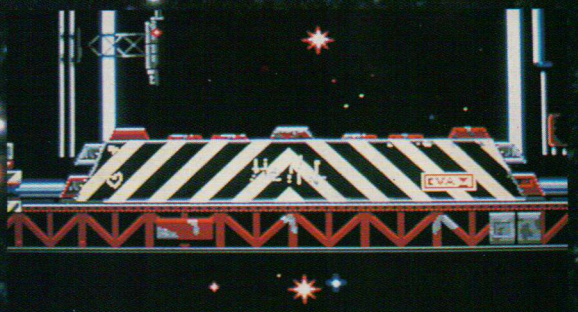
A typical day in the life of a '57 fighter pilot starts with the reading of the day's orders. The first couple of missions are designed to get you used to flying the ship and to practice docking. With that under your belt you're ready to take on proper missions, which usually involve 'Quad Jumping', a sort of hyperspace travel, to a different star system and then flying around using standard motors.

You view all the action through the ship's front window. To start with, flying around is very confusing – especially at high speeds. Fortunately there are a number of automatic pilots to help you (though things still look very con-

Call up the star system and planet you wish to travel to and lock the navigation computer on. Launch from the base and you're only a Quad Jump away from your destination.

And there he goes! Dead!

In your ship in Solbase: PWS means ProceedW ith Sortie.



Launch yourself away from the base...

GRAPHICS AND SOUND

There's a very atmospheric intro soundtrack and the in-game effects are great too. The filled 3D used throughout is well done and everything moves swiftly and smoothly. All the information screens (star systems, planet orbits and so on) are also very good. The overall impression of *Warhead* is that it's a highly polished game which, though it doesn't rely on the graphics, has nevertheless been well designed with obvious attention to detail.

LASTING INTEREST

None of the missions take hours to complete, but some do take a while and you'll be lucky to finish them all first time. More missions would be nice, but the ones there are will not disappoint.

JUDGEMENT

Imagine all the special missions taken out of *Elite* and plonked into one game, and that will give you some idea of what *Warhead's* all about. Each mission isn't as deep and won't take as long to complete as an *Elite* mission, but the number makes up for that. A great game: not brilliant but near enough to merit a good look.

...and switch on your HUD which gives you an indication of motion in the vastness of space.

fused at times!), and these include auto pilots that lock on to your primary target (which doesn't have to be the enemy) and ones that point you in the direction of travel – this may sound silly, but the laws of physics apply in space and you may not always be going in the direction you thought you were. There are also artificial head-up displays just to prove you're moving and weapon status displays.

The missions range in complexity from simple patrols to runs after smugglers and encounters with fleets of the enemy. It's not long into the game, though, that you meet one of the nastiest creations ever to wander the galaxy: The Berzerker, an alien ship that seems to hate all organic life, your enemies and yourself alike. Dealing with him takes some fine flying and devious thinking but he can be destroyed, and you'll have to discover just how it's done for yourself. A '57 pilot's lot is not a happy one, but it sure is exciting.

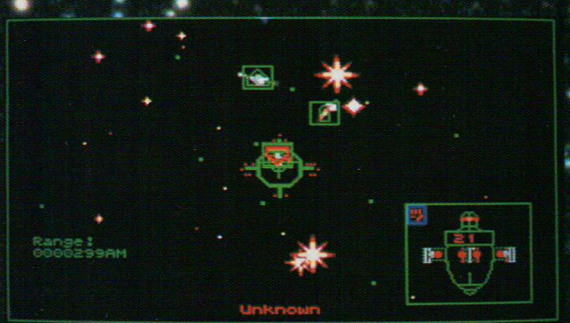
Andy Smith

GRAPHICS	8
SOUND	7
INTELLECT	6
ADDICTION	8
OVERALL	88%

Here come the six-legged devils.

You've selected a primary target, but you still don't know precisely which type of craft it is.

... and now you know what sort of ship it is and what weapons you'll need to employ to destroy it.



Launch a Data Gathering Missile first...

WARHEAD

"The most disturbing aspect of this conflict is that we do not know our enemy. We do not know their reasons for attacking us. We do not know who they are".

It is the middle of the 21st Century and Earth has been violently attacked by an insect-like alien nation, from a near star system, killing billions of humans, swiftly wiping out countries and collapsing world states, throwing the Planet into the merciless hands of a nuclear winter.

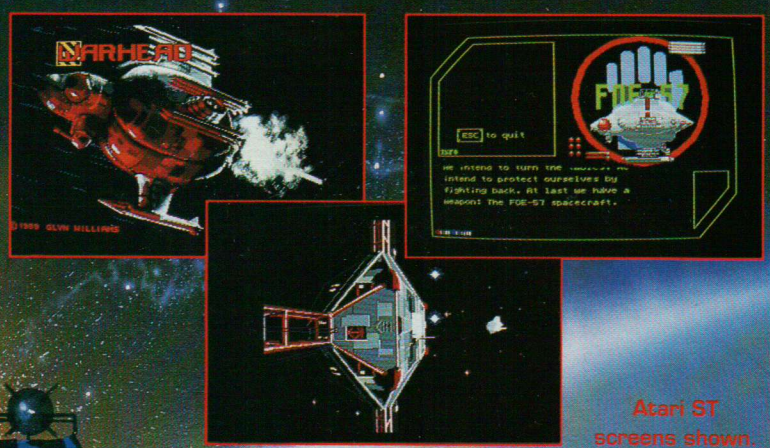
"We intend to turn the tables. We intend to protect ourselves by fighting back. At least we have a weapon: ***the FOE-57 spacecraft...***"

As the remaining humans turn to each other for combined strength and support, the Fist of the Earth world government turn to you to lead the ultimate battle.

"The safety of the peoples of Earth rests in your hands..."

WARHEAD

- **A most challenging space simulator combining strategy and arcade action**
- **Over 30 hours of solid play**
- **39 missions of space adventure**



Atari ST screens shown.

TGM STAR PLAYER

MPH MOTION • PICTURE • HOUSE

© MOTION PICTURE HOUSE

MARKETED AND DISTRIBUTED BY ACTIVISION (UK) LTD

Consumer Enquiries Tel: (0734) 310003

Mail Order: Intermediates Ltd. P.O. Box 847, Harlow CM21 9PH Tel: (0279) 600197

INFESTATION

PSYGNOSIS £24.95 ■

Keyboard and Joystick

Scanning the surface at the start of the quest: and something's closing in!

About to enter the transporter, so fire up the HUD to check on atmospheric conditions.

Main Picture: Kal Solar hits the surface of Xelox, kitted out and all ready for action.

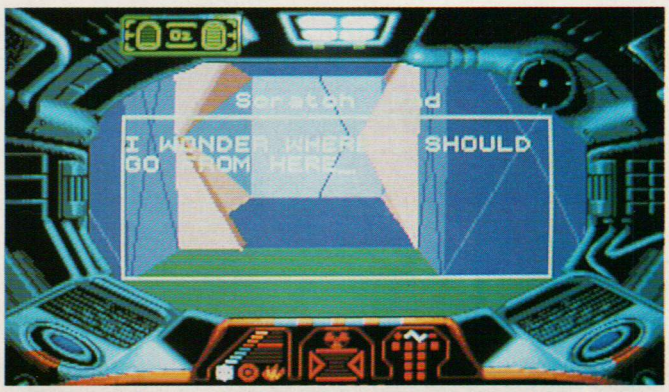
Ever since *Aliens* hit the scene there has been a whole host of games featuring races of Extra-Terrestrial beings that hatch from eggs to take over the universe. Even those that don't stick to the original plot have graphics inspired by Giger's eldritch creations. *Infestation* draws its inspiration from the film in both claustrophobic atmosphere and storyline, telling of research station Alpha II on the moon of Xelos.

Recent transmissions from the station have become garbled and unintelligible. The only thread running through the messages tells of a violent life form that has been laying eggs all over the complex – eggs that hatch into deadly insectoid warriors. The diminishing crew has tried to eliminate as many of the eggs as possible, but there are simply too many for them to handle with the meagre equipment they have to hand.

Enter your character – Kal Solar, mercenary soldier, trouble shooter and all-round hero. The game takes place in a filled-3D environment, commencing with Kal being dropped onto the barren surface of Xelos, armed with a handful of Cyanide cartridges with which to dispose of the eggs, a pressure suit, a Manned Manoeuvring Unit (MMU) which allows him to hover above the moon's surface and a pulse rifle for disposing of the occasional enemy-controlled drone.

You must find your way into the complex and travel around dropping cyanide cartridges in the proximity of the alien eggs. Easy enough? Not with alien-controlled droids out to kill you, not to mention the condition of the complex itself: blacked-out corridors, radiation leaks and areas of zero pressure. All around the complex you may find discarded items of technology, which will undoubtedly come in useful at some point.

But take care: you mustn't fail! The safety of the universe is in your hands... now where have we heard that before? ***Maff Evans***



Confusion sets in inside the network: why not try that door over there, to see if that will take you any further?

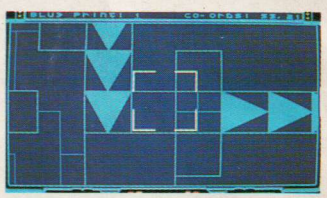
GRAPHICS AND SOUND

Polygon-constructed 3D is by no means a new technique, but it's still effective if properly used. *Infestation* combines a nicely bitmap-drawn console with solid and flicker-free 3D to produce a tense, claustrophobic-feeling game. The attention to detail is superb, even down to the company names on the title screen! The eerie breathing effects and intro music cap off the scene perfectly, producing more of an atmospheric interactive science fiction story rather than a straight 'hunt and kill' video game – in other words, exactly what an arcade adventure should be!

Helmet off, look up, and... AARGH! What's that??

LASTING INTEREST

As you would expect, there is no way that you can just pick up *Infestation* and rack up a considerable score straight away. It takes time, observation and more than a little thought merely to find your way off the moon's surface and into the complex! Using the terminals for orientation and guidance is essential, and soon becomes a natural part of the gameplay. Keep a blank disk, pencil and plenty of paper handy, since the 'save game' feature is bound to be used a lot in the weeks that you spend playing the game. And the pencil and paper? Well, without a map you won't last five minutes, never mind weeks!



Well, you've managed to get inside the complex: what now?

JUDGEMENT

Infestation is obviously going to be a huge turn-off for fans of quick, ten-minute shoot-em-ups, but those willing to apply a little use of the old grey matter will find it extremely rewarding. The actual complex is a huge place, with a number of dangers to avoid and problems to overcome, but once you start the ball rolling, the search for alien eggs is extremely absorbing. The massive array of controls is also initially off-putting, but soon becomes second nature and seems as casual as operating a stereo. Anyone who has fancied themselves as Hicks or Ripley in *Aliens* can live out their fantasy.

GRAPHICS	8
SOUND	7
INTELLECT	7
ADDICTION	8
OVERALL	89%

COMPUTERS SADDLER COMMUNICATIONS

MAIL ORDER DEPT. TRADING HOURS
Mon to Fri 9am - 1pm (Lunch)
2pm - 5pm (1 -2)
Saturday CLOSED

TELEPHONES:-
Ashton-in-Makerfield
(0942) 720867 and 711821
FACSIMILE:- (0942) 271226

SADDLER COMPUTER SERVICES LTD, 340 HAYDOCK LANE, HAYDOCK, ST HELENS, LANCASHIRE WA11 9UY

AMIGA A500 RANGE

BUNDLE	INCLUDES	SADDLER PRICE	R.R.P.
BAT PACK	A500 Computer, A520 TV Modulator, D Paint II, Batman: The Movie, Interceptor, New Zealand Story.	£318.00	£346.95
EDUCATIONAL CLASS OF THE 90'S PACK	**HARDWARE** A500 Computer, Midi, Interface. **SOFTWARE** D.Paint II, Superbase Personal, Publishers Choice, Maxiplan 500 (Spreadsheet) Arts Midi Recording Studio, Amiga Logo, BBC Emulator V.2, BBC Programs. **EXTRAS** 10 Blank Disks, Mouse Mat, Diskette Wallet.	£459.00	£499.00
Cumana 1Mb ext 3.5" Drive		75.98	89.99
Cumana 720K ext 5.25" Drive		105.98	129.99
Commodore 1084D Monitor		236.99	274.99
Phillips 8833 Monitor		233.45	269.99
Acorn AKF12 Monitor		188.99	229.99
Maxx Yoke		59.11	74.99
Minigen Genlock		86.77	99.95
1.2 → 1.3 Upgrade Board		48.69	52.92
Boot Selector Switch		9.10	10.55
Midi Interface 2		22.82	26.46

STAR PRINTER

MODEL	Pins	Col's	SP'D	Cost
LC10P	9	80	144/36	129
LC10-11P	9	80	180/45	145
LC10PC	9	80	144/36	168
LC15P	9	136	100/45	268
FR10P	9	80	300/76	299
FR15P	9	136	300/76	393
LC24-10P	24	80	170/57	199
LC24-15P	24	136	200/67	335
XB24-10P	24	80	240/80	395
XB24-15P	24	136	240/80	519
LASER 8			8PPM	1229
LASER 8 IIT			8PPM	1598

ALL OUR STAR PRINTERS ARE GENUINE UK MODELS WITH FULL 12 MONTHS UK WARRANTY.

SOFTWARE AND UTILITIES

PRODUCT	SADDLER	R.R.P.
Amiga - Scart Cable	8.68	12.99
Publishers Choice	64.99	99.99
Starter Pack	40.99	59.95
Home Office Kit	88.99	129.95
Deluxe Paint 3	54.99	79.99
Arena Accounts Package	91.84	127.78
The Works-Platinum Edition	96.06	128.50
A-Talk III	48.89	68.02
Micro Fiche Filer Plus	86.93	120.95
Lights Camera Action	35.30	49.11
Fantavision Editor	21.73	30.23
Highsoft Basic	43.45	60.45
Music X	139.97	173.88
Maxiplan Plus	93.75	130.43
Devpac V2	32.58	45.33
Dr Drums	16.93	22.64
K-Spread 2	32.58	45.33
Aegis Sonix	35.30	49.11
Amas	60.84	75.57
Perfect Sound	52.14	60.45
Amiga Alignment Kit	22.58	30.21
Amikit	18.99	26.43
BBC Emulator	22.58	30.21
Cli-mate	22.58	30.21
Deluxe Print II	27.17	37.80
Blank Sony 3.5" discs (x10)	12.00	14.95
Unbranded 3.5" discs (x10)	8.70	9.99

A2000 + B2000 products available
Please ring for details

ALL PRICES EXCLUDE VAT AND CARRIAGE

All prices to manufacturers specifications and subject to change without notice

DELIVERY UK MAINLAND

PRODUCT	NEXT DAY	4 DAYS
HARDWARE	£12 per box	£7 per box
SOFTWARE	£8 per order	£4 per order

PAYMENTS BY ACCESS AND VISA WELCOME BY CHEQUE
GOODS DESPATCHED WHEN CHEQUE CLEARS.

THE PEOPLE TO DO BUSINESS WITH

OPTIONAL CREDIT + LEASING FACILITIES - ASK FOR WRITTEN DETAILS

challenger products international

Freepost
Bridlington
North Humberside YO16 4BR

PRIORITY ORDER FORM ☑ TICK BOX

SUPER PRICES - NO HIDDEN EXTRAS - ALL PRICES INC. DEL. & VAT.

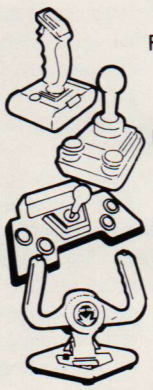
ALLSOP RANGE – THE WORLDS LEADING BRAND FOR COMPUTER CARE PRODUCTS

		QTY
DISK FILE 60 x 5.25"	8.95	☐
DISK FILE LOCKABLE 60 x 5.25"	9.95	☐
DISK FILE 30 x 3.5"	8.95	☐
DISK FILE LOCKABLE 30 x 3.5"	9.95	☐
DISK FILE 80 x 3.5"	12.96	☐
DISK FILE LOCKABLE 80 x 3.5"	13.96	☐
DISK FILE 10 x 5.25"	3.95	☐
DISK FILE 10 x 3.5"	4.95	☐
DISK FILE 5 x 5.25"	2.95	☐
DISK FILE 2 PACK 5 x 3.5"	5.95	☐
DISK FILE 1 PACK 5 x 3.5"	3.95	☐

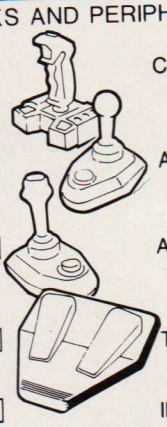
		QTY
UNIVERSAL PRINTER STAND & TRAY	16.95	☐
UNIVERSAL PRINTER STAND	8.95	☐
UNIVERSAL DOCUMENT HOLDER	3.95	☐
5.25" CLEANING KIT & STORAGE BOX	12.96	☐
5.25"D/D AND MONITOR CLEANING KIT	9.95	☐
5.25" D/D CLEANER	7.95	☐
3.5" CLEANING KIT & STORAGE BOX	14.95	☐
3.5" D/D AND MONITOR CLEANING KIT	11.96	☐
3.5" D/D CLEANER	9.95	☐
DC – 600 DATA CARTRIDGE CLEANER	37.95	☐
DC – 2000 DATA CARTRIDGE CLEANER	33.95	☐

ALL ALLSOP PRODUCTS CARRY LIFETIME GUARANTEE EXCEPT CLEANING KITS

COMPUTER JOYSTICKS AND PERIPHERALS.



	QTY
FLASHFIRE AUTOFIRE	9.95 ☐
PROFESSIONAL 9000	14.95 ☐
ULTIMATE RAPIDFIRE	22.95 ☐
RACEMAKER	28.95 ☐
IBM ANALOGUE JOYSTICK	18.95 ☐
IBM PC JOYSTICK ADAPTOR	16.95 ☐



	QTY
COBRA	11.95 ☐
ARCADE	16.95 ☐
ARCADE TURBO	19.95 ☐
TURBO PEDAL	22.95 ☐
IBM GAME CARD	18.95 ☐
MOUSE MAT REVERSIBLE	4.95 ☐

KAO DISKETTES – MAGNETIC MEDIA FROM THE SURFACE SCIENTISTS

		QTY
5.25" 48 TPI DSDD x 10	6.00	☐
5.25" 96 TPI DSDD x 10	9.00	☐
5.25" 96 TPI HIGH D x 10	11.50	☐
BULK 5.25" 48 TPI x 50	14.95	☐
BULK 5.25" HIGH D x 50	29.90	☐

		QTY
3.5" 135 TPI DSDD x 10	11.00	☐
3.5" 135 TPI HIGH D x 10	24.95	☐
BULK 3.5" 135 TPI DSDD x 50	28.75	☐
BULK 3.5" HIGH D x 50	64.40	☐
3.5" TRAVEL PACK WITH 10 DISKS	16.95	☐

LIFETIME GUARANTEE ON ALL DISKS.

NAME ..... TEL: No .....

ADDRESS .....

.....

POST CODE .....

Access VISA

CHEQUE/P.O. TO CPI ☐

CREDIT CARD NO. | | | | |

EXPIRY DATE

CPI IS A WHOLLY OWNED SUBSIDIARY OF EUROMAX ELECTRONICS LIMITED

A well-timed jump is needed to gain posession at the tip-off.

TV SPORTS BASKETBALL

CINEMAWARE £29.99 ■

Joystick and Keys

Taking a rest from their usual style, 1940s serial-orientated games, Cinemaware have once again turned to the US TV sports channels to bring us a second sports sim, *TV Sports Basketball*.

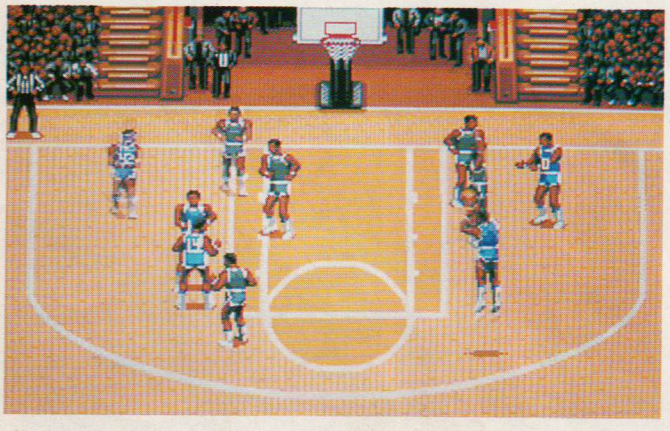
Following in the same vein as their previous sports release, *TV Sports Football*, the game places you as a player or manager (or even both, should you be so inclined) in an American basketball league. You can either opt to play as an established US league team complete with its own set of players, or perhaps design your own team from scratch.

Those not wishing to take up any excercise – be it computerised or otherwise – can just watch their team carry out the set tactics and shuffle the figures around depending on the results.

If you feel left out of the action you can always jump in and start controlling the team directly. If, on the other hand, you feel like putting yourself in the shoes of a single player and following him through his career then you can select the 'role playing' section.

The pattern of play in the league follows very closely the pattern of the actual American basketball league, the top teams from each division qualifying for the play-offs, which may even lead to playing in the World Series – but only if you're good enough!

Maff Evans

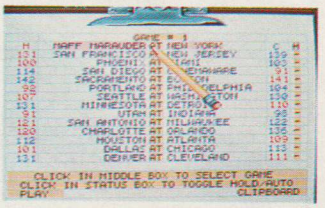


Oh dear, looks as if the Marauders aren't coping at all well with the New York offense.

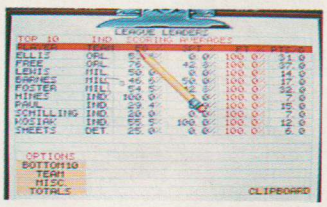
Cinemaware carry on the humour with some rather dubious-looking promotors!

Choosing the players who will actually appear on the court is a precise affair.

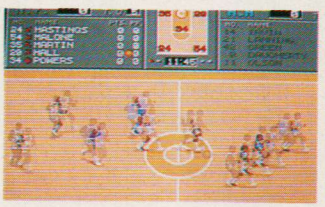
No TV show would be complete without a wittering frontman.



The week's games: can the Marauders shine through? It's extremely doubtful!



Now then, let's look at the team statistics and see who's most likely to be fired.



The tactical screen. This is the part of the game where players are positioned on the court.

GRAPHICS AND SOUND

As you would expect, Cinemaware have done the business in the presentation department. The intro screens are humourous, the animation is superb and the music is atmospheric. All the usual touches such as the wacky promoters and charismatic TV presenter have been included, as well as extra features like cleaners sweeping up pieces of broken backboard in the distance. The overall feel is very much in the American TV mould – even the programming credits read like the end credits of a TV show!

LASTING INTEREST

The wealth of options initially presented to the player makes it seem as though there is a good deal to keep you playing, but unless you have a large supply of friends to play against in the league or you prefer watching the computer plays the games for you then you'll soon wander off to find something else to lavish your attention on.

The whole thing is rather like watching a cartoon of a game of basketball rather than actively taking part – the computer does far too much, which prevents the player from getting seriously involved. Only dedicated 'manager' fans will find the game enthralling enough to capture their attention for more than a few hours.

JUDGEMENT

The dividing line between an accurate simulation and a playable action game is often considered a narrow one. Unfortunately, Cinemaware's latest offering falls the wrong side of the line. *TV Sports Basketball* is packed with information to make it one of the most stunningly accurate sports simulations ever, but the actual game sections are severely lacking in gameplay. Stopping the opposite team from storming past your players and scoring every time is virtually impossible – a task which isn't helped by the unruly and badly-implemented control system.

It's hard to believe that the team that brought us the superbly-presented and wonderfully playable *TV Sports Football* can have come up with a product that's enough to put people off the game of basketball for life. Nice graphics, a myriad of setting and options and slick presentation are all very well, but look a little deeper and all that is left is nothing more than an expensive and frustrating basketball manager game.

GRAPHICS	8
SOUND	7
INTELLECT	6
ADDICTION	4
OVERALL	51%

Pipe Mania!!

ADDICTION BEYOND BELIEF!!

C and VG Feb 1990 94%

Pipe Mania is "a classic puzzle arcade game that is so addictive, it should come with a Government Health Warning!"

Pipe Mania is a game of great ingenuity, simple in concept and friendishly challenging to play.

You'll need to act instinctively, but think strategically!

One wrong move, one brief hesitation or mis-placed pipe section, and you'll drown in a sea of slime!

ST Action

"Pipe Mania is a conceptually simple and cheeky game which is incredibly addictive"

Commodore User Screenstar

"Terrifically addictive... outlasts any arcade conversion"

AVAILABLE FOR

Commodore Amiga

IBM PC and Compatibles

Atari ST

Commodore 64 Cassette
Commodore 64 Disk

Spectrum Cassette
Spectrum Disk

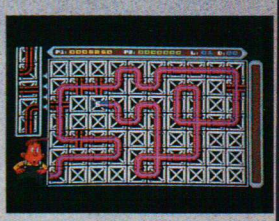
Amstrad CPC Cassette
Amstrad CPC Disk

MSX

BBC Electron Cassette
BBC Disk

Apple Macintosh

Achimedes



Zero March 1990 92%

"Buy this game and you may never sleep again"

The Games Machine Star Player Award 83%

"A puzzle game of great ingenuity and addictivity. Pipe Mania is simple in concept, fiendishly challenging in play, and attractive to look at"

Zzap Sizzler

"Absolutely guaranteed to drive you round the bend"

Amiga Computing Excellence Award 95%

"A game with a game play that shines"

Game Players Award USA

"Best PC strategy game of 1989"

C+VG HIT!

AMIGA FORMAT GOLD

THE One ATARI ST AMIGA PC FOR 16-BIT GAMES

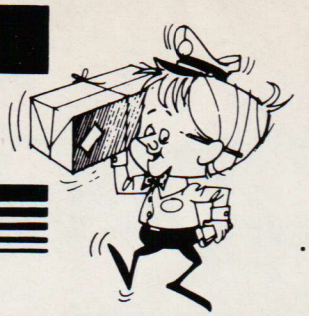
machine STAR PLAYER

ZERO HERO

GAME Player's GAME OF THE YEAR

EMPIRE

BYTEBACK



FAST DELIVERY SERVICE
. . . and the keenest prices

Ring us now! **0636-79097** we're programmed to help

FIND OUT WHY MOST AMIGA USERS PREFER BYTEBACK!

HARDWARE ONLY!

AMIGA A500 Batpack +10 games and joystick!	399.90
AMIGA A500	359.90
Philips CM8833 monitor	259.00
512K RAM expansion	84.90
A501 RAM/CLOCK	99.90
STAR LC10 Printer (Mono)	179.00
STAR LC10 Printer (Col) (Printers include lead!)	219.00
Cumana 3.5" Disk Drive	99.00
Senator 3.5" Disk Drive	89.00
Mono Video Camera + lens	229.90
8802 GENLOCK	269.90
Pro GENLOCK (8806)	749.90

ART ONLY!

TV Text	52.50
TV Show (NEW)	69.90
Comic or Movie Setter	59.90
Deluxe Paint 2	49.90
DELUXE PAINT 3	59.90
Deluxe Print 2	34.90
Deluxe PhotoLab	49.90
Design 3D	59.90
Director (The)	42.90
*Director Toolkit	29.90
DIGIVIEW GOLD (v.4)	119.90
Fantavision	29.90
Modeler 3D	59.90
Photon Paint 2	69.90
Pixmate	37.90
Professional Draw	109.90
Sculpt 3D (PAL)	59.90
Sculpt 4D Junior	99.90
Vidi Amiga	109.90
X-Cad Designer	89.90

UTILITIES ONLY!

Amiga DOS Toolbox	39.95
Aztec C Professional	109.90
BBC Emulator	39.90
Cashbook controller	54.90
Devpac 2	44.90
DigiCalc	29.90
PUBLISHERS CHOICE Includes: Page setter 1.2 Kind Words 2, Headline Fonts Artists Choice Artpack	79.90
DOS to DOS	39.90
Excellence	139.90
Home Accounts	22.90
Pagesetter (2)	69.90
Pen Pal	99.90
Personal Tax Planner	29.90
Pro Data	64.90
X-COPY 2 (+ hardware) The BEST Backup utility!	34.90
Professional Page (1.3)	179.90
Scribble Platinum	42.90
Virus Killer	9.90
Workbench 1.3	14.90
Works Platinum	139.90

MUSIC ONLY!

AMAS	84.90
Audiomaster 2	59.90
Deluxe Music Con Set	49.90
Instant Music	18.90
Mastersound	29.90
MUSIC-X	149.90
Pro Sound Designer	59.90
Sonix	49.90

ACCESSORIES ONLY!

Locking Disk Box (40+)	7.90
Locking Disk Box (80+)	9.90
FURRY MOUSE COVER! (with eyes, ears and nose!)	6.90
Mouse Mat	5.90
Keyboard Cover	5.90
Monitor Cover	5.90
Monitor Stand	14.95
Printer Stand	9.90
Copy Holder	5.90
Naksha Mouse	34.90
Midi Master	34.90

JOYSTICKS ONLY!

Joystick & Mouse extension	4.90
Joystick lead - 3 metres!	4.90
Quickjoy 3 Supercharger	9.90
Crusier Multicoloured	9.90
Cruiser (CLEAR)	13.90
Competition Pro 5000	14.90
Competition Pro Extra	15.90
Arcade joystick	16.90
Electroboard	19.90

PUBLIC DOMAIN 1=£3.00 4=£9.90 10=£19.90

AU.01 Jazzbench: Superb Workbench replacement; fully multitasking

AG.01 Star Trek: Amazing game with mega graphics! (3 Disks - £6.90)

AG.02 Pacman, Gravity wars, Hanoi Jackland, Othello, Empire etc.

AD.01 Walker demo 1, animation of Star Wars Walker (need 1Mb)

AD.03 Superb animation of Star Trek shuttle landing on the Enterprise!

PAN.29 Lots of games: Cosmoroids Amoeba Invaders, Stone Age, Jigsaw Backgammon, Ratmaze, Reversi etc.

SD.21 Monopoly: full working version of this family board game!

TBAG.34 QED (v0.19 - Text editor), XIV & XIP (Slideshow utilities), Diskopti (file access optimiser)

FISH 145 DMouse v1.06, Workbench utilities; mouse accelerator window activator, popcli etc.

FISH 251 Debug (symbolic debugger), Disksalv (disk recovery program), Monopoly, Diskspeed, Fish Tank

FISH 254 UEDIT: editor with teach mode, online help, mouse control, user definable commands etc.

FISH 259 Escape from Jovi: Arcade action! Stereo + hi res graphics!

FISH 261 Amusing animal animations + source file in Director format!

GAMES ONLY!

Armada	18.90
Blood Money	9.90
Battle Squadron	15.90
Black Tiger	18.90
Bomber	19.90
Boxing Manager	13.90
Shadow of the Beast	18.90
Centrefold Squares	9.90
Chess Player 2150	15.90
Chuckie Egg (1 or 2)	13.90
Clown O'mania	13.90
* Cyberball	15.90
* Damocles	18.90
Bloodwych	9.90
Demons Tomb	18.90
Dr Plummets House of Flux	15.90
Dragons Breath	18.90
Dragons Lair II	32.90
Drakkhen	18.90
Falcon	18.90
Flight Sim 2 or Jet	29.90
Scenery disks for above	13.90
Football Director 2	13.90

FREE PUBLIC DOMAIN DISK WITH * EVERY TWO GAMES ORDERED! * Pick from PD list opposite!

F-16 Combat Pilot	18.90
* F-29 Retaliator	18.90
Ghouls and Ghosts	17.90
Gold of the Realm	13.90
* Gravity	18.90
Gunship	15.90
Hound of Shadow	18.90
Infestation	15.90
Iron Lord	18.90
Jack Nicklaus Golf	18.90
* Last Ninja 2	15.90
Leisure Suit Larry 2	24.90
Lombard RAC Rally	15.90
Lost Dutchman Mine	15.90
* Midwinter	16.90
Pacmania	9.90
North and South	15.90
* Pirates	18.90
Player Manager	13.90
Police Quest	15.90
Pro Tennis Tour	18.90
P47 Thunderbolt	15.90
* Red Storm Rising	17.90
Risk	15.90
Sim City	18.90
Space Ace	29.90
Scabble Deluxe	13.90
Shoot em up Construction	18.90
Space Quest III	24.90
Steve Davis Snooker	9.90
Stunt Car	15.90
* Tower of Babel	15.90
TV Sports Football	18.90
TV Sports Basketball	21.90
Waterloo	18.90
Xenomorph	18.90
Xenon II - Megablast	17.90

(* due by date of publication!)

COMPILATIONS ONLY!

RENAISSANCE Invaders, Megapede, Draxians Rockstorm	13.90
THRILL TIME (8 GAMES!) Buggy Boy, Space Harrier, Live & Let Die, Thundercats, Battleships, Ikari Warriors, Beyond The Ice Palace, Bombjack	15.90
INTERNATIONAL ARCADE ACTION Bouncer, Invaders, Swooper, Diablo, Backgammon & 6 more!	12.90
MEGAPACK Plutos, Mouse Trap, Seconds Out, Winter Olympiad, Suicide Mission	15.90
MEGAPACK II Elf, Circus Games, Summer Olympiad, Formula 1 GP, Man from Council	15.90
LIGHT FORCE Bio Challenge, Vogager, R-Type, Int. Karate Plus	18.90
STAR WARS TRILOGY Star Wars, Empire Strikes Back, Revenge of the Jedi	15.90
PRECIOUS METAL Xenon, Capt. Blood, Crazy Cars, Arkanoid II	18.90
HIT DISKS (Vol 1) Goldrunner, Karate Kid II, Jupitor Probe, Slaygon	9.90
HIT DISKS (Vol 2) Major Motion, Time Bandit, Leatherneck, Tanglewood	9.90
KINGS QUEST TRIPLE PACK Kings Quest I, II & III	24.90

CHILDRENS ONLY!

AB Zoo (Alphabet Tutor)	9.50
Fun School 2 (Under 6)	13.90
Fun School 2 (6 to 8)	13.90
Fun School 2 (Over 8)	13.90
Three Little Pigs	19.90
Three Bears	19.90
The Ugly Duckling	19.90
Postman Pat	8.90
Micro English (GCSE)	18.90
Micro Maths (GCSE)	18.90
Micro French (GCSE)	18.90
My Paint	29.90
Things to do with Words	15.90
Things to do with Numbers	15.90

DISKS (DS/DD 3.5") ONLY!

Bulk - 100% Guaranteed!
10 = 7.90 50 = 34.90 100 = 64.90

SONY Boxed - 100% Guaranteed!
10 =12.90 50 = 59.90 100 = 99.90

BOOKS (Abacus) ONLY!

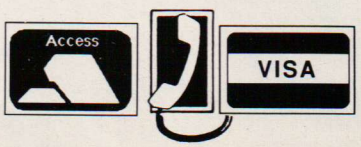
Amiga for Beginners	12.90
Amiga Basic Inside and Out	18.90
Machine Language	14.90
Tricks and Tips	14.90
More Tricks and Tips	14.90
System programs	32.90
Amiga DOS Inside and Out	18.90
Disk Drives Inside and Out	27.90
Disks for above books	13.90
ROM Kernal manual	28.90
Hardware Reference manual	19.90

ALL PRICES INCLUDE VAT AND FIRST CLASS POSTAGE!
QUARANTEED RETURN OF POST DELIVERY ON ALL STOCK ITEMS!

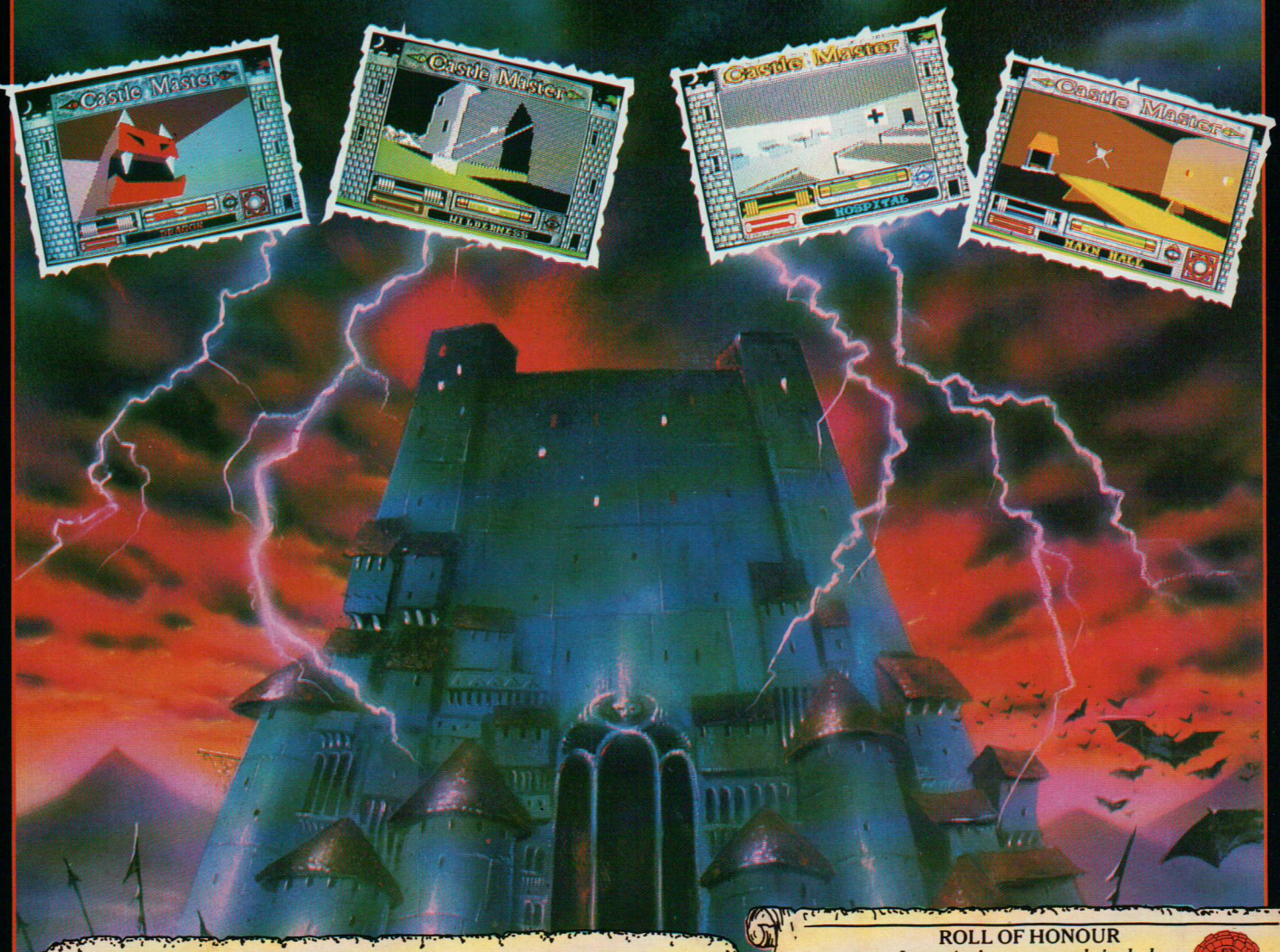
BYTEBACK

DEPT AF, 6 MUMBY CLOSE, NEWARK, NOTTS NG24 1JE

Cheque, postal orders or credit card facilities are available



Castle Master



A sensational new 3D Action Adventure from Incentive, in spectacular Super Freescape ™

Incentive, the award-winning team behind the massive hits DRILLER, DARK SIDE and TOTAL ECLIPSE have done it again! CASTLE MASTER is the result of years of work on their highly advanced Animated Solid 3D development system. It will catapult you into a world of fantasy.

Use your eyes and ears to discover solutions to the brain-twisting puzzles. Secret rooms, twisting corridors and hidden traps, all in superb SOLID 3D make Castle Master the most atmospheric Action Adventure you'll ever play.

Enter 'Castle Eternity' if you dare! You could be there forever.

ROLL OF HONOUR
Incentive's past awards include

Crash Readers' Awards
– Best Graphics
– Most Imaginative Game
– Best Overall Game

•

C & VG Golden Joystick Award

•

Commodore Computing International Oskar

•

Amstrad 100% Prix De L'Innovation

•

Computer Industry Award – 8 Bit Programmers of the Year

Available on: Atari ST, Amiga, IBM PC 3,5″ & 5,25″, Commodore 64 (cassette, disk) Amstrad (cassette, disk) Spectrum +3, Spectrum 48/128

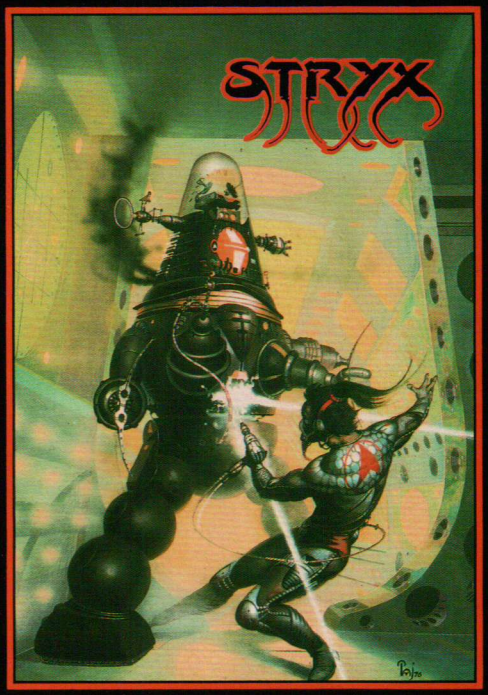
Atari ST C64 Spectrum & Amiga Screenshots

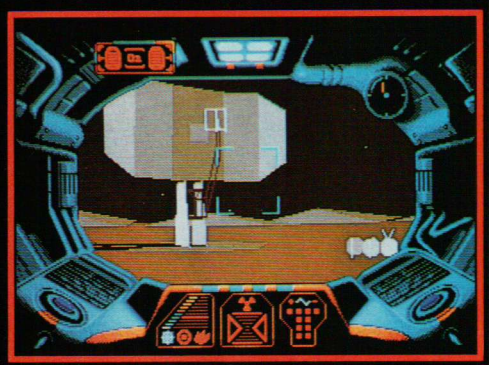
Programmed by: Incentive Software © 1990 New Dimension International Ltd

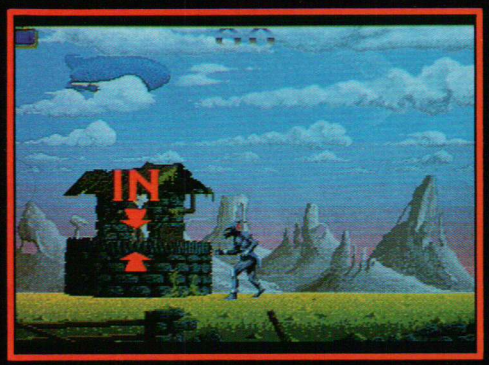
Published by Domark Ltd, Ferry House, 51-57 Lacy Road, London SW15 1PR
Tel: 01-780 2224

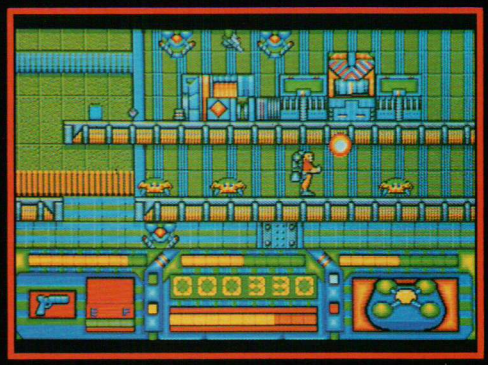
incentive
The Award Winners

DOMARK









INFESTATION

ALREADY NOMINATED FOR A NUMBER OF PRESTIGIOUS AWARDS

- 7 completely unique levels
- Over 300 different locations
- 3 man years in development
- Over 200 3D objects
- 100K of atmospheric music and sound effects
- Save game feature
- Continuous play – no pauses for disk loading and swapping
- 8 head-up displays for navigation, status, inventory, life support, avionics, atmospheric analysis, scratch pad and sights
- Hundreds of traps and enemies, puzzles and problems to solve within the game

AVAILABLE NOW – AMIGA/ATARI ST

SHADOW OF THE BEAST

'ENTERTAINMENT GAME OF THE YEAR 1989'

- A whole new dimension in computer games
- 50 frames per second, arcade quality scroll
- 350 screens – 132 unique monsters
- 13 levels of parallax scrolling
- 900K of emotive music
- 2Mb of graphics compressed into two disks

A TRULY MASSIVE GAME FOR THE AMIGA 500, 1000 & 2000 CURRENTLY BEING WRITTEN FOR THE ATARI ST

WINNER OF FIVE INTERNATIONAL AWARDS

STRYX

A GAME PLAYERS GAME

"There's more to Stryx than meets the eye. What meets the eye in fact are lots of small multi-coloured sprites, huge rambling levels and an incessant, continuous, endless, perpetual outpouring of aliens, robots, security guns, assassins and cyborgs. And they all want to blow you off the planet.

The graphics are great . . . most of the games characters will only fill up 3cc's but they compensate by being exquisitely animated and brilliant to watch.

Eye-catchingly colourful, bed-wettingly exciting, horse ridingly difficult – Stryx is all these and addictive to boot."

ZERO MAGAZINE – 87%

INTERNATIONAL AWARD WINNER

Psygnosis
South Harrington Building
Sefton Street, Liverpool L3 4BQ
United Kingdom
Tel: 051-709 5755
Fax: 051-709 6466

ACCESS VISA

INFESTATION AMIGA	£24.95
INFESTATION ATARI	£24.95
STRYX AMIGA	£19.95
STRYX ATARI ST	£19.95
SHADOW OF THE BEAST AMIGA	£34.95

GAMES PEOPLE PLAY

PSYGNOSIS

These stone heads lie in wait at the end of a stage.

BLACK TIGER

US GOLD £19.99 ■ Joystick

Surfing in on the waves of success from US Gold's *Strider* and *Ghouls and Ghosts*, comes *Black Tiger*, the latest conversion from the Capcom stable.

The Black Tiger of the title is the character you control: a legendary warrior of heroic status, known more for his powers of destruction than diplomacy. But there's no point being a hero without a quest to fulfill, and Black Tiger's is a corker: three fearsome dragons have risen from the depths of hell, bringing torment upon the world. BT must despatch these creatures and restore civilisation to a more even keel...

The mission takes the form of a platform shoot-em-up, as you guide BT through six levels of subterranean fantasy settings, spread over many screens scrolling both vertically and horizontally.

Mr Tiger walks along ledges, and can be made to jump across gaps in the scenery and straight up to climb vertical columns of rock. Arrows show the route that needs to be taken to locate the exit, although interesting items and places can be found by moving off the signposted trail.

Each underworld scene plays host to hordes of diabolical creatures, all of whom are out for Black's blood. Successful attacks deprive BT of chunks from his precious energy meter, until eventually his current life comes to an end. However, Black can defend himself with throwing knives and a particularly vicious blade-on-a-chain device which is launched at the enemy, yo-yo fashion.

On the enemy's demise, a 'Zenny' cash token is left which can be pocketed. Whenever Black comes across one of the numerous stone men, they spring to life offering some sort of assistance, and occasionally providing the opportunity to buy extra equipment with the Zenny coins: arms and armour, extra energy and time, plus keys are all up for grabs. The keys can then be used to open the locked chest which litter the caverns for whatever reward – beneficial or harmful – which wait inside.

On reaching the end of each stage, the inevitable end-of-level guardian (or indeed guardians) must be defeated in order to pass through to the next. Black Tiger has a limited time within which to escape from each level, and the mission continues until Black Tiger has defeated the dragons, or his remaining lives have all been senselessly wasted in pursuit of his quest. ***Steve Jarratt***

The small stone geezer on the right is actually...

... the proprietor of Weapons 'R' Us. Spare a Zennny guv?

GRAPHICS AND SOUND

Black Tiger might not appeal to the more quality-conscious Amiga owner. The playing area is quite small, and the intrusive jerky background scroll makes play less than fluid.

But there's some nice animation as the enemy creatures as they explode and breath fire, although things can get a little confusing in the heat of battle.

Spot effect and soundtrack do their respective tasks, but are nothing to shout about.

Making like Chris Bonnington and climbing a vertical column.

LASTING INTEREST

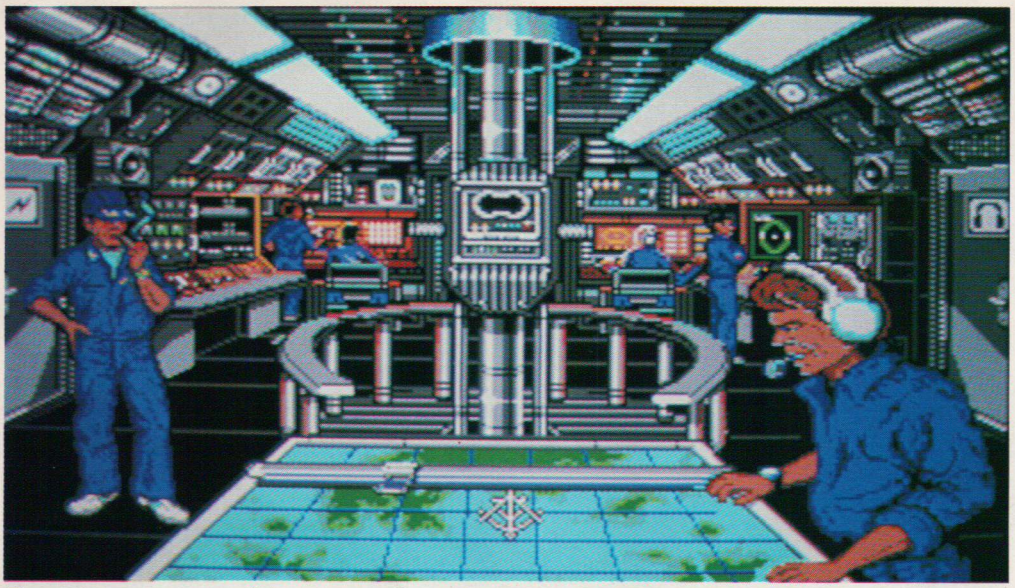
Three continue options help to sustain the offensive, and the sheer size of the task is enough to keep most players bashing away for some time. The 'explore and discover' nature of the gameplay is quite captivating, and certainly helps to maintain its appeal.

Believe it or not, your character is in the middle of this mêlée!

JUDGEMENT

Control of the main character is fiddly at first, with a one-strength jump which cannot be controlled in mid-air. However, *Black Tiger* bears enough of a resemblance to its coin-op parent to content most devotees, and although this unashamed ST port-over is a far cry from the class of US Gold's previous Capcom conversions, it still manages to entertain to a reasonable degree.

GRAPHICS	4
SOUND	4
INTELLECT	2
ADDICTION	7
OVERALL	71%



The main game screen. Select your various crew members here to access different parts of the sub. The chap in the foreground is in charge of navigation.

GRAPHICS AND SOUND

Well, you can't expect brilliant sound, can you? The few spot effects that are there are fine. The graphics are much better and everything has been well drawn: the few little bits that are animated, are animated well.

LASTING INTEREST

The missions are timed, which some will see as a good thing and others as bad. With about 20 missions for the solo player there's plenty to keep you busy.

688 ATTACK SUB

ELECTRONIC ARTS £24.99 ■

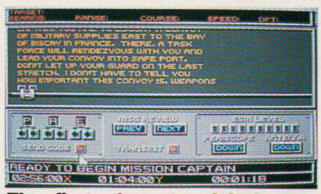
Mouse and Keyboard

MicroProse have had things to themselves for a long time in the submarine simulation market: their aged game *Silent Service* gave the player a chance to experience the thrills and spills of captaining a World War II sub. Now Electronic Arts bring things right up to date with a simulation of the latest range of American and Soviet subs.

It's mainly a one player game, but on some missions two players can play head-to-head via modem, each controlling a different side's sub. There are 10 missions in total (although the first is merely a practice mission) which may not sound like much but, as anyone who's played this sort of game will know, one mission can last a very long time. Moreover, once you have played them in the American sub you can play them again in the Soviet one, effectively doubling the number of missions.

The whole game is played and controlled from a main screen depicting the inside of your sub. By moving the mouse over certain members of your crew and clicking, you reveal different areas of the sub. The areas include the radio room where orders are sent and received, the navigation room where waypoints and so on are set, the engine room, torpedo control, damage control, the sonar room and the periscope. Obviously the options available in each room vary, but the act of switching between rooms simply involves hitting a function key.

Once you've got your orders and have decided on a strategy the first thing to do is jump from room to room and complete all the necessary tasks. Then you can switch on all the latest gadgetry (things like the contour computer, which gives you a constantly-updated image of the surrounding sea bed) and settle back for some nail-biting tension. ***Andy Smith***



The first place to visit is the radio room, which is where your orders come through.

JUDGEMENT

You have to be a certain kind of person to enjoy a sub sim: someone who likes to think about their actions and doesn't mind waiting a few minutes for things to happen. Sub sims rely on building tension and *688* does it beautifully. A great example of the genre and a brilliant game to play with a remote friend via a cable link.

GRAPHICS	8
SOUND	5
INTELLECT	6
ADDICTION	7
OVERALL	86%

Well into a mission and there's something up ahead. The active sonar pings are a dead giveaway and so is the speed – an enemy torp is closing in rapidly. Now you face a few frantic minutes of action as you try to fox it and convince it you're not really there.

Some rooms present you with a digitised picture of a crew member. Note the message window at the base of the screen: here's where all important things are brought to your attention.

CLOUD KINGDOMS

THE GAME WITH WITH THE FIRST INJECTION-MOULDED, EIGHT-WAY ROLLING, RUBBER-BOTTOMED SOFTWARE HERO!

When Terry's magic crystals are stolen by Baron von Bonsai and taken to the land of Cloud Kingdoms there's only one thing to do! He climbs into his super-giant green skycopter and sets off to rescue them. There Terry searches each kingdom collecting the crystals as he goes - but things aren't that easy.. along the way he encounters the Giant Rolling Eightballs and the Bad Insect Monsters...

Cloud Kingdoms is addictive arcade action all the way! Each of the 32 levels are totally different - explore them all and delight at the stunning graphics, sound effects and compulsive joystick twitching gameplay. This is one game you just wont' be able to switch off!!

- ★ WITH PINBALL BUMPERS, ICE, MAGNETS, BLACK HOLES, TRAPDOORS, ACID POOLS, LOCKED DOORS... TOO MANY TO LIST!
- ★ COLLECTABLES ON EACH SCREEN - PICK UP DIAMONDS, FRUIT, FLOWERS, KEYS, TREASURE CHESTS ...
- ★ EXTRA PICK-UPS - WINGS, PAINT POTS, CLOCKS, BOUNCING SHOES, RUNNING SHOES, FIZZY POP AND POTION.
- ★ ST VERSION FEATURES AMIGA-QUALITY SOUND.
- ★ BY DENE CARTER - THE CREATOR OF HIT TITLES SUCH AS 'DRUID' AND 'ENLIGHTENMENT'.

AVAILABLE END APRIL 90

ST	£24.99
AMIGA	£24.99
CBM 64	£ 9.99
TAPE	
	£14.99
DISK	
IBM PC (CGA/EGA/VGA)	£24.99

MILLENNIUM

Eight Years Ahead

LOGOTRON ENTERTAINMENT LTD, CHANCERY HOUSE, 107 ST PAULS RD, ISLINGTON, LONDON. N1 2NA

THEME·PARK MYSTERY

WELCOME TO THE PLEASURE DOME!

What sinister power has forced the Magic Canyon Theme Park to close down? Why does the mere mention of its name send shudders down your spine? What terrible secret drove its former owner mad?

You're the inheritor of this mysterious pleasure dome – only you can find the answer. Step through the creaking turnstile, board the mystery train and experience a fantastic journey through four entirely different zones: Dream Land, Dragon Land, Future Land and Yesterday Land.

With outstanding visual effects, sinister sound and an infernal plot, this is one mystery you'll never forget. Surviving it is an achievement, solving it is the most challenging part of all.

Once you've stepped through the gates, there's no going back.

OUT SOON ON ATARI ST, AMIGA AND PC

© 1990 MIRRORSOFT LIMITED

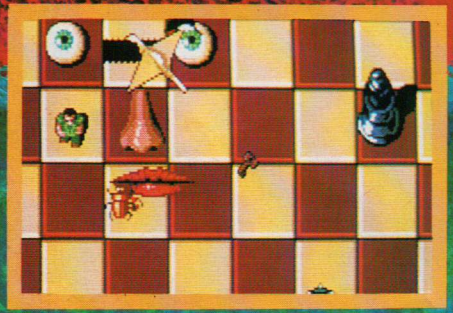
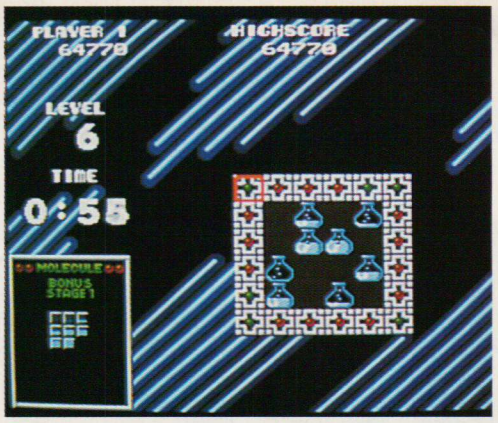


IMAGE WORKS, IRWIN HOUSE, 118 SOUTHWARK STREET, LONDON SE1 0SW TELEPHONE: 01 928 1454 FAX: 01 582 2404

There's only one possible place to build this molecule – but where is it?



The first bonus screen – the principles are the same, but you arrange bottles from empty to full.

ATOMIX

THALION/GRANDSLAM

£19.99 ■ Joystick

Just because you're relatively new to the scene doesn't mean you have to produce something radical, does it? German new boys Thalion don't think so.

In fact, simple puzzle games seem to be making something of a come back, what with *Pipe Mania* last month and *Atomix* this month. And like *Pipe Mania*, *Atomix* takes a couple of ideas from previous games and modifies them to suit. The game is made up of 30 levels and on each level the objective is to manipulate a set number of atoms into a molecule: for example, the first level sees you moving two hydrogen atoms onto an oxygen atom to make water.

Unfortunately, the atoms can't just be plonked any old how – they have to fit together properly, as shown in a picture on the bottom left of the screen. The other problem is that once you've picked up an atom with the square cursor you can't move it around as you wish. Push the joystick in a direction and the atom will move in that direction until it runs into either a wall or another atom.

Sounds like you could live with the problem? It's trickier than you'd imagine. And as if that weren't enough, there's also a murderous time limit to compete against. Fail to complete a level and it's game over – and there are no passwords to enable you to restart at the last level. There is, however, a second chance in the form of a trade-in where you can 'spend' 10,000 points in return for another stab at the last level.

As you'd imagine, the chemicals to be built become more complex as you go on, the mazes become more awkward to manoeuvre around (often you're left with only one possible place in which to actually build the thing) and the time limit never gets easier. ***Andy Smith***

LASTING INTEREST

Even with 30 levels to play through, it's too easy to complete and once you've cracked a level it becomes routine every subsequent time you play it, which is a tad annoying.

GRAPHICS AND SOUND

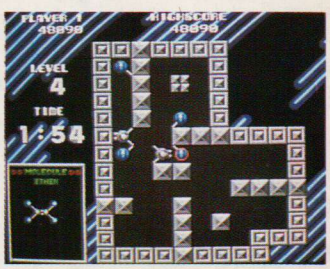
Everything looks fine and is well drawn and animated. It's not a stunner but then it was never designed to be. As for the sound: well the copy we reviewed had none although Thalion assured us just some gentle background music would be added. This will only enhance the game.

GRAPHICS	7
SOUND	N/A
INTELLECT	7
ADDICTION	8
OVERALL	61%

JUDGEMENT

Neat, simple, highly addictive and very playable. A great little game that fans of *Xor* and *Pipe Mania* will love. All it really needs is more levels, because once you get into it you'll find it far too simple to complete.

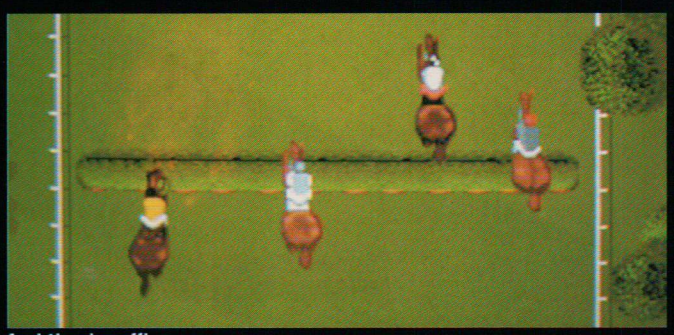
The start of the game and you have only three atoms to move.



At this stage things are starting to get decidedly tricky.

GRAND NATIONAL

ELITE £19.99 ■ Joystick



And they're off!

Here's a novelty. Take part in the Grand National! This simple viewed-from-above race-em-up puts you in the saddle of a National runner with 30 fences to jump.

First, though, you have to decide whether you'd like a three, five or ten year game and spend the £10,000 you're given on a horse. Any remaining monies after the purchase can be gambled on the race (betting on your own horse is a good idea). The idea then is to work your way up through the pack by going faster than the other horses but without exhausting your horse. Speed and energy indicators are on opposite sides of the screen and the game really revolves around keeping these two balanced until you can go flat out for the line a few fences from the finish.

To keep you on your toes as you race round, you have to hit the firebutton at the correct time to force your horse to jump and clear the fences. Finish a race in the top four and you'll earn some money. At the end of the game you'll want to have amassed as much of the green stuff as possible.

This is very simple stuff. There's almost no depth to the game and although it's quite playable it's not likely to keep you interested for much more than an hour. *Andy Smith*

GRAPHICS 5 / SOUND 5 / INTELLECT 3 / ADDICTION 6 / OVERALL 30%

AMIGA FORMAT

Our prices are...

A500 ½ Meg RAM UPGRADE £49

WITH FREE 1Mb DEMO.

A500 RAM UPGRADES

½ Meg INTERNAL £49
2 Meg INTERNAL £289
(MiniMax+, fits in A501 'trapdoor' slot)
2 Meg EXTERNAL £309
(MiniMegs)
8 Meg INTERNAL £349
(EXP 8000 2 Meg Fitted co-processor socket)

ALL PRICES INCLUDE VAT AND P & P

FLOPPY DRIVE NEC, TEAC £68

(3·5" WITH SWITCH AND THROUGH PORT SILENT MECHANISM)

HARD DISKS

VORTEX 42Mb FOR A500/1000 £489
CONTROLLERS BY:-
GVP, Microbotics
Xetec, SUPRA
Whatever your requirement we have the drive to suit your system.

A2000 bits

8-UP/SUPRARAM (2 Meg)	£309
8-UP/SUPRARAM (4 Meg)	£459
HARDFRAME (49Mb/28Ms)	£489
"SUPRA WORDSYNCH (SCSI CONTROLLER)	£175
FLICKER-FIXER	£319

ACCELERATOR CARDS
68020, 68030 cards, available now. Contact us.

OTHER PRODUCTS

1.3 KICKSTART ROM	£30
8372A FATTER AGNUS	£60
5¼" FLOPPY DRIVE (720K/360K SWITCHABLE)	£125

A590 CHIPS

HALF MEG	1 MEG	2 MEG
£40	£80	£150

ALL PRICES INCLUDE VAT AND P & P

...out of this world!

TRADE ENQUIRIES WELCOME

Send cheques to: Dept AF
Memory Expansion Systems Ltd.
Britannia Buildings, 46 Fenwick Street,
Liverpool L2 7NB
(051) 236 0480

Access VISA

(051) 236 0480 • 24 Hour Sales
(051) 227 2482 • 24 Hour Fax

POSTCRIPT CARTRIDGE FOR HP II / IID / IIP & COMP. INC 2 MEG RAM BOARD ONLY £895.00 ex VAT

COMMODORE

Amiga CLASS of the 90's

BUSINESS / EDUCATIONAL PACK

INCLUDES

KINDWORDS 2.0 WORDPROCESSOR
PAGESETTER DTP PACKAGE
DELUXE PAINT II ART PACK
MAXIPLAN SPREADSHEET
SUPERBASE PERSONAL DATABASE
BBC SOFTWARE EMULATOR
LOGO LANGUAGE
BASIC LANGUAGE
DR. T's RECORDING STUDIO
MIDI MASTER INTERFACE
TUTORIAL PACK
WORKBENCH / KICKSTART
DESKTOP UTILITIES
MOUSE AND MOUSE MAT
10 BLANK 3.5" DISKETTES
EDUCATIONAL SUPPORT FILE
— BONUS GAME —
* F-18 FLIGHT SIMULATOR *

TOTAL RRP --- £1029.00
OUR PRICE £515.00

A500 BAT PACK

INCLUDES

BATMAN THE MOVIE
NEW ZEALAND STORY
F-18 FLIGHT SIMULATOR
AMIGA BASIC LANGUAGE
AMIGA TUTORIAL PACK
'D' PAINT II ART PACK
WORKBENCH 1.32
KICKSTART 1.3
DESKTOP UTILITIES / EDITORS
TV MODULATOR
MOUSE AND MOUSE HOUSE

ONLY £369.00

A500 VIDEO SYSTEM

1 MEG AMIGA COMPUTER WITH CLOCK
RENDALE 8802 GENLOCK
DELUXE PAINT II
DELUXE VIDEO III
VIDEO PRODUCTION PACK
MOUSE AND MOUSE HOLDER

ONLY £699.00

3.5" 1 meg DISK DRIVE FOR AMIGA £69.00

IBM PC COMPATABLE STARTER PACKS

The PC package that comprises of specially developed tutorials, software, and manuals to get you and the computer working in harmony with the minimum amount of effort.

Each PC Starter pack contains:
⇨ A 20 MINUTE VHS TRAINING VIDEO
⇨ MS.DOS TUTORIAL SOFTWARE
⇨ TYPING TUTORIAL SOFTWARE
⇨ A – Z OF COMPUTER JARGON BOOKLET
⇨ INTEGRATED BUSINESS SOFTWARE PACK (WORDPROCESSOR, DATABASE, SPREADSHEET)

FREE BONUS PACK
FULL BUSINESS ACCOUNTS PACKAGE
LETTERHEAD DESIGNER SOFTWARE
HELPDOS TUTOR / HINT SOFTWARE
10 * 5.25" BLANK DISKS DISKETTES

	INC VAT
PC10 XT SINGLE DRIVE SYSTEM	
with MDA mono monitor	£629.00
" CGA colour monitor	£790.00
" VGA mono monitor	£825.00
" VGA colour monitor	£939.00
PC10 XT DUEL DRIVE SYSTEM	
with MDA mono monitor	£685.00
" CGA colour monitor	£859.00
" VGA mono monitor	£879.00
" VGA colour monitor	£995.00
PC20 XT HARD DISK SYSTEM	
with MDA mono monitor	£879.00
" CGA colour monitor	£1045.00
" VGA mono monitor	£1099.00
" VGA colour monitor	£1215.00
PC30 AT HARD DISK SYSTEM	
with MDA mono monitor	£1275.00
" EGA colour monitor	£1489.00

All PC's include 12mths on-site warranty and a special 90 day Software Helpline

MONITORS

SONY TV with RGB
KVM14 – NON REMOTE – £199.00
KVM14 – with REMOTE – £229.00
PHILIPS
8833 STEREO / 2 INPUT – £249.00
INCLUDES FREE !
12MTHS ON-SITE WARRANTY

ANTI-GLARE SCREEN £12.00

HEAT TRANSFER RIBBONS
LC-10 MONO HTR – £12.95
LC-10 COLOUR HTR – £18.95
HT JUMBO COL PEN SET – £16.95

ATARI

FREE!!
SOFTWARE COMPENDIUM WITH EVERY ST / STE

ST FOR BEGINNERS MANUAL
ALL ABOUT MIDI MANUAL
DESKTOP PUBLISHER
ST VIRUS KILLER COLLECTION
BOOT DISK CONSTRUCTION SET
DESKTOP WORDPROCESSOR
ST DIAGNOSTICS
DISK EDIT / CUSTOM FORMATTER
QUICK FORMATTER
50 / 60 HZ SWITCHER
SNAPSHOT II PIC DUMPER
UNDELETE FILE UTILITY
DESKTOP ALARM CLOCK
ARC FILE COMPRESSION SET
DESKTOP CALCULATOR
SOFTWARE BLITTER
RAM / PRINT SPOOLER
REVERSI GAME
QUICKFINDER FILE LOCATER
QIUCKMOUSE ENHANCER
AUTO RAMLOADER
KEYBOARD CUSTOMIZER
3.5" DISK LABELLER
DESKTOP DISK EDITOR
CUSTOM FORMAT DUPLICATOR
SYSTEM RESET PROOF RAMDISK
AUTO COMPRESSION RAMDISK
BOOT DISK MAKER
PRINT HANDLER CUSTOMIZER
RAT-TRAP MENU CONTROLLER
HYPERCOPY DISK DUPLICATOR
PRINT SELECTOR
DISK CATALOGUE SYSTEM
STE FIXERS
DOC SHOW CONTROLLER

LYNX

COLOUR PORTABLE GAMES SYSTEM
ONLY £165.00

NEW!!
520 STFM
DISCOVERY PACK

INCLUDES 4 GAME TITLES
CARRIER COMMAND
SPACE HARRIER
BOMB JACK
OUTRUN
2 PRODUCTIVITY TITLES
S T O S GAMES CREATOR
NEOCHROME ART PACK
FIRST BASIC LANGUAGE
OUR SOFTWARE BUNDLE
PLUS
ST TUTORIAL SOFTWARE
DISCOVER YOUR ST BOOK
MOUSE & JOYSTICK
MOUSE HOUSE

ONLY £289.00

520STE
POWER PACK PLUS
£385.00

ST PROFESSIONAL SERIES

ST MEGA 1	£509.00
ST MEGA 2	£799.00
ST MEGA 4	£1099.00
optional SM124 MONITOR	£99.95

OPTIONAL BUSINESS PACK – £29.95

STACY
ST PORTABLE COMPUTERS

ALL INCLUDE 1 MEG 3.5" DRIVE
1mg RAM / 20mg HARD DISK – £1340
2mg RAM / 20mg HARD DISK – £1540
2mg RAM / 40mg HARD DISK – £1645
4mg RAM / 40mg HARD DISK – £1849

STAR PRINTERS

Small Business series	
LC-10 MONO NLQ 9 PIN	£153.00
LC-10 MKII MONO NLQ 9 PIN	£179.00
LC-10 COLOUR NLQ 9 PIN	£198.00
LC-15 MONO NLQ 9 PIN	£309.00
LC24-10 MONO LQ 24 PIN	£239.00
LC24-15 MONO LQ 24 PIN	£395.00
Professional series	
XB24-10 48 PIN SLQ EMU	£465.00
XB24-15 25 FNT 41K BUFF	£609.00
FR-10 HEAVY DUTY 300CPS	£355.00
FR-15 16 FNT 31K BUFF	£465.00

STARSCRIPT *POSTSCRIPT*
LASER PRINTER
ONLY – £2300.00

ST SWITCHBACK £59.00

PRINTER STANDS £9.95 ea

AMIGA HALF MEG UPGRADE WITH CLOCK £58.00

RIBBONS
LC10 MONO £3.50
LC10 COL £6.00
LC24 MONO £4.75
FR / XB COLOUR KIT £35.00

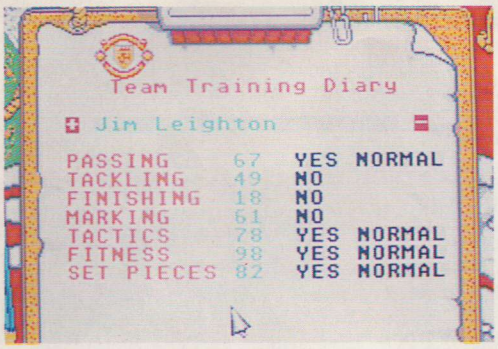
ALL PRICES INCLUDE VAT EXCLUDE COURIER DELIVERY

ACCESS AND VISA ACCEPTED

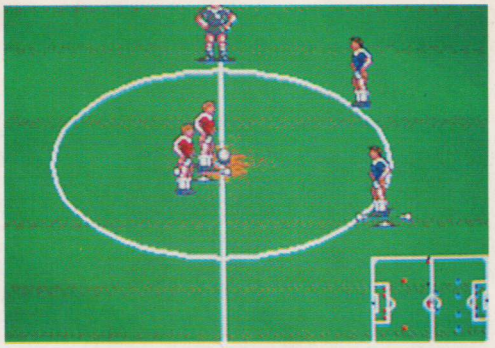
COMPUTERHOUSE UK

TEL: 01-731-1276 FAX: 01-371-9629
14 ROMILY COURT, LANDRIDGE ROAD,
FULHAM, LONDON SW6 4LL

AMSTRAD FX9600T FAX
THE COMPUTER LINKABLE FAX MACHINE
ONLY £679.00
DOUBLES UP AS A PRINTER AND COPIER



The scanner at the base of the screen will move to another corner if the action starts happening there, just to avoid confusion.



Every player has to keep fit by being put through his paces in training, even the goalie. If he doesn't train, a player becomes susceptible to injuries.

MANCHESTER UNITED

KRISALIS £24.95 ■ Joystick and Mouse

The heavyweights of the First Division have leant their name to this one or two player simulation of their club – can Anco's *Kick Off* hold off this challenge and keep its place at the top or will Man Utd steal the crown?

To kick off, it's a game of two halves – arcade and management. In the arcade game things take the standard form – you control the player nearest the ball and by passing to other players and shooting attempt to put the ball past their goalie. The player first selects his team from his pool of players (goalkeeper in goal, strikers up front and so on is a good idea). Then once the length of each half has been decided it's time to play the game, which features a side-on view of the action.

Should you decide to play the full management simulation, though, you not only have to look after your team, but must also guide them through a complete season including Littlewoods and FA Cup matches. Looking after your team involves overseeing the training programmes of each squad member and arranging for the transfer and acquisition of old and new players.

Once you've checked that everything is in order you can launch into a game and sit back to watch your team go about their business. Should things take a turn for the worse you can always join in with a quick press of the fire button and take over and try to get things back on an even keel.

Fortunately, there's a host of options to make your life easier if you're finding things tough, such as the opposition rating – where you can decide just how good the opposition's goalie, attack and defence are going to be – and the game save feature which means you don't have to play the whole season through in one sitting.

Andy Smith

GRAPHICS AND SOUND

The ball moves like it's full of lead, not air, but the animation is not the smoothest ever seen. Then there are the digitised piccies of real TV footage every time a goal is scored – this (almost impossible to see) clip would be a nice touch if it was anything like the goal you or your opponent had just scored, but it isn't. The sound is poor, being limited to a one second loop of almost crowd-like white noise and a few bumps as the ball moves around. Second Division quality in both these departments.

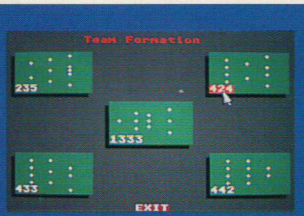
LASTING INTEREST

Better, especially if you're a fan. Completing a season will take some time and it's tough especially if you play against a half-competent human opponent or have the opposition set to 100% when playing the computer. The lack of depth in the game, though, kills off its overall lasting interest.

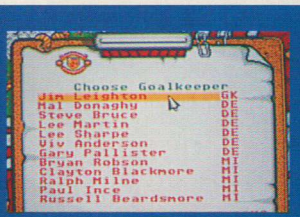
JUDGEMENT

The arcade game is not bad, it's just not brilliant. The biggest letdown is the management game which is far too limited. *Man Utd* falls down where every other arcade/management game has fallen down – the arcade side is not as good as it could be in gameplay terms and the management side is far too limited to stand up on its own.

GRAPHICS	7
SOUND	4
INTELLECT	3
ADDICTION	5
OVERALL	62%



The first choice to be made is selecting the formation of the team from five options...



...then choose who plays in which position and you're then ready for kick off.

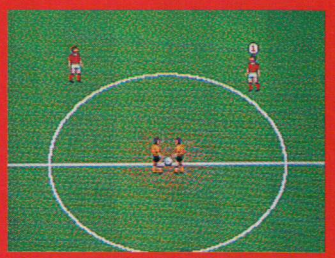
ITALIA '90

CODEMASTERS £4.99 ■ Joystick or Keyboard

There are bound to be more of these in the run up to the World Cup, so get used to them. This one offers up to four players the chance to take part in the finals as well as having a bash at some circuit training and indulging in some outdoor skill practice.

The actual match section is viewed from almost above and allows the player control of the nearest team member to the ball – you can switch to another player by hitting the fire button. The game looks all right but plays awfully badly. The sluggishness you can live with and you can even put up with the weird scroll, which sometimes lags far behind the action – but what really screws the game up is the inability to alter the direction of your player once you've pressed the fire button for a shot.

Spend a few minutes learning how to get round that, though, and the three matches you play in solo mode become ridiculously easy to win. Even with a couple of mates playing, it's really not up to much.



It's Russia to kick off, can they pull it back?

The circuit training and the skill practice do little to redeem the game, which is also a shame. The nicest thing to be said is that Codemasters have not, at least, overcharged for the game. *Andy Smith*

GRAPHICS 5 / SOUND 4 / INTELLECT 2 / ADDICTION 4 / OVERALL 27%

AMIGA FORMAT

A QUEST BEYOND BELIEF... A WORLD BEYOND IMAGINATION!

KNIGHTS OF THE CRYSTALLION

ORODRID is a city rich in culture. A place of music, art, poetry, politics and religion. A civilisation thriving on wealth and power. A CITY MADE OF BONE ... The journey through the skull or TSIMIT is a dangerous one, but success will bring you great power and position in Orodrim society ... AS YOU ENTER THE WORLD OF THE CRYSTALLION.

THE BOSU MIND CHALLENGE
A game of strategy, philosophy and psychological agility. Master the art of the Bosu or give up all hope of reaching your Crystallion.

TRICKS OF THE TRADE
Using your trading ability, generate the currency required to pay the keepers, and to fortify yourself on the long journey through the TSIMIT. But beware, compete too ruthlessly in the HARESH and you may find yourself isolated when YOU ask for assistance.

A DARK UNDERWORLD

Overcome the eerie darkness of the four VEILS of the TSIMIT, carefully searching the maze for the valuable crystals that will allow you to journey onwards and rise in the ranks of Orodrim society.

THE GIFT OF SECOND SIGHT

Sharpen your telepathic senses with meditation, concentration and memory exercises in the intricate card game Deketa.

- *HAM MODE RAY TRACED GRAPHICS.*
- *ORIGINAL STEREO SOUNDTRACK – includes non-repeating music generator.*
- *DIGITISED VISUAL AND SOUND EFFECTS.*

Only available on AMIGA

© Bill Williams 1990. All rights reserved.
Licensed to U.S. Gold Ltd.
Illustration: Peter Andrew Jones.
Copyright: Solarwind Limited.

U.S. GOLD®

U.S. Gold Ltd., Units 2/3, Holford Way, Holford, Birmingham B6 7AX. Tel: 021 625 3388.

IN THE BATTLE OF BRITAIN PILOTS LEARNED TO STARE IN THE FACE OF DEATH IN EVERY WAKING HOUR ....

.... HOW LONG CAN YOU SURVIVE?

SUMMER 1940,
THE BATTLE OF BRITAIN.

A battle fought not only by scientists, computers or space-age technology but by ordinary men. Men who learned to live with fear and stared in the face of death in every waking hour. Men who relied on each others skill, courage and faith to keep them alive at a time when their physical and mental faculties were stretched to breaking point and beyond.

Now you can relive this gut-wrenching, bloody confrontation in the most graphically stunning, historically accurate and thrillingly realistic war simulation ever available.

"Even in the heat of the moment I well remember my amazement at the shattering effects of my fire. Pieces flew off his fuselage and cockpit covering, a great stream of smoke appeared from the engine and a moment later a great sheet of flame licked out from the engine cowling and he dived vertically."
RAF Pilot Officer David Crook.

"There were about twelve Me 109s diving at me from the sun and at least half of them must have been firing deflection shots at me. There was a popping noise and my control column became useless. I found myself doing a vertical dive, getting faster and faster. I pulled the hood back, I got my head out of the cockpit, and the slipstream tore the rest of me clean out of the machine."
RAF Pilot Officer Stevenson.

"There isn't much time to muck about in a head on attack. I gave a short burst then slid underneath his big black belly with only feet to spare, and flashed through the rest of the formation. I hadn't meant to cut it so close, and instinctively ducked as I saw wings, engines, cockpits and black crosses go streaking through my hood. I had reached about 450 mph in my dive, and heaved back on the stick. I blacked out completely as I went up and over in an enormous loop."
RAF Pilot Officer Boggle Bodie

Screen Shots from IBM PC Version.

Available on:
ATARI ST, IBM PC & CBM AMIGA

U.S. GOLD®

LUCASFILM™ GAMES

ZERO HERO 94%

"A Battle of Britain game in which you can alter the outcome of the war. A welcome addition to the world of flight simulations!" **ZERO HERO**

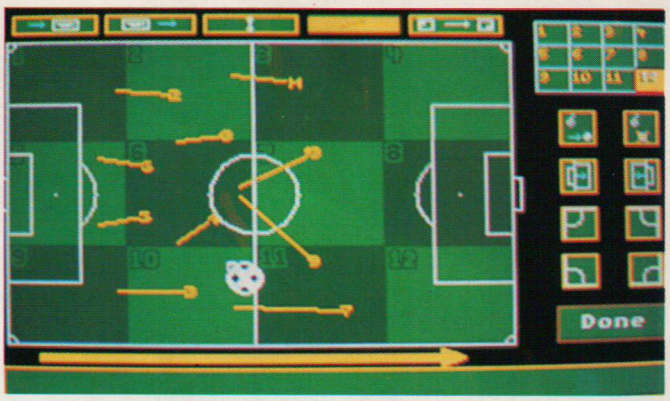
ACE RATED 933

C&VG HIT!

"Superbly packaged and presented combat simulation with immense depth."
C. & V.G.

U.S. Gold Ltd., Units 2/3 Holford Way, Holford, Birmingham B6 7AX. Tel: 021 625 3388.

The main menu from which all the game areas are accessed.



The tactics screen: alter the gameplay to your heart's content.

PLAYER MANAGER

AMIGA FORMAT GOLD

ANCO £19.95 ■ Mouse and Joystick

So what can you do to improve what is already the best football game ever to have appeared? Even Anco, publishers of *Kick Off*, tripped themselves up when they tried to enhance the excellent original (Amiga Format Gold Award, Issue One) with an expansion disk called *Extra Time*. That went down like a lead balloon because, to quote our review; "it's almost like you can take all the good bits out of *Kick Off* and play a very average football game". But now there's *Player Manager*.

There are two very major differences between *KO* and *PM*. *Kick Off* is the best one or two player arcade footy game whereas *PM* is for the solo player and contains not only an enhanced version of *KO*, but a whole management game as well.

The management side first. Starting the season as the newly-appointed manager of a division three club (called whatever you like) the long-term aim of the game is to take your bunch of hopefuls to the top of the first and win several cups along the way. Each season is made up of 24 matches and doing well involves not only juggling your players and picking the best side for each match, but also overseeing the training, scouting for new players, putting players you're not happy with on the transfer list and the all-important on-field tactics.

There's a whole section of the game that lets you decide where players should be on the pitch at any one time: during corners, in attack and so on. All the player-designed tactics and modifications can be saved to disk so your team really can play as you want them to. And statistics freaks will be pleased to know there are reams of them to wade through should you so wish.

GRAPHICS	8
SOUND	5
INTELLECT	5
ADDICTION	9
OVERALL	93%

The arcade side of things is in two main parts. You can play properly, as one man in one position, or you can control the whole team just like the old days. Do the latter, however, and your team will suffer a slight loss of form. The matches are in the classic viewed-from-above style and each lasts three minutes each way.

Play the matches, deal with the problems, enjoy the victories and remember to save your position when you've had enough for one day. ***Andy Smith***

GRAPHICS AND SOUND

There's not much to listen to, just the occasional whistle blow and crowd noise during the match. The graphics though are much better as every *Kick Off* veteran will know. They're smooth, quick and well animated. During the management section, too, all the menus and windows are big and bright so it's not easy to make a mistake.

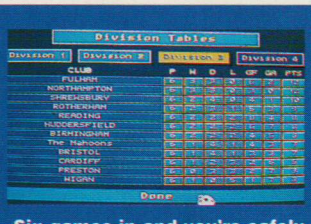
LASTING INTEREST

You'll be playing this for months to come: there's so much to do!

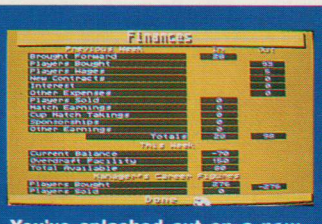
JUDGEMENT

After the disappointment of *Extra Time*, this is cracking stuff. The mix between management and arcade is the best to have appeared in any football game, making it enthralling and addictive. There's a whole mess of extra options and choices that, added together, make this a worthy upgrade to *Kick Off*. If you own *KO* already and are fed up with having to play the computer the whole time this is a must. If you don't own *Kick Off*, *Player Manager* should be near the top of your shopping list.

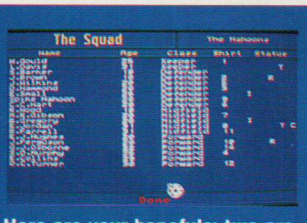
The version we played did contain the odd bug, however, (the corner-kick one from *Kick Off* is still there) and it did crash occasionally so make sure you save your position often.



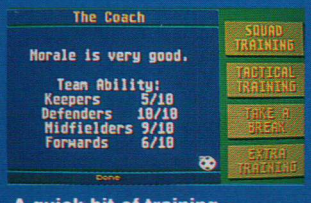
Six games in and you're safely in the middle of the division.



You've splashed out on a new signing so your wallet's empty.

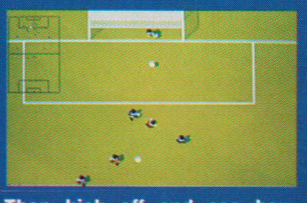


Here are your hopefuls: two are injured, two want transfers.

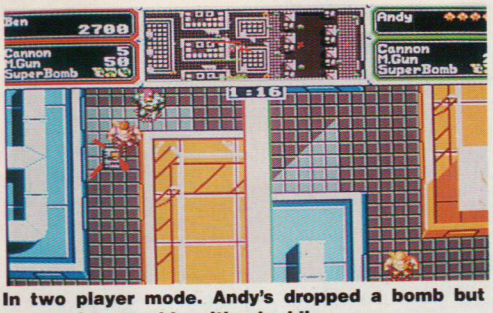


A quick bit of training...

...and it's time to pick the team that will play on the day.



Then kick off and see how well your team performs.



In two player mode. Andy's dropped a bomb but has run into trouble with a baddie.

The start of another level – Ben gets as close to the wall as possible to avoid the enemy gunfire.

CRACKDOWN

US GOLD £24.99 ■ Joystick

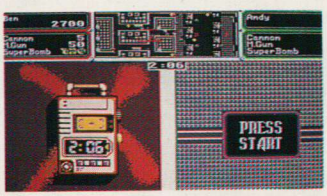
Andy Attacker and Ben Breaker are unlikely names at the best of times, but it's even harder to believe both of them are FBI agents. Then again, when you're designing a coin-op machine's scenario you are allowed some poetic licence.

It's a one or two player game converted from the original Sega machine in which Andy and Ben are out to destroy the nefarious Dr K. The action is viewed from above and takes place in the 16 levels of Dr K's fortress, which is infested with his army of biogenetically-engineered humanoids.

The agent's job is to destroy each level of the fortress by dropping three special explosives per level – the exact positions the bombs have to be dropped at are marked out by large red crosses. Finding the places to drop the bombs involves wandering through the mazes that make up each level and constant referral to the map at the top of the screen.

Finding the crosses is much easier than dealing with the baddies who patrol the levels and come popping out of concealed exits, but there are two ways of dealing with the baddies. The first way is to dodge them, pressing yourself tight up against walls: don't rush too much and this proves to be a good way of avoiding them, as a lot of the baddies follow set patrol patterns. The other way to destroy them is by shooting them with your machine gun and rocket launcher. The limited ammo supplies of each of these weapons can be replenished by walking over extra ammo boxes, which can be found lying around each level.

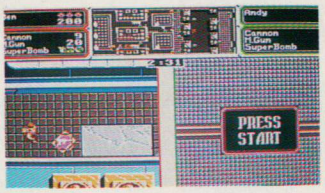
Plant the bombs and find the exit before the time limit expires and any remaining time is converted into bonus points: then you are ready to move onto the next, harder, level. ***Andy Smith***



That's the second bomb dropped which leaves you just over two minutes to drop the last one and get the hell out of there.

GRAPHICS AND SOUND

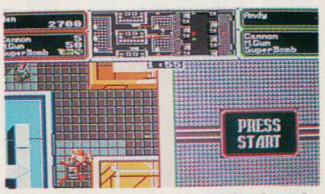
Crackdown looks just like its arcade parent: well drawn and well animated. The music and effects are fine too. Software houses are really getting to grips with these arcade conversions, especially in the cosmetics dept.



Andy runs over an ammo symbol and collects some more bullets.

LASTING INTEREST

In one player mode it burns out much faster than it should. In two player mode it's better but even then it's not going to have you playing for months.



X marks the spot: drop the bomb.

JUDGEMENT

It's far too repetitive as a one player game – this is no fault of the conversion but a fault of the original game. In two player mode it's a lot more fun but it's still not breaking any new ground and won't win any awards for originality or gameplay.

GRAPHICS	8
SOUND	6
INTELLECT	2
ADDICTION	6
OVERALL	67%

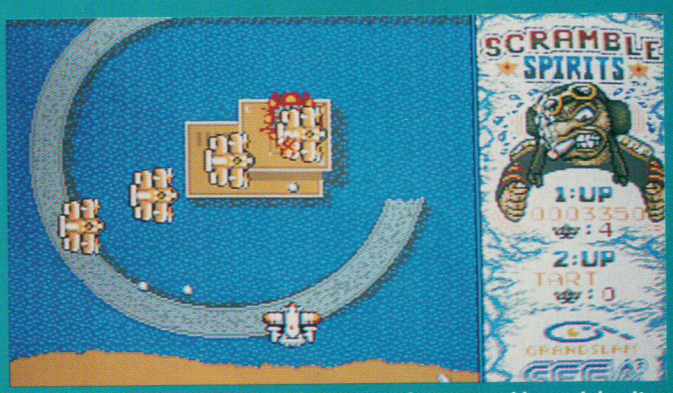
SCRAMBLE SPIRITS

GRANDSLAM £19.99 ■ Joystick

Here's a one or two player vertically-scrolling shoot-em-up that sees the player flying through six levels of frantic action, bombing and blasting the enemy.

There are flying baddies and ground installations to destroy and extra weapons to pick up in the shape of up to two small drone planes that accompany you. Once you have a drone you can make it strafe the ground while you concentrate on the wave after wave of flying aliens.

You have five lives to start with plus a few continue credits, so you can get quite far into the game even on the first sitting. It's not at all bad, but it's very standard fare. This again is no fault of the conversion, which is good, but a fault of the original game design. There are much better shoot-em-ups about if you really need another one. *Andy Smith*



Avoid the enemy fire, destroy the enemy planes... and keep doing it.

GRAPHICS 7 / SOUND 5 / INTELLECT 1 / ADDICTION 5 / OVERALL 54%

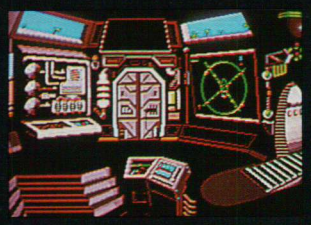
LINEL

LINEL
PRESENTS

NEOCRON

State of the art? Decide for yourself... 32 action-packed levels
*** 48 colours on screen * 300 different aliens * 10 different scenarios * 50 frames per second**
... the answer must be YES!

LINEL
24A WHITE PIT LAN
FLACKWELL HEAT
NR HIGH WYCOMB
BUCKINGHAMSHIRE HP10 9H
TEL. 06285 31 24
FAX. 06285 30 87

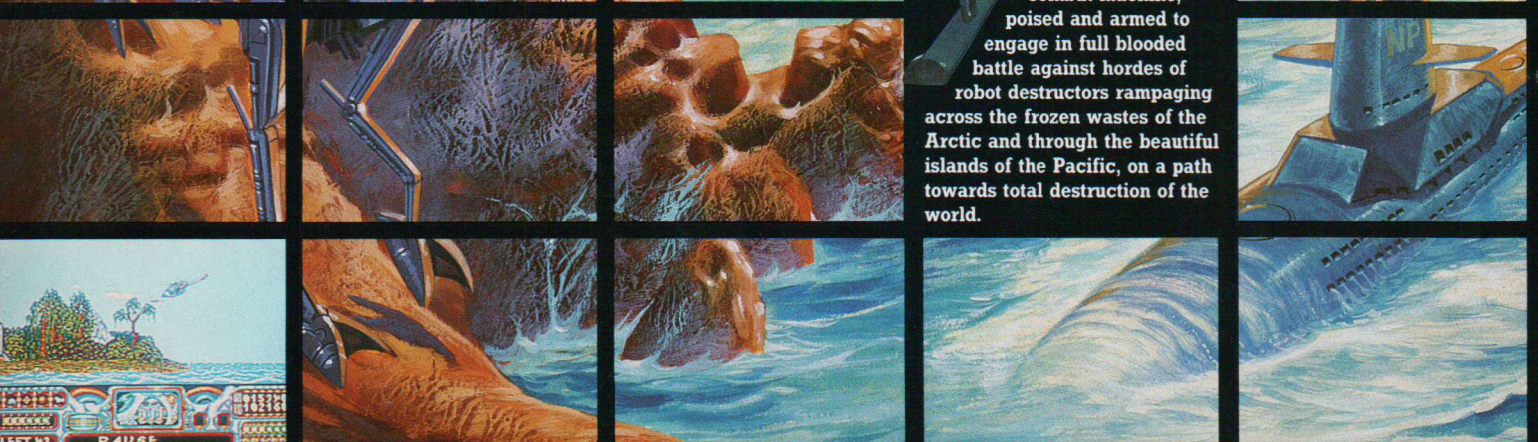


THE ODDS – STACKED AGAINST YOU ...,
THE RULES – THERE ARE NONE ...,
YOU'LL NEED AN EDGE – YOU'VE GOT IT!

DYTER-07

AVAILABLE ON
ATARI ST • AMIGA
£19.99

DYTER – 07, the ultimate battle-copter, the definitive combat machine, poised and armed to engage in full blooded battle against hordes of robot destructors rampaging across the frozen wastes of the Arctic and through the beautiful islands of the Pacific, on a path towards total destruction of the world.



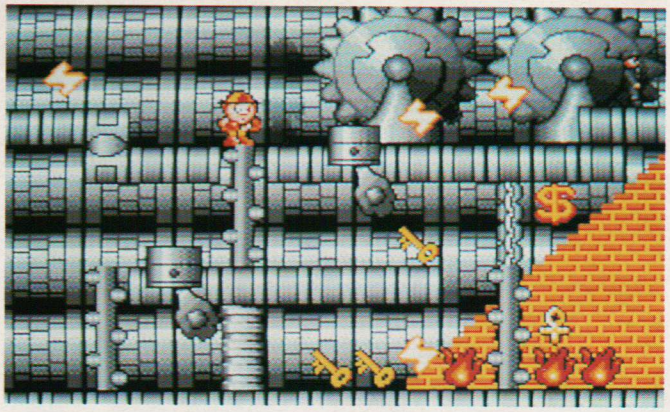
YOUR AMIGA
PLATINUM 87%

your AMIGA

reLINE SOFTWARE

Rainbow Arts®

Sketty Close,
Brackmills Business
Park, Northampton
NN4 OPL



London in the Industrial Revolution: collect four ankhs to get extra lives, collect keys to open barriers, and try to avoid the pistons.

KID GLOVES

MILLENNIUM £24.99 ■
Joystick and Keyboard

How often have you wished you were somewhere else when boring relatives come to visit? Well take pity on Kid, because his great uncle Indiana Stallone was one of the most boring relatives anyone could have.

Every Sunday, Kid's family were treated to ridiculously unbelievable anecdotes from the old man, about how he fought off savages in the Amazon jungle, tripped out on the West Coast (California, that is, not Blackpool), visited the Ice Age and fought Gladiators in Egypt. Uncle Indiana was old, but the Ice Age? And were there Gladiators in Egypt? This was all too much for Kid, so one Sunday he scurried out of the room and took refuge in his uncle's study.

Nosing through the junk he found an old dusty pair of boxing gloves and decided to try them on. Admiring himself in a *Raging Bull* pose in the mirror, he noticed the gloves sparkling. Thinking that this shouldn't be happening, he tried to take them off, but as soon as they touched there was a bright flash of light and Kid found himself standing in a jungle with a rather unfriendly looking native approaching. Maybe he should have stuck with the boring stories!

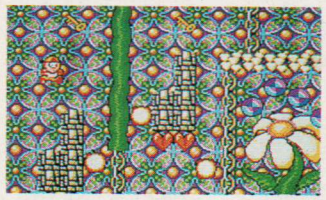
In *Kid Gloves*, you take control of Kid in his attempt to return home. You must fight your way through five time zones, starting in a prehistoric jungle and continuing through ancient Egypt, the Ice Age, London gripped by the industrial revolution and the psychedelic West Coast.

Each zone is split into ten screens, each containing a variety of monsters to avoid, obstacles to negotiate and items to collect. Kid can collect keys to open doors barring his way, money to spend in the shops and food for bonus points. The monsters can be dispatched with a shot from Kid's weapon. This is initially a catapult with two reusable magic coins, but extra weapons such as fire bombs, bouncing 'deathstars' and a powerful laser can be bought from shops found on the way – if Kid has picked up enough money!

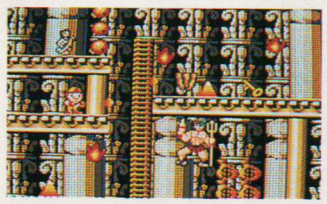
Occasionally, tricky situations can be overcome by using a little magic from Kid's limited supply of spells. Using magic causes a random spell to be cast ranging from Sesame, which opens doors, through Safety which causes dangerous obstacles to be rendered harmless, to Frozen, which stops monsters in their tracks.

Once Kid has made his way through all the screens in the five zones, the gloves can tranport him back to home and Uncle Indiana's not-so-boring stories. ***Maff Evans***

A Megalaser would be handy – but just look at the price!!



Wow, man! Like, look at the psychedelic freaky flowers.



Way back in Ancient Egypt – but what is a gladiatior doing here?

Get across the water in the Ice Age – but watch out for that penguin!

GRAPHICS AND SOUND

The graphics of *Kid Gloves* have obviously been designed with cuteness and colour in mind, but instead of cute the sprites are just small and the use of colour is a little over the top at times. The backgrounds on the Egyptian and Californian levels are so gaudy that it's extremely difficult to see where the walls and floors are supposed to be.

The sound is all right, with some jolly sampled effects, but the music sounds more like a C64 tune circa 1985 rather than '90s Amiga. Generally the tone is of a half-hearted attempt, which in this day and age isn't quite good enough.

LASTING INTEREST

Initially, *Kid Gloves* is great fun to play. Watching Kid in his oversized sportswear jump around making strange noises is most amusing. However, much in the same way as 'classic' (in other words, 'old') platform games worked, the game depends on the player learning patterns and timing for completing of the levels. This is fair enough when you first start playing, but once you've learnt the patterns it becomes incredibly easy to waltz straight through from screen 1 to screen 50 in no time at all.

There just isn't enough variety involved from game to game, so once you are proficient at the levels every turn could play just like the last. Not even the most hardened platform fans are going to be happy with a game that loses its appeal too quickly, nor are they likely to return to a game that doesn't provide any challenge after they've seen the different screens.

JUDGEMENT

Nowadays, a game set in a familiar mould must try to include that extra spark that pushes it ahead of all the others in the genre. Despite a humorous plot and an attempt to create a cute 'small boy' hero for players to identify with, *Kid Gloves* is just a basic 'progress from screen to screen' platform game like so many seen in the past. The sound and graphics are acceptable without being special, the gameplay overly simple and the addiction short lived. Even those new to computing and not old enough to remember the original *Manic Miner* can see the Amiga version to realise how much the format has aged, and sadly *Kid Gloves* just follows the tradition without providing much interest to leave its mark on the History Book of Software.

GRAPHICS	6
SOUND	5
INTELLECT	3
ADDICTION	5
OVERALL	61%

Q What comes out of the same offices as Amiga Format, only four times as often?

A Britain's leading news-stand computer weekly magazine.

Look what it offers!

- **Weekly** packed news pages covering all the latest developments in computing.
- **Weekly** product reviews, features, technical tips, letters, analysis.
- **Weekly** AMIGA section packed with product news, tips and comment.
- **Weekly** shopping bargains including a special voucher scheme guaranteed to save you money.

Only 58p!

Out every Thursday in all good newsagents.

NEW COMPUTER EXPRESS

First news, best buys – every week

LINC SOFT SOFTWARE

57 Maple Street, Bracebridge, Lincoln LN5 8QS
Telephone: (0522) 535409

Seconds Out	4.50	Gladiators	4.50	Nigel Mansell	7.99
Pub Pool	4.50	Hollywood Poker	4.50	Sky Fox 2	7.99
Motorbike Madness	4.50	Sidewinder 2	4.50	Soldier of Light	7.99
Speedboat Assassin	4.50	World Class		Bards Tale	7.99
Captain Blood	4.50	Leaderboard	7.99	Deep Space	7.99
Fish	4.50	Rolling Thunder	7.99	Extra Time	7.99
Joe Blade	4.50	Street Fighter	7.99	Bad Cat	7.99
Joe Blade 2	4.50	Bionic Commandos	7.99	Alien Syndrome	7.99
Extensor	4.50	Outrun	7.99	Gauntlet 2	7.99
War Machine	4.50	Foundations Waste	7.99	Zynaps	9.99
Eagles Nest	4.50	Joan of Arc	7.99	Cybernoids 2	9.99

Most titles are available in other formats for most popular computers.
Mail order only telephone or write for a price list for your computer.
Cheques or Postal Orders should be made payable to
LINC SOFT SOFTWARE

J. D. LEWIS REPAIRS & SPARES

SPARES:

68000 MPV	**£23.00**	8364 Paula	**£29.00**
8371 Fat Agnus	**£32.00**	8520	**£10.00**
ROM	**£21.00**	5719 Gary	**£12.00**
8362 Denise	**£19.00**	Service Manual	**£22.00**

ACCESSORIES:

Parallel lead..... **£6.95** Mouse mats (hard).. **£3.95**
KAO bulk disks **£6.50** (for 10)
A500 fixed price repair (excluding disk drive and PSU)
£40.00
All Datel products available. (Contact for prices)
42, Harcourt Avenue, Meir, Stoke-on-Trent, ST3 5LX.
Or Telephone: 0782 323348
*** All prices subject to availability**

SPECIAL OFFERS!

A500 Batman Pack only £349.99
Vidi Frame Grabber only £105.99
Vidi Frame Grabber Colour Upgrade only £18.95
or BOTH for £120.99!

Connection Cables, including Amiga & ST 4 player leads at £4.99.
Also specialised cables made to order.
Joysticks & peripherals at bargain prices.

A501 genuine Amiga RAM exp. only £99.99.
MPS 1530 colour printer only £219.99.
Music 'X' only £214.99. Aegis Sonix only £45.30.
Multi-Media Graphix Starter Kit only £54.99.
Multi-Media Exclusive Utility Collection only £99.99.

AMIGA TITLES

Cabal	£20.25	Space Ace	£20.00
Double Dragon	£5.00	Saint & Greavsie	£15.10
Double Dragon II	£16.10	Xenon II	£20.25
Infestation	£20.25	Rotor	£16.10
Ghouls & Ghosts	£15.00	Rainbow Island	£11.99

MOST OTHER TITLES AVAILABLE ALSO, WHILE STOCKS LAST!

Write or phone for details or price lists of Software or Hardware to:-

IMPEX-ILKESTON, MAIL ORDER
Tel: 0602 321330 (before 8.00pm) any day!
65, Sudbury Avenue Ilkeston, Derbys'., DE7 5EA

P&P free in U.K. on all orders over £10.00.
ALL PRICES ARE INCLUSIVE OF VAT.

(IMPEX-ILKESTON are also registered AMSTRAD dealers.)

MEGALAND

Access

0703 332225

VISA

All prices and manufacturers specifications subject to change without notice. All offers subject to availability. Offers subject to change in price without notice.

Delivery Charges

48 hour Courier Service £10.00 Excluding Weekends

Consumables Free Post

Overseas Orders Phone

SPECIALISTS IN MAIL ORDER

WHY MEGALAND

48 HOUR DELIVERY • 12 MONTHS WARRANTY ON ALL HARDWARE ON SITE MAINTENANCE OPTIONAL • TECHNICAL SUPPORT HELPFUL FRIENDLY SERVICE • SPECIAL PRICE OFFERS MEGASOFT CLUB MEMBERSHIP FOR EXTRA SPECIAL OFFERS EXPORT SPECIALISTS (ASK FOR DETAILS 0703 332225)

MEGALAND BRANCHES AT SOUTHAMPTON AND OXFORD

HOTLINE

RETURNS AND TECHNICAL SUPPORT TEL 0703 440569

BATMAN PACK

MEGALAND SUPERPACK ONE PLUS AMIGA A500
(SEE STANDARD FEATURES)

BATMAN THE MOVIE (GAME), F18 INTERCEPTOR, NEW ZEALAND STORY, DELUXE PAINT II, BLASTEROIDS, WICKED THUNDERBIRDS, THAI BOXING, DEFCON 5, SAINT & GREAVSEY, THE PRESIDENT IS MISSING, A500 DUSTCOVER, MOUSEPAD, QUICKSHOT II JOYSTICK.

PRICE **£399** INC. VAT

MEGALAND SUPERPACK TWO PLUS AMIGA A500
(SEE STANDARD FEATURES)

BATMAN THE MOVIE (GAME), F18 INTERCEPTOR, NEW ZEALAND STORY, DELUXE PAINT II, ESPIONAGE, FLINTSTONES, PACLAND, CHAMPIONSHIP FOOTBALL, FROSTBYTE, MOUSETRAP, ICE HOCKEY, MOUSE PAD, QUICKSHOT II JOYSTICK, DUSTCOVER.

PRICE **£399** INC. VAT

MEGALAND SUPERPACK THREE PLUS AMIGA A500
(SEE STANDARD FEATURES)

BATMAN THE MOVIE (GAME), F18 INTERCEPTOR, NEW ZEALAND STORY, DELUXE PAINT II, ZYNAPS, BATTLE VALLEY, EXOLON, SLAYER, CYBERNOID II, CRUNCHER FACTORY, KARTING GRAND PRIX, ICE HOCKEY, MEGA-BLASTER JOYSTICK, 10 BLANK DISKS.

PRICE **£399** INC. VAT

THE NEW LIGHT FANTASTIC PACK COMMODORE 64

The pack includes C64 computer, power supply, cassette unit, light gun, 3D glasses, Robocop, Rambo III, Platoon, Hypersports, Combat School, Batman the caped crusader, Mike Reids pop quiz, 3D action pack Army Days, Gangster and Time Traveller. Plus arts package, music creator, typing tutor and Shootem Up construction kit.

PRICE **£149.99** INC. VAT

AMIGA A500 HARDWARE	Price Ex. VAT	Price Inc. VAT
A500 AMIGA PACK	346.95	399.00
A500 + 8833 Monitor	500.00	575.00
A500 + 1084S Monitor	504.35	580.00
A500 + VISION 4200	452.18	520.00
A500 + AMIGA PACK and PHILIPS 8833 Monitor	534.78	615.99
A500 + 1084S Monitor and AMIGA PACK	539.14	620.00
AMIGA BATMAN PACK	320.89	369.00

MEGALAND BUSINESS PACKS		
A500 8833 OR 1084S Steel Monitor Stand Star LC10 Mono Printer 2 extra ribbons KINDWORDS V2 PUBLISHERS CHOICE PLUS CABLES A501 RAM EXPANSION	773.05	889.00
500 + 8833 OR 1084S Steel Monitor Stand STAR LC10 Mono Printer 2 extra ribbons The Works + Cables	655.96	754.35

AMIGA EXTERNAL DRIVES		
AF 880 3.5" Drive VERY SPECIAL PRICE	65.22	75.00
RF302C 3.5"	68.70	79.00
MDC 3.5"	66.09	76.00
A1010 3.5"	73.92	85.00
CUMANA CAX 354E	73.92	85.00

AMIGA ACCESSORIES		
A501 RAM Expansion	100.00	115.00
512K RAM Expansion	85.22	98.00
MOUSE MAT	4.31	4.95
AMIGA Dust Cover	4.31	4.95
AMIGA TV Modulator	17.40	20.00
1352 Mouse	20.83	23.95
Steel Monitor Stand	13.00	14.95
Double Steel non Stand	20.00	23.00

COMMODORE C64		
C64 Lights Fantastic Pack	130.00	149.99
C64 Hollywood Pack	112.18	129.00
1541 C11 5.25"	113.05	130.00
1581 3.5"	104.35	120.00

WE CAN ALSO SUPPLY THE TOP TWENTY BUSINESS AND GAMES SOFTWARE TITLES

A500/A2000 MONITORS	Price Ex. VAT	Price Inc. VAT
PHILIPS 8833 + Cables	207.83	239.00
1084S + Cables	207.83	239.00
VISION 4200	160.87	185.00
1900 C64 Mono	108.70	125.00

EPSON PRINTERS		
EPSON LX850 9 PIN 80 column 180/CPS 25NLQ	182.61	210.00
EPSON LQ550 24 PIN 80 column 150/CPS 50 CPS NLQ	269.56	310.00
EPSON FX850 264CPS 54 NLQ	339.14	390.00
EPSON FX1050	421.74	485.00
EPSON LX400	138.26	159.00
EPSON LQ400	202.61	233.00

PANASONIC PRINTERS		
PANASONIC KXP 1124 24 PIN 120CPS/24CPS NLQ	225.23	259.00
PANASONIC KXP 1081 9 PIN 120CPS/28 NLQ	120.00	138.00

MANNESMANN PRINTERS		
TALLY MT81	100.00	115.00
TALLY Laser MT905 6 pages per minute 300,000 page engine life series 2 emulation HP Laser Jet	940.00	1081.00
PRICE INCLUDES ON-SITE MAINTENANCE		

SEIKOSHA		
SEIKOSHA SP-180 80 column NLQ parallel	102.60	118.00

DRIVES		
NEW A590 Autoboot 20Mb Hard Drive for AMIGA A500	326.09	375.00
VORTEX AMIGA 500 40Mb Autoboot HD	433.92	499.00
TRIANGLE 20Mb Hard Disk	456.53	525.00
CUMANA CAS 354 ATARI Drive	73.92	85.00
CUMANA CD800/S Drive	209.57	240.00
CUMANA CS 354	93.92	108.00
CUMANA CSX200	80.00	92.00
CUMANA D/BBC4 Drive	148.70	171.00
CID 354 EXT/Drive	84.35	97.00

ATARI		
ATARI Explorer Packs 520 STFM or 520 STE		267.00
ATARI 1040 STFM 1MB		448.00
ATARI Power Pack		350.00
ATARI 1040 STFM + MONO Monitor		538.00

CITIZEN		
HQP40 24 Pin Printers with Colour Kit and Free IBM Cable	254.15	299.00

STAR PRINTERS	Price Ex. VAT	Price Inc. VAT
LC10 MONO 9 PIN 144CPS NLQ 36CPS 8NLQ fonts, 4K buffer	139.00	159.85
LC10 COLOUR 7 colours same spec as LC10 MONO will accept black ribbons	169.52	194.95
LC24-10 24 PIN 170CPS NLQ 57CPS 7K buffer 8 fonts	200.00	230.00
NX-15 9 PIN wide carriage 120CPS NLQ30CPS 4K buffer	280.00	322.00
LC10 MONO for C64 & 128 only LC10 Colour for C64 and 128 only	149.56	172.00
	186.95	215.00
NB24-10 24 PIN 80 column 216CPS/72CPS LQ	429.52	493.95
NB24-15 24 PIN wide 136 column 216CPS/72CPS LQ	519.13	597.00
NB 15 24 PIN 136 column 300CPS/100CPS LQ	686.08	789.00
NX 15 9 PIN 136 column 120CPS/30NLQ	280.00	322.00
ND 10 9 PIN 80 column 180CPS/45CPS NLQ	293.91	338.00
ND 15 9 PIN 136 column 180CPS/45CPS NLQ	340.86	391.99
NR 10 9 PIN 80 column 240CPS/60CPS NLQ	344.34	396.00
NR 15 9 PIN as NR10, but 136 column	393.91	453.00

STAR PRINTERS THE PROFESSIONAL SERIES		
TWELVE MONTHS ON-SITE WARRANTY ON THE ENTIRE PROFESSIONAL SERIES (UK MAINLAND ONLY FREE)		
FR-10 9 PIN 300CPS/76CPS NLQ slew rate 3.05 (ins per sec.) standard buffer 31K max buf 159k opt 16 MLQ/LQ resident fonts	287.23	330.31
FR-15 9 PIN this is the 15" version of the FR-10, ideally suited for the widest of printing of both A4 and A3 paper in its landscape orientation.	389.83	448.31
XB24-10 24 PIN 240CPS/80QEL slew rate-paper feed (ins per sec.) 3.6 standard buffer 27K max buf 187K super letter quality fonts 4 NLQ/LQ fonts 25 three of which are ORC fonts including code 39 bar code	389.83	448.31
XB24-15 24 PIN the XB24-15 is the wider version of the XB24-10 offering all the above facilities, but on a printer with a 15" carriage. The XB24-10 and 15 both print at 240 CPS in draft mode plus they both can coast through letter quality printing at 76CPS	513.49	590.51
All printers in this range have the option of a low cost 7 colour upgrade module which can be fitted by virtually anyone.		

MEGALAND

MEGALAND SOUTHAMPTON
42 – 44 Millbrook Road East Southampton, Hants., SO1 0HY
TELEPHONE 0703 332225

MEGALAND OXFORD
Islip Road, Off Hernes Road Oxford.
TEL 0865 512599
OR 0865 512633

OPEN MONDAY TO SATURDAY 9.00am to 5.30pm

STANDARD FEATURES

MEGALAND NOW OFFER THE BEST GAMES PACKS THIS SIDE OF THE PLANET. ALSO ALL OUR PACKS CONTAIN AMIGAS WITH THE FOLLOWING STANDARD FEATURES.
★ ALL UK SPECIFICATION ★

AMIGA A500, 512K RAM, 1 MB 3.5 DRIVE, MOUSE, THREE OPERATING MANUALS, 4096 COLOURS, KICKSTART 1.3, TUTORIAL DISK, UTILITIES DISK, WORKBENCH 1.3 DISK, POWER SUPPLY, TV MODULAR, MULTI TASKING SCREENS, BUILT IN VARIABLE SPEECH SYNTHESIZER, PLUS ALL CONNECTING CABLES.

GAME SELECTION WILL CHANGE SUBJECT TO AVAILABILITY.

A TOUCH OF class

More and more people are making use of the Amiga's obvious potential as an effective learning tool. Within a traditionally Acorn-dominated market, Commodore are making major moves in an attempt to break Acorn's monopoly. The flagship of this assault is the company's latest bundle, the Class of the '90s pack.

Although the pack has been available for a couple of months now, it has only recently been put on offer (minus the computer) to the general public. The pack consists of seven individual software packages that were previously sold separately for considerably more than their current asking price. Although the pack is designed specifically for use within schools, all the programs included fall into the category of being real-world applications that would be as useful in the office and the home as they are in the classroom. So, here's a look at what each program has to offer.

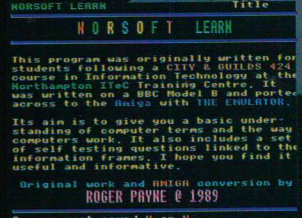
JASON HOLBORN goes back to school with Commodore's latest Amiga bundle, the "Class of the '90s" pack.

AMIGA LOGO

In primary schools, at an age when most of us were still struggling with our times tables, children today are learning to program computers.

Logo is a simple programming language that provides its rewards in the form of graphic displays. The basic instructions to the language are geometrical, moving a pointer called a 'turtle' around the screen to draw pretty patterns: but *Logo* also mirrors many of the complex methods used in programming.

Recently we tested *Amiga Logo* in a primary school where the kids already used *BBC Logo* – and they were very impressed! Commodore are even now upgrading *Logo* to control a 'floor turtle', a simple robot powered by remote control, which'll make it an even better product.



BBC EMULATOR

Acorn have had it all their way for several years now, but with the increased activity of machines such as the Amiga within education, the aging BBC micro looks set to finally be put into retirement. Replacing a computer is simple, but what about all that high-quality BBC software that has served ing that could be an expensive and frustrating task. However, help is at hand in the shape of Commodore's own BBC emulator.

The Emulator, as it is properly called, is a software-based emulator that turns the Amiga into an almost complete clone of a BBC Micro model B. Any programs that legal 6502 assembler can be run on the Amiga without problems. However, some software (notably games software) bypasses the BBC operating system and hits the hardware directly. Such software will definitely not work. But for bridging the gap during the transition between old and new, *The Emulator* provides the answer.

CLASS OF THE '90S
£TO BE ANNOUNCED
COMMODORE UK (0628)
770088

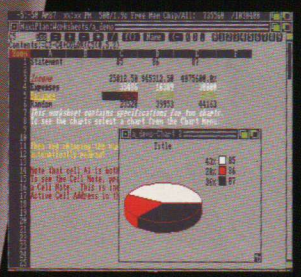
PUBLISHER'S CHOICE

The Disc Company's *Publisher's Choice* consists of not one, but four – count them, four – separate packages. These include a powerful Desktop Publishing system and a word processor.

The heart of the Publisher's Choice package is Gold Disk's *PageSetter 1.2*, a simple DTP package that paved the way for the now-standard *Professional Page*. Like its big brother, *PageSetter* uses a *PageMaker*-like systems of frames that can contain either pictures or text. To make the production of pages a quick and easy task, *PageSetter* even includes both a graphics editor and a text editor. Pages can be printed to either standard Preferences printers or (using the included utility) even to professional PostScript devices such as laser printers.

If *PageSetter*'s text editor isn't powerful enough for your needs, *Publisher's Choice* includes the popular word processing package *Kind Words 2*. *Kind Words* offers both spell checking and thesaurus facilities, making it the ideal introduction to word processing. *PageSetter* documents can be enhanced further by using different fonts and clip art, picked from the package's extensive two-disk set.

MAXIPLAN



No true business computer is complete without that most important of business application, the spreadsheet. *MaxiPlan*, from Oxxi Incorporated in the States, is one of the most powerful spreadsheets available that can quite easily handle the needs of any modern business. Within education, it's the ideal introduction to modern-day financial management.

MaxiPlan can be used for a host of different applications including straight spreadsheet analysis, database management, business graphics and project management. Any range of data within your worksheets can be highlighted and then graphed in up to ten different styles, including 2D and 3D pie charts, bar charts, line charts *et cetera*.

MUSIC RECORDING STUDIO

Music lessons have certainly changed since I was at school. These days, students are as comfortable with synthesisers and MIDI as they are with more traditional instruments such as the violin and piano. To give students an idea of modern recording techniques, the pack includes Dr T's highly-acclaimed budget MIDI sequencer system, *MRS*.

MRS is a powerful sequencer that offers eight tracks of real-time recording, with full editing and song composition. If the MIDI set-up you are using isn't up to the task, the Amiga can even join in with the music making using its in-built sample playing capabilities.

Computers such as the Amiga can't talk MIDI without the inclusion of a MIDI interface. Commodore have even thought of this, so the bundle includes Datel Electronics' popular MIDI interface. Roll over Beethoven!

SUPERBASE PERSONAL

SuperBase was one of the original database management systems to appear on the Amiga. Since then it has been upgraded and expanded to cover all levels of database requirements, from simple relational card files to full-blown database applications requiring the manipulation of multi-megabyte files.

SuperBase Personal is the basic program within this range. The program is an entry-level multi-file relational database management system that uses a very friendly WIMP-based environment to make the program one of the easiest-to-use database systems available. *SuperBase* uses a powerful control system much like that found on a video recorder. Files can be located using sophisticated conditional links. Data held within a file can be in a variety of different formats: straight text, alphanumeric, numeric, dates and even pictures in standard IFF format (as provided by *DPaint* output).

FIRST micro

HARDWARE & SOFTWARE SPECIALISTS
NEW! SHOWROOM
13 LANSDOWNE RD
BOURNEMOUTH
DORSET, BH1 1RZ

EXC. VAT ☎ (0202) 24927 — Access / VISA — **£5 – DELIVERY**

AMIGA A500 + BATMAN 2

GIVE AWAY!

INCLUDING:- ●BATMAN THE MOVIE ● NEW ZEALAND STORY ● F18 INTERCEPTOR ● Buggy Boy ● Ikari Warriors ● Barbarian ● Thundercats ● Terrorpods ● Amegas ● Deluxe Paint II - Mega ● Paint Package ● Microblaster Autofire ● Microswitched Joystick ● 10 blank 3.5" Disks ● Mouse Mat ● Mercenary ● Insanity Flight ● Art of Chess ● Wizball ● Dust Cover ● DiskBox

£339

AMIGA A500/ PHILIPS 8833

£476

AMIGA B2000

INCLUDING:
● MOUSE ● WORKBENCH
● BASIC ● UTILITIES ● MANUALS

£750

AMIGA A500

INCLUDING:-
● MOUSE ● WORKBENCH
● UTILITIES ● MANUALS
● BASIC ● TUTORIAL ● TV MODULATOR

£299

AMIGA B2000/ PHILIPS 8833

INCLUDING:-
● MOUSE ● WORKBENCH
● BASIC ● UTILITIES ● MANUALS
● XT BRIDGE BOARD ● 20Mb HARD DISK

£1250

AMIGA A500 BATPACK

● NEW ZEALAND STORY
● F18 INTERCEPTOR ● DELUXE PAINT II
● MOUSE ● TV MODULATOR

£309 + VAT

A500/A2000 MONITORS

1084(s) High res monitor	£209
Philips CM8833 High res	£199
1901 C64-colour	Call
1900 C64-Mono	£119

AMIGA EXTERNAL DRIVES

Cumana Cax 354E	£79
AF880	£78
RF302C	£74
Supra 20mb H/disk	£499

★ All drives 1mb + on/off switch ★

AMIGA ACCESSORIES

A501-512k RAM	£109
TV Modulator	£22
Mouse Mat	£4.39
Amiga dust-cover	£6.89
3.5 135TPI DS/DD	£9.99

NEC 3.5" 1MB 2ND DRIVE £59

COLOUR PRINTERS

Citizen HQ40	£362
Epson EX1000	£543
Hewlett Packard Desk Jet	£718
NEC P6+	£469
NEC P7+	£589
Star LC10	£194
Xerox 4020	£949

Only **£137.00**

Hugely successful 9 pin printer, the Star LC10 provides 4 NLQ fonts (with 96 print combinations) at 36cps and 144cps draft. Has a large 4K buffer and IBM/parallel interface built in. Includes a comprehensive front panel operation and features paper parking, allowing single sheets to be used without removing tractor paper.

THE star COMPUTER PRINTERS

LC24-10 £199

LC10 COLOUR £169

PRINTERS

Star LC10 (P) 130CDS	£139
Star LC10 colour	£189
Star LC24-10 (24 pin)	£260
Citizen 120D	£109
Commodore MPS 1230	£119
Panasonic KXP1124 (24 pin)	£279
Panasonic KXP1081	£148
Epson LX800	£158
Epson LQ500	£250
Epson FX850	£409
Epson FX1050	£382
Epson EX800	£369
Epson EX1000	£419

LASERS

Citizen Overture	£1299
HP Lazerjet II	£1825

A2000 HARDWARE

A2000 + 1Mb RAM	£869
A2000 + 1084(s) monitor + bridge BD + 20Mb H/disk	£1369
A2000 + 1084(s)	£1049
20Mb hard disk	£299
XT bridge BD	£299

BATMAN SALE

● BATMAN II
● THE NEW ZEALAND STORY
● F/18 INTERCEPTOR
● DELUXE PAINT II

£29

SUMMER SALE
A501 512K RAM EXPANSION
£75 inc VAT + Delivery

ALL PRICES EXCLUDE VAT

CREDIT CARD MAIL ORDER AND EXPORT HOTLINE

(0202) 24927

OPEN MON-SAT 9am-5.30pm

All prices and manufacturer's specifications subject to change without notice. Please call before ordering

To: First Micro, 13 Lansdowne Rd, Bournemouth, Dorset BH1 1RZ

I wish to order _____

My computer is _____

I enclose cheque/PO for £ _____ inc VAT.

Or charge my Access/Visa No. _____ Exp. date _____

Access / VISA

Name _____ Signature _____

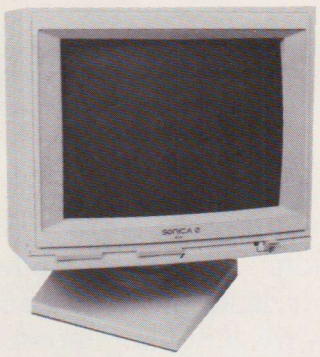
Address _____

Postcode _____ Tel No: _____

FIRST MICRO

PRESENTS ...

THIS MONTHS 'BEST BUYS'



TECNIK AMIGA 500 CONSOLE

Superb Control Centre for your Amiga 500. Re-locates Mouse and Joystick ports to right forward side of Console for easy access. Store Peripherals such as Disk Drives & Genlocks, provides firm base for your monitor at the right level. **from**

£15.99

TECNIK 2000 MONITOR

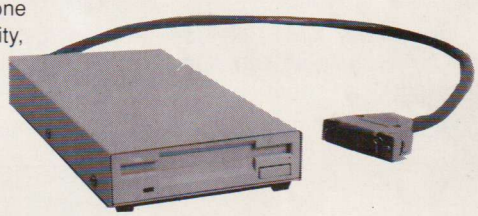
High resolution, Stereo Colour Monitor, RGB/Analog Output, Green Screen Switch, Built in Tilt & Swivel Stand, Superb High Resolution Colour Output, Twin Hi-Fi Speaker System.

£199

TECNIK AMIGA EXTERNAL DRIVE

Teac/Citizen Mechanism, on/off switch, Through Port Connector, one Megabyte Capacity, Slimline Design, 12 mth warranty.

£57



COMMODORE A501/512K RAM PACK

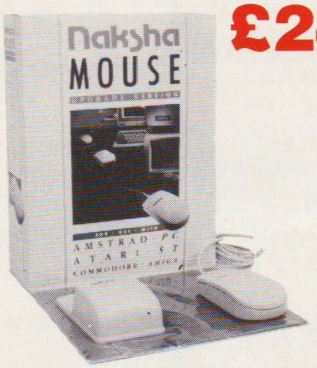
THE **"ORIGINAL"** Commodore product, designed specifically for A500 and includes full RF screening case & clock calendar card, only buy the original with full 12 month warranty. Beware of cheap imitation.

£69.99

NAKSHA MOUSE

Amiga/Atari Mouse, High Resolution 280DPi, includes Free Hard Mouse Mat, Free mouse house, Free Discount voucher for software.

£24.99



STAR NL10 PRINTER

9 Pin Dot Matrix, 80 Column, Letter Quality 30CPS NLQ, 120CPS Draft, Push and Pull Tractor Feed, Excellent High Quality.

£109

COMMODORE A500 BATMAN PACK

Most Advanced Home Computer on today's market. The Amiga will take you into a Fantastic World of 4096 Colour Graphics, includes: TV Modulator • Mouse • Workbench • Utilities • Tutorial • UK Manual • 12mth warranty.

£309

For Demonstration, Credit Card Hotline and Mail Order details:-

E & OE subject to changes without notice

VISA

ALL PRICES EXCLUDE VAT

0202 24927

Access

First Micro, Anglo City House, 13 Lansdowne Road, Bournemouth BH1 1RS

Amiga Desktop Video Guide

The Amiga Desktop Video Guide is the most complete and useful guide to desktop video on the Amiga.

Amiga Desktop Video Guide covers all the basics — defining video terms, selecting genlocks, digitizers, scanners, VCRs, camera and connecting them to the Amiga.

Just a few of the topics you'll find described in the his excellent book:

- The Basics of Video
- Genlocks
- Digitizers and Scanners
- Frame Grabbers/Frame Buffers
- How to connect VCRs, VTRs and Cameras to the Amiga
- Animation
- Video Titling
- Music and Videos
- Home Video
- Advanced Techniques
- Using the Amiga to add or incorporate Special Effects to a video
- Tips on Paint, Ray Tracing and 3-D Redering in Commercial Applications

ISBN 1-55755-057-3 **Price £16.95**

Amiga for Beginners	£12.95	Amiga Basic Inside & Out	£18.95
Amiga 3D Graphics	£16.95	Amiga Machine Language	£14.95
Amiga Tricks & Tips	£14.95	Amiga System Program Guide	£29.95
Advanced System Program	£29.95	AmigaDOS Inside & Out	£16.95
Amiga Disk Drives	£24.95	Amiga C for Beginners	£16.95
Amiga C for Advanced Prog	£29.95	More Tricks & Tips	£14.95
Amiga Graphics Inside & Out	£29.95	AmigaDOS Quick Ref	£8.95
Amiga Kernal ROM: Libs & Divs	£29.95	Amiga Kernal ROM: Autodocs	£28.95
Amiga Hardware Ref. Manual	£21.95	Disks for Abacus Books each	£9.95

Post free in U.K. Add £1 per book Europe and surface mail. Add 30% for airmail outside Europe. Access and Visa orders accepted. Dealer enquiries welcome. Tel: 0706-524304

ADAMSOFT (Dept AF), 18 Norwich Avenue, Rochdale, Lancs. OL11 5JZ

ADVENTURE HELPLINE

Do you play computer adventures? Have you ever been faced with a seemingly impossible situation?

WE CAN HELP

Our adventure rescue team work 7 days and 7 evenings a week and will be pleased to answer your queries. We offer help with any games or any computer - so if you are tearing your hair out ring this number NOW!

0898 338 933

T.M.E Plc 10b Hulme Hall Road. Manchester M15 4LY

Calls charged at 25p min "cheap" rate/38p at all other times

A500 PC CABKIT

Separate keyboard - boot DFO/1 mouse/ sticks all on side - both drives on front - DFI disable - reset on front - both L.E.D.S. on front - easy access. Internal modulator - low price.

D.I.Y. or free fitting service plus lots of options. *For details send SAE to:*

DEPT AF
COMPUTER CONVERSION SERVICES
THE HOLLOW, CREETOWN,
WIGTOWNSHIRE, DG8 7HZ.

GFA
Data Media UK

GFA BASIC

"Compiled programs are both compact and fast in execution. Everyone knows that interpreted GFA is fast, but compiled GFA is blisteringly fast– rivalling languages such as C and Modula 2 with ease."

Amiga Format review March 1990

As we dont want to upset our competitors, we have not reprinted the benchmark results, but we suggest you refer to the Amiga Format review Issue 8 Page 127.

GFA Data Media
Box 121
Wokingham
Berkshire, RG11 9LP

Tel: (0734) 794941

Available from your Atari Dealer, and most software stockists or in case of difficulty by mail order:

GFA Data Media (UK) Ltd, Box 121, Wokingham, Berkshire, RG11 9LP. Tel: (0734) 794941

Credit card or cheque/postal orders payable to GFA Data Media (UK) Ltd accepted. Phone orders welcome.

VISA

MasterCard

I wish to pay by Visa/Mastercard; please charge my account.

GFA Basic Interpreter Amiga £49.95 ☐

GFA Basic Compiler Amiga £29.95 ☐

Card No:

Signature

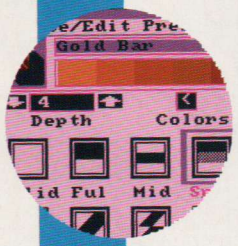
Name (on card)

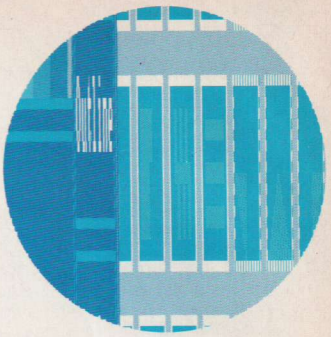
Address

Postcode

AMIGAFORMATAPR90

TV star





To most of us, desktop video means one thing – sprucing up the old holiday videos with tasteful titles and graphics. **JASON HOLBORN** takes a look at a package that allows you to do just that.

Considering the Amiga's domination of the low-end desktop video market – a market which it practically started! – it seems almost unbelievable that there is such a shortage of quality video titling packages available in this country. Sure, there are many 'Desktop Presentation' systems available, but if all you want to do is to add titles to your home videos of granny and the kids on the beach, why should you have to pay hundreds of pounds for a 'do it all' package? Chances are that it will probably contain a large number of features that you're never likely to ever want to use anyway!

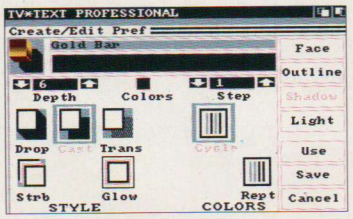
So what do we need from such a package? Put simply, all that is needed is a program that will allow you to quickly and easily knock up eye-catching screens that can utilise any number of different font styles and effects. Does such a package exist? Up until now, the only packages even worth considering consisted of just three titles (no pun intended) – HB Marketing's *Video Generic Master*, Aegis' *VideoTitler* and finally the unacclaimed king of them all, Zuma's *TV*Text*.

*TV*Text Professional* is the follow up to Zuma's earlier product and offers all the power of the original plus a generous helping of new and improved features. As such, both the price and minimum machine specification have increased: you will need at least a megabyte even to get started with the program.

LEFT: If the preset styles aren't to your liking, then you can create you own. Here, the face of the text is being defined.

RIGHT: Setting up the text shadow. Choose between drop, cast, strobes or glows.

FAR RIGHT: The text outline editor.

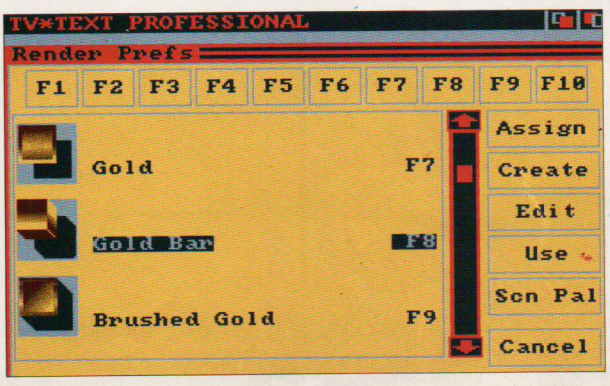


Screen Modes

Unlike its predeccesor, *TV*Text Pro* supports all Amiga screen resolutions and virtually all Amiga screen modes (excluding HAM). For most titling work you'll probably want to work in high resolution, but if memory constraints get the better of you *TV*Text Pro* also supports low resolution (with up to 64 colours), low resolution interlaced and medium resolution (with up to 16 colours). Although *TV*Text Pro* allows the use of non-interlaced screen modes, these screens can be interlaced at anytime for improved transportation to video tape.

The Amiga's ability to produce overscanned (borderless) screens is one of the main reasons why the machine has been so successful within the video industry. Any video software that does not support it is looked upon as nothing more than an ameteur toy. Not wishing to disappoint, *TV*Text Pro* supports two degrees of overscan – medium and maximum. A medium overscanned screen will remove a large percentage of the border that normally exists around an Amiga screen. On the other hand, a maximum overscanned screen has virtually no border, making what you see appear to fill the entire display.

BELOW: Choose the text rendering style from the Prefs requester.



Fonts

Any video titling package is only as good as the fonts that can be used with it. Zuma have been producing quality fonts for the Amiga for many years now, so it would be a big surprise if *TV*Text Pro* was let down in this department. Thankfully this is most certainly not the case, as the package comes complete with three disks crammed with fonts of varying sizes (ranging from 8 point, right up to a massive 102 point) and styles.

Even if you grow bored with the collection of fonts that Zuma provide, *TV*Text Pro* will happily accept any standard Amiga bitmapped fonts (including colour fonts!) such as those which are to be found on your Workbench and Extras 1.3 disks.

This is one particular area of desktop video where the Amiga really shines – if you buy a professional video titler, obtaining extra fonts is a costly affair. With the Amiga, all you have to do to source new fonts is to either use the Workbench FED tool to produce new ones, or have a quick chat with your friendly PD supplier. For little more than the cost of a couple of disks, your collection of fonts could multiply considerably.

MEDUSA Computers

VISA Access

Mail orders to:- Amiga Dept, 55 Harrow Drive, London N9 9EQ

AMIGA	AMIGA		
Batman Pack A500 + free modulator + Batman + £100 worth of software **£359.99**	**Software Pack** As Batman Pack + £230 software + Photon Paint **£379.99**	**Expansion Pack** **As Batman Pack + 1/2 Meg RAM + It came from Desert** **£449.99**	**Music Pack** **As Batman Pack + Music X + Midi Interface** **£534.99**

3.5" DD/DS Quality Disks Boxed in tens:
10 ..... 7.95 50 ..... 32.99

Competition Pro 5000 Extra £12.99	1/2 Meg Ram (with clock) + demo £69.99
Competition Pro 5000 ..... £10.99	Panasonic 1081 Printer £149.99
Konix Speedking (Auto) £8.99	Monitors, Printers etc ..... £phone
Konix Navigator £10.50	External 3.5" drive £74.99

3-D Pool 16.25	Demons Tomb 13.25	Highway Patrol 16.25	Pro Tennis Tour 16.25
Adidas Golden Shoe 16.25	Double Dragon II 13.25	Iron Tracker 13.25	Rainbow Islands 16.25
A.P.B. 13.25	Dr Plummet 16.25	Indiana Jones 13.25	Renaissance 16.25
Altered Beast 16.25	Dragon's Breath 19.50	Infestation 16.25	Robocop 16.25
Bad Company 16.25	Dragon's Lair II 29.99	Interceptor 16.25	R.V.F. 16.25
Barbarian II 16.25	Dragon Ninja 16.25	Interphase 16.25	Shadow of the Beast 21.99
Batman (The Movie) 16.25	Dragon Spirit 13.25	Ivanhoe 16.25	Shinobi 13.25
Beach Volley 16.25	Drakkhen 19.50	Kick Off 13.25	Silkworm 13.25
Blade Warrior 16.25	Drivin Force 16.25	Kid Gloves 16.25	Sim City 19.99
Bloodwych 16.25	Dungeon Master 16.25	Knights of Crystallion 19.99	Space Ace 29.99
Bomber 20.49	Dynamic Debugger ... 16.25	Licence to Kill 13.25	Star Wars Trilogy 16.25
Cabal 16.25	Dynamite Dux 16.25	Light Force 16.25	Strider 16.25
Carrier Command 16.25	E. Hughes Int Soccer 16.25	Magnum 4 ..... 19.50	STRYX 13.25
Chicago 90 ..... 13.25	F16 Combat Pilot 16.25	Microprose Soccer 16.25	Stunt Car 16.25
Chase HQ 16.25	Falcon 19.50	Midwinter 16.25	Super Wonder Boy ... 16.25
Conflict Europe 16.25	Falcon-Misson 13.25	Mr Heli 16.25	Switchblade 13.25
Continental Circus 13.25	Fire Brigade 19.99	Moonwalker 16.25	Swords of Twilight 16.25
Conqueror 16.25	First Contact 16.25	New Zealand Story ... 16.25	Test Drive II 16.25
Cyberball 13.25	Forgotten Worlds 13.25	Nevermind 13.25	The Lost Patrol 16.25
Damocles 16.25	Future Wars 16.25	North and South 16.25	Triad III 19.50
Day Of the Viper 16.25	F29 Retaliator 19.50	Operation Thunderbolt... 16.25	The Untouchables 16.25
Miscellaneous	Gemini Wings 13.25	P47 ..... 16.25	Toobin 13.25
	Ghostbusters II 16.25	Passing Shot 16.25	Turbo Outrun 16.25
Deluxe Paint III £62.99	Ghosts & Ghouls 16.25	Paul Gascoigne Soccer 16.25	TV Basketball 19.50
Music X £169.99	Grand Prix Circuit 16.25	Pipe Mania 16.25	War Head 16.25
Photon Paint II £44.99	Gravity 16.25	Populus 16.25	War In Mid Earth 16.25
Publishers Choice £69.99	It Came from Desert .19.50	Populus: Promise Land...7.99	World Class Leaderboard...7.99
Devpac Version 2 ..... £42.99	Hammer Fist 16.25	Powerdrome 16.25	Xenomorph 16.25
A.M.O.S. £34.99	Hard Drivin' 13.25	Powerdrift 16.25	Xenon II 16.25
			X- Out 16.25
			Xybots 13.25

TELEPHONE ORDERS: - 01-803 0893 NB. There is a 50p surcharge per game for orders placed by telephone. All prices are for mail order only and are subject to change without notice E&OE. Not all software titles available at time of going to press - new products sent when released. Hardware available at above prices, software at at 25% off RRP (eg F29 £21.99) on production of this advert at :- 28A WESTERHAM AVENUE, EDMONTON, LONDON, N9

B2000

AT Bridge Board Turbo 68020, 68030

Monitors Multi-Sync, 1084

0705 511439

The only source ..... call us last!

Hard Drives SCSI 20...300Mb

Star Printers LC10... XB24-15

A500 BAT PACK

+ much more

Athene Computers, 16 Stoke Rd, Gosport, Star Gold Dealer, Hants. PO12 1JB

B&B COMPUTER SUPPLIES

SPECIALISTS

IN QUALITY JAPANESE 3.5" DS/DD DISKS FROM THE LEADERS IN DISK TECHNOLOGY

SONY *Bulk 3.5" DS/DD Disks*

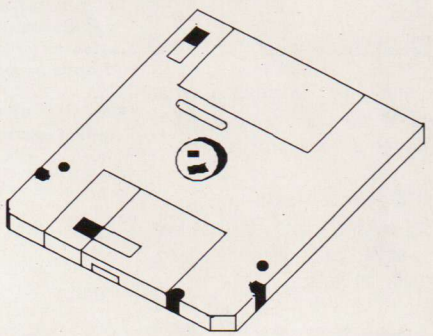
100% Certified Error Free

10	25	50	100
6.95	16.95	32.50	58.95

Disks & 80 CAP. Box Offer

12.75	22.45	37.75	63.95

80 Capacity Lockable Storage Boxes @ 5.99 ea.



AMIGA 512K EXPANSION

WITH CLOCK

49.95

CHEQUES / PO'S TO:-
B&B COMPUTER SUPPLIES
11 MEAKIN AVENUE, CLAYTON, NEWCASTLE, STAFFS ST5 4EY

Access VISA

* * * UNBEATABLE OFFER * * *

3.5" DS/DD BULK DISKS FROM A LEADING JAPANESE MANUFACTURER

100% Certified Error Free

10	25	50	100
5.95	13.75	27.50	53.00

DISKS & 80 CAPACITY BOX OFFER

11.75	19.25	32.75	58.00

PRICES INCLUDE VAT AND CARRIAGE
ALL OUR PRODUCTS ARE FULLY GUARANTEED
PHONE FOR LARGER QTY's

TELESALES HOTLINE:- 0782 626188

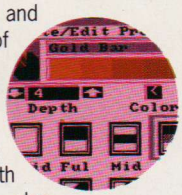
Rendering Effects

*TV*Text Pro*'s strength lies in its impressive text rendering facilities. Unless you're lucky enough to have a large collection of colour fonts, standard mono Amiga fonts can look a little dull. However, with *TV*Text Pro* you don't need to use colour fonts to produce good-looking multi-colour text, because the program includes a powerful effects generator that allows any mono font to be displayed on screen using a variety of different rendering styles and effects.

Using the rendering effects is simplicity itself. All you have to do is to choose the rendering effect required, type in your text and *TV*Text Pro* does the rest. However, unlike similar programs, text is not typed straight onto the screen. Instead, *TV*Text Pro* uses a separate text-entry window that is used to enter text a line at a time. Once you've entered the text to be used, pressing return activates the rendering process. Within a matter of seconds, your mono font is displayed in its multi-colour, rendered form. The text is treated as a brush that can be moved around and eventually pasted down using the mouse.

If the preset rendering effects aren't to your liking, then you can use *TV*Text Pro*'s powerful effects editor to create your own from scratch or to modify existing effects. The editor itself is split into distinct pages. One page handles the rendering effects for the face of the text, and others handle the outline and shadow. Even the light source direction that dictates how a shadow is cast can be altered by clicking on one of eight light-bulb icons around the screen.

If you can think of a rendering effect that could be applied to text, chances are that *TV*Text* supports it. Outlines, strobes, extrusions and metallics are only a few of the effects supported.

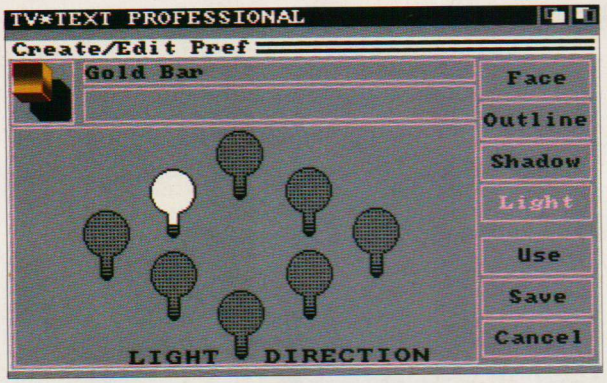


Drawing Tools

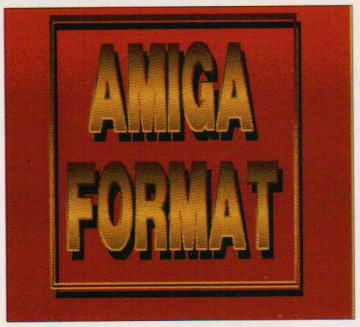
With *TV*Text Pro*, video titling doesn't just stop with titles, as the program also includes an impressive list of object drawing tools. Objects such as circles and boxes can quickly and easily be created and pasted down using the same rendering effects available with text.

If you have any logos or pictures that you wish to use as a backdrop, *TV*Text Pro* will happily accept these. Because colour palettes are never the same between one picture and another, *TV*Text* includes a very powerful 'Auto-Color' facility that attempts to match the colour palette of your IFF file to the palette currently in use. Of course, this can be switched off and the colour palette from the imported IFF file will be used instead. *TV*Text Pro* not only reads IFF files, but it will also write them. If you're happy with what you have produced and wish to use the screen with an external program, the current screen can be saved out as an IFF compatible file.

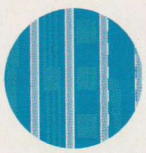
As well as using IFF pictures as backdrops, *TV*Text Pro* also includes a menu filled with options for creating attractive looking backdrops. Most immediate of these are the dithering options, but the program also allows you to use text or brushes to create wallpaper or tiled effects.



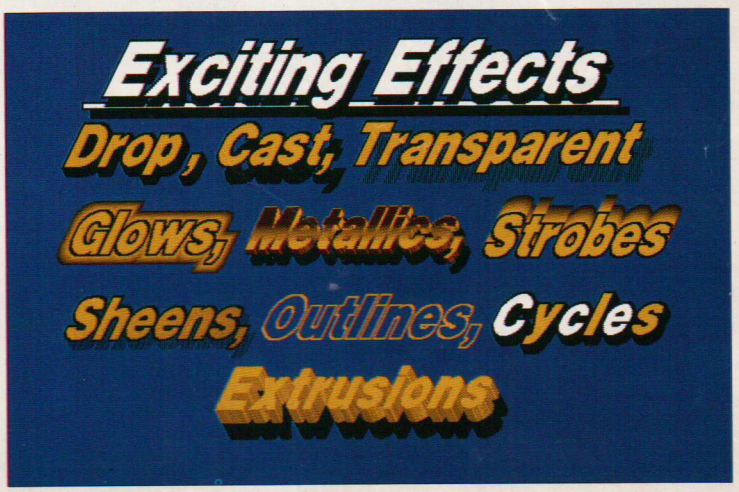
ABOVE: Altering the light source direction affects the direction in which the text shadow falls.



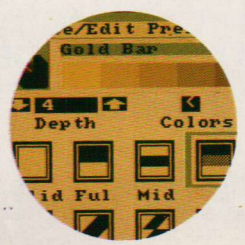
RIGHT: The brushed gold text rendering complete with a dithered background is particularly good.



RIGHT: *TV*Text Pro* comes complete with three disks filled with high-quality fonts.



RIGHT: Here are just a few of the effects that are possible with *TV*Text Professional.*



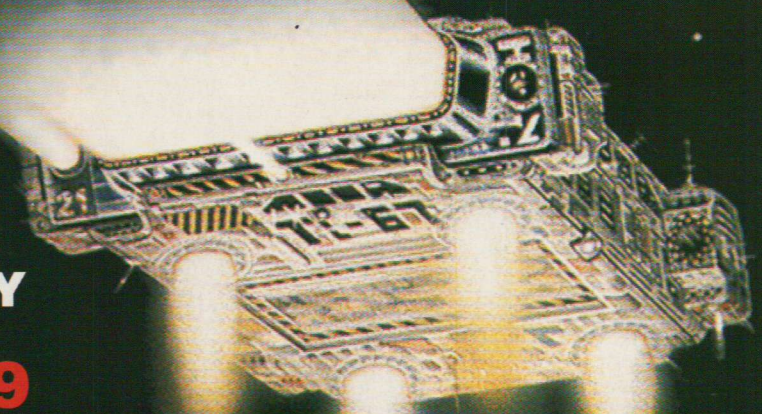
Conclusion

*TV*Text Professional* is undoubtedly a powerful program, but I just couldn't help wondering what it could do that couldn't also be achieved within a quality paint package such as *Deluxe Paint 3*. Now that *DPaint* offers fully overscanned display options, support for colour fonts and more powerful conventional font handling, there is no real reason why any display put together within *TV*Text Professional* couldn't be knocked up just as quickly in *DPaint 3*.

The advantage of *TV*Text Pro* is that it requires no artistic talent from the user as most of the work is carried out for you. If you try to carry out a similar task using *DPaint*, you're going to need to be a dab hand with the pixels to produce results that even come close to those obtainable from Zuma's package. With *TV*Text Professional*, anyone can now produce professional-looking video titles with considerable ease.

TV*TEXT PROFESSIONAL
£129.95 ■ All 1 Mb Amigas
■ HB Marketing 0753 686000

A NEW WORLD OF POWER



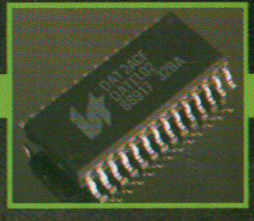
THE ANSWER TO YOUR DISK DUPLICATION PROBLEMS

FOR ONLY

£34.99

THE SYNCRO EXPRESS II IS HERE!

- SYNCRO EXPRESS IS A HIGH SPEED DISK DUPLICATION SYSTEM THAT WILL PRODUCE COPIES OF YOUR DISK IN AROUND 50 SECONDS!!
- Syncro Express requires a second drive & works by controlling it as a slave device & ignoring the ST or Amiga disk drive controller chip whereby high speeds & great data accuracy are achieved.
- Menu driven selection for Start Track/End Track - up to 80 tracks. 1 side, 2 sides.
- Very simple to use, requires no user knowledge.
- Also duplicates other formats such as IBM, MAC etc.
- Ideal for clubs, user groups or just for your own disks.
- No more waiting around for your disks to copy.
- Probably the only duplication system you will ever need!



THE LATEST CUSTOM LSI CHIP TECHNOLOGY

By using an on-board Custom LSI Chip, Syncro Express has the power to transfer an MFM image of the original disk directly to your blank disk - quickly, simply and without any user knowledge. One external disk drive is required*.

SYNCRO EXPRESS IS AVAILABLE FOR BOTH THE ST AND AMIGA SYSTEMS - PLEASE STATE WHICH REQUIRED WHEN ORDERING

WARNING 1988 COPYRIGHT ACT WARNING

Datel Electronics Ltd., neither condones nor authorises the use of it's products for the reproduction of copyright material.

The backup facilities of this product are designed to reproduce only software such as Public Domain material, the users own programs or software where permission to make a backup has been clearly given. It is illegal to make copies, even for your own use, of copyright material, without the express permission of the copyright owner, or the licencee thereof.

If you don't have a second drive we can supply SYNCRO EXPRESS together with a drive for

ONLY £104.99 (AMIGA)

ONLY £119.99 (ST)

HOW TO GET YOUR SYNCRO EXPRESS II

TELEPHONE (24 Hrs) - 0782 744707 - CREDIT CARD ORDERS

WE WILL DESPATCH YOUR ORDER QUICKLY & EFFICIENTLY TO ENABLE YOU TO START RECIEVING THE BENEFITS OF YOUR PURCHASE WITHIN DAYS, NOT WEEKS.

ORDERS NORMALLY DESPATCHED WITHIN 48 Hrs. ALL CHEQUES/POSTAL ORDERS MADE PAYABLE TO...

Access VISA

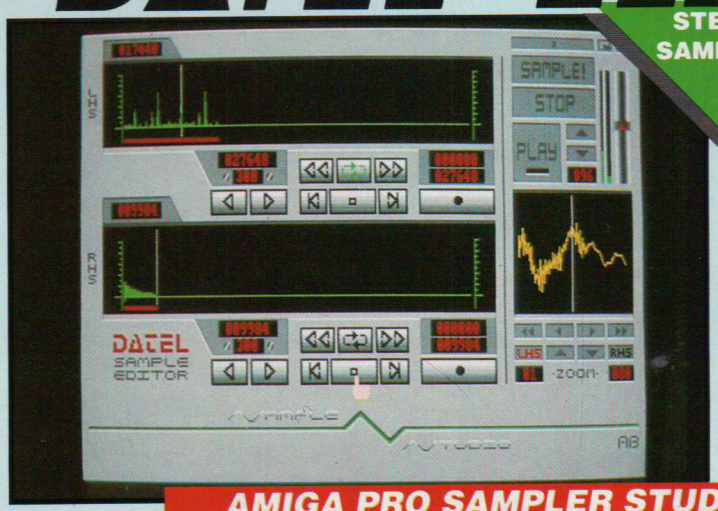
DATEL ELECTRONICS LTD.,

GOVAN ROAD, FENTON INDUSTRIAL ESTATE, FENTON, STOKE-ON-TRENT, ST4 2RS, ENGLAND

TECHNICAL/CUSTOMER SERVICE 0782 744324

DATEL ELECTRONICS

STEREO SAMPLING



AMIGA PRO SAMPLER STUDIO + DATEL JAMMER

- A top quality stereo sampling system at a realistic price.
- 100% machine code software for realtime functions.
- HiRes sample editing.
- Realtime frequency display.
- Realtime level meters.
- Files saved in IFF format.
- Adjustable manual/automatic record trig level.
- Variable sample rate & playback speed.
- Separate scroll line waveform windows & zoom function with Edit windows for fine accurate editing.
- 3D shot of sound waveform. Wave editor to design your own waveforms or adjust existing ones.
- Microphone & line input 1/4" Jack & Din connections.
- Software files can be used within other music utilities.

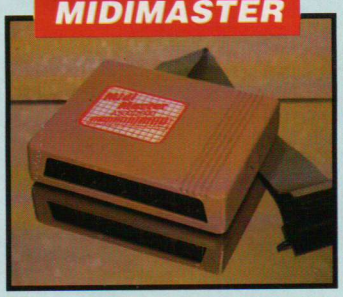
ONLY £79.99 PLEASE STATE A500/1000/2000

TO COMPLEMENT THE SAMPLE STUDIO THE DATEL JAMMER GIVES YOU A 5 OCTAVE KEYBOARD TO PLAY & RECORD YOUR SAMPLED SOUNDS

FEATURES:-

- 4 track sequencer up to 9999 events.
- Tempo & Beat controls.
- Mixer Controls on Instruments.
- Load & Save sequence.
- Works on standard IFF file sounds.

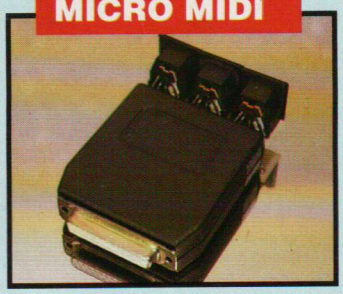
MIDIMASTER



- Full Midi Interface for A500/1000/2000 (please state model).
- Compatible with most leading Midi packages (including D/Music).
- Midi In - Midi Out x3 - Midi Thru.
- Fully Opto isolated.

ONLY £34.99

MICRO MIDI



- A simple low price Midi Interface for the A500.
- All the features found on more expensive units. Fully compatible.
- Midi In - Midi Out - Midi Thru.
- Fully Opto isolated.

ONLY £24.99

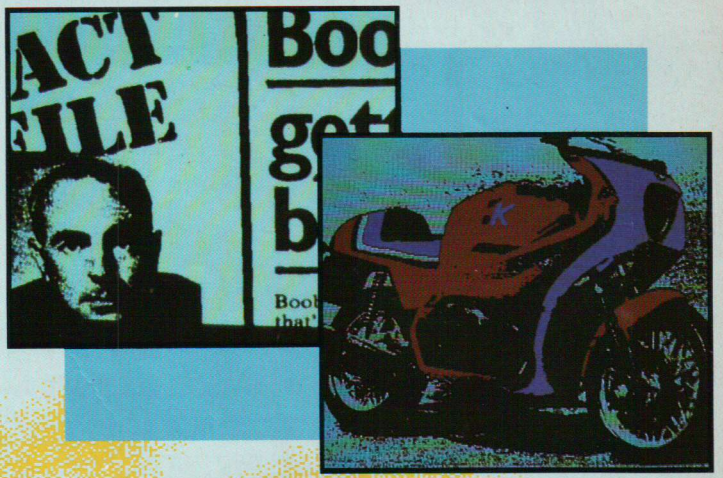
VIDEO DIGITISER

- 256 x 256 display with 16 grey levels.
- Realtime frame grab 1/50th second.
- Takes standard composite Video input from camera or Video recorder.
- Screen update 1 frame per second, single, continuous or buffered display.
- Load, Save facilities including IFF Save.
- Edit picture, cut, copy, paste and undo.
- Special effects, reverse, negative, mirror, compress, etc.
- Increase the width of the display to 320 x 256 automatically or manually.
- Plugs into the parallel port of your Amiga 1000/500/2000.
- Comes complete with its own power pack.

ONLY £89.99

GENISCAN GS4500 AMIGA

- An easy to handle Handy Scanner featuring 105 mm scanning width & 400 dpi resolution enables you to reproduce graphics & text on your computer screen.
- Adjustable switches for brightness & contrast levels. Printout for Epson compatibles.
- A powerful partner for Desk Top Publishing that allows for cut & paste editing of images etc..
- With Geniscan you have the ability to easily scan images, text & graphics into the AMIGA.
- Save images in suitable format for most leading packages including PHOTON PAINT, DELUXE PAINT, etc.



- Package includes GS4500 scanner, Interface & Scan Edit software.
- Unmatched range of edit/capture facilities simply not offered by other scanners at this unbeatable price.

SPECIAL OFFER

COMPLETE WITH PHOTON PAINT FOR ONLY £169.99

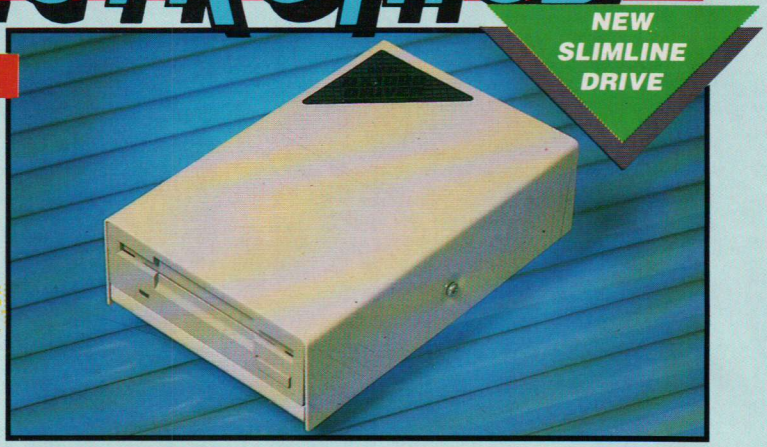
INCLUDING HARDWARE/SOFTWARE

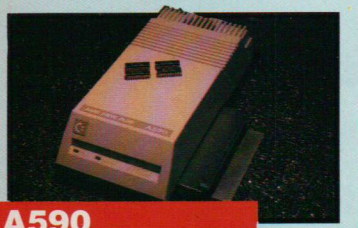
DATEL ELECTRONICS

EXTERNAL 3.5" DISK DRIVE

- Slimline extra low profile unit - very quiet!
- Top quality fully compatible drive mechanism.
- Throughport allows daisy-chaining other drives.
- A superbly styled case finished in Amiga colours.
- 1 meg unformatted capacity.
- Good length cable for positioning on your desk etc.
- Comes complete with it's own On/Off switch.

NEW LOW PRICE ONLY £74.99





A590 UPGRADES

- If you own an A590 Hard Drive, then you can upgrade it to give up to an extra 2 Megs of Ram to your system.

ONLY £69.99 FOR 512K (0.5 MEG)
ONLY £134.99 FOR 1 MEG
ONLY £259.99 FOR 2 MEGS

QUICKSHOT TURBO

- Plugs straight into your computer.
- All the features of the best selling Quickshot II plus:-
- Microswitch action for even longer life.
- Extra rugged construction. Superb styling.

ONLY £9.99 COMPLETE

512K MEMORY EXPANSION

- Now with this superb 512K Expansion unit tyou can simply plug in more memory. Bring your Amiga up to 1 Meg Ram in seconds!!
- Featuring the latest 1 Meg Fast Ram chips.
- Comes complete with dissable switch (not offered by some others, including A501 unit).
- Available with/without clock/calendar feature. Clock version has high capacity NiCad battery - never needs replacing!
- Low chip count means extra low consumption.
- High grade PCB with quality connector.
- Buy direct from the manufacturer and SAVE!
- Simply plugs into internal Ram extension slot - no knowledge at all required.

ONLY £69.99

ONLY £84.99
FOR VERSION WITH CLOCK/CALENDAR COMPLETE

ACCESSORIES

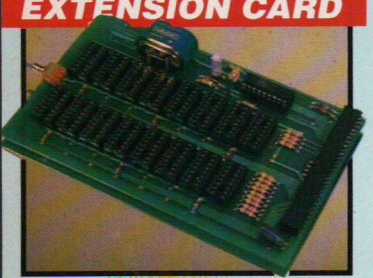
AMIGA CENTRONICS PRINTER LEAD £6.99
3.5" DISK HEAD CLEANER £3.99
A/B/C PRINTER SWITCH BOX £19.99
6" LONG MOUSE/JOYSTICK EXTENDER LEAD (DOUBLE) £4.99
100 x 3.5" DISK STORAGE BOX £8.99
25 x 3.5" D.S.D.D. DISKS .....ONLY £19.99

ICON PAINT

- A unique product to edit and produce your own individual icons.
- Allows for multi-colour (up to 16) extra large icons for use when customising workbench, disk, icons, tools, programs, etc.
- Advanced editing facilities make for fast and easy design.

ONLY £12.99

512K RAM EXTENSION CARD



- If you can obtain your own Ram chips, we can supply the card.
- Accepts 16 x 41256 D Rams.
- Available with/without clock option.
- Switch dissable feature.
- Simply plugs into Ram expansion slot.
- Fitted in only minutes - no user knowledge required.

ONLY £19.99

ONLY £34.99
FOR VERSION WITH CLOCK/CALENDAR

N.B. THESE PRICES DO NOT INCLUDE RAM CHIPS

REPLACEMENT MOUSE

- High quality direct replacement for mouse on the Amiga.
- Teflon glides for smoother movement.
- Rubber coated ball for minimum slip.
- Optical system counting - 500/mm.

Special offer - free mouse mat + mouse house (worth £7.99).

ONLY £29.99
COMPLETE

ALL ORDERS NORMALLY DESPATCHED WITHIN 48 HRS

HOW TO ORDER ...

BY PHONE	BY POST	FAX
0782 744707 24hr Credit Card Line	Send cheques/POs made payable to "Datel Electronics"	0782 744292 UK ORDERS POST FREE EUROPE ADD £1 OVERSEAS ADD £3

PRICES AND SPECIFICATIONS CORRECT AT TIME OF PRESS AND SUBJECT TO CHANGE WITHOUT NOTICE

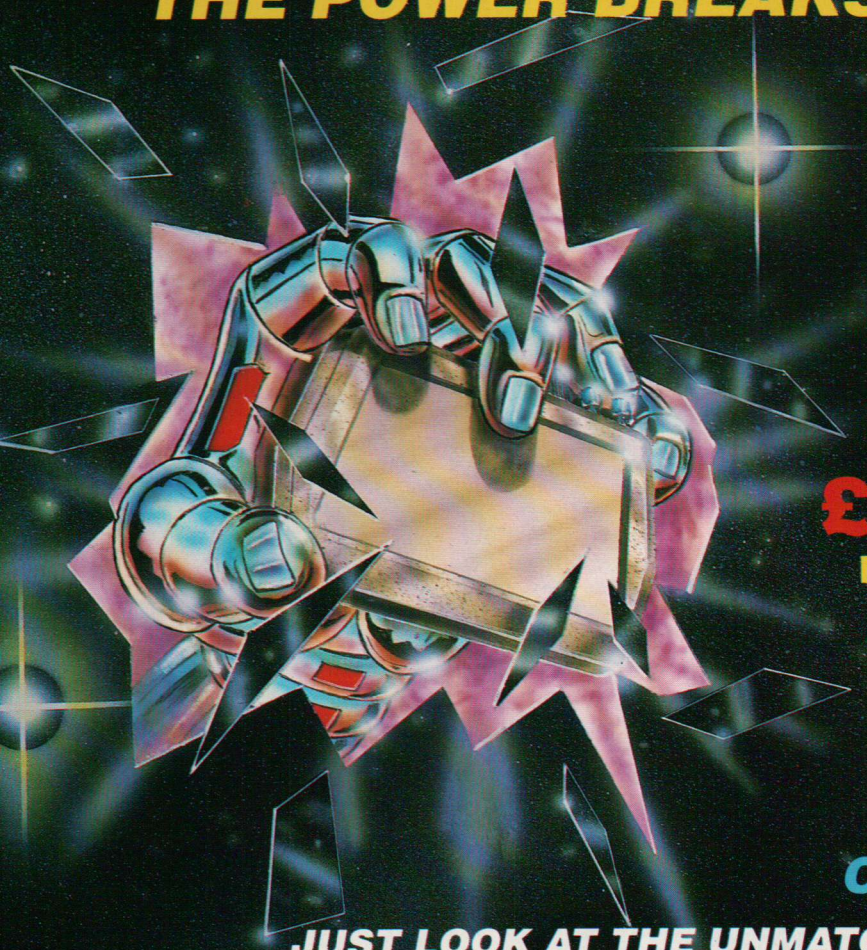
CALLERS WELCOME - Please reserve goods by telephone prior to visit.

DATEL ELECTRONICS

DATEL ELECTRONICS LTD., FENTON INDUSTRIAL ESTATE
GOVAN ROAD, FENTON, STOKE-ON-TRENT, ENGLAND.

SALES ONLY	TECHNICAL ONLY
0782 744707	0782 744324

THE POWER BREAKS THROUGH...



AMIGA ACTION REPLAY™

ONLY
£59.99
POST FREE

THE WORLD'S MOST POWERFUL FREEZER-UTILITY CARTRIDGE IS HERE

JUST LOOK AT THE UNMATCHED RANGE OF FEATURES

AMIGA ACTION REPLAY SIMPLY PLUGS INTO THE EXPANSION PORT OF YOUR AMIGA 500 AND GIVES YOU THE POWER TO FREEZE MOST ANY PROGRAM, THEN YOU CAN:-

SAVE THE ENTIRE PROGRAM IN MEMORY TO DISK
Special compacting techniques enable upto 3 programs to fit on one disk. Unique FDOS power means that the programs reload at upto 4 TIMES FASTER than Amiga Dos - even independantly of the cartridge.

UNIQUE INFINITE LIFE/TRAINER MODE
Allows you to generate more and even infinite lives, fuel, ammo etc. Perfect as a trainer mode to get you past that "impossible" level. Very easy to use.

SPRITE EDITOR
The full sprite editor allows you to view/modify the whole sprite set including any 'attached' sprites.

VIRUS DETECTION
Comprehensive virus detection and removal features to protect your software investment. Works with all presently known viruses.

SAVE PICTURES AND MUSIC TO DISK
Pictures and sound samples can be saved to disk. Files are IFF format suitable for use with all the major graphic and music packages.

SLOW MOTION MODE
Now you can slow down the action to your own pace. Easily adjustable from full speed to 20% speed. Ideal to help you through the tricky parts!

RESTART THE PROGRAM
Simply press a key and the program will continue where you left off.

FULL STATUS REPORTING
At the press of a key now you can view the machine status, Including Fast Ram,Chip Ram, Ramdisk,Drive status,etc.

PLUS THE MOST POWERFUL MACHINE CODE FREEZER/ MONITOR

MORE FEATURE THAN YOU COULD EVER NEED. HERE ARE JUST SOME;

- Full M68000 Assembler/Disassembler
- Full screen editor
- Load /Save block
- Write string to Memory
- Jump to specific address
- Show Ram as text
- Show Frozen picture
- Play resident sample
- Show and edit all CPU registers and flags
- Calculator
- Help command
- Full search feature
- Unique Cutom Chip Editor allows you to see and modify all chip registers-even write only registers
- Notepad
- Disk handling - show actual track, Disk Sync pattern Etc.
- Dynamic Breakpoint handling
- Show memory as HEX, ASCII, Assembler,Decimal
- Copper Assemble/Disassemble.

REMEMBER AT ALL TIMES YOU ARE INTERROGATING THE PROGRAM IN IT'S "FROZEN" STATE WITH ALL MEMORY AND REGISTERS INTACT.-INVALUABLE FOR THE DE-BUGGER OR JUST THE INQUISATIVE!

HOW TO GET YOUR AMIGA ACTION REPLAY...

TELEPHONE (24 Hrs) - 0782 744707 - CREDIT CARD ORDERS ONLY

WE WILL DESPATCH YOUR ORDER QUICKLY & EFFICIENTLY TO ENABLE YOU TO START RECIEVING THE BENEFITS OF YOUR PURCHASE WITHIN DAYS, NOT WEEKS.
ORDERS NORMALLY DESPATCHED WITHIN 48Hrs.
ALL CHEQUES/POSTAL ORDERS MADE PAYABLE TO...

DATEL ELECTRONICS LTD.,
GOVAN RD., FENTON INDUSTRIAL ESTATE, FENTON, STOKE-ON-TRENT, ST4 2RS, ENGLAND

AMIGA SUPERMARKET

AMIGA EXTERNAL 3.5" DISK DRIVE

* 880K FORMATTED
* THROUGH PORT
* ON/OFF SWITCH
* SLIMLINE STEEL CASE
* LOW POWER CONSUMPTION
* VERY QUIET OPERATION

ONLY **£74.99** POST FREE ☐

CUMANA 5¼" AMIGA DRIVE

* 40/80 TRACK SWITCH
* THROUGH PORT
* ON/OFF SWITCH
* AMIGA POWERED

ONLY **£129.99** ☐

REPLACEMENT INTERNAL DRIVE **£79.99** ☐
(For the Chinon mechanism only)

MONO & STEREO DIGITISERS

The best sounding (sample rates upto 70KHz), lowest priced (ready built & tested) AMIGA sound digitisers on the market AND compatible with a big range of sampler Software eg AUDIOMASTER I & II, PERFECT SOUND, SONIX, FUTURE SOUND & others. Complete with audio input lead for connection to personal stereos, radios, keyboards etc.

FREE 'SOUND WORKSHOP' DISK

A500/2000 MONO DIGITISER **£27.99** ☐

A500/2000 STEREO DIGITISER **£37.99** ☐

MINIAMP 2 STEREO SPEAKER SYSTEM

The AMIGA has the best stereo sound around — hear it through our MINIAMP 2 stereo speaker system. Two neat self contained, speakers & built-in stereo amplifier + handy remote volume control. Powered for the AMIGA (mains power pack optional). Complete with all leads — just plug-in & switch on.

MINIAMP 2 FOR A500/2000 . **£19.99** ☐

MINIAMP 2 FOR A1000 ..... **£19.99** ☐

OPTIONAL MAINS POWER UNIT **£5.99** ☐

MIDI INTERFACES — FREE MIDI LEAD

Connect any Midi instrument to your A500 or 2000 with our low cost MIDI INTERFACES. Compatible with all AMIGA MIDI SOFTWARE. Just plugs-in — no extra software, batteries or power supplies needed.
MIDI 1 has IN THRU & OUT sockets. MIDI 2 has IN THRU & OUT sockets + two unique separately switchable out or thru sockets for added versatility with additional Midi instruments & sound expanders.

MIDI 1 + FREE LEAD ..... **£29.99** ☐

MIDI 2 + FREE LEAD ..... **£34.99** ☐

EXTRA MIDI LEAD 5m ..... **£4.99** ☐

TRILOGIC TV & MONITOR LEADS

AL1 — AMIGA TO SCART TV OR MONITORS . **£11.99** ☐
mono or stereo, inc Sony, Philips, Toshiba etc.
AL2 — AMIGA TO FERGUSON 7/8PIN DIN ... **£11.99** ☐
inc MCO1, MCO5.
AL4 — AMIGA TO HITACHI 7 PIN DIN ..... **£11.99** ☐
inc Granada with RGB input.
AL6 — AMIGA TO AMSTRAD CPC COLOUR.. **£10.99** ☐
monitor with 6 pin socket. No audiolead.
AL11 — AMIGA TO MULTISYNC MONITOR ... **£10.99** ☐
with 9w 'D' socket. No audio lead.

MANY OTHER TYPES AVAILABLE.

All tv/monitor leads include audio lead except where stated, give all 4096 colours & are approx 1.5m long

LONGER LEADS TO ORDER **£4.99** EXTRA ANY LENGTH ☐

MONITOR SHARERS

Want to use two computers (or 1 computer, 1 VCR) with one Tv or monitor? NO MORE lead swapping if you connect our MONITOR SHARER switch. Your existing leads plug-in to Sharer, & lead from Sharer connects to tv or Monitor. Push button changeover switch can be used at anytime.

FOR SCART TVs & MONITORS..... **£15.99** ☐

MOUSE JOYSTICK SWITCH — NEW IMPROVED MODEL

A **must** for AMIGAS & STs — no more groping round the back, wearing out the mouse port or risking damage by not powering down before unplugging. With our Mouse/Joystick switch connect both & just push a button anytime to select which ever is needed — even when powered up.

MOUSE JOYSTICK SWITCH ..... **£14.99** ☐

PORT SHARER

Our neat PORT SHARER switch has TWO Amiga compatible 25w female 'D' sockets for printers, & audio/video digitisers. Push-button changeover switch. Amiga cable included. ***FREE CABLE***

FOR A500/2000 & STs etc .. **£21.99** ☐

PROMPT DESPATCH
FREE CATALOGUE
CALLERS WELCOME

MINIAMP 4 STEREO SPEAKER SYSTEM

Offers more power & louder speakers, with mains pack included. Separate 4 watt per channel amplifier, speakers / headphone socket + 4" dia twin cone heavy duty speakers.

ALSO FOR USE WITH ST, ARCHIMEDES, SPECTRUM + & SATELLITE TV RECEIVERS ETC.

FOR A500/1000 /2000 ..**£34.99** ☐

PLEASE ENQUIRE FOR OTHER APPLICATIONS.

MINIAMP 5 STEREO SPEAKER SYSTEM

The ultimate 3 way MINI HIFI BOOKSHELF SPEAKERS in solid alloy enclosure. Separate 5 watt per channel amplifier, speakers / headphone socket + Mains power unit & connecting lead.

ALSO FOR USE WITH ST, ARCHIMEDES & SATELLITE TV RECEIVERS ETC.

FOR A500/1000 /2000 ....**£69.99** ☐

(SPEAKERS ALONE SOLD ELSEWHERE FOR £59.99)

PLEASE ENQUIRE FOR OTHER APPLICATIONS.

LOW PRICES! FAST SERVICE!

GOOD RANGE OF AMIGA SOFTWARE STOCKED AT DISCOUNT PRICES – DETAILS IN OUR FREE CATALOGUE.

HOW TO ORDER

1) To use this ad as an order form — tick the box next to the items you wish to order, add any carriage charges (see below), fill in coupon, send in the whole page with cheque or Postal Order or quote Access or Visa number & expiry date. A copy of our catalogue will be sent with your order.
2) Or write out your order + name & address on a separate sheet if you wish.

ALL PRICES INC VAT

1) Orders under £15.00 — please add 75p
2) Orders over £15.00 post free
3) Optional express delivery — add £1.99 for small orders; or £5.00 for carrier delivery on computers, monitors, disk drives, printers.
*** FREE CARRIER DELIVERY ON ORDERS OVER £500 ***
4) Export orders despatched daily — add £1.99 extra for surface mail or £3.99 for airmail.

NAME .....

ADDRESS .....

..... TEL. NO. .....

EXPRESS DELIVERY £1.99 ☐ or £5.00 ☐
EXPORT DELIVERY £1.99 ☐ or £3.99 ☐

GOODS TOTAL £ :
CARRIAGE TOTAL £ :
TOTAL ENCLOSED £ :

BARCLAYCARD VISA

CARD No.

EXPIRY DATE

SIGNED
Address given above must be cardholders address.

Access

DUST COVERS — *DON'T LEAVE IT EXPOSED!*

A500 ..... **£5.49** ☐
A2000 — 2 COVERS .. **£9.99** ☐
3.5" EXTERNAL DRIVE **£4.99** ☐
CM8833/8852MONITOR **£6.99** ☐
1084/S MONITOR..... **£6.99** ☐
CITIZEN 120D ..... **£5.99** ☐
STAR LC10/LC10 COLOUR **£5.99** ☐
Flame retardant antistatic PVC

SAVE £1
BUY A DISK BOX PLUS ANY PACK OF DISKS AND DEDUCT £1

DISK BOXES

3.5" 40/50 DISK BOX **£8.49** ☐
3.5" 80 DISK BOX .....**£9.99** ☐
3.5" 100 DISK BOX .**£11.99** ☐
Lockable, smoked lid, antistatic

SONY DISKS

10 for ...**£12.99** ☐
25 for . **£28.49** ☐
50 for . **£55.99** ☐
100 for **£99.99** ☐
3.5" Ds/dd guaranteed plus FREE labels.

A500 BOOT SELECTOR.

Enables DF1 to be used as boot drive. (Internal fitment which may invalidate your warranty)
£13.99 ☐

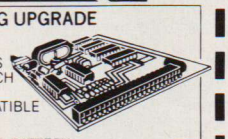
OUR TOP 10 AMIGA BOOKS

AMIGA TRICKS & TIPS....**£14.95** ☐
AMIGA DOS INSIDE OUT .**£18.45** ☐
AMIGA BASIC INSIDE OUT**£18.95** ☐
ADVANCED AMIGA BASIC**£18.95** ☐
AMIGA DOS MANUAL ....**£22.95** ☐
AMIGA DISK DRIVES INSIDE OUT.....**£27.95** ☐
AMIGA INTUITION REF MANUAL.....**£22.95** ☐
AMIGA ROM KERNAL REF EXEC.....**£22.95** ☐
AMIGA ROM KERNAL LIBRARY.....**£32.95** ☐
AMIGA MACHINE LANGUAGE.....**£14.95** ☐
AMIGA PROGRAMMERS GUIDE (COMPUTE).....**£16.95** ☐
AMIGA PROGRAMMERS HANDBOOK VOL1.....**£23.95** ☐
AMIGA PROGRAMMERS HANDBOOK VOL2 .....**£23.95** ☐

HARDWARE

A500 BATMAN PACK .....**£379.99** ☐
A590 HARD DRIVE .....**£379.99** ☐
RAM CHIPS FOR A590 TO GIVE UPTO 2 megs.....**£45.00/512K** ☐
PHILIPS CM8833 STEREO COLOUR MONITOR.....**£244.99** ☐
PHILIPS 12" MONO MONITOR FOR AMIGA .....**£84.99** ☐
STAR LC 10 PRINTER .....**£169.99** ☐
STAR LC10 COLOUR PRINTER ..**£214.99** ☐
STAR LC24 — 10 24 PIN PRINTER.....**£249.99** ☐
CITIZEN 120D PRINTER .....**£139.99** ☐
DIGIVIEW GOLD V4.0 .....**£139.95** ☐
MINIGEN GENLOCK FOR A500 .....**£109.99** ☐
MARCONI TRACKERBALL FOR AMIGA.....**£54.95** ☐
FREE LEAD WITH ALL PRINTERS & MONITORS
ALL PRICES INCLUDE CARRIAGE

A500 ½ MEG UPGRADE



LATEST LOW POWER CHIPS
ON/OFF SWITCH
EASY TO FIT
FULLY COMPATIBLE WITH A501

WITH CLOCK & BATTERY ONLY .....**£69.99** ☐

LESS CLOCK & BATTERY ONLY .....**£64.99** ☐

USEFUL ODDS & ENDS

REPLACEMENT MOUSE — FOR AMIGA, ST, AND C64.....**£29.99** ☐
MOUSE MAT - A4, NON SLIP, RED OR BLUE .....**£4.99** ☐
EXTERNAL DRIVE SWITCH FOR DF1 — NO EXPOSED PARTS .....**£8.99** ☐
4 JOYSTICK ADAPTOR FOR 4 PLAYER GAMES.....**£8.99** ☐
MODULATOR SPLITTER — CONNECT RGB LEAD & MODULATOR....**£15.99** ☐
MODULATOR EXTENSION LEAD APPROX 6" LONG.....**£8.99** ☐

PRINTER & MODEM LEADS

AMP1 — A500 PARALLEL PRINTER CABLE 1.5m .....**£7.99** ☐
AMP2 — A500 PARALLEL PRINTER CABLE 3.0m .....**£10.99** ☐
NM1 — A500 — A500 NUL MODEM CABLE 1.5m .....**£7.99** ☐
NM2 — A500 — A1000 NUL MODEM CABLE 1.5m .....**£7.99** ☐
ML1 — DEMON & DESIGNER A500 MODEM LEAD.....**£10.99** ☐
A1000 types also stocked.

AMIGA SUPERMARKET

TRILOGIC
Dept. A.F. Unit 1
253 New Works Road
Bradford BD12 0QP

TRILOGIC

Fax 0274 600150

FAST MAIL ORDER
PROMPT DESPATCH
TELEPHONE ORDERS:
0274 691115
5 LINES

ENQUIRIES
0274 · 678062

E&OE

THE WHOLE TRUTH ABOUT games programming PART 4

aliens

DAVE JONES, the ace coder behind Psygnosis' hits *Menace* and *Blood Money*, spills more secrets.

In this and next month's articles I will detail the largest part of the *Menace* code: namely, the alien movement and control routines. There will be no source with this month's instalment because I will only be describing WHAT the routines accomplish – next month will cover HOW they are accomplished, along with the source.

Movement is Life

So, we want to have aliens flying about the screen in nice patterns, attacking your ship, launching missiles at you, tracking your movements and doing all the other things that aliens do best. All the basic ingredients of a good shoot-em-up. What should spring to mind to control all of the movements is a decent data structure. As I have said before, there is no substitute for sitting down with a pen and paper and having a good think about what has to be accomplished. The best idea is to start off with the basic data that would have to be stored about an alien flying about on screen. This would probably be the following:

Alien number
Alien X coordinate
Alien Y coordinate
Alien speed

There will also have to be some way of telling the alien what to do. The simplest form would be a coordinate for it to move to. Once it gets there it would need another coordinate to go to. It would do this repeatedly until we tell it to stop, or until is has been destroyed. First, then, we will define the basic structure to describe a particular alien

```
            rsreset         ; reset the rs counter
X.Pos       rs.w    1       ; one word for the alien's x coord
Y.Pos       rs.w    1       ; one word for the alien's y coord
Sprite.Num  rs.b    1       ; a byte to hold the alien number
Speed       rs.b    1       ; a byte to hold the alien speed
```

Following this in memory would be a table of x,y coordinates for the alien tc move to in sequence. An example piece of source that moves an alien from left to right and back again could be defined as follows:

```
dc.w=   0,100               ; start alien at x=0, y=100
dc.b    6,2                 ; use alien number 6 with a speed of 2

dc.w    320,100,0,100,$7fff ; move to 320,100 then to 0,100
                            ; the $7fff is an end marker
```

This basic structure will provide only limited control of an alien, so it's time to add a few more features. Most of the aliens are animated (Figure One, overleaf, shows an eight-animation *Menace* alien) so as well as defining the alien number, we also have to define its current animation number. Note that in games an animated object is usually given a number that relates simply to the base address of that alien. The number of animations it actually has is stored separately. This makes changing the number of animation frames very simple, because the alien numbers all remain exactly the same. So we will also have to store the number of animations the alien contains somewhere in the structure as well as its current animation number:

```
Anim.Num    rs.b    1       ; a byte to hold the current animation
Num.Anims   rs.b    1       ; a byte to hold the maximum anims
```

The basic idea, then, is that for each game cycle we increment the

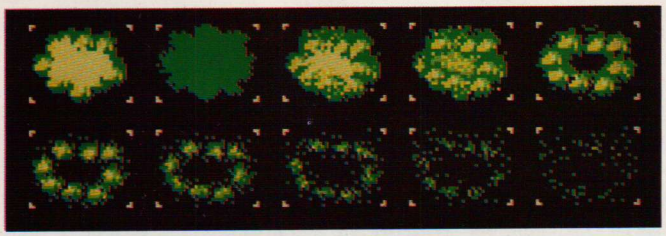


FIGURE ONE:
AN EIGHT-ANIMATION *MENACE* ALIEN

Anim.Num (0,1,2,3,... etc) until it hits the value in Num_Anims when we would reset it back to zero. Straight away a small problem crops up in that we may not want to animate an alien every game cycle (1/25th of a second for *Menace*). In fact very few of the aliens animate every game cycle as this is a little fast, so we will also have to introduce an animation delay into the structure:

```
Anim_Delay          rs.b 1      ; a byte to hold the animation delay
```

The method of incrementing the Anin.Num until it hits a maximum then resetting it to zero is termed a WRAP animation as it wraps around to zero. In some cases we may want the animation numbers to increase to a maximum and then decrease to zero: this is termed an UPDOWN animation. To indicate whether or not to use a wrap or updown type of animation requires us to store a single bit of information. There are many occasions in the controlling of an alien that only requires a simple on/off definition. These tend to be grouped together in the data structure and called a MODE word or byte. This is simply a collection of bits used for general-purpose description of simple on/off controls. This is now added to the structure:

```
Mode            rs.b 1          ; single byte to hold eight flags

UpDownequ       1<<3            ; define the updown flag as bit 3
```

Note the equate of which bit in the control byte reflects the animation type. NEVER use 'magic numbers' in your source such as the statement

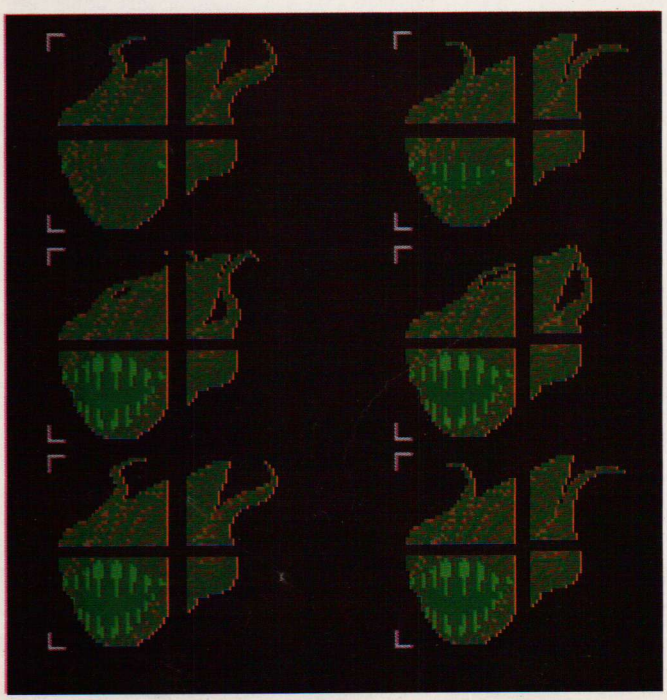
```
    btst    #3,Mode
```

This in no way tells you what bit 3 signifies: you may remember as you are working on the project, but what about in a year's time when you come back to re-use some of this source? The above should have been written as

```
    btst    #UpDown,Mode
```

which is very clear and has the advantage that to change the actual bit number that the UpDown flag is set at requires only the EQU statement above to be changed. Always make the assembler do as much work for you as possible. Right, lecture mode OFF, let's introduce the next element into the structure.

FIGURE TWO:
FOUR SPRITES MAKE ONE LARGE SPRITE



Reason for Living is Dying

Most aliens' sole purpose for existing in a shoot-em-up is to be blasted. Do we want them to die after being hit once, though? For most, I think not. We will have to introduce a variable to define how many times we can fill an alien with laser shot before it explodes:

```
Hits_Num rs.b       1           ; number of shots an alien can take
                                ; $ff for infinite
```

As you can see a certain value has been introduced that makes some aliens indestructible. This is not used very often but is handy, say for some asteroids tumbling across the screen that you simply have to dodge and cannot destroy (anybody who reached Level 6 of *Menace* will know exactly what I mean!)

As far as describing the alien, that is about it. I have made no mention of the size of the alien in the structure as in *Menace* all aliens were 32 x 24 pixels in size. To make larger ones simply meant moving a few about as though they were joined together (see Figure Two). It certainly makes life simpler handling only one size of alien, though you do lose out a little on flexibility.

Back to Motion

Now back to the movement of the aliens. The basic GOTO command was implemented simply by defining pairs of x,y coordinates for the aliens to head for – they continued until they were destroyed or until a special coordinate value told them to stop.

This is very inflexible for performing, say, a small circle movement. We would have to define goto points for many points on the circumference of the circle. This may take quite a while to work out, and would have to be recalculated for any other aliens at different x,y coordinates on the screen that wanted to perform a similiar circle.

One simple way of overcoming this problem is to use a relative coordinate system whereby rather than interpreting the x,y values as goto coordinates, they are simply offsets that are added to the present x,y coordinate. This allows us to define a shape as a set of offsets from a base point, the base point being arbitary. This should be able to be used in conjuction with the goto points so we can switch freely between absolute and relative movement at any time.

It is apparent that some form of control data has to be added into the coordinate list to switch between relative and absolute or one may be mistaken for the other. What basically happens in *Menace* is that movement always starts off in absolute mode, but at any time we can switch to and from relative mode by making one of the coordinate values a control word. For example to goto the middle of the screen, then move in a triangle shape, then return again may look something like:

```
    dc.w  160,100       ; goto 160,100
    dc.w  OffsetMode    ; switch to offset mode
    dc.w  2,2           ; move 2 along and 2 down a few times
    dc.w  2,2
    dc.w  2,2
    dc.w  -2,0          ; move 2 back a few time
    dc.w  -2,0
    dc.w  -2,0
    dc.w  2,-2          ; move 2 along and 2 up a few times
    dc.w  2,-2
    dc.w  2,-2
    dc.w  OffsetMode    ; toggle back to absolute mode
    dc.w  0,100         ; back to the start x,y
```

Control words have certain bits set that distinguish them from a goto coordinate (not much point in, say, having 32768 as a coordinate with a screen width of 352 pixels). What we end up with is a small language that describes the path aliens follow. We can go on adding control features

AMIGA SOUNDBLASTER

Everyone knows that the Amiga has excellent sound capabilities. Televisions and monitors do not produce hi-fi sound output, so until now it has been impossible to connect your Amiga to an amplifier to appreciate the sound quality. The Amiga SOUNDBLASTER is a small amplifier that comes complete with two high quality 50 watt 3-way speakers. It is easily connected to your Amiga and adds a new dimension to all your games.

The Amplifier
This unit has been designed and built in the UK specifically for use with the Amiga. It uses the latest microchip technology to produce a hefty 5 watt per channel of high quality sound. Twin volume controls allow both volume and balance to be set and a LED indicates that the unit is in operation. The amplifier connects to the Amiga via the monitor socket. It also has a through connector to allow the amplifier and a monitor to be plugged in together.

The Speakers
The speakers that come with the SOUNDBLASTER are 50 watt 3 way speakers and are contained in an attractive hi-tec enclosure. The speakers sound as superb as they look thanks to a powerful 3" woofer for all the low tones, a 2" mid-range speaker for all the middle notes and a tiny 1" tweeter for all the top of the scale tones. The speakers connect to the amplifier via 2.5M of cable.

AVAILABLE NOW ONLY £44.99 + £2 for postage

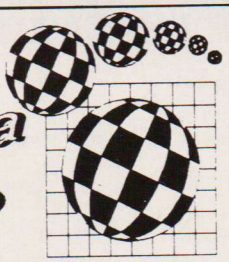
FREE STEREO HEADPHONES
We are giving away a pair of stereo headphones free with every SOUNDBLASTER for a limited period. These headphones plug into the SOUNDBLASTER allowing you to listen without disturbing the neighbours!

The SOUNDBLASTER package is completed with a mains adaptor to power the amplifier and full instructions.

Payment is accepted over the telephone with VISA & ACCESS cards or through the post by cheque, postal order, eurocheque, bank drafts etc.

Send to:-
SIREN SOFTWARE, 84-86 PRINCESS STREET, MANCHESTER M1 6NG

? ? Do you get the best out of your Amiga ? ? ?



Amiga Amiga Amiga Amiga Amiga Amiga

The U.K. Amiga Users Group is the Largest Amiga only user group in the world. We are now in our fourth year and are the most established and experienced Amiga user group in the U.K. We have over 1,500 members and are able to offer an unrivalled level of support. Our members receive a 60+ page bi-monthly newsletter packed with articles of interest at all levels, we have a massive library of public domain software and run an Amiga only bulletin board. We offer our members superb discounts on all hardware,software and books. The U.K.A.U.G. is the group to belong to regardless of your age or level of experience, our aim being to provide support and encouragement to everyone. Why not join us and start to appreciate what Amiga computing is all about.

For more info' send a stamped addressed envelope or telephone...
The U.K. Amiga User Group
144 Charles Street
LEICESTER LE1 1LB
(0533) 510066

Matrix Hire Makes the Software World Your Oyster !

Join the Matrix and enjoy access to our huge library of the most popular titles. For Amiga, Atari ST, Commodore and Amstrad machines.

For full details send large SAE stating your machine to:-

Matrix Leisure Club, Dept AM/F,
107 The Hyde, Church Park, Ware,
Herts, SG12 0EU

Free Membership for quick replies.

MAKE YOUR AMIGA EARN

Yes making money with your Amiga becomes incidental when you know how. Your micro is, if only you knew it, a gold mine. The size and make is irrelevant. Make the initial effort **NOW** by starting your own

HOME BASED BUSINESS

This may be the most important move you will ever make!

REMEMBER: You'll never get rich by digging someone else's "ditch". Anyone in the country, including YOU, can become very rich in a relatively short period of time just by doing a few basic things! It's more rewarding than playing games. The benefits are many and varied. Full or part time. For **FREE** details send S.A.E. to:

HOME BASED BUSINESS

31, PILTON PLACE (AF 10)
KING AND QUEEN STREET,
WALWORTH, LONDON SE17 1DR

ocean®

AN INVITATION TO JOIN THE WINNING TEAM

Ocean ... Europe's leading software publisher is expanding its development facility once again.

We are seeking experienced programmers and graphic artists to join the in-house team working on the most exciting projects.

Don't delay – if you're practiced in Z80, 6502, 8086 or 68000 assembly language or have the creative ability to interpret visual images into computer graphics this could be the career opportunity of a lifetime.

Successful applicants can be assured of an excellent salary and generous productivity bonus.

Please contact Gary Bracey on 061-832 6633 or Fax 061-834 0650.

PHONE ANYTIME FOR FAST FRIENDLY SERVICE

AMIGA A500 BATMAN PACK 1

512K RAM Computer - Built-in 1Mb Disk Drive, Workbench 1.3, Mouse, A520 TV Modulator, Speech Synthesis. Deluxe Paint II Art Package. New Zealand Story Game. Interceptor Flight Sim. & Batman the Movie Basic 1.3 Disk, Extras and Tutorial Disk. Introduction to the A500. All leads and manuals even a 13A plug!

£359.99

AMIGA A500 BATMAN PACK 2

all as PACK ONE
PLUS TEN MORE TOP SOFTWARE TITLES
Insanity Flight, Mercenary, Amegas, Wizball, Buggy Boy, Barbarian, Terropods, Mercenary 1, Art of Chess, Ikari Warriors plus PHOTON 2 Art Package with Animation
TOTAL VALUE OF EXTRA SOFTWARE £229

£379.99

PRINTERS

STAR LC10	£155.99
STAR LC10 COLOUR	£199.99
STAR LC10/2 NEW MODEL	£189.99
STAR LC24/10 24 PIN	£259.99
PANASONIC KXP 1081	£159.99
PANASONIC KXP 1180	£189.99
PANASONIC KXP 1124 24 PIN	£289.99

All our printers are UK Specification not converted grey imports. Fully guaranteed by the Manufacturers and include lead, cable and plug.

RIBBONS

LC10 Black - Branded	£3.50
LC10 Coloured - Branded	£8.90
CASPELL Ribbon Refresh Ink in an Aerosol - Simple to use	£8.95
THERMAL RIBBON - Prints your designs to paper then Iron on TeeShirt etc.	
LC10 Black	£13.80
LC10 Colour	£19.55
Getting the Most from Your Printer by BABANI - 84 Pages	£2.95

RING FOR DETAILS OF PRINTER PAPER AND LABEL PRICES

SPECIALS

EXPAND YOUR AMIGA WITH GENUINE COMMODORE PERIPHERALS

A501 512K RAM Pack with Clock	£109.99
AMIGA A1010 External Disk Drive	£85.99
ROM Version 1.3 Kickstart ROM with Fitting Instructions	£28.99
ENHANCER - Consists of Workbench 1.3 and Extras 1.3	£13.99

1MB - 3.5" DISK DRIVES

CUMANA CAX354 Disk Drive	£89.99
AMIGA A1010 Disk Drive	£85.99
POWER DRIVE Disk Drive	£76.99

HARD DISK DRIVES

AMIGA A590 20Mb Plug In Drive	£359.99

MIDI EQUIPMENT

DATEL Midi Master Interface	£28.79
Midi Leads ..... Per Pair	£5.98

MONITORS

COMMODORE 1084S 14" Stereo Col.	
PHILIPS CM8833 14" Stereo Col.	

Ring for Price and Availability.

MODEMS

PACE Linnet Modem	£123.99
PACE Linnet 1200 Modem	£207.99
AMIGA to MODEM Cable	£14.95

MOUSE/TRACKBALL

KEMPSTON 2 Button Mouse	£26.49
AMIGA 1352 Mouse	£32.49
MARCONI RB2 PC9 Trackball	£51.99

JOYSTICKS

KONIX Speedking	£12.95
KONIX Navigator	£14.95
CHEETAH 125+	£8.99
ZIPSTICK Super Pro	£13.95
COMPETITION Pro 5000	£10.79
CHEETAH Star Probe	£14.99
CHEETAH Mach 1	£10.99

ACCESSORIES

AMIGA Monitor Dust Cover	£4.99
AMIGA 500 Keyboard Dust Cover	£4.99
STAR Printer Dust Covers	£4.99
14" Mon. Anti Glare Screen Cover	£19.99
Monitor Tilt & Swivel Stand	£19.99
Mouse Mat	£4.99
Mouse Bracket (to Hold Mouse)	£2.99
Furry Mouse House	£7.25
Joystick Ext. Lead 2.5 Metres	£4.95
Printer Cable AMIGA to Printer	£5.99
Twin Joystick/Mouse Ext 6" Lead	£5.99
3.5" Disk Drive Head Clean Kits	£5.99
Copyholders A4 Document Holder	£15.99
Control Centre - Sits over Amiga as Monitor Stand & Store - Metal	£45.95
40 Disk Holder Lockable, top qual	£5.99
80 Disk Holder Lockable, top qual	£10.99

DISKS - FULLY GUARANTEED BULK DISKS 3.5"all with LABELS.

Pack of 10	£6.99
Pack of 10 in plastic case	£7.99
Pack of 20	£12.99
Pack of 50	£29.99

Pack of 20 in Our Top Quality Lockable 40 Disk Holder £18.49

Spare Labels Asstd. Colours 60 for £1.00

BATMAN GAMES PACKS

Batman - The Movie
New Zealand Story
F18 Flight Interceptor
DeLuxe Paint II

} Special Pack Price £34

SPECIAL
512k MEMORY EXPANSION RAM PACK
Plus free Dungeon Master 1 Meg Game. Game worth £24.99 and all packed together making a great package.
SPECIAL PRICE £79.99

AMIGA BOOKS

Advanced Amiga Basic	£17.99
3D Graphics Programming in Basic	£17.49
Amiga Assembly Language Program	£10.49
Amiga Basic - Inside and Out	£17.49
Amiga C for Advanced Programmers	£30.99
Amiga C for Beginners	£17.49
Amiga Disk Drives - Inside and Out	£25.99
Amiga DOS - Inside and Out	£17.49
Amiga DOS Manual 1.2 - 2nd Ed	£21.99
Amiga DOS Quick Reference Guide	£12.99
Amiga DOS Reference Guide	£14.39
Amiga for Beginners	£12.49
Amiga Handbook	£15.39
Amiga Machine Language - New Ed.	£14.39
Amiga Machine Lang. Program Guide	£20.99
Amiga Programmers Handbook	£22.99
Amiga Programmers Handbook Vol. 2	£22.99
Amiga Tricks and Tips	£14.39
Amiga More Tricks and Tips	£17.49
Amiga Users Guide	£17.95
Amiga DOS Manual	£21.95
Amiga DOS Express & Disk	£29.99
Computes First Book of the Amiga	£16.29
Computes Amiga Programmers Guide	£16.29
Amiga System Programmers Guide	£29.99
Beginners Guide to the Amiga	£16.29
Elementary Amiga Basic	£14.39
Inside Amiga Graphics	£16.29
Inside the Amiga with C - 2nd Ed	£19.99
Kickstart Guide to the Amiga	£13.39
Kids and the Amiga -Kids 8 to 80	£15.39
Programmers Guide to the Amiga	£22.99
Using Deluxe Paint II	£17.95
Becoming an Amiga Artist	£17.49

EDUCATIONAL & CHILDRENS

Fun School 2 - Under 6	£13.49
Fun School 2 - 6 - 8 years	£13.49
Fun School 2 - 8 and over	£13.49
Micro English (GCSE)	£19.99
Micro Maths (GCSE)	£19.99
Spell Book	£15.99
Things to do with Numbers	£15.99
Things to do with Words	£15.99
BBC Emulator	£39.99
Chicken Little	£24.99
Three Little Pigs	£24.99
The Ugly Duckling	£24.99
Little Red Hen	£24.99
Aesop's Fables	£24.99
The Three Bears	£24.99
Noah's Ark	£24.99

SERIOUS SOFTWARE

Kind Words V2.0	£34.99
Scribble Platinum	£35.99
Pen Pal	£99.99
Word Perfect 4.1	£159.99
Word Perfect Library	£84.99
K-Data	£34.99
Superbase Personal	£41.99
Superbase Personal 2	£69.99
Superbase Professional	£164.99
K-Spread 2	£41.99
Digicalc	£27.99
The Works - Platinum Edition	£139.99
Superplan	£67.99
VIP Professional	£69.99
Home Accounts	£20.49
Cashbook for the Small Business	£35.99
Digita System 3	£39.99
Personal Accounts Plus	£21.95
Personal Tax Planner	£27.99
On Line	£35.99
Page Setter	£69.99
Publishers Choice	£72.99
Starter Kit	£49.99
Home Office Kit	£104.99
Assem. Pro	£49.99
BBC Emulator	£39.99
Transformer - PC Emulator	£24.75
GFA Basic 3	£46.99
Argasm	£44.99
HiSoft Basic	£59.99
Lattice C V5.0	£156.99
AMOS the Game Creator	£37.99
Trip-A-Tron	£22.99
DeLuxe Paint III	£55.99
DeLuxe Print II	£34.99
DeLuxe Video III	£59.99
Director, The	£41.99
Movie Setter	£49.99
Photon Paint 2.0	£35.99
Photon Video Cell Animation	£67.99
Pixmate	£34.99
Print Master Plus	£35.99
Adrum	£27.99
Aegis Audiomaster II	£49.99
Instant Music	£17.99
DeLuxe Music Construction Set	£50.99
Dr T's Midi Recording Studio	£39.99
Music X	£169.99
KCS	£145.99
Disc 2 Disc	£25.99
Disk Master	£34.99
DOS 2 DOS	£26.99

LEISURE SOFTWARE

Came from the desert data disk	£10.99
Blade Warrior	£17.99
Black Tiger	£17.99
Bomber	£21.59
California Games	£14.49
Conqueror	£17.99
Chess Champion	£21.69
Chrono Quest 2	£21.69
Circus Attractions	£14.49
Colorado	£17.99
Cyberball	£14.99
Dragons Lair 2	£31.99
Damocles	£17.99
Debut	£17.99
Dragons Breath	£21.59
Elite	£17.99
Full Metal Planet	£16.99
F29 Retaliator	£17.99
Final Battle	£17.99
Gin and Cribbage	£19.99
Gravity	£17.99
Hammerfist	£17.99
Hot Rod	£17.99
Hoyles Book of Games	£24.99
Infestation	£17.99
Ivanhoe	£17.99
Jumping Jackson	£14.99
Kid Gloves	£17.99
Last Ninja 2	£17.99
Leisuresuit Larry 2	£24.99
Leisuresuit Larry 3	£24.99
Matrix Marauders	£14.99
Manchester United	£16.75
Midwinter	£17.99
Ninja Spirit	£17.99
Oil Imperium	£16.79
P47 Thunderbolt	£17.99
Pirates	£17.99
Rainbow Islands	£17.99
Renaissance	£14.99
Sonic Boom	£17.99
Space Rogue	£21.49
Sim City	£21.49
Sim City - Terrain Editor	£10.99
Super Cars	£13.49
Space Ace	£31.99
The Colony	£21.49
The Lost Patrol	£17.99
Theme Park Mystery	£17.99
Triad 3	£21.49
TV Sports Basketball	£21.99
TV Sports Football	£21.99
Warhead	£17.99
World Boxing Manager	£13.49
X-Out	£14.99
Xenomorph	£17.99

All prices INCLUDE VAT and DELIVERY - All items despatched within 24 hours of cleared payment subject to availability. Ring for details of Next Day Delivery Service. Ring or write for prices and details of any item not listed.

AUDITION COMPUTER SERVICES,
Shop at: 9A St. Peters Street, Stamford, Lincs, PE9 2PQ.
Come and browse or send cheques payable to A.C.S.
Telephone 0780 55888 Shop Hours - 0780 720531 Out of Hours.

Access VISA

that make the path data more compact yet more powerful. The offset mode will set a bit in the MODE byte to indicate when it is in offset mode.

Memory Economy

To cut down the amount of data required to describe a complex path (like a large ellipse formed from offsets) it would be ideal to be able to branch to some other path data, and then return after executing so many of its commands. The triangle path above, for instance, requires 40 bytes for the offset data. If we required 12 aliens to perform the triangle movement, but at different coordinates on the screen, we only want to define the offset data once, and have the rest of the aliens branch off to that data inbetween executing their own path data. Menace has a GOSUB command in the path data for this purpose. The gosub command passes over to the new offset data, then at the end of the data is the equivalent of a RETURN command which returns control back to original path data. The above could be written as:

```
        dc.w    160,100             ; goto 160,100
        dc.w    Gosub,Newpath-*     ; branch to some new data
        dc.w    0,100               ; back to the start x,y


Newdata dc.w    OffsetMode  ; switch to offset mode
        dc.w    2,2         ; move 2 along and 2 down a few times
        dc.w    2,2
        dc.w    2,2
        dc.w    -2,0        ; move 2 back a few times
        dc.w    -2,0
        dc.w    -2,0
        dc.w    2,-2        ; move 2 along and 2 up a few times
        dc.w    2,-2
        dc.w    2,-2
        dc.w    OffsetMode  ; toggle back to absolute mode
        dc.w    Return
```

If we had 12 similar paths to the above the memory required would now be drastically reduced.

More Memory Economy

Another useful memory saver is a FOR type contruct that allows any part of the path data to be repeated a set number of times. Imagine trying to move a series of aliens in a 'stepping' motion whereby they move, say, along 16 pixels then down 16 pixels, achieved by:

```
    dc.w  OffsetMode
    dc.w  4,0
    dc.w  4,0
    dc.w  4,0
    dc.w  4,0
    dc.w  0,4
    dc.w  0,4
    dc.w  0,4
    dc.w  0,4
```

The above performs one step, but if we wanted to repeat this 10 times, it would normally mean repeating the data 10 times or using many GOTO statements – but, yes you've guessed it, a loop function was implemented: simply appending the command

```
    dc.w  DoLoop
```

to the end of the data will cause the last xx bytes of path data to be repeated so many times. This caused two new items to be added to the alien structure, namely

```
Loop_Offset     rs.b 1    ; the number of bytes to loop back
Loop_Count      rs.b 1    ; how many loops to perform
```

This limits the loop command to only allowing one size of loop in each individual path, although this restriction was not noticed as multiple loops were never required.

Other Tweaks

A PAUSE function was added that allowed an alien to pause at a specific point for any length of time. A simple function but used quite often:

```
    dc.w  Pause,PauseValue ; the Pause value is in 1/25 seconds
```

A SEEK mode was added that allowed an alien, at any time, to start to track your ship and try to collide with it to reduce your shield. This is worked similarly to the pause function with a count specifying how long to seek your ship before carrying on with the rest of the path data:

```
    dc.w  Seek,SeekCount      ; seek ship for 1/25 * SeekCount secs.
```

Related to the seek command above is the FIRESEEK command which allowed one alien to start another path. This was used to allow aliens to fire missiles that used the seek mode:

```
    dc.w  FireSeek,SeekCount ; start a seek path from this alien
```

To finish off the command set some additional simple commands that came in useful were added. These are:

ChangeSprite – allowed you to change the sprite number at any time. Useful for transforming aliens into other types.

ChangeSpeed – quite obvious this one. Slow moving sprites can be given a quick turbo boost to attack the ship.

ChangeAnim – allows manual changing of the animation number. Used to mimick, say, turning a corner at any point on the screen

And that, basically, is that. Table 1, below, lists the full data structure for an alien path. Hopefully you can see the benefit of designing such a control system for moving objects about. It need not necessarily only be used in a shoot-em-up style game but can relate to many styles of game. It soon becomes quite simple to add more powerful commands to the code, which results in the code being useful in many more projects.

Now you know what the commands do – next month I will present the source and explain how they are accomplished. ■

TABLE 1
FULL DATA STRUCTURE

```
    rsreset
Next.Path       RS.W    1   offset to the next path
X.Pos           RS.W    1   current x position
Y.Pos           RS.W    1   current y position
Kills.What      RS.W    1   kills others aliens if dead (0-11)
Table.Offset    RS.W    1   the current table offset
Sprite.Num      RS.B    1   sprite number
Anim.Num        RS.B    1   animation number
Anim.Delay      RS.B    1   delay in 1/25th secs, dynamic copy
Anim.Delay2     RS.B    1   static copy to refresh the above
Speed           RS.B    1   speed in pixels
Pause.Count     RS.B    1   dynamic pause counter
Mode            RS.B    1   flags, see bleow
Loop.Offset     RS.B    1   loop offset in bytes (-ve)
Loop.Count      RS.B    1   dynamic loop count
Hits.Num        RS.B    1   number of hits to kill
Num.Anims       RS.B    1   number of animations
Seek.Count      RS.B    1   dynamic seek count
Table.Size      RS.B    0
```

* This is followed by x,y bytes to move to (always even) with command

* codes inserted to alter the control and movement.

```
*   Mode bits
    Offset.Mode     equ     1<<0    set when in offset mode
    Seek.Mode       equ     1<<1    set when in seek mode
    UpDown          equ     1<<3    set when updown
                                    animation
    AnimUpDown      equ     1<<4    set to animate up,
                                    reset down
    HeatSeekPath    equ     1<<5    set to signify a
                                    heatseeker
```

ATARI ST and AMIGA

Sixteen Bit Superdeals from the Sixteen Bit Specialists!

CUSTOMERS PLEASE NOTE! When comparing prices remember ours include fast delivery by courier.

NEW!!

520STE Power Pack

£359.00

Inc. VAT and Next Day Delivery

NEW STE

Power Pack includes:

★ 520STE 512K Keyboard with Built-in 1 Megabyte disk drive and TV Modulator
★ 4096 Colour Palette
★ 8 Channel digital stereo sound
★ 4 Joystick Ports
★ Over £550 worth of games software, including OutRun, Gauntlet 2, R-Type, Space Harrier, Super HangOn and 16 more Top Games
★ Organiser Business Software including WORDPROCESSOR, SPREADSHEET and DATABASE
★ First BASIC and First Music Utility Software
★ FREE JOYSTICK AND FREE MOUSE MAT WORTH £4.95
★ All leads, manuals PLUS MOUSE and free mains plug!

REMEMBER! Many ST's do not come with BASIC - ours come with ST BASIC REV D by Metacomco

520STE Explorer Pack

£279.00

NEW STE

★ Explorer Pack includes 520STE 512K Keyboard with built-in 1 Megabyte Disk Drive and TV Modulator.
★ 1 FREE Game, ST Tutorial and METACOMCO Basic worth £25.00.
★ All leads, Manuals PLUS MOUSE and FREE Mains Plug!
★ Free mouse mat worth £4.95.

1040STE BUSINESS PACK

£479.00

★ Includes the new 1 megabyte 1040STE keyboard plus over £200 worth of business software including WORD UP wordprocessing software, featuring glossary and mail merge, K-Spread 3.0 Spreadsheet and SUPERBASE PERSONAL database software. Also includes Metacomco BASIC Mouse pad, all Leads, Manuals and Mouse
★ 1040STE keyboard without software **£439.00**

MEGA 1 BUSINESS Pack

£549.00

Features:

★ Separate Keyboard and System Unit
★ Inc. all software supplied with 1040 STE Business Pack
★ Blitter chip installed for faster graphics

Inc SM124 Mono Monitor.....£628.00

AMIGA A500 BAT GAMES PACK

£399.00

Inc. VAT and Next Day Delivery

NEW!

BAT Games Pack includes:

★ Amiga A500 512K Keyboard with Built-in 1 Megabyte disk drive.
★ Free TV modulator worth £24.99 allowing you to use the Amiga with a normal TV.
★ DELUXE PAINT II GRAPHICS PACKAGE.
★ PHOTON PAINT II graphics package with animation worth £70.00.
★ FREE, only-just-released BATMAN - THE MOVIE games software.
★ NEW ZEALAND STORY arcade games software.
★ F16-INTERCEPTOR - amazing 3D flight simulator software.
★ A further £230 worth of Games Software, including BUGGY BOY, MERCENARY, BARBARIAN, WIZBALL & six more games.
★ FREE JOYSTICK, MOUSE MAT AND 10 BLANK DISKS.
★ Amiga BASIC, Amiga EXTRAS 1.3, Workbench 1.3 PLUS the Amiga Step by Step Tutorial.
★ All leads, manuals PLUS MOUSE and mains plug!

AMIGA 1 MEG BAT GAME PACK

£529.00

NEW!

1 Meg Bat Games Pack includes:

★ Fitted 1 Megabyte Memory Expansion + Real Time Clock Card
★ Everything listed for the A500 Bat Game Pack
★ DRAGON'S LAIR 1 MEG MEGAGAME!

AMIGA A500 CLASS OF THE 1990'S BUSINESS + EDUCATIONAL PACK

£549.00

FEATURES:

★ Amiga A500 + TV Modulator
★ Midi Interface + Software
★ Kind Words II word processor
★ Page Setter DTP
★ Super Base Personal Database
★ Maxiplan 500 Spreadsheet
★ Amiga Logo, BBC Emulator, Deluxe Paint II
★ Mouse mat, 10 blank disks and disk wallet

ACCESSORIES

Quickshot II Turbo Joystick	£9.95	Branded Memorex 3.5" DSDD Disks	
Competition Pro 5000 Joystick	£13.95	Box of 10	£13.95
Competition Pro with Autofire	£14.95	Memorex Disk Box	
Konix Speedking Joystick	£11.95	For 40 3.5" Disks	£8.95
Red Mouse Mat with Amiga logo	£5.95	Amiga 1/2 Meg Expansion	£119.95
Plain blue Mouse Mat	£4.95	Control Centre Atari or Amiga	£44.95

Contriver Amiga and ST Mouse with FREE Holder and Mouse Pad £20.95

EXTERNAL DISK DRIVES

Atari SF314 1 Megabyte	£139.00
Amiga A1010 1 Megabyte	£109.00
Cumana 1 Megabyte Atari or Amiga	£89.95
NEC 1 Megabyte Atari or Amiga	£79.95
Atari Megafile 30 Hard Disk	£439.00
New! Commodore A590 20 meg hard disk	£369.00
A590 Hard Disk + Memory Upgrade installed	Phone

PRINTERS

Star LC24-10 24Pin incl. lead ST/Amiga	£249.00
Star LC10 including interface lead for ST/Amiga	£169.00
Star LC10 colour including interface lead for ST/Amiga	£219.00
Citizen 120D including interface lead for ST/Amiga	£139.00

SEIKOSHA 80 COLUMN PRINTERS - AMAZING PRICES

Seikosha 9 pin NLQ including interface lead for ST/Amiga	£139.00
Seikosha 24 pin LQ including interface lead for ST/Amiga	£239.00

MONITORS

Commodore Amiga A1084 stereo Monitor inc lead	£269.00
Atari SC1224 Colour Monitor inc lead	£259.00
Atari SM124 Mono Monitor including lead	£119.00
Philips CM8833 stereo colour monitor inc. lead for ST or Amiga	£259.00

CREDIT CARD ORDERLINE ☎ 0908 378008 (Mon – Sat 9am – 6pm)

To order either call the orderline above with your Credit Card details OR make a cheque or P.O. payable to: Digicom Computer Services and send it with your order to the address below. Callers are also most welcome at the address below.

INSTANT CREDIT NOW AVAILABLE

DIGICOM

Unit 36, Wharfside, Fenny Stratford, MILTON KEYNES, MK2 2AZ.

All prices include VAT and delivery by courier

Written details on request APR 34.5% Variable.

Access VISA

A SERIOUS Business

Part One: Databases

After word processors, the most common "serious" application – and the subject of this article – is the database. But what exactly is a database? By simple definition, a database is a program for storing information on disk, then retrieving some or all of the stored information at a later date. This simple idea can be extended to allow the user more control over exactly what information he or she retrieves according to specified rules.

For instance, a small business's database might contain a list of customers' addresses. By simply setting the correct rules, an operator can display just those customers who live in the London and South East areas.

Amiga databases, thanks in part to the power of the machine and in part to the imagination of the designers, are not limited to such overtly trite examples. Many databases break new ground – like displaying pictures, playing sounds, even simulating a strip of microfilm – and with prices to suit all pockets, Amiga owners are spoilt for choice!

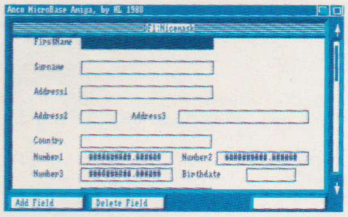
In the first instalment of a three-part series exploring home business software, **MARK SMIDDY** examines Amiga information storage.

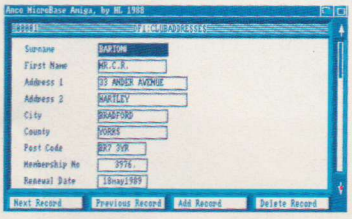
ILLUSTRATION DANNY JENKINS

UNDER £50 SOFTWARE

MICROBASE
Anco £19.95

For those on a budget there is only one choice, and although it comes from a company better known for their "adult" card games and one particularly infamous footy game it performs surprisingly well. Anco's *MicroBase* is a true entry-level database with an entry-level price of under £20. *MicroBase* is supplied on





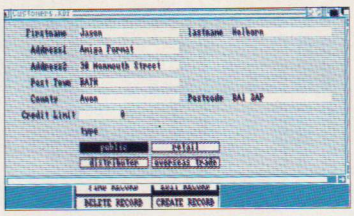
TOP: Editing a file in *MicroBase*. ABOVE: Creating a mask in *MicroBase*.

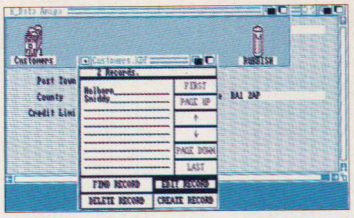
a single (protected!) disk and comes with probably the shortest manual ever supplied with any business software – at just 12 pages, almost anyone could manage to digest this.

The program is Intuition-based and runs in its own colourful (blue!) screen, but is not very suitable for multi-tasking due to the protection methods employed. Also absent is a "Quit" option. In its favour, *MicroBase* features simple indexing and simple sorting on text fields. It even has a powerful label printer and is fully compatible with Anco's budget word processor, *MicroText*. It does nothing to rave over – but it is capable and solid. At the price, *MicroBase* is good value for money and an excellent introduction to databases.

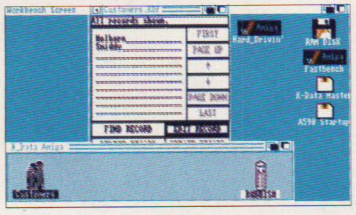
NEAR RIGHT: Editing a record in *K-Data*.

FAR RIGHT: The file index in *K-Data*.

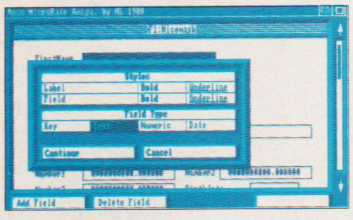




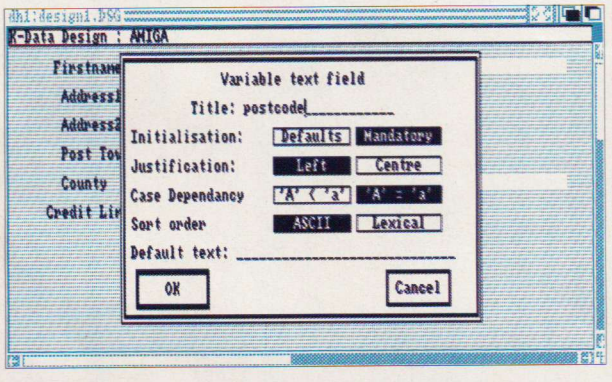
RIGHT: The desktop view in *K-Data*.



LEFT: Defining fields in *Microbase*.



BELOW : Designing a database in *KD-Design*.



K-DATA
Kuma £49.95

The next rung up the ladder from *MicroBase*, *K-Data* has features which nudge it into the semi-professional category even though it maintains a budget-level price. It has been around for some years now and is claimed to be the best-selling flat-card system for the Amiga.

Supplied on one disk, *K-Data* comes in two different versions – one for unexpanded A500s and an enhanced version for the larger machines. The main omission on the smaller version is a proper file request box. Recent releases, however, benefit from the inclusion of a standard ring-bound manual, which is a great improvement on Kuma's previous efforts.

The most notable feature of *K-Data* is its similarity to the ST's *GEM*, a hangover that gives away its origins. This does not detract from the quality of the product which is generally good overall. To conserve memory, *K-Data* is split into two parts: a designer where the form layout and fields are defined; and the database which does all the donkey work.

When *K-Data* is run, it opens a small window on the Workbench screen. As each file is opened, it appears in the window as a drawer of filed cards. This can be viewed as a virtual desktop and, again, works just like *GEM* – the icons can be grouped and dropped in the trashcan, thereby closing the files.

At the same time, another window opens listing the records stored in the database according to their key field. This works just like a file requester: find the record to update/edit and double-click on it – simple. Up to four files can be open at one and the same time.

The main fault with *K-Data* is its constant insistence on redrawing and moving windows, which does tend to make the operation of the program slow. Otherwise it is stable enough to be usable under most conditions.

GLOSSARY OF TERMS

Append: Add information to the end of a database.

Case Sensitive: Defines whether capital letters should be checked in a search. If case sensitivity is switched OFF the strings "ABC", "abc" and "AbC" all return the same result.

Create: Design a new database.

Data: Information which is stored by database software.

Database: A set of one or more records. *See Record.*

Delimiter: A special (user-defined) character used during importing and exporting to define the start and end of fields and records. *See Import and Export.* Also used to mark fields for mail merging.

Export: Output information from the database in an alien format (usually ASCII) so it can be read by other software). *See Import.*

Field: An area in which to enter a single item of information.

Field Name: Used during data entry and rule searching to identify a field. For instance: Address1 or FirstName.

Filter: Locating one or more records in a database according to a set of user-defined rules. *See Relational Operator.*

Fixed Length Data: Set of data stored using a fixed amount of disk space. Sacrifices compactness of storage for speed. *See Variable Length Data.*

Fixed Length Record: A record containing a fixed number of fields. *See Variable Length record.*

Flat Card Database: Simple database containing information on separate sheets – like a Cardex. These are suitable for many applications.

Form: Refers to the way some databases allow users to "paint" a design for a form layout. This could be an address label, for instance.

Import: Read information output from another program. *See Export.*

Index: Special file created by a database to allow swift, random access to all records. A database file can have many indexes "attached" to it.

Key Field: Another name for an Index field.

Quote Wrapped: A method used to store exported ASCII data to delimit fields within records. *See Delimiter.*

Record: A set of one or more fields. *See Field.*

Relational Database: A complex database where fields in one file can have an effect on fields in another. Records are said to relate to one another. This only applies to the more expensive systems.

Relational Operator: An operator defining part of a rule – Typical operators are: = (is equal to); <> (does not equal); >= (is greater than or equal to).

Rule Searching: *See Filters.*

Update: Add or delete records – or just change information – stored in the database.

Variable Length Data: Data stored using the minimum amount of disk space. Saves space at the cost of poor speed. *See Fixed Length Data.*

Variable Length Record: A record with an unknown number of fields. *See Fixed Length Record.*

Virtual Memory: Area of hard or floppy disk used as a buffer. This allows the size of a database to be limited to only by the amount of on-line disk storage. Not all databases support this particular feature.

We do it in real-time ... and in COLOUR.

All our video digitisers are real-time colour and capture a picture as fast as a TV camera can provide it, PLUS – All include a live framestore output for connecting to a second picture monitor or even a TV set to simplify focusing and setup. (Your computer monitor may have a switched CVBS input so you may not need a separate framestore display.) PLUS – All have monochrome facilities with comprehensive software tools.

SuperPic Amiga – Real-time digitising with genlock. Software to take advantage of the Amiga's colourful 4096 colour HAM display; including overscan and interlace as well as 32 colour mode. Writes IFF compatible and custom format picture files. Works with A2000, A500 (A1000 with adaptor).
Recommended retail price **£520.87** (£599 inc. VAT).

SuperPic PC – Includes IBM interface card and UHF TV framestore output. The framestore system means that even non-VGA PC users can save and recall colour images. Software to produce 256 colour VGA images from a palette of 256,000 and write GIF, PCX and custom format files.
Recommended retail price **£520.87** (£599 inc. VAT).

ColourPic Amiga – Similar specification to SuperPic Amiga, without genlock but includes UHF TV output.
Recommended retail price **£433.92** (£499 inc. VAT).

SuperPic, SuperPic PC and **ColourPic** can be obtained from your Amiga/PC dealer or for UK orders only send your cheque (including VAT) made out to JCL Business Systems and your digitiser will be shipped FOC by courier within two days (subject to availability). State model required. For orders outside UK please phone or FAX for details.

JCL

BUSINESS SYSTEMS LIMITED

71 St. John's Road, Tunbridge Wells, Kent TN4 9TT. Tel: Tunbridge Wells (0892) 510845. Fax: (0892) 511772.

NORDIC POWER®

Get a Real Action Cartridge®

Get the most from your computer. Get inside and where the action is. Freeze it to ice for tomorrows use. Easy to fit, easy to use. It is a must for expert programmers and beginners. Impress your friends with the ultimate computer tool. Once you have worked it, you will never work without it.

A11 C64, C128 (64 Mode) with 1541/1541C/1541ii/1570/1571/1581/Tape

GAME-UTILITY: Stops your game at the push of a button. You may change it, freeze it, pack it or restart it. Use the GRAPHICS for the integrated SLIDE SHOW, transfer Graphics or Sprites into another game. Merge multi-part games into a single part programme and save within only seconds. Create your private game from your favourite programme.

RAMSYSTEM 3.0: A serial FAST-LOAD/SAVE for disks using SECTOR INTER-LEAVE 3 in the original GCR-format. Needs only 7 seconds for loading 249 blocks with screen on. 3.0-files can also be fast-loaded without the CARTRIDGE. The new reference for SPEED and COMPATIBILITY. No special format required.

TURBO-TAPE 249: The European FAST-LOAD/SAVE standard for cassette-programmes of up to 249 blocks.

SUPER-PACKER: Compress your programme to fit more on your cassette or disk. Integrated during the freezing, can also be called as a BASIC command. Fits three games or more per disk side.

SPRITE UTILITY: With a SPRITE-MONITOR, SPRITE-FINDER, COLLISION-KILLER, EDITOR, INVERT, TWIST, DELETE, SPRITE-TRANSFER to other games, SPRITE-LOAD/SAVE, SPRITE-PRINTOUT within graphics.

GRAPHIC-UTILITY: GRAPHIC-FREEZE (B/W, STANDARD and MULTI-COLOUR-HIRES), GRAPHIC and TEXT-HARDCOPY, GRAPHIC-LOAD/SAVE, GRAPHIC-TRANSFER, SLIDE SHOW. Formats: KOALA, BLAZING PADDLES, ARTIST64, IMAGE-SYSTEM, DOODLE, ART STUDIO (2 formats) and HI-EDDI. Pictures can be reworked and then be re-loaded even into a different game. You can link pictures together for a SLIDE-SHOW from disk. Text (e.g. HIGH-SCORES) may be searched for with the TEXT-FINDER and changed to your liking. GRAPHIC can be printed including SPRITES, 16 grey shades, and inverted. B/W or full colour on parrallel 9 pin dot matrix printers; B/W on 24 needle printers, B/W on MPS 801/803. Totally simple, no special knowledge required.

POKES: Hold the POWER-button and key in your POKES for infinite lives in non-ending game.

TRAINER-BRAKE: Enable the slow motion feature to practice your skill. Works with many programmes.

MACHINE LANGUAGE MONITOR: For your COMPUTER, DISK-DRIVE, and DISKS. Using the 8K Cartridge RAM. Extraordinarily powerful. Does not affect vectors of interrupted programme. You can view and change the whole of computer RAM, SCREEN MEMORY, STACK and ZERO PAGE. Complete command -kit for professional programmers: ASSEMBLE, DISASSEMBLE, COMPARE, SEARCH, FILL, RELOCATE, FULL SCREEN ASCII, REGISTERS DISPLAY, TRANSFER, HEX/DUMP, HEX/BINARY CONVERSION, I/Os, RAM/ROM-Banking, DISK BLOCK-READ/WRITE, PRINT, DRIVES 8 and 9, and TAPE.

DISK/TAPE UTILITY: Super-fast DISK-BACKUP and DISK-COPY.FAST-FORMAT. Change HEADER (name and 5 figure ID), DOS WEDGE, LOAD from the DIRECTORY and much more. 2 drives (also 1581s) supported. Copy from tape to disk or tape (MULTISTAGE, NOVA formats).

PARALLEL INTERFACE: Use the USERPORT of your computer for fast and inexpensive operation of parallel printers. Also usable from the BASIC TOOLKIT!

BASIC TOOLKIT: The BASIC-expansion, that every good programmer needs: RENUMBER, AUTO LINE-NUMBERING, DELETE, MERGE, PACK (compress files), HEX-CONVERSION, COPY, BACKUP, OLD (UN-NEW), LINESAVE, HARDCOPY, SPECIAL LIST etc. LIST A PROGRAMME (or directory) to the printer or screen. FULL SUPPORT OF FUNCTION-KEYS: All the important commands such as RUN,LOAD, SAVE, MONITOR, LIST, DIRECTORY, COLOURS. Short commands for disk operations. Direct loading from directory.

Just hit a key to select a command. All functions are ROM based. No extra software required. No mouse required. For CASSETTE and up to 2 DRIVES.

DATA & ELECTRONICS
48 Albany Road, Sittingbourne, ME10 1EL England.
Telephone: 0795-472727
Address your dealer enquiries to the Manufacturer.
DATA & ELECTRONICS
P.O Box 3153, NL-5902 RD Venlo/Holland
Fax: 010 (31) 77-87-30-90

® Nordic Power and Action Cartridge are registered trademarks.
© Copyright of product and artworks D & E. All rights reserved.

AMIGA 500/AMIGA 1000/AMIGA 2000:
Kickstart version 1.0 to 1.4 and customised kickstarts.

SIMPLE TO USE: Just hit a key for DIRECTORY, PATH, SCRATCH, HARD and SOFT FORMAT.

SUPER PROGRAMME FREEZE: All you need is a name for a file and the whole computer memory will be frozen on disk. With your programme in memory, and frozen on the level you reached. In the original DOS format. It can be reloaded or restarted. Reload takes only 30 seconds for 512k.

BACKUP FOR 2 DRIVES: with integrated formatter, plus random drive configuration.

MACHINE LANGUAGE MONITOR: DISASSEMBLE any file and see how it works. Become a skilled programmer and ASSEMBLE your own programmes. Hexadecimal DUMP and alternation of memory locations are possible. ASCII dump helps you scan the memory for TEXT. You can search certain BYTES, WORDS and LONG WORDS with the FIND command. SAVE memory ranges to disk and relocate to an absolute address. View CIA and CIA REGISTERS. View and modify the CUSTOM CHIP REGISTERS. Also integrated PRINTER DRIVER for parallel 9-pin printers.

GRAPHIC UTILITY (GRABBER): Grabs almost any screen out of a game. Numerous adjustments can be implemented for PLAYFIELDS: 1 to 6 BITPLANES are selectable, MODULO 0 and MODULO1, DISPLAY DATA FETCH START and DISPLAY DATA FETCH. STOP are adjustable independently. All GRAPHIC MODES : e.g. LOW-RES, HI-RES, INTERFACE, DUAL PLAYFIELDS, HOLD AND MODIFY. Save GRAPHICS in IFF format. HARDCOPY (screen dump) in B/W on 9 pin parallel printers. TRANSFER in IFF format to other GRAPHIC TOOLS, through which even full colour printing is possible. Also GRAPHIC VIEW with integrated SLIDE SHOW.

SOUND SCANNER: You can search through computer memory and hear the SOUND SAMPLES. Forward and backward options are available for REPLAY. Also a GRAPHIC SOUND EDITOR to customise portions of sound. ZOOM feature for exact cutting of sound. Sound samples are SAVED in standard IFF format, which is compatible with the popular software packages.

TRAINING MODE: You may SLOW DOWN most games to a STAND STILL. Automatically suppressed whilst working with the other cartridge functions

INTEGRATED SLIDE SHOW: Compile a disk of your favourite GRAPHICS and view them in the slide show of your own making, with automatic repeat and adjustable sequence of pictures.

CHEAT MODE (Trainer/Pokes): This feature enables you to search for the parameters that lead to infinite lives or to key in other pokes with the monitor

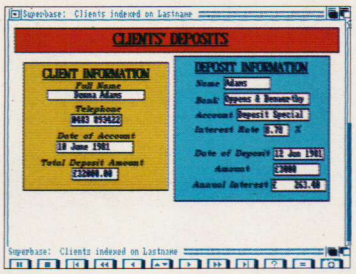
PACKER (cruncher): An invaluable asset! Extremely efficient. Crunches most megabyte games to fit on a single 880K disk. Works on up to 8 megabyte of memory.

RESET and RESET with MEMORY CLEAR from one function key.

IMPORTANT MESSAGE TO THE USER: All functions of the cartridge are ROM based for instant operation. No extra software required. Efficient MENU DISPLAY for easy handling. All the functions on KEYS. Super slimline cartridge. Fits into the expansion port with a PASS THROUGH BUS.

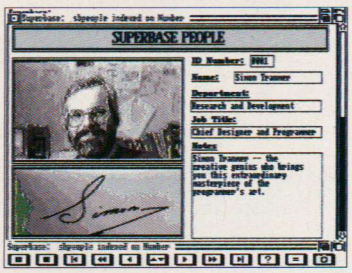
ALSO AVAILABLE: Special version with intergrated X-COPY™.

SUPERBASE PERSONAL Precision £59.95



ABOVE: *Superbase* hard at work with a typical record.

BELOW: *Superbase* in the process of editing a text file.



ABOVE: The designer of *Superbase* immortalised within the records of his own creation!

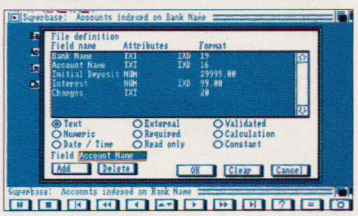
First in a set of three, this was the first database to use the revolutionary system of a control panel which resembles a video recorder. This not only allows the user to search through records very quickly, it is also a very easy system to learn. *Superbase* has the distinction of being the cheapest relational database described here. This mention of low cost should not be taken as judgement of the quality of *Superbase:* the price defies its power.

Unlike *K-Data,* the whole of *Superbase* is integrated into a single program which will run in 512K at a pinch, although it is more useable with 1Mb plus. Setting up the database is very simple once the plethora of options has been mastered; a task eased greatly by well-designed requesters. Four field types are available: text, numeric, date and external. Depending on the type these can be made required, calculated or validated according to a formula. External fields allow graphics and text files to be attached to the database – Superbase supports all Amiga IFF graphic modes including HAM.

Three separate modes are available for editing and viewing data: Record view displays the records as a list of fields; Form view allows fields to be "dragged" freely around the screen; and Table view displays the data horizontally with the field names heading each column. Editing is not possible in Table view.

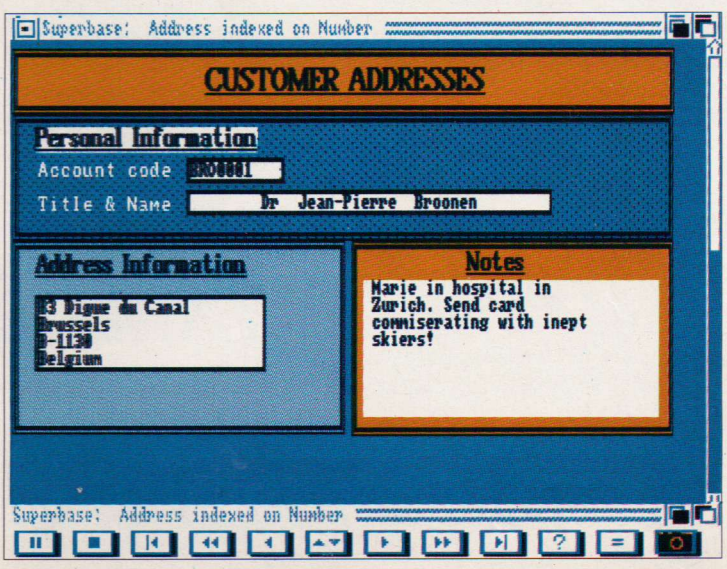
Superbase's real power lies in its extensive reporting capability, which is unrivalled in this price bracket. The relational characteristics allow several databases to be opened at once and records combined to report to screen or printer. At a simpler level, single files can be filtered with ease through an extensive set of logical and relational operators and indexed records can be accessed almost instantly. Even a label printer has been included with the basic program.

The glaring fault with *Superbase* lies in its DOS interface. The directory (or disk) has to be set before summoning a file request. Worse still, this option is hidden on a different menu! Nevertheless, the program has become *de facto* the leading Amiga database in many respects.



ABOVE: In the process fo editing field definitions in *Superbase.*

BELOW: The power of *Superbase* when it goes to work with forms!



WHAT'S IN A FIELD?

A field is a storage area for a single item of data like a name or a single line of an address. Several fields combine together to form each record on the database. Different packages support many different field types; most are common to all. Field types are specified when the database is set up. The three common types are:

ASCII or string: **All databases support this basic type although some support added features like left and right justification and even case correction!**

Numeric: **These fields only support numbers – and in simpler packages, just integers (whole numbers). More comprehensive packages like *Prodata* and the *Superbase* range can perform calculations on the contents of such fields.**

Date: **This speaks for itself. The format of the date can usually be specified.**

As already shown, there are many extensions to these basic types. As a rule of thumb, the more expensive packages include more options – although many of these are not necessary for the "average" user. Facilities such as "input validation" come in handy when there is a need to store numeric information such as prices. This helps avoid typing errors which could over or underprice items by checking for a reasonable value.

MICROfiCHE FILER £69.95

A brave attempt to take a database and make it as graphical and therefore as intuitive as possible. The idea is to locate records by scrolling a small magnification window over a larger sheet of "microfiche" – such as those found in libraries. When compared to traditional techniques, this concept seems strange initially but it soon becomes second nature.

Initially three windows are displayed: a small microfiche window; a larger display window where the records appear; and a list of "forms".

LEFT: *Microfiche Filer*'s address book.

MFF uses these forms to define how records are displayed, sorted and printed. The system permits a large degree of control over how much or little information appears in the fiche. It is possible to have a large number of display forms and swap between them very quickly.

Defining a database in *MFF* is tricky. Three field types are supported: text, numeric and picture. As with normal systems, the fields are named and typed first. However, before editing can commence an editing form must be defined. Each field is added individually, appearing in a small box which can contain either a reference name or the field itself. Field selection is made by clicking a small diamond located in the left of the box. Herein lies the problem: the sector diamond and associated resizing and movement gadgets are small and bunched together, making them difficult to hit.

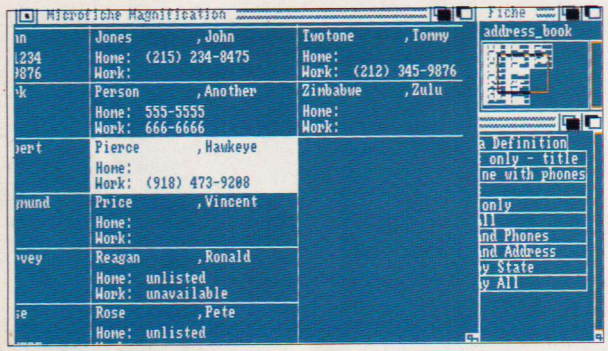
Text fields can be expanded to any size within the constraints of a window. Picture fields import IFF files, but only support two- or four-colour images because *MFF* runs in the Workbench screen; extra bitplanes are removed resulting in some images becoming unintelligible.

Microfiche Filer is idiosyncratic in many ways. Nevertheless, its strengths far outweigh its weaknesses in most areas. This is an everyday database, tailored to simple jobs – fun to use and powerful enough for most home user tasks. Not one for the professional though.

RIGHT: *Prodata*'s main menu options.

RIGHT: Configuring one of *Prodata*'s many possible options.

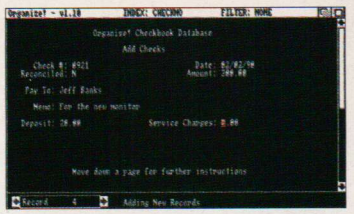
BELOW: About the task of editing a record in *Microfiche Filer.*



DESIGNING DATABASES

This is where the utmost care must be taken. It is very important to ensure all the required fields are in place before entering the data. Adding new fields to records at a later date may be difficult or even impossible depending on the software. For this reason it is often a good idea to leave one or two empty text (known as wildcard) fields attached to each record to hold spurious data. It is also a good idea to test a layout for suitability before finally committing too much data to its tender mercies.

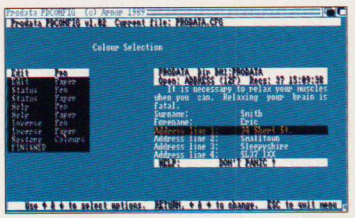
The physical design of a database will depend as much on the particular software concerned as on the application. Remember though – as in programming – there is a lot to be said for simplicity. Why bother including Date or Calculation fields in a record, if you don't need them, just because the software supports them?



ABOVE: Adding new records in *Organize 2*.
BELOW: Creating a new database in *Organize 2*.

PRODATA
Arnor £99.95

Comes from the purveyors of the fine word processor *Protext*. Like *Protext*, *Prodata* is aimed at those users content with largely keyboard-based operations and is completely devoid of pop-down menus; Arnor seem happy with PC-like pop-up types. That said, it is the most powerful of the flat-card databases and has the professional feel, a comprehensive manual, and support for dozens of printers.



Setting up the database is simplicity itself, being much more traditional than most Amiga systems. Data types include numeric, text, date and integer and comprehensive input validation is available. When the fields have been defined, data entry is extremely straightforward.

The most powerful feature of *Prodata* is undoubtedly its expression evaluator. This allows filters and layouts to incorporate calculations and a very comprehensive set of tests, giving *Prodata* the clear edge over its rivals in this area. Also, layouts can be made "intelligent" allowing blank (that is, unused) fields to be eliminated – when using address labels, for instance.

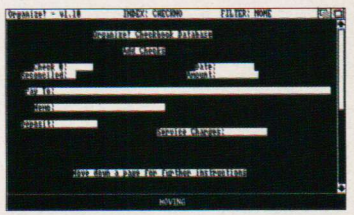
Many users will find *Prodata* too "PC-ized" for their liking – but ex-PC users, and of course *Protext Amiga* owners, will feel at home. Import and Export can be tailored for *Protext* making mail merging very simple.

ORGANIZE 2
Microsystems Software
£99.95

Comes from the *Works* package – hence the apparently high price. Although *Organize 2* is yet another flat-card system it does have the added advantage of being able to import *dBASE III* database files, although it is not programmable. Also, as part of the *Works* pack it is fully integrated with *Analyze 2* and *Scribble 2*, so data can easily be interchanged with these through the agency of the clipboard.

Four data types are supported: string, date, numeric and Boolean (yes or no). Numeric fields can be either integer or fixed point format. Setting up the record format, therefore, is simplicity itself. When the record format has been defined the data can be entered directly without having to design a form first. If a form is required this is a simple matter of dragging the appropriate fields to the appropriate positions.

Index and filtering are rudimentary compared to, say, *Prodata* or *Superbase*, but this avoids confusion and the variations supplied are enough to cope with most situations. Simple calculations can be defined for numeric fields within the form layout; plus an option of accumulated figures. *Organize* is a safe option – simple to learn and easy to live with.



ABOVE: Defining a form layout in *Organize 2*.

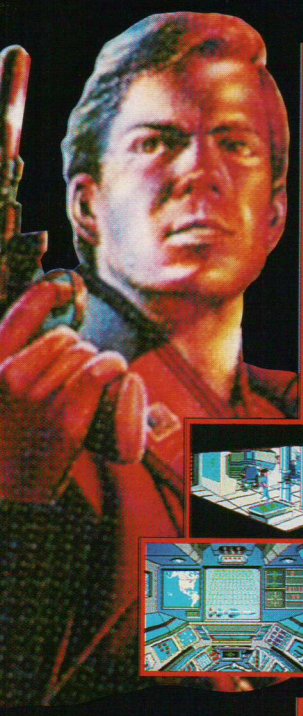
SUPERBASE PERSONAL 2
Precision
£99.95

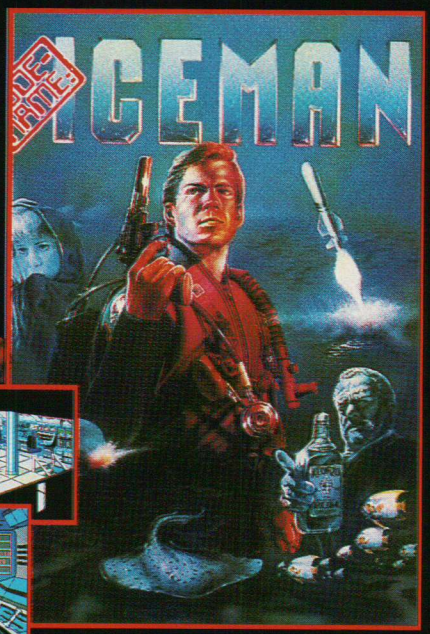
This upgrade adds a comprehensive text editor and mail merge to the basic package as well as improved documentation – in a ring bound manual. *Superbase 2* also has better external file handling and a "dongle" for protection – a sad mark of the

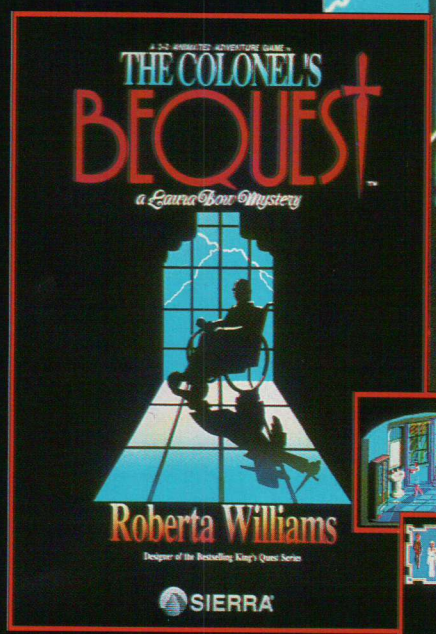
So You Wanna Be a Hero...

NEW RELEASES!

DYNAMIC THRILLERS & ADVENTURES ALL THE WAY!







Available for your PC, Atari ST & Amiga at all leading computer shops or by mail order.

Mail Order: Intermediates Ltd. P.O. Box 847, Harlow CM21 9PH Tel: (0279) 600197

SIERRA®

Sierra Consumer Hotline: (0734) 310003

When you're talking AMIGA talk to Microsnips

In fact, whatever your needs, we have over 3,600 different computers and accessories in stock – all backed by the knowledgeable, highly professional service that has made us one of the most respected computer dealers in Britain.

So whether you're looking for hardware, software or just some expert free advice, consult the Amiga specialists.

Talk to Microsnips.

AMIGA A500 BATMAN PACK
Including 'Extras', work bench 1.3. Manuals. Modulator for TV use. Quality Mouse. Power Supply Unit. *Plus* Photon Paint, Buggy Boy, Terror Pods, Amegas, Ikari Warriors, Thundercats, Art of Chess, Insanity Fight, Wiz Ball, Barbarian & Mercenary.
(Individually £729.34) NOW ONLY **£399.00**

DISC DRIVES	
Cumana 3½" 1mg Amiga	£89.95
MGT Lifetime 1mg Drive (suits all computers with suitable lead)	£139.00
Q-Tec 3½" 1mg Amiga Drive	£79.95
Cumana 5¼" Amiga Drive	£139.95
A590 20mg Amiga Hard Disk	£399.00
MONITORS	
Philips CM8833 Stereo/Medium Res	£249.00
Commodore 1084 Colour	£229.00
Amiga-Scart Lead	£10.95
DISK MEDIA	
20 3½" DSDD 100% Certified Disks	£18.95
30 5¼" DSDD 100% Certified Disks	£9.95
10 3½" TDK DSDD Disks	£14.50
Lockable Disk Box Holds 50 – 5¼"	£6.99
Lockable Disk Box Holds 40 – 3½"	£6.99
Lockable Disk Box Holds 100 – 3½"	£7.95
Mouse Holders	£2.99
Vision 10 Storage Box 3½"	£1.95
Vision 10 Storage Box 5¼"	£1.95
Mouse Mat 8mm Quality	£3.99
PRINTERS & ACCESSORIES	
Apollo RF/Anti Surge Trailing 4-Way Socket	£24.95
Amiga/Centronics Cable (2m)	£9.95
Citizen 120D	£149.95
Panasonic KX-P1124 Printer	£299.00
Panasonic KX-P1081 Printer	£179.00
Star LC10 Mono	£179.00
Star LC10 Colour	£229.00
2000 Sheets Fanfold/Microperf	£15.95
Star LC10 Colour Ribbons	£7.95
Panasonic/Star/Epson Ribbons	£3.99
80 Column Printer Stand	£9.95

RING 051-630 3013 TO ORDER
or for FREE CATALOGUE
Answerphone 6.00 p.m. – 9.00 a.m.

Access VISA AMERICAN EXPRESS

OVERSEAS CUSTOMERS NOTE
Postgiro International accepted. NOT Postbank Postcheque. Books not taxable – Europe add £5. Non Europe add £10. We reserve the right to charge carriage at cost.

UK POSTAGE AND PACKING. Items under £50 add £2. Items under £100 add £5. Items over £100 add £10 for Group 4 Courier ensuring delivery the day after the despatch. Overseas customers (Europe): Full price shown will normally cover carriage and free tax. Non Europe add 5% to total.

MICROSNIPS
Making technology work for you!
37 SEAVIEW ROAD, WALLASEY, MERSEYSIDE L45 4QN
051-630 3013 051-630 5396 051-691 2008
FAX: 051-639 2714 Personal Callers Welcomed

TRACK
COMPUTER SYSTEMS

Save at least 20% on over 120 Amiga Software Titles...

CREDIT TERMS AVAILABLE Ask for written details

CONGRATULATIONS To the... TRACK COMPETITION WINNERS (Over 2000 entries were received from AMF readers)

That's right, with every software title you buy from Track you'll not only save money, but you'll benefit from our experienced and helpful staff. We try to offer the... SERVICE YOU NEED, WHEN YOU NEED IT!
We're always pleased to welcome customers to our shop in Derby, or talk you through the jargon of the computer industry and...help you make the right choice with software or hardware purchases.
Shown below are just a few examples of our vast range of Amiga Software, IN STOCK NOW!

AREXX		£39.95
5 AEGIS GRAPHICS + ANIMATION	(RRP £250)	£99.95
DIGI PAINT 3		£55.95
DIGIVIEW GOLD 4		£119.95
EXCELLENCE		£129.95
HOME OFFICE KIT		£119.95
KIND WORDS 2		£39.95
LATTICE C++		£249.95
LINKWORD - French, Spanish, German etc. + Many More		£23.95
MUSIC X		£199.00
PHOTON PAINT I		£10.75
PHOTON PAINT II	RRP £89.95	£39.95
PRO BOARD		£179.95
PRO NET		£179.95
PRO VIDEO +		£199.95
PUBLISHERS CHOICE		£79.95
QUARTERBACK		£34.95
THE WORKS-Platinum Edition		£159.95
SCULPT 3D XL		£119.95
SCULPT 4D Junior		£95.95
SCULPT 4D Professional		£399.00
SONIX	RRP £69.95	£39.95
STARTER KIT		£55.96
SUPERBACK 2		£39.95
SUPERBASE 2 AND SUPERPLAN	RRP £200	£99.95
SUPERBASE 2 & KINDWORDS 2 & MAXIPLAN	RRP £249.95	£99.95
SUPERBASE PROFESSIONAL		£199.95
TV TEXT PROFESSIONAL		£105.95
TV SHOW		£79.95

Keep on the Right Track with this months Feature Products!

SUPERBASE 2
+KINDWORDS 2 & MAXIPLAN
In one package you get the top selling... Database, Word Processor and Spreadsheet in one AMAZING PACKAGE!
You SAVE £150!

NEW-NEW-NEW **G2 VIDEO CENTRE** NEW-NEW-NEW
A COMPLETE TELEVISION PRODUCTION CENTRE IN ONE COMPACT UNIT!
Track Value at Only... **£679**
To find out more about this superb product, buy the TUTORIAL/DEMO VIDEO Only...£5.99

PUBLIC DOMAIN SOFTWARE
At a TRULY AMAZING LOW PRICE!
Send for YOUR copy of the Track PD listing. At the super low price of £1.50 per disk our titles are probably...THE CHEAPEST ANYWHERE IN THE UK!
AMIGA BOOKS, TOO MANY TO LIST...Phone Telesales Now!

NEW SOFTWARE
Track are a Software House with a number of Amiga titles under development. We are ALWAYS looking for original Amiga products. For an appraisal please call CHRIS HARVEY.

TRACK COMPUTER SYSTEMS
Dept AMF, 2 Blacksmiths Yard, Sadler Gate, Derby. DE1 3PD.
Tel: (0332) 41817 Fax: (0332) 44001

ALL PRICES INC. VAT & CARRIAGE
✦TRACK ARE LICENSED CREDIT BROKERS✦

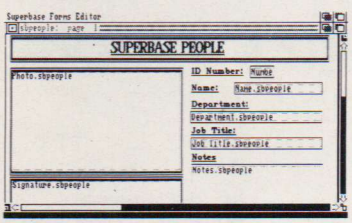
times. Many other minor improvements have been made including limited support for *Lotus*, *dBASE* and DIF files. Essentially though, what applies to *Superbase Personal*, applies here too.

SOFTWARE OVER £100

SUPERBASE PROFESSIONAL
Precision
£249.95

The ultimate solution in Precision's range for those who require the undoubted ease of use of *Superbase Personal* with the added facility of programmability. *Professional* is supplied on no less than three disks comprising: a Workbench disk, a set of examples and the forms editor. These are accompanied by two voluminous manuals and, like *Personal 2*, a "dongle" for protection. Even though *Professional* is awe-inspiring at first, the task of learning how to use it is greatly eased by the excellent documentation. It is not, however, intended for beginners.

The two features separating *Professional* from its competition are its programming language, which is relatively easy to learn, and the superb Forms editor. This object-oriented package is the key to producing anything from high-quality graphical reports to invoices and statements – imagination is the only limit. External files and graphics can easily be incorporated into the form, which can be tested within *Superbase* at any time during use.



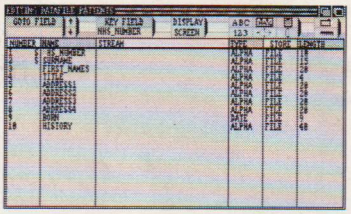
ABOVE: *Superbase Professional*'s forms editor in operation.

BELOW: *Superbase Professional*'s forms editor once again.

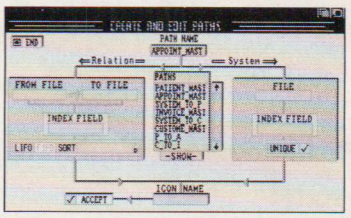
ACQUISITION
1.3 Taurus
£249.95

The only serious competitor to *Superbase Professional*. Although having received much less publicity, *Acquisition* was written with the Amiga in mind and exploits, so the manufacturers claim, the full power of the machine. The package is supplied on three disks with a massive 350-page manual detailing how to get started with the system and an overview of the command language Acom. Beginners are directed towards a separate 200-page introduction to *Acquisition* which is sold separately.

At the heart of the system, Acom serves as a very powerful interface with the system. Commands are available to access the even low-level graphics functions – one of the supplied examples blits a Garfield around the screen, another draws a complex 3D plot. Some would say this is overkill but it shows how *Acquisition* can form the heart of a much more powerful system. Minimum system requirements are set at two disk drives and 512K – more realistically, 1Mb and hard disk.



LEFT: Setting the flow in *Acquisition 1.3*.



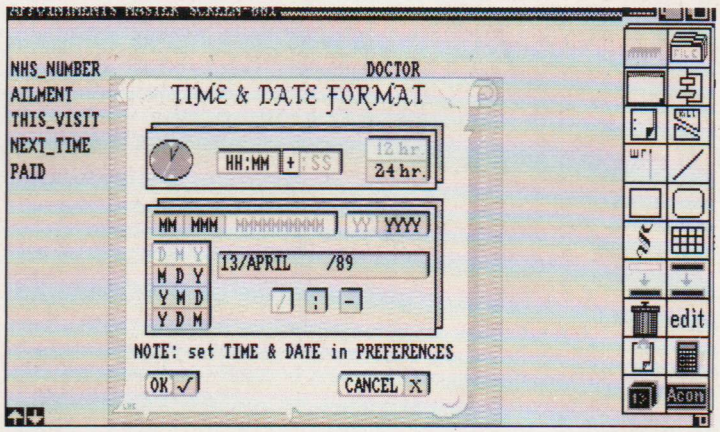
LEFT: Setting time and date in *Acquisition 1.3*.

Compared to *Superbase*, *Acquisition* is very difficult to get to grips with. Once the application (not necessarily a pure database) is running, however, it will prove the stronger of the two. The initial learning curve makes *Superbase* a more user-friendly option – but *Acquisition* is a strong competitor.

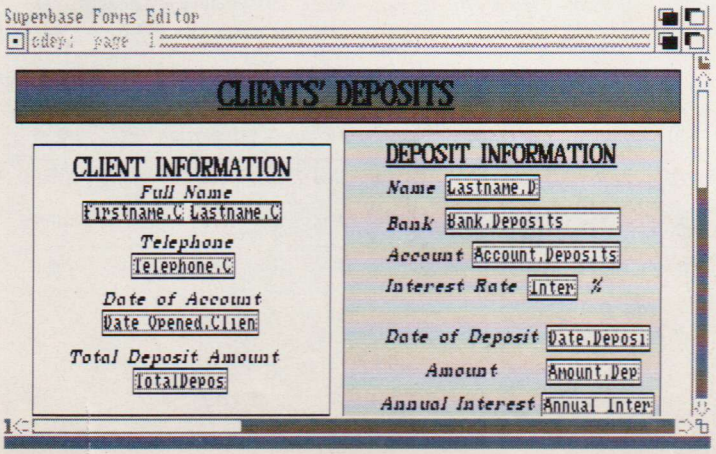
A SERIOUS BUSINESS

dBMAN V
Versasoft
$299 US

Finally vying for a place in the database stakes since Versasoft have managed to get it working in the Amiga environment. It has the distinction of being the only database available for the Amiga which can truly



BELOW: Creating a new file in *Acquisition 1.3*.



PASSWORD PROTECTION

For the small and occasional user, there is rarely a need for a password facility to protect the information contained in a database. However, passwords come into their own when several people need to use the same system. This can protect casual – and inexperienced – users from modifying or even reading important or sensitive material.

For instance, the person in charge of a system, the data manager, could set three passwords. The first would allow read access only – for the day-to-day operators; the second would also provide the ability to add new records – for the input clerks; the third, the ability to change data at will – reserved for the system manager only.

offer compatibility with *dBASE III Plus*. The portability of *dBASE* programs makes this an interesting option in itself, although *dBMAN* systems are available in their own right for the ST, UNIX, XENIX and even mainframes. Among the many enhancements, *dBMAN V* includes windowing support, a relational report writer and a compiler. At the time of writing, *dBMAN* is not available in the UK.

Conclusion...

For the first-time user, there is little to choose between the two leading budget packages, *MicroBase* and *K-Data*. *MicroBase*, being the cheaper of the two, has less features but does have a label printer. Conversely *K-Data* boasts better reporting and search facilities, and integrates completely with *K-Spread 2* (featured in 'A Serious Business' next month).

Slightly more upmarket, *Microfiche Filer*'s unique graphical approach will find a niche with users appreciating totally intuitive operation. It falls down where large, complex databases are concerned because all records are limited by available memory. This price range also brings *Superbase Personal* into play at £10 cheaper. Although less intuitive than *Microfiche Filer*, *Superbase* is a pleasure to learn and very easy to use. Being fully relational, *Superbase Personal* is the most comprehensive of the budget systems.

The more professional user on a budget is guided towards *Superbase Personal 2* with its powerful text editor and perhaps *Prodata*. Although *Prodata* is the least "Amigaized" database, it will find a home with *Protext* users. In the same bracket is the *Works* bundle which contains the popular integrated system of *Scribble 2*, *Organize 2* and *Analyze 2*.

The top end of the market sees two packages vying for a place. *Superbase Professional*, the high-powered (and high-profile) upgrade from *Superbase*, combines the smaller package's ease of use with the power of a forms editor and built-in language. The less well-known *Acquisition 1.3* is claimed to be more powerful but will take a lot longer to get to grips with. Both of these are aimed squarely at the the power market – however, only *Superbase* supports *dBase* files, which could be seen by some as a weakness.

The last option for dedicated power users is *dBMAN V* – ostensibly a *dBASE III Plus* clone. The strength of *dBMAN* is its portability with versions available for most 16-bit machines including the ST. It is by no means a beginner's database and should really only be purchased either as a run-time system or for serious database development work.

...And Advice

The problem of which package to go for must be resolved from two main considerations:

1) Is it easy to use? It is pointless buying an "all-singing" package with a programming language if the person using it has no idea how to program?

2) Is it affordable? This will depend on individual resources. However, it is pointless saving money by buying a package incapable of the job demanded. Conversely, it is unwise to spend more money than need be.

These points apply to all software and especially that in the business sector. Make sure the application is completely understood before searching for software to ease the task.

Data Protection Act

Since 1984 it has been illegal to hold information on computer files without first registering as a computer data user: and this includes straightforward data such as people's names and addresses. If you intend holding any information of this kind you must register with the Data Protection Registrar. Application forms and further information are available from main Post Offices. ■

IS INTEGRATION NECESSARY?

Several databases are available for the Amiga, but not all of them can easily exchange data with other productivity software such as word processors and spreadsheets. Many can import and export information as ASCII, but very few can claim to be truly integrated. The question which must be posed is this: does the application require data to be exchanged regularly?

For instance: a computer club may want to send out monthly newsletter to all its members. Or, a computer dealer may need to incorporate data from both accounts and database files to send out monthly statements. Both examples require a mail merging facility – which could prove difficult (or impossible) to implement between packages produced by different software houses.

Some packages, *Superbase Professional* and *Acquisition* for instance, incorporate a text editor, thereby completely avoiding the problem – but the privilege certainly costs extra.

A SERIOUS BUSINESS

SUPPLIERS

Thanks to the following suppliers:

Amiga Centre Scotland: 031-557-4242 (*Acquisition & MFF*)
Anco Software: 0322-92513 (*MicroBase*)
Arnor: 0733-68909 (*ProData*)
CHIPS: 0642 219139 (*The Works*)
Kuma Computers: 0734-844335 (*K-Data*)
Precision Software: 01-330-7166 (*Superbase series/ARexx*)
NovoPlan Gmbh: 010-4929-528080 (*dBMAN V*)

QUICKVIEW
PRODUCTS LISTED IN APPROXIMATE PRICE ORDER

Product:	Field Size	Max Fields	Max Records	Max Filesize	Max Open	Max Indexes	Filters	GFX	Snd	R	P	F	Supplier	Price:
MicroBase:	System	System	System	System	1	1	No	No	No	No	No	–*-	Anco	£19.95
K-Data:	1638 bytes	N/A	Disk	Disk	2-4	1	Yes	No	No	No	No	–*-	Kuma	£49.95
S'base Pers:	255 bytes	System	16 Million	Disk	System	999	Yes	Yes	No	Yes	No	–*-	Precision	£59.95
Microfiche Filer:	System	System	*1	System	1	1	Yes	Yes	No	No	No	–*-	Software Visions	£69.95
Prodata:	100 bytes	300	Disk	Disk	1	5	Yes	No	No	No	No	–*-	Arnor	£99.95
Organize:	254 bytes	128	4.2 Billion	N/A	1	1	Yes	No	No	No	No	–*-	Micro Systems	£99.95
S'base Pers 2:	255 bytes	System	16 Million	17 Gigabytes	System	999	Yes	Yes	Yes	Yes	No	–*-	Precision	£99.95
S'base Pro:	255 bytes	System	16 Million	17 Gigabytes	System	999	Yes	Yes	Yes	Yes	Yes	<200	Precision	£249.95
Acquisition 1.3:	10 Mb	10 Million	100 Million	1 Gigabyte	System	N/A	Yes	Yes	Yes	Yes	Yes	>200	Tarus Impex	£249.95
dBMan V:	*2	128	2 Billion	N/A	10	System	Yes	No	No	Yes	Yes	>320	Verasoft Corp.	$299.00

Notes:
System: No internal restrictions – limited by memory available
Disk: Limited by disk space available (more on hard disks)
***1: 512K 200-400; 1.5Mb 2000-3000 address type records. Uses full 8Mb**
***2: 254 bytes for text fields; 64K for memo fields**
–*- Does not apply

Dowling COMPUTERS

MAIL ORDER DIVISION

HEAD OFFICE:
Unit 48
Tyne Road
Sandy, Beds, SG19 1RB
Tel: 0767 681750/60
Fax: 0767 681730

ALL PRICES INC VAT PLUS A FULL 1 YEAR GUARANTEE

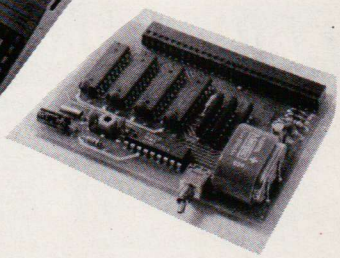
★NEW★ STOP PRESS★ NEW	RRP	OUR PRICE
AMIGA 500 Flight Of Fancy Pack inc F29 RETALIATOR, Rainbow Island etc	£399.95	£359.95

AMIGA COMPUTERS & ACCESSORIES

FULL 1 YEAR GUARANTEE	RRP	OUR PRICE
AMIGA 500 + Mouse, modulator, Workbench 1.3, manuals etc	£379.99	£339.99
AMIGA 500 BATMAN PACK, inc DPaint II, Batman the Movie, etc	£399.99	£349.99
AMIGA 500 1 MEG BATMAN PACK inc our own Megaboard, Ram Expansion upgrade with clock	£489.95	£399.95
AMIGA 500 CLASS OF THE 90'S PACK, inc Publishers Choice, BBC Emulator	£573.85	£499.99
DOWLING AMIGA PLUS PACK - available only with above TENSTAR Games Pack + 10 3 1/2" disks mouse mat + Dustcover + Joystick	£249.99	£39.99
COMMODORE 1084S Stereo Monitor	£309.99	£249.99
CUMANA 1 meg quality drive - The Best!	£89.99	£79.99

THE MEGABOARD RAM EXPANSION 500

UP-GRADES YOUR AMIGA A500 FROM 512K TO 1 MEGABYTE!



FEATURES

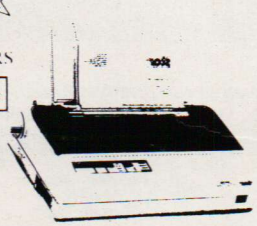
- Only top quality components used
- Real Time clock with NICAD battery backup
- Memory disable switch to revert back to original 512K
- 12 months guarantee. Fully tested prior to despatch

Purpose designed for the AMIGA A500

ONLY £59.95

THE star COMPUTER PRINTERS

= Registered Dealer =



Being Star registered dealers we only sell official UK machines which come with a full 1 year guarantee. Beware of inferior imported products

OFFICIAL U.K VERSIONS	RRP	OUR PRICE
STAR LC10 mono 144/36 C.P.S	£229.95	£149.95
STAR LC10 II 25% faster version	£263.35	£169.95
STAR LC10 Colour, 7 colours	£297.85	£189.95
STAR LC24-10- 24 pin multifont	£343.85	£229.95
STAR LC10 Sheet Feeder (auto)	£74.75	£49.95
STAR LC10 Mono Ribbons	£5.95	£3.95
STAR LC10 Colour Ribbons	£7.95	£5.95
STAR LC24-10 Ribbons	£7.95	£5.95
STAR LC10 Quality Dust Cover	£7.95	£5.95

★ 3 1/2" DISKS ★ 3 1/2" DISKS★ ★ 3 1/2" DISKS ★

All our disks are of the highest quality, are 100% certified and have 'made in Japan' stamped on each disk. We guarantee each disk is either Sony, TDK or JVC unbranded.

50	£29.99
100	£57.99
200	£99.99
400	£179.99
Roll of 1000 labels	£9.99

ART, BUSINESS AND MUSIC PACKAGES

FOR THE MORE DISCERNING COMPUTER USER	RRP	OUR PRICE
ART		
Photon Paint II	£69.95	£19.99
Deluxe Paint II	£49.95	£9.99
Vidi- Amiga	£99.95	£89.95
BUSINESS		
Kindwords Wordprocessor	£49.95	£29.95
Superbase 2	£99.95	£29.95
Maxiplan Spreadsheet	£99.95	£29.95
MUSIC		
Aegis Sonix version 2.0	£69.99	£29.99
Music - x 'state of the art music package'	£229.95	£129.99

★ THIS MONTH'S SOFTWARE BARGAINS FOR THE AMIGA 500 ★

HURRY - LIMITED STOCKS	RRP	OUR PRICE
Shadow of the Beast - A classic	£34.99	£17.99
Blood Money	£24.99	£9.99
Obliterator	£24.99	£6.99
Barbarian - Psygnosis version	£24.99	£6.99
Driller - 3D classic	£24.99	£6.99
Dark Castle - Mirrorsoft adventure	£24.99	£6.99
Conflict in Europe	£24.99	£6.99
Deflector	£24.99	£6.99
Bombuzal - extremely addictive	£24.99	£6.99
Ballistix - fast competitive ball game	£19.99	£6.99
Batman - The Movie	£24.99	£6.99
F18 Interceptor	£24.99	£6.99
New Zealand Story	£24.99	£6.99
Spy Vs Spy	£9.99	£4.99
Spy Vs Spy II - The Island Caper	£9.99	£4.99
Boulderdash Construction Kit	£9.99	£4.99

ORDERING MADE EASY

Order by phone by calling our Head Office quoting your Access/Visa Number

Order by Post - make Cheques, Building Society Drafts or Postal Orders payable to Dowling Computers

Add £6.00 courier delivery for all orders over £100.00. Add £2 for orders under £100.00

SPEEDYSOFT
INTERNATIONAL
THE FASTEST MAIL ORDER SERVICE AVAILABLE

Fast Lane	£12.99	Espionage	£9.99
CARRIER COMMAND	£12.99	Techno Cop	£8.99
Continental Circus	£12.99	Pacmania	£9.99
Ghouls & Ghosts	£16.99	Peter Beardsley	£10.99
THUNDERBIRDS	£9.99	Blasteroids	£9.99
Winners (4 games)	£19.99	Scorpio	£7.50
Sporting Triangles	£12.99	Strip Poker II +	£9.99
Saint & Greavsie	£9.99	Face Off	£7.50
Predator	£9.99	Phantom Fighter	£9.99
New Zealand Story	£13.99	Highway Hawks	£9.99

Send s.a.e for free catalogue. Mail order only
CREDIT CARD ORDERS TEL: 021-706 2255
SEND YOUR CHEQUE OR POSTAL ORDER MADE PAYABLE TO
SPEEDYSOFT INTERNATIONAL,
SOMERFIELD HOUSE, 296 WARWICK ROAD,
SOLIHULL, WEST MIDLANDS B92 7AF

AMIGA REPAIRS & SPARES

A500 Fixed Price repair.....£40.00
1 Week turnaround (do not send PSU)

SPARES:

68000 MPU	£23.00	5719 Gary	£12.00
8362 Denise	£19.00	8364 Paula	£29.00
8371 Fat Agnus	£43.00	8520	£11.00
8372 Fat Agnus	£48.00	ROM V1.2	£23.00
MSM6242 Clock	£8.00	ROM V1.3	£23.00

Service Manual.....£22.00

SALES

A500 Batpack	£360.00	A520 Modulator	£26.00
A501 512K RAM	£120.00	SCART Lead	£13.00
A1010 3.5" D-Drive	£110.00	Serial Lead	£12.00
Cumana 3.5" D-Drive	£90.00	Parallel Lead	£12.00

All prices include postage.
3 months warranty. Sinclair & Amstrad also repaired.

ACE Repairs, Dept AF, Outways Farm, Pelynt, Looe, Cornwall PL13 2NW
(0503) 20282

TELETEXT
A world of information at your fingertips

Now you can keep it informed with the latest weather, financial news, sports results, current affairs and much more from Ceefax or Oracle. But unlike a Teletext TV all this valuable information isn't trapped behind glass. Now you can.....

Save to disc. Pages may be saved in Compact (over 800 pages per disc) or IFF format.

Print. You can print as just text (for a fast result) or as a screendump.

Review. Instant access to the last 16 pages which have been received.

Speak. Thanks to the Amiga's speech capability, it will even read the news to you.

Multiple display. It can display and update two pages on screen simultaneously!

FastText. True FastText - gets pages in advance and reduces the waiting time.

Tuning. Just connect an aerial - it tunes itself in! Although the prime function is to receive Teletext, it also will convert a 1081 or 1084 monitor to a colour TV.

Programmable. The system can be programmed to get a series of pages and then save or print them. Your own programs can access the data on Teletext.

Only a **Microtext** adaptor can provide all these facilities, it's easy to use and connects to the parallel port, a printer can be reconnected to the adaptor. Everything is supplied, all you need is your Amiga and a normal TV aerial.

At just **£124.80** + VAT inc p/p for an advanced Teletext TV it's excellent value for money. Make sure you're always up to date, and get yours now from:-

MICROTEXT
Dept AF, 7 Birdlip Close, Horndean, Hants PO8 9PW
Telephone: 0705 595694 Fax: 0705 593988

KICK OFF* CHALLENGE CUP 1990
WILL YOU BE THE U.K.'s No. 1?

THOUSANDS OF £££££££'s **HUNDREDS OF PRIZES**

INCLUDING:.....£2,500 in cash.....Cup Final Tickets.....Weekends in London.....Commodore Monitors.....Cumana Disk Drives.....RAM Expansions.....Boxes of Disks.....Games.

+ MANY OTHER PRIZES

N.B. The Kick Off Challenge Cup is run by the Computer Football Association, with the full support of Anco Software Ltd. The competition is open to all association members.
*Kick Off is a copyright product of Anco Software Ltd.

Please register me as a member of the COMPUTER FOOTBALL ASSOCIATION,
Send me my membership card and competitors pack to:
NAME:.....
ADDRESS:.....
.....
.....
I enclose my membership fee of £5.00.
(Cheques payable to The Computer Football Association)

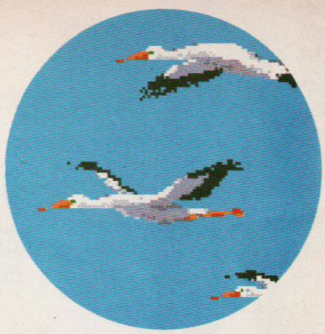
I would like to play my first game in: (Please tick appropriate box)

- ☐ BIRMINGHAM
- ☐ BRIGHTON
- ☐ CAMBRIDGE
- ☐ CARDIFF
- ☐ CARLISLE
- ☐ EDINBURGH
- ☐ GLASGOW
- ☐ LEEDS
- ☐ LONDON
- ☐ MANCHESTER
- ☐ NORWICH
- ☐ NOTTINGHAM
- ☐ OXFORD
- ☐ PLYMOUTH
- ☐ SOUTHAMPTON
- ☐ TAUNTON

SEND YOUR COMPLETED APPLICATION FORM TO:

C.F.A. 475 STAINES ROAD, BEDFONT, FELTHAM, MIDDLESEX, TW14 8BL

disk EXTRA



Where else can you get a magazine and a disk containing almost 900K of programs for under £3? RICHARD MONTEIRO guides you through the Coverdisk's stunning offerings.

ON YOUR DISK

HAMMERFIST

Knockout arcade action in Vivid Image's superb playable demo of their cyberpunk game. Turn the volume up and start hammering the opposition. This is a journey into the surreal...

WIPE OUT

A hilarious intergalactic hoverboard challenge awaits you in Gonzo Games' fantastically addictive playable demo. Sun, sea, and surf – on a planet with no atmosphere...?

BIRDS SAMPLER

RGB Studios bring you a taster of *The Birds*, the next Real Things animation pack, with the animation 'Storks in Flight'. Everything you need to create your own *DPaint III* animations.

POINTER ANIMATOR

Time to get rid of the Amiga's boring arrow pointer. Make your pointer move like you've never seen it before - change it into a flag fluttering in the wind, a swimming fish, or perhaps even an ever-undulating nose...

KEYBIZ

Government research indicates that the creativity index and lucidity factor of journalists, writers, and scribes in general shows a remarkable improvement when *Keybiz* is running.

MEGA WB

Expand your Workbench work area to beyond your wildest dreams – well, to the limit of available memory. You're gonna have a ball moving windows and icons outside the standard screen.

GAME BUSTERS

A fiendish selection of cheats that'll give you the upperhand in *Mutant Camels II, Captain Fizz, F18 Interceptor, Joe Blade 1* and *Joe Blade 2.*

UP TO £800 UP FOR GRABS!

Think you've got what it takes to write for the *Amiga Format* Coverdisk? Get your programming tools out and prove what you can do, and earn yourself some cash in the process. We're after Workbench hacks, demos, utilities, games, game cheats... You could earn up to £800! Turn to Page 108 for details.

BACK UP YOUR COVERDISK IMMEDIATELY

DON'T KNOW HOW? SEE P 108 FAST! ENSURE YOU WRITE-PROTECT YOUR DISK BEFORE USE!

HAMMERFIST

PROGRAM: VIVID IMAGE
FILES: HAMMERFIST, HAMMERFIST.DOC, DEMO.CODE

When two hearts beat as one – especially two robotic hearts – you know you're in for trouble. Hammerfist and Metalisis were two ordinary fun-loving cyberdroids until someone decided to cut back on expenditure.

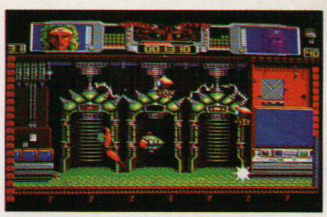
The logic went like this: two bodies, many similar bits, remove the duplicate items, save lots of dosh... the cutbacks went a little too far. The results of which mean that only one or the other of the robots can exist at any instance, instant transmutation from one body to the other being the only way to flip between personalities.

This co-existence, verging on non-existence, really got up Hammerfist's and Metalisis' shared nose. As you can imagine, they are both mad as hell – although, obviously, only one of them can be mad as hell at any given time.

Trapped in the mechanical world that made them, Hammerfist and Metalisis are after blood and bolts. And only you can guide them towards success along their path of destruction.

There are numerous moves to be learnt, so listen up. For fighting moves hold down the joystick fire button and push the joystick in the required direction of attack. For directional moves simply push the joystick in the direction in which you actually want to go.

Don't let looks deceive you, they both pack a mighty punch.



Flic-flac, flic-flac, flic-flac. What will it be – heads or toes?

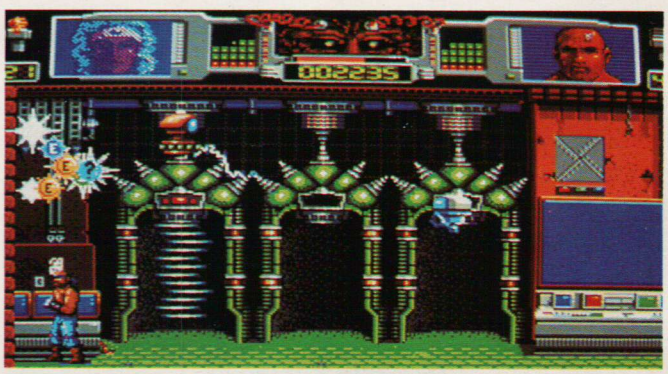
The following aggressive moves can be used when you're in control of Hammerfist:

- Punch forward – fire plus left or right.
- Punch up – fire plus up.
- Punch down – fire plus down.
- Piston fist – continue pushing left or right while punching.

Metalisis is no sweetheart either – she has the following moves available to her:

- Flic-flac while stationary – fire plus up.
- Flic-flac while running – fire.
- High flic-flac – continue pressing up while performing a flic-flac.
- Kick – fire plus left or right.

You can change characters simply by pushing up on the joystick. Pushing down will cause the character to duck. To turn into the screen press fire three times or hit the space bar. To head-butt (nice couple, aren't they?) or open doors hold the fire button and pull down



Hammerfist hammers another foe into the ground. Pick up the glowing stars for extra ammo, health and points.

on the stick. Step into an inset doorway by holding down fire and pushing up. Finally, you can select a weapon by ducking and pressing fire twice. Alternatively, press F1 for no weapon, F2 for piston fist and F3 for laser.

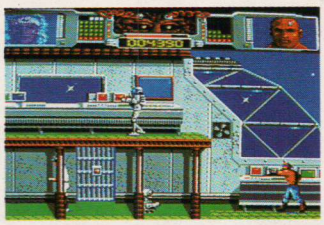
Other in-game keypresses you might be interested in include Esc to pause, Del to restart, F6 for music, F7 for sound effects and F8 for all sound off.

Getting Started

Hammerfist can only be run by resetting the computer and inserting the Coverdisk into the drive. A prompt will appear asking whether or not you wish to run *Hammerfist* – type Y and press Return if you wish to play the game. Pressing N will send you to the Coverdisk main menu. *Hammerfist* also appears as the first option (F1) in the main menu. You will only be able to run *Hammerfist* from here if your machine is blessed with 1Megabyte or more.

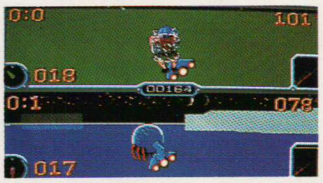
After a few seconds you'll be presented with the *Hammerfist* loading picture; press the joystick fire button to continue. From the *Hammerfist* main screen you can press Help to enter an option menu or fire on the joystick to start play. Please note, the joystick must be plugged into Port 2. You can change this from the option screen.

When copying the game to another disk you will only be able to run it by starting a CLI, entering the *Hammerfist* drawer and typing 'Hammerfist' at the CLI prompt. There is no *Hammerfist* icon for you to click on from the Workbench – so unfortunately it won't work from there.



Overload the computer terminals (bottom right of the screen) to reach the rooms beyond.

Cripes! Looks as if you're heading straight for a crystal wall...



Ha, ha, ha, ha! Wipe out! Dust yourself off ready for the next go.

WIPE OUT

PROGRAM: GONZO GAMES
FILES: WIPE OUT, WIPE OUT.DOC

It's just not easy to get very far in the rounds of the Intergalactic Hoverboard Challenge. You may laugh, but few Sapiens have reached the Hall of Fame. Training on water-based surfaces is no substitute for the real thrill of hoverboarding. While wind-surfing, skiing, skating and scree-riding are good for balance training, they are no preparation for the phenomenal speeds attainable on a hoverboard. Sapiens are not considered good contenders or to have the right temperament to take on the best at high hoverboard stages.

Of course there are exceptions – one in particular, a chap called Olbane Woldmunsey-Brickett III, caused a sensation many tournaments back by actually spelling his name in the wake left behind his board. A real crowd pleaser.

Don't be put off, but when you're up against things like Cyborgs, Archeoptra, Ameboids, Thermoids, Photonians, Mechanoids, you've got to be good. Damn good. Or even better.

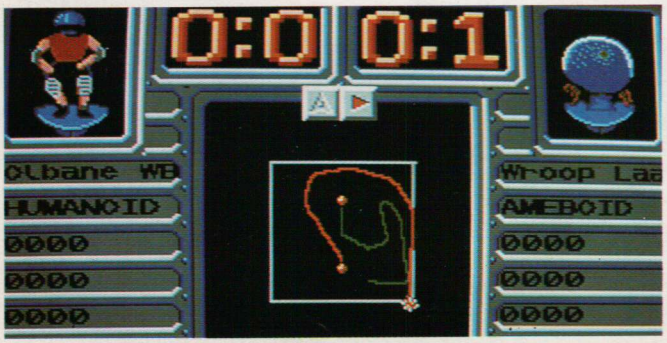
Anyway, welcome to the intergalactic hoverboard challenge. You're locked in an area against a hostile opponent. As you move around the area, you leave a crystallised wake behind you. So does your opponent. To win you must force your opponent to make a mistake. Likewise, your opponent will be looking to sink you. Contact with any wall is a big mistake. First one to wipe out loses. Hi ho – hoverboard away!

Getting Started

From the main menu press key F2 on the keyboard. After a short pause the game will start. If you wish, you can load *Wipe Out* from the Workbench. Enter the *Wipe Out* folder and double-click on the *Wipe Out* program icon to start.

Ensure there's a joystick plugged into Port 2 and use the following moves to get your hoverboard humming:

- Up – forward fast.
- Up and fire – forward even faster if turbo option fitted to board.
- Fire – jump.
- Left – slow left turn.
- Right – slow right turn.
- Diagonal left – fast left turn.
- Diagonal right – fast right turn.



After the match, you're shown the paths you both took.

BIRDS SAMPLER

PROGRAM: RGB STUDIOS
FILES:
BIRDS_SAMPLER.DOC,
1_KEYPALETTE[16].PIC,
2_FLYINGSTORK[26.ABR,
3_SEA-CROSSING[16].PIC,
4_LANDSCENE[26.ABR

Before you go any further, do you have1Mbyte of RAM and *Deluxe Paint III*? No? Well then, this isn't for you, I'm afraid.

Perhaps you've done the 'amazing bouncing ball' tutorial in *DPIII*'s manual, and learnt your way around the paint-and-animate program doing that. Then what? Moving inanimate objects around the screen is fun. Zooming text is great. But true animation is about living, moving, animate creatures. That means you need a set of sequenced pictures, each one a little different from the next. The Real Things *Birds* sampler on the Coverdisk provides you with the means of producing stunning animated sequences.

Do remember though, you need *Deluxe Paint III* to use the *Birds* sampler. If you own *DPIII*, you will know that 1Mbyte is necessary for animation.

Getting started

Follow these steps to make your own movies. Use the small sample kit of Real Things parts supplied in the BIRDS_SAMPLER drawer on the disk. You can't see the files from Workbench; they only show from the *DPIII* file requester.

1. Load DPIII. Set it to LoRes, 16 colours. Load 1_KEYPALETTE.PIC in your Pictures load requester.

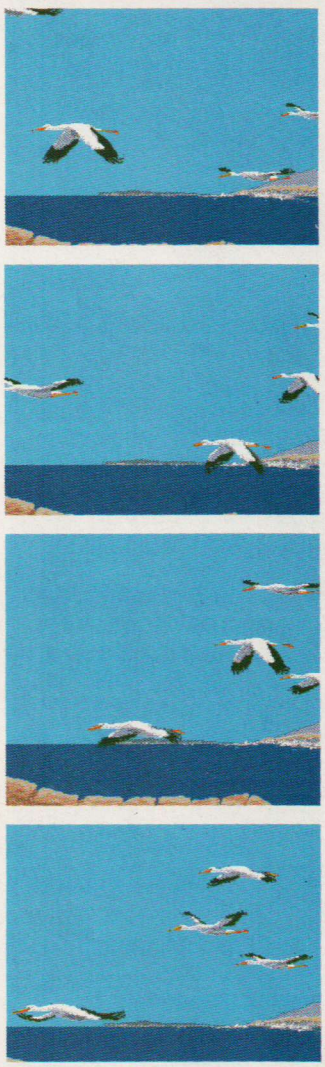
2. Load 3_SEA-CROSSING.PIC, then open 60 frames from the Anim-frames requester.

3. Load 2_FLYINGSTORK.ABR via the Animbrush requester.

4. Place the stork just off screen to the left, about half-way up.

5. Open the Move requester (hit Shift M) and enter these numbers in the appropriate boxes: [X] –500, [Y] 20, [Z] –120, [COUNT] 60. Select the Move-to symbol. Click on Draw.

That's enough to get you started. A comprehensive help file called BIRDS_SAMPLER.DOC is contained in the BIRDS_SAMPLER drawer and will provide you with further information.



You too can create animations like this from the collection of bird parts to be found in the Real Things *Birds* sampler.

Pdom PD Amiga Public Domain and Shareware Software

Application Disks

● **FFISH254** - UEdit V2.5a the word processor.
● **FFISH 176** - AnalytiCalc V23.2a of the spreadsheet. Requires 1Mb RAM and 2 drives.
● **FFISH 143** - RIM V5.0 is a relational database.
● **AMP1**: Home Business Pack. RIM the relational database and HyperBase database. UEdit the word processor, spell checkers, VisiCalc and VC spreadsheets.A 3 disk pack for only £7.50!

Utility Disks

● **FFISH253** - Elements an interactive display of the periodic table.
● **FFISH258** - BACKUP V2.04 allows you to backup anything, anywhere!
● **PDOM93** - ARP V1.3 the Amiga DOS Replacement Project.
● **PDOM 62** - The Public Dominator Anti Virus Disk: Virus X V4.0, VCheck V1.2 (for memory), VCheck V1.9 (for disk drives), Zero Virus V1.3 the fully integrated virus detector and killer. Also Boot Block Champion the utility.
● **PDOM 59** - Ameteur Radio Disk: disk full of HAM utilities.
● **FFISH 243** - NoClick V3.5 stops the disk drive clicking if there is nodisk in the drive. PassWord V1.21p you specify the password for your system security. Pcopy V2.0 the excellent disk copier.
● **FFISH 188** - Boot Intro V1.0 displays a scrolling and a still message of your choice at boot up.
● **FAUG 41** - Rain Bench. Amiga Arc V0.2 compatible with ARC V5.0.
● **AMICUS 22** - Printer Driver Generator V2.3, Show Print II.3 IFF screen dump.
● **FFISH 158** - DiskX sector editor, MSDOS V0.1 read MSDOS or ST format into RAM:.
● **FFISH 157** - XIcon V2.01 allows you to call up scripts containing CLI commands from an icon.
● **FFISH 131** - DFC is a disk copier that multi-tasks. Hyperbase V1.6 is a database system.
● **FFISH 58** - ASDG-rrd a RAM disk that survives reset. BigView displays any size IFF picture. EGraph creates graphs from X,Y pair text files. NewZap V3.0 disk sector editor.
● **FFISH 244** - BBChampion V3.1 the Boot Block Champion load, save and analyze boot blocks. BootIntro V1.2 you specify The headline text of up to 44 characters and the scrolling text of upto 300.
● **FAUG 67** - Disk X V2.0 the sector editor. Hand Shake V1.06b a VT100 terminal emulator. Pack It a whole disk compressor.
● **FAUG 62** - Access! V2.6 very powerful telecommunications package.
● **FAUG 50** - Dir Util V VI the disk manager.
● **APDC 18** - Floppy Disk Utils: Quick Copy V1.0, Disk Mapper, Disk Salvage, Viruscheck, System Utils: Blitz V1.0 text editor, TimeSet, ACalc calculatorAmiga Monitor V1.1, MeM Grab fast memory grabber, DirectoryMaster V1.1
● **APDC 15** - Icon utilities: full of icon files and creators. Some animated!Brilliant disk for icon manipulation.

Graphics Disks

● **SOFT 013** - Mandelbrot Explorer. Excellent full features mandelbrot designer.
● **FAUG 42** - DBW Render a very good Ray Tracing utility.
● **SOFT 123** - Amiga MCAD V1.2.2 excellent Computer Aided Design package.
● **SOFT 022** - Disk Full of graphic utilities: Clip It! clip any part of the screen and save to disk, Filter Pics manipulate pictures with enhancers, edgedefinition, colour and size shifters; plus loads of excellent packages
● **APDC 13** - VDraw V1.19 brilliant painting program, Ray Tracer Generator, MCAD V1.2 an object-orientated drawing package, IFF to pieces jigsaw program, ROT 3D drawing program.
● **AMP 3**: Graphics Pack: 3 disks SOF123, SOF22 and APDC13. A 3 disk pack for only £7.50!

Demo Disks

● **PDOM89** - AMOS the Amiga Games Creator Demo.
● **PDOM91 and PDOM 92** - Ghostbusters II demo by Hellbound. requires 2 disk drives and 1MB RAM! Great digitised pics and sound from the movie Ghostbusters II. 2 disks @ £3.00 a disk.
● **PDOM 86** - The Memory Expansions Systems demo No1. Excellent graphics! Requires 1MB RAM.
● **PDOM 87** - The Memory Expansions Systems demo No2. Amazing graphics! Requires 1MB RAM.
● **PDOM 82** - Batman Remix demo. Sampled sounds of Prince's BATMAN.
● **PDOM 83** - Space ACE Demo an excellent demo of the game with fabulous animation and incredible sampled sounds!
● **PDOM 65 and PDOM 66** - Red Sector Mega Demo. THE best demo on the Amiga! A mega good demo that only needs 1 drive. Amazing graphics, fabulous sounds, astounding vector graphics!!
● **PDOM 01** - The Walker Demo I is a mega animation demo that requires 1Mb RAM.
● **PDOM 02** - The Walker Demo II the mega mega animation demo that requires 1Mb RAM.
● **PDOM 73** - AGAtron Special disk 10: Star Trek Dry Dock Demo. Excellent! Mega! Brilliant!Prefers 1Mb RAM, but you will get part of the demo on a 1/2Mb RAM.
● **PDOM 74** - Star Trek the Starship Enterprise flying around in a circle.
● **PDOM 76** - Agatron Animation 14: Star Trek Shuttle landing on the SS Enterprise. Prefers 1Mb RAM, but you'll get part of it on 1/2Mb RAM.

Game Disks

● **Pdom90** - Tennis game by C Dreke, excellent tennis action game ,fully working.
● **FFISH252** - Star Trek Trivia V2.0
● **FFISH259** - Escape from Jovi V3.0
● **PDOM79**, PDOM80 and PDOM81 the StarTrek game! An amazing 3 disk fully working amazing graphics game! Requires 1MB RAM.
● **FFISH 205** - Bally the arcade game, Battle Force V3.01 simulated battle between 2 robots. Chess V2.0.
● **SD 21** - Monopoly.
● **SOFT 118** - Amoeba Attack, Lander, Gravity Attack, World text adventure and Bullrun a battle simulation.
● **PAN 29B** - Amoeba space invaders, CosmoRoids, Stone Age a Boulder Dash type, BackGammon, Chain Reaction, Master Mind, Reversi, Black Jack, Crazy Eights, Klondike, Jig Saw, Keno, YachtC, Daleks and Ratmaze.
● **SOFT 042** - Chinese Checkers excellent version.
● **SOFT 068** - Clue as in Cluedo, Othello, Klondike, Canfield and Cribbge.
● **SOFT 069** - Backgammon, Yahzee, TVision, Missle Command, Cosmo 2 and 3D Breakout.
● **SOFT 117** - Empire, Gravity Wars, Hanoi, Hockey, Bikoff, Jackland, Othello Master,Pacman, all brilliant PD games.
● **AMP 8** - Game Pack: 3 disks SOF68, SOF69 and SOF117. A 3 disk pack for only £7.50!

Language Disks

● **FFISH 171** - Sobozon C a port of the Atari ST version of this full K&R C compiler, assembler and linker.Not for the beginner due to lack of disk info.
● **FFISH 193** - Zc V1.01 modified version of the Sobozon c compiler from disk FFish 171. It now generates codecompatible with A68k assembler and has a front end to allow easier useage.
● **FFISH 140** - Stoney Brook PROLOG v2.3.2. SB PROLOG requires 1Mb of RAM.
● **FFISH 91** - The Adventure Definition Language (ADL).
● **FFISH 201 and FFish 77** - Draco V1.2 is a compiled - structured language reminiscent of both C & Pascal. A full interface to AmigaDOS & Intuition is supplied. Be sure to get both FFish 201 AND FFish 77 @ £3.00.
● **APDC 25** - Logo, XLisp, Modular 2, MVP Forth.
● **PDOM 60** - Modula II compiler. Apparently fully working, complete and ready to use version with on diskdocumentation and examples.

Most of the disks in this advert actually contain more files than is listed. The ad also only shows a small portion of our catalogue, we have in stock TBAG, AMUSE,APDC, FAUG, Panorama, Amicus, Slipped Disk, The latest Fred Fish and our own PDOM collection. so for details of the service and a free copy of the 56 page bumper catalogue send a Stamped S.A.E. (If you are ordering you will get the latest catalogue).Disk Prices: 1 to 5 disks are £3.00 each, 6 to 10 disks are £2.75 each and 11 or more disks are only £2.50 each!

★ ★ ★ PDom Supplies ★ ★ ★

Excellent quality blank disks including labels: 10-£7.00, 50-£33.00, 100-£61.00. Blank disk labels: 100-£3.00, 1000-£20.00. Disk boxes: 10 capacity £1.50, 20 capacity £3.00, and lockables: 50 capacity £4.50, 100 capacity £7.00.Disk and box: 10 £8.00, 20 £16.00, 50 £35.00 and 100 £65.00. Disk cleaning kits - £2.50.

All prices are fully inclusive.
Foreign Orders must add 10% for shipping costs.
NOTE: we are mail order only!
To order please send a cheque, postal order payable to Pdom PD Amiga or credit card details to:

Pdom PD Amiga ,
1 Bartholomew Road,
Bishop's Stortford,
Hertfordshire, CM23 3TP.
Telephone 0279 757692.

VISA

Access

TOFWARE INTERNATIONAL

TOFWARE INTERNATIONAL, 24 Tresham Road, Orthon Southgate, Peterborough,
Bank:Midland Bank, Sort code 40-18-17 51172859 acc. no. 018620472 Fax: 0744-371703

FREE ORDER PHONE: 0800-898455

New New New New New

Newsflash, a monthly diskmagazine with great music, graphics, reviews, programms, tips and tricks and many more.

Subscription 6 months £ 25.00
Subscription 12 months £ 45.00

Introduction: Newsflash issue march and april now £ 5.00

GAMES PACK VOL I
10 disks packed with 30 beautiful games for £ 16.00

GAMES PACK VOL II
10 disks packed with 11 big and exciting games £ 16.00

STAR TREK
The game of the movie
3 disks £ 6.00

RETURN TO EARTH
game, 1 disk £ 3.00

SONIX SOUND PACK
10 disks with sound sampling, demo's and great music. 10 disks £ 16.00

SUPER SEX PACK
10 disks packed with the most beautiful girls, including the best animation £ 16.00

STARTER PACKAGE
10 disks packed with tips, tricks, CLI help, DEMO's etc. £ 16.00

SUPER PROGRAMM PACKAGE
15 disks with cadcam, household programms, anti-virus, games and utilities. A german magazine had tested this package and wrote: "the quality of the programms is good to very good".
15 disks £ 22.00

FRED FISH PACKAGE
We supply all the Fred Fish disks at a price of £ 2.00

We can now offer you the latest 15 Fred Fish disks (246-260) in 1 package with Dmake, labelprint, crossdos, zerg, trektrivia, Fast action, Stevie, Slotcars, Monopoly, Flipper and many more for just £ 22.00

NEW:
SOFTWARE SUBSCRIPTION
Now you can receive the very best new software for your amiga computer every month, at a very low price. Including games, demo's, utilities etc.

5 disks a month	£ 9.00 per month
10 disks a month	£15.00 per month

NEW PACKAGE
(18 year and older)

Sexy girls vol	1, 7 disks	£ 10.00
	2	£ 10.00
	3	£ 10.00
	4	£ 10.00
Part 1 + 2 + 3 + 4	28 disks	£ 45.00

NEW: PARTY ALL NIGHT/DO IT AGAIN PAM £ 5.00

UGA SOFTWARE

UGA SONIX PACKAGE
10 disks £ 20.00

UGA SLIDE SHOW
4 disks £ 10.00

UGA MUSIC PACKAGE
10 disks £ 20.00

UGA DEMO'S AND INTRO'S (THE BEST)
10 disks £ 20.00

UGA ANIMATIONS
some of the animations
5 disks £ 10.00

UGA SPECIALTIES
the best specialties in 1 package
10 disks £ 20.00

UGA QL EMULATOR
including 2 data disks £ 9.00

UGA UTILITIES I
5 disks with the best utilities £ 10.00

UGA UTILITIES II
5 disks £ 10.00

Each UGA utilities package includes more than 100 utilities.

UGA UTILITIES I + II £ 18.00

DISKETTE DUPLICATION
Tofware International is the leading diskette duplicator in Europe. We can offer you the lowest prices, best services, full fullfilment, warehousing, sealing etc.

If you are interested in our services don't hesitate to contact us, we are sure that we can offer you the lowest price available.

5.25" ds/dd	starting at	£ 0.15
5.25" hd/dd	starting at	£ 0.34
3.50" ds/dd	starting at	£ 0.34
3.50" hd/dd	starting at	£ 0.68

All prices are inclusive diskette.

HOW TO ORDER?

Call our freephone 0800-898455
FAX: 0744-371703 (attn. Tofware International Dept.)
and we will sent you the goods by firstclass post. (C.O.D.)
Send cheques or cash to: Tofware International
24 Tresham Road
Orthon Southgate
Peterborough
You also can transfer the total amount to our bankaccount (see above)
We will ship the goods after arrival.

All prices are inclusive VAT. Please ad £ 1.50 to total order.
We also sent C.O.D. Orders. Please ad £ 2.50 to total order.

MEGA WB

PROGRAM: PUBLIC DOMAIN
FILES: MEGA WB, MEGA WB.DOC

When run, *Mega WB* expands the Workbench work area far beyond the resolution limits of your monitor. In other words, you could have a Workbench area that stretches beyond the edges of your monitor. Imagine having a work area of 1024 pixels by 512 pixels. Or even, if you have the memory, 3000 pixels by 3000 pixels.

Of course, your monitor or TV can't display the whole work area in one go, and only shows the usual 640 by 256 image. In effect, you window in on a small area of the Workbench. By moving the pointer towards one of the edges of the screen, you can move around the *Mega Workbench* area.

Getting Started

Double-clicking on the *MEGA WB* program icon (inside the *MEGA WB* drawer) from Workbench sets up a default expanded Workbench area of 1024 pixels wide by 512 pixels high. That's roughly twice the normal Workbench size.

Pressing key F5 from the Coverdisk's main menu will also set up an expanded Workbench work area of 1024 by 512 pixels.

Follow these instructions if you want to create a custom Workbench area:

- Highlight the *MEGA WB* program icon by single-clicking on it from Workbench.
- Click on Info in the Project menu. (Remember, click and hold the right mouse button to make the Project menu, and all the other menus in the menu bar, appear.)
- You will see a box labelled Tool Types. Inside you will see Width=1024. Click the pointer somewhere inside the box to get a cursor. Delete 1024 and type in a value of your choice.
- By clicking on the down-pointing arrow inside the Tool Types box, Height=512 will appear in place of Width=1024 (or whatever your new Width value may be). Change the 512 to a value of your choice.
- Once you've made your changes, be sure to click on the SAVE gadget situated towards the bottom left of the Info box.

Do note, *Mega WB* won't work if you try to create work areas that require more memory than your machine is endowed with.

To de-install *Mega WB*, double-click on the *MEGA WB* program icon. Do ensure that all windows and icons lie inside the standard Workbench area before you try to reduce the Workbench area back to normal.

KEYBIZ

PROGRAM: MARK SCHRETLEN
FILES: KEYBIZ, KEYBIZ.DOC

Here's a program meant to change your working environment. Fnarr, fnarr. When installed in a multi-Amiga office, managers report dramatic increases in productivity levels yet workers insist that their output has not changed.

Further, all reports that they have developed a certain fondness or attachment to their Amigas and claim that their Amiga is friendlier than ever before. This fondness or friendliness is most frequently reported by more senior office workers who yearn for "the good old days" and frown upon technological advances. Some of these workers even claim substantial reduction in stress levels at work because of *Keybiz*.

The only real advice we can give is: don't believe the hype.

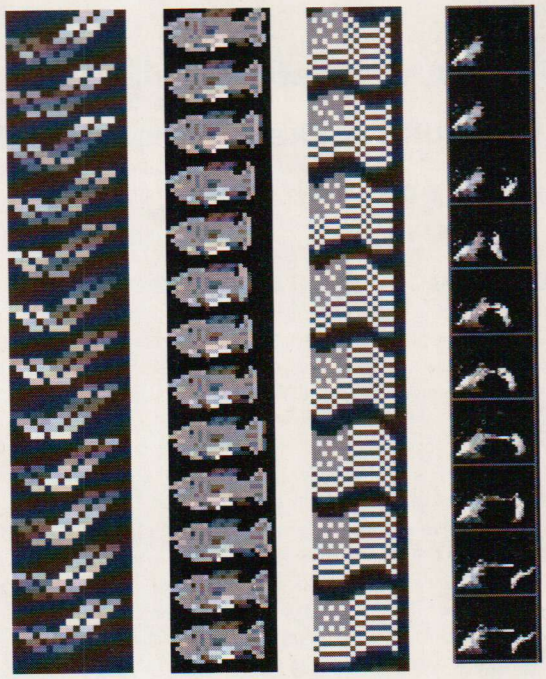
Getting Started

Pressing F7 from the main menu will transport you to the Workbench from where you can run *Keybiz* simply by clicking on the *KEYBIZ* icon located inside the *KEYBIZ* drawer.

Turn up the sound on your monitor or amplifier and continue with your normal work. If you wish to remove *Keybiz*, click once on the CloseWindow gadget in the *Keybiz* window that is displayed in the top-left of the screen.

POINTER ANIMATOR

PROGRAM: TIM KEMP
FILES: POINTERANIMATOR, POINTERANIMATOR.DOC, POINTERSTOPPER, MERGE, AMICHECK, FISH, FLAG, NOSE



Haven't you sickened of the Amiga mouse pointer? It's so dull, drab, lifeless, inanimate... *Pointer Animator* to the rescue! Tim Kemp's excellent program animates the Workbench pointer by substituting its own custom pointer. The pointer image is rapidly changed to give the illusion of animation. The image sequences are standard IFF ILBM files meaning you can easily edit predefined animations and create your own! In addition to the normal three-colour pointer, *Pointer Animator* supports a 15-colour affair.

Our eyes are specially designed to detect motion. On a normal Workbench screen with a good contrast between the pointer and display colours, you can easily distinguish the position of the pointer. On a 32-colour screen, it can be difficult to identify the pointer. Even with very similar colours, an animated pointer is easy to spot.

For a full run-down of how to go about creating your own animated pointer, look at the comprehensive help file. If designing animated pointers seems too much like hard work, there are four examples for you to tinker with on the Coverdisk.

Getting Started

To run a pointer animation from the Workbench, all you need to do is double-click on the animation's icon. Hit key F4 on the keyboard to read the *Pointer Animator* help and get to the Workbench. From the Workbench enter the *POINTERANIMATOR* drawer. Inside you will find icons with the names *AMICHECK*, *FISH*, *FLAG*, and *NOSE*. Double-click on any of those to get an animated pointed. Double-click on POINTERSTOPPER to revert to the standard mouse pointer.

GAMEBUSTERS SPECIAL

Yet again *Amiga Format* brings you a mighty collection of game hacks. This month's selection of hacks comes from Matthew and Peter Warner. the pokes can only be run by pressing key F6 from the Coverdisk's main menu and then pressing the appropriate function key when the Game Busters menu appears.

A QUICK WARNING

None of these hacks write to disk, but play safe and keep your original game disks write-protected when using them.

MUTANT CAMELS II

Infinite shields for the hairy hippy's manic shoot-em-up. Press F1 from the Game Busters menu to run it.

CAPTAIN FIZZ

Psygnosis' game laid bare. Infinite health and credits for the hero of the piece. F2 will get you the goods.

INTERCEPTOR F18

A superb hack giving you infinite missiles and cannon rounds in this monster flight simulator. Press F3 to run.

JOE BLADE 1

There's no way you can lose with infinite energy and ammo, and permanent enemy uniform. Hit F4 and follow the prompts.

JOE BLADE 2

Infinite energy and time are all you need to blast your way around the enemy fortress. Button F5 will give you invincibility.

USING YOUR FORMAT DISK

IMPORTANT! Before using your *Amiga Format* disk, you should make a back-up of the master disk as soon as possible.

BACKING UP YOUR DISK

For many reasons, it is important to make a backup of the Coverdisk as soon as possible. Copying the disk may sound like a complicated task suitable for techno-buffs only, but it is surprisingly simple provided you read the following instructions carefully:

1. First, turn on your machine and load Workbench. Once the Workbench screen appears and the disk-drive light goes out, remove your Workbench disk and insert our Coverdisk.

2. Next, click once on the Coverdisk icon and then press the right mouse-button and the Workbench menus will appear. Now, while keeping the right mouse-button depressed, move the mouse pointer over to the 'Workbench' heading and a menu will drop down. Move the mouse pointer over the 'duplicate' menu option and then press the left mouse-button.

3. After a few seconds' disk access, the Workbench DiskCopy tool will be loaded and run. Now just follow the on-screen prompts and your *Amiga Format* Coverdisk will be copied to a backup disk. When the machine asks for the destination, insert your blank disk into the drive. Further instructions are in the user's guide that comes with your Amiga.

USING THE PROGRAMS

All programs on the *Amiga Format* disk are specially set up to make them as easy to use as possible. If you can use the Amiga's Workbench then you can use our Coverdisk! If you do have problems with a program, full instructions on loading and using the programs are included in Disk Extra and these should get you up and running. If you still have problems, you should read the documentation file (.DOC) that is included with every program. To run any of the programs on this month's Coverdisk, follow a simple procedure: unless specified differently within Disk Extra, just double-click on the program's icon on the Workbench and it will load and run. Full details on how to use the programs once they have loaded are inc-luded as a documentation (text) file with the program.

To display a documentation file, just double-click on the appropriate .DOC file and a window will open containing the file's contents. Pressing the space bar will advance the text a page at a time.

COPYRIGHT NOTICE

Unless specifically stated, the programs on the Coverdisk are not in the public domain and the copyright remains with the author. Selling or distributing these programs without the author's permission is against the laws of copyright.

DISK EXTRA HOTLINE

0225 765086
Between 4pm and 6pm on weekdays only

Flummoxed by files? Dumfounded by disks? Paranoid about programs? If you have a problem with the disk – and you're sure the disk is in full working order – phone 0225 765086 with your query. State the model of your machine and anything you've got attached to (or plugged inside) the computer. For problems with disks before Issue 5 phone *Amiga Format* on 0225 442244.

IS YOUR DISK FAULTY?

We have done our best to check that the programs on the *Amiga Format* Coverdisk are simple to use, error-free and have no known viruses. However, we cannot normally answer telephone queries on using the software, and we do not accept liability for any consequences of using the programs on the disk.

If your *Amiga Format* disk is faulty – and out of the tens of thousands duplicated, some are unfortunately bound to be – you should send it back for a free replacement within a month of the cover date to:

Amiga Format
May Disk
Discopy Labs
Unit A, West March,
London Road, Daventry
Northants NN11 4SA.

If your Amiga refuses to accept the disk, try using the DISK-DOCTOR utility on your Workbench disk to rescue it before sending it off for a replacement. Full details of *DiskDoctor* can be found in the user's manual that came with your machine.

WARNING!

The game cheats on this month's Coverdisk are straightforward to use, but please read the instructions in the magazine, and on the disk. Please! If you screw up your game disks – or, indeed, any other disk – because you failed to read any documentation, we have to say it's your fault. You're on your own. We cannot be responsible for any damage incurred while using the Gamebusters hacks.

WE WANT YOUR PROGRAM

If you've got any programs for the Amiga which you think other readers would find useful, interesting or amusing, we'd very much like to know about them.

1. Make sure your program is foolproof to use. 2. Create a file called README.DOC on the disk which explains exactly how to use your program. 3. Fill in this form, sign it, and send it without delay to: CoverDisk Software, *Amiga Format*, 30 Monmouth Street, BATH BA1 2AP. You could win a share of up to £800 prize money for the best programs each month.

EARN UP TO £800

Name .....

.....

Address .....

.....

.....

Telephone *(Daytime)* .....

(Evenings) .....

My program name is .....

.....

Approximate total size of files in kilobytes .....**K**
(we cannot use programs longer than 200K; shorter submissions, under 100K, stand the best chance of publication). It is a:

- ☐ **Game**
- ☐ **Business utility**
- ☐ **Music program**
- ☐ **Novelty**
- ☐ **Technical tool**
- ☐ **Art program**
- ☐ **Educational**
- ☐ **Other**

Brief description .....

.....

.....

.....

Checklist **(please tick):**

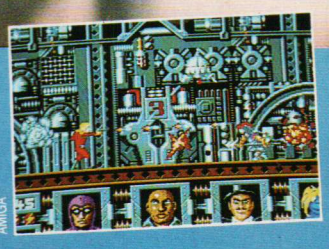
- ☐ **Stamped, addressed envelope for return**
- ☐ **README.DOC explanation file on disk**
- ☐ **Printout of README.DOC file (if possible)**
- ☐ **Name, address, machine type written on label**
- ☐ **Disk certified virus free**

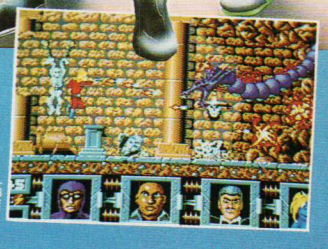
IMPORTANT **Please sign this declaration:**
This program is submitted for publication by *Amiga Format*. It is wholly my own work and I agree to indemnify Future Publishing against any possible legal action should copyright problems arise.

Signed .....

Date .....

DEFENDERS OF THE EARTH™





THE HEROES OF THE PAST ARE HERE TO SAVE THE FUTURE

featuring Flash Gordon and his friends in an epic battle against the evil forces of Ming The Merciless

AVAILABLE FOR: C64, AMSTRAD CPC
AMIGA, ATARI ST SPECTRUM 48/128K

ENIGMA VARIATIONS

© 1990 King Features Entertainment Inc.
King Features Syndicate Inc. All Rights Reserved.

13 North Park Road, Harrogate HG1 5PD Sales: (0322) 92518

3 1/2" BENCHMARK DISKS AND BOX OFFER

20 3 1/2" DS/DD + 80 Cap. Box...£20.00
40 3 1/2" DS/DD + 80 Cap. Box...£34.50
50 3 1/2" DS/DD + 80 Cap. Box...£40.00
70 3 1/2" DS/DD + 80 Cap. Box...£54.00
All disks 100% certified & guaranteed
All boxes inc. Lock & Dividers

3 1/2" BENCHMARK DISKS DS/DD 135TPI

25.....£17.80
50.....£34.80
100.....£63.25
200.....£117.88
400.....£223.68

DISK BOX SPECIAL

inc. locks and dividers

3 1/2" 50 Capacity £5.25
3 1/2" 80 Capacity £6.50
5 1/4" 50 Capacity.....£4.95
5 1/4" 100 Capacity.....£6.50

DATA CABLES

IBM 25m-36m 2 mtr £7.25
Cent. 36m-36m 2 mtr £8.25
RS232 25m-25m 2 mtr.....£7.25
RS232 25f-25m 2 mtr.....£7.25
BBC 26 IDC-36m £4.50

DATA SWITCHES

For use with all computers

2 way 36 pin Cent.....£14.50
2 way 25 pin D-type.....£12.50
X-over 36 pin Cent.....£19.22
X-Over 25 pin D-type.....£18.22
All metal Case with rotary switch

MICE AND ACCESSORIES

Genius Mouse GM - 6+.....£35.00
(inc. Dr Halo III Menu Maker and Library Mouse pad and pocket)
Rigid Mouse Mat double sided.....£4.50
Mouse Pocket.....£2.50
3.5" and 5.25" Library Cases per 5.....£4.75
2 Piece Printer Stand.....£7.95
3.5" External for Atari 1 Meg (720K)....£74.99
3.5" Amiga 1 Meg (880K).....£74.99

UNBRANDED DISKS 100% CERTIFIED & GUARANTEED

3.5" DS/DD		3.5"DS/HD	
100	£47.00	100	£95.00
200	£94.00	200	£180.00
400	£173.00	400	£357.00
600	£249.00	600	£518.00
800	£320.00	800	£670.00
1000	£387.00	1000	£812.00

ALL OUR DISKS HAVE A LIFETIME WARRANTEE. DISKS ARE SUPPLIED WITH USER LABELS

UNINTERRUPTIBLE POWER SUPPLIES

350 VA Slimline £287.00
400 VA.....£298.00
550 VA Slimline £350.00
1000 VA.....£625.00

3 1/2" BENCHMARK DS/HD High Density

25 .....£32.00
50 .....£58.00
100 .....£106.00
200 .....£199.00
400 .....£370.00

ALL PRICES INCLUDE VAT & P&P. UK & BFPO ORDERS ONLY

MCS

Cheques and Postal Orders to: VISA

24 HOUR ORDERLINE 0597 87784

Manor Court Supplies Ltd

Telephone: 0597 87 792 Fax No: 0597 87 416

Dept AF5, Glen Celyn House,Penybont, Llandrindod Wells, Powys, LD1 5SY

EDUCATION AND GOVERNMENT ORDERS WELCOME

AMIGANUTS UNITED

☆ STOP PAYING OVER THE ODDS FOR YOUR ☆
☆ PUBLIC DOMAIN SOFTWARE ☆
PRICES START AT ONLY FIFTY PENCE SELECTED FREEBIES WITH EVERY TEN PROGS ORDERED.

SEND FOR THE INTRODUCTORY OFFER TO THE FASCINATING WORLD OF PD CONTAINING:
THE AMOS GAMES CREATOR PLAYABLE DEMO (THIS PROG IS DUE FOR RELEASE IN MAY)
BREAKOUT CONSTRUCTION SET ALLOWS YOU TO DESIGN YOUR OWN VERSIONS
(THIS ALSO HAS A GREAT EDUCATIONAL GAME FOR THE KIDS. CALLED BRITE LITES).
THE PREDATORS TWO DISK MEGADEMO IN 11 PARTS WITH TWO NICE GAMES.
THE MAIN 1990 LIBRARY DISK. FULLY DETAILED DESCRIPTIONS OF OVER 500 PROGS.
THIS 5 DISK INTRO PACK IS OFFERED AT ONLY £6.99 INCLUDING POST/PACKING
PLEASE ASK FOR INTRO PACK 2 WHEN ORDERING.

NEWSFLASH U.K.
ISSUES 6, 7, 8 NOW AVAILABLE. EACH ISSUE COMES WITH A SUPPORT DISK CONTAINING DEMOS, UTILITIES, HELPFUL ADVICE PLUS MUCH, MUCH MORE.
ONLY £5.50 PER SET..... PLEASE STATE WHICH ISSUE YOU REQUIRE WHEN ORDERING.

AVAILABLE NOW
DISKS 512 A+B: THE FANTASTIC 'STAR TREK GAME'
RUNS ON 1/2 OR 1 MEG (ONLY 1 DRIVE REQUIRED)...£3.70
DISK 498: 'SID' ABSOLUTELY THE BEST DIRECTORY UTILITY TO DATE.
APRIL LIBRARY UPDATE AVAILABLE FROM MARCH 31st FOR £1.85

Cheques/Postal Orders payable to: **AMIGANUTS UNITED**
169, DALE VALLEY RD, HOLLYBROOK, SOUTHAMPTON SO1 6QX
PLEASE NOTE: Some PD disks contain language that may be considered offensive.

SENLAC SOFTWARE PDLIBRARY

14 OAKLEA CLOSE, OLD ROAR ROAD, ST LEONARD ON SEA, EAST SUSSEX TN37 7HB TELEPHONE: **0424 753070**
CHEQUES & POSTAL ORDERS TO ABOVE ADDRESS QUOTE REF A/F1
CREDIT CARD ORDERS DESPATCHED SAME DAY

VISA

FREE CATALOGUE WITH FIRST ORDER

DISK PRICES
2-9 Disks...£2.00 each (Min Order 2 Disks)
10-24 Disks...£1.75 each
25 Disks and Over...£1.50 each

SEND 28p SAE FOR YOUR CATALOGUE NOW!!!

GRAPHICS & SOUND SAMPLING SERVICE AVAILABLE!

* = 1 Meg Required df1: External Drive Reqd. (2) No. Disks in Set

GRAPHIXS
Fantasypixs I
Fantasypixs II
Karis Cartoons
Digipixs Slideshow
Deluxe Photlab (2*)
APDC9 Graphics
Calig Demo
Roger Dean Pixs
Fanatasypixs III
Paradise Slideshow
Rot (Fish71)
Photofile Pixs
Photofile Pixs (2)
Ham Pixs
Joe Slideshow
Graphics Slideshow I
GFX Slideshow II
GFX Slideshow III

GLAMOUR DISKS
Utopia
Sam Fox Slideshow
Sabrina Sam Fox
Playboy Slides
Kim Wilde Slides

GAMES/DISKS
Retaliator/Pacman87
Autobahn 3000
PDChess/Tetris II etc
Casino Craps
Monopoly/Cluedo
Battlemech
Moria *
Larn

MORE GAMES
PDGames I
PDGames II
PDGames III
Empire
Risk
Cribbage

ANIMATION DISKS
Not Boing Again *
Probe Sequence
Walker I *
Walker II *
Roses Flowershop
Cokeman-Smurf
War Hammer (D Video)
Rotating Women
Car Demo *
Zeus Bust *
Dragons Lair Demo *
Killer Demo *
Ghostpool *
Coyote (2*)
Charon *
FRP Karns Attack *
FRP Roadrunner
Boing Machine *
Alice/Dogsworld *
Luxoteenager *
Wave Sailing (2*)
FRP Paula VI*

GAME DEMO DISKS
Hard Drivin
Battle Squadron

MORE GAMES DEMOS
Sword of Sodan
Clown 'O' Mania
Back 2 Base
Interphase
Battlechess *
Shadow of the Beast
Amos Games Creator

GENERAL DEMOS
Complex Bobs
Trash & TTB Demo
Doc Analyser Demo
Red Sector (2)
JCS Demos
ACU Collection
Tetragons Demos
Alcatraz Demos
Space Ace Demo
Puggs in Space
NewTek (2*df1:)
Vision Megademos
Deathwarp
Sanxim Demos
Universal Pictures
Kefrens 7 up Crew
Pan Demo
Maase Demo + others
Intros Collection
Phenomena Mega Demo 1
Dexion Demos 1
MES Demo *
Vangelis Demo *
Science 451 Demos
Videoscape Demos

UTILITIES DISKS
ESA Utilities
Fullforce Utils
8 Channel S'Tracker
Ghostwriter
Games Music Creator
Soundtrackers (2)
Le'copiers disk
NIB Backup (df1:)
Pixs Executable
Bootblock Progs (2)
Virus X 4.0 + Others
Raytracing
M'Cad
My Menus
Business Pack (6 Disks)

MISCELLANEOUS
Obscene I
Obscene II
Safesex Demo
LoadsaMoney
Millerlite
Holsten Pils
Mike Tyson
Insanity II
Zeotrope Demo
VEdit (Editor)

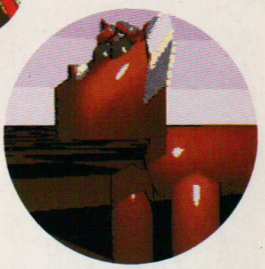
MUSIC DISKS
D-Mob II
Batdance Remix
Compact Disk Player
Sound Explosion
Jungle Mania
RIP Eruptions

LIFE MEMBERSHIP LIBRARY AND FREE P.D. ONLY £1

PRICES;
1-5 = £1.50
6-10 = £1.25
11+ = £1.00
including disk

PREMIER P.D.

SAYS *NO* TO PROFIT, AND GIVES IT BACK TO OUR MEMBERS!
PRICES STATED INCLUDE DISK
SUBTRACT 50p IF YOU SUPPLY DISKS
Send cheques or P.O.s to:
PREMIER P.D. 15 CROXTETH Dr. RAINFORD, MERSEYSIDE, WA11 8JZ.



pd UPDATE

RICHARD MONTEIRO continues his five-year mission to boldly go where no PD pundit has boldly gone before boldly.

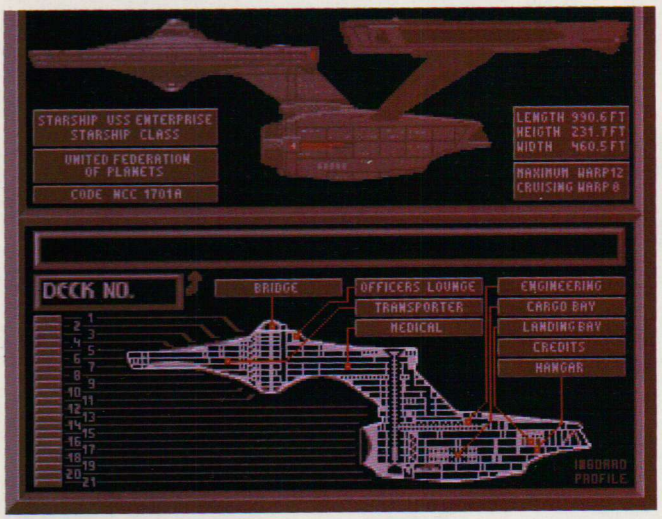
STAR TREK ● gts

Space... the final frontier. These are the voyages of blah, blah, blah. Like the countless episodes of the cult series which appears to have gone way past its five-year deadline, there seem to be countless games based on the *Star Trek* theme. Unfortunately few of the *Star Trek* games have attracted cult followings and there's little chance of them ever becoming classics.

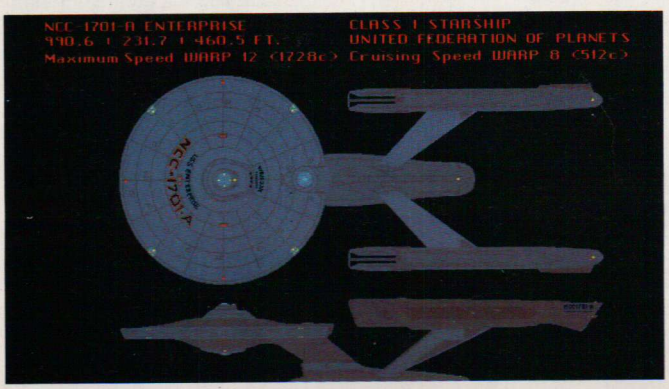
Now feast your eyes on the latest *Star Trek* game, a two-disk PD extravaganza offering you the Universe to explore. It's a huge game; brilliantly complex, stunningly detailed and enormously playable. Superlatives over, here's the rest of the story.

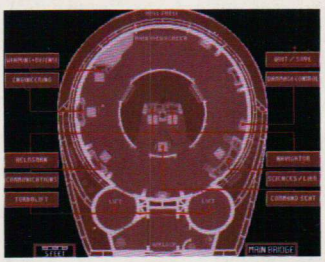
You're in control of the Enterprise (no surprises there) and can run from deck to deck shouting your orders and deciding where in the Universe to go. From time to time you will get missions from Starfleet HQ which you must complete. As in *Elite*, you can trade with planets and battle with any aliens you feel like wasting.

The game runs on a 512K machine; 1Mbyte is recommended because you lose many of the excellent sampled sounds on a less well-endowed machine. Still, it's better than no game at all.



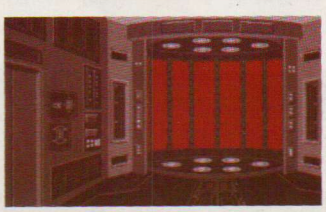
ABOVE: By using the turbolift you can move from deck to deck and check supplies, officers' moral, your health, the engines and so on.





ABOVE: From the main bridge you can set your course, arm the photon beams, switch on the shields, communicate with aliens, interrogate the science computer and check on Scotty.

BELOW: In an emergency, you can always use the Shuttlecraft as a last means of escape.



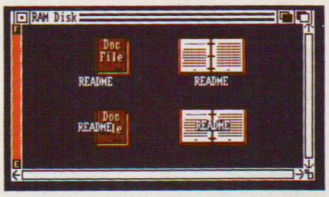
"Beam me up Scotty." "Aye, captain, but she canna take it – you gotta lose somma that weight."

ICONTOOLS
Fish 284

Icontools is a collection of hacks rather than a single utility. The utilities exploit areas of .info files (icon image files) that the current version of Workbench fails to clear or reset upon loading the icon.

Fix allows you to specify the two colours that appear in the borders of the Workbench windows, *Lift* lets you position the filename anywhere in the icon's immediate vicinity and *Center* will position the filename in the middle of the icon.

While the hacks work with existing Workbench versions, there is no absolute guarantee that this will be the case with Workbench 1.4 and beyond.



The top two icons show how the file name normally lies underneath the graphic image while the bottom two icons show what can be done with *IconTools*.

MOUSECLOCK
Fish 279

You've probably seen hundreds of utilities for displaying the time, date and possibly even amount of available memory; but you're guaranteed not to have seen anything as exotic as *MouseClock*. The utility combines a time, date, chip memory and fast memory display to the right of the mouse pointer. The display sprite follows the

Demos CORNER

Marvel at what your Amiga can really do!

INTROS 28
17Bit 584

Another great collection of Amiga mini-demos on one disk. On this disk you'll find:

BLACK MONKS – You've seen starfields before: now witness bubblefields, with the largest colour scrolling message ever.

COMPLEX – Funky music plays while an enormous vector grid spins. The grid can be controlled by your good self. Well, at least it's an interactive demo. It's marginally better than just looking and listening.

COUNTER FORCE – Three soldiers (I presume) stand silhouetted against a red skyline. Big scrolling messages bounce to an excellent house beat.

FRAXION – Wow! An original way of scrolling a message. Huge lettering spiralsgently upwards. The effect is brilliant. And that music sounds very familiar indeed... Nice one chaps, but was there really any need for the BOB bit at the end?

PHENOMENA – This one has appeared in the PD pages previously. It's the demo with a huge graphic of a helicopter flying in a jungle. Most impressive.

PUBLIC ENEMIES – Hmmm, what a strange opening sequence. It's the sort of thing Jason Holborn would appreciate. After the first bits are over you can steer a grid in any direction. Novel, to say the least.

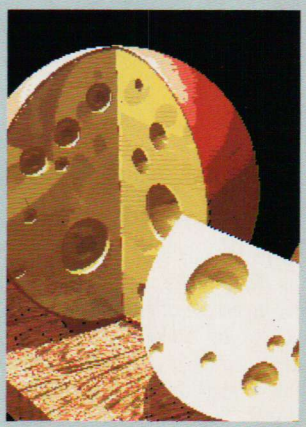
VISION FACTORY – Yet another interactive demo. This time you get to navigate a space craft over a load of bushes. Nuff said.

INTROS 29
17Bit 585

More mini demo mayhem from the likes of Brain Storm, Complex, Disknet, DMob, Poison and Vision Factory.

REAL 3D
17Bit 581

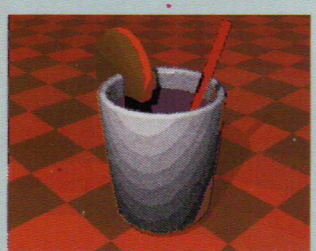
You better believe what you're seeing. High resolution, interlaced, ray-traced HAM images – breathtaking. You'll be lucky to tear your eyes from the screen.

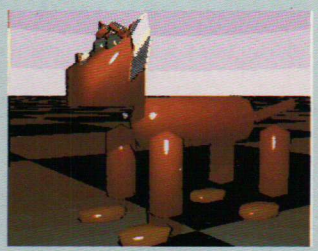


Just one of the many stunning screen images available on the Real 3D Picture Show disk.

UGA MUSIC DISK 15
Softville umus 15

Gyrate to the latest grooves produced on the Amiga. You'll find seven tracks from a selection of authors together with three tracks from Dtack on this excellent UGA (United Graphic Artists, if you're curious) compilation.





ARTISTIK DISK
17BIT 577

What a stunner! The disk, put together by the Sun Connection, features some of the best still-life images you're likely to see. The HAM ray-traced images in particular are spectacular. Even the haunting track that accompanies the pictures is very good.

Some of the Sun Connection stunners which are to be found on 17Bit Disk 577.

pointer as it moves round the screen. It's amazing, and probably the most convenient place for such information.

FISH 285
gts

What an excellent disk. It's packed with some cracking good utilities along with the obligatory smattering of the inane.

AVAILMEM

– A small free memory counter that continuously displays the amount of free chip and fast memory in bytes.

DYNASHOW

– Have you seen those stunning high-resolution overscan HAM images that certain video digitisers are capable of producing? Well now you can display them with this slideshow program.

'LINER

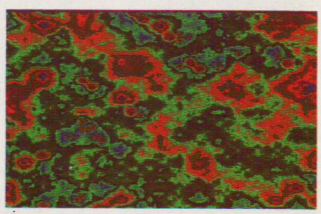
– This utility lets you outline a project like a story or a program.

MSIZER

– A program that lets you resize a window from any corner by holding down the left mouse button and the left Amiga key.

PLASMA

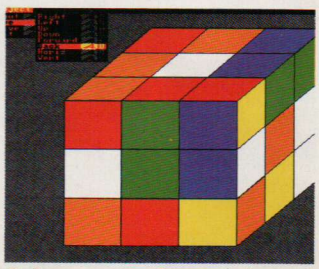
– Generates plasma clouds in extra-halfbrite mode. Plasma clouds are a special form of fractal which show smooth colour graduations. Useful, huh?



Yes, very pretty, but to be honest, just how useful are halfbrite Plasma clouds?

RUBIK

– source and compiled program of a Rubik's Cube solver. You shuffle the cube and the program tries to solve it in the shortest time. You



Before you can turn one face of a Rubik's cube, *Rubik* will have solved the entire cube for you.

SPRING SALE
DISKS FROM 39P

Why is it our many customers praise our excellent service and continue to shop with us? Probably because we offer the best in mail order with a service that is beyond comprehension. For this reason, we are now offering for a limited period only, the opportunity for you to purchase our high graded disks at unbelievable prices. All disks include vat and there is a once only carriage charge of £3.50 per order upto 500 disks. This offer is only applicable to mail order and while stocks last. We will beat and match any competitor on any equivalent product. Disks complete with lifetime guarantee.

3.5 DS/DD 880K high graded bulk disks: upto 250 - 46p, upto 500 - 44p, upto 1000 - 42p, 1000 plus - 39p. Call for further pricing.
10 Sony/Verbatim/Tdk/Dysan DS/DD Branded boxed: £11.50 Inc.
3.5 80cap. Datafile80: £6.50. (please add £2.50 to cover P&P if not ordering disks)
5.25 disks: £3.70-10, £7.20-20, £15.00-50, £28.00-100.
3.5 DS High Density 10-£14.00. 30-£39.00. 100 - £120.00

The following prices are all inclusive of vat and P&P.

Soft mouse mats:	£3.60	Mouse houses:	£2.90
Twin Joystick extenders:	£4.80	Dust covers (A500):	£3.90
Midi (10ft) cables:	£3.60	Many printer ribbons from:	£2.70
Cumana 3.5 1Mb ext drive:	£87.95	Triangle 3.5 1Mb ext drive:	£86.95
Music X:	Call	C-Lab Creator:	£260.00
Mastertracks Pro:	£270.00	Cubase/Pro-24	Call
AMAS Sampler:	£73.00	Trilogic Midi Interface:	£34.00

We are agents for Alesis, C-Lab, Hybrid Arts, DR.T, Momxoix, Soundbits, phone for pricing on further music products and we can supply most music based products.

Amiga 500 BatPack:	£358.00	Amiga BatPack with Tenstar Pack:	£365.00
Amiga 2000 systems:	Call	Commodore PC10/20/30:	Best ever prices.
Amiga 20Mb HardDisk:	£355.00	Vortex 40Mb:	£495.00
1 meg expansion board very high grade chips with clock:	£74.00	Star LC10 Printer:	£168.00
Epson LX400:	£179.00	Seikosha SP 180:	£139.00
Minigen Genlock:	£95.00	Cameron B&W handy scanner type2:	£195.00

We can supply many more products for you such as Games/DTP/CAD/Graphics/Accounts/Languages/Fax paper, all branded new, and just a phone call away. (Shhh!, we also sell Apple Branded products. You'll be amazed!).

We are now the exclusive distributor of the Mountain Breeze Computer Ioniser, which if you spend time on your computer, the unit can cut down dizziness, headaches, eyestrain and many other items which may be caused by V.O.D.S. syndrome. The unit costs only £29.95 inc and is highly recommended. Also available is the Room ioniser for £39.95 and larger units suitable for offices, studios etc. Phone for further details.

So why should you buy from us?, because we offer truely the best in mail order and we don't behave like cowboys. Convinced? You will be! Something to think about - yer pays yer money, yer takes yer choice! Don't make a big mistake.

It is our policy to offer the best pricing and service to our current and new customers, so where possible we will offer you the best price if that is what you want. If we don't advertise in the latest edition of this magazine, then it doesn't mean we are not here. Just pick up your phone. Personal calls until 12 midnight.

All above prices include vat and P&P (next day add £6.00) and come complete with our no nonsense warranties. All trade and government welcome. Best ever prices on all your hardware/software requirements not listed above. Send Large SAE for prices. Overseas please add 20% to total cost to cover shipping. Phone Paul now or send in your order with Cheque/PO/ Citibank or Access/Visa/Connect your order (usual details) for immediate despatch to:

joy of life arts, (AM5), 45 elswick, skelmersdale, lancashire, wn8 6bx, england, telephone/facsimile: 0695 32382 (24hrs)

Access VISA

We supply the best at the best prices!

JTS P.D.

Send a blank disk or an S.A.E. for our free catalogue

ONLY £1.75 per disk!

Here is just a small selection of our great value software:

JTS Intro Disk: full of games, utilities, animations, demos and a virus killer £1.25
JTS Utils Disk #1: Cruncher, virus killer, file editor, assembler and much more! £1.75
AGAtron Slideshow: Fifteen brillant ray-traced pictures in a slideshow £1.75
Forgotten Realms Slideshow: Digitised pictures from this book, excellent stuff £1.75
AMOS Preview: A demo of this amazing new game/demo creator, you'll want it! £1.75
LINK MegaDemo: One of the best disks around, with eight original parts to it £1.75
NewTek Demo 3: An awesome display of graphics (1 Meg) on this 2 disk demo.....£3.50
CLUB-MIX: One 17.5 minute house remix by the brilliant Beatmaster, cool! £1.75
The Home Business Pack: 3 disks containing a database (RIM), wordprocessor (UEDIT) and a very good spreadsheet (VisiCalc). This great value package for only ->.....£4.50

OR YOU CAN BUY ANY 10 AMIGA P.D. DISKS FOR £12.50!! (fully inclusive)

ISSUE 9 OF THE ABSOLUTELY BRILLIANT V.G.A./NEWSFLASH DISK MAGAZINE (2 disks) £5.50

To order: please make cheques or postal orders payable to JTS P.D and then send your order to:
2, ASHFIELD,
WETHERBY. LS22 4TF

Foreign orders please add 20% for the extra postage.
Enquiries: Tel. 0937-63834 (outside office hours)

AMIGA PUBLIC DOMAIN

LOOK!!

MAGNETIC MEDIA PD LIBRARY

HUNDREDS OF TITLES
STARTER PACKS
FAST, RELIABLE SERVICE

NOW ONLY
£1.80 each or £16.50/10

Pack A	Delirious 1,2,3 & 4	(4 discs)	£6.50
Pack F	Titanics, Crusaders, Trash & TTB Music	(3 discs)	£5.00
Pack I	Vortex, Anti-Trax, North Star, Mega Demos	(3 discs)	£5.00
Pack K	Doc, Wild Copper & Rip	(3 discs)	£5.00
Pack L	Every inch a woman, Sam Fox & Sabrina	(3 discs)	£5.00
Pack M	Tiffany, Kylie, Debbie Gibson Demos	(3 discs)	£5.00

MANY MORE OFFERS & STARTER PACKS SEND SAE FOR FULL LIST.
PLEASE MAKE CHEQUES/POSTAL ORDERS PAYABLE TO:

MAGNETIC MEDIA
VICTORIA ARCADE, ALDERGATE
TAMWORTH, STAFFS B79 7DL
TEL: 0827 59566

PRICES INCLUDES VAT
1st CLASS POST IN UK
(Airmail Postage: Europe/Scandinavia £3.50/10
Other countries £6.50/10)

KAD-SOFT UK

THE NEW NAME IN AMIGA PD

KA1 - The Business Collection, Editor, Spreadsheet & Database
KA2 - Word Processor & Spellchecker
KA3 - C-Compiler Assembler & Linker
KA4 - Database Collection
KA5 - Disk Doctor Collection
KA6 - CLI Help. Worried by CLI? This one will make everything clear.
KA7 - A Collection of brilliant arcade games.
KA8 - Predators Mega Demo. Brilliant twin disk demo.
KA9 - Break out construction set
KA10 - Nightmare on Elm Street Demo
KA11 - North Star and Silent Demo
KA12 - Star Trek Modulator 2 Game
KA13 - Deluxe Music Construction Kit.
KA14 - Magnetic Fields Demo. The Ultimate Bobs & Sprites Demo
KA15 - Robocop Demo. Brilliant
KA16 - Star Trek The Next Generation. 1 Meg shareware version
KA17 - Space Ace demo
KA18 - The North Star Mega Demo
KA19 - Cool Cougar Demo. Cartoon quality
KA20 - Virus Killer
KA21 - The Anti-ST Demo Disk
KA22 - The Miami Vice demo. Digitized sounds
KA23 - Kylie Minogue Demo disk 1
KA24 - Kylie Minogue Demo disk 2. Needs KA23 to run.
KA25 - Larn version 12. Brilliant Dungeons and Dragons game.
KA26 - Shanghai. Playable demo of great game.
KA27 - Utilities collection 1. Quick copy, P copy, Dir Master, Funckery, Blitz, Virus X
KA28 - Games Collection 1, Cribbage, Tiles, Bullrun, Tic Tac Toe.
KA29 - Games Collection 2, Amoeba, Yelp, Rock Slide, Egyption Run.
KA30 - Bankn, Home Help, Home Finance Packages.

All discs - £2.50 inc P&P
Ring for FREE Catalogue

We stock the complete range of Fish, Amicus, Slip Disk, T-Bag and Panorama Disk Collections.

DISKS

3.5" 135 tpi DD/DS Disks Unbranded (KAO, Sony) 100% error free. Certified very high quality will format to 880k easily.

10	20	50	100
£6.80	£12.85	£29.50	£55.00

All price include P&P, Labels
No quibble Money Back Guarantee

ACCESSORIES

Disk Boxes
40 cap - £4.10 50 cap - £4.90
80 cap - £5.75 120 cap - £7.50
Mouse Mats - £3.50
Mouse Holders - £3.50
Amiga Dust Covers - £5.50
Comp Pro 5000 - £12.40

Amiga Batman Pack £375 inc VAT plus 10 PD disks

Send Cheques & P/O's payable to:
KAD-SOFT, 2 EBOR PADDOCK, CALNE, WILTS, SN11 0JY
TEL: 0249 817174

Access VISA

SEGA 16

ST/Amiga Fanzine £1.00 + 20p P&P
ISSUE 5 with **FREE** Disk **FREE** P.D. List

Amiga P.D. Software only £2.00

Sound Sampling for the ST/Amiga
£3.00 per disk (10 samples)

Picture Digitizing for the Amiga
£3.00 per disk (6 pictures)

For details contact us at:-

Sector 16 160 Hollow Way Cowley Oxford

Please make Cheques / P.O.'s payable to ANDREW HAMILTON and SIMON GLEED

CRAZY JOE'S PD

☆ OVER 500 PD DISKS IN STOCK ☆ NO MEMBERSHIP FEE ☆ GAMES, DEMOS, UTILITIES, MUSIC, SLIDESHOWS ☆ ALL DISKS £2 EACH/£1.50 FOR 10 ☆ BLANK DISKS £7 FOR 10 ☆ WE ALSO STOCK COMMERCIAL SOFTWARE AT DISCOUNT PRICES ☆

A FEW FROM OUR CATALOGUE

016	Space Ace Demo	236	Showering Girls (1 Meg)
050	R.I.M. Database	240	Puggs in Space
068	Adventures Disk	251	Blizzard Game
069	Games Disk 2	288	AMOS Demo
117	Monopoly	315	Return to Earth
119	Amiga MCAD	380	PD Spectacular
123	Calendar Girls (X)	469	Dragons Breath Demo
135	Board & Card Games	483	Elvira Demo
138	Pacman Game	496	The Holy Grail (1 Meg)
172	Flaschbier Game	498	Wanderer Game

☆ SEND £1 FOR CATALOGUE DISK OR S.A.E. FOR LIST ☆

145 Effingham Street, Rotherham, S. Yorkshire S65 1BL
Telephone: (0709) 829286

Access VISA

These are brief descriptions, disks may contain much more

»»»»»»»»» *Sonix Songs, player/graphic screen*
USON1 Duelling, Electric Dream, Wonderful +
USON10 Human Power, Mindbreaker, Robocop +

»»»»»»»»» *Slideshows with background music*
USLID1 'Heroes' tune + 16 hi-res pictures
USLID4 Fantasy pictures by The Dark Lord

»»»»»»»»» *Music at it's best, with graphix*
UMUS1 Ten original tunes, brilliant!
UMUS13 Metromania, Sahara, Lonely + 3 others

»»»»»»»»» *Intro's and Demo's, the best*
UINT1 O.G.D, PARTY!, EUROPE + 7 others
UINT4 TEARDROPS, MAGIC FIELD + 5 others
UINT14 COMBINATION, SUBWAY, WEAPON + 4

»»»»»»»»» *Great GAMES to play at home!*
UGAM1 COSMOROIDS, ROLLERBALL, LADYB
UGAM2 FLASCHIBER - The game, brilliant
UGAM3 LINGO, BALLY, NIGHTWORKS & YOUPI

»»»»»»»»» *Some of the best ANIMATIONS*
UANIM1 SPACE animation - needs 1meg RAM
UANIM2 UGA and STAMP animations, good!
UANIM3 RUNNING MAN, TURNING MAN, UGA
UANIM5 HAPPY GUY, WINDOW, F15 MIRROR

»»»»»»»»» *SPECIAL disks - a special collection*
USPEC1 ZOUNDMONITOR, like ST but better
USPEC4 GHOSTWRITER, make your own screens
USPEC11 GAME MUSIC CREATOR, brilliant!
USPEC13 QL EMULATOR, just what it says!
plus 2 support disks available

Britains
No.1
PD &
Shareware
Service

official UK distributor for the range of quality disks
UGA

NEWSFLASH

Produced by NUK and UGA
This disk magazine is distributed around the world and is acknowledged as the BEST. Packed with information, these great disks, along with the *SUPPORT DISKS*, are now available monthly from Softville. We carry the full range and Issues start at No6, phone for the very latest version.
£2:99 each or £5:50 a set.

»»»»»»»»» *Utilities you can't get elsewhere*
UUTIL1 SinusCreator, Bootcontrol, CLIWizard, Iconlab, CRLoad, Mandlevroom, Bootune
UUTIL3 Tetrapack, Showfont, Bootback, Disksalv, TrackerX, Iconizer, SceneryMaker etc. etc.
UUTIL9 KickSaver, Terrainsculpt, StarEditor, Bootext, Sonixpeek, Flowripper, Linkiller etc. etc.

»»»»»»»»» We stock over 90 of these fabulous UGA disks, all easy to use, menu driven and exclusive to us!

PLUS we have the complete FRED FISH collection, Currently over 290 disks, with more added monthly

PLUS the A.P.D.C collection
PLUS the PANORAMA collection
PLUS the AMICUS collection
PLUS the SLIPPED DISK collection
PLUS the T.BAG collection

And of course our own 'SOF' collection of Utilities and the very BEST demo disks, now numbering well over 450 in all!

STARTER PACK
Choose any 5 disks, get 5 blank disks + labels & a Library case for only £18:50
VIRUS KILLER DISK
loads of killers inc. VIRUSX v4.0
ONLY £1:50 each (state Amiga)

Send an A5 size envelope (28p stamp) for a FREE copy of our 80 page catalogue. State CLEARLY the make of your computer

Over 1000 disks FULL of great programs.
1-5 disks - £3 each
6-9 disks - £2:75 each
10 and over - £2:50 each
Buy 10 - get another FREE
all prices inc. of Disk, Post & packing & VAT

Callers **SOFTViLLE** *Welcome*
Unit 5, Stratfield Park, Elettra Ave, Waterlooville, Hants PO7 7XN.
Ring for advice or to order 24hrs on
0705 266509
Fax 0705 251884
Access VISA

FREE
PD CATALOGUE ON DISK

(please state Atari ST or Amiga)
When you send a blank disk and S.A.E. to:

RIVERDENE PDL

63 Wintringham Way,
Purley on Thames
Reading, Berkshire RG8 8BH,
Telephone: (0734) 428492
Fax: (0734) 451239
Access VISA

E.M.P.D.L.

Amiga Public Domain Library. Open 7 Days 9am - 9pm

Latest Edition catalogue, disc, plus lifetime membership **only £2.50**

700 discs catalogued.
Updated monthly. Range of accessories
Amiga and Atari ST

Cheques & P.O.'s payable to:
E.M.P.D.L. 54 WATNALL ROAD, HUCKNELL, NOTTS, NG15 7LE.
0602 630071

AMIABLE PUBLIC DOMAIN

Dept AF, 105 Denmark Square, Aldershot, Hants GU12 4TP. 0252 23738

Quality Public Domain &Shareware for the Amiga

★ Over 600 Disks ★ Virus Free
★ From less than £2 ★ Fast Service
Send blank disk & return P&P or £1 for Catalogue Disk & Latest Virus Killer.

We also distribute Newsflash Europe's leading Amiga Disk magazine

NOVA brings you.....A new concept in Amiga PD - VALUE

NEW NOVA PD
FAST, PROFFESIONAL AND FRIENDLY AMIGA PD SERIVCE

HIGH QUALITY PUBLIC DOMAIN DISKS

£2.00 OR LESS*

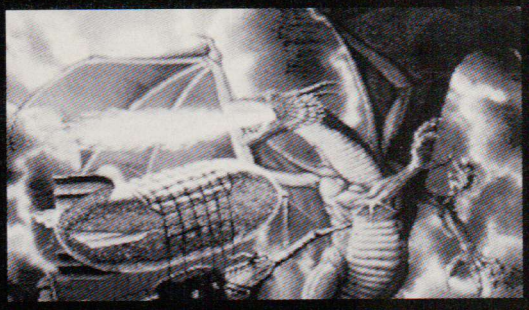
Two Disk Catalogue £2.00
We'll get any PD disk for you - AT NO EXTRA CHARGE
NO EXTRA FEES - Write for overseas postage
FREE MONTHLY PRIZE DRAW
ALL Libraries available (Fish, TBAG, AGATron etc.)
Latest demos, animations etc.
Discount Hardware/Software/Disks etc.
i.e. PHOTON PAINT 2 £49.99 SONIX £39.99

WHY PAY MORE ?

*Prices start at £0000
Cheques/POs Payable to NOVA

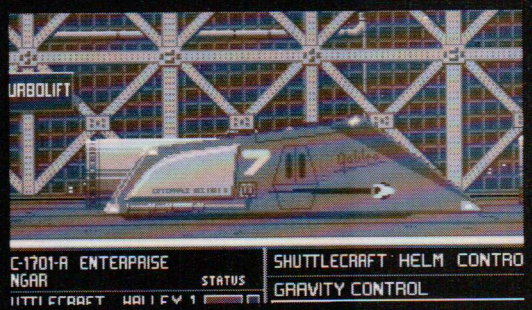
Access VISA
NOVA (AF2), 30 Parsons St, Banbury, Oxon OX16 8LY ☎ (0295)262029

TOP TEN DEMOS



17Bit Disk Numbers
1 INTROS (587)
2 NEWTEK DEMO 2 (559/560)
3 DMOB MUSIC DISK (554)
4 VISION MEGADEMO (580)
5 FORGOTTEN REALMS SLIDESHOW (578)
6 PREDATORS MEGADEMO (588/589)
7 GATE MUSIC DISK (582)
8 ZEE'S HIP HOP MUSIC (531)
9 INTROS 30 (586)
10 THE RACE (601)

TOP TEN PD



GTS Titles
1 THE ALL-NEW STAR TREK
2 TV GRAPHICS
3 HOME BUSINESS PACK
4 BLIZZARD
5 EDUCATION WITH THE AMIGA
6 FISH 251
7 PD LIBRARY PACK
8 PD SPECTACULAR
9 HAM RADIO SPECIAL
10 RETURN TO EARTH

can get the program to save a file of the moves it uses to solve the problem and refer to it later.

HOME FINANCE COLLECTION
Softville apdc 24

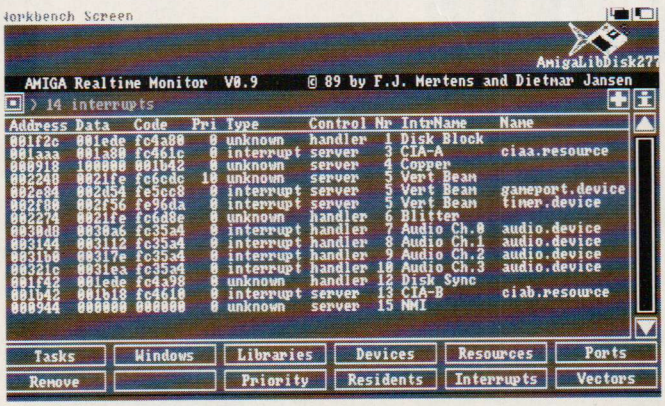
On this disk you'll find a collection of terrific home finance programs including the following:

VISICALC
– An excellent spreadsheet that rivals many commercial offerings. Visicalc is little different from established spreadsheets like *Lotus 1-2-3;* you're presented with a grid of rows and columns into which you may put labels, expressions or data.

HOMEHELP
– In short it's a grocery list generator. The system provides an easy method of preparing your grocery list and greatly simplifies your shopping trip. Hmmm...

BANKN
– A program to keep track of your bank account. You enter transactions into a a chequebook journal as they occur (no comments about chequebook journalists, please!).

You're presented with the remaining balance after each transaction has occurred. You may customise the expense code table to fit your particular needs and set budgets for each category.



With *ARTM* you can meddle with task priorities and even kill off runaway tasks, should the desire take you or the need arise.

SUPERMORT
– And finally, a utility to help you look after your mortgage.

ARTM
FISH 277

Here's one for technophiles. *Amiga Real Time Monitor* (*ARTM*) displays and controls multitasking activities in your Amiga. You can list all tasks occurring in your Amiga, select any one of them and either remove it or change the priority that it currently has.

In addition all libraries, devices, resources and ports can be displayed and – where applicable – can be removed or have their priority changed. Vectors, interrupts and residents can also be displayed and toyed with.

A powerful tool in the right hands. A guru-inducing program in the hands of the careless.■

SUPPLIERS

The following companies are responsible for the distribution of Amiga Public Domain software in this country. For their full address look out for their advertisements or give them a ring.

George Thomson: 0770 82234, 17 Bit Software: 0924 366982, Softville PD: 0705 266509, Amiga PD Library: 0742 588429, Purple PD: 0279 757692, Ray Burt-Frost: 0703 785680, Seniac PD: 0424 753070: Deeper Domain: 01 204 3954, Crazy Joe's: 0709 829286, Nova: 0295 262029, EMPDL: 0602 630071, JTS PD: 0937 63884, PD Soft: 0702 612259, Riverdene PDL: 0734 428492, Amiable PD: 0252 23738, WCA: 0792 772745.

HARRY HART ANIMATIONS
Softville uanim 7

Some of the very best video grabbed animations have been tweaked, and in some cases modified, by the UGA team and put on a single disk. The results are hilarious as you can see from the nose sequence below...

ROLL OVER Amiga

Not content with your mouse? Well, now there is an alternative. **MAFF EVANS** checks out two of the possibilities.

The Amiga mouse is a sweet little thing. Rolling around the desk doing what it's told, getting things that it picks up off the surface clogged around the ball, getting its wire caught around objects, running out of room just before the pointer reaches its target. Well, there is one simple solution – a trackball.

A trackball is basically a mouse on its back which sits on the desk next to your machine. Although it may not seem like the greatest idea in the world to switch to using a trackball rather than a mouse, there are a few benefits to be found. For one, it stands less chance of its wire getting caught around things – which can be dodgy if the object in question happens to be something like a cup of coffee. Just try unsticking your keyboard once some hot drink has been tipped across it!

Another advantage is that you don't need a clear space to use it. Imagine a musician on stage with his Amiga running a sequencer. The musician has all his gear rack-mounted up, so there isn't a great deal of space to use a mouse. What does he do? Bung a trackball on the top of the machine and hey presto – full control in a much-reduced space!

So now you *all* want to get hold of one. But what are the alternatives? This month, two trackballs wended their way into the *Amiga Format* office, so here's a brief appraisal of how the pair performed.

FT-100 TRACKER

The first up for inspection is from HB Marketing, long renowned for their involvement in the serious side of the Amiga. The trackball itself is designed to blend in with the Amiga design-scheme, being the same colours and similarly-shaped so that it sits prettily next to the machine.

As well as the roller, the device has two buttons, placed to the left of the ball, which act as the mouse's left and right buttons.

The makers have also included a unique device to relieve the user of the old 'twisted wrist' syndrome endured while 'clicking and dragging' with the trackball. By flicking a switch at the back of the tracker, a third button beneath the other two can be clicked once to simulate the left button being held down while the pointer is moved. Pressing the button a second time 'releases' the mode.

This is supposed to make it easier for the user to operate the trackball, but for those of us (including me) who are left-handed, this causes more problems than simply having the buttons in the corners. The roller itself didn't fare too well either. At times it refused to cooperate at all, leaving the pointer to either wander hopelessly off course or just stick in the middle of the screen. This is a shame, since the 'drag mode' is a good idea which is unfortunately wasted on a dodgy trackball.

FT-100 TRACKER
■ All Amigas ■ Price TBA
HB Marketing, Unit 3, Poyle 14, Newlands Drive, Colnbrook, Berkshire SL3 0DX. Tel: 0753 686000. Fax: 0753 680343

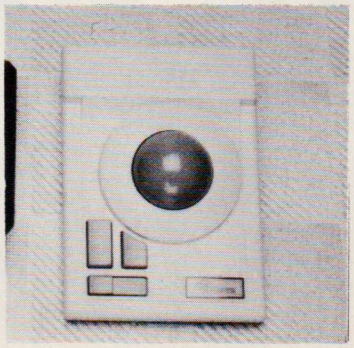
ATARI TRAK-BALL

Having gained a good reputation in the Atari 8-bit community, Atari's classic trackball has arrived in an Amiga version. Being somewhat larger than the FT-100, the Trak-Ball is a big, ominous-looking black plastic affair with a large roller-ball in the centre and two heavy-duty buttons in the top corner.

Personally, I prefer this 'traditional' layout to HB's fancier design, as it's not so easy to forget which button is which – actually it's quite obvious which is which! The roller itself is superb. The smooth and free motion moves the pointer easily across the screen with little effort, so that precision movements can be made quickly and easily.

In all the Atari Trak-Ball is the one to go for: it just goes to show, just because a product is old, doesn't necessarily mean it's bad. In fact, it could become a classic!

TRAK-BALL ■ All Amigas ■ £28.99
Hard Edge Communications, 98 Commonside, Walkley, Sheffield, S10 1GG. Tel: 0742 665719



TOP PICTURE: On the left is the Atari Trak-Ball: on the right is the FT-100 Tracker.

NEAR RIGHT: Trak-Ball

FAR RIGHT: FT-100

PUBLIC APOLOGY

M.D. Office Supplies would like to take this opportunity to apologise to all its competitors. As always we will supply the highest standard Discs, Storage Boxes, etc, at the LOWEST POSSIBLE PRICES.

IN FACT WE GUARANTEE IT

AMAZING PRICES SUPERB QUALITY UNBEATABLE VALUE

3½ 3.5" DISCS & BOXES 3½

25 3.5" DS-DD 135 TPI with 100 Capacity Lockable Storage Box.....£21.95
35 3.5" DS-DD 135 TPI with 100 Capacity Lockable Storage Box.....£29.95
45 3.5" DS-DD 135 TPI with 100 Capacity Lockable Storage Box.....£34.95
55 3.5" DS-DD 135 TPI with 100 Capacity Lockable Storage Box.....£39.95
65 3.5" DS-DD 135 TPI with 100 Capacity Lockable Storage Box.....£44.95
75 3.5" DS-DD 135 TPI with 100 Capacity Lockable Storage Box.....£49.95

150 3.5" DS-DD 135 TPI with 2, 100 Capacity Lockable Storage Boxes.....£84.95
200 3.5" DS-DD 135 TPI with 2, 100 Capacity Lockable Storage Boxes.....£94.95

OUR 3.5" DISCS ARE **VERY CAREFULLY SELECTED** TO GIVE YOU 100% ERROR FREE PERFORMANCE AND UNQUESTIONABLE RELIABILITY. EACH DISKETTE IS SUPPLIED WITH OUR 100% NO QUIBBLE GUARANTEE AND IS SUPPLIED WITH LABELS

5¼ 5.25" DISCS & BOXES 5¼

25 5.25" DS-DD 96 TPI With 100 Capacity Lockable Storage Box.....£12.50
50 5.25" DS-DD 96 TPI With 100 Capacity Lockable Storage Box.....£16.50
75 5.25" DS-DD 96 TPI With 100 Capacity Lockable Storage Box.....£22.50
100 5.25" DS-DD 96 TPI With 100 Capacity Lockable Storage Box.....£28.50

OUR 5.25" DISCS ARE **VERY CAREFULLY SELECTED** TO GIVE YOU 100% ERROR FREE PERFORMANCE. EACH DISC IS OFFERED WITH OUR 100% MONEY BACK GUARANTEE AND IS SUPPLIED WITH LABELS, ENVELOPES, W.P. TABS.

HIGH DENSITY 3.5" DISCS

10 DS HD 3.5" Discs £14.99
30 DS HD 3.5" Discs with 50 Capacity Box.....£49.99
50 DS HD 3.5" Discs with 100 Capacity Box.....£64.99
100 DS HD 3.5" Discs with 100 Capacity Box..£110.00
150 DS HD 3.5" Discs with 100 Capacity Box..£149.95

PRICE & QUALITY GUARANTEE

We pride ourselves on offering you the very Highest Quality products at the best possible prices. If you should ever see a comparable product offered cheaper in this magazine DO NOT HESITATE give us a call because we won't match it:

WE WILL BEAT IT - GUARANTEED

LOW LOW PRICES FOR BULK BUYERS

For all you large users we have some unbeatable bulk rates on our superb DS-DD 3.5 discs.

300 DS DD 135tpi.....£139.95
400 DS DD 135tpi.....£179.95
500 DS DD 135tpi.....£220.00
600 DS DD 135tpi £258.00
800 DS DD 135tpi £335.00
1000 DS DD 135tpi £389.95

As always lifetime guaranteed, unquestionable reliability, each disc is supplied with label.

NEW EXCITING PRODUCTS

New, New, New products to enhance your computers productivity and performance.

External Disc Drives, slimline, very quiet, very reliable .....only £79.95
Replacement Mice, smooth operation, precise movement .....only £29.95
2 Piece Universal Printer stands (cuts down on space).....£6.95
Stackable disc boxes 80 capacity and lockable.
1off - £9.95 3 off - £8.95 5 off - £7.95
Can be stacked horizontally or vertically as you please.
Tilt 'n' Turn 14" Monitor stand, a superb investment .....only £14.95
Data Switches 2 way manual switch (State serial or parallel) .....only £12.95

M.D. OFFICE SUPPLIES

VISA

18 CRESCENT WAY, FARNBOROUGH, KENT BR6 9LS

Access

TELESALES HOTLINES: 0689-61400

Trade Accounts Welcome

All prices include VAT and Delivery UK only E/OE

Education Orders Welcome

12 ISSUES

of *AMIGA FORMAT* only £29.95

and GET A BRILLIANT FREE GAME worth £24.95

Choose from either

Dark Side

"Futuristic 3 - D Action" 87%

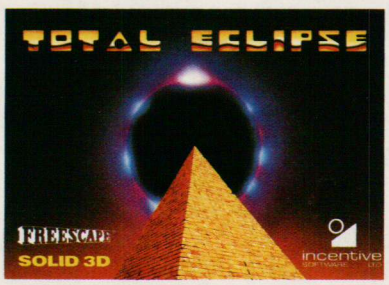
Evath, your home planet is about to be destroyed by the Ketars of Tricuspid. You must find a way of destroying their huge weapon, "Zephyr One", which is about to be detonated.

or

Total Eclipse

"An epic 3 - D game" 78%
Amiga Format

Reach the shrine of the sun-god before 10am to stop the Total Eclipse. If you don't, the curse of the pharaoh will destroy the moon and cover the earth in meteorites. Make it quick – you've not much time to spare!



Yes, I want to subscribe to *Amiga Format* and receive my free software. Tick as applicable:

1. ***Dark Side*** ☐
2. ***Total Eclipse*** ☐

Name.....
Address.....
.....
Postcode.....
Telephone number.....
I wish to pay by Access / Visa / Cheque / P.O.
Number.....
Expiry Date.....
Please make cheques payable to "Future Publishing Ltd."
Send to: AMIGA FORMAT, THE OLD BARN, FREEPOST, BRUNEL PRECINCT, SOMERTON, SOMERSET, TA11 7BR

■ You know *Amiga Format* is Britain's leading magazine for the Amiga, crammed full of brilliant and exciting new reviews and previews of the latest software and hardware products around. Make certain of receiving your copy before the newsagent sells out!

■ Remember our unique guarantee: if at any time you are not completely satisfied with our subscription service you can cancel the subscription and receive a refund for all unmailed issues.

■ Use the coupon on the corner of the page or ring Trevor Witt on our hotline number, 0458 74011, having your credit card handy.

Overseas subscriptions
Air Mail Europe £55.95
Surface Europe and World £40.95

The World Cup Starts HERE!

A COMPREHENSIVE GUIDE AND GAME REPLICA OF THE WORLD'S MOST EXCITING SPORTS SPECTACULAR

WIN TICKETS TO THE WORLD CUP

Fly to Italy, stay in Rome for 7 nights and witness the climax of the world's greatest ever sporting event!

See competition card inside game pack for full details and competition rules.

FREE WORLD CUP FILE-OF-FACTS

64 colour pages that tell you everything you need to know about the ...

ITALY 1990 WORLD CUP FINALS!

WORLD CUP TRIVIA QUIZ

A chance to test your knowledge in:
'THE WORLD CUP STARTS HERE!' TRIVIA QUIZ

Q. WHICH GOALKEEPER LET IN 5 GOALS IN HIS LEAGUE DEBUT AND WENT ON TO CAPTAIN A WORLD CUP WINNING SIDE?

A. ?

AUTHENTIC GAME ACTION

Including: • ***Variable skill, speed, strength and agression levels.*** • ***Choice of formations.*** • ***Full team seeding system.*** •

TAKE YOUR PLACE IN THE FINALS

Choose your team from a REAL playing squad then battle through authentic league and knock out phases all the way to the final, playing against the opponents you would expect to meet in the real event!

UNIQUE PLAYING FEATURES

Include: • **Player v.s. Player option.** • **Variable match duration (2 minutes to 45 minutes).** • **TV style presentation.** • **Referee with the ability to use the 'red card'! ...**

AND MUCH MUCH MORE!!

Available on:
CBM AMIGA · ATARI ST COLOUR MONITOR
CBM 64/128 & AMSTRAD Cassette & Disk
SPECTRUM Cassette.

ITALY 1990. 24 teams and their supporters converge on Italy for the greatest sporting event in the world and millions more will witness the spectacle on their television screens.

But for you THE WORLD CUP STARTS HERE! Get to know the facts on all the teams, venues and fixtures, select your squad, then GO FOR GOAL – lift the trophy for your country. Then sit back and be the best informed World Cup football fan around!

ITALY 1990

THE WORLD CUP STARTS HERE!

U.S. GOLD

© 1990. U.S. GOLD LTD. All Rights Reserved.

U.S. Gold Ltd, Units 2/3 Holford Way, Holford, Birmingham B6 7AX. Tel: 021 625 3388.

COME AND SEE US

THE COMPUTER STORE

POST FREE

DISKS LOW LOW PRICES and HIGH HIGH QUALITY

3 1/2" DSDD **ONLY 59p EACH** **3 1/2" DSDD**

Our disks are packed in boxes of 10 and come complete with labels. They are of the highest quality and come with a no quibble replacement guarantee. Order any quantity of disks you want at only 59p each post free.

25 Disks + 80 Capacity Lockable Box.....£19.95
40 Capacity Lockable Disk Box.....£5.99
80 Capacity Lockable Disk Box.....£6.99
100 Capacity Lockable Disk Box.....£7.99

Call in and visit The Computer Store, produce this advert and we will give you a FREE 3.5" disk. We are in the In Shops Complex in Chelmsley Wood Shopping Centre

THE COMPUTER STORE
Unit 82 In Shops,
2-8 Greenwood Way,
Chelmsley Wood,
Birmingham, B37 5TL
Tel: 021 770 0468

Near Junction 4 M6. Park across the road in the open air car park in Chelmsley Circle. Parking is free.

Commodore MPS 1230 Printer.....**£149**
STAR LC24-10 Printer.....**£249**
STAR LC-10 Mono Printer.....**£159**
STAR LC-10 Colour Printer.....**£219**
All printers come with free lead
Cumana 1 meg 2nd 31/2" Drive....**£84.95**
Commodore A1010 31/2" 2nd Drive**£84.95**
Ashcom Half Meg + Clock.....**£69.95**
Ashcom Half Meg no Clock.....**£59.95**
Quality Mouse Pad (10"x8"x1/4")....**£3.99**

A590 Hard Drive.....**£379.00**
A590 + 1 Meg Fitted.....**£499.00**
A590 + 2 Meg Fitted.....**£599.00**
1 Meg of Memory for A590.....**£119.00**
2 Meg of Memory for A590.....**£229.00**

Courier Delivery £5.00
C.O.D. by Courier only £10.00

THE PRICE YOU SEE IS THE PRICE YOU PAY - NO EXTRAS

Amiga A500 Package
Containing
The Batman Pack
A500 Computer, Mouse,
Modulator, Workbench 1.3,
Extras 1.3 The Very First Tutorial,
Batman the Movie,
The New Zealand Story, F/A-18
Interceptor, Deluxe Paint II.

PLUS
The Computer Store Pack
Consisting of Quality Mouse Pad,
Mouse Bracket,
10 Best Quality Blank Disks,
Disk Box to Hold 40 Disks.

PLUS
The Addons Pack
Consisting of Exolon, Zynaps,
Slayer, Battle Tank, Xybernoid II,
Megablaster Joystick.

FREE COURIER DELIVERY
This package is available
ONLY from
THE COMPUTER STORE
ONLY £399

17 BIT SOFTWARE

"THAT BIT BETTER THAN THE REST"

THE FOLLOWING SPECIAL OFFERS ARE AVAILABLE TO CLUB MEMBERS ONLY!

ANY OF THESE TITLES

WAS £24.99, OUR PRICE £15.99 EACH!!
F-29 RETALIATOR*, 688 ATTACK-SUB, DUNGEON MASTER (1 MEG ONLY), X-OUT, PIPE-MANIA, CONQUEROR, INTERPHASE, E-MOTION, CHASE HQ, OP. THUNDERBOLT, XENOMORPH, BATMAN, KID GLOVES*, DAMOCLES, WARHEAD*, ULTIMATE GOLF*, LOST PATROL*, ELVIRA*

WAS £29.99, OUR PRICE £18.99 EACH!!
MIDWINTER*, IT CAME FROM THE DESERT (1 MEG), BOMBER, TV SPORTS BASKETBALL*, DRAGONS BREATH, DRAKKHEN, MAGNUM 4 (COMPILATION!), TRIAD 3 (SPEEDBALL, R-RANGER & BLOOD MONEY!).

NOT A MEMBER??? JOIN HERE → →

* DENOTES - NOT AVAILABLE AT TIME OF GOING TO PRESS.

17 BIT SOFTWARE'S LATEST ISSUE OF THEIR EVER POPULAR DISK UPDATE IS AVAILABLE NOW TO AMIGA OWNERS EVERYWHERE FOR JUST

☆£1.00☆

YES, FOR £1.00, YOU CAN SAMPLE THE DISK THAT HAS MADE 17 BIT BRITAIN'S LEADING AMIGA PUBLIC DOMAIN SUPPLIERS. ON RECEIPT OF YOUR CHEQUE, WE WILL SEND YOU -
17 BIT UPDATE 12 - CONTAINING:

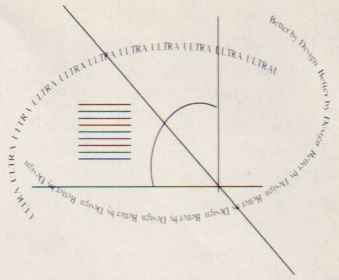
☆ AMAZING MUSIC ☆
☆ STUNNING ARTWORK ☆
☆ CLI TOOLS AND UTILITIES ☆
☆ SUPERB DEMOS!!! ☆
☆ SOFTWARE NEWS AND REVIEWS ☆
PLUS FULL DETAILS OF 17 BIT PUBLIC DOMAIN SOFTWARE (OVER 600 DISKS!!)

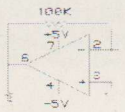
YOU WILL ALSO RECEIVE DETAILS OF OUR USER GROUP (THE BIGGEST IN THE UK, OVER 12,000 MEMBERS), AND A LIST OF SOME STUNNING SPECIAL OFFERS ON COMMERCIAL SOFTWARE + FREE LIFE MEMBERSHIP! PLEASE NOTE, MEMBERS ARE UNDER NO OBLIGATION TO BUY!!
SEND £1 TODAY - YOU WON'T REGRET IT!!
PLEASE SEND YOUR CHEQUE/PO/ACCESS/VISA DETAILS TO

17 BIT SOFTWARE,
(DEPT AMF) PO BOX 97, WAKEFIELD, WEST YORKS, WF1 1XX
TEL: 0924 366982

Access VISA

Better BY DESIGN





The Amiga has created quite a storm in the low-end CAD market. **JASON HOLBORN** takes a look at the latest arrival on the scene, *UltraDesign*.

Computer Aided Design has traditionally been a rather elitist area of computing. Even with the arrival of the low-cost personal computer, the computing power required to drive the most basic CAD application put such packages firmly out of the reach of the budding amateur.

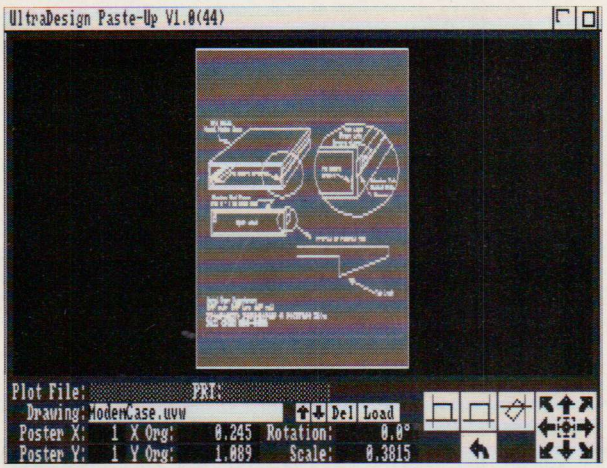
Even today, with powerful PCs coming in at ten a penny, modern CAD systems have advanced to require even greater levels of performance from the host hardware. With such steep processing requirements, it seems that the CAD user on a tight budget is still cut off from the technology that is required. Does a low-cost computer exist that can finally bring the power of the modern CAD system to the masses? Of course it does – and its name is Amiga.

The combination of high-resolution screen modes and fast graphics processing have put the Amiga at the forefront of low-cost computer aided design. No other computer at the price can hope to compare to the CAD potential that the Amiga offers. Even a comparable PC CAD system could end up costing you well over twice the price of an Amiga CAD system, while still failing to deliver many of the extras the Amiga is famous for.

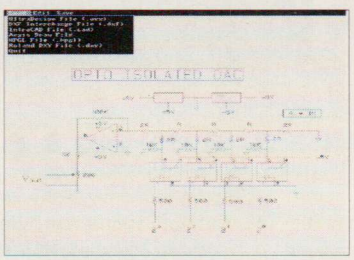
The Amiga's ace card is undoubtedly its multitasking capabilities. Many established CAD users have switched to the Amiga from systems costing many thousands of pounds for this very reason.

CAD applications are heavily processor intensive, so anything that saves time can also save money. Particularly time-wasteful is printing. Using a conventional pen plotter, dumping a complex drawing can take a long time: time in which the computer is rendered useless. With the Amiga, the user can carry on working during the printing process.

The cornerstone of the Amiga CAD revolution has undoubtedly been one package – CADVision's *X-CAD Professional*. This single package has done more to promote the Amiga as a serious contender within the CAD market than any other package. Realising the sales potential of the Amiga and *X-CAD* combination, Commodore have been pushing the system heavily.



ABOVE: A large number of different drawings can be pasted into one plot.



RIGHT: Files can be loaded in the formats of most industry-standard CAD packages.

Latest arrival in the Amiga CAD field is *UltraDesign*, from the US company Progressive Peripherals and Software. Progressive, who are better known for their successful image-processing package *PIXmate* and the Marcam FrameGrabber, were also responsible for the budget CAD system, *IntroCAD*. Although *IntroCAD* was far from professional, it paved the way for this latest release.

Designer Software

UltraDesign is a professional-standard computer aided design package designed to compete against the likes of Amiga *X-CAD Professional* and AutoDesk's industry-standard PC CAD system, *AutoCAD*.

The *UltraDesign* system consists of three separate programs: the *UltraDesign* editor itself, a printing utility called *PasteUp* and *CADverter*, a very handy little utility to allow you to convert CAD files from other systems for use within *UltraDesign*.

The *UltraDesign* main screen consists of a single window, which is your view of your drawing. Like all CAD systems, your drawings can be considerably larger than can be displayed on the monitor screen. However, *UltraDesign* uses a 'viewport' system that provides a 'window' on this larger workspace. It is possible to zoom right out to display the entire workspace within the current viewport, as well as being able to zoom in to examine the most intricate items.

Depending on which drawing mode is currently selected, a row of icons runs down the left-hand side of

CAD CONVERSIONS

The Amiga IFF file format has made life so easy for Amiga owners, that the ability to share files between applications from different software producers is taken almost for granted. However, start using another computer and you'll soon realise how unusual the Amiga is – nowhere else within the computer industry will you find a computer that has such a high level of data portability.

Because the Amiga is a fairly new arrival within the CAD market, it would be rather unreasonable of Progressive to expect existing CAD users to scrap all their previous work in favour of *UltraDesign*. Although standards exist within the CAD world, CAD file formats are numerous. To make the transistion between old and new considerably less painful, *UltraDesign* includes a very handy file conversion utility called *CADverter*.

This utility allows you to convert to and from different CAD file formats. File formats supported include the industry-standard *DXF* format as used by AutoDesk's *AutoCAD* system on the PC-compatibles, Hewlett-Packard's *HPGL*, Roland's *DXY*, Progressive's own *IntroCAD* system and Aegis' *Draw*.

the screen. Selecting a particular drawing operation is simply a matter of choosing the appropriate drawing mode and then clicking once on the relevant icon. *UltraDesign*'s drawing modes are split into distinct sections – Lines, Circles or Ellipses, Text, Dimensioning and Filling or Hatching.

Drawing Tools

UltraDesign features all the standard CAD operations, plus a few more of its own. As well as the usual tools to create and edit objects, *UltraDesign* adds a few new tricks of its own. Drawing tools include circles, ellipses, boxes, multiple lines, arcs, arrowheads, ellipse rotation, filleting, razor lines and rubber-banding.

Positioning the cursor at the exact coordinates that you require can be a fiddly and often frustrating process. *UltraDesign* gets around this with the inclusion of a Seek To... option which attempts to place the cursor at the exact point that you require. All you have to do is to move the cross-hair close to the desired location and click the mouse button – *UltraDesign* will try to lock the cursor to the nearest object that meets specified criteria.

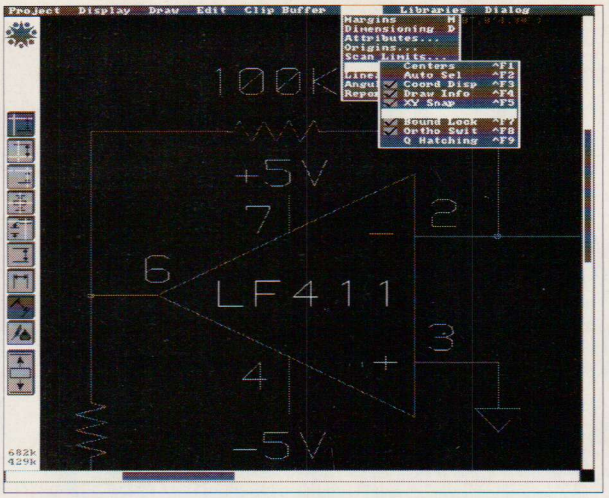
UltraDesign drawings aren't just limited to boring wireframe diagrams. Using a system called Hatching, any specified area may be filled with either a solid colour or a fill pattern. To aid the process of producing fill patterns, *UltraDesign* includes a versatile tool to make the previously tedious task of producing hatch files considerably quicker and easier.

Get Layered!

Layers are an all-important aspect of any CAD system. The use of layers allows any drawing to be split up into several overlaying sections. This is particarly useful with complex drawings, as individual elements can be isolated from the rest of the drawing. Thankfully, *UltraDesign* is particularly well-endowed in the layers department – it allows up to 65,536 different layers to be used. I challenge you to use that lot at once!

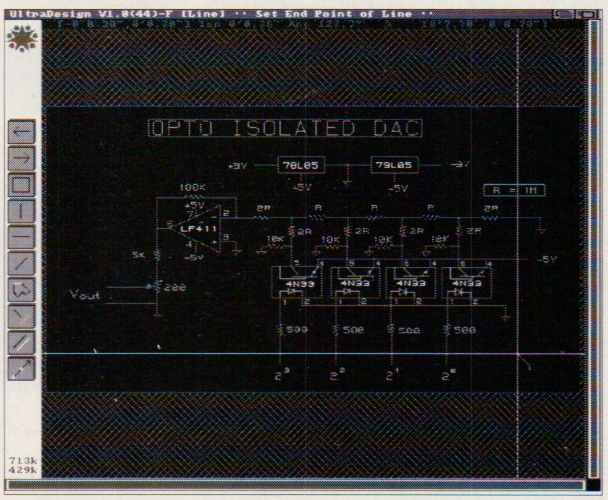
Text is particularly well handled within *UltraDesign*. Once defined, a line of text can be pasted down, rotated, reversed, flipped, inverted and scaled with ease. By default, two different font types are available to every drawing. However, the *UltraDesign* disks contain a further eighteen different fonts which may be loaded into the program and used. Structured fonts do use an awful lot of memory, however, so you are well advised to use them sparingly if you don't want to see your hard disk filling up very rapidly.

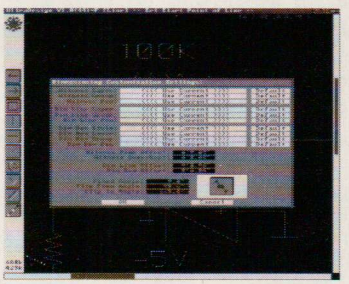
Because of the complexity of structured fonts, they can take a long time to be drawn – each character has to be drawn as a series of lines. However, *UltraDesign* gets around this time-wasting process with the impementation of a special QText module which speeds up text rendering considerably.



ABOVE: Setting up the use of a grid by which to control the placing of images.

BELOW: Using the Set To... option to control the accurate placing of a line-end.





Control over the dimension specifications is more than adequate.

Conclusion

With the arrival of *UltraDesign*, the Amiga's potential as a serious CAD workstation has risen to even greater heights. Although the package is not as immediately useable as its main competitor, *X-CAD*, it offers many extras that should earn Progressive's product many devoted followers.

Particularly impressive among these are both the *PasteUp* and *CADverter* modules, described in the box-outs on this page and the previous page, which only go to prove that Progressive certainly have been listening to the ideas and comments of their intended user base.

To many of us, particularly home users, the price of *UltraDesign* may seem rather steep, but you must take into consideration that similar packages on other systems will set you back considerably more.

However, even at this relatively low price *UltraDesign* is undoubtedly aimed at the professional user blessed with lots of RAM, Flicker Fixer boards, high-resolution plotters etc. If you're a budding amateur, a better bet is almost certainly CADVision's budget *X-CAD, X-CAD Designer*.

For the professional user, not only is *UltraDesign* a true alternative to *X-CAD*, but also DTP users who require a drafting program to produce diagrams and the like for their page layouts may well want to check out this impressive product.

ULTRADESIGN

£299.99 ■ All 1 Mb Amigas ■ Marcam Ltd (0604) 790466

PRINTER SUPPORT

Printing isn't handled directly by the UltraDesign program – instead your drawings must be saved out to disk and then imported into a separate printing utility called PasteUp.

According to Progressive, PasteUp represents a new dimension in producing hard copies of CAD drawings. The program allows the arrangement of any number of drawings onto a single page, in a very similar manner to a desktop publishing program. Drawings can be presented in exact scale, at any angular rotation. Even if the output device (printer, to you and me) cannot handle the printing of large-scale diagrams, the PasteUp program features a postering facility which will split the page up into several pages to be joined after printing.

PasteUp supports a whole range of different output devices and formats including standard Preference-supported printers. If you are using a dot matrix Preference printer, PasteUp will print at the highest possible resolution. Other printers supported include drivers for the Hewlett-Packard, Houston Instruments and Roland plotting languages.

However, most exciting of all is UltraDesign's support for both the Encapsulated (EPS) and standard PostScript languages. Not only can your drawings be output to professional printing devices such as laser printers and Linotronic imagesetters, but UltraDesign can be used to prepare images for other Amiga packages.

Probably the most common use of this facility becomes apparent with a package such as Professional Page 1.3. Now that ProPage supports the importation of EPS files, UltraDesign drawings can be pulled straight onto the page of your DTP documents. This option alone makes UltraDesign equally useful for DTP work as it is for CAD applications.

NBS presents until MAY 31st

PD EARTHQUAKE

Can you hear the rumble?

9·9 on the Richter scale!

99p

N.B.S. has given the price of Amiga Public Domain a Shake, Rattle & Roll and brought it crumbling down to an earth shattering 99p (Normal price £1.75) BUT HURRY! The offer will close on 31st May 1990 and Lookout! The after-shock brings down prices on disks & accessories too!

TOP quality DS/DD 135 TPI Japanese manufacture 31/2" disks : normal price 70p EARTHQUAKE Price 55p
Lockable 100 capacity disk storage boxes : normal price £8.50 EARTHQUAKE Price £6.50
Also on special offer: 10 cap. boxes £1.25 • Soft mouse mats (boxed) £2.65 • Custom disk labels 250 for £5.00
Crystal Turbo Joystick, Micro Switch, Autofire £10.99 • Star LC10 (MK1 & 2) Printer ribbons Black £2.99 Colour £5.25

DEMOS
D 108: NBS Animations Disk 1 (Window Man, Walking Man, Frog, Hammer)
D 112: Vortex 42 Megademo 2 (Packed with Vortex 42's latest demos)
D 114: Madness Demo (Graphics & Music Demo)
D 115: Titanics Demo (8 Music Compositions & Graphics)
D 118: Ray Traced Demos (Includes Newton's Cradle)
D 119: Juggler Demo (The famous demo which sold 1000's of Amigas)
D 121: Outsider Acid Demo (Trippy Gaphics & Aceeed Music, v good!)
D 122: Horror Demo (Digitised animation of Violent Amputation etc!)
D 125: Dexion Megademo (Highly recommended)
D 131: Black Monks Picture Demo (Demo & Digitised Pictures)
D 132: Arcadia Megademo (New Demo)
D 133: Star Trek Animations (3D Animations 512K!)
D 136: Alcatraz Megademo (New Demo)
D 138: Raf Megademo (Demo, please note ... **2 discs**)
D 140: Kefrans Demo (Excellent highly recommended)
D 142: Scoopex SAE PC Demo (Picture Show & Music)
D 145: Forgotten Realms Picture Show (Fantasy Devil Hobbit type pics)
D 146: RSI Mega Demo (**Worlds best Mega to date. Get it!!...2 discs**)
D 148: Charon (Classical Style Demo ... **1 Meg only**)
D 149: SAE Scoopex £36 (More classy demos)
D 150: Ian & Mick (Mega Demo 'nc Toilet Door Demo)
D 151: Deathstar Mega Demo (inc Fantastic Cosmic Explosion ... **2 disks**)
D 152: NASA Pictures (Digitised Piccys)
D 153: Puggs In Space (Brill De 'o. Get it!!!)
D 154: CHH Animation (...of a knight coming out of a book...**1 Meg only**)
D 155: Phenomena Demos 1 to 19 (Demos for Demo Comp ... **3 disks**)
D 156: Excel Demos 18 & 20 (Bobs & Vector Demos ... **2 disks**)
D 157: Space Ace Demo (Cartoon Graphics ... Great Sound!)
D 158: Freekd Out (Great Music by The Crusaders Demo Crew)
D 159: Vision Mega Demo 4 (More great scrolly stuff)
D 160: Trilogy Megademo (New in! Recommended inc Shootemup! **2 disks**)
D 161: Predators Megademo (Includes two games! Don't miss it! **2 disks**)
D 300: Arsewipe (Adults only answer to your toilet problems)
D 301: Miller Lite (Micro Veersion of the TV advert with digitisation)
D 302: Holstein Pils (John Wayne/Gryth Rees Jones TV ad)
D 501: Probe Sequence (Strange life on a distant planet ..explore)
D 503: Luxo Teenager (Ray Traced Demo ... **1 Meg only**)
D 504: Ghost Pool (Pool game with invisible players!!)
D 505: Space Fighter (Another Ray Traced Demo ... **1 Meg only**)

MUSIC
D 205: Kactus & Mahoney (Superb! Can't be rated highly enough)
D 207: Miami Vice Theme (Huge, full sample ... please note ... **4 discs**)
D 209: D-Mob Music 2 (Music Demo)
D 211: It Music Demo (Music Demos ...)
D 212: Byterappers Music 3 (Music ... and its good!!)
D 213: Titanix Music 1 (Our best 512K music disc, don't miss this one)
D 214: Enemies Music 3 (Music demo.. with Spectrum Analyser, Fantastic!)
D 217: It Music 2 (Music Disc/Demo)
D 218: D-Mob Music 3 (Music/Demo)
D 219: Crytoburners Music Disc (Music, Music, Music!)
D 220: Alf 2 Mix (Music Samples from TV Show)
D 224: We Want Some Pussy Rap (What are we going to do about it?)
D 226: Sonic House 1 (More of the same)
D 227: Powerdrive 2 (Music ripped from games)
D 228: Random Access (3 good remix tunes inc Paranoimia)
D 229: Vangelis Demo (Good stuff ... **1 Meg only**)
D 230: Digital Concert 2 (Over 12 mins of House)
D 231: Destination Docklands (J. M. Jarre at Docklands)
D 232: Blowfly (Music Rap ... could be offensive to some)
D 233: Darkstar Music Disk £4 (More great music)
D 234: SAE Disc 35 (New & very good!)
D 235: Opal Music (Fine Tunes & Multitasking Fastformat Facility)
D 236: Sunrise Vol 8 (Great stuff!)
D 237: Clapping World Demo (Fantastic original music & graphics)
D 238: SAE Disc 40 (Hot Of The Drive!)

GAMES
G 100: PD Shoot'em'ups (5 games including Invaders, Asteroids etc)
G 101: Yahzee (Dice game, plus Connect 4 & Othello)
G 102: Yelp! (A top quality 'Painter' game)
G 103: Star Trek (Game 1) (**2 disks, 1 Meg only**, great sound)
G 103A: Star Trek (Game 2) (**3 disks, 1 Meg**, 2 drives, pics & sound)
G 105: Adventure Games (Text Adventures)
G 106: Arcade games (Early PD games ...)

XXX-FOR ADULTS ONLY (please state that you are over 18!)
X 100: Fantasy Vol 1 (Erotic Art & Pinups)
X 102: Picture Show Vol 2 (Same Pinups with Slideshow & Glen Miller!)
X 103: Sam Fox Special (Stretch That Monitor Screen!)
X 104: Mayfair (Black & White pics)
X 105: Picture Show Vol 3 (More of those ladies)
X 107: Megaton Man (A brilliant amusing naughty disk!)

UTILITIES
U 100: Virus Killer Disc (Virus Checker, System Z & more + Infector!!)
U 101: Virusx V.4 (Kills all known viruses <12.1.90> Dead! The Ultimate!)
U 200: Bootblock Utility (Create your own Bootblock)
U 201: Utility Disc 1 (14 utils. including Cli-wiz, Cruncher & more)
U 202: Utility Disc 2 (11 Cli utils. eg Blitzfonts, Hexcalc, Setkey etc)
U 205: Game Music (Creator create your own music, superb!!)
U 206: Ghost Writer (Latest demo construction kit)
U 208: Powerpacker (Powerful Cruncher utility, used by experts)
U 302: Fonts Vol 2 (even more fonts)

This is not a full list. Full list sent on request or with order.

Cheques/PO to NBS 21 Priory Road, Newport, Isle of Wight PO30 5JU

PD Prices are 99p PER DISK. Please note some titles are 2 or more disks. Minimum PD order - 5 disks.

Please add 50p P&P per order. All orders despatched first class by return post.

Access 0530 411485

ASHCOM

VISA 0530 411485

NEW

YOU NEED 512K NOW HOW MUCH WILL YOU NEED TOMORROW?

NEW

THE NEW ASHCOM RAM EXPANSION IS EXPANDABLE TO 1.8Mb

FEATURES:

- ★ Real Time clock/calendar with high capacity Nicad battery backup
- ★ Memory disable switch
- ★ Low power consumption
- ★ Buffered Data Bus (Essential for high capacity Ram boards)
- ★ Plugs in as A501 NO SOLDERING!!
- ★ 12 Months warranty

All prices include VAT and delivery.
Trade enquiries welcome. British made.
Please make cheques payable to Ashcom

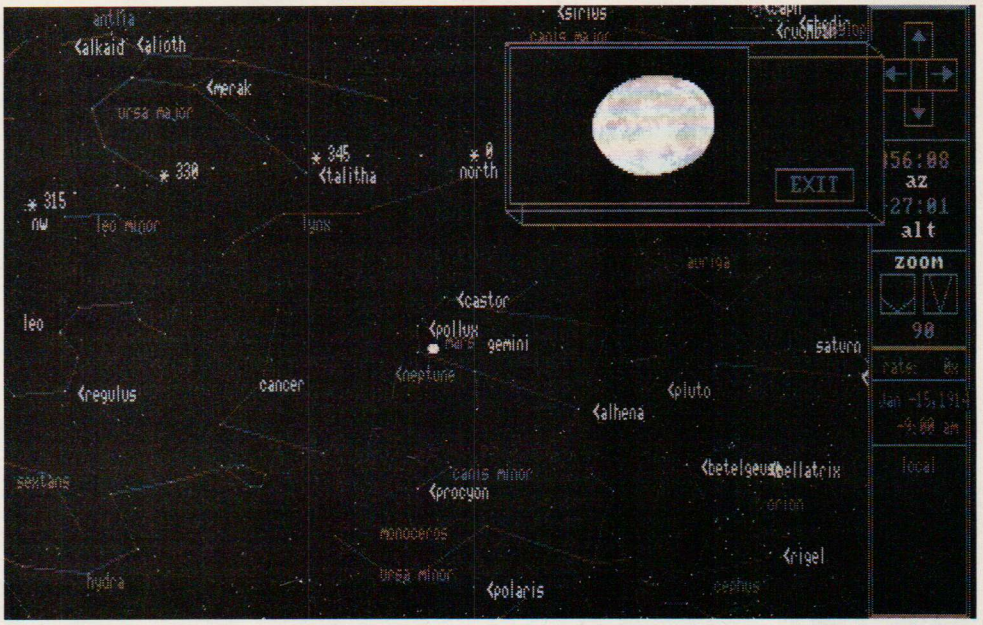
ONLY £89.95 for 512K version Rams only
Expander Board **£19.95. £40** per 512K
Fully expanded to 1.8Mb only **£225**

ASHCOM 512K RAM EXPANSION WITH REAL TIME CLOCK/CALENDAR ONLY £59.95
AND DISABLE SWITCH WITHOUT CLOCK £53.95

VIRUS BLOCKER NEW ONLY £19.95
PREVENTS THE WRITING OF ALL BOOT BLOCK VIRUSES TO DISK. SIMPLY PLUGS INTO EXTERNAL DISK SKT

Only from ASHCOM, 10 The Green, Ashby-De-La-Zouch, Leicestershire, LE6 5JU

Telephone: (0530) 411485



Space ACE

JASON HOLBORN whops out his telescope and goes looking for some heavenly bodies.

for the majority of us, the night sky is nothing more than a mass of stars. A few us can identify a couple of the more common celestial bodies, such as Venus, and a couple of the more immediately obvious constellations such as Orion, The Plough (or should that be the Big Dipper?) and the Seven Sisters (Bob insists that there is also a constellation called Dudley the Hamster, but none of us can find it!), but very few of us can identify the remaining 99.999% of visible stars.

This, then, is where *Distant Suns* comes in. If you have ever stared up into the night sky and thought to yourself 'I wonder what that star is called?' or 'I wonder what planets are visible tonight?', then *Distant Suns* may well be the program that you've been looking for.

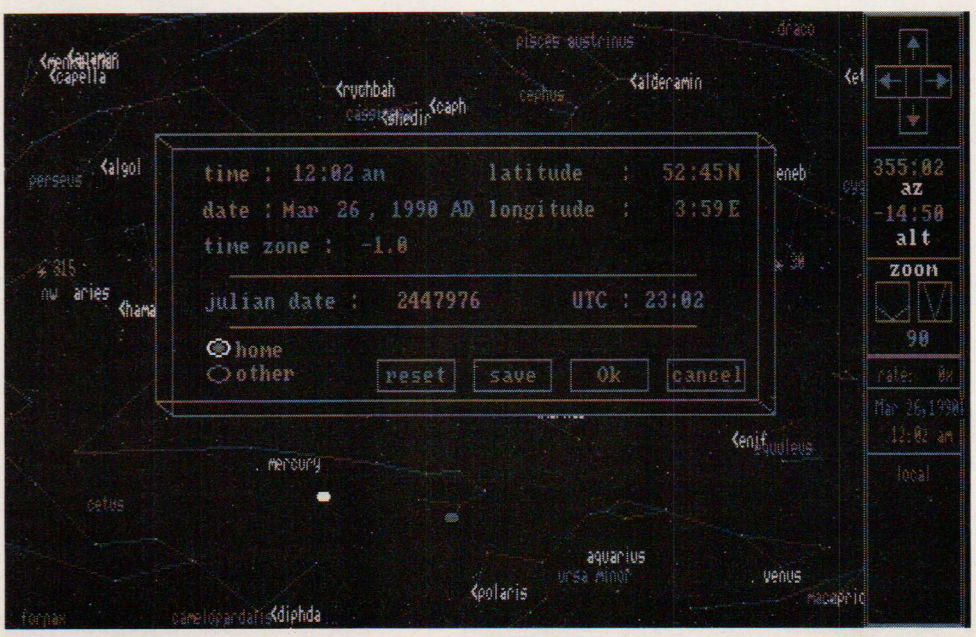
Distant Suns is a powerful graphical database program containing details of over 2,200 stars (expandable to a further 9,100 or more using the *Distant Suns* expansion disks). The program provides a quick and easy method of identifying any celestial object at any point in time, at any place on the Earth. At its simplest level, just type in the time, date and your location (expressed in terms of longitude and latitude) and *Distant Suns* will display a map of the heavens complete with any extra information that you may require.

If it's planets you're looking for, *Distant Suns* will label any that are visible. If you're playing 'spot the constellation', then once again *Distant Suns* will do the hard work by tracing the outlines of every visible constellation. By using the program's Point and Identify option, information on any star is just a mouse click away.

Just like in real life, the number of stars displayed on-screen is affected by the light generated by your location. If you're out in the country, miles from the nearest light source, the skies will be filled with a seemingly endless number of stars. However, view the sky from the city and you will find that many of the dimmer stars will be washed out by the brightness of street lights etc. When you select the appropriate 'Skylight' setting, *Distant Suns* will simulate this for you.

ABOVE: Examining the Earth's satellite.

BELOW: Setting the position from which you view the night sky.



Time Travel

Have you ever wondered what the night sky was like on the day that you were born? If so, *Distant Suns* will let you look into the past – all you have to do is simply tell it the date, time and location.

Distant Suns' power doesn't just stop there, however, as you can even look into the future. Time travelling is limited – if that's the appropriate word! – to dates within the range of 9999BC and 9999AD.

The *Distant Suns* manual is a joy to behold. Filled with wit and humour, it not only documents the program's operations, but also serves as an introduction to the theory involved in observational astronomy.

The manual discusses all the various concepts neccessary to get the very most from the program, such as declination, right ascension and the equatorial coordinate system (sounds like it could be fun, eh!)

Conclusion

Distant Suns is a fascinating program that could well bring out the latent, aspiring astronomer in you. This is one of the few serious packages that will not only entertain you, but will also teach you a great deal about astronomy. The multitude of options offered by this program is so great that a review of this size can only touch upon its capabilities.

If you've ever been even remotely interested in the mysteries of the night sky – and you want to be able to impress people by pointing out Alioth on the way home from the pub! – then *Distant Suns* is certainly worth considering. Switch on your Amiga, switch off the lights and the secrets of the universe are laid out before you, ripe for the taking.

DISTANT SUNS
£59.95 ■ All 1Mb Amigas ■
HB Marketing (0753) 686000

BYTES & PIECES™

2000 'SLOT MACHINE' ™

For the 2000 with auto-booting and driver software. Ready formatted. Can be a hard card or with drive mounted in a drive bay or in an external case. Your choice. (We can provide just the interface if you provide the ST506 drive). Uses the OMTI cache memory card that is **RAPID!** Read speeds near to 500K a second are possible. **We can sell you a 40 meg system for £450** plus carrage but for the serious user we recommend the very latest drive, **a 66 meg 3.5 inch 24 mill/sec access drive that you can hardly hear running and at £599 it is a steal.** Don't forget, with our systems you double the capacity by the purchase of a second drive only! Highly recommended by **AMIGA USER INTERNATIONAL** and **17 BIT SOFTWARE**

A500/A1000 HARD DRIVES

Exactly the same specification as above but obviously external mounted in a fan cooled case that can take two half-height drives or one high-tec full height drive. These drives are not a toy 20 meg but for the serious user/hobbyist. Even 40 megs is sometimes not enough but one will cost you **£499** plus carrage but try to start with the 66 meg at **£625 for rapid mass storage.** We have larger capacity drives.

B2000 CLONE BOXES allow you to use up to 2 B2000 cards in your A1000/A500 eg Hard Card and 8 meg board **£99**

FULL B2000 SYSTEMS

We can supply the B2000 & Fatter Agnus at £795
8meg card with 2 meg £260
40 meg auto-boot hard card £370
66 meg auto-boot hard card £455
87 meg auto-boot hard card £625
Larger drives available P.O.A.
XT Bridgeboard and 5.25 floppy £375
AT bridgeboard and floppy £550
68030 accelerator card with 2 meg 32 bit fast wide ram £1100
15" Multisync monitor £550 1084 monitor £199
Video card for Interlace etc with 640 by 512 £250
EPSON-STAR-NEC printers available. All ex vat

A500 owners find out how your A500 can be worth up to £300 against a 2000 machine Call for quote, good for 30 days

512K RAM BOARD

Without clock **£49.95** With clock **£54.95** **We do not believe in switches that break and cause problems. ALL our Ram Boards go with a utilities disk for switching Fast Ram on and off; a clock reset program when the clock has been hit by a virus or a protection routine and the latest virus checkers.**

2MEG BOARD

A500 memory board uses low power CMOS chips as 512k, 1 meg or 2 meg. Transparent auto-configure. No leads or jumpers, multi-layered board, buffered at **£299** for 2 megs

1.5MEG BOARD

A1000 memory board with clock, can autoconfigure 512k 1 meg & 1.5 meg software ram test disk 1.5 megs **£270**

OCTABYTE™ 8MEG - 2000

For the 2000 and the new **AX-S** expansion system.
With a ram controller chip for contiguous ram not fragmented! Software support disk tests ram. The latest technology, not a board a few years old. **2 megs £299 8 meg £799**

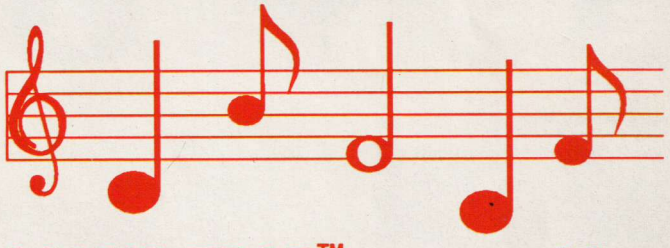
X-RAM™ 8MEG - A500-A1000

The same as 'OCTABYTE' but in a slimline case with optional power supply.. **£350 for 2 megs X-RAM can be used in a 2000 when you upgrade.**

INTERLOCK™ GENLOCK £399

X-COPY 2.1 inclusive of postage £17.50

HARDWARE £17.50 Upgrades £3.50 (Send your disk)
HARDWARE & SOFTWARE £27.50 all inclusive



SOUND TRAP™ 3 now with AUDIOMASTER II

THE BEST HARDWARE AND THE BEST SOFTWARE for all AMIGAS to give superior soundsampling. ST3 and Audiomaster 2 £59.95 all inc. ST3 on it's own still £37.50 AUDIOMASTER 2 £25 TO ST3 USERS SONIX £25 INC BABY MIDI INTERFACE THE SIZE OF A SMALL PRINTER PLUG. IN--OUT--PASS THRU' £27.50

IT CAME FROM THE DESERT £15

MAXIPLAN 500 plus KIND WORDS 2 plus SUPERBASE 2 together retail at over £250. From Us a silly £70 or £30 each Get one of the three at £20 with every Ram board purchased. Save lots of money but hurry while stocks last

---

MasterCard **BYTES & PIECES, 37 CECIL STREET, LYTHAM, LANCS, FY8 5NN, UK** VISA

Tel 0253-734218 Fax 0253-736035 ON-LINE Support number available

Callers by appointment please. Open 11am to 6pm Monday to Friday Prices include VAT unless stated

We are the Official Spirit Technology distributors and manufacturers. Dealer enquiries welcome

1

ST FORMAT GOLD

Rainbow Islands
from Ocean

This follow up to Bubble Bobbie looks set to be as much of a hit as Ocean's last cutesy game, New Zealand Story. It combines colourful visuals with frighteningly addictive gameplay, with the result that you end up with one hell of a game.
Graphics have been downloaded from the original arcade version and the moves are just the same. Lead Bub and Bob to the top levels by firing rainbows into the air and then climbing them. When you reach the top of a platform, you can collect thousands of bonus points. There are seven islands to complete, each one more challenging than the last.
"Graftgold's ST Version of Rainbow Islands is one of the best coin-op conversions to have appeared in along time" Maff Evans, ST Format

Rainbow Islands

		PRICE	CODE
Amstrad CPC	Cass	£ 9.99	BF832AC
Amstrad CPC	Disk	£14.99	BF833AD
Commodore 64	Cass	£ 9.99	BF834CC
Commodore 128	Disk	£14.99	BF835CD
Spectrum 48K	Cass	£ 9.99	BF836SC
Spectrum +3	Disk	£14.99	BF837SD
Atari ST	Disk	£19.99	BF838ST
Amiga	Disk	£24.99	BF839AM

THE BI

An INCREDIBLE way to buy the month's top titles!

BUY ONE – GI

BIG FOUR MAIL ORDER

- Fast delivery
- Friendly service
- Fabulous savings

We're backed by the resources of one of Britain's most successful publishers so you can order with confidence.

It's so simple!

You may find it hard to believe that we're GIVING away software but it's true. You simply buy any of the titles on this page at the normal retail price listed and then you can pick any other title (or the same title on a different format) absolutely free of charge!
The only condition is that the value of the free game must not be greater than that of the game you're paying for.
Apart from that there are no strings attached. It's literally TWO for the price of one! Or FOUR for the price of two...the sky's the limit! Have you ever seen a better offer...?

FIRST CLASS POST, PACKING & VAT, INCLUDED

3

Fiendish Freddy's Big Top of Fun
from Mindscape

Mindscape's circus extravaganza brings you thrills, spills and a whole barrel o' laughs. Dive from high-boards, walk tightropes, be fired from cannons, swing on trapezes, throw knifes and juggle in a desperate bid to save the circus from the big bad bank.
An original multi-event game with a wicked sense of humour!

Fiendish Freddy

		PRICE	CODE
Amstrad CPC	Cass	£ 9.99	BF847AC
Amstrad CPC	Disk	£14.99	BF848AD
Commodore 64	Cass	£ 9.99	BF849CC
Commodore 128	Disk	£14.99	BF850CD
Spectrum 48K	Cass	£ 9.99	BF851SC
Spectrum 128	Disk	£14.99	BF852SD
Atari ST	Disk	£24.99	BF853ST
Amiga	Disk	£24.99	BF854AM

G 2

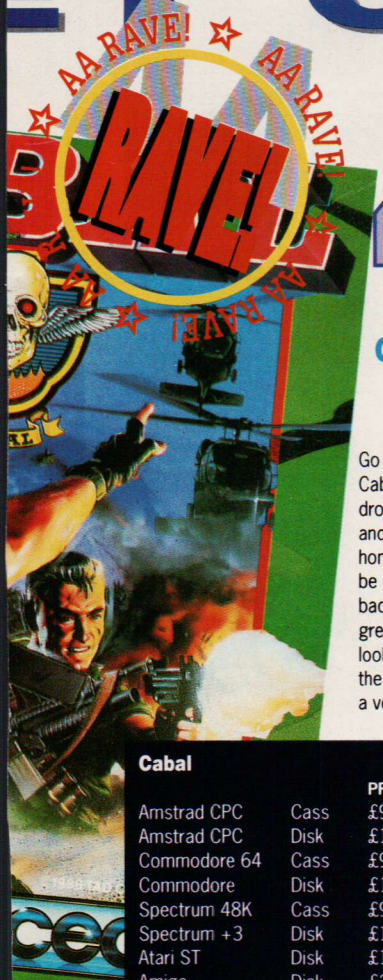
Black Tiger
from U S Gold

US Gold have had major hits with Strider and Ghouls 'n' Ghosts. Now comes their latest horizontally-scrolling action game, Black Tiger.
In a similar fashion to Ghouls, the objective is to charge through horizontally-scrolling levels, climbing ladders and following red arrows to the end of the level. Along the way, fight ugly gargoyles, snakes and even deadly orchids using your powerful weaponry. When the going gets tough, disappear inside the shop, pick up some extra weapons, and go out for another merry blast.
If you're a fan of horizontally-scrolling action games, you'll love this one.

Black Tiger

		PRICE	CODE
Amstrad CPC	Cass	£ 9.99	BF840AC
Amstrad CPC	Disk	£14.99	BF841AD
Commodore 64	Cass	£ 9.99	BF842CC
Commodore 128	Disk	£14.99	BF843CD
Spectrum 48	Cass	£ 9.99	BF844SC
Atari ST	Disk	£19.99	BF845ST
Amiga	Disk	£24.99	BF846AM

ET ONE FREE!



4

Cabal from Ocean

Go crazy in cartoonland with Cabal. A lone trooper, he's dropped behind enemy lines and must fight his way back home. Level after level must be cleared of buildings and bad guys with machine guns, grenades and bazookas. It looks like Operation Wolf for the under fives but plays like a vet.

Cabal

		PRICE	CODE
Amstrad CPC	Cass	£9.99	BF855AC
Amstrad CPC	Disk	£14.99	BF856AD
Commodore 64	Cass	£9.99	BF857CC
Commodore	Disk	£14.99	BF858CD
Spectrum 48K	Cass	£9.99	BF859SC
Spectrum +3	Disk	£14.99	BF860SD
Atari ST	Disk	£19.99	BF861ST
Amiga	Disk	£24.99	BF862AM

ORDER HOTLINE 0458 74011

Post to: Big Four Mail Order, The Old Barn, Somerton, Somerset TA11 7PY

YES, I want to take advantage of this remarkable way of buying software.

The game(s) I would like to BUY are:

Title	Machine	Order Code	Price

The game(s) I would like FREE are: (You may claim one free title for each game bought. The total price of the free game(s) must not be greater than the total price of the paid-for game(s).)

Title	Machine	Order Code	Price
			FREE!
			FREE!

NAME

ADDRESS

POST CODE

PAYMENT BY: ☐Cheque ☐Access ☐Visa

CREDIT CARD NUMBER

EXPIRY DATE

Please make cheques payable to "Big Four Mail Order".

AMIGA 05/90

16 BIT CENTRE

ALL PRICES INCLUDE VAT AND COURIER SERVICE

CALLERS AND MAIL ORDER WELCOME

OPEN MONDAY to SATURDAY 9am-6pm

PHILIPS 8833 STEREO MONITOR
Including Lead for Amiga
ONLY £249.00

STAR LC-10 COLOUR PRINTER
Including Free Printer Lead
ONLY £199.00

STAR LC-10 MONO PRINTER
Including Free Printer Lead
ONLY £159.00

TARGET MIDI INTERFACE
In, through, 3x out
LED's signal data transfer
ONLY £29.00

A500 XMAS PACK

STILL AVAILABLE
Includes: A500, Mouse, Modulator, Leads, Workbench, Basic, Tutorial, Joystick, Mouse Mat, Disk Bank, 10 Blank Disks, Amiga Dust Cover, Batman, New Zealand Story, F18 Interceptor, Deluxe Paint II, Amegas, Art of Chess, Wizball, Terrapods, Buggy Boy, Barbarian, Ikari Warriors, Mercenary, Insanity Fight, Thundercats, Manuals,

ONLY £399.00

HARDWARE

COMMODORE A590, 20Mb Hard Disk, Unpopulated	£369.00
COMMODORE A590, 20Mb Hard Disk, Populated to 2Meg	£519.00
COMMODORE official A501 Ram expansion	£115.00
COMMODORE 1084 P/D monitor	£239.00
PHILIPS AV7300 TV TUNER	£69.00
PHILIPS 8833 Stereo Monitor inc Lead for Amiga	£249.00
TARGET Sound Sampler plus software	£29.00
SOPHUS S5 Professional Sound Sampler	£99.00
NAKSHA Mouse	£28.50

PRINTERS

STAR LC-10 MONO PRINTER	£159.00
STAR LC-10 COLOUR PRINTER	£199.00
CITIZEN SWIFT 24, 24 Pin Mono Printer, (Upgradeable to Colour)	£299.00
CITIZEN SWIFT 24, 24 Pin Colour Printer	£339.00
CITIZEN 120D	£139.00
CITIZEN SWIFT 9, 9 Pin Colour Printer	£259.00
SWIFT 24 Colour upgrade	£35.00
Epson LQ400 24 Pin Printer	£299.00
Panasonic KXP1124 24 Pin Printer	£299.00

All printers supplied with 1.8M cable suitable for Amiga or any computer with standard centronics port

SOFTWARE AND DISKS

ARENA ACCOUNTS	£119.00
3M DS/DD Disks, Box of Ten inc. Labels	£12.95
MUSIC X Midi Package	£169.00
SUPERBASE PERSONEL	£39.00
KIND WORDS V2	£39.00
PROFESSIONAL PAGE 113	£169.00
XCOPY V2.1, Copier + Text Editor (H/W V6.4 £29.00)	£19.95
DIGIVIEW V4 Update disc	£35.00
AEGIS Sonix	£35.00
PC TRANSFORMER IBM Emulator	£25.00
PHOTON PAINT II	£25.00

NEW LOW COST DISK DRIVE

- ❑ SLIM DESIGN METAL CASE
- ❑ ON/OFF SWITCH
- ❑ THROUGH PORT
- ❑ 880K FORMAT CAPACITY
- ❑ HIGH QUALITY CITIZEN MECHANISM

ONLY £74.95

TARGET RAM EXPANSION

512K RAM EXPANSION FOR A500
USES 100NS Chips for true fast RAM

ONLY £69.00 (£59.00 Without Clock)

OPTIONAL MEMORY SWITCH ONLY £2.00

AMIGA PACKS

AMIGA Class of 90's Pack, includes Maxiplan, Publishers Choice, BBC Emulator, Logo, Superbase Personal	£515.00
AMIGA BATMAN PACK, Includes A500, Modulator, Mouse, Manuals, Batman, F18 Interceptor, Deluxe Paint II, New Zealand Story	£365.00
AMIGA STARTER PACK Includes A500, Modulator, Mouse, Workbench, Basic, 5 Commercial Games + Joystick	£369.00
AMIGA 1 MEG PACK Includes A500, Commodore A501 Ram Expansion + Deluxe Paint III	£499.00
1 MEG SPECIAL, Amiga A500, with Fitted 512K Target Ram	£415.00
AMIGA B2000, 1084 MONITOR, PC XT Bridgeboard, 30Mb HARD DRIVE, Rom 1.3, Workbench 1.3	£1399.00
AMIGA B2000, 1084 MONITOR, PC AT Bridgeboard, 30Mb HARD DRIVE, Ram 1.3, Workbench 1.3	£1995.00

ALL AMIGA'S SUPPLIED WITH MOUSE, MODULATOR, MANUALS, LEADS, WORKBENCH, BASIC + TUTORIAL

HOW TO ORDER: Either call our number below with your credit card details, or send a cheque/PO or credit card number and expiry date to our address. Make cheques payable to THE 16 BIT CENTRE Prices subject to change without notification.

16 BIT CENTRE

Unit 17, Lancashire Fittings Science Village
Claro Road, Harrogate HG1 4AF
Tel (0423) 531822/526322

Access

VISA

Doctorin' THE T

JON BATES looks over two new offerings from Dr T: the *Copyist* scoring software and *KCS v3*, yet another sequencing package...

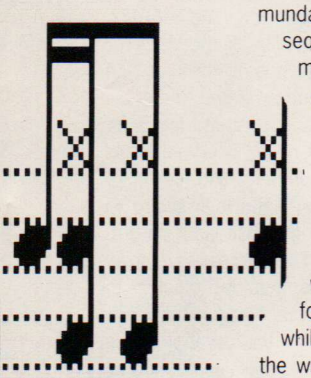
Another sequencing package? You may well ask 'Does the world really need another music sequencing package for the Amiga?' One could ask a similar question of car manufacturers when they release a new product and their answer is, of course, 'Yes' every time.

The market does not get any smaller: in fact, it is now widely known that Commodore UK are not only throwing in music sequencing packages as part of their 'Class of the 90's' education bundle but are also trying in earnest to squeeze their product into more professional music studios. Proof of an expanding serious market as well as increasing home use. The bundled sequencing package is Dr T's *MRS*, the Spartan child of *KCS*.

Two Programs...

So what have we here? What's in the spotlight on the test-bench this month? Well, the *Copyist* notation program is one of the few pieces of scoring software for the Amiga and so it gets a good going over later in these pages. The sequencing package – the *Keyboard Controlled Sequencer*, better known as *KCS* – has been around since the dawn of the first cheap 16-bit home computer. Updates have been both regular and vigorous and now the latest Amiga version is available.

To call it merely a sequencer is hardly fair, because extras have been bolted onto the original that take it from being a mundane workaday sequencer to a multi-talented system that only stops short of making the tea. If you know and have used the software bear with us in the following review while we outline the way in which the package works. The additions will be highlighted for you to drool over later.



...Beat as One

Both programs can co-exist, obviously, but here's the twist. Dr T have what is known as a Multi Program Environment which will cause one program to hook into another and inter-react. In fact, they claim that up to 19 programs can co-exist and inter-react: if they are Dr T programs, that is. Methinks a wardrobe full of RAM will be necessary for this as both the programs under review use one meg: for these two to run happily 2Mb RAM is the minimum and even more is going to be needed if you think of RAM disk storage for temporary files.

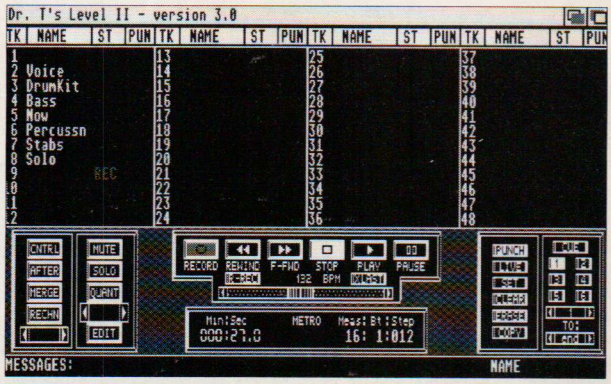
KEYBOARD CONTROLLED SEQUENCER V3.0

KCS v 3.0 has three operational pages plus several host routines/programs that can inter-react and control certain areas. The three main operation modes go by the names Track, Song and Open.

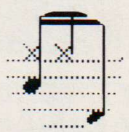
Heart of the *KCS* is the main Track page. You get a screen display of 48 tracks, awaiting your input, which occupy the top half of the screen. The bottom half is divided into three. Real-time quantize, flip to edit , MIDI re-channeling, track control et cetera are taken care of in the left-hand column. The right-hand column copies, erases, over-records and jumps to any of six cue points. The centre section is the 'tape transport' controls – in other words the fast forward, rewind, play, pause, stop, record – plus the metronome and location counter in not only bars and beats but also time elapsed.

The status of each track is noted – that is, solo or muted – and as soon as you finish recording one track the record option jumps to the next available track so that you can carry on without interruption.

If, however, you decide that your last effort was no good the 'R-Rec' option will halt operations in mid-stream and start you off again. A subtler version of this is the 'X-Last' which, rather like the similarly-branded laxative, purges the system of your last efforts!



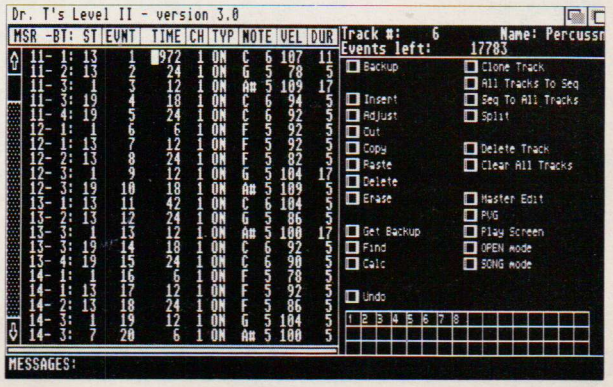
ABOVE: The Track Screen. 48 tracks simultaneously plus lots of handy icon controls.



BELOW: Track Editing. The events are listed (yawn) down the left hand side and commands on the right.

The tempo has an expanded or compressed range. Nothing mysterious here, just that you can either have normal metronome speeds of 40 to 240 beats per minute or you can go weird and demand tempos from 10 to 999. Tempos are adjusted by dragging the slider bar, clicking the arrows either end of the bar or using the qwerty keys which cause the tempo to jump in a pre-defined ratio.

Also on screen as opposed to menu are the basic MIDI filters for controllers and aftertouch which will



save on memory usage and simplify the data that is going in.

Punch It Up!

Replacing sections of tracks is achieved with the usual 'punch' button. Again on the main page as an icon, it lets you set the points at which you will enter and depart from record in the track. Cleverly, it automatically puts the new section onto a spare track and mutes the original section: thus you never actually lose data until you are happy with the new section.

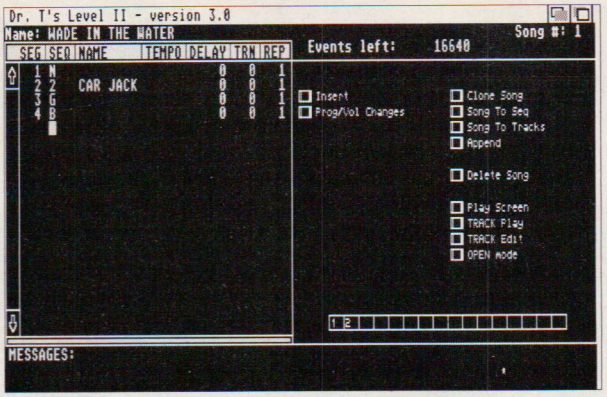
Several other smart routines enable you to copy or erase new data from track to track and to retain the punch cue marks or have new ones for each track. There is also a more complex live-edit mode which allows you to delete notes from a track or alter their velocities in real time as the track is playing. In total there are no less than 17 track functions, like punch, mute, etc. which should keep you occupied for some time to come.

Shift It!

There are many ways of transfiguring one set of MIDI data into another. This is another way of saying that data such as velocity can be converted into volume data, or vica versa, to create accents from, say, a pitch bend or modulation wheel.

You can also delay or pre-delay tracks. This is known as 'shift' and each track can be shifted in time forwards or backwards. The amount you can do it by is limited to three settings and notes shuffled off the end of the track are not sounded. This is often used for creating echo effects but I have to say that here it is a bit limited in application.

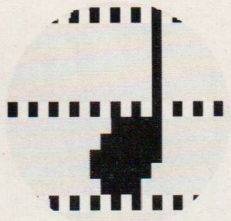
All the usual sequencing functions of naming tracks, swapping track location, erasing tracks are on hand. One oddity is that the Merge function in fact merges incoming and outgoing MIDI data – in other words it is a software Thru switch and on most other pieces of sequencing software it is called thus. The option for actually merging recorded tracks is called up from menu.

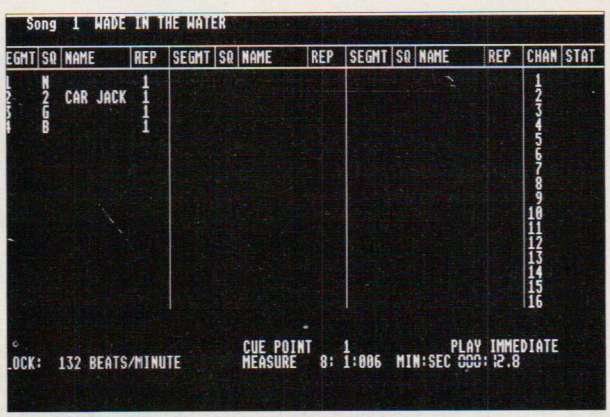


ABOVE and BELOW: Link the combined tracks together into sequences and chain them together.

Think about Sync

If you are planning to use *KCS* synchronized to other pieces of equipment then I should inform you that KCS will synchronize to most things in most ways. As a formality it obeys MIDI sync and song position pointer. It will also configure itself to work with incoming SMPTE code thanks to a host program called Phantom and it will send a special set of MIDI-exclusive commands to a Fostex R8 eight track recorder and slave it up to the screen control panel: you rewind the sequencer and the R8 rewinds as well. The same goes for play, fast forward and reverse since the R8 is kitted out with a MIDI In port. Obviously, to get the maximum benefit from this labour-saving routine KCS and the multi-track recorder need to be locked in sync – see 'That Syncing Feeling' below.





Keep on the Track

At first in Track mode you have to take a little care since the right-hand mouse button, which usually opens up the menu bar, is a controller in its own right in the active area of the screen. The menus carry an enormous variety of options, like copy all tracks to a sequence on the Open sequencer page, go to any bar, alternate ways of setting cue points, clear tracks, merge tracks, auto loop and record, and mute last recording, which is essential when trying out various 'takes' of solos.

One peculiar feature of the *KCS* is that the length of Track One is taken to be the length of the whole section. You can override that by specifying the track length from a menu option, but this is a method that I have never felt happy with because it predefines something that you may wish to override at a later stage. OK, you can stitch various sequences together but that tends to be repair after the damage rather than inspired work at the time of creation.

Edit Problems?

The edit screen for track mode has only one basic form of editing, of the 'data-stream' type. Down the left hand half of the screen is all the data for each event. Although this is an extremely accurate method, there are several things about it that I find a bit of a bind. First of all, it is entirely in the form of numbers and so as a trained musician I find it awkward to visualise what the bar and pattern should be like. Even a graphic display would help and it is far quicker to work with graphics than numbers.

For example, the duration value of all notes and events, expressed as a number, bears very little relationship to what the musician can hear or visualise: although there is a sort of 'help' option that roughly abbreviates the name of the closest note value. The rests between the notes are specified as a number between 0 to 65535, again fairly meaningless. The notes are named, thankfully, but again – why not display them? Even if you have never used a musical instrument before and so have no preconceptions, you would find this a neuralgic nightmare.

On the plus side is the tremendous amount of word-processor-type functions that you can perform in edit mode: cutting and pasting, splitting, creating back-up sequences, and so on. You can alter any of the data

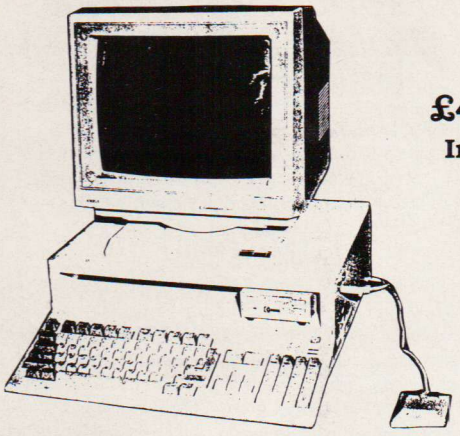
THAT SYNCING FEELING

Although there is ample scope for a tutorial on this subject, a few quick explanations about synchronization and its whys and wherefores might not go amiss right here and now.

Synchronization is the locking together of one or more devices so that they work together. For instance, you might have a software sequencer and drum machine locked together by MIDI Clocks – a simple process where you ask the drum machine to listen out for the clock speed sent from the sequencer and to ignore its own internal clock. Not only will sequencer and drum machine work at the same rate but also they will stop and start together.

The Fostex R8 multi-track tape recorder is a clever gadget that has a 'MIDI In' port that will read incoming MIDI codes and thus perform the same functions, that of slaving the transport controls to a sequencer. But to run an ordinary tape recorder 'in sync' with a sequencer is a little bit more fiddly. One of the tracks on the tape has to be sacrificed so that a time code can be recorded on it. This is generated by a time-code generator and reader which is a separate (and not a cheap) piece of hardware. This time code is then read from the tape and transformed by the hardware box into code that the sequencer can understand. In this case the tape is controlling the sequencer speed and possibly the location too. The time code is usually SMPTE although it could be FSK, a much simpler ersatz code. The subject is complex; more to follow in this column at a future date.

Does Your Amiga
LOOK THE BUSINESS!



RRP Only £49.95 Inc VAT

Yes this is really a standard Amiga A500 - No modifications! What's more, it's more convenient to use than the A1000 or A2000. With a "CONTROL CENTRE" you can bring all your disk drives, genlocks and frame grabbers etc into one smart and attractive unit. No longer does your monitor need to sit amongst all that spaghetti coming from the rear of the A500 - Your monitor can now sit up top, where it's easier seen and used. All that spaghetti also disappears from view - neatly hidden inside the rear of the "CONTROL CENTRE." Your joystick and Mouse ports are also re-located where you can get them - no more fumbling around the rear of the A500!

The Amiga "CONTROL CENTRE"
You'll wonder how you managed without one!

Available from all good Amiga Stockists - For more information contact:

PREMIER MICROS

15 Rideaway Drive, Hemingford Abbots, HUNTINGDON, Cambs, PE18 9AQ
Tel (0480) 300738 - Fax (0480) 495077.

T.C COMPUTERS

12A Barnards Way, Charlton Heights, Wantage, Oxon, OX12 7EB.
Tel: Wantage (02357) 60177

AMIGA A500

Amiga A500 inc TV modulator & game	349.00
Amiga A500 Batman Pack	359.00
Amiga A500 Ten Star Pack	379.00
Amiga A500 Appetizer Pack	379.00
(Word Processor / Paint program / Music program / Game)	
Amiga A500 inc TV modulator & 2nd Disk drive	439.00
Amiga A500, 1 Mb Ram inc TV modulator & Game	449.00
Amiga A500 & Colour monitor	From. £579.00
Amiga A500 System Pack	749.00
(A500 / Colour monitor / Printer / The Works software)	
Amiga A500 Class of the 90's Pack	539.00

AMIGA 2000

Amiga 2000 CPU Base unit	999.00
Amiga 2000 & Colour monitor	1199.00
Amiga 2000 / PC Pack	1525.00
(2000 / Colour monitor / XT Bridge board / 5.25 drive / 20Mb HD)	

Too much to list please call for other systems and prices

Peripherals

TC Amiga Console for the A500...(Keep things together)	39.99
512k Ram / Clock expansion	From 59.99
Commodore A501 Ram / Clock expansion	129.00
Commodore 1084P Colour Monitor	269.00
Philips CM8833 Stereo Colour Monitor	249.00
Cumana CAX 354 1Mb External disk drive (Disable / Enable)	89.00
NEC or Citizen 1Mb External disk drive (Disable / Enable & Through)	79.50
Star LC-10 80 col. 144 cps. Dot Matrix printer	165.00
Star LC-10 80 col. 144 cps. Colour Dot Matrix printer	209.00

Software at up to 30% OFF RRP...Phone for prices
All prices inc VAT & are subject to change without notice.

YUPPIES
COMPUTER CLUB

APB	£12.99	*F29 Retaliator	£15.85	Operation Wolf	£13.00
Batman The Movie	£15.50	Falcon F16	£18.50	Peter Beardsley	£11.50
Beach Volley	£15.50	*Full Metal Planet	£15.50	Populus	£15.99
Blasteroids	£13.75	Future Wars	£15.75	Powerdrift	£15.75
Blood Money	£15.50	Ghostbusters 2	£16.00	Purple Saturn Day	£12.00
Bloodwyck	£15.50	Ghouls N Ghosts	£15.50	*Rainbow Island	£14.75
Bomber	£20.50	Guerilla War	£13.99	Red Heat	£13.50
Bombuzal	£14.50	Gunship	£13.50	Robocop	£13.50
California Games	£15.75	Hard Drivin'	£13.40	Running Man	£10.00
Chase HQ	£15.49	Hores Of The Lance	£15.85	RVF Honda	£13.85
Cobal	£15.75	Hunt For Red October	£13.50	Shadow Of the Beast	£19.00
Continental Circus	£13.50	Int Karate +	£15.85	Shoot Em Up Const Kit	£18.00
Cybernoid 2	£12.00	Iron Lord	£15.99	Space Ace	£28.50
*Day Of The Viper	£15.75	J. Nicklaus Golf	£14.75	Stunt Car Racer	£14.50
Dominator	£12.99	Kristal	£16.50	Test Drive 2 The Duel	£20.75
Double Dragon	£12.00	*Lost Patrol	£15.50	Toobin	£13.50
Double Dragon 2	£12.50	Lords Of The Rising Sun	£16.99	Triad Vol I	£10.00
Dragon Ninja	£14.85	Magnum 4	£15.50	Xenon II Megablast	£14.85
Dungeon Master	£14.75	Manhunter New York	£20.99	Untouchables	£15.95
Elite	£14.50	Netherworld	£16.50	Waterloo	£15.90
F16 Combat Pilot	£15.75	Operation Thunderbolt	£16.00		

* Titles not yet released but will be despatched upon release

Please add £1.00 P&P for each game purchased and send Cheques/Postal Orders to:

YUPPIES COMPUTER CLUB

81 Thurmond Crescent, Stanmore, Winchester, Hampshire, SO22 4DH.

Capricorn Computers

THE BEST VALUE IN AMIGA PD!

GAMES		DEMOS	
CCPD3	Missile Defense, Clue, Backgammon 3D Breakout, Cosmo-roids,Tunnel Vision	CCPD44	Holsten Pils
CCPD20	Amoeba Invaders, Adventure, Egyptian Run, Gravity Wars, Cycles, Triclops, Tic-Tac-Toe	CCPD45	Wild Copper
CCPD37	Conquest, Hockey, Larn, Othello, Pegboard	CCPD51,52	Northstar Mega-Demo III
CCPD50	AmigaMaze, Chess, GravAttack, Yelp, Gravity Wars, Go-Moku	CCPD58	Miller Lite
CCPD56	Hack (Lite)	CCPD64	Walker Demo II (1 Meg)
CCPD94,95,96	Star Trek (1 Meg +2 drives)	CCPD65	IT Megademo (1.2 KS)
CCPD97	Flaschbier	CCPD73	Fashionating
CCPD98	Wanderer, Cosmic Conquest, YachtC, Four In A Row, Tetrix, Black Box	CCPD82,83	Deathstar Megademo
CCPD103	Retaliator, Sorry!, PacMan87	CCPD84	Dexion Mega-Demo
CCPD130	BallyII, Battleship!, Chess, SYS, Paccer	CCPD90	Vortex 42 Mega-Demo2 (1.2 KS)
CCPD137	Moria (1 Meg)	CCPD114	Shell Shocked
CCPD140	Tennis (1 Meg), Car	CCPD118	Rebels Mega-Competition-Demo
CCPD141	Escape from Jovi, Tiles!, LadyBug	CCPD121	3D-Net-Analyzer Demo
CCPD158	Orbit 3D, Diplomacy, SYS	CCPD128	Phenomena Mega Demo
CCPD161	Asteroids, Blackjack, Hearts, Miniblast	CCPD132	Vision Megademo II
CCPD191	Puzz, Zerg, World, Daleks, Callisto, Pontoon	CCPD133	Errors Megademo (1.2 KS)
		CCPD138,139	Deluxe Photolab Demo (1 Meg+2 drives)
		CCPD142	Alcatraz Mega Demo 3
		CCPD144	Robocop Demo
		CCPD148	Triangle Giga-Demo 3
		CCPD151	Space Ace Demo
		CCPD166	Puggs In Space Demo
		CCPD180	Mad Monks Mega Demo
		CCPD187	Walker Demo (1 Meg)

This is only a small selection of our disks, we also have the best in Music, Utilities, Adult, Animations etc. with more disks arriving everyday!

DISKS ONLY £2.50. OR £1.50 IF YOU SUPPLY YOUR OWN BLANKS
UK POSTAGE AND PACKING INCLUDED. OVERSEAS ORDERS ADD £2.00 (AIRMAIL)

Disks despatched within 24hrs of receipt of order and checked before sending.
Please make Cheques/PO's payable to Capricorn Computers. And send to:-

CAPRICORN COMPUTERS
35 Warwick Road,
Olton, Solihull,
West Midlands. B92 7HS
Tel. (021) 707-0381

Call or write NOW! for the latest list

Or call in at our shop at the above address where we also sell the best in Software & Hardware for the Amiga.

TONIC AUDIO

MAIL ORDER SPECIALISTS
TEL: 0222 863906 FAX: 0222 864756

INTRODUCTORY OFFER
FREE MIDI INTERFACE & LEADS

WITH SELECTED MIDI SOFTWARE.

If you purchase from the Midi Specialists - Tonic Audio, either: the brilliant Music-X or Music-X Junior, we will give you FREE a Compatible Midi Interface Kit and 2 FREE 2.5M Midi Leads for use with an Amiga 500/2000. In fact you will have everything except a Midi Keyboard to get you started in the world of Midi

THE COST?

Music-X plus FREE Midi Interface Kit - £199.99
Music-X Junior plus FREE Midi Interface Kit - £99.99
Or either of the above with ready built Midi Interface, add £3.95.
This Interface was designed by Tonic Audio, uses high quality Midi specification components, has sockets for Midi in, out and thru (via software control), is fully compatible with all good Midi software and comes with full construction details, with a help hotline in case you have difficulties.

Tonic Audio Midi Interface Kit purchased separately costs just £14.95 or ready built - £18.90

Write or phone for detailed leaflet.

We can also provide other Midi Software, Midi keyboards, Roland Midi Sound Modules, Peripherals, disks and serious software for your favourite computer - Just give us a call for prices.
Please add £2.50 Post and Packing to the above. All Prices include V.A.T

SEND OR PHONE FOR OUR FREE CATALOGUE AND RECEIVE FUTURE EDITIONS AUTOMATICALLY.

TONIC AUDIO,
UNIT 20, ACORN WORKSHOPS, HAROLD WILSON IND. EST, VAN ROAD, CAERPHILLY, MID GLAM, CF8 3ED.
TEL: 0222 863906 FAX: 0222 864756
VISITORS 10AM TO 6PM MON-SAT
ESTABLISHED 1987

VISA Access

FIRST CHOICE COMPUTERS

TEL: LEEDS (0532) 637988

UNIT 8, ARMLEY PARK COURT, STANNINGLEY ROAD, LEEDS LS12 2AE

ALL PRICES INCLUDE VAT & DELIVERY. ALL OUR PRODUCTS ARE UK SPECIFICATION

STAR LC10 MONO
9 Pin Printer Inc Lead
£159.00

IN STOCK NOW!!
AMIGA FLIGHT FANTASY PACK
Inc. F-29 Retaliator!! Rainbow Islands, Escape from the Planet of the Robot Monster, Deluxe Paint 2, Mouse Modulator. Add £20.00 for Batman + F-18 Interceptor. Add £20.00 for 10 Star Pack.
£369.00

PHILIPS CM8833
Stereo monitor inc lead
£249.00

AMIGA 1 MEG
Memory Expansion inc real time clock Photon Paint 2 only £15.00 when you buy 1 Meg Ram Expansion.
£69.00

PRINTERS (inc lead)

Star LC10 Col	£209.00
Citizen Swift 24 pin	£309.99
Colour option for Swift	£34.99
NEC P2+ 24 Pin	£299.00
Star LC24/10 24 pin mono	£249.00

DISK AND HARD DRIVES

Cumana Amiga 3.5 1 Meg	£84.99
Senator Amiga 3.5 1 Meg	£79.00
Amdrive 30 Meg Hard Drive	£399.00
Amdrive 50 Meg Hard Drive	£469.00
Com A590 20 Meg Hard Drive	£386.00
Powerdrive 3.5 1 Meg	£16.99

COMPUTERS

Amiga Batpack inc Deluxe Paint 2, Batman, F18 Interceptor, New Zealand Story, Mouse, Modulator and manuals.
£369.00

Amiga Batpack plus 10 Star games pack
£389.00

ACCESSORIES

Naksha Mouse	£39.99
Scart Leads	£9.99
Printer Leads	£5.99
100 Capacity lockable 3.5 disk boxes	£7.99
80 Capacity lockable 3.5 disk boxes	£6.99
40 Capacity lockable 3.5 disk boxes	£5.99
Amiga dust covers	£4.99
Star LC10 cover	£4.99
14 inch monitor cover	£6.99
12 inch monitor cover	£5.99
Universal printer stand	£9.99
Mouse pads	£4.99

AMIGA BOOKS AT DISCOUNT PRICES

Amiga Hardware Ref	£21.49
Amiga Basic Inside & Out	£17.99
Amiga Tricks & Tips	£14.49
Amiga C For Beginners	£17.99
Amiga Machine Language	£14.49
Second Book Of Amiga	£16.49

THIS IS ONLY A SMALL SELECTION

SOFTWARE SPECIAL OFFERS

Deluxe Paint 2	£14.99
Photon Paint 2	£24.99
F18 Interceptor	£9.99
New Zealand Story	£9.99
Batman The Movie	£9.99
10 Star game pack	£39.99

OTHER DISCOUNT SOFTWARE

Kind Words V2	£38.99
Protext WP	£74.99
Publishers Choice DTP	£74.99
Mavis Beacon Typing	£24.99
Devpac 2	£49.99
GFA Basic Interpretor	£39.99
GFA Basic Compiler	£25.99
AMAS Midi Sampler	£84.99
Audio Master 2	£59.99
Doctor T's Midi Recording Studio	£49.99
Doctor T's Copyist Super	£79.99
Deluxe Music Construction Set	£54.99

DISKS

100% ERROR FREE LIFETIME GUARANTEE
135 TPI 3.5 INCH

SONY BULK		
10	For	£6.99
50	For	£31.99
100	For	£59.99
200	For	£115.99
300	For	£158.99
500	For	£254.99
1000	For	£499.99
MITSUBISHI BULK		
10	For	£5.99
50	For	£27.99
100	For	£49.99
200	For	£97.99
300	For	£142.99
500	For	£229.99
1000	For	£449.99
DISK LABELS		
500	For	£7.99
1000	For	£13.99

OPEN 9.00AM TO 5.30PM MONDAY TO SATURDAY OPEN SUNDAYS 10.00AM TO 3.00PM
OPEN THURSDAY 'TILL 8PM
FOR THE BEST PRICES, BEST ADVICE AND THE BEST SERVICE, YOUR ONLY CHOICE IS FIRST CHOICE.
Call into our showroom or order by telephone for a fast delivery Tel: 0532 637988 Fax: 0532 637 689
please make cheques payable to First Choice

VISA Access

fields en bloc or individually. It is also very easy to flip to another track without exiting the edit mode and hear any highlighted events.

In Track mode you only hear the track you are working on, so to edit and hear all the tracks together you have to go to Open edit mode. This is also where you would globally cut and edit events.

Gone for a Song

The Song Mode is fairly straightforward. Any amount of track sections can be mixed onto a sequence which in turn can be chained up to form a song. Up to 100 small sequences, called segments, can be linked to together in a multiplicity of ways. However, it would seem that any alterations such as transposition and cutting the length of segments would have to be done in either the Open or Track mode before linking them together. Loop points can be set as can channel mute and solo. You can also alter the order in which the segments play back as you are going along.

A couple of neat features are the step time mode, which takes the form of a list of events which you type in – you can set up parameters and insert from the host keyboard as well. The other is the program's use of the IFF voices available to the Amiga sound chip. It can load up to 16 voices and access any four of them at any one time. The option for this is taken from the environment menu. They are alterable and touch sensitive and can be set for any range of notes.

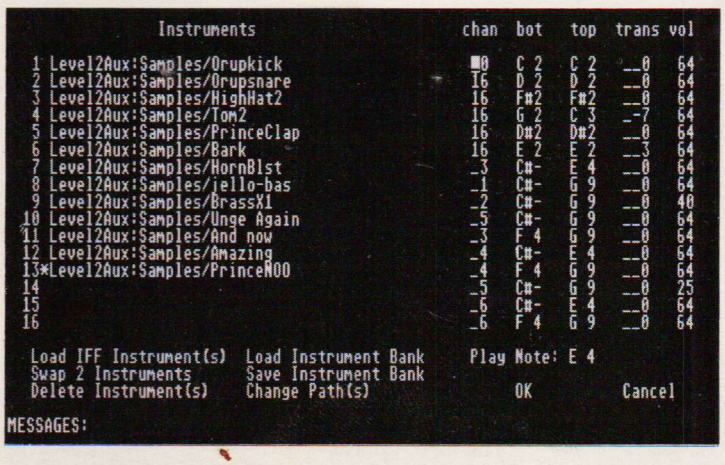
Extra! Extra!

Onward to the extra goodies that come with *KCS v3*.

Automix: The first is 'Automix', basically a screen full of active faders which will first of all control relative volumes of MIDI equipment but can also be adapted to any area you would like to control.

PVG: The second addition is a complex beast and is almost a composing tool with artificial intelligence. Almost, but not quite. I have to confess that to dig into its hidden depths would take an indeterminate amount of time, but the principle is that it takes particular areas such as note values, velocities, pitches, time, pitch-bend etc, and subjects them to some fairly heavy-duty mathematical logic controls in an attempt to create a structured chaos out of which comes a new order – which is pretty philosophical for a mere sequencing tool!

You can create macro controls that can be called up so that you can, say, transpose a tune into a different scale, or alter the logic of its accents and timing. The name given to this gadget is the Programmable Variations Generator and Master Editor – PVG for short. It can create rhythmic cycles that build up and edit preset fields, with the Master Editor keeping a tight rein on the whole play-back process. It is pretty complex and a bit unmusical at first but rather interesting after a while.



Conclusions

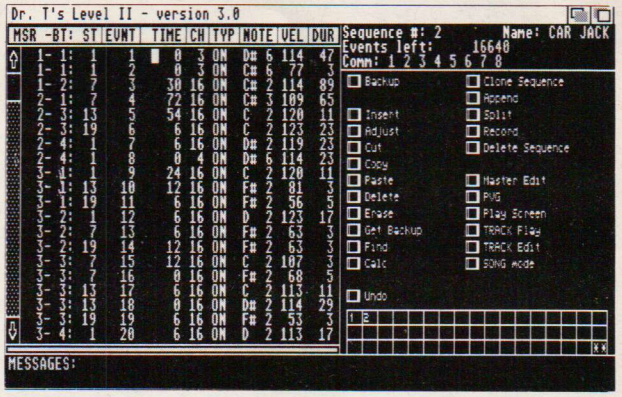
In the space we have available it is not possible to cover all the *KCS* features in great depth, but at least most of them have had a mention.

One of the benefits of having a well tried-and-market-tested piece of software is that you have all the options, bolt-ons and ways of processing data that the marketplace has demanded.

I would guess that for most of the main functions there are at least two methods of operating them and possibly twice as many variations on the way that they operate. On the other hand it will take you a very long time indeed to exhaust the possibilities and know the alleyways of this program in detail which, if you are a newcomer to the field, could be a daunting task.

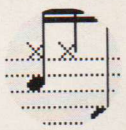
To sum the program up; it comes from a long line of *KCS* software and so has many refinements. However it seems a shame that despite its many and varied innovative features the editing seems to be rather behind the times as far as editing display goes; you have to type in every single editing detail. Nevertheless it is a powerful force to be reckoned with and is a well tried and tested professional tool.

Current owners of the old *KCS* can update for a mere £30 and should you be interested in the SMPTE aspect you can get the 'Phantom' SMPTE generator and reader for £249.00. It will also work as a MIDI interface if you ask it nicely.



ABOVE: Open mode. Ok, you can't spot the difference between this and Track Edit: well it's a bit more subtle than a *News of the World* competition as you have to look at the MIDI channels which are mixed proving that it is more than one track mixed together.

LEFT: Track Editing. The events are listed (yawn) down the left hand side and commands on the right.



KCS LEVEL II VERSION 3
All Amigas, 1Mbyte required ■
£299.00 ■ MCM: 01 258 3454

MIND YOUR PPQ

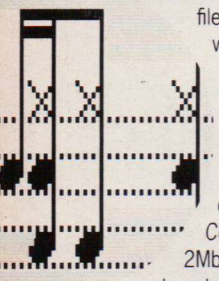
There is always much bragging in any sequencer literature as to the amount of PPQ it has – that is, the accuracy to which it will record each note. What happens is that the software breaks down each quarter note (crotchet) into a specified number of clock pulses; you could perhaps think of this as a clock ticking, the greater the number of ticks given to a second the greater the accuracy of the clock. This is the case with MIDI sequencers. Ppq, by the way, stands for Pulses Per Quarter note. Subtle nuances in tempo and note accuracy become rarified the greater the number of PPQ.

KCS v3 has a variable number of PPQ to define its accuracy. The default is 240 but it will go as high as 384, which is pretty good. However, tucked away in the back of the copious and corpulent manual is a little warning which recommends no higher setting than 240 BPM.

The reason for this is that the timing will eventually suffer: the program uses the gaps between events to run around and to do its work ready for the next output. With this time cut down and larger numbers to crunch there will be a tendency for the notes to start disappearing up their own points of exit (!) and for the software to suffer with severe stres from overwork, at which point it will probably take to its bed and wheeze weakly for a bit.

COPYIST APPRENTICE

As part of the Multi Program Environment the *Copyist Apprentice* will take *KCS* files directly, if they are both resident and running, and turn them into a score which you can edit and print out. It can also work in other ways. You can use it as a stand-alone music entry system, rather like a music typewriter, or you can load in MIDI files which it will turn into notation. It will also work with SMUS files to ensure compatibility with more low-budget sequencers like *DMCS*.



The reality is that you could well paint yourself into a corner as far as memory space is concerned. For *KCS* and *Copyist* to co-exist requires 2Mbyte of RAM. If you opt to store temporary files in RAM disk, that will require more. You could store temporary files (that is, those that are created by *Copyist* from *KCS*, MIDI or SMUS prior to conversion to notation) on a disk drive but it is very slow.

Setting the Score

On booting up you choose where the temporary work files are stored and the resolution to see the score in. Then it's down to scoring. The program will work on up to 12 staves at a time and the notes are entered, altered and edited by a combination of either menu options, alphanumeric keys and cursor.

Thankfully there are help pages on hand, because learning your way through the keystrokes could take a bit of time, even though the essential ones are the initials of the note or sign in reverse. Instead of dragging notes and symbols from a graphic menu you have to define the note and enter it; perhaps the former is intuitively quicker.

As a short cut you can have notes before and after or vertically aligned with the first note from simple keystrokes. It has all the logic of beaming and linking notes together where required and supports guitar and percussion notation. Entering text, lyrics and headings seems to be no problem either, although you do have to place them on the page yourself rather than the 'auto lyric' option often used in notation programs.

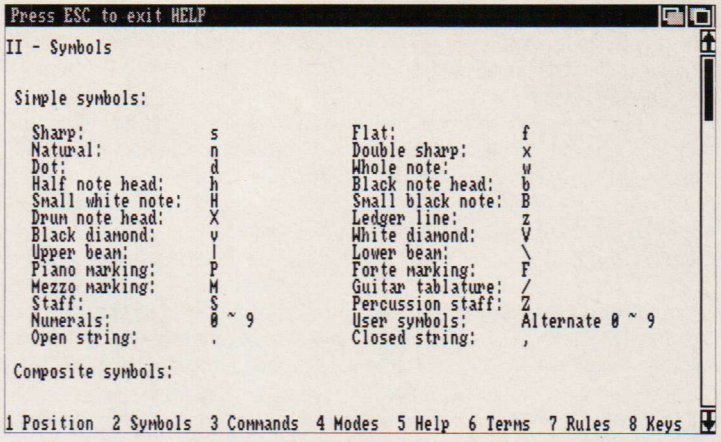
Copyist will notate all time signatures, clefs, signs and symbols, put notes of different values on the same beam, and position slurs, ties, expression markings, grace notes and ornaments.

Once all is in, then, it is print-out time. *Copyist* supports Epson and Laser with the option to route the output through the chosen Amiga print driver. However it pulls the score in and out page by page and this is a mite frustrating. Niceties like page numbering and headings seem to be missing from the *Apprentice*'s menu.

Its way of working I felt was not the most user friendly and it would have been nice to get a minature version of the page you are working on but nevertheless it is a well-thought through package. It main failing is the quality of the score itself. All the symbols and notes seem a bit emaciated and there seemed no way of setting a heavier or thicker typeface. As its name suggests it is the apprentice version of the *Professional* and the *Copyist DTP*. It is a good apprentice but not a master. ■

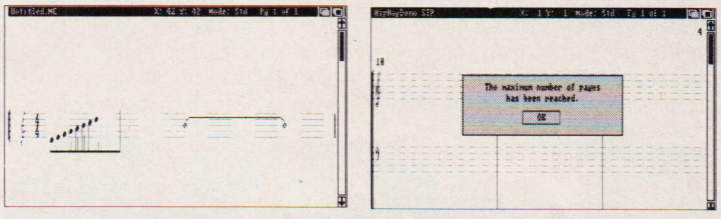
COPYIST APPRENTICE
All Amigas, 1Mbyte required ■
£79.95 ■ MCM: 01 258 3454

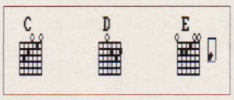
RIGHT: Part of the 8-page Help section.



NEAR RIGHT: Oops! Batesy discovers bugs in *Copyist* when it comes to joining up the notes.

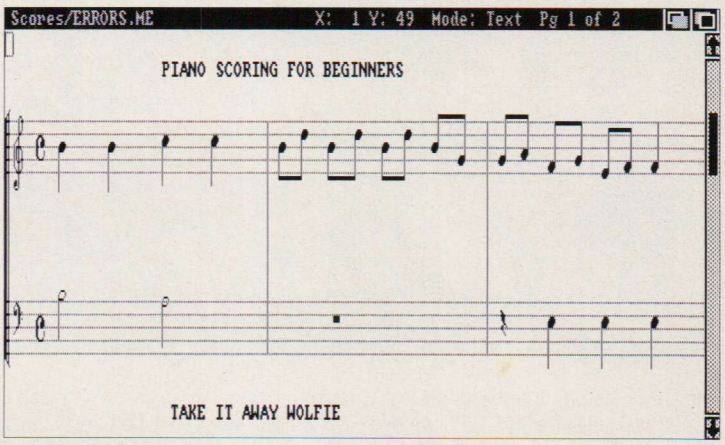
FAR RIGHT: A full *Copyist* score all ready to print out.



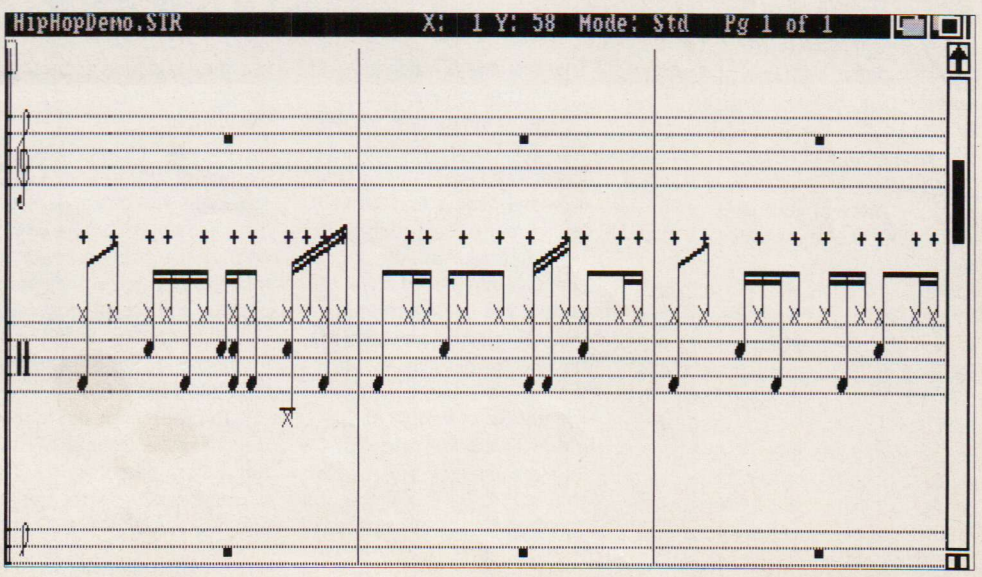


ABOVE: Also on offer is guitar chord notation.

RIGHT: Put it where you want it – adding text to the music.



BELOW: Automatic drum scoring: simple!



ANNOUNCING THE LAUNCH OF THE AMIGA MUSIC MATRIX

A disk magazine for the Amiga Musician.

Issue One has Sampled Sounds from the Korg M1 in 1FF Format 8 Trak Soundtracker Software. Articles and tutorials on MIDI, Music and using Amiga Basic for music playing/teaching.

Issue One is available now price £10 or you may subscribe for four issues for only £35.

Phone for further details 0592 714887 or write to:

THE MUSIC MATRIX
14, MAIN STREET,
EAST WEMYSS
KY1 4RU

AMIGA PUBLIC DOMAIN SOFTWARE LIBRARY

* No subscription fee * Free catalogue on request *
* Monthly bulletins containing news, offers, competitions etc *
* Wide range of disks rapidly growing *
* All our disks are virus free *
* All disks cost £2.00 each ten or more £1.50 each *
* Immediate despatch on all orders *
* Full range of commercial software *
* 10 3.5" unbranded Sony DS/DD disks £7.50 *

FREE.....with your first order of ten or more disks you will obtain a disk full of virus killers....!

Send SAE for details.

WCA Business Systems
250 Carmarthen Road,
Swansea.
SA1 1HG.
Tel: (0792) 473550.

Access

TEL: 0983 79496

VISA

ACCOUNTS

Arena Integrated 1MB	119.83
Cashbook Controller	39.79
Cashbook Combination	59.80
Desk Top Budget	34.96
Home Accounts	23.92
Panmead Modules	39.79
Personal Tax Planner	34.96
Personal Accounts Plus	29.90
Small Business Xtra 1MB	89.93
System 3 Integrated	44.85

BOOKS

Please Call

COMMUNICATIONS

A Talk 3	69.92
BBS PC	88.78
K Comm 2	24.84

COMPUTER AIDED DESIGN

Design 3D 1MB	57.96
Professional Draw 1MB	99.82
X Cad Designer 1MB	79.81

DATABASE MANAGERS

Data Retrieve Pro 1MB	179.86
Mailshot Plus	37.95
Microfiche Filer	49.91
Prodata	57.96
Race Horse Form Master	39.79
Superbase Professional 1MB	164.91
Superbase Personal	39.79
Superbase Personal 2 1MB	62.79
Who What When Where	29.90

DESKTOP PUBLISHERS

Pagesetter 2 1MB	74.98
Pagestream 1MB	129.95
Professional Page 1.5MB	179.86

EDUCATION

GCSE Tutors	24.84
My Paint	34.96

EDITORS

CygnusEd Professional	69.92

GRAPHICS

Animagic Editor 1MB	54.97
C Light	39.79
Comic Setter 1MB	39.79
Deluxe Art Parts Volume 1	9.89
Deluxe Paint 3 1MB	57.96
Deluxe Video 3 1MB	79.81
Digi Paint 3	49.91
Elan Performer	44.85
Impact Presentations	49.91
Lights, Camera, Action 1MB	47.84
Movie Setter	51.98
Photon Paint 2 1MB	57.96
Pixmate	38.87
Professional Draw Clip Art	44.85
Sculpt 3D XL 1MB	99.82
Sulpt 4D Professional 1MB	329.82
Sculpt Animate 4D Junior	84.87
The Director	39.79
Turbo Silver	99.82
Zoetrope 1MB	79.81

HARDWARE

1.3 A500 Kickstart ROM	29.90
1MB MiniMax A500 RAM	199.87
3.5" NEC Drive Switch/Thru	68.77
512K A500 RAM Clock/Switch	69.92
A Max Mac Emulator No ROMs	109.94
A4 Flat Bed Scanner	449.88
A590 20MB Hard Disk Drive	369.84
A.M.A.S. Sound Sampler	77.74
Digi View Gold 4	119.83
MIDI Master Interface	34.96
Minigen Genlock	99.82
Vidi Amiga PAL Digitiser	99.82

PACKAGES

Appetizer	29.90
Graphics Starter Kit	54.97
Home Office Kit	99.82
Publishers Choice	68.77
Starter Kit	59.80
The Works Platinum	129.95

PROGRAMMING

ArgASM Assembler System	49.91
Aztec C Professional	109.94
Benchmark Modula 2	119.83
Devpac 2 Assembler System	42.78
GFA Basic Compiler	28.98
GFA Basic Interpreter	39.79
Hisoft Basic Compiler	57.96
Lattice C 5	169.97

SOUND

Deluxe Music	52.90
Instant Music	22.77
Music X	169.97
Music X Junior	Query
Sonix	39.79
Studio Magic	49.91

SPREADSHEETS

Advantage	79.81
DGCalc	31.97
Superplan 1MB	67.85

UTILITIES

AmigaDOS Toolbox	39.79
Amikit For Beginners	29.90
ARexx Macro Interpreter	34.96
Award Maker Plus	34.96
B.A.D. Disk Optimiser	31.97
BBC Emulator	34.96
Calligrapher Font Designer	64.86
CanDo Environment	109.94
CrossDOS File Transfer	29.90
Disk Master Housekeeper	39.79
DOS 2 DOS File Transfer	29.90
Enhancer 1.3 S/W Upgrade	14.72
Facc 2 Disk Cache	23.92
Kara Sub Head Fonts	49.91
MAC 2 DOS File Transfer	69.92
Masterpiece Fonts (110!)	129.95
Mavis Beacon Typing	27.83
Project D Backup/Editor	31.97
Superback 2 H/D Backup	39.79
Ultracard Plus	69.92
Virus Infection Protection	34.96
Wordperfect Library	89.93
X Copy Backup/Editor	17.94
Your Family Tree Genealogy	34.96

WORDPROCESSORS

Kindwords 2	35.88
Outline	29.90
PenPal	99.82
Protext	64.86
Scribble (Platinum)	41.86
Transcript	32.89
Wordperfect	164.91

Applied Research Kernel
Richard Howe & Angela Hammett
Corve Farmhouse, Chale Green, Ventnor, PO38 2LA, U.K.

POST UK Zero. Software to Europe £4/Item. World £10/Item
CHEQUES London Sterling payable to A.R.K. please
EXPORT & BFPO Remove U.K. V.A.T. (=price/1.15)
PHONE Monday to Saturday 10.00am to 6.30pm
V.A.T. Prices include U.K. V.A.T. at 15%
DESPATCH Usually within 48 hours
PRICES Are subject to change

CHECK THIS OUT!

UNIQUE TECHNIQUE'S

MEGA SALE

HARDWARE

Amiga External disk drives	£75
A500 1/2 Meg Upgrade with clock	£75
Amas Sampler & Midi Interface	£73
Master Sound Sampler	£32
Vidi Amiga Frame Grabber	£99
Midi Interface (3 Outs)	£33
Midi Leads (long)	£2.50

MUSIC SOFTWARE

Doctor T's Midi Rec. Studio	£49
Doctor T's K.C.S.	£154
AudioMaster II	£62
Aegis Sonix	£51
Music X Official UK Version	£175

PAINT/DRAWING/CAD/VIDEO SOFTWARE

Deluxe Paint III	£61
DigiPaint III	£53
Photon Paint II	£58
Professional Draw	£106
Modeller 3D - Aegis	£54
Deluxe Print II	£36
Deluxe Video III	£54
Deluxe PhotoLab	£53

DESKTOP PUBLISHING & WP SOFTWARE

Pagesetter Version 2	£79
Professional Page V1.3	£175
Protext	£70
Excellence!	£126
Comic Setter - Gold Disk	£39
Comic Setter Clip Art Sets	£18

LANGUAGES

Lattice C V5.0	£167
Aztec C Developer Pack	£167
Devpac V2	£44
HiSoft Basic	£57
K-Seka Assembler	£36

GENERAL SOFTWARE

BBS-PC Bulletin Board	£85
Can Do - Inovatronics	£95
Publisher Choice	£74
Home Office Kit	£108
Starter Kit	£55
B.A.D. Disk Optimiser	£32
UltraCard Plus	£68
Flight SIM II	£32
DOS 2 DOS - Central Coast	£32

All prices include VAT. P&P FREE (UK only). All software UK Versions.
FREE price list available.

UNIQUE TECHNIQUE

25 Middlefield Road, Bessacarr, Doncaster, DN4 7EB

Access

Cardnet Credit Card Hotline
(0302) 539955

VISA

LIVE IN LEEDS ?

Why not visit the only dedicated Amiga and ST dealer in town?

We specialise in DTP, CAD, MIDI, Graphics, and Business applications. Together with the full range of Amiga and Atari Computers, Star Printers, Genlocks Digitizers, Interfaces, Second Drives and more.

So for a better service, product range and the keenest prices call

P.S. Selected games software now in stock.

Miditech

MIDITECH, THE COLOSSEUM, COOKRIDGE STREET, LEEDS LS2 3AW
0532 446520
Access & Visa Welcome
MAIL ORDER AND TRAINING PACKAGES AVAILABLE

THIRD COAST TECHNOLOGIES LTD

Amiga A500 Basic Pack £349.00
Amiga A500 + Batpack £369.00
Amiga A500 + Batman Pack + Tenstar Option £386.00
Amiga A2000 full UK spec machine £999.00

A500 HARD DRIVES

Xetec Hard Drives are the fastest hard drives
for the A500 & A2000 Commodore A590 22 Meg £365.00
IVS 32 Meg. Full SCSI 25 Milliseconds Head Park £499.00
Xetec 45 Meg. Full SCSI 25 Milliseconds Head Park £649.00
IVS 50 Meg. Full SCSI 25 Milliseconds Head Park £599.99
Xetec 65 Meg. Full SCSI 25 Milliseconds Head Park £699.00
Xetec 85 Meg. Full SCSI 25 Milliseconds Head Park £799.00
Xetec 109 Meg. Full SCSI 25 Milliseconds Head Park £999.00
Xetec 251 Meg. Full SCSI 25 Milliseconds Head Park £1995.00

A2000 HARD DRIVES

Xetec 32 Meg. Full SCSI 25 Milliseconds Head Park £399.00
45 Meg. Full SCSI 25 Milliseconds Head Park £449.00
50 Meg. Full SCSI 25 Milliseconds Head Park £499.00
65 Meg. Full SCSI 25 Milliseconds Head Park £599.00
85 Meg. Full SCSI 25 Milliseconds Head Park £799.00
109 Meg. Full SCSI 25 Milliseconds Head Park £949.00
251 Meg. Full SCSI 25 Milliseconds Head Park £1899.00

AMIGA A500 & A2000 RAM UPGRADES

Amiga A500 1 Meg Ram Upgrade (inc clock & switch) £49.99
Amiga A500 2 Meg internal Ram Expansion (populated) £299.95
Amiga A500 2 Meg internal Ram Expansion (unpopulated) £149.00
Amiga A500 4.0 Meg internal Ram Expansion £699.00
Amiga A500 8.0 Meg internal Ram Expansion £1099.00
Amiga A500 8.0 Meg Board expands in 2, 4 and 8 increments (takes 1x1 D RAMS, unpopulated) £249.99
Amiga A500 2 Meg External Ram Expansion (unpopulated) £249.00
Amiga A500 2 Meg External Ram Expansions (populated) + PSU £349.00
Amiga A500 4 Meg External Ram Expansions (populated) + PSU £599.00
Amiga A500 8 Meg External Ram Expansions (populated) + PSU £1099.00

PRINTERS

Star LC-10 Mono Printer £169.99
Star LC-10 Colour Printer £215.00
Star LC-24-10 ..... £239.00

FLOPPY DRIVES FOR THE AMIGA A500 + 2000

Internal 1 Meg Floppy Drive. Direct replacement £64.99
1 Meg External 82 Track Count £69.99
1.44 Meg 89 Track £99.99
1 Meg External with Track Counter £124.99
5.25 with Track Display £149.99
5.25 without Track Display £129.99

NEW PRODUCTS

PC AT Emulator for all Amigas £299.00
Professional Colour Digit with built in RGB splitter £249.00
Professional Monochrome Digitiser Low Medium and High Res £149.99
RGB Splitter for colour cameras allows full colour digitising £99.99
Minigen Amiga A500 & A2000 Genlock £95.99
Professional Genlock Overscan, Fader, built in RGB Splitter, too many features to list £499.00
Rendale 8802 Genlock £195.00
Microtext Teletext Adaptors built in tuner £139.99
X-Specs 3D Glasses, excellent for Cad Cam Liquid Crystal shuttering gives a whole new outlook on your Amiga £99.99
Processor Accelerator 16 MHz Accelerator will support MC68881. Offers between 45-50% more performance whilst maintaining complete compatability with software 8-16MHz switch £149.99
Replacement Amiga Mouse A500 & A2000 ..... £24.99
A-Max Mac Emulator Roms £249.99
Amiga A2000 8 Meg Expansion Board (Unpopulated) £149.99
Amiga A2000 8 Meg Expansion Populated, 2 Megs £349.00
Amiga A2000 8 Meg Expansion Populated 4 Megs £519.00
Amiga A590 Upgrade Chips £11.00

D.I.Y kits to Interface embedded SCSI hard drive or IBM PC ST506 drive to Amiga A500 or Amiga A2000.

Trumpcard includes power supply, enclosure, software, auto-boot roms. Will accept 3.25 inch embedded SCSI drive any capacity. Simply plugs into side of A500 can draw power from machine or external source. Up to 4 megs of desk cache or system memory can be installed. Offers transfer rates up to twice that of A590. Board can be removed and used in A2000 at a later date offering future expansion £199.99

ALF MFM drive kit for A500. Offers support of ST506 IBM PC drives. Available with or without power supply and enclosure. Host board and controller available. Entire kit including Enclosure host board and controller auto boot roms cables and software £299.99
ALF RLL kit available at the same price for people with RLL IBM ST506 type drives £299.99
A500 ALF controller and host board without power supply and enclosure £199.99
A500 ALF host board will accept standard PC hard card full software including enclosure for host £129.99
Toolbox 3 slot or 2 slot box available, allows the A500 user to have A2000 power at A500 prices, the toolbox clips onto the side of the A500 and allows support of A2000 products on the A500. eg 8 meg ram board, hard card, 68020 accelerator board. Features 2 or 3 slots, 40 watt supply, on/off power £299.00

HARDWARE

Virus protection device eliminates all viruses £34.99
Lightpen for Amiga A500 + 2000 ..... £79.99

Amiga Owner can't be bothered Now available £99.99 Phone for Details

UNIT 8, BRADLEY HALL TRADING ESTATE, STANDISH, WIGAN WN6 0XQ
TEL: 0257 472444 FAX: 0257 426577

We accept Bank Drafts, Company and Personal Cheques and also Access and Visa Cards.
All prices include VAT at 15%. A full warranty is offered on all products. All prices correct at time of going to press.
We reserve the right to alter prices. E + OE.

VISA Access

HAMMERSOFT

VISA Access

MAIL ORDER SOFTWARE SPECIALIST

Hardware U.K. only. (Free delivery) (Courier £5.00)

AMIGA PACK 1:
Amiga A500 Batpack Inc. TV modulator, Batman, Interceptor, New Zealand Story, Deluxe Paint II, 23 PD Games 375.00
AMIGA PACK 2:
As in 1 with 10 Star Pack 399.00

ATARI LYNX
Portable Game Console 179.00
Amiga A500 & Stereo Monitor 619.00
Philips 8833 Stereo Monitor 255.00
A590 Hard Drive 379.00
1/2 Meg Expansion/Clock 79.00
Cumana 3.5" Drive, Port+Switch 85.00
Olivetti colour printer 210.00
Star LC10 Mono 175.00
Star LC10 Colour Printer 225.00
Star 24 pin printer 259.00

SOFTWARE BEST SELLERS AMIGA
Altered Beast 16.50
Chase HQ 17.50
Dragon's Lair II 34.90
Dungeon Master (1 Meg) 17.50
F-29 Retaliator 17.50
Flight Sim II 26.90
Ghouls & Ghosts 17.50
Hollywood Poker Pro 8.99
It Came from the Desert 1 Meg 20.99
Kick-Off! 13.90
Midwinter 19.90
Music X-Official U.K. Version 169.95
Outrun 8.99
Populous 17.50
Promised Lands data disk 8.99
Rainbow Islands 17.50
Shadow of the Beast + T-Shirt 24.90
Sim City 19.90
Sim City Terrain Editor 11.99
Space Ace 34.90
Space Harrier II 13.99
Super Cars 14.50
Sword of Sodan 16.90
Untouchables 16.99
Xenon II Megablast 17.50

LEISURE
Batman the Movie 17.50
BATTLE CHESS 17.50
Black Tiger 17.50
Blade Warrior 17.50
Cabal 17.50
Colony (The) 19.90
Cyberball *14.50
Damocles *16.90
Dragon Ninja 16.99
Elite 16.90
Extra Time 8.49
First Contact 16.90
Gauntlet II 8.99
Ghostbusters II 17.50
Infestation 16.90
Interphase 17.50
Ivanhoe 17.50
Light Force (4 pack) 17.50
Lost Patrol 17.50
Magnum 4 (4 pack) 20.99
Manchester United 17.50
Moonwalker 16.99
Ninja Warriors 14.50
OPERATION THUNDERBOLT 17.50
Pro Tennis Tour 16.90
Robocop 17.50
Space Rogue 19.90
Speedball 16.99
Strider 17.50
Stryx 13.90
Stunt Car Racer 16.90
THREE STOOGES 18.90
Tower of Babel 16.90
Triad II 17.50
Triad III 20.99
T.V. Sports Basketball 20.99
Virus Killer Utility 7.99
World Boxing Manager 13.99
Xenomorph 16.90

ADVENTURE & SIMULATION AMIGA
BLOODWYCH 15.90
Bloodwych Data Disk 11.99
BOMBER 20.99
Demons Tomb 17.50
Dragons Breath 20.99
Drakkhen 19.90
DUNGEON MASTER (1 Meg) 17.50
DUNGEON QUEST 17.50
Faery Tale Adventure 14.50
F-16 COMBAT PILOT 16.90
F-16 FALCON (1 Meg) 20.99
FALCON MISSION DISK 14.50
F-29 RETALIATOR 17.50
Flight Sim. II 27.90
Japan or Europe Scenery Disk 13.90
FUTURE WARS 17.50
HOUND OF SHADOW 17.50
INDIANA JONES ADVENTURE 17.50
Starflight 17.50
WATERLOO 17.50
Windwalker 20.99

GRAPHICS & VIDEO AMIGA
Cameron B/W Scanner + S/W 95.90
Cameron Colour Scanner + S/W 499.00
Deluxe Paint II ..... (PAL) 39.90
Deluxe Paint III ..... (PAL)(1MB) 59.90
Deluxe Video III ..... (PAL)(1MB) 64.90
Digipaint III ..... (PAL) 59.90
Digiview 4.0 + Digipaint ..... (PAL) 129.90
Fantavision ..... (PAL) 29.90
Photon Paint ..... (PAL) 19.00
Photon Paint II ..... (PAL)(1MB) 39.90
Professional Draw ..... (1MB) 99.90
Pro Vidoe Plus 179.00
Sculpt 3D XL ..... (PAL) 119.00
Trip-a-Tron 21.99
Turbo Silver 98.90
T.V Show 2 ..... (PAL)(1MB) 58.90
T.V Text Pro ..... (PAL) 109.90
VIDI frame grabber (PAL)(B&W) 99.00
Vidi Colour Upgrade 17.50
X CAD Designer 79.90

MUSIC APPLICATIONS
Aegis Sonix 2.0 ..... 48.90
Mastersound Digitizer 35.90
Deluxe Music 50.90
FutureSound Digitizer 79.90
MUSIC X U.K version 169.95
Midi Master Interface 5 ports 32.95

BUSINESS & EDUCATION
Advantage ..... phone
Arena Accounts ..... (1MB) 128.00
Fun School 2
Under 6's, 6-8's or over 8's 14.90
Home Accounts 20.99
Home Office Kit 126.90
Kindwords 2 ..... 39.90
Mavis Beacon Typing Tutor 21.95
Pen Pal ..... (PAL)(1MB) 98.90
Prodata 59.90
Protext V4.2 ..... (rec.1 MB) 65.90
Pagesetter V2 ..... (PAL)(1MB) 79.90
Professional Page 1.3 (1Meg) 173.90
PUBLISHERS CHOICE 74.90
Starter Kit: Kindwords, Fusion Paint, Crazy Cars, Ski & Mini Golf 59.00
Transcript 32.90
Word Perfect 4.1 Current Ver 159.90
WORKS PLATINUM 129.90

QUALITY JOYSTICKS & ACCESSORIES
Comp Pro 5000 ..... 13.90
Comp Pro Extra ..... (clear auto) 14.90
Micro Blaster ..... (autofire) 13.90
Control Centre 49.00
A500 Dust Cover 4.95
Mouse Mat 5.95
Disk Box Lockable 40 capacity 7.50
10 x 3.5" SONY BRANDED 14.90
10 x 3.5" DSDD DISKS + labels 9.95

T.D.K. AUDIO & VIDEO TAPES
(TDK items +25p postage per order)
AD90 (x5) ..... 6.75 E240-HS (x2) 8.99
AR90 (x5) ..... 7.45 E180-Hi Grade 4.99
SA90 (x5) ..... 8.99 E240-Hi Grade 5.99
SAX90 (x3) 6.49 E180-HiFi 5.99
MA90(x3) ..... 8.55 E240-HiFi 6.99

Please Send Cheques/Postal Orders to:
HAMMERSOFT, (DEPT F)
47 MILL ROAD,
HETHERSETT, NORWICH,
NORFOLK NR9 3DS
Access, Visa, Eurocard & Mastercard Accepted
Cheques Subject to clearance

Titles Available on Request!
ORDERS/ENQUIRIES:
TEL (0603) 812416

* = Available on Release
Prices all include VAT & 1st Class Postage in U.K. (Europe please add £2.00 per item)
Return of Post Service on Stock Items

MICROTEK

CALL US TODAY (0206) 572028
MAIL ORDER

3 BELL CLOSE, OLD HEATH, COLCHESTER, ESSEX CO2 8EP.

All prices are subject to availability and change without notice. Prices include VAT, all software and small hardware items post FREE, please add £3.00 for Amiga Packs and large hardware items (£10.00 for courier service). Make cheques & postal orders to Microtek: **Phone or write now for full price lists**

Amiga Pack 1
A500 Computer Bat Pack & Joystick

Amiga Pack 2
Bat Pack with Joystick & 1/2 meg Expansion

Amiga Pack 3
Bat Pack with Joystick, 1/2 meg Expansion & 3.5" Cumana Disk Drive

1/2 Meg Expansion ...£56.00
A590 Hard Drive £359.99
A590 + 1 Meg.....£434.99
A590 + 2 Meg.....£507.99
Cumana Disk Drive.....£78.99
Commodore 1010 Drive .£89.99
A500 2 Meg INT.....£286.99
Master Sound Dig.....£35.99
Pro Video Plus £179.99

X CAD Designer.....£89.99
Draw 2000 .....£149.99
Digiview Gold V4.0 .£122.99
Home Office Kit.....£118.99
Absoft A/C Basic.....£149.99
Story So Far £15.99
Giants On The Amiga.....£22.99

QUESTION OF SPORT ONLY £4.99

TURBOSOFT

Music X Only £129.99

FORTHCOMING ATTRACTIONS

F-29 Retaliator	£16.99
Cyberball	£13.99
Blue Angels	£16.99
European Superleague	£13.99
Pool of Radiance	£19.99
Rock 'n' Roll	£13.99
Hillsfar	£16.99
Adidas Golden Shoe	£16.99
U.M.S. II	£15.99
Damocles	£16.99
Myth	£16.99
Blade Warrior	£16.99
Ultimate Golf	£16.99
Liverpool - The Game	£16.99
Onslaught	£15.99
The Punisher	£16.99
Chaos Strikes Back	£16.99
Space Harrier II	£16.99
Ultima IV	£16.99
Starflight	£16.99
Last Ninja II	£16.99
Manhunter in San Francisco	£20.99
Dr Dooms Revenge	£14.99
Wild Streets	£14.99
Star Trek V	£16.99
Tusker	£16.99
Verminator	£15.99
Mid Winter	£16.99
Barbarian II (Psynosis)	£15.99
Ivanhoe	£15.99
Neuromancer	£16.99
Lost Patrol	£15.99
Delta Armalyte	£13.99
Infestation	£15.99
Ant Heads Data Disc	£9.99
Bomber Mission Disc	£13.99
Colorado	£16.99
Dynamic Debugger	£16.99
F19 Stealth Fighter	£22.99
Final Battle	£16.99
Gin & Cribbage	£20.99
Hammerfist	£16.99
Hot Rod	£16.99
Ninja Spirit	£16.99
Kid Gloves	£16.99
Leisuresuit Larry III	£23.99
Pirates	£16.99
Red Storm Rising	£16.99
War Head	£16.99
Sim City - Terrain Editor	£9.99

JOYSTICKS

125+ Cheetah	£7.99
Pro 5000 Clear	£11.99
Pro 5000	£11.99
Navigator + Autofire	£9.99
Speedking + Autofire	£8.99
Cruiser Black/Blue	£8.99
Quickjoy Superboard	£16.99
Quickjoy II	£7.99
Quickjoy Supercharger	£10.99

1 Meg Upgrade Only	£54.99
1 Meg + Dungeon Master	£69.99
1 Meg + Dragons Lair	£79.99
1 Meg + Escape Singes Castle	£79.99
1 Meg + Gold of the Realm	£59.99
1 Meg + Lost Dutchmans Mines	£64.99
1 Meg + Roger Rabbit	£59.99
1 Meg + It Came From the Desert	£74.99

TOP 50 CHART

Xenon II	£15.99	Drivin Force	£16.99
Double Dragon II	£13.99	Super Wonderboy	£16.99
F-16 Combat Pilot	£15.99	Hound of Shadow	£16.99
Gazzas Soccer	£14.99	Cabal	£16.99
Ninja Warriors	£13.99	Untouchables	£16.99
Ghostbusters II	£16.99	T.V. Sports Basketball	£19.99
Operation Thunderbolt	£16.99	Dragons Breath	£18.99
Chase HQ	£16.99	Manchester United	£14.99
Bomber	£19.99	P-47 Thunderbolt	£16.99
Populous New Worlds	£7.99	Austerlitz	£16.99
Future Wars	£16.99	Rainbow Islands	£16.99
Iron Lord	£16.99	Player Manager	£11.99
Kick Off Extra Time	£7.99	Keef the Thief	£16.99
Battle Squadron	£16.99	Full Metal Planet	£16.99
Hard Driving	£13.99	Conqueror	£16.99
Ghouls 'n' Ghosts	£16.99	X-Out	£13.99
Stunt Car Racer	£16.99	Pipe Mania	£14.99
Pro Tennis Tour	£16.99	Black Tiger	£16.99
Shadow of the Beast	£24.99	Lost Dutchmans Mines (1 Meg)	£14.99
It Came From The Desert (1 Meg)	£19.99	Escape from Singes Castle	£26.99
North & South	£16.99	Risk	£13.99
Sim City	£19.99	Knights of the Crystallion	£20.99
Turbo Outrun	£16.99	Rotor	£11.99
Drakkhen	£19.99	Switchblade	£16.99
Space Ace	£26.99	Super Cars (Gremlin)	£16.99
Maniac Mansion	£16.99		

TRIPLE PACK - ONLY £16.99
Hostages, Purple Saturn Day, Kult

MAGNUM 4 - ONLY £19.99
Afterburner, Double Dragon, Operation Wolf, Batman The Caped Crusader

COMPUTER HITS II - ONLY £8.99
Tetris, Black Shadow, Golden Path, Joe Blade

PREMIER COLLECTION - ONLY £9.99
Exolon, Nebulus, Netherworld, Zynaps

PRECIOUS METAL - ONLY £15.99
Captain Blood, Xenon, Arkanoid II, Crazy Cars

LIGHT FORCE - ONLY £16.99
Bio Challenge, Ik +, R-Type, Voyager

SUPREME CHALLENGE FLIGHT COMMAND - ONLY £19.99
Eliminator, Skychase, Strike Force Harrier, Lancaster, Skyfox II

TRIAD 3 - ONLY £19.99
Rocket Ranger, Speedball, Blood Money

TIME AND MAGIK - ONLY £7.99
Lords of Time, Red Moon, The Price of Magik

WICKED GAMES PACK - ONLY £9.99
Bouncer, Paccie, Backgammon, Invaders, Ball Raider II, Swooper, Spaceballer, Diablo, Zitrax, Othello

● SPECIAL OFFERS ● SPECIAL OFFERS ●

Leaderboard	£6.99	Sorceror Lord	£6.99	Seven Gates of Jambala	£4.99
Rocket Ranger	£9.99	Pacland	£8.99	Chambers of Shaolin	£7.99
Marble Madness	£7.50	Pacmania	£8.99	Running Man	£4.99
Bards Tale I	£7.50	Terrorpods	£6.99	Bloodwych	£9.99
Dragon Spirit	£7.99	Starglider II	£7.99	Interphase	£9.99
New Zealand Story	£7.99	Conflict in Europe	£7.99	Treasure Island Dizzy	£4.99
Shufflepuck Cafe	£7.99	Seconds Out	£4.99	Gauntlet II	£7.99
T.V. Sports Football	£12.99	Roger Rabbit	£8.99	Spy Vs Spy	£4.99
Galaxy Force	£4.99	Joan of Arc	£7.99	Spy Vs Spy II	£4.99
Alternate Reality	£5.99	Quest for the Time Bird	£9.99	Spy Vs Spy III	£4.99
Casino Roulette	£2.99	Blasteroids	£6.99	Thunderbirds	£4.99
Brian Clough's Football	£6.99	Trivial Pursuits	£9.99	F/ball Manager II + Exp Kit	£12.99
F-18 Interceptor	£9.99	Nebulus	£4.99	Breach	£4.99
Eliminator	£4.99	Cybernoid II	£4.99	Daily Double Horse Racing	£9.99
Fish	£7.99	Netherworld	£4.99	Centrefold Squares	£7.99
Trivial Pursuit New Begin	£6.99	Hollywood Poker Pro	£7.99	Phobia	£4.99
Saint & Greavsie	£7.99	Gold of the Realm (1 Meg)	£9.99	Italia 90	£4.99
Kristal	£9.99	Baal	£7.99	S.A.S. Combat	£4.99
Emmanuelle	£7.99	Menace	£7.99	Captain Blood	£4.99
Lords of the Rising Sun	£11.99	Ballistix	£7.99	Barbarian Psynosis	£6.99
Speedball	£9.99	Shadow of the Beast	£16.99	Fusion	£6.99
Batman the Movie	£9.99	Laser Squad	£8.99	Drum Studio	£4.99
Fernandez Must Die	£6.99	Passing Shot	£4.99	Sidewinder II	£4.99
Flintstones	£6.99	3 Stooges	£9.99		
Hunt For Red October	£9.99	Tank Attack	£9.99		

CLASSIC COLLECTION

Dungeon Master (1 Meg)	£15.99
Dungeon Master Editor	£7.99
Battlechess	£16.99
3D Pool	£13.99
Colossus Chess X	£15.99
Steve Davis Snooker	£13.99
Kings Quest Triple Pack	£24.99
Falcon	£19.99
Flight Simulator II	£26.99
Lombard R.A.C. Rally	£15.99
Operation Wolf	£15.99
Scenery Disk 7, 9 or 11	£13.99
Scenery Disk Japan or Europe	£13.99
War in Middle Earth	£13.99
Airborne Ranger	£15.99
Robocop	£16.99
Waterloo	£15.99
Twin World	£16.99
Bloodwych	£16.99
Battletech	£16.99
Wayne Gretzky's Hockey	£15.99
Deluxe Scrabble	£13.99
Dragons Lair (1 Meg)	£26.99
Bards Tale II	£16.99
Ferrari Formula 1	£16.99
Grand Prix Circuit	£16.99
Sword of Sodan	£16.99
Ultima IV	£16.99
Zak McKraken	£16.99
Forgotten Worlds	£13.99
Blood Money	£15.99
Test Drive II	£16.99
Shoot 'em Up Construction Kit	£19.99
Balance of Power 1990	£19.99
R.V.F. Honda	£16.99
Indy Jones The Adventure	£16.99
Kick Off	£12.99
Falcon Mission Disc	£13.99
Populous	£16.99
Populous Promised Lands	£7.99
Altered Beast	£11.99
Super Cars (T.D. II Disc)	£8.99
California Challenge (T.D. II Disc)	£8.99
Muscle Cars (T.D. II Disc)	£8.99
Oil Imperium	£16.99
688 Attack Sub	£16.99
Battlehawks 1942	£16.99
Elite	£12.99
Gunship	£12.99
Microprose Soccer	£12.99
Carrier Command	£12.99
Fiendish Freddy's Big Top Fun	£16.99
Continental Circus	£11.99
Dragons of Flame	£16.99
Day of the Viper	£16.99
Borodino	£19.99
Demons Tomb	£12.99
Hillsfar	£16.99
Gold of the Americas	£16.99
Leisuresuit Larry I	£16.99
Leisuresuit Larry II	£19.99
Space Rogue	£18.99
Horse Racing	£16.99
Heroes of the Lance	£16.99
Manhunter in New York	£19.99
Omega	£19.99
Pictionary	£16.99
Postman Pat	£6.99
U.M.S.	£16.99
Virus Killer	£7.99
Vulcan	£16.99
World Tour Golf	£7.99
Red Lightning	£19.99
Stella Crusade	£24.99
Stormlord	£13.99
Tracksuit Manager	£13.99
European Space Shuttle	£24.99
The Cycles	£16.99
Bridge Player 2150	£19.99
Times of Lore	£16.99

ART & SOUND

Studio Magik	£52.99	Deluxe Video III	£59.99
Fanavision	£24.99	Deluxe Music Cons.Set	£49.99
A.M.O.S.	£34.99	Deluxe Paint II	£7.99
Photon Paint II	£22.99	Studio 24	£134.99
Deluxe Paint III	£59.99	Track 24	£59.99
Deluxe Print II	£34.99	Mastersound	£32.99

UTILITIES & BUSINESS

A-Max (Mac-Emulator)	£109.99	Mavis Beacons Typing	£19.99
A-Max with 128K ROMS	£209.99	Kindwords	£37.99
DevPac II	£44.99	Protext V.4	£59.99
Digicalc	£27.99	Pagesetter	£89.99
Hisoft Basic	£59.99	Transport Controller	£149.99
Lattice C V.4	£164.99	Draw 2000	£189.99

EDUCATIONAL

Discover Chemistry	£13.99	Fun School II 8+	£12.99
Discover Maths	£13.99	Kid Talk	£24.99
Discover Numbers	£13.99	Math Talk	£24.99
Discover the Alphabet	£13.99	Discovery Maths	£24.99
Fun School II (under 6)	£12.99	Discovery Words	£24.99
Fun School II 6-8	£12.99	Discovery Trivia	£24.99

Please note that not all forthcoming attractions are released at the scheduled time.
These will be despatched within 24 hours of release, subject to availability.

41 SOUTH STREET, LEIGHTON BUZZARD, BEDS, LU7 8NT TEL: 0525 377974 FAX: 0525 852278

ORDER FORM Access Access MasterCard VISA

Please supply me with the following for

Computer .....

Titles	Price

DATE: .....

NAME: .....

ADDRESS: .....

.....

.....

.....Post Code.....

TEL: .....

AMIGA FORMAT MAY '90

Please make cheques & PO payable to ***Turbosoft***

Orders under £5 please add 50p per item. Over £5 p&p ***FREE*** *in UK. Elsewhere please add £1.50 per item.*

N.B. Please state clearly mode of computer & also cassette or disc when ordering

COMPUTER REPAIRS

FIRST AID FOR TECHNOLOGY

ATARI ST/AMIGA

Simply send your machine along with a £15 diagnostic fee and you will be sent a written quotation for the cost of repairing your machine.

★ TYPICALLY £45, 1 WEEK TURNAROUND ★

W.T.S. ELECTRONICS LTD, CHAUL END LANE, LUTON, BEDS, LU4 8EZ

0582 491949 (4 LINES)

COMPUTERWISE

BRIGHTON 674626

AMIGA SPECIALISTS

We have 100's of software titles; many are now discounted, books and peripherals in stock at all times. Up to £1,000 instant credit with Lombard Tricity. Finance subject to acceptance. Full written details upon request

Open 10 am to 5.30pm Monday to Saturday

44 George Street, Kemptown, Brighton

Opposite American Express building.

VISA Access

COLOUR PRINTOUT!

Now you can have your Deluxe Paint and Photon Paint pictures printed out in full colour on our Xerox 4020 printer.

Small 5 " x 8 " £1.50
Large 8 " x 11" £3.50
Post and Packing £1.50

Larger prints, up to 10 feet square, and overhead transparencies are also available, prices on application.

Red Computers, P.O Box 222, Taunton, Somerset TA1 1LG
Phone: 0823 276768. (evenings only)

WORLDWIDE SOFTWARE
106A Chilwell Road, Beeston
Nottingham NG9 1ES

WORLDWIDE SOFTWARE

WORLDWIDE SOFTWARE
106A Chilwell Road, Beeston
Nottingham NG9 1ES

Commodore Amiga Software

A.P.B	£14.95
After the War	£14.95
Airborne Ranger	£16.95
Aquanaut	£17.95
Armada	£22.95
Armalyte	£14.95
Austerlitz	£17.95
Axels Magic Hammer	£14.95
Bad Company	£16.95
Barbarian 2 (Psygnosis)	£17.95
Barbarian	£9.99
Bards Tale 2	£17.95
Bards Tale	£7.25
Batman the Movie	£17.95
Battle Squadron	£17.95
Battlehawks 1942	£17.95
Battletech	£17.95
Betrayal	£16.95
Beverley Hills Cop	£16.95
Beyond Dark Castle	£22.95
Black Tiger	£17.95
Blade Warrior	£17.95
Bloodwych Data Disk	£11.99
Bloodwych	£17.95
Blue Angels	£17.95
BMX Simulator	£4.99
Bomber	£22.95
Borodino	£22.95
Boxing Manager	£14.95
Cabal	£17.95
Carthage	£16.95
Chase HQ	£17.95
Cloud Kingdoms	£17.95
Colossus Chess X	£16.95
Commando	£14.95
Commandoes (Infogrames)	£17.95
Conflict	£4.99
Conflict in Europe	£17.95
Conqueror	£17.95
Crackdown	£17.95
Cyberball	£17.95
Damocles	£16.95
Dan Dare 3	£14.95
Dark Century	£16.95
Defenders of the Earth	£17.95
De Luxe Scrabble	£14.95
Debut	£16.95
De Luxe Strip Poker	£14.95
Dominion	£17.95
Double Dragon 2	£14.95
Dr Dooms Revenge	£17.95
Dragons Breath	£22.95
Dragons of Flame	£17.95
Drakkhen	£21.95
Drivin Force	£16.95
Dungeon Master 1 meg	£16.95
Dungeon Master Editor	£7.99

Commodore Amiga Software

Dynamic Debugger	£17.95
Dynasty Wars	£22.95
East V West Berlin	£16.95
Edition One	£17.95
Elite	£16.95
E. Motion	£17.95
Escape Singes Castle	£32.95
European Space Shuttle	£28.95
F16 Combat Pilot	£16.95
F16 Falcon	£21.95
F16 Falcon Mission Disk	£14.95
F29 Retaliator	£17.95
Ferrari Formula One	£17.95
Fiendish Freddie Big Top	£17.95
Fire Brigade 1 meg	£21.95
Fire	£17.95
First Contact	£16.95
Flight Path 737	£4.99
Flight Simulator 2	£28.95
Flt Sim 2 Scenery Disk 11	£14.95
Flt Sim 2 Scenery Disk 7	£14.95
Flt Sim 2 Scenery Disk 9	£14.95
Flt Sim 2 Scene Disk Europe	£14.95
Flt Sim 2 Scene Disk Hawaii	£14.95
Flt Sim 2 Scene Disk Japan	£14.95
Football Director 2	£14.95
Football Manager 2 Exp Kit	£9.99
Football Manager 2	£14.95
Footballer of the Year 2	£14.95
Full Metal Planete	£17.95
Fun School 2 (6 to 8 years)	£14.95
Fun School 2 (over 8)	£14.95
Fun School 2 (under 6)	£14.95
Future Wars	£17.95
Gauntlet	£9.99
Gauntlet 2	£9.99
Ghosts 'n' Goblins	£14.95
Gold of the Americas	£17.95
Grand National	£14.95
Grand Prix Circuit	£17.95
Gravity	£17.95
Gridiron	£16.95
Grimblood	£4.99
Gunship	£16.95
Hard Drivin	£14.95
Heavy Metal	£17.95
Heroes Quest	£26.95
Highway Patrol 2	£16.95
Hillsfar	£17.95

Commodore Amiga Software

Hollywood Poker Pro	£9.99
Hound of Shadow	£17.95
Hunter Killer	£4.99
Impossamole	£14.95
Infestation	£16.95
Indy Last Crusade Adv.	£17.95
Interphase	£17.95
Iron Lord	£22.95
It Came from the Desert (1 meg)	£21.95
Ivanhoe	£17.95
Jack Nicklaus Golf	£16.95
Joan of Arc	£9.99
John Lowe Ultimate Darts	£14.95
Jump Jet	£4.99
Kaiser	£22.95
Keef the Thief	£17.95
Kick Off	£14.95
Kick Off Extra Time	£7.99
Kid Gloves	£17.95
Killing Game Show	£14.95
Kings Quest 4	£26.95
Kings Quest Triple Pack	£26.95
Laser Squad	£14.95
Leisuresuit Larry	£17.95
Light Force	£17.95
Lombard RAC Rally	£16.95
Lords of the Rising Sun	£21.95
Lost Patrol	£17.95
Magnum 4	£22.95
Maniac Mansion	£17.95
Matrix Marauders	£14.95
Microprose Soccer	£16.95
Midwinter	£22.95
Mindbender	£14.95
Never Mind	£14.95
New Zealand Story	£17.95
Ninja Warriors	£14.95
Nitro Boost	£4.99
North and South	£16.95
Oil Imperium	£16.95
Omega	£21.95
Omni Horse Racing	£17.95
Onslaught	£17.95
Operation Thunderbolt	£17.95
Outlands	£14.95
Overlander	£14.95
P47 Thunderbolt	£16.95
Paperboy	£14.95
Paris/Dakar Rally	£17.95

Commodore Amiga Software

Pinball Magic	£17.95
Pipe Mania	£16.95
Player Manager	£14.95
Populous	£17.75
Populous Promised Lands	£7.99
Powerdrift	£17.95
Powerdrome	£17.95
Prince	£17.95
Pro Tennis Tour	£17.95
Pursuit to Earth	£14.95
Quest for the Time Bird	£22.95
Rainbow Islands	£17.95
Reach for the Stars	£17.95
Red Lightning	£22.95
Renaissance	£14.95
Risk	£14.95
Robocop	£17.95
RVF	£16.95
Scramble Spirits	£17.95
Seven Gates of Jambala	£17.95
Shadow of the Beast	£28.95
Sherman M4	£17.95
Shinobi	£14.95
Shoot em up Construction Kit	£22.95
Sidewinder 2	£4.99
Silent Service	£16.95
Sim City	£21.95
Skidz	£14.95
Soldier 2000	£14.95
Space Ace	£34.95
Space Harrier 2	£14.95
Space Rogue	£22.95
Star Blaze	£14.95
Star Command	£22.95
Starflight	£17.95
Stellar Crusade	£27.95
Stunt Car Racer	£16.95
Super League Soccer	£16.95
Super Wonderboy	£17.95
Supercars (Gremlin)	£14.95
Switchblade	£14.95
Swords of Twilight	£17.95
Test Drive 2 California Challenge	£11.20
Test Drive 2 Musclecars	£11.20
Test Drive 2 Supercars	£11.20
Test Drive 2 The Duel	£17.95
The Cycles	£17.95
Their Finest Hour	£17.95
The Jetsons	£17.95

Commodore Amiga Software

Toobin	£14.95
Tower of Babel	£16.95
Tracksuit Manager	£14.95
Treasure Island Dizzy	£4.99
Triad Vol 3	£22.95
Turbo Outrun	£17.95
TV Sports Basketball	£22.95
TV Sports Football	£22.95
Twin World	£16.95
Ultimate Golf	£17.95
U.M.S. 2	£17.95
Untouchables	£17.95
Vaux	£14.95
Vortex	£14.95
Vulcan	£14.95
Waterloo	£17.95
Wayne Gretszky Hockey	£17.95
Wild Streets	£16.95
Windwalker	£22.95
Wings of Fury	£14.95
World Cup Soccer 90	£17.95
World Soccer	£17.95
X-Out	£14.95
Xenomorph	£17.95
Xenon 2 Megablast	£17.95
Xenophobe	£16.95
Zak McKracken	£17.95
Zombi	£17.95

BY PHONE
VISA
0602 252113
(24 Hours)

Fast Delivery On All Stock Items By 1st Class Mail In UK.
Special Overseas Service By Air Mail Worldwide.
Credit Card Orders Accepted by Phone Or Mail.
Overseas tel no: Nottingham 225368
Credit Card Order Telephone Lines

BY PHONE
VISA
0602 225368

**********	
512K Expansion + Dungeon Master	£89.99
10 X 3.5" Blank Disk	£9.95
20 X 3.5" Blank Disk	£17.50
30 X 3.5" Blank Disk	£24.95
40 X 3.5" Blank Disk	£32.95
50 X 3.5" Blank Disk	£37.50
**********	
Lockable Disk Storage Boxes	
40 Disk Storage Box	£7.95
80 Disk Storage Box	£8.95
100 Disk Storage Box	£9.95
**********	
Joysticks	
Cruiser	£8.99
Quickjoy 2 Turbo	£9.95
Quickjoy 2 Pilot	£7.95
Quickjoy Supercharger	£12.95
Cheetah 125 Plus	£6.95
Quickshot Turbo	£10.95
Speedking Autofire	£10.99
Zip Stick Autofire	£14.95
Competition Pro	£12.95
Competition Pro Extra	£14.95

Europe (other than UK) shipping costs are:
£1.50 per disc for normal airmail
£2.50 per disc for express airmail

Please make cheques or postal orders payable to **WORLDWIDE SOFTWARE**
All prices include postage and packing in the UK.
ADVERTISED PRICES ARE FOR MAIL AND TELEPHONE ORDERS

Outside Europe shipping costs are:
£2.00 per disc for normal airmail
£3.00 per disc for express airmail

WorkBENCH

We all need a little help once in a while, especially with a machine as complex as the Amiga. **JASON HOLBORN** passes on the best advice.

MODULATED MONITOR

Anyone who uses the Amiga with a TV modulator will know what that the picture quality is far from satisfactory. Although the Amiga produces beautiful screen displays, these are let down by the poor quality of Commodore's A520 TV modulator.

However, there is a way to improve picture quality substantially by channelling the output from the TV modulator into an aerial booster amplifier (intended for use with indoor TV aerials). These devices can be bought for around £15 from most electric stores, such as Tandy. The resulting picture almost matches that obtainable from a proper monitor.

Nathanael Inteson
Meersbrook, Sheffield

Transform your TV into a high-quality monitor with our tip 'Modulated Monitor'.

EPSON DRIVER TIPS

Here's a couple of scorching hints which will help you get a decent graphics printout from an EpsonX-compatible printer.

1. Check the current density settings within Preferences – if you are using density 1 or 3 then watch out, because the paper-type setting affects the line-feed distance, leaving gaps between lines! If the paper type is set to single, then the line feed must equal the number of dots printed minus one third of a dot.

The wrong value here can result in horrible horizontal banding, which can make your printouts look pretty awful! The best way of working out the ideal setting for your printer is simple – just experiment with it.

2. Try checking the printing gap setting in the printer. Don't be put off by having to delve inside your printer – the results are worth the effort! On the Star LC-10, this adjustment is carried out using a small lever located at the left-hand side of the metal bar on which the print head travels. If in doubt about its location, refer to the manual that (with any luck at all) came with your printer.

This adjustment can make a surprising improvement in print quality. I have found that the different density settings in Preferences tend to require different gap settings to obtain good results.

3. Remember to use a white background colour or select 'negative' in Preferences in order to save wear on your printer ribbon (not to mention your ears!!)

A J Edmonds
Latchford, Warrington

Get more from your printer with our tip 'Epson Driver Tips'.

DIGIVIEW DISTORTION

Here's a handy tip for anyone using NewTek's Digi-View video digitiser with a colour video camera. If you are suffering from colour signal distortion interfering with the digitiser (which normally expects a mono signal such as that produced by the Hitachi MV-720k camera) and you're not afraid to do a little wiring, then help is at hand. The following modification will turn the colour signal from your camera into glorious monochrome (don't worry, no modification is required to the actual camera).

All you need is an 8 ohm loudspeaker like those found in old transistor radios. Failing that, pop along to your local electrical spares store (such as Tandy), who should be able to help you.

1. First, of course, turn off all power to the digitiser.

2. Next, get hold of a spare video lead and cut it in half. The cable will contain a central core and a braided outer sleeve – strip an inch or two back from either side of the break.

3. Connect the central core from one half to one loudspeaker terminal, and the other central core to the other terminal. Join the two ends of braid together.

4. Check that there are no short circuits – wrap some insulating tape around the braided join just to make sure.

Are your grabs suffering from distoration because you use a colour camera? Read 'DigiView Distortion'.

5. Turn on the power and connect the video directly into the back of your Amiga monitor, if you have one. Flick the CVBS switch and the video picture should appear... minus colour. If so, the camera should now work much better with Digi-View.

If nothing works, check your wiring. It's worth saying that, at video frequencies, electrical components such as loudspeakers can act as complex components and even those with identical impendances may give varying results.

Michael Lax
King's Heath, Birmingham

FILTHY RICH AND FAMOUS!

We know that our readers are an intelligent lot who can provide an absolute mountain of tips, tricks and general goodies to make life a bit more bearable for those us not blessed with brains the size of a planet.

If you have a scorcher of a tip – it can be about practically anything to do with the Amiga – then we want to hear from you. If your tip is the best of the month, then not only do you get your name in print, but you could even be the lucky winner of fifty quid! Yes folks, that's just like one quid, but there's fifty of them!

Put your tips and advice for other readers in the post now and send them to this address: WORKBENCH, AMIGA FORMAT, 30 MONMOUTH STREET, BATH BA1 2AP. Get writing straight away!

PROBLEMS WITH NOTEPAD

was most interested in your article in last months magazine entitled 'Stand Alone NotePad'. This, I thought, was precisely what I needed and therefore decided to try the tip. However, having followed the instructions word for word (several times), I was unable to get the tip to actually work.

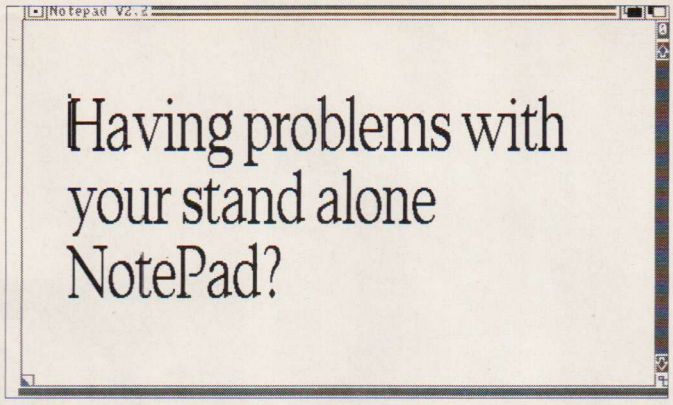
Every time I attempted to type in the commands listed within the article, all I ever got was an error Object not found. Are there any mistakes within this article, or is there something wrong with my computer?

Albert Evans
Newport

Oops! Deary me, we did make a bit of a boo boo in last month's Workbench. As all you frustrated tipsters you tried the Stand Alone NotePad tip will already have found out, the tip doesn't actually, as such, in practise, um... er... work. The problem isn't with the actual tip itself (Jason's tips always work – that's what Jason says anyway), but several printing errors managed to creep in after the text file left Jason's word processor (as anyone who knows him will agree, Jason never accepts responsibility for anything!)

The first printing error cropped up in nearly all the 'copy' commands that appear at the bottom of the first column. Those of you who know AmigaDOS sufficiently well will probably have spotted it straight away – the exclamation marks should actually be vertical bar symbols ('|'). All you have to do is to substitute every exclamation mark with a vertical bar and you're away. For example, the first line that features this error currently reads Copy C:Copy!MakeDir!Install!Ed RAM:, this should read Copy C:Copy|MakeDir|Install|Ed RAM:.

The second printing mistake can be found in the line that reads MakeDir DF0:DEVS:Printers. Anyone who knows AmigaDOS fairly well will probably have already spotted the mistake – the second colon (':') should actually be a backslash symbol ('/'). The line should now read MakeDir DF0:DEVS/Printers. To be certain, we tried the tip again and hopefully it should work (honest guv).



Have problems with our 'Stand Alone NotePad' tip? Read on!

MAKING THE MOST OF MACROS

STAR TIP

Macros can be wonderful things. If applied correctly, a simple macro can not only save you many hours of typing, but can also take a vast amount of the drudgery out of programming.

One particular language that has more than its fair share of drudgery is Assembler. Many programmers build up libraries filled with macros to carry out particular tasks, thereby allowing code from different projects to be used over and over again.

The macros below were designed to take the drudgery out of writing hardware copper lists. Instead of having to write reams and reams of meaningless 16-bit values, your copper lists will finally become readable ("Impossible!" I hear you shout). Anyway, enough waffle, here's the juicy bits. But first we'll start with a look at the format of each macro individually.

```
CMOVE data,address
```

This is the copper MOVE instruction. The two values normally given have been reversed to match the 68000's MOVE format. For example, moving a value into the hardware colour register zero is achieved using the following command – CMOVE $000,COLOR00

```
CWAIT line,column
CWAITline,column,lm,cm
```

These macros provide both the normal copper WAIT instruction and the masked WAIT instruction. The vertical line and horizontal column must be given. The macros will then build up the neccessary word. If no mask is defined, the mask generated will be the default value of $FFFE.

```
CSKIP line,column
CSKIP line,column,lm,cm
```

Just like the CWAIT macros, the CSKIP instruction provides both direct and masked versions of the copper SKIP instruction. If no mask is defined, then the mask generated will be $FFFF.

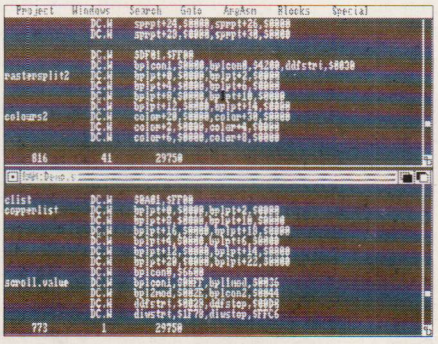
```
BWAIT line,column
BSKIP line,column
BWAIT line,column,lm,cm
BSKIP line,column,lm,cm
```

These four macros are similar to the Cxxxx macros with one exception. If the copper has been used to start a blitter operation, these macros will force the copper to wait until the blitter has finished. Note that the macro is checked AFTER the blitter is freed.

```
CEND
```

Not a great deal to this macros business really. This macro was created purely for cosmetic reasons and is basically just a friendlier version of DC.W $FFFF,FFFE which is used to end a copper list.

C G Wilson
Clwyd, Wales



Are your copperlists unreadable?

```
*****************************
* Copper Macros *
* Coded for Amiga Format by *
* the Silicon Sorcerer *
*****************************

CMOVE   MACRO
  DC.W  \2&%0000000111111110
  DC.W  \1
  ENDM

CWAIT   MACRO
  DC.W  (\1&$FF)*256+(\2&$FE!1)
  IFC   '',''\3'
  DC.W  $FFFE
  MEXIT
  ENDC
  DC.W  (\3&$7F!$80)*256+(\4&$FE)
  ENDM

CSKIP   MACRO
  DC.W  (\1&$FF)*256+(\2&$FE!1)
  IFC   '',''\3'
  DC.W  $FFFF
  MEXIT
  ENDC
  DC.W  (\3&$7F!$80)*256+(\4&$FE!1)
  ENDM

BWAIT   MACRO
  DC.W  (\1&$FF)*256+(\2&$FE!1)
  IFC   '',''\3'
  DC.W  $7FFE
  MEXIT
  ENDC
  DC.W  (\3&$7F)*256+(\4&$FE)
  ENDM

BSKIP   MACRO
  DC.W  (\1&$FF)*256+(\2&$FE!1)
  IFC   '',''\3'
  DC.W  $7FFF
  MEXIT
  ENDC
  DC.W  (\3&$7F)*256+(\4&$FE!1)
  ENDM

CEND    MACRO
  DC.W  $FFFF,$FFFE
  ENDM
```

PRODUCTS BY Kodak

PHOTOFILE

ST & Amiga Digitising Service

Not only do we digitise your pictures (up to A4 size) in any Amiga format or resolution, we send your pictures back to you as an auto-booting slideshow!
Over 1000 satisfied customers - including Psygnosis (Shadow of the Beast) and RGB Studios (Real Things).
Orders are processed and despatched within 24 hours.

CLIP ART

Almost 2000 mono IFF line art pictures on 7 disks! Ideal for DTP, Deluxe Paint, Photon Paint, Pen Friend, animations etc.
Hundreds of subjects covered! Available only from Photofile for just £35.00

Access VISA

Digitising costs - £1.75 per colour picture and £1.25 per b&w, picture, HAM, Halfbrite, Lo-res, High-res. Interlace or Overscan if required.
Please add £3.00 per order for setup, Kodak disk and P&P.
Send £3.00 for our demo disk or digitised images or an SAE for our advice and information sheet.
Please make cheques/P.Os payable to Photofile
PO Box 49, North PDO, Nottingham, NG5 6SR
Phone (0602) 261498 for enquiries or Access/Visa orders.

Graphics House, Styles Road, Arnold, Nottingham NG5 6RE

AUTHORISED DEALER FOR * AMIGA * STAR *

AMIGA (UK MODELS ONLY)

Amiga B2000 only 949.00
B2000 + Stereo Colour Monitor 1169.00
B2000 + 20/30/48Mb Autoboot + Stereo Monitor 1399/1589/1629
Amiga 500 NEW PACK..Phone for Details
Amiga 500 BATMAN PACK Interceptor / Batman/DPaint II/ NZ Story 359.00
Amiga 500 BATMAN PACK + Tenstar Pack 389.00
Amiga 500 BATMAN PACK + Philips 8833 Colour Mon.....599.00
Amiga 500 CLASS OF THE 90's Education Pack Comprising: DPaint II/ S'base/Maxiplan/Publ Choice/ Dr T's Midi/BBC Emul etc. 529.00

PRINTERS

Citizen 120D + (NEW) Parallel 129.95
Star LC-10 Parallel 159.00
Star LC-10 Colour Parallel.....205.00
Star LC24-10 24 pin Multi-font 170/57 cps 239.00
All Oki 20 consumables normally in stock .....PHONE

MONITORS

Philips 8833 Stereo Colour Monitor...249.00
Commodore 1084S Stereo Col Mon for C64/128/Amiga/PC.....259.00

DISK DRIVES

A2000 Autoboot 30Mb Drive 439.00
A2000 Autoboot 48Mb Drive 469.00
Amiga A590 Autoboot 20Mb Drive (RAM expandable).....369.00
20Mb Disk Drive for PC/A2000 Inc Controller 150.00
Internal 3.5" Disk Drive for A2000 ....79.95
External 3.5" Drive for Amiga - Disable Sw & Thro' Port.....79.95

MISCELLANEOUS

Commodore A501 RAM/Clock Exp ..99.95
RAM/Clock 512K Exp for A500 .....79.95
Kickstart V1.3 ROM for A500/2000 ..28.00
New Fat Agnus 59.00
A2000 RAM 8Mb Populated with 2Mb..319.00
MiniGEN low cost Genlock 109.00
Vidi-Amiga Colour PAL Frame Grabber 129.00
Surge Protector 4-Way Distrib Unit...15.95
Surge Protector 13A Plug/3-Way Adaptor 12.95/19.95

SOFTWARE

Arena Business Accounts Sales/ Purchase / Nom/ Invoice 149.00
TV*TEXT Professional 129.00
Pro Video Plus 189.00
Digiview Gold V4.....119.95
Home Office Kit: Kindwords 2, Pagesetter 1.2, Maxiplan 1.9, InfoFile, CaleFonts & Artists Choice.....129.95
Starter Kit: KindWords 2, Golf, Crazy Cars, Super Ski.....59.95
Professional Page 179.95
X-CAD Designer 79.95
Music-X.....175.00
Midi Interface for above (1-in/3-out/1-thru).....34.99

ALL PRICES INCLUDE 15% VAT
CARRIAGE £5 (EXPRESS £10) SOFTWARE £2
Prices subject to change without notice. E. & O. E.

Delta Pi Software Ltd

VISA MasterCard
8 Ruswarp Lane, WHITBY, N. Yorks YO21 1ND
TEL/FAX: 0947 600065 (9am - 7pm)

EDUCATIONAL SOFTWARE FOR THE AMIGA

SERIOUS ASSISTANCE

MICRO MATHS	29.95*	GCSE Assistance 11+
MICRO FRENCH	24.95*	Learn French 8+
MICRO ENGLISH	24.95	Improve your English 8+

CHILDRENS INTRODUCTORY PROGRAMS

KIDTALK	34.95*	An amazing talking word processor 5-12
DESIGNASAURUS	34.95	Brilliant Dinosaur construction Kit/Game 4+
CONSOUNDTRATION	19.95	Sharpens the memory (Sound & Graphics) 4+
CONSOUNDTRATION DISK 1	19.95	Expansion disk for above
ROBOT READER	19.95	(6 different Stories to choose from) 3+
MIXED UP MOTHER GOOSE	24.95	Graphic Adventure Game with Mixed up Rhymes 4+
TALKING COLOURING BOOK	19.95	Absolutely the best starters art package 3+
MATH-A-MAGICIAN	22.95	5 Programs with different levels 4-8
WORLD ODYSSEY	34.95	Increase your world knowledge 7+
MATH ODYSSEY	34.95	Improve your maths with puzzles 7+
TYPING TUTOR+Word Invaders	24.95	Typing program with a special game 7+
THE TALKING STORY BOOK	19.95	Nice Story teller for ages 3-7
THE TALKING STORY BOOK 2	19.95	A great story teller 7+
AT THE ZOO	24.95	Animal Paint, Print. With Sounds 3+
MY PAINT	34.95	Highly recommended childrens Art Package 4+
MY PAINT COLOURING DISK 1	19.95	Expansion Disk For Above
DINOSAURS ARE FOREVER	24.95	Paint & Print Dinosaurs 3+
NUMBERS COUNT	24.95	Number Painting 3+
OPPOSITES ATTRACT	24.95	Paint & Print Pictures 3+
LETTERS FOR YOU	24.95	Paint & Print Pictures 3+
WORLD ATLAS	34.95	Excellent Geography Database 8+
SPELLBOOK 4-6	19.95*	2 Expansion Disks Available
SPELLBOOK 7+	19.95*	2 Expansion Disks Available
THINGS TO DO WITH WORDS	19.95*	Anagrams, Word Hunt, Jumbled Sentences
THINGS TO DO WITH Numbers	19.95*	Time Telling, Grid Search, Train Fill.

SERIOUS GEAR FOR THE ADULTS

MAVIS B TYPING	29.95*	Excellent Typing Tutor
BBC EMULATOR	39.95	Run BBC Software On Your Amiga
DR T'S MIDI STUDIO	49.95*	MIDI Program
MAXIPLAN 500	59.95	Intergrated Spreadshhet & Database
AWARD MAKER PLUS	29.95	Create High Quality Certificates

SPECIAL OFFERS

PROTEXT	49.95	Word Processor V4.2 - *1 ONLY*
SUPERBASE 2	49.95	The Best Database Program - *2 ONLY*
FUN SCHOOL 2 (UNDER 6'S)	13.75*	8 Various Programs
FUN SCHOOL 2 (6-8 YEARS)	13.75*	8 Various Programs
FUN SCHOOL 2 (OVER 8'S)	13.75*	8 Various Programs

All these titles are available **NOW** for any of the Commodore Amiga Computer Range. To order any of the above items or to obtain further details drop us a line today. You **DO NOT** have to be a member of ESC to buy from us.

Access **MEMBERS get up to 25% DISCOUNT** VISA

EDUCATIONAL SOFTWARE CLUB
32a Southchurch Road, Southend-on-sea, Essex SS1 2ND.
(0702) 600557
Out of Office Hours Answer Phone
FAX 0702 613747
EDUCATIONAL ENQUIRIES WELCOME
* Denotes the item is also Available on the ST

PD Soft
1 Bryant Avenue, Southend-on-sea, Essex SS1 2YD.

PD SPECIALS

320 - F29 Retaliator (Preview)
435/6 - Trilogy (Mega Demo II)
437 - Subway (Mega Demo)
441 - Avenger (Mega Demo)
443 - Cyberball (Preview Disk)
444 - HAM Pictures (Cars/EX1)
452 - Elira (Preview)
456 - Dual Crew (Mega Demo)
459/60 - Kefrens (Mega Demo VIII)
461 - Digital Concert II (12 mins)
462 - Vision (music Masters 2)
463 - Sonix Extravaganza
464 - Silerts (Mega Demo)
465 - Bud D Kan (Preview)

SPECIAL EASTER OFFER - £2 Each Disk

Send a SAE or Phone us for the Most Up-to-Date PD Catalogue available for your Amiga Today!
(0702) 612259 Office Hours Only or FAX (0702) 613747
Access VISA

CONTROL THE UNIVERSE!

"I'm totally awed by what you have done!...it's beautiful, especially when the lights are off...congratulations..."

Arthur C. Clarke
author of 2001: A Space Odyssey

Distant Suns (Commodore Amiga™ only), the award-winning planetarium blockbuster, is now available in the UK in PAL! Endless entertainment and education for all. Ask for it!

Virtual Reality Laboratories, Inc.
2341 Ganador Court
San Luis Obispo, CA 93401 USA

3½" DSDD DISKS

100% CERTIFIED ERROR FREE

PRICE INCLUDES VAT & LABELS

ALL OUR DISKS ARE FULLY GUARANTEED

40p

80 Capacity Disk Box £5.50: With Disks £4.50
12 Capacity Boxes 95p each £7.50 for 10
Quality mouse mats £3.95

AMIGA 512K UPGRADE WITH CLOCK £55.00

PLEASE ADD £3.20 P+P PER ORDER
Cheques/PO's to:-

MEDIA DIRECT - DEPT AFT
11 SAGE CLOSE, HANLEY
S-O-T ST1 3SF
TELESALES HOTLINE:
0782 - 712819

Access VISA

SOFTMACHINE

AMIGA HARDWARE

A500 BATPACK
Amiga 500 (1.3 ROM)
Mouse + P.S.U.
Modulator + Leads
Workbench 1.3
Basic 1.3 + Extras
The Very First Tutorial
Introduction to the A500
WB1.3 Supplement
Amiga Basic Manual
Batman, Interceptor
New Zealand Story
Deluxe Paint II
£374.99

A500 BATPACK +
Pack 1 plus the following:
Ikari Warriors + Insanity Fight
Mercenary 1 + Art of Chess
Terrorpods + Thundercats
Barbarian + Buggy Boy
Amegas + Wizball +
Photon Paint II
£394.99

SOFTMACHINE STARTER PACK
Mouse Mat
Mouse Bracket
10 TDK MF2DD Disks
80 Capacity Disk Storage Box
3.5" Head Cleaner
A500 Dust Cover
ONLY £25*
*When purchased with any Amiga computer...Offer limited to 1 starter pack per Amiga purchased!

ALL PRICES INCLUDE V.A.T. AND DELIVERY (U.K. ONLY)
Courier/Overseas rates on request

SPECIAL OFFERS
Cambridge Lisp
Lattice ++
Zima fonts
City Desk
Limited stock ring for prices

AMIGA B2000 SYSTEM BUNDLES
Latest revision B2000's available in PC-XT/AT and/or 20Mb/40Mb Hard Drive configurations

Amiga 500 + A1084	£594.99
Amiga 500 + A1084S	£624.99
A590 20Mb Hard Drive	£374.99
A501 RamExp/Clock	£94.99
A520 Modulator	£24.99
MPS1230 Printer	£144.99
A1084 Colour Monitor	£224.99
A1900M Mono Monitor	£99.99
A1010 Disk Drive	£91.99
A1352 Mouse	£33.99
A2000	P.O.A.
A2000 + A1084	P.O.A.
A2000 + A1084/S	P.O.A.
A2024 HiRes Mono Monitor	P.O.A.
A2010 Internal Drive	P.O.A.
A2090 20Mb Hard Drive	P.O.A.
A2093 20Mb A/boot Drive	P.O.A.
A2095 40Mb A/boot Drive	P.O.A.
A2092 20Mb MS-DOS Drive	P.O.A.
A2088 PC-XT Bridgeboard	P.O.A.
A2286 PC-AT Bridgeboard	P.O.A.
A2058 Ram Expansion	P.O.A.
A2620 68020/68881	P.O.A.
A2621 Unix Card	P.O.A.
A2300 Genlock	P.O.A.
A2350 Prof Video Adaptor	P.O.A.
A2032 PAL Comp Vid Card	P.O.A.

RAM EXPANSIONS
0.5Mb clock + switch £66.99
2Mb populated to 1Mb clock + switch from £196.99

SOFTWARE

WORD PROCESSING

Excellence	£136.95
Kind Words 2	£35.50
Pen Pal	£105.95
Protext	£69.95
Pro Write 2.5	£70.60
Transcript	£32.50
Word Perfect	£177.40
Scribble Platinum	£41.40

DATABASES

Acquisition 1.3	£192.80
K-Data	£35.50
Microfiche Filer	£62.95
Microfiche Filer Plus	£123.95
Prodata	£56.95
Superbase Personal	£43.20
Superbase Personal 2	£69.95
Superbase Professional	£170.55

SPREADSHEETS

K-Spread 2	£43.20
Maxiplan A500	RING
Maxiplan Plus	£133.55
Superplan	£68.50

LANGUAGES/COMPILERS/ETC

APL 68000	£99.95
A-Rexx	£36.30
Aztec C Developer	£137.15
Aztec C Professional	£99.65
Aztec C scd	£61.25
Benchmark Modula 2	£132.50
Benchmark C Libraries	£70.60
Devpac 2	£43.60
GFA Basic V3	£47.55
Hisoft Basic	£57.35
K-Seka Assembler	£35.50
Lattice C V5	£174.75

UTILITIES

A-Max	£134.95
A-Max with Roms	£249.95
Amikit	£28.65
Ashas Caligrafonts	£47.75
B.A.D.	£32.50
B.B.C. Emulator	£39.95
Butcher 2	£28.65
CLImate	£32.50
Cygnus Ed Professional	£70.60
Disk 2 Disk	£39.95
Dos 2 Dos	£39.95
Diskmaster	£39.95
Enhancer (WB 1.3)	£13.85
Facc II	£24.85
Fancy 3D Fonts	£39.95
Gomf V3.0	£28.65
Grabbit	£24.85
HiSoft Extend	£15.75
Interchange	£39.95
Interchange Objects 1	£17.25
I/change Mod V3D/FinF	£17.25
I/change Mod V3D/Turbo	£17.25
Kara Fonts	£55.35
K-Gadget	£21.95
K-Roget	£35.50
Lions Fonts	£47.75
Mailshot Plus	£35.50
Newsletter Fonts	£24.85
Power windows V2.5	£55.35
Project D	£32.50
Quarterback	£47.75
Studio Fonts	£24.85
Superback	£41.95
Text Ed Plus	£55.35
The Calligrapher	£70.60
Transformer	£26.35
Ultra Card Plus	£74.35
X-Copy V2	£16.90

DESK TOP PUBLISHING

City Desk	£83.20
Pagesetter V2	£79.20
Professional Page	£193.50
Prof. Page Clip Art	£36.40
Prof. Page Template	£36.40
Publishers Choice	£78.75
Home Office Kit	£116.65

CAD/GRAPHICS/ANIMATION

Animagic	£62.95
Animator/Images/Draw	£55.00
*Architectural Design	£23.20
C-Light	£39.95
Comic setter	£39.95
Comic Setter Clip Art	£17.25
Deluxe Paint III	£60.50
Deluxe Photolab	£53.15
Deluxe Print II	£38.55
Deluxe Productions	£104.35
Deluxe Video III	£56.95
Design 3D	£62.95
Digi Paint 3	£55.35
Digiworks	£78.75
Draw 2000	£172.95
Fantavision	£32.30
Forms in Flight 2	RING
*Future Design	£23.20
*Human Design	£23.20
Impact	£55.35
*Interior Design	£23.20
IntroCAD	£47.75
Lights Camera Action!	£51.55
*Microbot Design	£23.20
Modeler 3D	£62.95
Movie Setter	£39.95
Page Flipper + F/X	£93.50
Photon Paint 2	£29.95
PIXmate	£39.95
Professional Draw	£108.75
Pro Video Plus	£193.50
Sculpt 4D	£367.45
Sculpt 4D Junior	£103.80
The Director	£47.75
The Director's Toolkit	£28.65
Turbo Silver	£108.75
TV Show	£70.60
TV Text	£70.60
TV Text Prof.	£105.95
T.V. Show V.2	£58.60
Video Effects 3D	£123.95
Video Generic Master	£55.35
Video Titler	£86.20
Video Wipe Master	£55.35
Videoscape 3D	£123.95
X-CAD Designer	£89.75
X-CAD Professional	£352.80
Zoetrope	£86.85

*state Sculpt or Videoscape!

MUSIC

A Drum	£32.50
Audiomaster 2	£62.95
Deluxe Music	£53.15
Dr T's KCS	£154.50
Dynamic Drums	£47.75
Dynamic Studio	£116.35
Instant Music	£20.25
Music X	£184.15
Opus 1	£79.95
Pro Midi Studio	£111.35
Sonix	£51.55
Sound Oasis	£62.95
Studio Magic	£69.85
Synthia	£74.70
Track 24	£74.95

COMMUNICATIONS

A Talk III	£70.60
BBS PC	£93.50
Ruby Comm	£54.65
Ruby Comm Plus	RING

ACCOUNTS

Arena Accounts	£140.95
Desk Top Budget	£32.50
Home Accounts	£21.95
Personal Accounts Plus	£24.95
Small Business Accounts	RING

Please ring for prices/availability on any hardware/software/peripherals not listed. (Full price list on request)

Please make cheques/postal orders payable to SOFTMACHINE. All prices are inclusive of V.A.T.
All prices subject to change without notice. All items subject to availability. E.& O.E.

Access VISA

SOFTMACHINE
Dept. AMF 5, 36 Guernsey Road, Sunderland SR4 9RR. Telephone: 091 385 7426

TIME TO MOVE ON?

To expand, or not to expand? That is the question. I bought my Amiga 1000 when they first came out – well someone had to! Although I have since bought the extra 256K RAM expansion (knocking the machine's memory up to 512K) and a second disk drive, it is still relatively unexpanded. I have built up a nice little nest egg over the years and will soon be wanting to add a hard drive and other such luxuries to my machine. Could you possibly answer a couple of questions?

1. With the dawn of ROM-based Kickstarts, ECS and peripherals made for use on only the A500 and 2000 (Xetec's FastTrak etc), is it time to lay the old A1000 to rest and buy myself a nice new Amiga 2000?
2. If so, do I say goodbye to *The Music Studio* and *Leaderboard*? (both will only work under Kickstart 1.1)?
3. What exactly is Fast RAM, and why haven't I got any?
4. In either case, I need a hard disk drive that also provides space for RAM expansion. Is RAM quicker when installed in the hard drive unit?

J Hall
Epsom, Surrey

1. With the impending release of both Kickstart 1.4 and the Enhanced Chip Set, it seems that Commodore have forgotten A1000 users. Thankfully, third party developers have not. One company in particular that A1000 users have to thank is Delaware Valley Software, who are soon to start shipping a board that will breathe new life into Commodore's original (and arguably their best) Amiga.

The Delaware Wonder Card is a very clever little board that slots in as a replacement to the Kickstart daughterboard inside the A1000. This board allows the Amiga 1000 to use both the ECS and even Kickstart 1.4, which is ROM-based! Not only that, but once the ECS is installed the A1000 will have access to all the new ECS screen modes and the ability to use up to a megabyte of chip RAM.

Optional extras include a battery backed clock, an audio filter switch and the ability to software select between 1.2, 1.3 and 1.4 of the Amiga O/S. How can an A1000 owner live without such a device? (My A1000 is going to get one as soon as they are available in this country!)

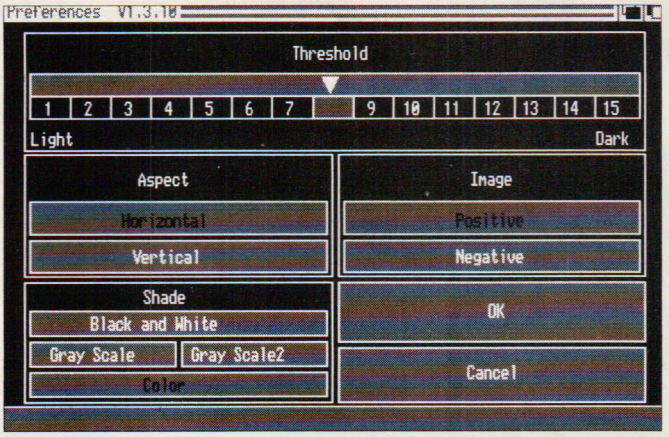
Needless to say, as soon as it is available we will review this wondrous piece of hardware. Until then, Delaware can be contacted on 0101 215 446 9227.

2. Most software that will only work under 1.1 of the operating system has since been re-released in a 1.2/1.3 compatible form. Both Music Studio *and* Leaderboard *are included in this.*

3. Fast RAM is memory that cannot be used by the Amiga's custom chips – only the 68000 can access it. If you buy a RAM expansion to take your Amiga over 512K, you will have Fast RAM in your machine. (There's also Slow RAM, but we won't go into that!) If you need a RAM expansion for your A1000, then GTS sell A1000 RAM expansions. GTS are on 077082 234.

4. As far as I am aware, no such device exists for the A1000. Looks as if you may be forced to buy a separate RAM expansion and hard drive.

What will become of the A1000? Read 'Time To Move On'...

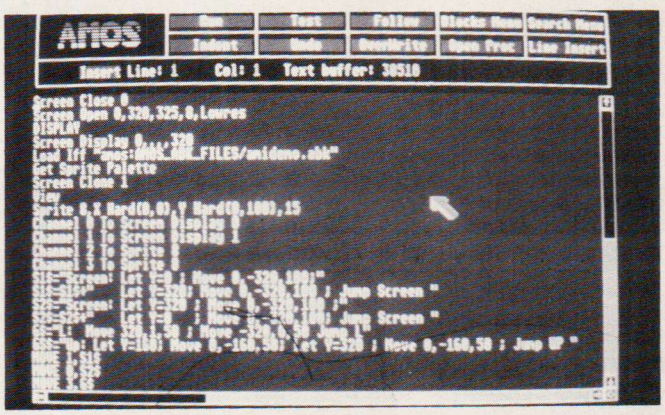


The Graphic 1 screen within Preferences.

STAR STRUCK

I have recently treated myself to an Amiga 500 and a Star LC-10 colour printer. Although I have owned the printer for over two months now, I am still having problems with it. My problems are simple – no colour prins out and no pound signs appear. When I try to print something in colour, all I get is plain boring black and white. As for the pound sign, all I get is ➤

BASIC PROBLEMS



***AMOS* – Just what you need if it's ultra-fast graphics, animation and scorching sound that you're after.**

Curiosity has forced me to put ink to paper and ask Workbench a few questions.

1. What is the correct meaning of the abbreviation, CLI? I have heard it called the 'Command Line Interface', the 'Command Line Interpreter' and even the 'Command Language Interpreter'. Which is correct?

2. I am considering purchasing HiSoft's BASIC compiler. Is its speed worthy of its price tag? Also, can I access the Amiga operating system libraries (Graphics, Intuition etc)? If I use the operating system routines, will my programs run at near machine code speed?

3. Is GFA BASIC (once compiled) as fast as HiSoft's system?

C Griffin
Merseyside

1. CLI definitely, no question about it, no arguments, most certainly stands for 'Command Line Interface'. Take no notice of anyone who says otherwise – both Commodore and myself say so!

2. HiSoft BASIC, like AmigaBASIC, allows you complete access to the power of the Amiga's operating system. However, as any Amiga applications programmer will tell you, the Amiga OS routines are far from fast (the graphics library is particularly bad) so your programs will never be that fast.

If it's ultra-fast graphics, animation and sound that you're after, then a better bet could well be Mandarin's soon-to-be-released BASIC language, AMOS. This excellent provides the kind of graphics and sound facilities that were previously only accessible from assembler.

3. GFA BASIC is a blisteringly fast language, faster than both HiSoft BASIC and AMOS. For an idea of the speed of GFA BASIC, check out our review of the GFA Compiler in Issue 8 of AF.

a hash symbol. What could I possibly be doing wrong?

M Lawrence
Hampshire

Humm, strange one that. There are several reasons why your printer could be refusing to print in colour. The first possibility is the blatantly obvious one – have you got a colour ribbon in the printer, or is it just a black ribbon?

Secondly, have you actually told the Amiga that you are using a colour printer? This is achieved using the Workbench Preferences tool. To check, load Preferences, enter the Change Printer screen and then click on the Graphic 1 gadget and you should see a screen display similiar to the one printed on this page.

You'll notice that there is a box called Shade at the bottom left of this screen that contains four gadgets. The one that you are interested in is colour, which should be highlighted (click on it if it is not). Once you've done this, save off your new configuration and try to print in colour – if all goes well, your problem should now be solved. Note that you will have to carry out this procedure for all your boot disks (DPaint etc).

The problem with hash symbols is simple to solve. Somewhere on your printer you will find a row of dip switches. These are used to configure various aspects of the printer. One of these dip switches (pin 5, if my memory serves me well) is used to tell the printer to print either hash symbols or pound signs. Refer to the manual that came with your printer to find out exactly which dip switch to flick.

AMIGA FORMAT WORKBENCH CAN HELP YOU WITH YOUR PROBLEMS!

Here at *Amiga Format*, we do our best to help readers with their problems. In many cases tips and tricks that other readers have found for themselves are good advice for others, so we are always happy to receive tips – and to pay for them as well.

But Workbench isn't just about tips and tricks to help you get the very most from your Amiga – we also try to help sort out any problems you may have.

If you have a problem which is causing you grief, then put pen to paper and write to Workbench, Amiga Format. Please note that we're a busy lot (producing a state-of-the-art, market-leading magazine takes a lot of hard work!) and so we cannot take phone calls or reply personally to any letters, so save your stamps: if you do send us a SAE, then Damien will roll it up into a ball and throw it at Andy just when he's about to achieve a high score.

Send your letters to: WORKBENCH HELP, 30 Monmouth Street, Bath BA1 2AP. Go on, make my day!

C FOR YOURSELF

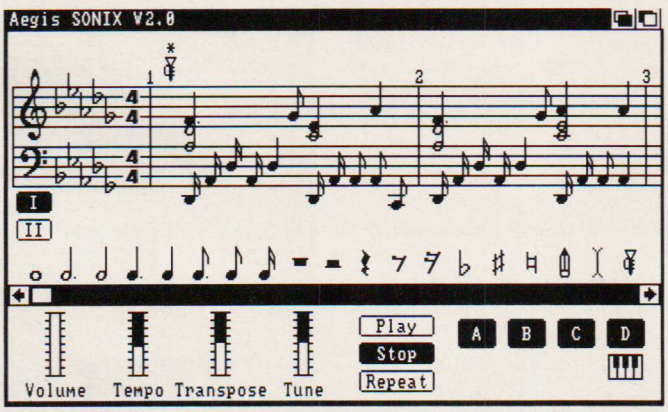
1. Why is there such a large variation in price between RAM expansions? For a 512K RAM expansion, I've seen prices in your mag that range from as little as £50 to well over £100. Are all RAM expansions created equal or are some more equal than others?
2. With a MIDI interface, is it possible to use a normal keyboard and guitar for input, or must I buy a device made specifically for use with the interface?
3. What is the difference between *Aegis Sonix* and *Deluxe Music?* Which package is best?
4. Excuse me for being totally thick, but what exactly is C?

N Chadwick
Garbleshire

1. Speaking very generally, there is very little difference between 512K RAM expansions. However, there are several things to take into consideration when choosing the one that is good for you.

Some RAM expansions offer battery-backed clocks that allow the Amiga to keep time even when it is turned off. Most people rarely use these, so it is simply as case of deciding whether your require such a facility. Usually, the lack of a battery-backed clock can knock about £20 off the price of a RAM expansion.

Another factor to consider is future expansion. If 1 Megabyte is enough for your needs just buy the cheapest 512K RAM board that you can find: otherwise you are advised to look for a board that offers further expansion. Quite a few boards come populated with just 512K but can be taken further by simply plugging in extra RAM chips.



ABOVE: *Sonix* – an ideal introduction to music making on the Amiga.

BELOW: C offers high performance and portability.

2. MIDI is an industry-standard communications protocol that was devised to allow any MIDI device (regardless of make, model or type) to talk to any other MIDI device. As long as the instruments that you have support MIDI, they will happily work with your Amiga MIDI interface (providing you have the appropriate software to hand!)

3. Aegis Sonix and Deluxe Music are in many ways very similar. They are both music packages that allow the creation of music by placing notes onto a standard musical stave. Deluxe Music is a far more powerful package, but is rather user-unfriendly at times. Aegis Sonix, on the other hand, is favoured by many because of its ease of use. If you're new to music software, then Aegis Sonix is probably a better bet.

4. C is a programming language devised during the early seventies by Brian Kernigan and Dennis Ritchie at Bell Laboratories, for use on their then-new operating system, Unix. C is a highly-structured programming language that lends itself particularly well to systems programming (operating systems, low-level device drivers etc). The language was designed to offer high speed of execution, a very high level of portability (C programs from one system can be taken across to another system with minor modifications) and C programs suffer from very few overheads once compiled.

A large amount of the Amiga's operating system was written in C (Graphics and Intuition libraries etc. AmigaDOS was unfortunately written in a wretched language called BCPL, which is even more hideous than COBOL!), hence its popularity. If you are planning on writing applications that use the Amiga operating system, then C is a very good choice.

```
RAM:OpenLibrary.c
#include <intuition/intuition.h>
#include <intuition/intuitionbase.h>
#include <graphics/graphics.h>
#include <graphics/gfxbase.h>

#define DEBUG 1

struct IntuitionBase *IntuitionBase;
struct GfxBase *GfxBase;

main()
    {
    IntuitionBase = (struct IntuitionBase *)
            OpenLibrary("intuition.library",NULL);
    if (IntuitionBase == NULL)
            {
            printf("Unable to open Intuition library\n");
            exit(1);
            }
    GfxBase = (struct GfxBase *)
            OpenLibrary("graphics.library",NULL);
    if (GfxBase == NULL)
            {
            printf("Unable to open Graphics library\n");

            CloseLibrary(IntuitionBase);
            exit(2);
            }
    if (DEBUG == 1) printf("Everything opened ok\n");
```

Amiga 500 Batman Pack £369.95

MAIL ORDER

SOFTSELLERS

MAIL ORDER

A590 Hard Drive £369.95

6 Bond St., Ipswich, Suffolk. IP4 1JE

5a Dogs Head St., Ipswich, Suffolk (Retail) 36a Osborne St., Colchester, Essex (Retail)

24hr MAIL ORDER PURCHASE LINE (0473) 257158/210605 FAX (0473) 213457

688 ATTACK SUB	16.99
5th GEAR	13.99
ALTERED BEAST	16.99
ACTION FIGHTER	15.99
ANCIENT ART OF WAR	16.99
ANCIENT ART OF WAR AT SEA	16.99
ANTS HEAD (DATA DISK)	12.99
AQUAVENTURA	24.99
ASTERIX	16.99
AXELS MAJIC HAMMER	13.99
BALANCE OF POWER 1990	15.99
BARBARIAN II (PALACE)	16.99
BARBARIAN II (PSYGNOSIS)	16.99
BANKOK KNIGHTS	16.99
BATTLECHESS	16.99
BATMAN (THE MOVIE)	16.99
BATTLE OF BRITAIN	16.99
BATTLE SQUADRON	15.99
BETRAYAL	15.99
BEVERLY HILLS COP	15.99
BLOODWYCH	16.99
BLOODWYCH DATA DISKS	12.99
BLOOD MONEY	16.99
BEACH VOLLEY	16.99
BATTLEVALLEY	15.99
BLACK TIGER	16.99
BLADE WARRIOR	15.99
BLUE ANGELS	16.99
BAD COMPANY	15.99
BATTLE OF AUSTRALITZ	15.99
BOMBER	19.99
BUDAKHAN	16.99
CHASE HQ	16.99
CHAOS STRIKES BACK	16.99
CALIFORNIA GAMES	13.99
CABAL	16.99
CONFLICT EUROPE	16.99
CONQUEROR	16.99
CONTINENTAL CIRCUIT	13.99
CARTHAGE	15.99
CORVETTE	19.99
COMMANDO COMPILATION	15.99
CYBERBALL	13.99
CHICAGO 90	12.99
COMMANDO	12.99
CHAMBERS OF SHAOLIN	15.99
DAMOCLES	15.99
DAY OF THE TIGER	15.99
DIE HARD	16.99
DAN DARE 3	13.99
DEFENDERS OF THE EARTH	12.99
DRAGON FLIGHT	19.99
DRAGON'S BREATH	19.99
DRAGONS OF FLAME	16.99
DUNGEON MASTER	16.99
DUNGEON MASTER EDITOR	9.99
DREADNOUGHT	13.99
DEMONS TOMB	13.99
DRAKKEN	19.99
DYNAMITE DUX	16.99
DOUBLE DRAGON II	13.99
DOGS OF WAR	12.99
DYNAMIC DEBUGGER	15.99
ELITE	15.99
EPOCH	15.99
ESCAPE FROM THE PLANET OF ROBOT MONSTERS	13.99
EYE OF HERCULES	16.99
FLASH DRAGON	13.99
F29 RETALIATOR	19.99
F19 STEALTH FIGHTER	15.99
F16 COMBAT PILOT	15.99
FALCON	19.99
FALCON MISSION DISKS	13.99
FERRARI FORMULA ONE	16.99
FIRST CONTROL	15.99
FINAL BATTLE	16.99
FULL METAL PLANET	15.99
FOOTBALLER OF THE YEAR	13.99
FORGOTTEN WORLDS	13.99
FORGOTTEN WORLDS	13.99
FAST LANE	12.99
FRANKENSTEIN	12.99
FUTURE WARS	16.99
FIGHTING SOCCER	16.99
FIENDISH FREDDY	19.99
FIGHTER BOMBER	19.99
GAZZA'S SUPER SOCCER	16.99
GRID IRON	16.99
GHOSTBUSTERS II	16.99
GUN SHIP	15.99
GRAVITY	16.99
GAMES SUMMER EDITION	13.99
GORE	16.99
GALAXY FORCE	16.99
GHOULS AND GHOST	16.99
GRAND NATIONAL	19.99
HAMMERFIST	16.99
HIGHWAY PATROL	15.99
HILLSFAR	16.99
HARD DRIVING	13.99
HEAVY METAL	16.99
HOUND OF SHADOW	16.99
HOT ROD	16.99
HOYLES BOOK OF GAMES	24.99
INDIANA JONES (LUCAS FILMS)	16.99
INDIANA JONES (US GOLD)	13.99
IVANHOE	16.99
IRON LORE	19.99
IRON TRACKER	12.99
IMPERIUM	16.99
INFESTATION	16.99
INTERPHASE	15.99
INTERNATIONAL ATHELETICS	12.99
IT CAME FROME THE DESERT	19.99
JACK BOOT	16.99
JACK THE RIPPER	12.99
JUMPING JACKSON	12.99
KEEF THE THEIF	16.99
KENNY DALGLISH SOCCER MATCH	13.99
KULT	15.99
KICK OFF	12.99
KICK OFF II	12.99
KICK OFF EXTRA TIME	9.99
KRYSTAL	19.99
KILLING GAME SHOW	13.99
KRYPTON X	12.99
LASER SQUAD	12.99
LEAVING TERRAMIS	16.99
LEGEND OF DJEL	16.99
LEISURE SUIT LARRY II	19.99
LIGHTFORCE (COMPILATION)	16.99
LOMBARD R.A.C. RALLY	16.99
LAST NINJA II	16.99
LOST PATROL	16.99
LIVERPOOL	15.99
LAST STUNTMAN	12.99
MANCHESTER UNITED	16.99
MANIAC MANSION	16.99
MICROPROSE SOCCER	15.99
MIDWINTER	15.99
MAJIC JOHNSON	12.99
MOONWALKER	16.99
MAGNUM 4 (COMPILATION)	19.99
MURDER IN VENICE	15.99
MATRIX MARUADERS	16.99
NINJA SPIRIT	16.99
NINJA WARRIOR	16.99
NEW ZEALAND STORY	13.99
NORTH AND SOUTH	15.99
NEVERMIND	13.99
OPERATION THUNDERBOLT	16.99
ORIENTAL	15.99
ONSLAUGHT	13.99
OVERLANDER	12.99
PAPERBOY	12.99
PINBALL MAGIC	16.99
POLICE QUEST II	16.99
POOLS OF RADIANCE	16.99
POPULOUS	16.99
POPULOUS DATA DISKS	9.99
PRECIOUS METAL (COMPILATION)	16.99
PREMIER COLLECTION 1,OR 2 (COMPIL)	19.99
PLAYER MANGER	12.99
PLANET BUSTERS	13.99
P47	15.99
POWERDRIFT	16.99
PICTIONARY	16.99
PANIC STATION	13.99
PRO TOURNAMENT TENNIS	16.99
QUARTZ	15.99
QUARTER BACK	13.99
QUEST FOR TIME BIRD	19.99
RAINBOW ISLAND	16.99
RENEGADE	16.99
ROCKET RANGER	19.99
ROCK AND ROLL	13.99
R.V.F. HONDA	15.99
RED STORM RISING	15.99
RISK	13.99
RALLY CROSS	12.99
ROADWARS	13.99
SCRAMBLE SPIRITS	13.99
S.E.U.C.K.	19.99
SPACE ACE	29.99
SPACE HARRIER (NEW)	12.99
SPACE HARRIER II	13.99
SKIDZ	13.99
SPACE SAVAGE	13.99
STAR TREK S	24.99
STARFLIGHT	16.99
STRYX	13.99
STRIDER	16.99
SKATE OR DIE	16.99
SPACE QUEST III	19.99
STEVE DAVIS SNOOKER	12.99
STORY SO FAR I (COMPILATION)	12.99
STORY SO FAR 3(COMPILATION)	12.99
STUNT CAR	15.99
SHINOBI	13.99
STREET FIGHTING MAN	13.99
SCROLL	12.99
STARWARS COMPILATION	16.99
SUPER WONDERBOY	16.99
SILPHEED	19.99
SLAYER	13.99
STORMLORD	13.99
SHADOW OF THE BEAST	24.99
STAR BLAZE	13.99
SUPER QUINTET	15.99
SIM CITY	19.99
SAINT AND GREAVSIE	13.99
SEVEN GATES OF JAMBALA	15.99
SUPER LEAGUE SOCCER	16.99
SURVIVOR	15.99
SWITCHBLADE	13.99
SUPER CARS	13.99
SONIC BOOM	16.99
THEME PARK	16.99
TYPHOON THOMPSON	16.99
TOWER OF BABEL	15.99
TURBO BUGGIES	13.99
TV SPORTS BASKETBALL	19.99
TV SPORTS FOOTBALL	19.99
TRIAD II (COMPILATION)	16.99
TRIVIAL PURSUIT (FAMILY EDITION)	16.99
THE GALES	16.99
THRILL TIME PLATINUM (COMP)	15.99
TRIVIA	15.99
TRACK ATTACK	16.99
TURBO OUTRUN	16.99
ULTIMATE GOLF	16.99
ULTIMATE DARTS	13.99
UNIVERSE III	12.99
UNTOUCHABLES	16.99
UMS II	15.99
ULTIMA V	19.99
WARHEAD	16.99
WATERLOO	15.99
W.E.C. LE MANS	15.99
WILD STREETS	15.99
WINNERS (COMPILATIONS)	19.99
WORLD CUP SOCCER '90	13.99
XENOMORPH	16.99
XENON II	16.99
X-OUT	13.99

JOYSTICKS

Cheetah 125	£7.99
Cheetah Starprobe	£11.99
Pro 5000 Extra Glo Green	£13.99
Pro 5000 Extra Glo Red	£13.99
QS Turbo	£9.99
Euromax Racemaker	£24.99
Euromax Prof 9000	£11.99
Konix Navigator	£11.99

DISC BOXES

3.5" 40 Holder Lockable	£5.99
5.25" 50 Holder Lockable	£4.99
3.5" 80 Holder Lockable	£7.99
5.25" 120 Holder Lockable	£6.99

DISC BOXES WITH DISCS

3.5" 40 Holder Lockable with 10 3.5" dsdd discs	£12.99
3.5" 40 Holder Lockable with 20 3.5" dsdd discs	£19.99
3.5" 40 Holder Lockable with 40 3.5" dsdd discs	£33.99
3.5" 80 Holder Lockable with 10 3.5" dsdd discs	£15.99
3.5" 80 Holder Lockable with 40 3.5" dsdd discs	£35.99
3.5" 80 Holder Lockable with 80 3.5" dsdd discs	£55.99

DISCS

10 3.5" dsdd Unbranded	£7.99
20 3.5" dsdd Unbranded	£14.99
50 3.5" dsdd Unbranded	£34.99
100 3.5" dsdd Unbranded	£59.99
10 3.5" dsdd Branded	£11.99
20 3.5" dsdd Branded	£22.99
50 3.5" dsdd Branded	£54.99
100 3.5" dsdd Branded	£99.99

PERIPHERALS

Replacement Mouse and Mouse Holder + Mouse Mat	£29.95
Four Player Adaptor	£5.95
Mouse Mat	£4.95
Joystick Extender	£5.95
Dust Cover	£4.95

CHEQUES AND POSTAL ORDERS MADE PAYABLE TO SOFTSELLERS. POST & PACKING FREE IN UK. OVERSEAS £1.50 PER ITEM. Subject to availability and price change without notice. Not all titles released at time of going to press. Shop prices may vary, but personal callers can claim advertised discounts on production of cut-off slip.

TITLE	COMP	PRICE
	TOTAL COST £:	

Have you ordered from us before? YES NO

Name.....

Address .....

.....

.....

Tel No: .....

AMF MAY

Amiga 500 Class of 90 Pack £529.95

512K Expansion + Clock Card £99.95

★ ★ ★ SOFT EXCHANGE ★ ★ ★

£4.99 each or £12.99 for three

BMX Simulator
Nitro Boost Challenge
Joe Blade 1
Joe Blade 2
War Machine
Hollywood Poker
Starways
Space Battle
Rock
Cruncher Factory
Eye
Thai Boxing
Warzone
Frostbyte
Artura
Challenger
Mousetrap
I.S Sphere
Rocket Attack
Conflict in Europe
Thexder
Pool
Kickstart 2
Alien Syndrome
Italia 90
SAS Combat
Treasure Island Dizzy
Eagles Nest
Extensor
Fire Blaster
Ice Hockey
Brainstorm
Protector
Suicide Mission
Quantos
Plutos

Space Station
Flight Path 737
Jump Jet
Space Flight
Espionage
Pac Boy
Terrorpods
Sorceror Lord
H.K.M
Side Winder II
Sorcery +
Rtrn of Jedi
Hotshot
Adv Ski Simulator
Drum Studio
Amegas
Karting G Prix
Captain Blood
Artificial Dreams
Demolition
Grid Start
HR 35
Seconds Out
Dr Fruit
Kwasimodo
Vader
Hellfire Attack
Tracers
Saint & Greavsie
Blasteroids
Final Trip
Firezone
Kelly X
Road Wars
Soldier of Light
Empire Strikes Back

★ SPECIAL OFFERS ★

PRISON £7.99

EXOLON £5.99

BATTLE VALLEY £7.99

STEEL £5.99

CYBERNOID £6.99

SLAYER £7.99

ZYNAPS £8.99

EYE OF HORUS £6.99

STARBLAZE £8.99

BALLISTIX £7.99

TDK BLANK DISCS
Box of 10
DS/DD
£12.99

PARROT BLANK DISCS
Box of 10
£24.99

PUBLISHERS CHOICE ONLY £65.99

GRAPHICS STARTER KIT
£35.99

Home Accounts	£20.99
Personal Accounts Plus	£24.99
Small Business Accounts	£60.99
Small Business Accounts Extra	£84.99
K Comm 2	£19.99
K Data	£35.99
Superbase Personal 2	£54.99
Superbase Personal	£35.99
Superbase Professional	£169.99
Xcad	£79.99
Deluxe Paint II	£69.99
Digi Paint 3	£49.99
Human Design Disc	£16.99
Photon Paint 2	£59.99
Home Office Kit	£99.99
Starter Kit	£49.99
Digicalc	£28.99
K Spread 2	£37.99
Superplan	£74.99
C Light	£35.99
Music X	£165.99
Mini Gen	£84.99
Day By Day	£21.99
E Type	£27.99
Fantavision	£27.99
Deluxe Music Con Kit	£47.99
Deluxe Paint 3	£53.99
Amax	£99.99
Protext V4	£65.99
Kindwords II	£35.99
Penpal	£94.99
Word Perfect 4.2	£165.99
Amax with Roms	£179.99
Audiomaster	£53.99
Devpac	£44.99
Hisoft Basic	£53.99
Adrum	£29.99
Movie Setter	£54.99
Sonix	£52.99
Video Scape 3D	£109.99
Video Titler	£84.99
Zoetrope	£74.99
Toolkit	£29.99
Amax	£74.99

01 653 9094

To avoid disappointment, please always include an alternative.
All prices include VAT and delivery. Send Cheque/P.O. to:
SOFT EXCHANGE, 101 CLIFTON ROAD, SOUTH NORWOOD, LONDON, SE25 6QA

01 653 9094

DIGITEC
COMPUTER SYSTEMS

ALL PRICES ARE INCLUSIVE OF VAT AND 1ST CLASS DELIVERY IN UK
(OUTSIDE UK PLEASE WRITE FOR QUOTE)

AMIGA SOFTWARE

A-Talk III	£78.22	Draw 2000	£195.00	Pixelscript	£113.00
Absoft A/C Basic III	£169.57	E Clips	£78.22	Powerwindows V2.5	£60.83
Absoft A/C Fortran	£256.52	Elan Performer	£43.43	Pro Video Plus	£217.35
Aegis Sonix	£56.48	Encore	£43.43	Pro Video Plus Fonts 1	£86.91
Amas	£86.91	Excellence	£147.78	Pro Video Plus Fonts 2	£86.91
Animagic	£69.52	Fancy 3D Fonts	£43.43	Pro Video Plus Fonts 3	£86.91
Animator / Images	£69.52	Fantavision	£43.77	Pro Video Plus Fonts 4	£86.91
Arena Accounts	£146.95	Flow	£78.22	Pro Write V2.5	£86.91
Ashas Caligrafonts	£52.13	Forms In Flight II	£104.30	Proboard	£173.87
Assem Pro Abacus	£60.83	Future Sound	£78.22	Professional Draw	£121.70
Audiomaster II	£69.52	HiSoft Basic	£69.52	Professional Page V1.3	£217.35
Award Maker Plus	£34.74	Home Office Kit	£130.39	Pronet	£173.87
Aztec Professional	£113.00	Interchange	£43.43	Protext V4.2	£86.91
Bad Disk Optimiser	£34.74	Interfont	£86.91	Publishers Choice	£86.91
BBS-PC Bulletin Board	£104.30	Intro Cad	£52.13	Quarterback	£52.13
Becker Text	£104.30	K-Seka Assembler	£43.43	Scribble Platinum	£43.43
Benchmark C Library	£78.22	K-Spread II	£52.13	Sculpt 3D XL	£130.39
Benchmark IFF Library	£78.22	Kara Fonts One	£60.83	Sculpt 4D	£435.00
Benchmark Modula 2	£147.78	Kara Fonts Two	£52.13	Sculpt 4D Junior	£104.30
Board Master	£78.22	Kara Sub Heads	£52.13	Studio Magic	£69.52
Caligrafonts	£60.83	Lattice V5.0 Dev Sys	£250.00	Superback	£45.65
Calligrapher V1.05	£78.22	Light Camera Action	£56.48	Text Pro	£50.00
Comic Setter	£43.43	Lion Fonts	£52.13	The Director	£52.13
Copyist Apprentice	£78.22	Mail Shots Plus	£43.43	The Directors Toolkit	£30.39
Crossdos	£29.99	Master Sound	£34.74	The Works Platinum	£147.78
Data Retrieve	£60.83	Masterpiece Fonts	£147.78	Transport Controller	£173.86
Data Retrieve Pro	£217.35	Maxiplan A500	£100.00	Turbo Silver	£121.69
Deluxe Paint III	£69.56	Maxiplan Plus	£150.00	TV Show (Pal)	£78.22
Deluxe Photolab	£60.86	Micro Fiche Filer Plus	£139.09	TV Text Professional	£113.00
Deluxe Video III	£60.86	Modeller 3D	£69.52	Ultracard Plus	£78.22
Design 3D	£69.52	Moviesetter	£43.43	Video Effects 3D	£139.09
Devpac V2.0	£52.13	Music X	£199.96	Video Generic Master	£60.83
Digi Paint III	£60.83	Page Flipper FX Pal	£121.70	Video Titler	£96.00
Digita Home Accounts	£26.04	Page Render 3D	£121.70	Videoscape 3D	£139.09
Digiview V4.0	£130.39	Pagesetter V2.0	£86.91	Vidi-Amiga	£99.96
Digiworks	£86.91	Penpal	£113.00	Word Perfect Library	£99.00
Disk 2 Disk	£43.43	Perfect Sound	£69.52	Word Perfect V4.1	£199.00
Disk Master	£43.43	Personal Tax Planner	£34.74	X-Cad Designer	£99.00
Dos 2 Dos	£43.43	Pic-Magic	£78.22	X-Cad Professional	£399.00
Dr. T's Copiest Prof	£208.65	Pix Mate	£43.43	Zoetrope	£86.91

HARDWARE

8806 Pro Genlock	£750.00	CBM 1011 3.5 Drive	£99.00
A1000 Insider Card	£165.17	CBM 1084D Monitor	£254.99
A2000 8Meg Card 2Meg Pop	£499.00	Cumana Cax354 3.5 Drive	£89.00
A500 512K Card	£75.00	Flicker Fixer	£345.00
A500 512K Card + Clock	£85.00	Minigen	£99.95
Amiga 500 Batpack	£359.00	Philips 8833 Monitor	£265.00
Amiga 590 Hard Drive	£359.00	Vortex A500 40Mb Drive	£498.75

PLEASE SEND ALL CHEQUES / POSTAL ORDERS PAYABLE TO:
DIGITEC COMPUTER SYSTEMS
TO: 51 GRANGE ROAD, ALVASTON, DERBY. DE2 0JX

LOOK! AMAZING OFFERS

100% Certified Error Free

3½" DS/DD DISKS

ONLY LIMITED STOCKS AVAILABLE

36p +VAT

TDK

3½ Branded!! DS/DD disks

85p + VAT

DISK BOXES
40 CAP.....£4.10
80 CAP.....£4.80

LIFETIME GUARANTEE ON ALL DISKS

ADD £3.40 P&P per disk order. ADD £2 P&P for joysticks.
ADD £9 for next day delivery

AMIGAS

Batpack	£358
+ Tenstar Pack	£375
Class of the 90's	£495
40Mb Hard Disk	£Call
3 1/2 External Drive	**£59**
Ram Pack	**£61**
+ Clock	**£64**

JOYSTICKS

Quickjoy	£5
Black Cruiser	£8
Zipstick	£11
Spectra Video Infra-Red	£Call

ACCESSORIES

Mouse Mat	£4
1000 Labels	£10.50
LC10 Ribbons	£3.85
Colour	£5.60
Cleaning Kits	£Call

Superbase 2 £50 Maxiplan £50

★ GAMES AVAILABLE AT LOW PRICES ★

CALL OR SEND CHEQUES TO B.C.S LTD,
349 DITCHLING ROAD, BRIGHTON BN1 6JJ
0273 506269 24 hours. 7 days.

VISA

YOUR ONE STOP SHOP

MORE SOFTWARE THAN YOU CAN HANDLE!
MORE HARDWARE THAN YOU CAN USE!

Software SUPERSTORE

AMIGA 512K MEMORY EXPANSION

* Brings your Amiga up to 1 Meg in seconds.
* Enable/disable switch. Now you can run ALL software.
* Easy to fit - no technical knowledge needed.
* Reliable, fast, high quality chips on a robust through plated P.C.B. Do not confuse with cheaper, inferior products.
* DOES NOT INVALIDATE GUARANTEE.

ONLY £69.99

ONLY £79.99 FOR VERSION WITH CLOCK/CALENDAR

AMIGA EXTERNAL 3.5" DISK DRIVE

* LOW PROFILE UNIT.
* TOP QUALITY DRIVE MECHANISM. FULLY COMPATIBLE.
* ENABLE/DISABLE SWITCH.
* THROUGH PORT ALLOWS DAISY-CHAINING OTHER DRIVES (AMIGA ONLY)
* SUPERBLY STYLED CASE IN AMIGA COLOURS.
* 1 MEG UNFORMATTED CAPACITY.

ONLY £79.99

WE STOCK MOST DATEL PRODUCTS

AMIGA A500 BATMAN PACK

ALMOST HALF PRICE

	R.R.P.
A500	£399.99
TV MODULATOR	24.99
BATMAN (THE MOVIE)	24.99
NEWZEALAND STORY	24.99
DELUXE PAINT II	49.99
INTERCEPTOR	29.99
TEN STAR PACK	229.50
TOTAL R.R.P.	£784.44
LESS DISCOUNT	£384.45

OUR PRICE..... £399.99

*OR £15 MONTHLY

WE HAVE EVERYTHING YOU COULD POSSIBLY NEED FOR YOUR COMMODORE

VISA

Access

Licensed Credit Broker

*(subject to status) Written details on request.

RED HOT SOFTWARE EXPLOSION

FOR CALLERS ONLY	R.R.P.	Our Price
Galaxy Force	24.99	4.99
Photon Paint II	29.99	19.99
Running Man	24.99	4.99
The President is Missing	24.99	4.99
Bombjack	24.99	4.99
Rampage	24.99	4.99
Peter Beardsley Int Soccer	24.99	4.99
Pac Land	24.99	4.99

1 MEG AMIGA :-

as above plus half meg upgrade, mouse, mat, mouse holder, lockable disk storage case, dust cover and 10 disks

OUR PRICE

ONLY £499.99

*OR £19 MONTHLY

MAIL ORDER:-

Carriage will be charged at Cost

ORDER HOTLINE
(MON to FRI)
(0782) 202269
ADVICE HOTLINE (0782) 268620
for FAST & FRIENDLY SERVICE

1 YEAR ON-SITE MAINTENANCE ONLY £10 EXTRA ON ANY PRINTER

PRINTERS

STAR LC10

Acclaimed "Best Buy" budget printer. Now massively under-priced at just

£169.99 *OR £8 MONTHLY

STAR LC10 Colour

The perfect printer for every Amiga. Colour output from all the better art packages - or just slot in a black ribbon for word processing. Cheap to run too. Very affordable

£229.99 *OR £9 MONTHLY

STAR LC24 - 10

24 Pin quality at a price you can afford. 8 Fonts, 3 print variations, paper parking, 170 CPS draft, 57 CPS LQ

£259.99 *OR £10 MONTHLY

FREE Cable with every Printer

STOKE-ON-TRENT
11 Market Square Arcade, Hanley Stoke-on-Trent
Manager: Wayne Tel: 0782 268620 Open 6 Days

SHEFFIELD
6 Waingate, Sheffield
Manager: Tony
Tel: 0742 721906
Open 6 days

ST HELENS
27 Baldwin Street, St Helens
Manager: Adrian
Tel: 0744 27941
Closed Thursday

STOCKPORT
6 Mealhouse Brow, (Off Little Underbank), Stockport. Manager: Ray
Tel: 061 480 2693
Closed Thursday

Evesham Micros

ALL PRICES INCLUDE VAT AND DELIVERY

Same day despatch whenever possible. *Express Courier* delivery £5.00 extra.

RETAIL SHOWROOMS

63 Bridge Street
Evesham
Worcs WR11 4SF
☎ 0386-765180
Open Mon-Sat, 9.00 - 5.30

5 Glisson Road
Cambridge CB1 2HA
☎ 0223-323898
Open Mon-Sat, 9.00 - 5.30
Specialist Education Centre

1762 Pershore Road
Cotteridge
Birmingham B30 3BH
☎ 021-458 4564
Open Mon-Sat, 9.00 - 5.30

MAIL ORDER DEPARTMENT

Unit 9 St Richards Rd, Evesham, Worcs WR11 6XJ

Access

Call us now on ✆ 0386-765500

8 lines, Open Mon-Sat, 9.00-5.30. Fax: 0386-765354
Technical support (open Mon-Fri, 9.30-5.30): 0386-40303

VISA

Send an Order with Cheque, Postal Order or ACCESS/VISA card details

Government, Education & PLC orders welcome
All products covered by 12 Months Warranty
All goods subject to availability, E. & O.E.

Buy with confidence from one of the longest established companies in their field, with a reputation for good service and prices. We have invested heavily in a computer system to enable our Telesales staff to provide up-to-the-minute stock information, coupled with highly efficient order processing. Our fully equipped Workshop enables us to carry out almost any repair on our premises. We feel sure that you won't be disappointed if you choose Evesham Micros.

AMIGA 500 LOW COST RAM UPGRADE

ONLY £55.00 inc.VAT & delivery

512K RAM/CLOCK EXPANSION FEATURES :

- ☆ Direct replacement for the A501 expansion
- ☆ Convenient On / Off Memory Switch
- ☆ Auto-recharging battery backed Real-time Clock
- ☆ Compact unit size : Ultra-neat design
- ☆ Uses only 4 D-RAMs for High Reliability
- ☆ Low power consumption

RAM expansion without clock, only ... £49.00

3.5" EXTERNAL DRIVES

using Teac / Citizen drive mechanisms

- Suits Amiga 500 or Amiga 1000
- Teac / Citizen drive mechanism
- On / Off switch on rear of drive
- Throughport connector
- 880K Formatted capacity
- Slimline design
- Very quiet
- Long cable for location either side of computer
- Full 12 months guarantee

Superb low price!

£64.95

Including VAT and delivery

SPECIAL DEALS

Amiga 500 512K Batpack includes 4 titles and TV modulator **£359.00**
Amiga 500 1Mb Batpack features our 1Mb Memory Upgrade fitted **£399.00**
Amiga 500 Batpack with Drive includes 2nd 3.5" External Drive **£419.00**
Amiga 500 1Mb Batpack with Drive features our 1Mb Memory Upgrade *plus* 2nd 3.5" External Drive **£459.00**

Amiga B2000 Pack includes XT Bridge Board and 1084D Monitor **£1199.00**
Amiga B2000 32Mb Pack deal as above; includes 32Mb Filecard fitted ... **£1438.00**

External 5.25" 40/80 track switchable drive	£114.95	MiniGEN Genlock Adapter	£95.00
Omega Projects MIDI interface	£29.95	Philips CM8833 colour monitor inc.cable	£249.00
Vortex System 2000 40Mb Hard Disk	£499.00	Contriver Hi-Res replacement Mouse pack	£22.95
Vidi-Amiga	£99.00	Amiga 500 dust cover	£4.95

CBM A590 HARD DRIVE

Good quality 20Mb Hard Disk from Commodore, including its own PSU. Features sockets for up to 2Mb of FAST RAM expansion (see below). 80ms Access time, with up to 2.4Mb/sec transfer rate. Will autoboot when used with Kickstart 1.3. Has built-in cooling fan.

Only £369.00

A590 512K RAM Upgrade kit	£36.00
A590 1Mb RAM Upgraade kit	£70.00
A590 2Mb RAM Upgrade kit	£135.00

RAM upgrades fitted free when bought with A590.

PRINTERS

All prices include VAT/delivery & cable

LC10

Hugely successful 9 pin printer, the Star LC10 provides 4 NLQ fonts (96 print combinations) at 36cps and 144cps draft. Includes 4K buffer and IBM/parallel interface, front panel operation, plus paper parking, allowing single sheets to be used without removing tractor paper.

star

We use and recommend Star printers because they offer an unbeatable combination of features, print quality, reliability and value. When buying, please note we are now offering 12-month on-site maintenance contracts for £5.75 extra.

Only £159.00
Colour version also available,
Only £209.00
Prices include 2 extra black ribbons free of charge.

Star LC24-10 multifont 24pin printer, super low price	£239.00
Star LC24-15 wide carriage version of LC24-10, 200/67cps	£409.00
Star LC15 wide carriage version of LC10, 180/45cps	£329.00
Star LC-10 Mk.II faster version of LC10, 180/45cps	£199.00
Olivetti DM100S 9-pin 10" printer 200/30cps inc. 1 year on-site warranty!	£129.95
Panasonic KXP1081 reliable + sturdy 9pin 10" printer 120/24 cps	£159.00
Panasonic KXP1180 super new feature-packed multifont 9pin 11"	£179.00
Panasonic KXP1124 new good specification multifont 24pin 11"	£269.00
Panasonic KXP1624 wide carriage version of KXP1124	£399.00
Epson LX400 (was LX800) 10" 180/25 cps	£179.00
Epson LQ550 good 24pin 150/50 cps	£349.00
Epson LQ400 new 24pin 180/60 cps with 8k buffer	£229.00

A-MAX

MACINTOSH EMULATOR

Enables Apple Mac and Mac Plus emulation on the Amiga. Cartridge includes socket for connection of Mac Floppy Drive so that Mac disks can be read in directly. Compatible with all current versions of System. Versions available with or without Macintosh 128K ROMS (required).

Without 2 x Mac 128K ROMS £129.00
WITH 2 x Mac 128K ROMS £249.00

5.25" External Drive

Our high quality 5.25" drive is capable of a number of configurations including 40 or 80 tracks (360/720K format). Colour matched to the Amiga, quiet in operation, and includes a throughport connector.

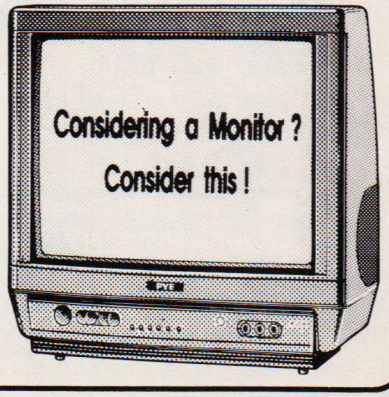
£114.95 including VAT & delivery

PYE 15" FST TV/Monitor

(MODEL 2325)

With its dedicated monitor input, this model combines the advantages of a high quality medium resolution monitor with the convenience of remote control Teletext TV - at an excellent low price !

£249.00
includes VAT, delivery and computer connection lead



ANIMATIX FOR AMIGA
36 THE BRAMPTON CENTRE
WATH-UPON-DEARNE S63 6BB
TEL: (0709) 760151

ALL PRICES INC VAT+DELIVERY

HARDWARE

A500 Batman Pack £365	A500 Batpak +10 Star & Photon Paint £384	A500 Batpak + 1084S £610	A2000 + 10 Star £1035

DISK DRIVES

A1010 Disk Drive	£95.39
Cumana CAX354 3.5"	£95.39
Cumana CAX1000S 5.25"	£126.50

MIDI & GRAPHICS

Easyl A4 Tablet	£286.35
MM3000 Midi I/Face	£24.95
MidiMaster	£34.99

MONITORS

Commodore 1084S	£282.33
Commodore 1900M	£99.99
Mono 12"	£99.99
Philips CM8833	£275.00

PRINTERS

Commodore MPS1230	£212.00
Commodore MPS1250	£144.25
Citizen 120D	£230.00
Epson LX850	£297.00
Micro P MP165++	£230.00
NEC P2200	£408.25
Canon 1080A Inkjet	£540.50

DIGITISERS & SAMPLERS

Futuresound	£84.20
Pro Sound Gold	£73.59
Digiview Gold	£138.45
Superpic	£518.64
Rendale 8802 Genlock	£276.97

JOYSTICKS & CONTROLLERS

Kempston Mouse	£29.95
Marconi Trackball	£59.95
Competition Pro	£14.95
Competition Pro +	£15.95
Navigator	£14.95
Quickjoy III	£12.95
Slik Stik	£6.95
Speedking	£12.95

CABLES & ACCESSORIES

4-Way Adaptor	£5.95
Midi Cable	£2.95
Printer Cable	£11.50
Mouse Mat	£4.95
A550 Power Supply	£62.50

E&OE. Prop M Parr

Cheques payable to ANIMATIX

PROTON SOFTWARE

AMIGA		AMIGA		AMIGA	
Bomber	19.99	Powerdrift	16.99	Kings Quest Triple Pack	25.99
Space Harrier II	16.99	Onslaught	16.99	Dragons Lair (1 Meg)	27.99
Space Ace	27.99	Dragons Lair II	27.99	Leisuresuit Larry I	17.99
Chase HQ	16.99	Cyberball	13.99	Leisuresuit Larry II	25.99
Hard Drivin'	13.99	TV Sports Basketball	22.99	Tank Attack	16.99
Turbo Outrun	16.99	Black Tiger	16.99	Flight Simulator II	26.99
Kick Off	12.99	Chaos Strikes Back	17.99	Western European Scenery Disk	16.99
Batman the Movie	16.99	Conqueror	17.99	Japan Scenery Disk	16.99
Manchester United	16.99	Future Wars	17.99	Hawiian Oddessy Scenery Disk	16.99
Shadow of the Beast	23.99	Dragons Breath	22.99	Jet	32.99
Xenon II	16.99	Balance of Power 1990	16.99	Battlehawks 1942	16.99
Gazza Soccer	16.99	Overlander	13.99	Hillsfar	16.99
Falcon	19.99	Flight Command	22.99	Pro Tennis Tour	16.99
Scrambled Spirits	13.99	War Head	16.99	F-16 Combat Pilot	16.99
Battle Squadron	16.99	Triad 3	18.99	Sword of Twilight	16.99
RAC Rally	16.99	Player Manager	13.99	Chess Player 2150	16.99
Extra Time	9.99	Stryder	16.99	North & South	16.99
Altered Beast	16.99	TV Sports Football	21.99	Light Force	16.99
Robocop	16.99	Xenophobe	16.99	X-Out	16.99
F-29 Retaliator	16.99	Space Ace	27.99	Fun School (Under 6)	13.99
Pacland	6.99	It Came From the Desert (1 Meg)	21.99	Fun School (6-8)	13.99
Pacmania	6.99	Ivanhoe	16.99	Fun School (over 8)	13.99
Double Dragon II	16.99	Test Drive 2	16.99		
Running Man	8.99	Jetsons	17.99		
Chambers of Shaolin	8.99	Lord of the Rising Sun	21.99		
Lost Patrol	16.99	Birdie	16.99		
Populous	16.99	Forgotten Worlds	14.99		
Rainbow Islands	16.99	Grand Prix Circuit	16.99		
Wayne Gretzky	16.99	Jack Nicklaus Golf	16.99		
RVF Honda	16.99	Waterloo	16.99		
Midwinter	16.99	Dungeon Master (1 Meg)	16.99		
Pipemania	16.99	Battle Chess	16.99		
Ghostbusters II	16.99	688 Attack Sub	16.99		
Rocket Ranger	20.99	Police Quest	16.99		
Sim City	21.99	Space Quest II	16.99		
APB	13.99	Space Quest III	24.99		
Fiendish Freddy	16.99				

SPECIAL OFFERS	
Archipelagos	5.99
Staray	5.99
Galaxy Force	6.99
Tin Tin on the Moon	8.99
Warlocks Quest	6.99
Conflict in Europe	5.99
Stir Crazy	5.99
Alien Legion	5.99
Blood Money	9.99
Bad Company	9.99

If the product you're looking for is not here give us a call. 1000's more titles in stock. Orders under £10.00, please add 50p per item p&p. Products in stock usually sent same day.

PRODUCT	COST
TOTAL	

Send to:
PROTON SOFTWARE
ENTERPRISE HOUSE
BLACKHORSE ROAD
LETCHWORTH
HERTS SG6 1HD
Tel: (0462) 686977
Fax: (0462) 673227

PO/Cheques payable to: PROTON SOFTWARE. *New releases sent on day of release.*

DISCOUNT SOFTWARE
FROM MJC SUPPLIES

WORD PROCESSING

PROTEXT V4.2

This must be the most powerful word processor available for the Amiga. Excellent speed and wide range of features make it the only WP to buy. Includes Mail Merge and Spell Checking.

RRP£99.95.....Our Price £64.95

Useable demo disc available - £5.00

SERIOUS SOFTWARE

Publishers Choice	79.95
Digicalc (spreadsheet)	26.95
K Spread II (spreadsheet)	49.95
Home Account	20.95
Personal Tax Planner	28.95
K Data (database)	32.95
Home Office Kit	129.95
Amiga Appetizer	34.95

PRO DATA

The long awaited Database from Arnor, authors of Protext.
Requires 1MB.
RRP - £79.95
OUR PRICE - **£59.95**

BUSINESS SOFTWARE *FROM DIGITA*

System 3	**£37.95**
Cash Book Controller	**£37.95**
Final Accounts	**£21.95**
Cash Book Combo	**£54.95**

PRINTERS

All printers listed have a ten-inch (A4) carriage, are Epson compatible and accept cut sheet or continuous paper. The relevant printer cable is also included free of charge. Delivery is 7-10 days from date of cheque/credit card clearance. For next day (after clearance) delivery add £5.

CITIZEN 120-D

Cheap Epson FX-80 compatible giving a range of text sizes and effects in draft mode, limited sizes and effects in NLQ.

£139.95

PANASONIC KXP-1081

Good print and build quality, very reliable. Offers all the draft mode sizes and effects of the FX-80 compatibles in NLQ as well. Best Value.

£159.95

STAR LC-10

As well built and reliable as the Panasonic. Four different typefaces all available in the full range of sizes and effects. Well worth the little extra.

£179.95

STAR LC-10 COLOUR

All the features of the LC-10 but with the addition of 7 colours in several shades. Uses the Epson JX-80 printer driver from Workbench or your graphics program.

£229.95

STAR LC-24/10

24 pin version of the LC-10. Has 5 typefaces, all usual sizes and effects, two extra effects (Outline and Shadow) and excellent print quality.

£259.95

EDUCATIONAL

Each Fun School has 8 educational games per disc.

Fun School 2 (2-6 years)	13.95
Fun School 2 (6-8 years)	13.95
Fun School 2 (8-12 years)	13.95

The "Discover" range have 6 games per disc

Discover Alphabet (6+ yrs)	15.95
Discover Numbers (6+ yrs)	15.95
Discover Maths (10+ yrs)	15.95

GRAPHICS

Fantavision	29.95
Photon Paint II	68.95
Deluxe Video III	64.95
Deluxe Paint III	59.95

VIDI AMIGA
NTSC Version (300 x 200 res) -£79.95
PAL version (300 x 256 res) - £99.95
VIDI CHROME
Colour upgrade for any Vidi Amiga.
Requires video camera.
£14.95

SOUND

AMAS-Sampler & MIDI Interface	74.95
Master Sound Sampler	34.95
Trilogic Midi interface	34.95
(In, Out, Thru, 2x Out/Thru Switchable)	
Trilogic Stereo Audio Digitiser	34.95
(requires software)	

GAMES

We stock a range of Amiga Games, available mail order or at our premises at discount prices.
Write or call in for latest lists.

ACCESSORIES

A500 Dust Cover	3.95
Mouse Mat	3.95
A500/2000 - Printer Cable	6.95
Quickshot Turbo Joystick	10.95
Competition Pro 5000 J/S	12.95
3.5" Disk Head Cleaner	5.95
Kempston Mouse	29.95

PROGRAMMING

K-Seka (assembler)	34.95
Hisoft Devpac V2	39.95
Hisoft Basic V1.05 (1 meg only)	59.95
GFA Basic 3	49.95
Extend (for Hisoft Basic)	15.95

BOOKS

Amiga For Beginners	10.95
Kickstart Guide	12.95
AmigaDos Ref.Guide	14.95
Amiga Tricks & Tips	12.95
Amiga Basic Inside & Out	18.95
Elementary Amiga Basic	14.95
Amiga Dos (Burgess)	14.95
The C Language (by K&R)	23.95
Pascal Beginners Guide	6.50

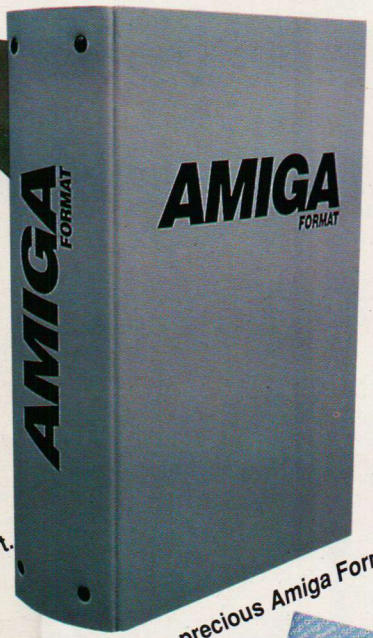
All prices include Postage, Packing & VAT. Please send Cheques/PO's to:

M.J.C. SUPPLIES (AF), 40A Queen Street, Hitchin, Herts SG4 9TS
Tel: (0462) 420847, 421415 or 432897 for enquiries/Credit Card Orders

AMIGA FORMAT MAIL

THE LATEST AND GREATEST PRODUCTS AT THE BEST POSSIBLE PRICES!

1 Gain some credibility in this truly American shirt.

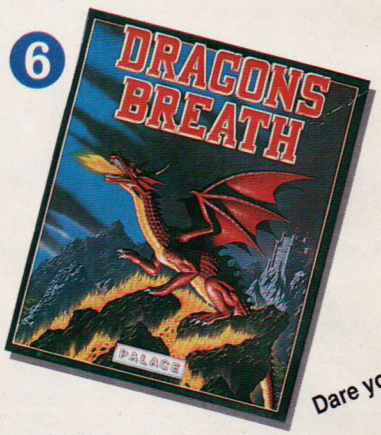


2 Keep your vulnerable, precious Amiga Formats safe.

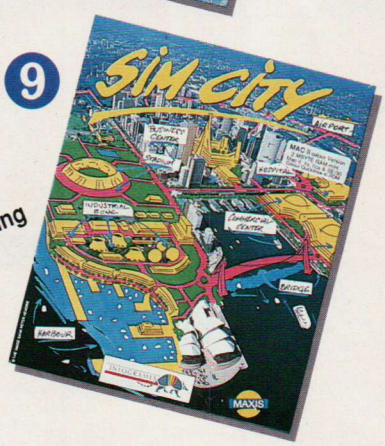
3 War game of the year?.

7 Sound sampling for your Amiga

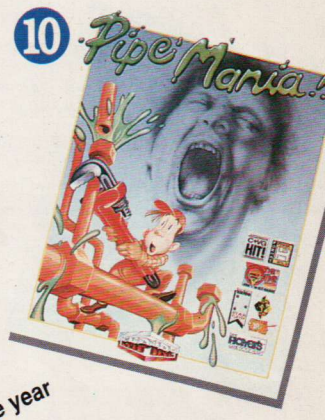
8 Program in 68000 NOW!



6 Dare you take t



9 City games, compulsive playing



10 The most addictive coin - op of the year

11 Brilliant educational software

12

Access VISA

HOTLINE
0485 74011

HOW TO ORDER... JUST MAKE A NOTE OF THE PRODUCT NAME AND ORDER NUMBER AND FILL IN THE ORDER FORM OPPOSITE OR RING OUR HOTLINE NUMBER ON 0458 74011

PRICES INCLUDE POSTAGE, PACKING AND VAT

NO HIDDEN EXTRAS

ORDER

5 Unbelievable value

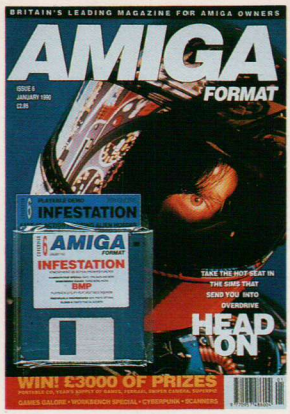
gon's Breath?

FOUR great games in ONE.

Get yourself round these pipes!

SUBSCRIPTION

See Page 118 for our latest subscription offer of FREE software worth £24.95



BACK ISSUES

Want to complete your collection of the ultimate Amiga magazine? Complete with disks, we even pay the postage!

AMIGA FORMAT

ISSUE	PRICE	ORDER NO
ISSUE 1 - 4	SOLD OUT	SORRY!
ISSUE 5	£2.95	AMF05
ISSUE 6	£2.95	AMF06
ISSUE 7	£2.95	AMF07
ISSUE 8	£2.95	AMF08

OR WHY NOT BUY SOME OF THE VERY RARE ORIGINAL *ST/AMIGA* MAGAZINES... HURRY, THERE ARE LIMITED STOCKS!

ST/AMIGA FORMAT

ISSUE	PRICE	ORDER NO
ISSUE 1-10	SOLD OUT, SORRY!	
ISSUE 11	£2.95	AM211
ISSUE 12	£2.95	AM212
ISSUE 13	£2.95	AM213

1 BASEBALL SHIRT

Designed in the USA, this black and white shirt is a must for every Amiga owner (Logo on left breast and centre back)

Description	Price	Order No
Medium	£6.50	AM106
Extra Large	£6.50	AM107

2 AMIGA BINDER

Keep your issues together in this high quality binder with the *Amiga Format* logo printed on the front and spine.

Description	Price	Order No
One binder	£4.95	AM108
Two binders	£9.00	AM109

3 CONQUEROR Rainbow Arts

SAVE £6

Authentic World War II tactical wargaming. Fight your way through massed ranks of enemies tanks. Non-stop action, stimulation and excitement!

Description	Price	Order No
Conqurer	£17.95	AM154

4 MAGNUM 4 Ocean

SAVE £8

A **FOUR** game compilation conssiting of Double Dragon, Batman - The Caped Crusader, Afterburner and Operation Wolf.

Description	Price	Order No
Magnum 4	£21.99	AM155

5 RPS DISK PACK

FREE DISK BOX & CALCULATOR

Buy 20 top quality 3.5 inch disks and receive a **smart disk box** and **disk calculator FREE**

Description	Price	Order No
Disk Pack	£29.95	AM145

6 DRAGON'S BREATH

SAVE £8

Palace. • A cult computer game of using your dragon to conquer villiages and then tax them! "Prepare yourself for some engrossing, entertaining and thoroughly enjoyable playing sessions" **Andy Smith Amiga Format**

Description	Price	Order No
Dragon's Breath	£22.99	AM156

7 MASTERSOUND Microdeal.

SAVE £10

The best sound sampler for your Amiga. As featured on issue 7 cover disk. Complete with cut and paste, fade, volume and other features.

Description	Price	Order No
Mastersound	£29.95	AM153

8 DEVPAC 2 HiSoft.

SAVE £15

Program directly into 68000 assembler language. See the cover disk demo then buy the full product at this remarkable price.

Description	Price	Order No
Devpac	£44.95	AM157

9 SIM CITY Infogrames

SAVE £10

Build a city from scratch, cope with the dramas of earthquakes, etc. Compulsive gameplay. *"Once you're into it you can't get out of it"* **Andy Smith** Issue 6

Description	Price	Order No
Sim City	£19.99	AM147

10 PIPE MANIA Ent. Int.

SAVE £7

See the demo on Issue 9. This superb pipe game has you hooked for ever!

Description	Price	Order No
Pipe Mania	£12.99	AM158

11 RAINBOW ISLANDS

SAVE £7

Ocean. • Paint your world with a rainbow. This brilliant, fun, unusual, addictive game will have you hooked for hours. It certainly had the Amiga Format team begging for more!

Description	Price	Order No
Rainbow Islands	£17.99	AM160

12 FUN SCHOOL 2 Database Software • Bumper packages of educational software for children. Fun School consists of three different suites of eight programs. *" Fun School 2 lives up to both parts of its title. It is fun and your child will almost certainly learn too."* **Steve Carey**

SAVE £7

Description	Price	Order No
Fun School 2		
Under 6 years	£12.95	AM150
6-8 years	£12.95	AM151
Over 8 years	£12.95	AM152

AMIGA FORMAT MAIL ORDER

Name

Address

Postcode

Phone number

Description	Price	Order No

Method of payment (please circle) Access • Visa • Cheque • PO

TOTAL ORDER

● For overseas orders call Trevor for prices on 0458 74011

Credit Card No

Expiry date

Please make all cheques payable to Future Publishing Limited

SEND THIS FORM TO: Trevor Witt, **Amiga Format**, The Old Barn, Freepost, Somerton, Somerset, TA11 7PY

No stamp required if posted in the UK, Channel Islands or the Isle of Man

DISC PRICES TURNED UPSIDE DOWN

200 DS/DD 3.5" Discs
Plus 2 Deluxe
Storage Boxes
only £89.95

300 DSDD 3.5
DISCS
£122.99
inc labels

600 DSDD 3.5
DISCS
£233.99
inc labels

1000 DSDD 3.5
DISCS
£369.99
inc labels

Mass storage
180 capacity
lockable 5.25
stackable box
£19.95

3.5 DS-DD Special Offers

25 DS DD 135TPI 100% ERROR FREE, PLUS deluxe lockable storage box	£18.99
50 DS DD 135TPI 100% ERROR FREE, PLUS deluxe lockable storage box	£33.99
75 DS DD 135TPI 100% ERROR FREE, PLUS deluxe lockable storage box	£47.99
100 DS DD 135 TPI 100% ERROR FREE, PLUS deluxe lockable storage box	£59.99

All 3.5 Discs are certified 100% error free, lifetime warranteed for reliability and performance, and supplied with labels.

5.25 DS-DD Special Offers

25 DS DD 100% ERROR FREE, PLUS deluxe storage box	£12.95
50 DS DD 100% ERROR FREE, PLUS deluxe storage box	£18.95
75 DS DD 100% ERROR FREE, PLUS deluxe storage box	£24.95
100 DS DD 100% ERROR FREE, PLUS deluxe storage box	£29.95

All 5.25 Discs are certified 100% error free, lifetime warranteed for reliability and performance, and supplied with envelopes, labels, w/p tabs.

Mouse Mats
only
£1.99

14" Tilt 'n'
Turn Monitor
Stand
£14.95

5.25 High Density Special Offers

25 HD 1.2MB 100% ERROR FREE, PLUS deluxe storage box	£16.99
50 HD 1.2MB 100% ERROR FREE, PLUS deluxe storage box	£29.99
75 HD 1.2MB 100% ERROR FREE, PLUS deluxe storage box	£42.99
100 HD 1.2MB 100% ERROR FREE, PLUS deluxe storage box	£49.99

All HD 1.2 MEG 5.25 are certified 100% error free, lifetime warranteed for reliability and performance, and supplied with full user sets, labels etc.

3.5 High density Special Offers

10 HD 1.44MB 100% ERROR FREE IN A PLASTIC LIBRARY CASE	£14.99
25 HD 1.44MB 100% ERROR FREE, PLUS deluxe lockable storage box	£34.99
50 HD 1.44MB 100% ERROR FREE, PLUS deluxe lockable storage box	£59.99
100 HD 1.44MB 100% ERROR FREE, PLUS deluxe lockable storage box	£99.99

All HD 3.5 Discs Carry The HD Logo, and are certified 100% error free, lifetime warranteed for reliability and performance, and supplied with labels.

3.5 Head
Cleaner
only
£1.99

Disc-X-Press

What Other
Suppliers
Promise
We Deliver

2 Way Manual Data
Switch Serial or
Parallel
ONLY £9.95

80 Capacity
Stackable boxes
ONLY
£9.95

External Disc
Drives
Ring for latest offer

Universal
Printer Stands
ONLY
£6.95

Access

VISA

Disc-X-Press
101 Burnham Road, Dartford, Kent DA1 5AZ
Tel: 0322 289817

All supplies are subject to availability
All prices inclusive of VAT & Delivery UK only

E/O.E

B.F.P.O. WELCOME

DELIVERED BY hand

TIM SMITH gets to grips with the GeniScan 4000 hand-held scanner from Datel.

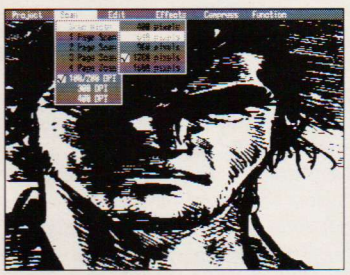
The first thing which leaps out at you with this hand scanner is just how easy it is to use. Fitting the thing takes one 13-amp socket for the power supply, one parallel port for the 25-way connector, a fairly flat surface for the scanning to take place and Jean's your aunty.

You get software which will allow you to manipulate the images in quite complex ways and the hardware itself. We won't go into the power supply (which is no more than a black box) but the rest of the kit deserves some examination.

Logical, Captain

The real work is done by the modest logic chips, which reside in a small plastic case that plugs into the parallel port. Logic-based they might be, but even their Spock-like abilities will not allow them to deal with 4094 of the Amiga's 4096 colours. The Datel Amiga Handscanner is a monochromatic device. But don't let that put you off. To achieve colour scanning would cost a damn sight more than the most decent human beings could afford. A flatbed, colour scanner will cost you anything from a thousand pounds upwards.

What you do get are 'grey scales' rather than a flat, boring, badly-photocopied mono. The grey scaling will produce half tones at sixteen levels of gradation or, if you prefer, a simple two-tone. Both of these formats can be saved in either IFF or RAW form. The former allows you to transfer the captured images over to other soft-



ware such as desktop publishers or paint packages where you can add as many colours as you like.

Head!

The trick, of course lies in capturing the images in the first place and to do this you need to concentrate on the scanning head itself. This is connected to the interface by way of a small 8-way DIN plug. In appearance the scan head bears a striking resemblance to a late '70s idea of an interplanetary scout ship – a kind of rounded-off 'T' shape – upon which you will find four controls.

The brightness is monitored by a thumb-wheel at the rear of the device. While this affects the way you see the image appearing on screen, it also controls the way in which the software defines light from dark. Although

ABOVE: The GeniScan 4000 bears a strange resemblance to a '70s TV spaceship.

ABOVE LEFT: Defining the size of the scan.

it appears to be the least important of the devices at your command, getting it right is imperative if you wish to have a clear image to play around with later.

Next to the brightness control is the Resolution switch. A four way switch, this works in tandem with the software and needs to be set at the same level.

On the side of the scan-head are two more switches: the one nearest the back defines to the software just what type of image you are scanning. You are given four options: three are set at Photo which are, in effect, the grey scale settings. The three different options here are dependent on the quality of the original image you have chosen for scanning. Although the documentation claims that Photo gives you 'newspaper type grey scales of dot density', the final output is going to be only as good as your printer can achieve. The Photo options are basically there for you to pick out a few details and if used properly will make life easier when it comes to touching-up the captured picture.

The final option on this switch is called Letter, but as there is still no way for the scanner to know whether you are running your hand over a picture of your favourite star-person or the collected letters of Boris Yeltsin, what it actually does is provide full monochrome with no scaling. This is the ideal setting for line drawings, simple cartoons or photographs of people you hate and have decided to make look bland when you put the images of them into the Yearbook or 'Wanted' poster.

The final control on the head is modestly called Start. A simple on/off job, this (obviously!) tells the scan-head that you are over the section of image you wish to be scanned.

Softly Software

Four controls leave the scan-head itself feeling light, which is fine by me as it makes long hours of work less arduous. You are not left with just three ways of getting the image right, however. The main power of the package comes with the software.

The Amiga 1000 isn't capable of auto-booting this so have Kickstart at the ready in order to get moving. If you've not got the 1000 then simply whack in the disk and off you go. The first thing you see are some dancing images, Mickey Mouse and the like, which is the product's way of showing off and telling you 'just how easy it is' – once you've become sick and tired of this, click on the left mouse button and on you'll go.

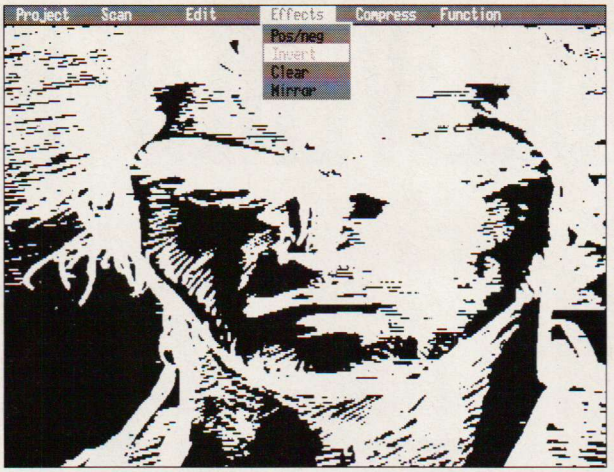
You will know when you are in business as the normal cursor icon changes into one of the scan head. While powering up the green scan light (positioned at the front of the scan-head) will have lit up for no apparent reason, as soon as the software has got itself sorted and is resident in the system, however, this light will soon extinguish and you will be ready for action.

Once everything is running, which might take a couple of attempts as the model used for this review did have a tendency to be petulant and fall over every so often, it's time for the first of many menus to pull on down! Because the bulk of the Amiga's screen is used to display the images themselves, this pull-down menu system was the only really workable option and it serves its purpose effectively enough.

There are six categories available to you in the form of Project, Scan, Edit, Extras (!), Compress and Function. The first thing to do here is bring down the Scan menu and inform the scanner just what width of image you wish to be captured. Five selections are available: 400, 640, 800, 1280 and 1600 pixels wide. Although it is tempting to go for the top whack every time, avoid this temptation. The optimum width is dependent on the quality of the original graphic, so trial and error are your best pals in the early stages of this operation – and most of the others.

Old Buffer

The next step is to set the number of 'pages' or screens you want scanned – from one to four pages. Because images are scanned to a buffer, the ability to scan and store up to four attempts can be a real time-saver. Each page consists of 20,000 bytes of data while the buffer itself allows for ten times as much information, giving 200,000 bytes to play around with in the form of 2.5 screens wide by four deep. Screen memory and buffer memory are independent, which makes re-doing cock-ups that bit easier.



ABOVE: Reversing an image out from positive to negative is extremely easy.

RIGHT: Similarly, the software makes it easy to cut out and paste in different images, to provide a collage effect.

Once you have decided how many pagers you wish to scan it's time to get into details. Scan density is set from 100/200, 300 or 400 dots per inch and these settings have to be tied into those which you set on the scan-head itself. There is scope for experimentation by not doing so but only if you're really into fuzzy images with little definition. 400 dpi is no mean feat, by the way, and does provide you with some quite dapper-looking scans for later use. The company claim 95% accuracy in scanning with the 400 dpi.

Once you're all set up it's time to get going: in fact once you have selected the number of pages you require, the green light on the scan head springs back into action and it's down to you to press the start button.

Fiddle About

Don't use glossy surfaces, my old blind, deaf and dumb servant used to tell me, and she was right. Glossy images just bounce the light back up the hooter of the scan-head so, if you can, photocopy first or use matt images to begin with. The scanning itself takes little time and you don't have to have a hand steadier than Maradonna's to achieve clear results. Happily the scan-head is light and better still while a completely flat surface is best the scanner can cope with a normal desktop.

Once you are happy with the quality of the image on screen you can either save it direct to disk for later transfer or you can use the software's built-in editing tools. These include Cut, Copy, Paste, Mix and Brush. The two options can prove very effective by allowing you to paint a captured picture in full or part (just keep your finger on the mouse button) on top of other images, or to integrate a Letter with a Photo. Cut and Copy are straightforward in application, allowing you to tidy up your graphics and save data to the buffer for later use: for example (and if copyright allowed) you could put John Major's head on the body of Maynard Keynes. On top of this lot there is also the essential Undo command.

Effects abound but get boring after a while – there are only so many times you will want to see a black and white picture turn upside down (Invert), from left to right(mirror) or turned from black and white to white and black(pos/neg). You'll probably dabble here for a while before hoiking the scan into some beefier program for a real working over.

Basically, the software does the business effectively enough but with no great flair. You do have a deal of access to the buffer itself which is a boon for long hauls of work say, for example, when putting together a fanzine. The Compression facilities allow you to squash buffered information as well as that of the files which you are editing – in effect it is a 'size to fit' option which is rather lacking in any fine tuning.

Conclusion

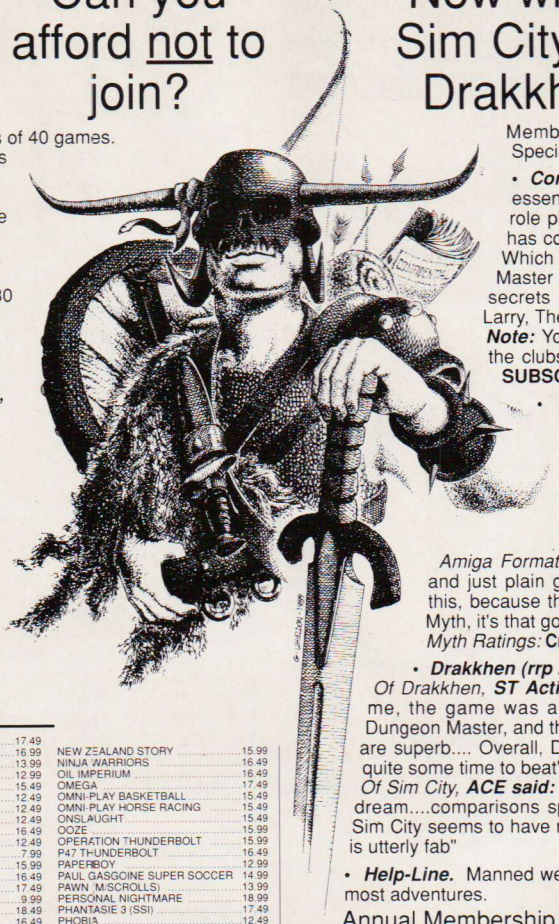
Overall the Datel (or GeniScan as it comes to be known half-way through the rather flimsy manual) is a workmanlike tool. The hardware is light, easy to use and capabable of achieving some excellent results once you have worked out the scaling, angling of the head and equation of image quality to scan requisites. The manual could have done well to give some workable examples with the occasional screen shot but there you go, trial and error.

The software has been pepped up since version 1 (you now get the 400 dpi density) and once you've found your way around it will also produce some extremely effective visual delights. However, the main worth of the system lies in its ability to export images to sofware of greater editing strengths if you have access to such things. Finally, don't think that the images you get on screen will be matched by the printed effort. A nine-pin dot matrix printer will probably not do a great deal of justice to them and sadly there is no way of finding this out as no print function is included.

GENI-SCAN 4000 SCANNER
£169.99 ■ All Amigas ■ Datel Electronics 0782 744707

Special Reserve

Can you afford not to join?



Now with Sim City or Drakkhen

Official Secrets

- Bi-monthly ***Buyer's Guides,*** each with reviews of 40 games.
- ***Release Schedules,*** issued with each Buyers Guide, with up-to-the-minute release information.
- ***Catalogue, Membership Card and Folder***
- ***Fast despatch*** of stock items, normally the day after receipt of order. Most lines in stock.
- Games sent ***individually*** by ***1st class post.*** Most fit through your letter-box.
- ***7-day hotline***, until 8pm weekdays, 10 to 5.30 Saturdays, 11 to 5 Sundays.
- ***Written confirmation of order*** (with receipt).
- ***Instant refunds*** on request, if there is a delay.
- ***No commitment, no obligation to buy.***
- ***The best games, carefully selected, available at extraordinary prices.***

All for just **£5.00**
Annual membership.

We're miles cheaper than elsewhere. Below are a selection of offers at prices you might not believe. You can buy games at the same time as joining - or join now and select from our full catalogue. All items advertised are only for sale to members and are subject to availability. *Note: Upgrade to Official Secrets is offered to members of Special Reserve.*

Members of Official Secrets get all the benefits of Special Reserve **plus:**

- ***Confidential.*** Our 32 page bi-monthly magazine is essential reading for those interested in adventures or role playing games. Written by experts, *Confidential* has covered everything from How to Host a Murder to Which F16 Flight Simulator? Our agents, led by the Master Spy known as "The Boss Upstairs", seek out the secrets of RPG's, FRP's, MUG's, PBM's, Leisure Suit Larry, The Russians, Elvira..... and more.

Note: You can subscribe to Confidential without joining the clubs for **£15.00** (UK) by entering **"CONFIDENTIAL SUBSCRIPTION"** on the order form.

- ***Myth.*** Written by Magnetic Scrolls, authors of The Pawn, exclusively for members of Official Secrets. Myth is a small adventure set in Ancient Greece. In it you'll meet The Ferryman, cheat Death and face the nine-headed Hydra. Myth includes the famous Magnetic Scrolls parser and graphics and is included in the price of membership.

Amiga Format said: "An excellent adventure... witty, cunning and just plain good fun! If you liked Fish! you'll probably like this, because they're very similar in style: you may even prefer Myth, it's that good!"
Myth Ratings: **Crash 91%, CU 90%, Amiga Format 87%, TGM 85%**

- ***Drakkhen (rrp 29.99) or Sim City (rrp 29.99).***

Of Drakkhen, ***ST Action said:*** "Drakkhen really impressed me. For me, the game was a subtle cross between my all-time favourite, Dungeon Master, and the SSI fantasy role-playing games. The graphics are superb.... Overall, Drakkhen is an excellent RPG, one that will take quite some time to beat" and ***Zero said:*** "Absolutely brilliant".
Of Sim City, ***ACE said:*** "Sim City is a politician's - or a gamesplayer's - dream....comparisons spring immediately to mind with Populous... but Sim City seems to have much more depth...." and ***C&VG said:*** "Sim City is utterly fab"

- ***Help-Line.*** Manned weekdays until 8pm and Sundays with solutions to most adventures.

Annual Membership **£27.99** with 6 issues of Confidential, Myth, Drakkhen or Sim City, Help-Line **and membership of Special Reserve.**

Amiga Software

3D POOL	15.49	FIENDISH FRED'S BIG TOP FUN	17.49	NEW ZEALAND STORY	15.99
A.P.B	12.99	FIRE BRIGADE - KIEV (1 MEG)	16.99	NINJA WARRIORS	16.49
ALTERED BEAST	15.99	FISH! (M/SCROLLS)	13.99	OIL IMPERIUM	16.49
ANARCHY	14.99	FOOTBALL DIRECTOR 2	12.99	OMEGA	17.49
AQUANAUT	14.49	FULL METAL PLANETE	15.49	OMNI-PLAY BASKETBALL	15.49
ARKANOID	12.99	FUN SCHOOL 2 (2-6)	12.49	OMNI-PLAY HORSE RACING	15.49
ARTHUR (INFOCOM)	19.99	FUN SCHOOL 2 (6-8)	12.49	ONSLAUGHT	15.49
BACKGAMMON PROFESSIONAL	12.99	FUN SCHOOL 2 (8+)	12.49	OOZE	15.99
BAD COMPANY	15.99	FUTURE WARS	16.49	OPERATION THUNDERBOLT	15.99
BALANCE OF POWER 1990	15.49	GALDREGON'S DOMAIN	12.49	P47 THUNDERBOLT	16.49
BALLYHOO (INFOCOM)	16.49	GAUNTLET 2	7.99	PAPERBOY	12.99
BARBARIAN 2 (PALACE)	18.49	GHOSTBUSTERS 2	15.99	PAUL GASGOINE SUPER SOCCER	14.99
BARDS TALE 1	7.99	GHOULS 'N' GHOSTS	16.49	PAWN (M/SCROLLS)	13.99
BARDS TALE 2	16.49	GIN AND CRIBBAGE	17.49	PERSONAL NIGHTMARE	18.99
BATMAN THE MOVIE	15.99	GNOME RANGER (LEVEL 9)	9.99	PHANTASIE 3 (SSI)	17.49
BATTLE OF BRITAIN	19.49	GO PLAYER PROFESSIONAL	18.49	PHOBIA	12.49
BATTLECHESS	16.49	GOLD RUSH! (SIERRA)	16.49	PIRATES	15.99
BATTLEHAWKS 1942	16.49	GRAND PRIX CIRCUIT	16.49	PLANET BUSTERS	15.49
BATTLETECH (INFOCOM)	16.49	GRAVITY	16.49	PLANETFALL	24.99
BEACH VOLLEY	15.99	GREG NORMAN'S ULTIMATE GOLF	16.99	PLAYER MANAGER	12.49
BEYOND ZORK (INFOCOM)	24.99	GRIDIRON (U.S FOOTBALL)	15.49	POLICE QUEST 1 (SIERRA)	15.99
BLACK TIGER	16.49	GUILD OF THIEVES (M/SCROLLS)	13.99	POPULOUS	15.49
BLADE WARRIOR	15.99	GUNSHIP	15.99	POPULOUS PROMISED LANDS	7.99
BLOOD MONEY	14.49	HARD DRIVIN'	12.99	POWER DRIFT	12.49
BLOODWYCH	15.49	HARLEY DAVIDSON	15.49	POWERDROME	16.49
BLOODWYCH DATA DISK	9.99	HILLSFAR (SSI)	17.49	PRO TENNIS TOUR	16.49
BOMBER	18.49	HITCH HIKERS GUIDE (INFOCOM)	39.99	PROTEXT WORD PROCESSOR	64.99
BOMBER MISSION DISK	10.49	HOLLYWOOD HIJINX (INFOCOM)	24.99	PUBLISHERS CHOICE DTP (KIND WORDS 2, PAGESETTER 1.2, ARTIS'S CHOICE, CAL FONTS, LASER SCRIPT) (1 MEG)	59.99
BRIDGE PLAYER 2150 GALACTICA	18.49	HONDA RVF 750	15.49	QUEST FOR THE TIMEBIRD	16.99
BUGGY BOY	8.99	HOUND OF SHADOW	16.99	QUESTRON 2 (SSI)	17.49
C-LIGHT (3-D ANIMATION + DRAW)	31.49	INDIANA JONES ACTION	11.99	RAINBOW ISLAND	15.99
CABAL	15.49	INDIANA JONES ADVENTURE	16.99	RED LIGHTNING (SSI)	19.99
CHAMBERS OF SHAOLIN	14.99	INFESTATION	14.99	RICK DANGEROUS	15.49
CHASE H.Q	15.99	INFIDEL (INFOCOM)	17.49	ROBOCOP	15.49
CHESS PLAYER 2150	15.99	INTERPHASE	15.99	ROCK 'N' ROLL	12.99
CHESSMASTER 2000	15.49	IRON LORD	15.99	SCAPEGHOST (LEVEL 9)	12.49
CHRONOQUEST 2	17.49	IT CAME FROM THE DESERT (1 MEG)	18.49	SCRABBLE DE LUXE	12.99
COLLOSUS CHESS X	15.49	I.C.F.T.D. DATA DISK	10.49	SEASTALKER (INFOCOM)	19.99
COLORADO	15.99	JACK NICKLAUS GOLF	16.49	SHADOWGATE	15.99
CONTINENTAL CIRCUS	11.99	JIG SAW	12.99	SHERLOCK (INFOCOM)	24.99
CORRUPTION (M/SCROLLS)	13.99	JINXTER (M/SCROLLS)	13.99	SHINOBI	12.99
CUTTHROATS	16.49	JOURNEY (INFOCOM)	19.99	SHOOT 'EM-UP CONSTR' KIT	18.49
CYBERBALL	12.99	KEEF THE THIEF	17.49	SIDEWINDER	7.49
CYCLES	15.99	KENNY DALGLISH SOCCER	12.49	SILKWORM	12.99
DAMOCLES	15.49	KICK OFF	12.49	SIM CITY TERRAIN EDITOR	9.99
DATA STORM	12.49	KICK OFF EXPANSION DISK	7.49	SPACE ACE	27.49
DAY OF THE VIPER	16.49	KIND WORDS 2.0 (W/PROCESSOR)	29.99	SPACE QUEST 1 (SIERRA)	16.49
DEBUT (PLANET SIMULATION)	15.49	KINGS QUEST 1, 2 & 3 (SIERRA)	21.49	SPACE QUEST 2 (SIERRA)	16.49
DEJA VU	15.49	KINGS QUEST 4 (SIERRA)	21.49	SPACE QUEST 3 (SIERRA)	21.49
DEJA VU 2	15.49	LANCELOT (LEVEL 9)	13.49	SPACE ROGUE	17.49
DELUXE MUSIC CONSTR SET	46.47	LASER SQUAD	12.99	SPELL BOOK (4-6 YEARS)	13.49
DELUXE PAINT III	51.49	LAST NINJA 2	15.99	SPELL BOOK (7+ YEARS)	13.49
DEMONS WINTER (SSI)	17.49	LEADERBOARD BIRDIE	16.49	SPELLBREAKER (INFOCOM)	24.99
DOUBLE DRAGON	12.99	LEISURE SUIT LARRY 1 (SIERRA)	18.99	STAR BLAZE	16.49
DOUBLE DRAGON 2	13.49	LEISURE SUIT LARRY 2 (SIERRA)	21.49	STAR COMMAND (SSI)	19.99
DRAGON'S LAIR (1 MEG)	28.49	LEISURE SUIT LARRY 3 (SIERRA)	21.99	STAR WARS TRILOGY	15.99
DRAGONS BREATH	18.99	LIFE AND DEATH	15.49	STARCROSS (INFOCOM)	24.99
DRAGONS OF FLAME (SSI)	17.49	LIGHT FORCE (R-TYPE		STARFLIGHT	16.99
DRIVING FORCE	16.49	VOYAGER, BIO-CHALLENGE, IK+)	15.99	STEVE DAVIS SNOOKER	12.49
DUNGEON MASTER (1 MEG)	15.49	LIVERPOOL	11.99	STRIDER	16.99
DUNGEON MASTER EDITOR	7.49	LOMBARD RAC RALLY	14.99	STRYX	12.49
DUNGEON QUEST	16.49	LURKING HORROR (INFOCOM)	24.99	STUNT CAR RACER	15.99
DYNAMIC DEBUGGER	16.49	MAGNUM 4 (COMPILATION)	18.99	SUPER CARS	13.49
DYNAMITE DUX	15.99	MANIAC MANSION	16.99	SUPER LEAGUE SOCCER	15.49
ELVIRA - MISTRESS OF THE DARK	19.49	MATRIX MARAUDERS	12.49	SUPER WONDERBOY	15.99
ENCHANTER (INFOCOM)	18.49	MAVIS BEACON TEACHES TYPING	17.99	SWITCHBLADE	13.49
ESCAPE FROM SINGE'S CASTLE	28.49	MICROPROSE SOCCER	15.99	SWORDS OF TWILIGHT	16.49
F16 COMBAT PILOT	15.99	MIDWINTER	15.99	TALESPIN ADVENTURE CREATOR (1 MEG)	18.99
F16 FALCON	18.49	MIND FOREVER VOYAGING	19.99	THE COLONY	17.49
F29 RETALIATOR	15.99	MOONMIST (INFOCOM)	19.99	THE LOST PATROL	15.99
FEDERATION OF FREE TRADERS	19.49	MUSIC X	124.99	THEME PARK MYSTERY	15.99
FERRARI FORMULA 1	16.49	NEVER MIND	12.49	THINGS TO DO WITH NUMBERS	13.49
				THINGS TO DO WITH WORDS	13.49
				TIME	18.99
				TOWER OF BABEL	16.49
				TRIAD VOL2 (MENACE, BAAL, TETRIS)	14.99
				TRIVIAL PURSUIT	12.99
				TURBO OUTRUN	16.49
				TV SPORTS BASKETBALL (CINEMAWARE)	18.49
				TYPHOON THOMPSON	12.99
				UMS - UNIVERSAL MILITARY SIMULATOR	15.99
				UMS CIVIL WAR DISK	9.49
				UMS VIETNAM DISK	9.49
				UNINVITED	15.49
				UNTOUCHABLES	15.99
				VETTE (CORVETTE)	18.49
				VIRUS	12.49
				WAR IN MIDDLE EARTH	15.49
				WARHEAD	15.99
				WAYNE GRETZKY HOCKEY	15.99
				WEIRD DREAMS	15.49
				WILD STREETS	15.99
				WINDWALKER	17.49
				WISHBRINGER (INFOCOM)	19.99
				WITNESS (INFOCOM)	19.49
				WORKBENCH 1.3	13.49
				X-OUT	13.49
				XENOMORPH	15.49
				XENON II, MEGABLAST	15.49
				ZORK 1 (INFOCOM)	16.49
				ZORK TRILOGY (INFOCOM)	29.99
				ZORK ZERO (INFOCOM)	19.99

Sony 3.5" DS/DD 69p

Solution Books

BARDS TALE 1	3.99
CORRUPTION	2.50
DUNGN MASTER	2.50
FISH! SOLUTION	2.50
GOLDRUSH	6.99
GUILD OF THIEVES	2.50
HILLSFAR	7.99
HITCHIKERS GUIDE	7.99
JINXTER	2.50
KINGS QUEST 1,2,3 &4	10.99
LEISURE SUIT LARRY 1	6.99
LEISURE SUIT LARRY 2	6.99
MANHUNTER NEW YORK	6.99
PAWN	2.50
POLICE QUEST 1	6.99
POLICE QUEST 2	6.99
SHADOWGATE	2.50
SPACE QUEST 1	6.99
SPACE QUEST 2	6.99
SPACE QUEST 3	6.99

Amiga Specials

ADVENTURE CONSTRUCTION KIT	11.99	MENACE	6.99
ARCHIPELAGOS	6.99	NIGEL MANSELL GP	4.99
AUSTERLITZ	11.99	NORTH AND SOUTH	10.49
BAAL	6.99	PACLAND	6.49
BALLISTIX	6.99	PACMANIA	6.99
BATTLE SQUADRON	12.49	PASSING SHOT (TENNIS)	8.99
BLACK CAULDRON	7.99	PHOTON PAINT	6.49
CAPTAIN BLOOD	8.49	PURPLE SATURN DAY	7.49
CARRIER COMMAND	7.99	REAL GHOSTBUSTERS	7.49
CHAMP FOOTBALL	4.99	ROCKET RANGER	8.99
CHRONO QUEST	9.49	RUNNING MAN	8.49
CONFLICT EUROPE	6.49	SHADOW OF THE BEAST	12.99
DEFENDER OF THE CROWN	8.49	SHOGUN (INFOCOM)	15.49
DRAGON NINJA	9.49	SIM CITY	14.99
DRAKKHEN	14.99	SKYCHASE	5.99
EDDIE EDWARDS SKI	6.49	SKYFOX	5.99
ELIMINATOR (1.2)	5.49	SPACE HARRIER 2	10.99
ELITE	9.99	SPEEDBALL	6.49
EYE OF HORUS	6.99	STARGLIDER	5.49
F16 FALCON MISSION	7.99	STARGLIDER 2	6.99
F/TBALL MANAGER 2 PLUS EXPANSION	10.99	SWORD OF SODAN	8.49
HIT DISKS VOLUME 2	8.49	TEENAGE QUEEN	8.49
HOSTAGES	7.49	TETRIS	4.49
HYBRIS	7.49	THE PRESIDENT IS MISSING	5.99
KARTING G.PRIX	4.49	THREE STOOGES	6.99
KING OF CHICAGO	8.49	THUNDERBIRDS	5.99
KINGS QUEST 2	6.99	TIME & MAGIK	6.49
KRISTAL	8.99	TURBO CUP	6.49
KULT	7.99	TV SPORTS FOOTBALL	11.99
LEATHERNECKS	5.99	VIXEN	4.49
LORDS OF THE RISING SUN	9.99	VOYAGER	9.49
		WATERLOO	10.49
		WHO FRAMED ROGER RABBIT	7.49

SHADOW OF THE BEAST 12.99

INNEVITABLY, SOME OF THE ABOVE GAMES MAY NOT YET BE RELEASED. ALL GAMES ARE DESPATCHED AS SOON AS POSSIBLE. SALES LINES **0279 600204.** PLEASE NOTE THAT THERE IS A SURCHARGE OF 50P PER GAME FOR ORDERS PLACED BY TELEPHONE.

Order Form

We only supply club members
Non-members please add the membership fee

Name _____
Address _____
_____
Post Code _____ Phone No. _____
Computer _____ *5.25"/*3.5"/*3.0"/*TAPE

Payable to: Special Reserve or Official Secrets
P.O. Box 847, Harlow, CM21 9PH

Special Reserve and Official Secrets are trading names of Inter-Mediates Ltd.
Reg. Office: 2 South Block, The Maltings, Sawbridgeworth, Herts CM21 9PG.
Registered in England Number 2054713. VAT reg. no. 424 8532 51

Existing members please enter your membership number
Special Reserve membership £5 UK, £6 EEC, £7 World or
Official Secrets membership £27.99 UK, £32 EEC, £36 World
with Drakkhen and Myth ☐ or with Sim City and Myth ☐ £ _____

Item _____ £ _____
Item _____ AMFORM £ _____

TOTAL £ _____

Credit card expiry date _____

*CHEQUE/*POSTAL ORDER/*ACCESS/*VISA
(Including Connect, Mastercard, Eurocard, Switch etc)
* Delete where applicable

Overseas orders must be paid by credit card
Prices include UK & EEC Post and Packing
World orders please add £1.00 per item
For blank disks add 10% EEC or 25% World

DATAPLEX

10 Petersfield Avenue, Slough,
Berkshire SL2 5DN
Tel 0753 35557

All prices excluding VAT and delivery

Access VISA

AMIGA HARDWARE

New Amiga Batman Pack.....£317.00
Includes:
DPaint II
Batman The Movie
F18 Interceptor
New Zealand Story
TV Modulator
while stocks last
New Amiga Batman Plus 5 GamesPack Plus Joystick £345.00

AMIGA ACCESSORIES

A501 - 512K Ram + clock	99.00
TV Modulator	10.00
Mouse Mat	4.00
Amiga to Philips Lead	10.00
Amiga to Printer Lead	10.00
Quickshot II/Stick	10.00

DATAPLEX DRIVES

1MB 3.5" External Drive	68.00
1MB 3.5" Internal Drive	63.00
1MB 5.25" External Floppy Drive	95.00

NEW AMIGA CLASS OF '90'S

Including:
Art & Design feature, Word Processing, Desk-Top Publishing, Spreadsheet, Music, Logo and BBC Emulation ..429.00

PHILIPS MONITORS

CM8833 14" RGB/CVBS mon	199.00
CM 8833 14" RGB/CVBS mon (including cables)	219.00

PRINTERS

Amstrad LQ3500 DI	189.00
Amstrad DMP4000	175.00
Amstrad LQ5000 DI	295.00
Brother HR20 Daisywheel	269.00
Brother HR40 Daisywheel	688.00

DOT MATRIX RANGE

Citizen 120D	115.00
Citizen 180E	127.00
New 24pin swift 24	255.00
Colour upgrade for swift	42.00

All Citizen printers come with 2 year warranty

Epson LX400	139.00
Epson LX850	182.00
Epson FX850	310.00
Epson FX1060	410.00
Epson LQ400	215.00
Epson LQ500	249.00
Epson LQ550	289.00
Epson LQ850	445.00
Epson LQ860	525.00
Epson LQ1060	654.00

HEWLETT PACKARD

Thinkjet	265.00
Quietjet	343.00
Quietjet+	412.00
Deskjet	443.00
Deskjet +	568.00
Paintjet	729.00
Rugged Writer	865.00

All Hewlett Packard printers come with 12 months on site warranty

Star LC10 mono	135.00
Star LC10 Colour	168.00
Star LC24-10	225.00
NEC P2 +	245.00
NEC P6 + 80 character	389.00
NEC P7 136 character	523.00
Colour upgrade kit	69.00
Panasonic KXP 1081	119.00
Panasonic KXP1124	219.00
Sheetfeeder	89.00
Panasonic KXP1180	144.00
Panasonic KXP 1592	253.00
Panasonic KXP1595	319.00
Panasonic KXP1540	404.00

NEW MANNESMANN TALLY LAUNCH OFFER

MT81 (dot matrix)	115.00
Sheetfeeder	62.00
Serial I/F	35.00

RIBBONS

KXP1081/1090/1/2	4.00
DMP 2000/3000/3160	2.80
DMP 4000	4.40
PCW 8256/LQ3500	4.50
Panasonic 3131/MP26	4.40
FX800/RX/MX/FX80	3.15
FX1000/FX/RX100	4.40
NL 10	4.40
LQ500/800/850	4.40
LC10	4.40
NEC	5.00

Professional Repairs Carried Out.

ONCE BYTTEN®

59 Swanley Road
Welling
Kent DA16 1LL

Tel: 01-304 2631

THE TRADE - IN POST

FAX 01-304 7214

THE BEST DEALS ON THE BEST HARDWARE

COMPUTERS

Amiga A500 Batman Bundle with Modulator, Mouse & S/Ware	£369.00
Amiga B2000 Computer only REV 6.2 or higher	£959.00
Amiga B2000/XT B/Board/20MbHDD/1084 Monitor	£1450.00
Amiga B2000/AT B/Board/20MbHDD/1084 Monitor	£1950.00
Amiga B2000/AT B/Board/40MbHDD/1084 Monitor	£2215.00
Amiga B2000/68030&68882 28Mhz	£1859.00

All other combinations available. Ring for pricing on your Spec.

DISC DRIVES

NEC 3.5" External Drive with Switch & Through Port	£69.95
NEC 3.5" Internal Drive (2000/3000)	£62.50
NEC 5.25" External Drive 40/80	£129.00
Seagate ST157N-1 48Mb 28ms Bare SCSI Drive	£299.00
Quantum 40Mb 19/11ms Bare SCSI Drive	£399.00
GVP Hard Card with 40mb Quantum 19/11ms	£525.00
GVP Hard Card with 80mb Quantum 19/11ms	£789.00
GVP Hard Card with 40mb Quantum & 2Mb RAM	£779.00
GVP Hard Card with 80mb Quantum & 2Mb RAM	£999.00
GVP 40Mb Quantum for A500 A/B 4Mb RAM (0K Fitted)	£699.00
GVP 40Mb Quantum for A500 with 4Mb RAM (2Mb Fitted)	£889.00
GVP SQ44 Removable Hard Disc with Controller & Cart 44Mb	£839.00
GVP WT150 Tape Streamer 150Mb SCSI with Cart	£599.00

MEMORY

GVP A2000-8/0 8Mb RAM Board with SCSI HDD Controller	£275.00
1Mb Simms for above (2 for every 2Mb)	£95.00
Microbotics 8-Up 8Mb RAM Board 2MB Fitted	£299.00
1Mb DIP for above (16 for every 2Mb)	£9.50
M-501 512K Expansion for A500	£69.95
Commodore A501 Official A500 Expansion	£99.00

SOFTWARE

X-Copy II with Hardware Interface - 'The best'	£29.95
X-Copy II with NEC Disc Drive & Interface	£89.95

Coming Soon - 'The First Amiga Cartridge' Phone for details

WAFFLE

All prices include VAT at 15%. Export orders welcome please divide by 1.15 to get VAT FREE PRICE. Carriage: UK - Computers/Monitors/Printers £5 Post, £10 Courier.
Overseas Please ring or fax for quote.

Access VISA

RAMSOFT

AMIGA & ST SPECIALISTS

UNIT 1 DRAKE HOUSE
160 DRAKE STREET
ROCHDALE, LANCS
OL16 1PX
TEL: 0706 43519

* A500 BAT PACK *

A500, TV Modulator, Deluxe Paint II. Interceptor. New Zealand Story, & Batman - The Movie

***** £359.00 *****

A500 BAT PACK +

This Pack as above Plus Ten Star Pack.

1: Amegas, 2: Art of Chess, 3: Barbarian, 4: Buggy Boy , 5: Ikari Warriors 6: Insanity Flight, 7: Mercenary Comp, 8: Terrorpods, 9: Thundercats, 10: Wizball.

R.S. PRICE ! **£379.00**

Plus Photon Paint II * Only £389 *

COMMODORE 1084 £229.00
PHILIPS CM 8833 ! £249.00
All Monitors Include Leads!

Class of 90's Now in stock Only £519

MONITOR PACK.
Buy any pack & we will offer a Philips CM8833 **FOR ONLY £239 inc lead**

NAKSHA MICE.....ONLY £38.00
CONTRIVER MICE ONLY £26.00
AMIGA MICE.....ONLY £36.00

PRINTERS

STAR LC 10 MONO	ONLY £159
STAR LC 10 COL	ONLY £199
PANASONIC KXP1124	ONLY £259

PRINTER RIBBONS
ALL MAKES AVAILABLE, LOW PRICE
EG: STAR LC-10 MONO £4.49.
Col - £7.50

ALL OUR PRINTER PRICES ARE INCLUSIVE OF LEADS

RAM Expansion, inc. Clock & Switch...£69.95...*...3.5" External Drive...£75.00
TDK 3.5" Disks X10...£12.00...*...Posso 150 Cap Disk Box...£18.00
LC10 Dust Cover...£8.50...*...Monitor Cover...£9.50...*...A500 Cover...£7.00
Please Call for prices on items not listed

ACCESS VISA & STYLE WELCOME

Please note, all our prices include VAT & Courier Delivery.
All hardware items despatched within 48 hrs, dependent on availability & cheque clearance, prices subject to change without prior notice at any time. Personal callers welcome.
We are open from 09.00-17.30 Monday to Sat. E & OE.

RAMSOFTS BOOK SHOP

Amiga DOS Quick Reference (Abacus)	£9.95
Motorola 68000 Programmers Ref Man (Motorola)	£9.95
Amiga Desktop Video Guide (Abacus)....NEW!	£16.95
Amiga for Beginners (Abacus)	£12.95
Kids and the Amiga (Compute!)	£14.95
Elementary Amiga BASIC (Compute!) (D)	£14.95
Amiga Machine Language (Abacus) (D)	£12.95
Amiga Programmers Guide (Compute!)	£14.95
Amiga DOS Reference Guide (Compute!)	£14.95
Amiga Tricks and Tips (Abacus) (D)	£14.95
Inside Amiga Graphics (Compute!) (D)	£14.95
Amiga C for Beginners (Abacus) (D)	£14.95
Amiga Applications (Compute!) (D)	£14.95
First Book of the Amiga (Compute!) (D)	£14.95
Amiga DOS - Inside & Out (Abacus) (D)	£16.95
Advanced Amiga BASIC (Compute!) (D)	£16.95
Computer Viruses - A High Tech Disease (Abacus - NEW!)	£16.95
Amiga Users Guide to Graphics, Sound, Telecom (Bantam)	£16.95
Amiga 3D Graphics Programming in BASIC (Abacus - NEW!) (D)	£17.95
Amiga Machine Lang Programming Guide (Compute!) (D)	£17.95
Using Deluxe Paint II (Compute!)	£17.95
Learning C - Graphics on Amiga & Atari ST (Compute!) (D)	£17.95
Amiga BASIC - Inside & Out (Abacus) (D)	£18.95
Amiga Microsoft BASIC Programmers Guide (Scott-Foreman)	£18.95
Inside the Amiga with C (Sams) Special Offer!	£10.00
Amiga DOS Manual (Bantam)	£22.95
Programming the 68000 (Sybex)	£22.95
Amiga Disk Drives - Inside & Out (Abacus) (D)	£24.95
Programmers Guide to the Amiga (Sybex)	£24.95
Amiga Programmers Handbook (Sybex)	£24.95
Amiga Programmers Handbook, Vol 2 (Sybex)	£24.95
Amiga Hardware Reference Manual:- A/W...NEW*	£21.95
Amiga ROM Kernal Reference Manual. Libs/Devs. A/W...NEW..*	£29.95
Amiga ROM Kernel Ref. Man.: Includes & Autodocs (A.W. NEW!)	£29.95
Amiga C for Advanced Programmers (Abacus - NEW!)	£29.95
Amiga System Programmers Guide (Abacus) (D)	£29.95
Amiga Graphics Inside & Out (Abacus - NEW) (D)	£29.95

Books Marked (D) have a Disk Available, £9.95...Disk may be purchased separately.

Addison/Wesley Special:- Set of Technical Reference Manuals Only £70.00..*

******** RAMSOFT EXTRAS ********

SOFTWARE SPECIALS

Singes Castle - £32.00. **Photon Paint 2: - £25.00** Black Magic:-£9.99
We will give upto 50% Discount on most items of software. Items not in stock are available next day, subject to release schedule.
*** Please ring for price on other titles.. All prices are inclusive of postage

GAME Busters

A veritable flood of letters has been arriving for Gamebusters this month – it was hard to find the Amiga underneath them all. Eyes down for a good cheat with **MAFF EVANS**.

SPACE ACE

If we've had one letter on this then we've had a letter on this. The number of letters sent in for *Space Ace* must reach well into double figures. Obviously it would be impossible to list everyone who sent in the solution, but thanks to you all anyway.

screen 1 ▲
– OUTSIDE BORF'S SHIP
A classic case of RTFM here. If you want to know what that means ask a parent or guardian, but it does have something to do with reading the manual.

screen 2
– STAMPING ROBOT
Just as you enter the screen the robot's right leg smashes down, so pull right to avoid it. Push the joystick left when the leg lifts up and left again when Dexter touches the floor with his hands. Now wait until the left leg lifts up and push left again to go past.

screen 3
– THE ROCK TOWER
When the drones fire at you pull back on the stick and push up when you stand on the rock.

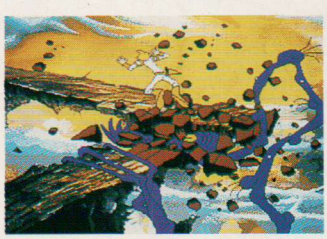
screen 4
– APPROACHING THE SHIP
Push up before the shuttle disappears behind the horizon.

screen 5 ▼
– THE TRASH MONSTER
Press fire when the monster rears up frighteningly above you.

screen 6
– THE CRUSHER ARM
When the arm comes up after crashing into the water, push right. Press up as soon as you land.

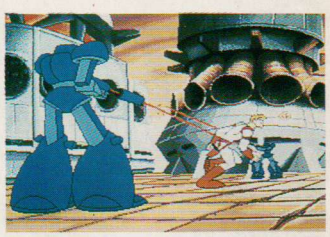
screen 7
– THE MOVING PLATFORM
Push right when the platform comes up for the second time. Once you are on the platform quickly push right to jump off.

screen 8
– PURPLE MONSTER 1
Pull back to come to a halt in front of the big purple-type monster then push right to escape.



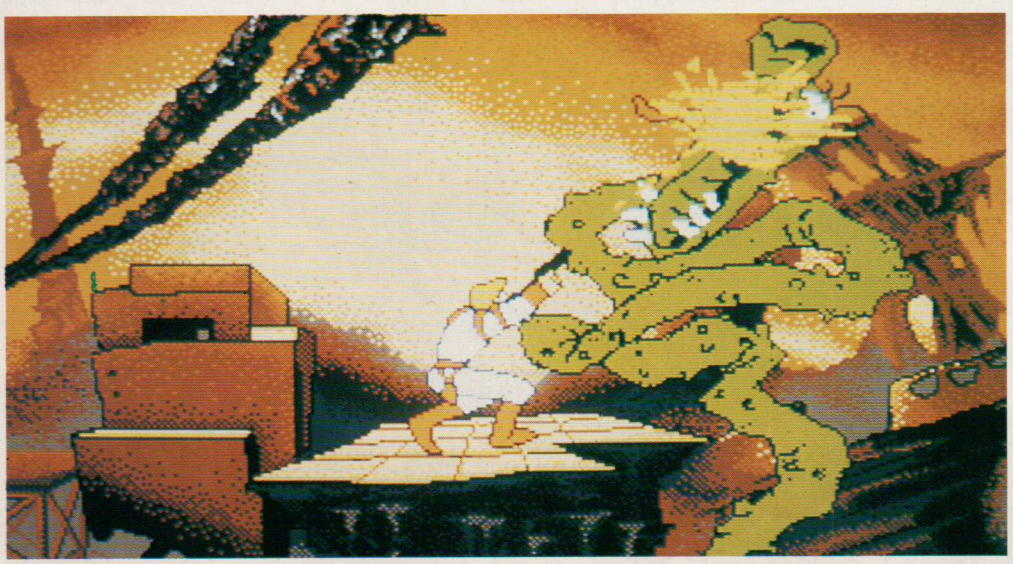
screen 9 ▲
– PURPLE MONSTER 2
Again pull back to stop, then left to make good your escape.

screen 10
– PURPLE MONSTER 3
As soon as the monster's tentacle graps Dexter's feet, press fire.



screen 11
– THE WALKWAY
As soon as Dexter drops onto the walkway, push up on the joystick.

screen 12
– THE DOG CHASE 1
Push up as soon as the dogs come on the screen.



screen 13
– THE DOG CHASE 2
Push right as soon as you reach the crossroads to go that way.

screen 14
– THE DOG CHASE 3
Push up when Dexter turns around and sees the dogs behind him.

screen 15 ▲
–THE GUARD ROBOTS
As soon as Dexter appears between the two big blue robots push right to flee rapidly.

screen 16
– THE BLAST TUBE 1
Push left as Dexter reaches the tube to disappear down the tube.

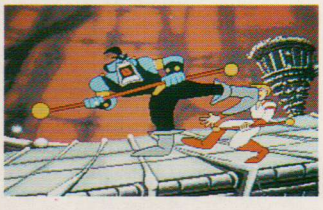
screen 17
– THE BLAST TUBE 2
Again push left as Dexter reaches the end of the screen.

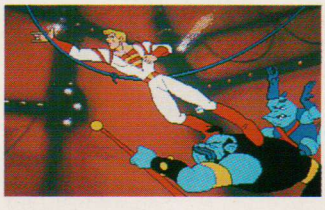
screen 18
– THE BLAST TUBE 3
This time move right as Dexter reaches the end of the screen.

screen 19
– THE ENTRY TUBE
Push up as Dexter reaches the ladder in order to climb up it.

screen 20 – THE FIGHT 1
As soon as Dexter and Borf appear on screen, press fire.

screen 21 – THE FIGHT 2
Press fire as soon as you appear to block Borf's blow.





screen 22 – THE FIGHT 3 ▲
Press fire when Dexter picks up his staff then push right to roll out of the way.

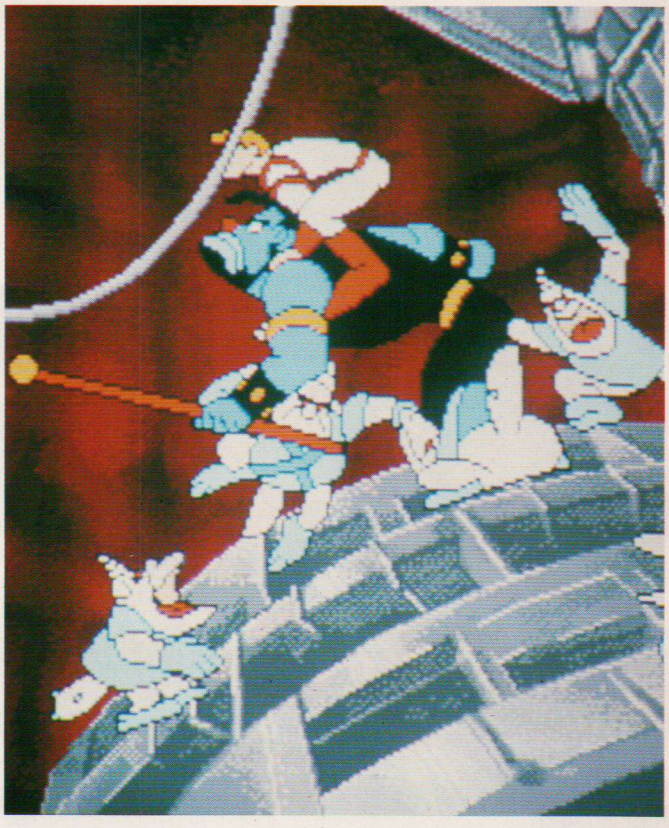
screen 23 – THE FIGHT 4 ▼
Press fire as soon as you appear then pull down. By this stage you may realise this'll take a while.

screen 24 – THE FIGHT 5
Just as Borf is about to hit Dexter with his staff press fire.

screen 25 – THE FIGHT 6
Push up to jump over the staff as Borf swings it, then pull down to duck the next blow.

screen 26 – THE FIGHT 7 (long fight this) ▶
Push right as soon as Dexter appears then push down to run behind Borf's back.

screen 27 – THE FIGHT 8 (it's almost as long as the one in *They Live*) ▼
When the screen changes to Dexter reaching out to grab the rope, push left. He will swing to temporary freedom.



screen 28
– THE LAVA PLATFORM
Leave the stick alone and let Dexter drop onto the platform.

screen 29 ▼
– KIMBERLEY'S RESCUE
Just as the lava is nearly touching Dexter's feet push right.

screen 30
– THE APPROACH 1
As soon as this screen appears on your monitor push right.

screen 31
– THE APPROACH 2
When Dexter nears the turning is the right moment to push left.

screen 32
– THE APPROACH 3
As soon as Dexter appears is a very good time to push right.

screen 33
– THE LAST STAND ▶
When Borf fires the ray push left to shove the mirror forward. When you see the laser in the mirror push right.

Borf will now get a blast of the infanto-ray up the nethers and Dexter will have won. Off to the Pie Shoppe for a celebratory slap-up binge! Hurrah!

DUNGEON MASTER

There have been quite a few pleas for spell lists to this subterranean adventure, but unfortunately we haven't had any in... Wait a minute, what's this? Stap me vitals! It's a list of spells to that subterranean adventure *Dungeon Master*! That's handy, Harry, stick it in the oven...

POTIONS

VI – Increased Health
YA – Increased Stamina
YA BRO NETA – Increased Vitality
YA BRO DAIN – Increased Wisdom
OH BRO ROS – Increased Dexterity
FUL BRO KU – Increased Strength
ZO BRO RA – Increased Mana
VI BRO – Poison Antidote
VI BRO – Shield
ZO VEN – Poison (for throwing)

MISSILE SPELLS

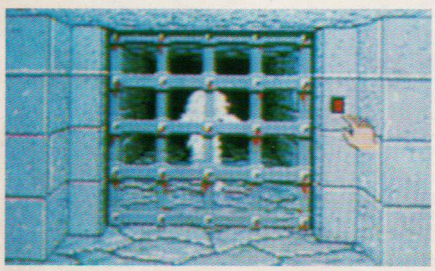
FUL IR – Fireball
OH VEN – Cloud of Poison
OH KATH RA – Explosive (similar to Fireball)
DES EW – Kills Spiritual Beings (eg Ghosts)
DES VEN – Poison

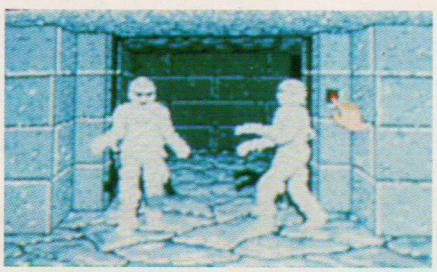
OTHER SPELLS

YA IR – Shield
OH EW RA – You can look through solid objects
FUL – Light
FUL BRO NETA – Spell Shield
ZO – Opens some doors
ZO RATH KA – Zokathra Spell

There are also a few spells the results of which aren't clear. These are YA BRO ROS, OH IR RA, OH EW SAR and DES IR SAR.

'Zeus'
Grange Over Sands, Cumbria





HOBBYTE BUSBYTE COMPUTER CENTRE

Hobbyte COMPUTING

10 MARKET PLACE
ST. ALBANS
HERTS AL1 3DG
TEL (0727) 56005/41396

THE GALLERY
ARNDALE CENTRE
LUTON, BEDS LU1 2PG
TEL (0582) 457195/411281

AMIGA 500 inc vat

All A500s are full UK 1.3 versions, with 30 day replacement warranty plus 12 Months guarantee and include Mouse, Workbench, Basic, Utilities, Manuals, Tutorial and Modulator (not with monitor).

BATMAN PACK

BATMAN the Movie, Interceptor, New Zealand Story, Deluxe Paint II	£349
Batman upgrade - software as above, without computer	£29
Also with 1084D/8833 monitor	£599

BATMAN PACK PLUS

BATMAN the Movie, Interceptor, New Zealand Story, Deluxe Paint II, PLUS 10 Star Games, joystick, Mouse Mat, Disc Box, 10 Blank discs, Dust Cover	£385
Also with 1084D/8833 monitor	£589

PROFESSIONAL PACK

Superbase II, Maxiplan spreadsheet, Protext word processor, 10 blank discs	£445
Also with 1084D/8833 monitor	£659

A500 "CLASS OF THE 90s" PACK

Midi Interface, DPaint II, Superbase Personal, Publishers Choice, Maxiplan 500 spreadsheet, Dr. Ts Midi Recording Studio, Amiga LOGO, BBC Emulator, 5 BBC programmes, 10 Blank Discs, Mouse Mat, Disc Wallet	£495
Class of 90s upgrade pack for A500 users	£195

SCHOOLS, COLLEGES AND GOVERNMENT DEPTS - BUY 20 GET 1 FREE. 7 DAY GUARANTEED REPAIR TURNAROUND

AMIGA HARD DISCS/RAM inc vat

A2058 8 MB Ram Expansion, populated To 2 MB for 2000	£499.99
8-UP 8MB Ram Expansion, populated To 2 MB, for 2000	£339.95
Extra chips for above, for each 2MB	£179.95
Commodore A501 RAM expansion for A500	£106.99
M501 0.5 MB RAM for A500	£69.99
M501 RAM + clock/battery for A500	£79.99
2MB RAM Expansion (internal) for A500	£339.95

AMIGA 2000 ex vat

All B2000s are full UK 1.3 versions, latest board revision, with 30 day replacement warranty plus 12 months guarantee and include Mouse, Workbench, Basic, Utilities, Manuals, Tutorial. ***We will price match any genuine offer.***

A500 TO B2000 TRADE IN OFFER

Give us your old working A500, for special "trade-in" prices

PACKAGE	CURRENT	TRADE-IN
	£749	phone
B2000 plus 1084S/ 8833 monitor, inc lead	£959	phone
B2000 , 8833/1084S, 3.5" and 5.25" Drives, 20MB HD and XT Bridge Board,	£1249	phone
B2000 , 3.5" 880KB drive, 19ms 40 MB Autobooting Hard disc with new A2091 controller -supports 7 SCSI devices	£1349	£955
As above, also with AT bridge board	£1799	phone
Any above, also with Publishers Choice	+ £69	

ACCESSORIES - PHONE FOR FULL LIST. EDUCATIONAL DISCOUNTS AVAILABLE

A0291 19ms 40MB Hard Drive, supports 7 SCSI devices	£599
A2286 AT Bridgeboard with 5.25" 1.2MB drive	£559
A2300 Internal genlock	£189
A2032 PAL composite video card	£79
A2620 68020 co-processor	£1099
14" SUGA Multisync 800 x 600 colour monitor (needs video card)	449
Video Card For HRCM (flicker Fixer)	£249
Cherry Digitising Pad And Driver	£449

COMMODORE PC/ATs ex vat

What Micro, October 1989 rates PC20 top big-name PC, based on value and performance. The PC40 was voted BEST BUY in Which Computer, Feb/March 1990 and is one of the only AT machines which can be fitted internally with both a 5.25" and 3.5" floppy.

NEW - COMMODORE PC STARTER PACK, including:

- Start-up tutorial video
- MS DOS Tutor
- Typing Tutor
- Secretary Bird Word Processor, Spreadsheet, Database
- Free one year on-site maintenance

	Mono	CGA	VGA Mono	VGA Col
PC10 5.25" single drive	498	639	659	749
PC10 5.25" Double drive	549	689	699	799
PC10 5.25" and 3.5" drive	599	739	759	849
PC20 5.25" with 20MB hard disc	699	849	899	999
PC20 5.25", 20MB hard disc + 3.5"	779	929	979	1079

FREE 24 HR ON SITE MAINTENANCE ON ATs. EDUCATIONAL PRICES - SEE "IMPORTANT NOTE" BELOW

	Mono	Educational	VGA Col	Educational
PC 30 3.5" EGA NOT VGA	999	899	1099	1049
PC40 VGA 286 with 40MB HD	1199	1099	1399	1249
PC40 VGA 286 with 40MB HD, tape streamer	1499	1249	1699	1499

IMPORTANT NOTE:
YOU MAY QUALIFY FOR EXTRA DISCOUNT *IF YOU ARE CURRENTLY AT SCHOOL, COLLEGE OR UNIVERSITY, OR IF YOU WORK IN GOVERNMENT, MEDICAL, OR EDUCATIONAL ESTABLISHMENTS.* (Not available on A500 or PC Starter packs)

PRINTERS/SCANNERS ex vat

£119	CITIZEN 120D	£298	STAR LC 15 wide carriage LC10
£149	STAR LC10	£298	AMSTRAD LQ 5000 132 COL 24 PIN
£169	STAR LC10 COLOUR	£398	STAR LC 24-25 wide carriage LC-10
£189	AMSTRAD 3250 dl	£549	JX100 colour scanner A5 16 Bit plane
£199	STAR LC 24-10 24 PIN	£895	QUME CRYSTALPRINT WP LASER
£229	AMSTRAD LQ 3500 24 PIN	£1114	QUME CRYSTALPRINT 8 LASER
£179	AMSTRAD DMP 4000 132 COL	£1699	JX300 colour scanner A4 24 bit plane
£249	PANASONIC 1124 24 PIN	£799	Interface and software for JX300

PLEASE QUOTE WHERE AD SEEN WHEN ORDERING. All prices, except where stated are ex VAT and based on cash or cheque with order. Prices correct at time of going to press, but are subject to change without notice. Purchase orders accepted from PLCs and Government bodies. Carriage on warranty repairs is paid by customer. E & OE

OUR COMMITMENT TO CUSTOMER CARE

We believe our customers have less problems than those who deal with some of our competitors. However if you do have any grievances, please contact Linda in our Customer Services Department who will do everything possible to help.

TEST ON REQUEST

Equipment is generally reliable and all items are batch-tested before despatch. However, please state if your purchase is to be given as a present, so that we can fully test, just in

ORDERING

To place your order:
send cheque, postal order or offical order, plus £10 per box - (software free) for next day courier delivery and VAT to Dept AF Hobbyte Computers Ltd, 10 Market Place, St. Albans, Herts AL3 5DG, or call in with a copy of this ad at our branches in St. Albans and Luton.
You may also phone your order to our sales desk on St. Albans (0727) 56005. Access/Visa and official orders from

TELE-ORDER (0727) 56005

FOOTBALL CRAZY

The Most AUTHENTIC MULTI-MANAGER Football Game Has Finally Arrived. After 2 Years Research & Development The Ultimate Game Is Ready And Waiting To Test Your Skills. FEATURES INCLUDE:-

Multi-Manager Game for 1 to 4 Players.

Full UK and European Cup itinary including FA, League, Zenith Data, Leyland Daf, European, Cup Winners and UEFA Cups. All Cup matches are played to the precise rules. eg. 2 Leg Ties, Extra Time, Away Goal Rule, Seeded Draws, Penalties, etc.

Complete league line up with 20 1st division teams and 24 in the 2nd, 3rd and 4th. End of season Play-offs with expulsions.

All team surnames are the real ones for all 92 clubs (CURRENT 89/90 SEASON).

Historic Records are maintained for 6 seasons with the ability to call up all previous results against your next opponent.

A Lively Transfer Market to Buy and Sell Players with an end of season deadline. Player Loans, Free Transfers with Approach & Offers on players or trainees.

Managers can be sacked or offered jobs at better teams.

All screens are displayed in a pleasant format, which is easy to use and comfortable to read. PRINTER facilities also exist.

Complete Instructions, for the beginner, are provided in a 16 page booklet.

...and would you believe it doesn't stop there! We have included many other fine details which are just impossible to list in this space. They include all the regular features you would expect like loading & saving your game, player injuries plus much, much more. The most genuine implementation of a Football Managers hectic season awaits you for only £19.95.

Take Your Team To The Top And Win The Double.

Or Are You Good Enough To Win The Quadruple Crown. Never Yet Achieved By A League Team Manager.

Available for the Amiga & All Atari ST's. PC Version Coming Soon.

MAIL ORDERS

Send £19.95, Guaranteed Cheque / Postal Order / Credit Card Details to:

ESP SOFTWARE
32B Southchurch Road,
Southend-on-sea,
Essex SS1 2ND.

AVAILABLE FOR IMMEDIATE DISPATCH

Orders outside the UK please add £1.00 extra.

TELEPHONE ORDERS

VISA (0702) 600557 FAX (0702) 613747 Out of hours Answer Phone Access

PREMIER MAIL ORDER

TITLE	PRICE
1/2 MEG Upgrade	59.99
3D Pool	11.99
688 Attack Sub *	16.99
Action Fighter	13.99
Airbourne Ranger	14.99
Altered Beast	16.99
Amos *	34.99
APB	12.99
Aquanaut	13.99
Austerlitz	16.99
Axels Magik Hammer	13.99
B.A.D. *	14.99
Balance of Power 1990	16.99
Barbarian 2 (PAL)	16.99
Bards Tale 1 or 2 Hint Book	5.99
Bards Tale 2	17.99
Batman the Movie	16.99
Battle of Britain *	16.99
Battlechess	16.99
Battlehawks 1947	16.99
Beach Volley	16.99
Black Tiger	16.99
Blade Warrior *	16.99
Blood Money	16.99
Bloodwych	13.99
Bloodwych Data Disc	9.99
Bomber	21.99
Boxing Manager	13.99
BSS Jane Seymour *	16.99
Budokan *	16.99
Cabal	16.99
Carrier Command	14.99
Castle Master	16.99
Cavadar *	16.99
Centrefold Squares	12.99
Chase HQ	16.99
Colossus Chess X	12.99
Combo Racer *	13.99
Conflict Europe	16.99
Conqueror *	16.99
Continental Circus	13.99
Crackdown *	16.99
Crazy Cars 2	14.99
Cyberball	13.99
Damocles *	16.99
Dark Century	16.99
Deluxe Music Con Kit	69.99
Deluxe Paint 3	59.99
Deluxe Photolab	59.99
Deluxe Print 2	69.99
Deluxe Production	89.99
Deluxe Strip Poker	12.99
Deluxe Video 3	79.99
Dr Doom	16.99
Dr Plummett	16.99
Dragon Ninja	15.99
Dragon Spirit	12.99
Dragons Breath *	21.99
Dragons Lair (1 Meg)	26.99
Dragons Lair 2 -Singes Castle	26.99
Dragons of Flame	16.99
Drakkhen	21.99
Dungeon Master (1 Meg)	16.99
Dungeon Master Editor	7.99
Dungeon Master Hint Book	7.99
Dynamite Debugger *	16.99
Dynamite Dux	16.99
Elite	14.99
Emlyn Hughes *	13.99
Emlyn Hughes Quiz *	13.99
Escape From Robot Monsters	13.99
F16 Combat Pilot	16.99
F29 Retaliator	16.99
Falcon	19.99
Falcon Mission Disc 1	13.99
Fantavision	29.99
Farey Tale Adventure	13.99
Ferrari Formula 1	16.99
Fighting Soccer	16.99
Final Battle *	16.99
Fire !	16.99
Flight Disc 7 or 11	13.99
Flight Disc Europe	13.99
Flight Disc Japan	13.99
Flight Sim 2	26.99
Football Director 2	12.99
Football Man Gift Pack	11.99
Footballer of the Year 2	13.99
Full Metal Planete	16.99
Fun School 2 (6-8)	11.99
Fun School 2 (Over 8)	11.99
Fun School 2 (Under 6)	11.99
Future Wars	16.99
Ghostbusters 2	16.99
Ghosts and Goblins *	13.99
Ghouls and Ghosts	16.99
Gold of the Americas	16.99
Gold Rush	16.99
Golden Shoe *	16.99
Grand National *	13.99
Gravity *	16.99
Gunship	14.99
Hard Drivin	13.99
Hillsfar	16.99
Hounds of Shadow	16.99
Imperium *	16.99
Impossamole *	13.99
Indy Jones Action	13.99
Indy Jones Adventure	16.99
Int Arcade Action	9.99
Interceptor	16.99
Interphase	16.99
Iron Lord	16.99
It Came from Desert (1Meg)	19.99
It Came from Desert Data	9.99
Ivanhoe *	16.99
Jack Nicklaus Extra Courses	9.99
Jack Nicklaus Golf	15.99
K Quest 1, 2, 3 or 4 Hint Books	6.99
Keef the Thief	16.99
Keef the Thief Hint Book	5.99
Kennedy Approach	14.99

TITLE	PRICE
Kick Off	11.99
Kick Off Extra Time	7.99
Kid Gloves *	16.99
Kind Words 2	34.99
Kings Quest 4 *	21.99
Kings Quest Triple	26.99
Klaxx *	13.99
Knights of the Crystallion *	21.99
Kult	16.99
Laser Squad	12.99
Leaderboard Birdie	16.99
Leisure Suit Larry	16.99
Leisure Suit Larry 2 *	19.99
Leisure Suit Larry Hint Book	6.99
Licence to Kill	12.99
Light Force	16.99
Lombard RAC Rally	14.99
Loom *	16.99
Lords of Rising Sun	15.99
Lost Patrol	16.99
Magnum 4	16.99
Manhunter New York	21.99
Manhunter NY Hint Book	6.99
Maniac Mansion	16.99
Microprose Soccer	14.99
Midwinter *	19.99
Mr Heli	15.99
New Zealand Story	16.99
Nightbreed *	16.99
Ninja Sprit *	16.99
Ninja Warriors	13.99
North and South	4.99
Omega	21.99
Operation Thunderbolt	16.99
Operation Wolf	14.99
Overlander	13.99
P47	15.99
Paperboy	12.99
Pipemania *	16.99
Player Manager	12.99
Police Quest	16.99
Police Quest 2 *	16.99
Police Quest Hint Book	6.99
Pool of Radiance *	19.99
Populous	16.99
Populous Promised Lands	7.99
Powerdrift	16.99
Powerdrome	16.99
Precious Metal	15.99
Pro Tennis Tour	16.99
Rainbow Islands	16.99
Rally Cross	12.99
Reach for the Stars	16.99
Red Heat	15.99
Resolution 101 *	16.99
Rick Dangerous	15.99
Robocap	15.99
Rocket Ranger	14.99
RVF Honda	14.99
S Quest 1, 2 or 3 Hint Book	6.99
Shadow of the Beast	22.99
Shinobi	12.99
Shoot Em Up Con Kit	19.99
Sideshow	16.99
Silent Service	14.99
Silkworm	12.99
Sim City	19.99
Skate or Die *	16.99
Space Ace	26.99
Space Harrier (20 Levels)	13.99
Space Harrier 2	13.99
Space Quest 1 or 2	16.99
Space Quest 3	26.99
Spy Who Loved Me *	13.99
Star Trek V *	16.99
Star Wars Trilogy	16.99
Starflight	16.99
Starflight Hint Book	5.99
Starglider 2	14.99
Steve Davis	12.99
Strider	16.99
Stunt Car Racer	15.99
Super Cars	13.99
Super Wonderboy	16.99
Swords of Twilight	16.99
Swords of Twilight Hint Book	5.99
Test Drive 2	16.99
Test Drive 2 California Chal	9.99
Test Drive 2 Muscle Cars	9.99
Test Drive 2 Super Cars	9.99
The Cycles	16.99
The Jetsons	16.99
Theme Park Mystery *	16.99
Time	19.99
Times of Lore	16.99
Toobin	13.99
Tower of Babel	16.99
Track Suit Manager	11.99
Trained Assassin	13.99
Triad Vol 3 *	19.99
Turbo Outrun	16.99
TV Sports Basketball *	19.99
TV Sports Football	17.99
Twin World	16.99
Typhoon Thompson *	13.99
UMS	14.99
UMS 2 *	15.99
Unreal *	16.99
Untouchables	16.99
Waterloo	16.99
Wayne Gretzky Hockey	14.99
Wierd Dreams	14.99
Wild Streets	16.99
Wings *	19.99
Wings of Fury *	13.99
World Cup Soccer 90 *	16.99
Xenomorph *	16.99
Xenon 2 Megablast	15.99
Zak McKraken	16.99
Zany Golf	16.99
Zombi *	16.99

SPECIAL OFFERS TITLE	PRICE
Adv Ski Sim	4.99
Amegas	4.99
Archipelagos	9.99
Archon Collection	7.99
Armaggedon Man	7.99
Art of Chess	7.99
Arctic Fox	7.99
Backlash	3.99
Barbarian (Pal)	7.99
Bards Tale 1	7.99
Battleships	7.99
Bionic Commando	7.99
Black Shadow	7.99
Blackjack Academy	7.99
Blasteroids	9.99
Bloodwych + Data Disc	19.99
BMX Sim	4.99
Bombjack	7.99
Bombuzal	9.99
Boulderdash Con Kit	7.99
Brian Clough	7.99
Buggy Boy	7.99
Captain Blood	4.99
Chariots of Wrath	9.99
Conflict	4.99
Craps Academy	7.99
Dragon Scape	7.99
Drum Studio	4.99
Eagles Nest	4.99
Empire Strikes Back	9.99
Excalibur	3.99
Eye of Horus	9.99
Fast Lane	9.99
Fernandez Must Die	7.99
Flying Shark	9.99
Foundations Waste	7.99
Fusion	7.99
G. Nius	7.99
Galactic Invasion	7.99
Garfield	9.99
Gladiators	4.99
Gold Runner	7.99
Grimblood	4.99
Hit Disc Vol 1 or 2	9.99
Hollywood Poker	4.99
Hunter Killer	4.99
Ikari Warriors	7.99
Iridon	7.99
ISS	9.99
Italia 90	4.99
Joe Blade 1 or 2	4.99
Kickstart 2	4.99
Leatherneck	9.99
Little Computer People	4.99
Live and Let Die	7.99
Marble Madness	7.99
Mindfighter	7.99
Mission Elevator	7.99
Motorbike Madness	4.99
Murder in Venice	9.99
Music X	149.99
Nigel Mansell	7.99
Nitro Boost	4.99
Nord and Bert (Infocom)	7.99
Outlands	9.99
Outlaw	4.99
Outrun	7.99
Passing Shot	9.99
Phobia	9.99
Pioneer Plague	9.99
Pool	4.99
Raider	9.99
Rampage	7.99
Return of the Jedi	9.99
Roadwars	4.99
Rolling Thunder	7.99
Romantic Encounters	7.99
SAS Combat	4.99
SDI (Activision)	9.99
Seconds Out	3.99
Shufflepuck Cafe	9.99
Sidewinder 1 or 2	4.99
Skyfox 2	7.99
Soldier of Light	4.99
Sorcery Plus	4.99
Speedball	10.99
Speedboat Assassins	4.99
Spedertronic	7.99
Sporting Triangles	9.99
Spy V Spy 1, 2 or 3	7.99
Starray	9.99
Street Fighter	7.99
Take Em Out	9.99
Tank Attack	9.99
Targhan	7.99
Techno Cop	9.99
Terrapods	9.99
Tetra Quest	4.99
Thexder	7.99
Tracers	7.99
Treasure Island Dizzy	4.99
Turbo	7.99
Vindicators	9.99
War Machine	4.99
Warlocks Quest	4.99
Way of Little Dragon	7.99
World Class Leaderboard	7.99
WorldTour Golf	7.99

Titles marked * are not yet available and will be sent on day of release
Please send Cheque/PO/Access/Visa No. and expiry date to:

Dept AF05, Trybridge Ltd, 8 Buckwins Square, Burnt Mills, Basildon, Essex. SS13 1BJ.

Please state make and model of computer when ordering.
P&P inc. UK on orders over £5. Less than £5 and Europe add £1 per item.
Elsewhere please add £2 per item for Airmail.
These offers are available Mail Order only.
Tel. Orders: 0268 590766.

AMIGA 4 Mb 68020 CARD £399

New

New

- Enjoy the performance of a SUN 3/100 Workstation (RRP £10K) on your A500
- Run graphics packages at lightning speed (upto 40 times faster with 68882)
- Load Kickstart 1.3 into 32-bit SUPER-FAST RAM (software selectable!)
- Our RAM price is more cost effective than any A501 compatible (runs faster too!)
- A 1 Mb RAM-DISC upgrade for THE 20-CARD costs less than a second disc drive!
- Runs programs 5-6 times faster than a standard Amiga
- THE 20-CARD comes with 1 Mb populated (remaining 3 Mb socketed)
- THE 20-CARD operates at a FULL 16 MHz (asynchronous design)
- THE 20-CARD has a socket for the 68881/ 68882 maths co-processor (16 MHz)
- THE 20-CARD uses low price 256x4-100ns DRAMS (has no wait states)
- THE 20-CARD has a superior DRAM design enabling it to out perform some 20 MHz cards
- THE 20-CARD is the ONLY card to auto-synchronise with the Amiga perfectly
- THE 20-CARD fits internally into the 68K socket and is compact in design (7.75 x 5.3 inches overall dimensions)
- AFTER A WEEKS USE YOU'LL WONDER HOW ON EARTH YOU MANAGED WITHOUT IT!

ORDER FORM

I enclose a cheque/Postal Order for £399 (inc. VAT) payable to:-

SOLID STATE LEISURE LIMITED

Signature: _____

Name: _____

Address: _____

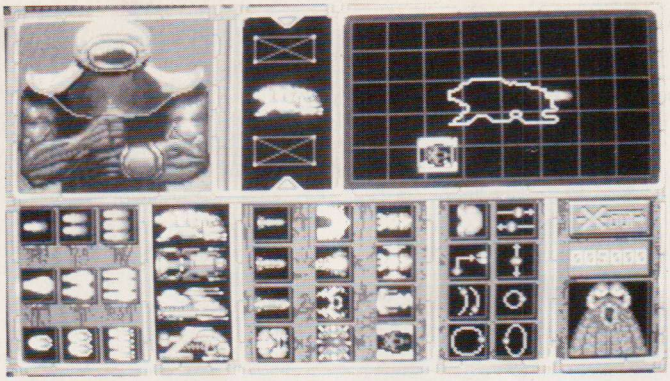
_____ ***Post Code:*** _____

Send to: Solid State Leisure Limited, 80 Finedon Road, Irthlingborough, Northants NN9 5TZ.
Tel: (0933) 650677 - Monday To Saturday 9-5pm

Please allow 28 days for delivery

X-OUT COVERDISK DEMO

After Issue 8's Gamebusters revealed some amazing features of the *Infestation* Coverdisk demo which even we didn't know about, here's one for our Issue 8 demo, *X-Out*...



Corruption in the marketplace even goes on in outer space, it would appear. What am I talking about? Well, if you buy the item that has been picked up in the picture to the left and attach it to the ship it will cost you a cool 2000 smackers.

But if you then take it off and give it to the sales monster he will give you 2500 for it. If you put it back on the ship now it will cost you 2500, so get another one from the menu for more dosh!

DH Akehurst
Ingatestone, Essex

NORTH AND SOUTH

D Whittle starts his letter with tips for *North and South* with 'Dear Sir/Madam,' but I don't really think I suit that name. Imagine – called to the palace... the queen touches both shoulders and says 'Arise, Sir Madam'. Arrgh! Anyway, on with the hints...

THE START OF THE GAME

When playing a one-player game as the South, choose either 1962 or 1963 for an advantage. If, on the other hand you choose the North, then select 1964. To start a fair two player game then choose 1961, since both armies will then be equal.

Other screen options include the ship which will allow anyone owning South Virginia to gain an extra army about every eighth full move. However you have to be careful, as if you have any more than 12 infantry, 6 cavalry or 2 cannon, then you will be stopped from docking, which means you will be unable to gain the extra army.

For a slightly longer game choose the raincloud for when it rains over an army-occupied state. This will stop that particular army from moving.

If you're feeling adventurous, then choose the Indian – this will be explained later.

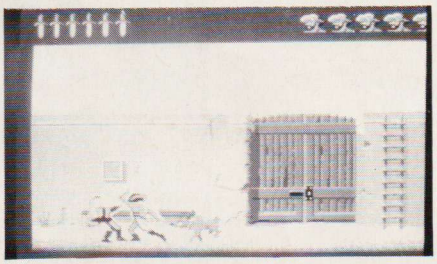
MOVING FROM STATE TO STATE

At the start of the game head for the counties with forts in them as they will open the train line, giving access to money for extra armies. You will also need to occupy the states between the forts with the train line going through it, otherwise it'll be like waiting for the delayed train from Bristol Temple Meads. Another important position is the port in South Virginia, as it could give an extra army just when you need it.

If you choose the Indians, then you will see to the West of the map an Indian and a Mexican. The Indian will attack any army that stays North-West of Texas for too long, which results in the loss of a whole army. The Mexican will attack you if you stay in Texas for too long, throwing a bomb which does the same damage as an Indian attack. These sequences are amusing if it's your opponent that's getting hammered, but a little worrying if your side is taking a beating!

If you are worried that an enemy army is going to attack one of your forts, then leave an army there. That way he'll think twice before attacking.

The more states you own the more money you'll receive, so remember to defend your states and try to corner the enemy in one state. Then he'll have to fight to the death, unless he's stronger than you, in which case he'll break free.



FIGHTING BATTLES

At the start of a battle, press the fire button until the meter at the top of the screen is full. With luck the cannonball fired should hit the enemy with an eye-watering blow!

If there is a bridge, wait until an infantry or cavalry is crossing: that way you'll kill two birds with one stone.

If the bridge has been destroyed and you want to get across to the other side follow the path that should be at the top or bottom of the screen. If you do decide to use the path, remember that it can only be traversed in single file, so if you send a full Infantry, only three men will survive.

At the start of the game try and send in your cavalry to slaughter the enemy artillery, infantry or cavalry as soon as possible. However, take care when confronting the infantry or artillery: they can fire at you before you reach them, so keep moving to avoid their shots. If you leave your artillery in one place, then the enemy will try to destroy it. If you see his meter rising for a shot, move your artillery straight away, then his shot will be wasted.

TAKING PORTS

If you have more forts than the enemy chances are you'll receive more armies than him, so try to take as many forts as possible at the start of the game and so reduce the number of armies he receives. To take a fort, you must move one of your armies into an enemy held state. Once you start moving, go to the top of the wall to avoid the dogs and the explosives. Remember to jump the gaps or you'll fall to the ground! If you see an enemy soldier heading your way, either fire a dagger or move to the top or bottom of the wall, then he'll pass you. Follow these points and you should take the fort in no time.

DEFENDING FORTS

You need to get a shot in as early as you can, so to appear at the same height as an enemy soldier, press either the up or down key. As soon as you appear loose off a dagger to stun him. If he fires a dagger at you then just jump over it. Once you have stuuned him, run up and keep punching him to slow him down. At the start, let your men attack him one after another and you should (hopefully) keep the fort.

TAKING TRAINS

As soon as the train sequence starts, push up to climb up onto the second carriage instead of the first. Make your way to the right, jumping the gaps between the carriages and avoiding the guards. When you jump a gap, loose off a dagger to stun a guard, so that he can't stop you from jumping. Once you reach the cab you will get the gold that the enemy would have received.

DEFENDING TRAINS

Defending a train is similar to defending a fort. When an enemy soldier jumps a gap between the carriages, send on a soldier and let loose a dagger. This should knock him to the ground so that he has to climb back onto the carriages. If you miss him with the dagger, then run up to him and attack him with your fists to slow him down.

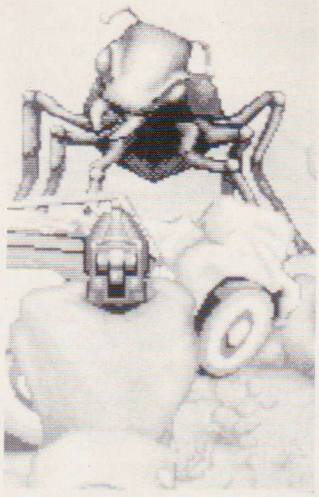
GENERAL HINTS

Always try to surprise armies when you can. Try to combine armies to increase their strength. Try to remember to leave Texas as soon as you can, otherwise the Mexican will get you! The same applies for the Indian – steer clear or you'll get it in the neck!

D Whittle
Newbury, Berkshire

IT CAME FROM THE DESERT

If you're overrun with insects then either get to the louse doctor or call Rentokill. On the other hand if they're only giant ants then have a shuftie at these playing tips.



All the evidence must be collected and analysed by Dr. Wells by June 9, otherwise the doctor either dies or leaves town.

The following table gives the dates, main sources and relative tips to use for specific evidence:

DATE	LOCATION	PART(S) FOUND	TIP
June 2	Jackie's Car	Body, Fluid	1
June 3	Home Base	Body	2
June 4	Cook's Stud Farm	Cast	
	Police Station Tape		
June 5	Ore Plant	Tape	3
	Quarry Fluid		
	Neptune Hall Fluid		
June 7	Ore Plant	Cast	
	Any 1st Ant Encounter	Body	4
	Any 2nd Ant Encounter	Fluid	4

The Tips (From the Table)

1 – Jackie's Car isn't found unless you are in your house on the morning of June 2. Let Jackie into your house and select 'Take Jackie to Car.' Once you are at the car you will find the fluid, but to find the body part you must select 'Investigate Scene Further.'

2 – This body part is delivered to your house by a neighbour. To get it you must be at home on the morning of June 3 and you must answer the door.

3 – You are given the tape the second time you go to M-2 on June 5. The first time you are stopped by an ant.

4 – To collect either of these pieces you must kill the first ant and then go on to destroy enough ants to scare off the rest.

GENERAL TIPS

To collect the body part and the Fluid on the first day, first go to JD's farm, then go to the South-West Cone. If you do this without answering the door first, you can take the evidence to Dr. Wells for analysis.

By June 6 the ants will go into hiding and all ant activity stops until the main attack on June 9.

Mines three, four and five, the pump-stations, the North Cone and the North-West Cone are all dead-ends and nothing ever happens there. Ignore the strange lights you hear about – they're just red herrings.

The nest is below M-1, but it is impossible to enter before the main ant attack.

To beat Ice at playing chicken drive on the left-hand side of the road and steer to the right at the last minute – but DON'T press fire. Ice should steer around you. It may take a few attempts until you get this right, as it is quite difficult.

Winning a knife-fight is one of the easiest sections. All you have to do is repeatedly stab and swipe by pressing fire and up followed by fire and right. Get it right and your opponent rarely hits you.

Try to avoid fire-fighting wherever possible, as it's the hardest of the sub-games – so don't pick up the red rock at the start!

If you stay in hospital you may miss a vital piece of evidence, so here are a couple of methods of escape:

1 – Grab a wheelchair as soon as you can and take it down the lift. Barge past any nurses or orderlies and rush past the guards.

2 – Sneak your way from room to room towards the elevator or stairs. Once downstairs carry on sneaking until you get to the bottom right hand room. Walk up to the guards and get their attention before going back to the right hand room. The guards should go past, leaving you to sneak out of the room and rune through the doors.

Towards the end of the game the mines and South-West cone may be destroyed. If this happens you can only get into the nest by plane. Fly to M-1 gassing any ants on the way. When you reach the mine fly a little to the left and turn round to land on the dirt track. Now you're ready for the nemesis!

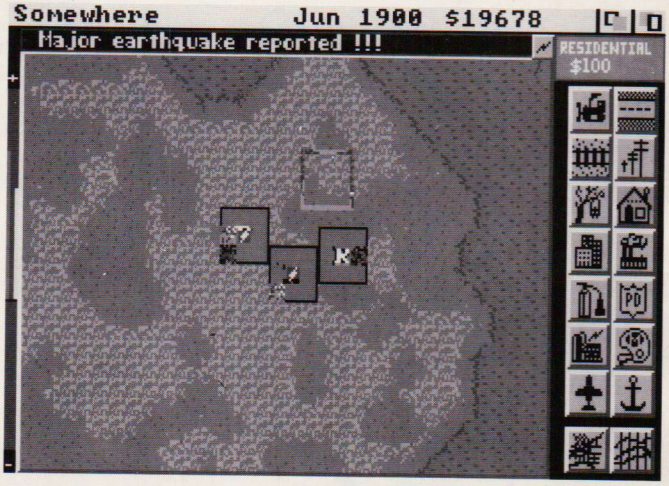
Stephen Powell
Tromode, Isle of Man

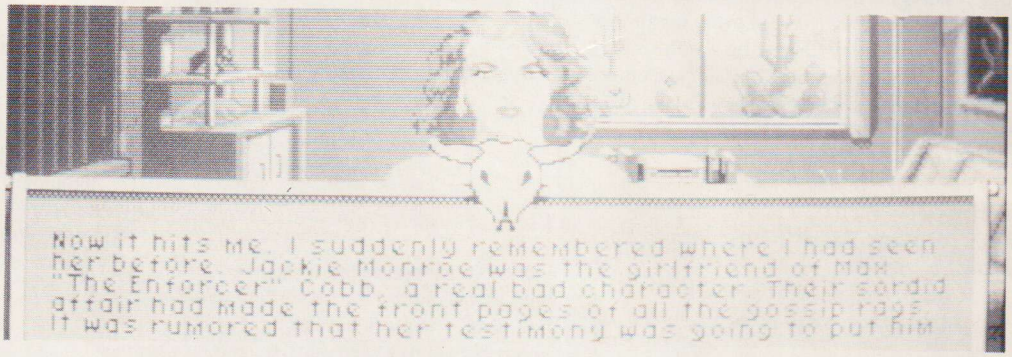
SIM CITY

To bring even more realism into this simulation, you can become a greedy and bitter official by embezzling money from the authorities. If the old kitty is looking a bit sparse, hold down Shift and type FUND. The pot will go up by $10,000 each time. After a few goes, this causes an earthquake, so it may be an idea to stock up your dosh before building anything.

"Gold? Gold! And it's all mine! HahahahahahaHAAA!"
"Do you think we've got the right man for the job?"

Phil White
Walsall, West Midlands





PRIZE WINNERS

All you people that sent in *Space Ace* solutions and expect a prize, I'm sorry, but there were just so many of you that it wasn't fair to award the prize to one person – and we can't afford to give away about 30 software vouchers in one month! So the prizes this month go to Stephen Powell for his hints on Cinemaware's *It came from the Desert*, D Whittle for his *North and South* tips and the man with the strange moniker 'Zeus' for the invaluable spell guide for *Dungeon Master*. Fifty-quid vouchers will be on their way to these lucky winners soon!

POWER COMPUTING

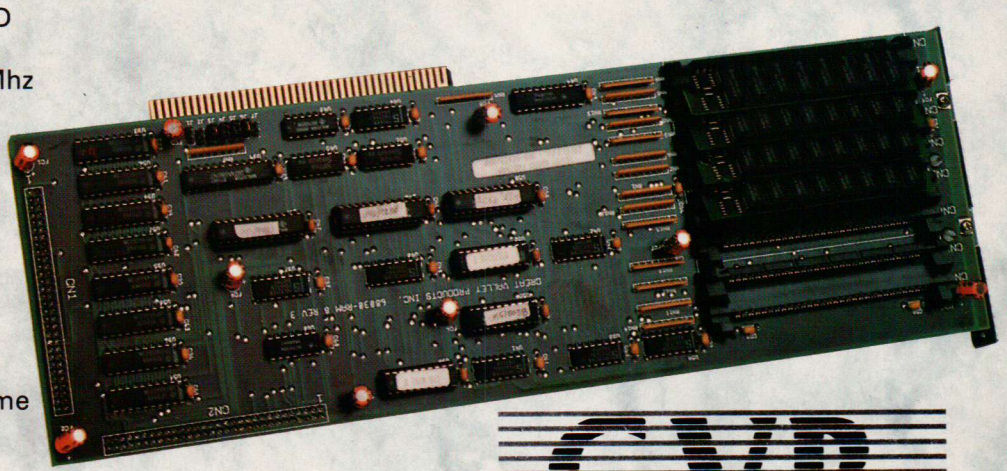
THE AMIGA 2000 SPECIALISTS

UK SOLE DISTRIBUTOR FOR GVP

68030 ACCELERATOR BOARD

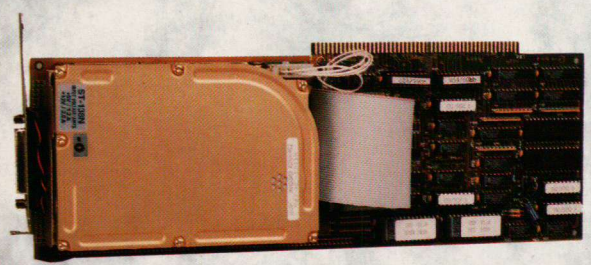
Up to 33 Mhz

- 16 Mhz, 28 Mhz, 33 Mhz
- Expandable to 8 MB
- Easy to install
- 12 month warranty
- Selectable 68000 fall back mode for full floppy based game compatibility
- 68030 design allows high clock rates and Genlock compatibility



GVP
GREAT VALLEY PRODUCTS INC.

HARD DISK CARD



- Available in a range of sizes
- 2 MB of fast ram expansion using easy to install, state-of-the-art SIMMS
- External SCSI connector for attaching additional external SCSI devices
- Easy to install
- 12 month warranty

8 MB EXPANSION BOARD & SCSI HARD DISK CONTROLLER

- Up to 8 MB ram using 1 MB x 8 SIMMS modules
- Supports 6 MB fast ram expansion for PC Bridgeboard users
- Includes flat 50-pin ribbon cable for connecting internal SCSI Hard Drive
- Easy to install
- 12 month warranty

Other GVP products include

SCSI CARD
HARD CARD
TAPESTORE - 150 MB Tape Streamer
SYQUEST 44 MB - Removable Hard Disk

COMMODORE ™ AMIGA

PHONE
0234 273000
FOR YOUR BEST DEALS!
Dealer Enquiries 0234 273248

GVP

All trade marks acknowledged

Power Computing Ltd • 44A Stanley Street • Bedford • MK41 7RW

Tel 0234 273000 Fax 0234 270133

Technical Support 0234 273248 Mon-Fri 3 - 5 pm

Showroom & Telephone Sales open Mon-Sat 9·30 am – 6·00 pm and to 8 pm Thursdays & Fridays

PC POWER CO

ALL PRICES ON THESE PAGES INCLUDE VAT AND DELIVERY

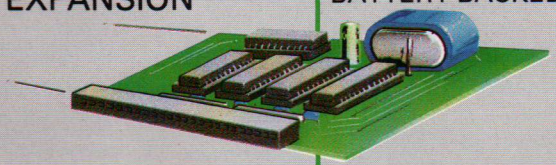
A selection of special deals only ava

NOW ANTI CLICK!

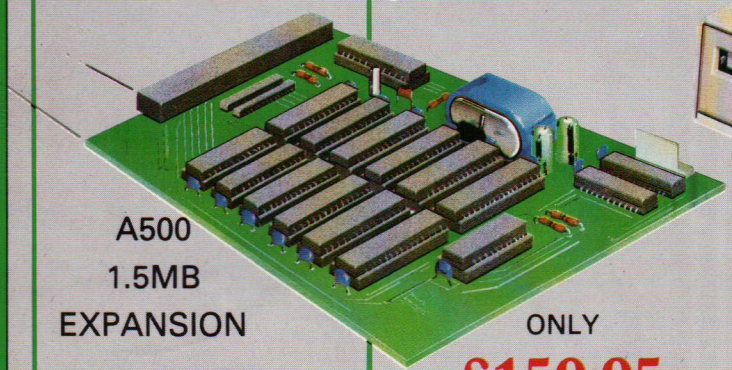
A500 512K EXPANSION

ONLY **£59** INC. VAT

INCLUDING BATTERY BACKED CLOCK



A500 1.5MB EXPANSION



ONLY **£159·95** INC. VAT

INCLUDING BATTERY BACKED CLOCK

A500 Expansion ram PC501/PC502

- A500 Expansion Ram using low power 1 Mb chips
- Two Models available 512K/1.5MB
- Complete with clock and lithium battery
- Fits in A500 expansion underneath computer
- Comes complete with extra ram switch off software
- 1.5MB model **only** requires simple cable to be fitted inside Amiga
- 12 month warranty

A500 Internal Drive Kit

£59·00

ONLY **£69·95** INC. VAT

Power Drive PC880

- Now with anti-click that stops that annoying drive click when no disk are present!
- Fully compatible with A500, 880K formatted
- Isolating on-off switch
- Through port for daisy chaining
- Colour matched and styled to Amiga
- Free utility diskette
- 12 month warranty

40 Disks* and lockable storage box

£29·95 INC. VAT

15 Disks* and Storage Box

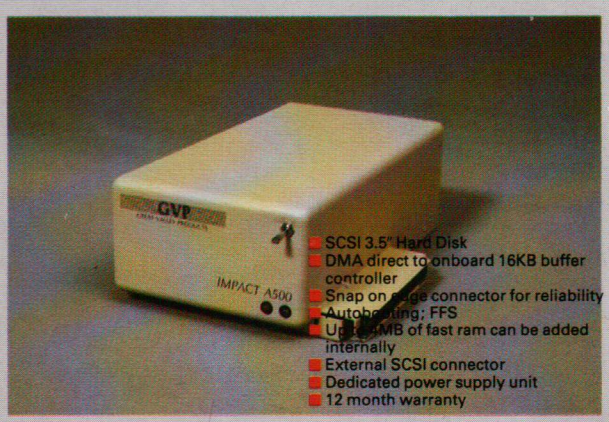
£9·95 INC. VAT

Verbatim media - fully certified and guaranteed for life!

GVP

GVP IMPACT A500 Hard drive

Now using SIMMS for a massive 4MB extra ram!



- SCSI 3.5" Hard Disk
- DMA direct to onboard 16KB buffer controller
- Snap on ribbon connector for reliability
- Autobooting; FFS
- Up to 8MB of fast ram can be added internally
- External SCSI connector
- Dedicated power supply unit
- 12 month warranty

	0K	2MB	4MB
45MB	£599.00	£749.00	£899.00
80MB	£849.00	£999.00	£1149.00
100MB	£999.00	£1149.00	£1299.00

BUY YOUR A500 SYSTEM FROM POWER AND GET A GREAT DEAL MORE!

All packs include

- A500 + mouse + PSU
- Batman, New Zealand Story and Interceptor Games
- Ten Star Games pack
- Deluxe Paint 2
- Konix Speed King Joystick
- Mouse Mat
- 5 diskettes

BASIC PACK	as above	£399
SUPER PACK	with PC880 drive	£459
ULTRA PACK	with PC880 + 512K	£499
MEGA PACK	with PC880 + 1.5MB	£599
HYPER PACK	as Mega with A590 Hard Dr.	£949

Class of the 90's and other packs available

Commodore A590 20MB Hard Disk £379

MPUTING

ilable from Power House DIRECT!

GO COLOUR AMIGO!

Includes
- LC10 Colour UK Model
- Parallel Cable
- 200 sheets microperf paper
- 200 address labels
- LC10 colour WB driver
- Delivery and vat

LC10 Colour Fabric printing kit

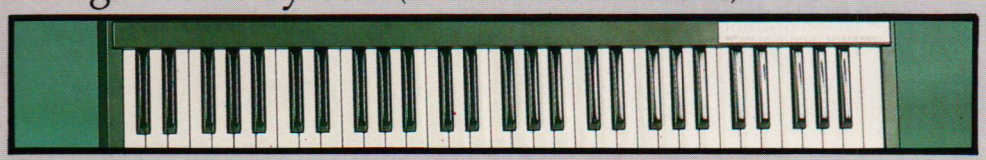
£24·95

Star LC10 Colour Complete Kit

£219·00 INC. VAT

Star LC10 Colour	£219
Star XB10-24 Colour	£499
HP Paintjet Colour	£799
HP Paintjet XL A3 Colour	£2500

Amiga Music System (MM5000 + Pro Sound Gold) **£99**



Video Magic + P.A.S.E. Animation Program **£49**

- Multi media presentation system
- Supports all IFF picture files
- Supports P.A.S.E. Animations
- Auto scripting
- Sound effects by using Prosound Designer
- Controllable from joystick Port 2
- Many more features

Full details available

VIDTECH SCANLOCK £899

All trade marks acknowledged

Power Computing are the productivity software specialists. Scores of new titles every week! The following is a selection from our large range. We also stock most of the published Amiga books and magazines.

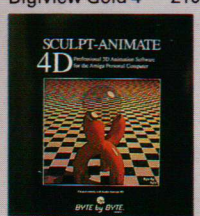
The One Stop Software Shop! Callers Welcome!

RED HOT PRICES

ART & GRAPHICS

Typically 30-40% off rrp

Animagic	£69
Amiga Clipart	£29
Comic Setter	£37.95
Deluxe Paint 3	£59
Deluxe Photolab	£48
Deluxe Video 3	£79
Digipaint 3	£49
Digiview Gold 4	£109.95



Elan Performer	£39
Express Paint 3	£69
Fantavision	£29.95
Interchange	£49
Interfont	£79
Intro Cad	£39
Kara Screen Fonts 1	£49
Kara Screen Fonts 2	£49
Movie Setter	£48
Photon Paint 2	£79.95
Pixmate	£35

Pro Video Plus PAL	£169
Sculpt 3D XL	£99
Sculpt 4D Junior	£149
Sculpt 4D	£329
Turbo Silver	£99
Video Magic + P.A.S.E.	£49
Video Page	£99
XCAD Designer	£87.95
XCAD Pro	£325

WORD PROCESSING, DTP & BUSINESS

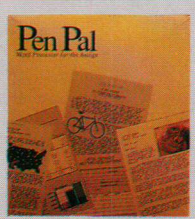
Excellence	£159.95
Home Accounts	£24.95
Kind Words	£39
Maxiplan +	£99
Maxiplan 500	£79
Pagestream	£120
Pro Draw	£100
Pro Page 1.3	£179
Pro Page Templates	£39
Pro Text	£74.99
Pen Pal	£99
Superbase 2	£62
Superbase Pro	£160
Superplan	£62
The Works Platinum	£149
Word Perfect	£164

LANGUAGES ETC

Devpac Amiga	£45
Hisoft Basic	£55
Lattice C v5	£160
Lattice C++	£299
Manx C Dev	£163
Manx Debugger	£49
Power Windows 2.5	£48

UTILITIES

Arexx	£39
BAD	£35
BBC Emulator	£39
CLImate	£20
Dos 2 Dos	£29
Cross Dos	£29
Fine Print	£39
Quarterback	£34
Transformer	£29
WB 1.3	£15



MUSIC

Midi Interface	£25
C64 Music Keyboard Interface	£49
MM5000 Keyboard	£55
Dr T's Drums	£25
Dr T's Midi Studio	£49
KCS level 2	£229
Music X	£199
Pro Sound Gold	**£39**
Amiga Music System	£99
Sonix	£45

Need Help?
Power Technical Helpline Mon-Fri 3pm-5pm 0234-273248 Customers only!
For sales information call our sales lines! All prices are subject to change
Availability on most items is excellent due to large stocks. Please call first to avoid disappointment

POWER HOUSE DIRECT GVP NATIONAL DISTRIBUTOR

Power House, the direct sales arm of Powe Computing Ltd — Leaders in peripherals & software — is the natural choice for the Amiga enthusiast. Highly competitive prices, a wide choice, fast computerised service and the backing of a £2M+ 5 year ol company are just some of the reasons for tele-shopping at Power. Large stocks, friendly reception and "if it don't work we give you a new one" are a few more!

"The Extensive Power House Bedford Showroom" open Monday to Saturday 9.30am - 6.00pm Thursday & Friday 7.00pm

Power Computing Ltd, Power House, 44A Stanley Street, Bedford MK41 7RW

Orders Only 0800 581742 Free Call
General Enquiries & Orders 0234 273000 (5 lines)

Name

Address

Postcode

Telephone

System owned

Credit Card no.

Expiry date

Signature

I would like to order

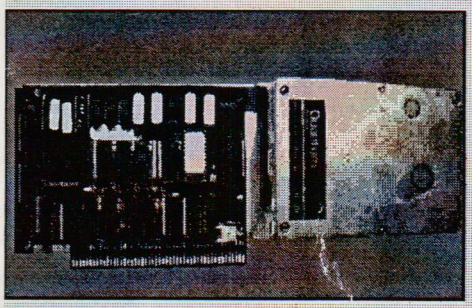
Make cheques payable to Power Computing Ltd

I enclose a cheque / PO for

£

AE

HardFrame/2000: There is no competition.



When it comes to choosing a hard drive for your Amiga 2000, there's no real alternative to MicroBotics HardFrame/2000. It's the fastest Amiga SCSI controller available, and our 5-year warranty says it's also the most reliable. Coupled with a fast Seagate (28 ms access time) or Quantum ProDrive (19/11 ms access) it's also surprisingly affordable. Try it yourself on thirty days approval (we don't think we'll get too many coming back.). Unmatched by any other controller (Amiga World July '89). Since then, nothing has changed. HardFrame is fastest. Prices start at £499 for a HardFrame with 32MB Seagate, 28ms. HardFrames fitted with Quantums start at £599 for the 42MB.

Prices exclude VAT.

Dealers can order from:
MicroBotics (01) 298 0060
SDL (01) 300 3399
ZCL 0543 414817

Letters

A host of golden daffodils – errm – a host of your letters escape the wiles of the sinister Japanese paper-folding genius **BOB FANCHU** and make it into print. Send your raw materials to 30 Monmouth Street, Bath, BA1 2AP.

KINKY BOOTS

PRIZE LETTER

I have an Amiga 500 and have discovered a number of corrupted disks in my collection. With a few exceptions these are all originals, or magazine or Public Domain certified disks. I would like to offer a cautionary tale to others who discover their prized collection is full of errors or corrupted disks.

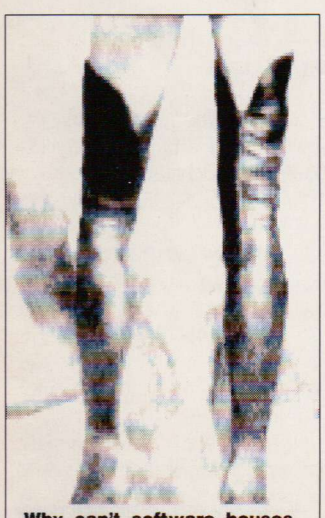
Don't assume, just because a disk comes from a manufacturer and you break the seal yourself, that it is virus free. How easy would it be for a malicious person to deliberately leave a virus to cause havoc? Check your disks!

Are the software companies even aware of the alarm caused by non-standard bootblock messages flashing on the screen, particularly for new computer owners?

Please don't write programs that behave in this way – everyone automatically fears the worst and begins to wonder where the disk was infected. Accusations fly thick and fast as partners blame each other: for buying games untried? Through mail order? From the sale bin? That scruffy shop? That posh shop? Was the seal broken? Did the assistant get the disk from the back room? Surely you didn't buy it from that shop which allows yobbos to *X-COPY* their own disks on the display machine? Did you run it through all the virus checkers before use? Was the write-protect ever left off?

Would the software companies please use standard bootblocks only: then we do not have the alarming messages of 'non-standard bootblock' and should a virus ever damage a bootblock we can rewrite the bootblock with the industry-standard one and still use the program.

Wendy Stokes-Clare
Nesscliffe, Shropshire



Why can't software houses stop using strange boots? See 'Kinky Boots'.

TROUBLE IN THE MAIL

Last November I sent £17.90 to Megasave for the game *Bomber* to give to my grandson for a Christmas gift. The cheque was cashed within three days and all I have received after waiting four months has been a letter from the liquidators of Megasave stating that the company has gone into liquidation. They owe £51,444, £28,812 of which is owed to 1,762 Mail Order customers, who will not be able to recover any of the debt.

My advice is not to trust your money to Mail Order companies that use a box number address without a phone number, and never part with your money unless the item you want is in stock.

To advertise a disk for sale long before its release date is widely practiced in many computer magazines, so if you must order in advance make sure it's from a company you can trust.

G L Murray
Bexleyheath, Kent

SHANGHAIED

Please, please help me! I am a very new owner of an Amiga 500, and having sold my Commodore 64 and games I am desperately trying to locate *Shanghai* for Amiga 500. I am getting dreadful withdrawal symptoms – and my daughter needs a copy too. So two copies would be even better – but I will settle for one.

You are the only one left to help – Activision do not have any left – I MUST get *Shanghai*!!!

Mrs P G Chambers
Par, Cornwall

If Activision are all out of copies your best bet is to check out the Public Domain for a copy. Why not give one of those nice people listed on our PD Update pages a ring and see if they can help you?

FORTY-SOMETHING

As a guy that has been confused and amused by this thing called an Amiga for nearly three years now, I thought I'd send you my list of favourite games, although some more recent Amiga owners may not have heard of some of these.

1. *Kick Off*
2. *Shanghai*
3. *Amiga Basic!*
4. *Solitaire Royal*
5. *Pagesetter 1.2*
6. *Deluxe Paint II*
7. *MED* (from your Coverdisk)
8. *Analyse*
9. *Leisure Suit Larry*
10. *Sonix*

No 'shoot-em-ups' here, but rather than slag those off as mindless alien bashing they are, in my opinion, more a test of reactions and memory – which at my age (42 and 3/4s) are somewhat lacking. The embarrassment of having my hard-won top score being beaten by the average 14-year-old within 15 minutes of sitting behind the machine is too much for me.

My wife also plays *Shanghai* or *Solitaire* whenever possible so some women do like some computer games.

Greybeard
Harrow, Middlesex

THE CRUNCH BUNCH

I have been trying out my dated file cruncher on the Coverdisk of Issue 8 of *Amiga Format* (the most fab, brill, excellent magazine for the Amiga). I managed to save about 22K and all the files still worked. I was wondering why you don't use a more up-to-date cruncher – you could save yourself a great deal of disk space.

In this space you could put any small PD program or demo. I noticed that *Ultrapaint* was crushed and that saved you 36K. This makes a total saving of 58K. In that space you could put a crunched *Xoper* directory.

Wise up and do what the opposition do. I am sure many of your readers would be grateful.

Jason W Gordon
Wallington, Surrey

We don't use a cruncher on everything because it can cause problems with some programs and they will not always show up straight away. We use it where we are sure it is safe. It's also worth noting that some programs actually take up more space when crunched.

DTP FOR COVERDISK?

I have been reading *Amiga Format* since Issue 1 of the then *ST/Amiga Format*, and in general have enjoyed many of the progs issued on the Coverdisks. However, in all that time there has never been a Desktop Publishing program included on the disk.

I see the Coverdisk as primarily a chance to try various different types of software that I have no experience of, and then if I like the look of them I look around for the

Are film licence boxes really tastier than the products they contain? See 'Chewing Cardboard'.

best commercial example to purchase. This is true of the *MED* program on *Amiga Format* Issue 7.

I was very impressed with that program, and it has opened up another side of the Amiga for me. I feel the same about DTP, I have always been interested in it, but have been reluctant to invest a large amount of cash to 'experiment' with it, so please consider a DTP program for inclusion in a future Coverdisk. I do think that it is a waste of disk space to provide a playable demo of yet another shoot-em-up when we are all familiar with that vein of entertainment.

Stuart Hunter
Edinburgh

Sadly we have never been able to get a demo of a DTP program because most of them are written in the US. If we get a chance, though, we will run one.

TOP TEN TIME AGAIN

Here is my list of Top Ten games (which I own) of all time.

1. *Virus Killer* (Practical) – worth its weight in gold.
2. *Tracksuit Manager* (Again, Again) – one of the best footy games around.
3. *Austerlitz* (PSS) – for budding generals everywhere.
4. *Sim City* (Infogames) – gives you the power of God.
5. *Battlehawks 1942* (Lucasfilm/US Gold) – as least as good as the actual old film coverage ever managed to be.
6. *IK+* (System 3) – a fast and frenetic beat-em-up against aggressive opponents.
7. *Elite* (Firebird) – a VERY big universe provides months of trading/blasting.
8. *Sentinel* (Firebird) – still very original.
9. *Graphic Adventure Creator* (Incentive) – an excellent and easy to use adventure writing utility.
10. *Zoids* (Martech) – has stood the test of time, still very playable.

Stuart N Hardy
Wales, Sheffield

SELF-HELP FOR HANDICAPPED

I was down the paper shop and started to talk to a lady who was saying that she had a wheelchair bound son who has an Amiga that he uses for entertainment.

Well, my brother is also in the same situation and is also a lonely child as he cannot really go out to play with the few friends he has.

The lady in the shop said that her child (age 15) was in the same position as my brother (age 11). Going by this there must be a hell of a lot of children and adults in the same situation.

So I was thinking of trying to start a special club for these people where they could write to each other via their Amiga and send each other disks. Also they could be supplied with games/utilities from the PD library at no expense, as most of these children cannot afford to pay for any form of software let alone full-priced games. So, two things I wish to ask.

1. Can you ask all handicapped people who wish to take part in this to contact me without hesitation at the address below either by letter or by disk.

2. Is there any Amiga user willing to help or donate useful PD disks for the Handicapped Club? Please note that no money will be payed out or accepted by either the users or operators of this club. I hope this club will be successful and help the handicapped stay in contact with each other and be of help to them.

If you have any advice on this it will be much appreciated.

Neville Tanner
10 Grantham House,
Friary Estate, Peckham,
London SE15 1RN

CHEWING CARDBOARD

When I first got my Amiga, over two years ago, I said to myself that I would not accept pirated software. I kept this view until someone I knew offered me some stuff. At that time I could not afford to buy originals and welcomed the opportunity to copy software. I had forgotten my resolution to buy from the shops.

Eventually I became as selfish as all other pirates, not caring about whether what I was doing was damaging other people's income (either the programmers, or the poor sods who had to shell out £25 a game). Piracy is a very selfish business, there is no question about it. Groups should put their computing expertise to use, and get paid for it, not just write bouncy, scrolly, boasty intros.

The world of your new Amiga may seem an expensive one, but do not turn to piracy to avoid the cost. Save, and buy the best software you see. That way people will stop writing shit, and begin to code quality software.

Oh, and avoid film licences: they are always without exception (except maybe *Batman*) total rubbish. You will get more enjoyment from eating the box of a film licence than playing it (and wasn't *Robocop*'s box tasty?)

Sam Carrington

GOOD OLD DAYS

PRIZE LETTER

What's been your most enjoyable game? I know mine – it was *Atic Atac* on the Spectrum. Why? Well, back in the good old days when computers were a 'new thing' to the home user, nothing quite like them had been seen before. Games such as *Atic Atac*, *Manic Miner* and *Jetpack* amazed everybody who saw them. They were instantly addictive and totally playable. "So what's different now?" I hear you cry.

The point I'm trying to make is that something new always draws our attention. However, through time, people start to look elsewhere for their 'kicks'. I personally have owned a Spectrum and a C64, presently owning an Amiga. While owning a Spectrum I would play virtually any game, on the C64 my choice narrowed down, and with the Amiga only really two types of games – puzzle solving and role-playing. Nowadays, shoot-em-ups, beat-em-ups and the like simply do not 'turn me on'. Many many people I know also share the same viewpoint.

To conclude, I think that during the following years shoot-em-ups and the like will become more unpopular. Games which do well will be the puzzle solving, strategy and RPG types (games requiring a little thinking power have always done well). I feel that games which will do particularly well will be the most original – a good starter for us here is *Populous*.

Denis Cowie
Cleethorpes, S Humberside

The death of the shoot-em-up as the mainstream game type is long overdue. There will always be room for them and the other unoriginal games, but it's time the new generation took over.

QUICK QUESSIES

1. What does an assembler do?
2. Can you buy *Journey's End* (Mastertronic) for the Amiga?
3. Which virus killer is best?
4. Which is the best Database?

Scott Moncrieff
Corstorphine, Edinburgh

1. It assembles a program into machine code.
2. No.
3. Generally the most recent one, Virus X 4.0 from last months Coverdisk should do you.
4. Check out Page 91.

VIRUS SCHMIRUS

As soon as your issue with the cover-mounted *X-Out* demo arrived I eagerly opened it and loaded it. Good stuff, except your disk had just given me the 'Lamer Exterminator' virus.

I didn't notice this until a mate borrowed the disk and found that he could not copy anything. A message kept coming up saying: "Unknown virus in Bootsector". The beast had spread onto three

of his disks and five of mine.

Luckily the *Pseudo Ops Virus Killer V2.0* wiped out the virus and saved me from shelling out for new software. Please could you tell how on earth I was the unlucky sod who managed to get a virus from your disk as I am constantly wondering WHY ME??

M Cadier
Folkestone, Kent

You could not have got a virus from the Coverdisk. Our checking procedure is very thorough at every stage and our custom boot-block guarantees it is virus-free when it gets to you.

HACKED OFF

All right you SCUM, you VERMIN, you bunch of HYPOCRITES. You see yourselves as the totally law abiding magazine with not a hacker in sight. Then why, may I ask, are you advertising (as an invaluable purchase) the Hacker's Handbook. I hope you can explain yourselves otherwise I will make you listen to the *Xenon II* soundtrack on the ST (yuck) all day!!

James Burrows
Eye, Suffolk

The Hacker's Handbook was so named before 'hacking' became a dirty word. It does cover subject matter that is potentially illegal in its application, but it's actually of most use to those trying to stop people getting into their computer systems.

ABSOLUTE BEGINNER

Could you please answer my following questions :

1. Can all viruses be removed by using one particular killer disk? If not could you suggest which disk or disks I should purchase?
2. Are these disk killers easy to use?
3. Should I be careful of which PD software I buy?
4. Could you suggest any good educational books on the Amiga?

As you see from the above questions I am a beginner and would be grateful if you could help.

J Massey
Wrexham, Clwyd

1. No. Viruses and killers are virtually continually updated, so just keep gettign the most recent one.
2. Yes.
3. Always be careful with any disk from an outside source.
4. It depends what you want to learn. There are an awful lot of books – we may do a round up.

LANGUAGE BARRIER

Although I am currently enjoying Dave Jones' series on Amiga games programming, I think many of us are at a disadvantage as we cannot compile and save the code that Dave has generously provided. Neither the *Devpac* assembler from *ST/Amiga Format* or the *Argasm* assembler recently provided have the necessary 'include' files to allow us to compile the code. Perhaps here a good PD assembler may be considered for inclusion in a future issue.

Still on the subject of assembly language, I am a computer systems manager, and have written programs in 4GL, Pascal, Fortran and a couple of others. Assembly language has always eluded me, however, as I have never seen an adequate beginners' tutorial about 68000 machine language, other than the odd short series which lasts a couple of issues.

I would welcome a course in assembly language which was practical rather than explaining what each instruction does. Perhaps the first month you could start off and have a simple article on printing a message on screen, and in the coming issues on how to open a custom screen, and maybe designing a simple sprite and getting it to move very simply on the screen. The point, I think, is to have something that is achievable every month to keep the interest in the subject.

Perhaps this tutorial could even be based along the lines of The Very First tutorial that comes with the Amiga. I have always thought that having a disk on a magazine was an excellent way of teaching new skills to readers.

Stuart Hunter
Edinburgh

LITERARY PRETENSIONS

As you are in a position of offering wonderful Amiga goodies I hereby claim mine for submitting to you an original and ridiculous piece of literature.

There's only one thing – are you man enough to print it?

Jem Barrett
Northampton

1. No.
2. Definitely not.
3. Errm... that's it.

FRUSTRATED PROGRAMMER

I've been the proud owner of an A500 for several months now, and after finally getting my jaw off the floor and enduring several hours of plastic surgery just to get that gob-smacked 'Wow! How does it do that?' look off my face (it leaves my old CPC464 standing) I have seen many demos, heard many tunes and seen many a sane and rational person driven MAAAAAD with envy (HeeHeeHee!)

But now I want to have a go myself – I want to make my own mega demos, I want to make things go flying around the screen going ZZAAP! PING PIIIOOOINNG! and I want a Ferrari parked outside my ski lodge in Austria (OK, OK – maybe next year!)

Anyhow, to the point – where do I start? How do I get control of the blitter? What exactly is a copperlist?

What I really need is a couple of decent books on machine code programming on the 68000 (for the beginner). I've programmed in BASIC for several years, PASCAL for several months, and I've scratched the surface of assembly on an 8-bit. Now I want to get down to the nitty-gritty of serious power programming, but I need some books to show me how. I am following Dave Jones' course and I'm finding it very interesting, but I want to know more. Are there any books you recommend?

Daniel Hopkins
Caernarfon, Gwynedd

Jason swears by Abacus' Amiga Assembly Language Programming which will teach you the fundamentals of programming in 68000 assembler. You'll also need a good book on the Amiga hardware. The two which Jason recommends are Addison Wesley's Amiga Hardware Reference Manual and Abacus' Amiga System Programmers Guide. All three books are available from Adamsoft on 0706 524304.

WHERE'S MY PARADROID?

I own a 1 Meg Amiga and I read your magazine every month. One of the great things about *Amiga Format* is the amount of letter pages. So much can be learnt from other people's letters.

Now, on to my list. Over the years I have owned quite few computers. Below is a list of the 10 pieces of software that I have used most.

1. *Paradroid* – 64
2. *Kick Off* – Amiga
3. *Elite* – 64/Amiga
4. *Kindwords v2.0* – Amiga
5. *Blood Money* – Amiga
6. *Batman: The Movie* – Amiga
7. *Deluxe Paint III* – Amiga
8. *Populous* – Amiga
9. *Robocop* – Amiga
10. *Gridrunner* – Vic 20

Oh, and by the way, could you please tell me when the Amiga version of *Paradroid* is coming out.

Robert Sadler
Halesowen, W Midlands

Paradroid is being worked on and should be out in a few months.

QUICK QUESSIE 2

I have a query. In *Amiga Format* Issue 8 I read in your Letters pages about being able to externally upgrade my A500 to 8 Meg. Is this true? If so, does it mean I will be able to run software that requires 3 or 4 meg of RAM? If so, how much will it cost? Where will I get it from?

Stephen Stairs
Moulton, Northants

Yes it does. Check out the ads.

DISABILITY ALLOWANCE?

I am a newcomer not only to your brilliant magazine, but also to Amiga computing itself. You see, I have recently become disabled and can only move one arm. After 7 months in hospital I was given an A501 as a gift. The kindness of friends and charities have provided a 2nd drive and printer.

This brings me to my main point – it's all very well having the equipment, but it becomes redundant when you can't afford the software. I have to rely on state benefits to support my wife and 2 very young children. I cannot throw my money away on software which may turn out to be total crap.

I know your feelings on the issue, but I find 'pirate' disks to be a way of reviewing software personally. I cannot say I favour these crackers but I really have no choice. In a similar vein, I have to say some of the PD utility disks are very good, and provide someone on a limited income the means to build a useful library.

On a serious note, I would like to delve deeper into the Amiga's capabilities. Can you recommend a good, easy, and cheap programming system – also, do you know of any company selling guaranteed second-hand equipment such as midi systems, hard drive, flatbed scanners...?

Dave Winder
Sutton, Surrey

JOIN THE UNEMPLOYMENT CLUB

I am writing to you regarding User Groups for unemployed computer enthusiasts. I was involved in such a group in Dublin which catered for all the popular makes of computer. The group was divided in sections i.e. ST, Amiga etc.

The group was a huge success with over 250 members in Dublin alone. We set up a Public Domain service for each of the formats catered for, started a virus checking service, held meetings, outings etc. We received great

A patient experiences the latest treatment for Amigaholics, a condition described in 'It's the Real Thing'.

support from computer shops etc receiving free games, blank disks, stationery and publicity.

I would love to set up a group here in Britain. Each of the formats would have its own section run by a small number of dedicated users. If possible these would then set up their own PD and information services and a newsletter would be produced. I would also hope to include a *Dungeon Master* and *Chaos Strikes Back* column, users' ads, help column and a section for each computer.

To set up such a large User Group we would have to make a small charge to members to cover mailing, PD software, putting together and printing of the newsletter. Although primarily for low-income and unemployed users, any computer owner would be quite welcome to join.

Other aims of the club would be: presenting home computers as useful tools in everyday life and not just for playing games on; dispelling the 'my computer is better than yours' syndrome; making life a little easier for unemployed/low income users; encouraging members to put their computing skills to good use (by holding competition to produce programs etc); providing information regarding courses, equipment and software, and help for learning new skills and development of existing ones.

I would be very grateful if you could print my letter in your excellent magazine: I would also be very grateful for any support your magazine may be able to offer this venture. If any of your readers would like more information or would like to join this club please do not hesitate to write.

Paul Matthews
2/6 West Pilton Crossway,
Edinburgh EH4 4ED

BULLETIN BOARD

You invited your readers to send in details of their bulletin boards in Issue 7, so here goes! "The Isle of Avalon", tel 01-659-5732 from 9am to 9pm (the daylight hours!) Speed available are 300/300, 1200/1200, 2400/2400. We have an Amiga area which includes the Amiga Echo (worldwide messaging), files, letters, plus on-line games, an agony aunt, a BBC area, a PC area, an international general messaging facility and fidonet mail. The board uses ANSI graphics (optional) and supports all popular file transfer protocols.

Steve Linkstead
Horsham, Sussex

MAD ABOUT MASTERSOUND

I am writing to complain about the Coverdisk on Issue 7. The specific reason that I bought this magazine was solely because of the *Mastersound* demo. When I got home and loaded the disk a message appeared on the screen demo. When I got home and loaded the disk a message appeared on the screen saying that I did not have enough memory as I only have an A500.

If I had known this was going to happen I would not have bought the magazine but as it wasn't printed on the cover, disk or Index I assumed it would be compatible with my computer. I feel that the fact that I had to flick half-way through the magazine as well as reading it to find this out is a bit much to ask when you are in the local newsagents.

As I cannot return the magazine to my newsagent I feel that a refund is not unreasonable or some other sort of recompense for my wasted money.

Barnaby Grubb
Sittingbourne, Kent

It does work on an unexpanded A500 – just make sure it is the first thing you run after you have booted up the disk.

IT'S THE REAL THING

John Gigney (Letters, *Amiga Format* Issue 8) has a good point. Every Amiga fan knows that a session at the console is totally riveting. For long stretches. (There have been a million meals-gone-cold to prove it.) That intense level of prolonged concentration must be mind-shaping. Especially as it is so enjoyable as well.

So the subject matter we're soaking ourselves in can be a pretty important question. We just can't help being influenced by it.

On the Amiga it's so real you have to get the answers – or feel like a bad parent. So you sharpen your eyes, without noticing it at first. And before long, accurate observation of reality becomes a day to day habit; and a pleasure in itself.

We're Amigaholics, that's for sure. So we reckon we might as well be addicted to a better understanding of the real creatures we share the world with.

Robin Bilson
Buxted, East Sussex

SAVE MY GAME

I would like to air a point regarding games software that uses the master disk to store player's games on (ie CRL's *Lancaster*). This is simply stupid as it will increase the likelihood of software companies being sent faulty returns as well as leaving software vulnerable to viruses as the write protect tab has to be off.

May I also suggest that saved games should use the operating system of the host computer so that if we have ten games we do not need ten different disks.

If software companies adopt weird formats to save player's games hoping that this will stop users editing the saved games (as in the *Dungeon Master* Editor software) then why not use an encryption alogrythm instead?

Surely, adopting these suggestions would save software houses money in dealing with complaints and faulty returns as as well as save users money by having to buy less disks to put saved games on. Perhaps it is a conspiracy from the blank disk manufacturers? I think we should be told.

Mike Pearson
Inverkeithing, Fife

BEGINNER'S LUCK

Congratulations on another excellent issue (Issue 7, Feb 1990). At last there is an article for beginners ('Taking Control'). Many thousands of Amigas have been sold and a high proportion of these must be for beginners, like myself. I am sure that I am not the only one who finds a lot of what is written to be totally incomprehensible simply because we don't understand the terminology or the procedures.

This is a pity because not only are we missing out, but a lot of what you publish and also put on your demo disks is totally wasted. So please can we have more articles directed at the beginner explaining in idiot language the terminology etc. Then, perhaps, we can get the full value from our Amigas – and from your mag.

In your recommendations for programs for the new owner, I was surprised at what appears to be an omission. You make no mention of the brain teasers which can be played against the Amiga. I am thinking of such programmes as *Scrabble, Chess, Shanghai, Solitaire* and others. I get many hours of pleasure from these.

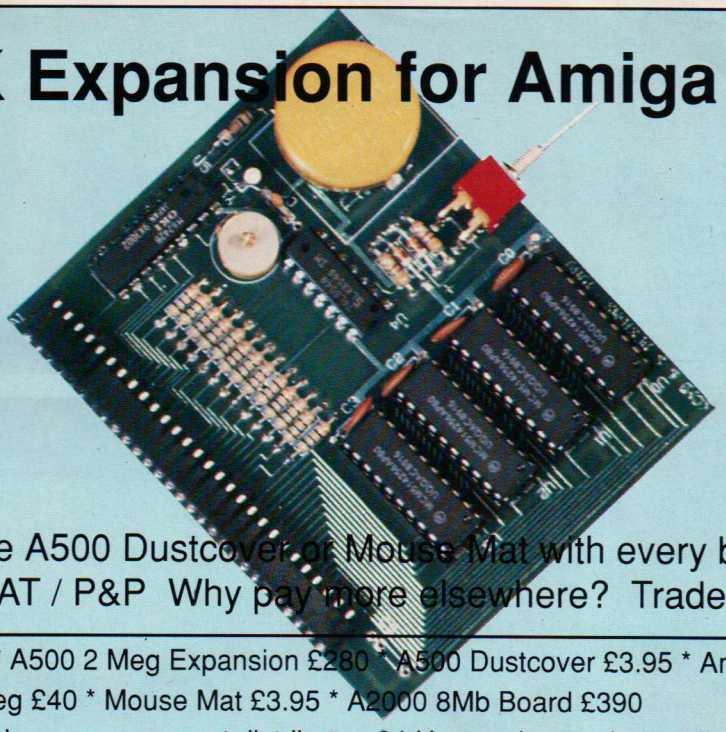
D W Joslin
Bridgwater, Somerset

We try to vary our coverage, most of it aimed at the average user, but some aimed at experienced users and some at beginners. We shall continue to do so.

CHARITY BEGINS AT THE KEYBOARD

This letter is to tell you about our little charity event. My mates and I plan to do a 30hr Computation. This means we stay on our computers for 30 hours, NON-STOP and simultaneously. We are trying to raise over £1,000 for Rochford

512 K Expansion for Amiga A500



£49.50

* Real Time Clock
*A501 Replacement
*1 Mbit DRAMS

£46.95

* Memory Only
* Disable Switch
* Made in U.K.

* Free A500 Dustcover or Mouse Mat with every board

All Prices include VAT / P&P Why pay more elsewhere? Trade enquiries welcome

A500 3.5" Disc Drive £68 * A500 2 Meg Expansion £280 * A500 Dustcover £3.95 * Amiga SCART Lead £7
A590 Upgrades per 0.5 meg £40 * Mouse Mat £3.95 * A2000 8Mb Board £390
Please send a cheque or phone your nearest distributer: 24 Hour order service available. * Same day despatch

DS & K DESIGNS LTD,
Dept AF, 66 Lime Street,
Liverpool, L1 1JN
Tel: 051 709 4412 Fax: 051 709 3317

VISA

Access

SPEED COMPUTER LTD
Dept AF, 41 Weymede, Byfleet,
Weybridge, Surrey, KT14 7DQ
Tel: 09323 52277 Fax: 09323 52772

LOOK!

All Prices Include VAT & 1st Class Delivery

☎ 081-744 3087/1834 (Mon-Sat 10-6)

Amiga Books

Advanced Amiga BASIC	£18.95
Amiga 3D Graphics Prog BASIC	£18.45
Amiga Applications	£16.95
Amiga Assembly Lang Prog	£14.45
Amiga BASIC Inside & Out	£18.95
Amiga C Advanced Programmers	£32.45
Amiga C For Beginners	£18.45
Amiga DOS	£14.95
Amiga DOS Inside & Out	£18.45
Amiga DOS Manual	£22.95
Amiga DOS Quick Reference	£8.95
Amiga DOS Ref Guide	£14.95
Amiga DOS Inside & Out	£18.45
Amiga For Beginners	£12.95
Amiga Gd Graphics Sound Teleco	£17.45
Amiga Handbook	£15.95
Amiga Hardware Ref Manual	£21.95
Amiga Machine Lang Guide	£21.95
Amiga Machine Language	£14.95
Amiga Microsoft BASIC Prog Gde	£18.45
Amiga Prog Handbook Vol 1	£23.95
Amiga Prog Handbook Vol 2	£23.95
Amiga Programmers Guide	£17.45
Amiga Programmers Guide	£18.45
Amiga ROM Kernel Ref Man Autod	£28.95
Amiga ROM Kernel Ref Man Lib	£32.95
Amiga Systems Programmers Guide	£32.95
Amiga Tricks & Tips	£14.95
Becoming an Amiga Artist	£18.45
Beginners Guide to the Amiga	£16.95
Compute's 1st Book of Amiga	£16.95
Compute's 2nd Book of Amiga	£16.95
Elementary Amiga BASIC	£14.95
Inside Amiga Graphics	£16.95
Inside the Amiga with C 2nd Ed	£20.95
Kickstart Guide to the Amiga	£13.95
Kids & The Amiga	£15.95
More Tips & Tricks For Amiga	£18.45
Programmers Guide to the Amiga	£23.95
Amiga Graphics Inside & Out	£32.45

Ribbons · Highest Quality Guaranteed · F-Fabric C-Carbon Multi-Strike

	1+	3+
AMSTRAD		
PCW8256/8512 (F)	£3.45	£3.00
PCW8256/8512 (C)	£3.75	£3.50
PCW9512 (F)	£3.75	£3.50
PCW9512 (C)	£2.85	£2.75
DMP (F)	£3.95	£3.50
DMP2000/3000 (F)	£3.50	£3.00
DMP3160/3250 (F)	£3.50	£3.00
DMP4000 (F)	£5.45	£5.00
LQ3600 (F)	£3.45	£3.50
LQ3600 (C)	£3.75	£3.50
LQ5000 (F)	£8.95	£8.50
BROTHER		
HR15/20/10/25/35 (F)	£3.95	£3.50
HR15/20/10/25/35 (C)	£3.95	£3.50
M1009/1109 (F)	£3.95	£3.50
M1409 (F)	£4.95	£4.50
M1609/1709/1724 (F)	£4.95	£4.50
CANON		
A1250/40/AP1200 (F)	£3.95	£3.50
PW1080/PW1156		
CENTRONIC		
GLP, HP80, 156 (F)	£3.95	£3.50
CITIZEN		
1200 (F)	£3.95	£3.50
180E (F)	£3.95	£3.50
COMMODORE		
MPS801 (F)	£3.95	£3.50
MPS802, 2022 (F)	£3.95	£3.50
MPS803 (F)	£3.95	£3.50
DIABLO		
HTII, 1345, 1355 (F)	£3.95	£3.50
HTII, 3000, 3200 (C)	£3.95	£3.50
EPSON		
LX80/86/90 (F)	£3.95	£3.50
LX800/LQ600/800/850(F)	£4.45	£4.00
MX80/FX80/85/86/90 (F)	£3.95	£3.50
MX100/FX100/LX1000 (F)	£4.95	£4.50
LQ1000/1050/ERC-20(F)	£4.95	£4.50
LQ2500/EX800/3X1000 (13mm) (F)	£5.45	£5.00
LQ1500/LP1500 (F)	£5.45	£5.00
JUKI		
6100 (C)	£2.95	£2.50
6200, 6300, 6500 (C)	£3.95	£3.50
M. TALLY		
M180/Spirit (F)	£3.95	£3.50
MT80/Spirit (C)	£3.95	£3.50
MT88/88 (F)	£5.45	£5.00
NEC		
P2200 (F)	£4.45	£4.00
PC8023 (F)	£4.45	£4.00
Pinwriter P3/P7	£5.95	£5.50
Pinwriter P5/9XL (F)	£5.95	£5.50
P6 + P7 (F)	£5.95	£5.50
PANASONIC		
KXP109/108/1124/159(F)	£3.95	£3.50
KXP3131/3151 (F)	£3.95	£3.50
QUENDATA		
DMP310/DP80/100 (F)	£4.50	£4.00
QUME		
Sprint 3/5 1,11,111 (F)	£4.95	£4.50
Sprint 3/5 1,11,111 (C)	£4.95	£4.50
Sprint 7/9 10/11/14.IV(F)	£4.95	£4.50
Sprint 7/9 10/11/14.IV(C)	£4.95	£4.50
SEIKOSHA		
CP80 (F)	£3.95	£3.50
CP100/250X (F)	£3.95	£3.50
SHINWA		
CP80/808/CTI (F)	£3.95	£3.50
CP80/808/CTI (C)	£3.95	£3.50
STAR		
LC10 (F)	£3.95	£3.50
LC24.10 (F)	£4.45	£4.00
NB15/24-16 (F)	£4.45	£4.00
NB24.10/ND10/NL10 (F)	£4.45	£4.00
TAXANKAGA		
810/815/910/915 (F)	£3.95	£3.50

Dust Covers
Keyboard £4.95
Monitor (Philips) £9.95
CM8833 (Commodore 1084)

3½" Disc Drive Head Cleaning Kit £4.95

Commodore Amiga TV Modulator £17.95

Amiga A501 ram £99.00
Commodore Original Clock & Calendar

Cable & Connectors

Monitor Lead (D23F - scart)	£14.95
Printer Cable Parallel (D25M CEN36M)	£7.95
Null Modem Cable (D25 mm, mf, ff)	£14.95
D23 M or F with Cover	£3.95
7 Core Screened Cable (perM)	£2.00
Scart 21 Plugs	£2.00
Twin Phone Plug with Cable (1M)	£2.00

Amiga Mouse	£24.95
Mouse Mat: soft	£3.95
thick rubber	£4.95

Lockable Disc Boxes

3½" 50(caps)	£7.95
3½" 80(caps)	£10.95

3.5" DISK — 100% CERTIFIED (prices for pack of 10 labels and envelopes) — Maxell Sony 3M Dysan Verbatim

	BRANDED		BULK	
	DSDD 720K	DSHD 1.4M	DSDD 720K	DSHD 1.4M
10	£10.95	£24.95	£6.95	£13.95
20	£20.95	£44.95	£12.95	£24.95
30	£30.95	£72.95	£18.95	£39.95
40	£40.95	£94.95	£25.95	£52.95
50	£50.95	£119.95	£30.95	£64.95
100	£94.95	£229.95	£59.95	£119.95

orders to: *A to Z Computer Services*

49 Heath Road, Twickenham, Middlesex TW1 4AZ Fax: 081-891

* *Prices are for mail order only and subject to change without notice.*
* *Education, Govt. Authority Official Orders welcome (min £50)*

Ladbroke Computing International

ST World 'Best Dealer' 1989

Amiga

33 Ormskirk Rd, Preston, Lancs, PR1 2QP
Open Mon. to Sat. 9:00 am to 5.00pm
Dealer enquiries welcome.

Phone us for best prices. We will try to match any price.

We were voted Best Dealer by the readers of ST World because we give our customers the best available service from, both our shop premises at 33 Ormskirk road and through our Mail order department at the same address. FOR THE BEST SERVICE AND PRICES, SHOP WITH US. All Software and Hardware is fully tested prior to purchase. All hardware is supported by on site engineers so that quick turn around on all repairs is guaranteed. There are no hidden extras. All prices include VAT. Delivery is free on orders over £100, in Mainland UK (add £5 for courier delivery). All prices are correct at copy date, 20/03/90 and are subject to change without prior notice. All prices are good while stocks last. Phone for up to date prices and advice.

Amiga Drives

Vortex 40Mb	£ 499.99
Supra 30 Mb	£ 674.99
Third Coast 65 Mb	£ 659.99
Cumana 1 Mb floppy, disable switch and through port (New slimline low noise model CAX 354)	£ 69.99
Cumana 1Mb 5 1/4" floppy drive, disable switch and through port, 40/80 track switch(CAX 1000S).	£ 129.99
Disk drive dustcover	£ 2.99

A4 Flat Bed Scanner

This high quality 200dpi flat bed scanner is also a thermal printer and photocopier. It can scan high resolution images in up to 16 grey scales. Software and cable are provided for the ST or Amiga. The software allows capture, printing, load and save of images in a number of formats(ST software includes image editor). Ideal for DTP, this is probably the most cost effective peice of office equipment you could own.

£449.99

Peripherals

A2000 PC-XT bridgeboard	£ 558.99
A2000 PC-AT bridgeboard	£ 792.99
Master sound sampler	£ 34.99
2Mb RAM expansion for A500	£ 539.99
Midi Master 1 in, 1 thru, 3 out	£ 32.99
AMAX Mac emulator	£ 124.99
AMAX with 128K Mac ROM's	£ 229.99
AMAS Sound sampler	£ 91.99
Digi-view gold V3.0	£ 137.99
Semi-Professional quality genlock	£ 275.99
Studio quality genlock	£ 793.99

Quality 3.5" Disks

	Unbranded		Sony
Quantity	Loose	Boxed	Boxed
10	£6.99	£7.99	£9.99
100	£64.99	£74.99	£89.99

All our disks are top quality Sony, Maxcell or Kao products. All disks carry an unconditional lifetime guarantee. Please add 60p p&p for each pack of ten disks.

Monitors

Philips 8833 colour, stereo monitor. A best-selling monitor which exploits the excellent sound quality of the Amiga. £249.99

Philips 8802 colour, mono monitor £239.99

Philips 15" FST Remote, Scart input, Teletext Tv with 60 tuner presets. £ 259.99

Commodore 1084 phone

An Amiga to scart cable is included with monitors only.

Price Beaters

Joysticks from	£4.99
Trak ball converted to work as mouse on Amiga	£19.99
Mouse mats from	£5.99
A500 Dustcover	£3.99
Printer Dustcover	£7.99
Monitor Dustcover	£4.99
3.5" disk care kit	£5.99
80/100 disk box	£9.99

Memory Upgrade Boards

* Available with or without calendar/clock. * Plugs easily into A500 slot so no soldering. * Switch provided to switch RAM in/out. * Battery backed calendar/clock, retains time/date on switch off. * Amazing low price.

512K RAM Extension board	£19.99
512K RAM Extension board + clock	£29.99
512K RAM Extension board, populated	£59.99
512K RAM Extension board + clock, populated	£69.99

Our trained technicians can repair all hardware, including Amigas, in minimum time at competitive rates.

New Low Prices

Amiga Packs

Pack1=Batman pack, mouse, modulator	£369.99
Pack2=Batman + pack, mouse mat, joystick, Tenstar pack	£399.99
Pack3=Batman class of 90's pack	£549.99
Pack 4=Pack1 + 512K RAM extension	£424.99
Pack 5=Pack 1 + CM8833 Colour Monitor	£609.99
Pack 6 =Pack 4 + CM8833 Colour Monitor	£669.99
Amiga 2000 Pack includes A2000, PC-XT bridgeboard, 5 1/4" drive, 20Mb Amiga/MS-DOS hard drive, 1084S colour monitor	£1585

Phone for other combinations of hardware / software.

Quality Low Price and Professional Series Printers

Star LC-10 Best-Selling mono 9 pin	£ 159.99 *	Star FR-10 mono 9 pin, 300 cps draft elite, 16 NLQ fonts	£ 527.99 *
Star LC-10 2 faster version of LC-10	£ 189.99 *	Star FR-15 15" carriage version of above	£ 688.99 *
Star LC-10 Colour 9 pin, 7 colour printer	£ 199.99 *	Star XB-24/10 24 pin SLQ, LQ, 240cps draft elite	£ 688.99 *
Star LC-24/10 24 pin mono excellent quality	£ 239.99 *	Star XB-24/15 15" carriage version of above	£ 907.99 *
Citizen Swift 192/64cps 24 pin mono.	£ 319.99 *	7 colour upgrade kit for XB-24/10 and XB-24/15	£ 39.99
Citizen 120D 9 pin mono. Lowest price	£ 134.99 *	Star Laser Printer 8, 1 Mb memory, 8 resident fonts,	
Atari SLM804 Laser Printer, 90 days on site warranty	£ 1099.99	8 pages per min, 300 Dpi	£ 1599.99 *

*** All these printers carry a 12 months on site warranty and come complete with Amiga cable**

VISA Access

(0772) 203166 Fax 561071

Ladbroke Computing International is a trading name of Walton Marketing Limited.

To assist us in processing your order please quote this code. SAM2.2

commodore

FROM £349! AMIGA

Prices include VAT, delivery & warranty. Please add £15 for overnight delivery. All systems are tested before despatch. On-site maintenance options available.

Amiga A500 complete, now only	£349
Amiga A500M with A1084 hi-res colour monitor	£615
Amiga B2000 latest UK model, with 1.3 Roms and 1MB chip-RAM	£949
Amiga B2000 As above, plus A2286 PC-AT bridge board & 5¼" disk	£1495
Amiga B2000 With A2286, plus A2090A/2092 20MB autoboot hard disk	£1795

■■■ B2000 + AT Bridge Board + 40MB autoboot hard disk £2095!

PERIPHERALS AMIGA

A2286 PC-AT board & 5¼" drive	£595
A2088 PC-XT board & 5¼" drive	£249
20MB Amiga/MS-Dos hard disk	£229
A2090A/2092 20MB autoboot h/d	£375
A2090A/2094 40MB autoboot h/d	£675
A2620 68020 Accelerator Card	£1295
C2058 8MB Board, 2MB installed	£375
RAM for above, per 2MB ...	£199
Flicker Fixer Multiscan Adaptor	£349
14" Multisync high-res monitor	£445
C2010 NEC 3½" internal drive	£79
3½" DS/DD diskettes, per 10	£10
C1010 NEC 3½" half-height drive	£79
A501 plug-in RAM/clock 512K	£119
A1084 High-res colour Monitor	£249
A590 20MB autoboot hard disk	£375
RAM for A590, per MB ...	£99
Amdrive 20MB SCSI hard disk	£339
Amdrive 50MB SCSI hard disk	£425
Star LC10 Multifont Printer	£179
Star LC10C colour, 120 cps, NLQ	£229
HP DeskJet+ 300 dpi inkjet, B/W	£695
HP PaintJet colour inkjet 180 dpi	£889
DXY1200 A3 8 pen plotter	£1159
Trackball Marconi RB2	£59
FrameGrabber	Phone
Superpic Genlock/Digitiser	Phone

■■■ NEW half-height NEC external drive with switch & throughport £79!

TELETEXT AMIGA

Why not enjoy the free **Teletext** databases with the **MicroText** Teletext adaptor... Fully programmable, with **Fastext** facility, instant access to last 16 pages, double page view, **telesoftware** loader, auto-start/background operation... Pages can spoken, printed as ASCII or graphics, saved as ASCII or IFF files... And it turns your 1081/1084/8833 monitor into a digital TV! Available now for only £139!

■■■ SUPERBASE II half-price special offer, while stocks last... £49.95!

PRODUCTIVITY AMIGA

SuperBase Personal	Relational database power, without programming!	39.95
SuperBase Personal 2	As above, plus text, mail merge, batch entry etc.	49.95
" " Professional v3	With Forms Editor and DML programming language	154.95
SuperPlan	Pro Spreadsheet with business graphics, time planner	49.95
VizaWrite Desktop v2	High performance desktop WP, now with HQ fonts	69.95
Professional Page v1.3	Includes WP, Desktop, colour separations, CAD	189.95
Excellence!	WP with graphics, thesaurus, dictionary etc.	129.95
Arena Accounts	Sales, Purchase and Nominal Ledgers plus invoicing	168.95
Personal Tax Planner	UK Income Tax computation program, from Digita	39.95
A/C Basic v1.3	By Absoft. Compiles Amiga Basic... FAST!	149.95
SuperBack	Backs up 20MB in 20 minutes, any Amiga hard drive	37.95
B.A.D. Disk Optimizer	Speeds disk access up to 500%, WorkBench or CLI	34.95
Publisher's Choice	£79.95	
ProText v4	79.95	
Amiga C for Beginners	18.45	
Amiga C Advanced Programmers	24.95	

Lattice C v5	£179.95
Dos-2-Dos	34.95
PC Emulator v1.1	24.95
C64 Emulator v2	39.95
BBC Emulator v1.2	44.95
Workbench v1.3 Enhancer	14.95
System Programmer's Guide	32.95
Amiga Basic Inside & Out	18.95
AmigaDos Inside & Out	18.45
Amiga Tricks & Tips	14.95

■■■ SUPERPLAN half-price special offer, while stocks last... £49.95!

CREATIVITY AMIGA

Graphics Starter Kit	Aegis Images/Aegis Animator/Aegis Draw/Aegis Artpak	69.95
Sculpt-Animate 4D	3D graphics and animation for the professional user	369.95
Sculpt-Animate 4D Jr.	As Sculpt 4D above, without HAM ray-tracing	109.95
Sculpt 3D XL	Much faster than Sculpt 3D, with 24-bit plane option	129.95
Music-X	"Without doubt the best piece of MIDI software to date"	199.95
Pro-Video PAL Plus	Professional video titler with fonts, extra fonts available	189.95
Pro Video font sets	Choice of 4 sets of 4 anti-aliased fonts, each...	89.95
TV-Text Professional	Latest full-feature video titler, includes Zuma fonts	139.95
SummaSketch Plus	12x12 Graphics Tablet with fast driver software	425.00
PAL Rendale Pro	Broadcast quality genlock for the professional user	625.00
Rendale 8802 Genlock	£199.95	
MiniGen	109.95	
DigiView Gold	89.95	
De Luxe PhotoLab	49.95	

De Luxe Paint 3	£62.95
De Luxe Video 3	89.95
Digipaint 3	59.95
Design 3D	69.95
Animagic	64.95
Photon Paint 2	69.95
Fantavision	34.95
Professional Draw	114.95
Aegis Draw 2000	179.95
PageFlipper + F/X	79.95

■■■ IF YOU WANT IT TOMORROW... CALL US TODAY! ON 01-546-7256 ■■■

Prices are POST FREE & include VAT. Order by phone with your credit card, or send cheque/PO or your credit card number. Official orders welcome. We despatch same day by FIRST CLASS post. Please allow 5 days for delivery of hardware orders. Prices are quoted subject to availability. Ref. A69

Access VISA

Calco Software

LAKESIDE HOUSE, KINGSTON HILL, SURREY, KT2 7QT. TEL 01-546-7256

NO COMPUTER IS COMPLETE WITHOUT A DUST COVER

Protect your Amiga with a dust cover from the BBD Professional Range.

Made from best quality proofed nylon that has been treated with a flame retardant and an anti-static inhibitor. BBD Dust Covers are tastefully finished with contrasting piping. They never crack, discolour, tear or fade. They can be washed and ironed. So confident are BBD of the quality that they give a no-quibble guarantee with every cover.

BBD dust covers are not expensive and all our prices include VAT and P&P

Amiga 500, Keyboard only.....£5.00
Amiga 1000, one piece cover.....£8.00
Amiga 2000, two piece set £11.00

In addition to the above BBD offer a wide range of other covers. These include printer covers from only £5.50
Why not contact us for further details

BBD DUST COVERS

Dept. 34, The Standish Centre, Cross Street, Standish, Wigan, WN6 0HQ

Access

Telephone: 0257 425839 ext 34
Fax: 0257 423909

VISA

Sheer Perfection in Computer Protection

MISTRAL COMPUTER SUPPLIES

Mail Order 0705 453814 Mail Order

AMIGA SOFTWARE

F29 Retaliator	16.99	Turbo Outrun	16.99
Pool of Radiance	16.99	Interphase	15.99
Damocles	16.99	Space Ace	29.99
Untouchables	16.99	Altered Beast	16.99
Iron Lord	19.99	Beach Volley	16.99
Chaos Strikes Back	16.99	Super Wonderboy	16.99
Dragon Spirit	13.99	Dragon of Flame	16.99
Drakkhen	19.99	Fiendish Freddy	19.99
Fast Lane	13.99	Xenon II	16.99
Last Ninja II	16.99	Double Dragon II	13.99
Rainbow Island	16.99	Gazza's Soccer	16.99
Cabal	16.99	P47	15.99
Barbarian II (psygnosis)	16.99	F16 Falcon	19.99
Keef the Thief	16.99	Falcon Mission Disk	13.99
Ninja Warriors	13.99	Predator	16.99
Ghostbuster II	16.99	Xenomorph	16.99
Operation Thunderbolt	16.99	Typhoon Thompson	16.99
Chase H.Q.	16.99	TV Sports Basketball	16.99
Power Drift	16.99	Space Rogue	19.99
Ghouls & Ghosts	16.99	Rainbow Island	16.99
Stunt Car Racer	15.99	Hyper Action	16.99
Continental Circus	16.99	Dragons Breath	19.99
Shadow of the Beast	24.99	Fire Brigade	19.99
It Came from the Desert (1 meg)	19.99	F.29 Retaliator	16.99
Kenny Dalglish II	19.99	Player Manager	13.99
Sim City	19.99		

★★★★★ AMIGA HARDWARE ★★★★★

Amiga 500 Bat Pack * SPECIAL OFFER*	Phone
A590 Hard Drive 20 M.B. *SPECIAL OFFER*	£352.99
Vortex 40 meg hard drive *SPECIAL OFFER*	£505.99
External Second Drive Amiga & ST	£72.99
Amiga 500 + 1084 monitor	£575.00
A501 512K RAM exp	£85.99
A520 Modulator	£22.99
1084S Monitor	£247.99

3.5" Disks unbranded, boxed and fully guaranteed.
10 .....50p each 50 plus.....45p each

Access *Send Cheque/PO to:* **Mistral Computer Supplies, 42 Park Way, Havant, Hants, PO9 1HH.** VISA

All Prices include P & P and VAT, new titles dispatched on day of release. Send for full soft & hardware list. All formats available. Please add £2.00 per item outside UK.

BARCLAYCARD VISA

YOUR GUARANTEE SOFTWISE

Access

COMPUTER SOFTWARE PHONE/MAILORDER

Will not charge credit card customers for goods until day of dispatch, we do not charge extra for phone orders, we will quote prices over the telephone, and send price list with every order, if required, price list on request - large S.A.E. required.

3D Pool	13.99	Interceptor	16.99	Triad 2	16.99
7 Gates of Jambala	16.99	Ivanhoe	16.99	Untouchables	16.99
Afterburner	16.99	It Came From The Desert	19.99	Weird Dreams	16.99
Altered Beast	13.99	Jack Nicklaus Golf	16.99	Xenon 2	16.99
Austerlitz	16.99	Keep The Thief	16.99	Space Quest 2	16.99
B of Power	16.99	Kick Off	16.99	Star Wars Trioligy	16.99
Batman the Movie	16.99	Leisure Suit Larry 2	23.99	Stunt Car Racer	16.99
Battlechess	16.99	Licence To Kill	13.99	Times Of Lore	16.99
Beach Volley	16.99	Live & Let Die	13.99	Turbo Outrun	16.99
Bloodwych	16.99	Lost Patrol	16.99	Waterloo	16.99
Bomber	19.99	Manhunter	19.99	Wings Of Fury	13.99
Cabal	16.99	Microptose Soccer	16.99	Home Accounts	25.99
Chase HQ	16.99	New Zealand Story	16.99	Personal Accounts Plus	28.99
Continental Circus	13.99	North & South	16.99	Small Business Account	69.99
Cyberball	13.99	Onslaught	16.99	K Comm 2	25.99
Damocles	19.99	Operation Thunderbolt	13.99	K Data	42.99
Day of the Viper	16.99	P.47	16.99	Superbase Personal 2	85.99
Delux Strip Poker	13.99	Police Quest	16.99	Fun School 6-8/over 8/under 6	16.99
Double Dragon	13.99	Populus	16.99	Digicalc	34.99
Dungeon Master (1 Meg)	19.99	Powerdrome	16.99	K Spread 2	51.99
Elvira	19.99	Quartz	16.99	Protex V4	85.99
Elite	13.99	Rally Cross	13.99	VIDI	114.95
European Superleague	13.99	Robocop	13.99	Delux Paint 3	68.99
F.16 Combat	16.99	Running Man	13.99	Kindwords 2	42.99
F.29 Retaliator	16.99	Shadow Of The Beast	23.99		
Future Wars	16.99	Shinobi	13.99	**Branded Disks**	
Galaxy Force	16.99	Sim City Maxi	19.99	3.5" DS/DD Sony	9.99
Ghostbusters 2	16.99	Grid Iron	16.99	5.25" DS/DD TDK (48TPI)	8.99
Ghouls & Ghosts	16.99	Hard Driving	13.99	**Unbranded Disks**	
Indiana Jones Infestation	16.99	Honda R.V.F.	16.99	3.5" DS/DD	7.49
		Test Drive Duel	16.99	5.25" DS/DD	6.99

All prices correct at time of going to press

MANY MORE SOFTWARE ITEMS AVAILABLE. SEE OUR GUARANTEE

All prices phone/mail order only, goods subject to availability or release date, above prices include V.A.T. and P&P. UK only (Europe deduct 15% + £2.00 P&P per item, games only). Mail order, please make cheque/P.O. payable to Softwise - 41 The High Street, North Tawton, Devon EX20 2HG. Please allow for cheques to clear (5 working days) before goods despatched.

0837 82846
For Phone Orders

Access MasterCard

A.B Computer Supplies

Amiga A500 Bat Pack inc. modulator, Batman D Paint II, F18 and New Zealand Story.....**£369**

Amiga 2000 XT Pack inc. 1084s col. monitor, XT Bridgeboard and 20MB PC DOS Hard Disk .....**POA**

Commodore A501 Ram Expansion 512K **£112**

Commodore 1084s Colour Monitor.....**£249**

Cumana CAX354 on/off switch, daisychain **£89**

Branded Sony 3.5" DSDD per box of 10 .....**£12**

All Prices Include VAT and Delivery U.K.

Please send Cheque/P.O. to:

A.B. Computer Supplies, 103a Shellfield Road, Marshside, Southport, Merseyside PR9 9UL.
Tel: 0704-213544.

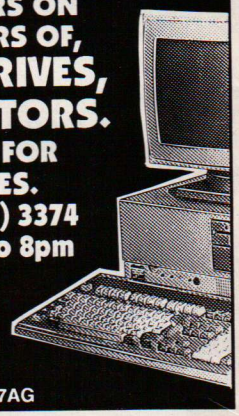
REPAIRS

FULLY QUALIFIED ENGINEERS ON SITE TO UNDERTAKE REPAIRS OF, COMPUTERS, DISC-DRIVES, PRINTERS AND MONITORS.

ALL WORK GUARANTEED FOR 3 MONTHS. FREE ESTIMATES.

Tel: MARK OR MARTIN (0527 85) 3374

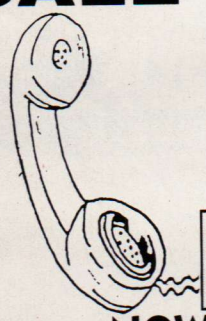
BUSINESS HOURS Mon-Sat 9am to 8pm



AMPOWER
COMPUTER REPAIRS

15a ALCESTER ROAD, STUDLEY, WARKS B80 7AG

SALE ★ SALE ★ SALE ★ SALE



SUCCESS BUILT ON SERVICE

PLEASE RING FOR PRINTER RIBBON PRICES ETC

F.M. Computer Supplies

Lancaster House,
Lancaster Road, Carnaby Industrial Estate, Bridlington,
N. Humberside. YO15 3QY.
Telphone: 0262-679640 Fax: 0262 602620
24 HR ANSWERING SERVICE

FREE STORAGE BOX WITH ALL DISKS

NOW EVEN LOWER PRICES ON OUR TOP SELLING LINES!

3.5" Disk and Box Offers

20	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box	£16.95
30	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box	£19.95
40	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box	£25.95
50	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box	£29.95
60	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box	£34.95
70	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box	£39.95
80	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box	£44.95
90	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box	£49.95
100	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box	£54.95

You can choose any size or type of disk box to go with your top quality disks completely FREE! All our disks come complete with labels and our life replacement guarantee.

LOOK AT THIS AMAZING OFFER

FREE CAR PHONE WITH EVERY ORDER OVER £100.00

Same day despatch

All prices include VAT and Track Back delivery - for overnight please add £5 per order

VISA

* Subject to fitting by Phonetech Communications, Peterborough.
E & OE Prices correct at time of going to press.

Access

Also stockists of:- Mouse and Accessories Cables Joysticks Listing Paper and Much Much More!

SALE ★ SALE ★ SALE ★ SALE

Hospital Special Baby Care Unit Trust Fund (Our local hospital).

This charity event will take place at Mansell Chair Frames Ltd, Unit 1 Charfleets Industrial Estate, Canvey Island on 26th May, starting time 9 am – and we finish on Sunday at 3 pm.

Some Computer companies, like CDS Software, Electronic Arts, Mirrorsoft, Thalamus and Mindscape International have donated us some games and we are very grateful for them. We have a variety of computers at the Computathon, including IBMs, Amigas, Segas and Nintendos. All we need now is some more people aged approximately 15-16 years old, of any sex or culture, who are willing to use their own computers, get sponsors for £150 minimum and stay up for 30 hours!

Please print this letter straight away, as we hope to get a group of people together well before the date and give them time to get sponsors. I will reply to all letters, and will meet up with the people that I feel are good enough!!!

Neil Mansell
53 St Marks Rd,
Canvey Island, Essex SS8 9NJ

ASSEMBLER CORNER

I have very little reason to say anything adverse about your magazine, except concerning the "Dave Jones Series".

I am very pleased to see this kind of addition to the magazine, but unfortunately the source code given on the disk is of no use to me since I use the *K-Seka* assembler/debugger – which will not even allow me to edit the source, let alone assemble it.

Is it possible that you could include a version which I may use, with or without the comments? I'm sure there must be many people with the same difficulty I have.

Finally, it may be a good idea to have a section which is entirely for the assembler users, consisting of programming hints and routines – supplied by the readers and/or games programmers (such as Dave Jones). *Sinclair User*, which I used to read in the days of my Spectrum, had such a feature and was very successful.

Matthew Barker
Weston-Super-Mare

Devpac is generally accepted as the Amiga industry standard assembler. If you do insist on using K-Seka *(you're a brave soul!), then converting the source code to* Seka *format is simply a matter of removing tabs and substituting the Devpac assembler directives for their* Seka *equivelents (which is easier said than done, I'll warn you now!)*

LESS IS MORE

As an Amiga user to be, I feel justified in writing to an Amiga magazine at last. After congratulating you on a great magazine I want to address a point to Roger Barefoot, who wrote to you about flight simulators a couple of months ago.

In his letter he complains of a lack of ground detail in the latest flight sims. Fair enough, but in the newest experimental military flight simulators the ground graphics are being generated with *less* detail, the idea being that by creating the picture with blocks of colour the eye is tricked into seeing detail that isn't there. This also enables the speed of the simulator to be increased without detracting from the visuals.

Finally, a question about this Amiga that's arriving on my doorstep in a few days time. I have been told that the Amiga does not support a proportional joystick. Having tried to play flight simulators with switched sticks on my old BBC 'B' I can imagine that, despite the fantastic graphics and sound, it will almost be a downgrading from my Beeb in the control area. I would be glad if you could prove me wrong.

Philip Lundsay
Belfast, N Ireland

The Amiga can support a proportional stick but the software usually does not.

NO PROTECTION

I refer to the recent attention drawn to software piracy or 'hacking'. In my opinion, the very existence of the hacking groups is a direct consequence of the software companies.

If the software companies did not protect their products then the hacking groups would not even exist at all and these people's talents would be put to a far more constructive use. Obviously, the software would be copied more easily, but perhaps to a far lesser extent than if circulated by a large hacking network of groups. Most people, I feel, would much prefer to own the original copies complete with instructions, etc.

If the software companies have to continue to protect their products from these petty 'hacking' groups all that will happen is that prices will go up as protection gets more and more advanced and the hacking groups will thrive.

When someone has paid the original it is nice to have the peace of mind to have a back-up copy to use in case the original becomes corrupt. Sure, the companies may offer replacement deals at a reduced price, but this may come as little consolation when this occurs to a £25 game or a more expensive piece of software.

I would prefer to see unprotected software, but with some sort of a passworded entry – a random word from a manual, say – which I see as a good comprise to the problem. This, I feel, would get rid of the 'hacking' groups which exist who have such a harmful effect on the profits of the software companies whose hard work goes in to producing good quality software for our machines.

Nigel Stockley
Corfe Mullen, Dorset

VIRUS BUSTERS

Over the past *Amiga Formats* (by the way, they are absolutely brilliant!) I have been reading views on the Virus epidemic infecting our floppy disks. I have become compelled to write to Amiga Format giving some ideas on the subject of protecting our disks. As my computer knowledge is limited, the *Amiga Format* team and readers may find the ideas distressing!

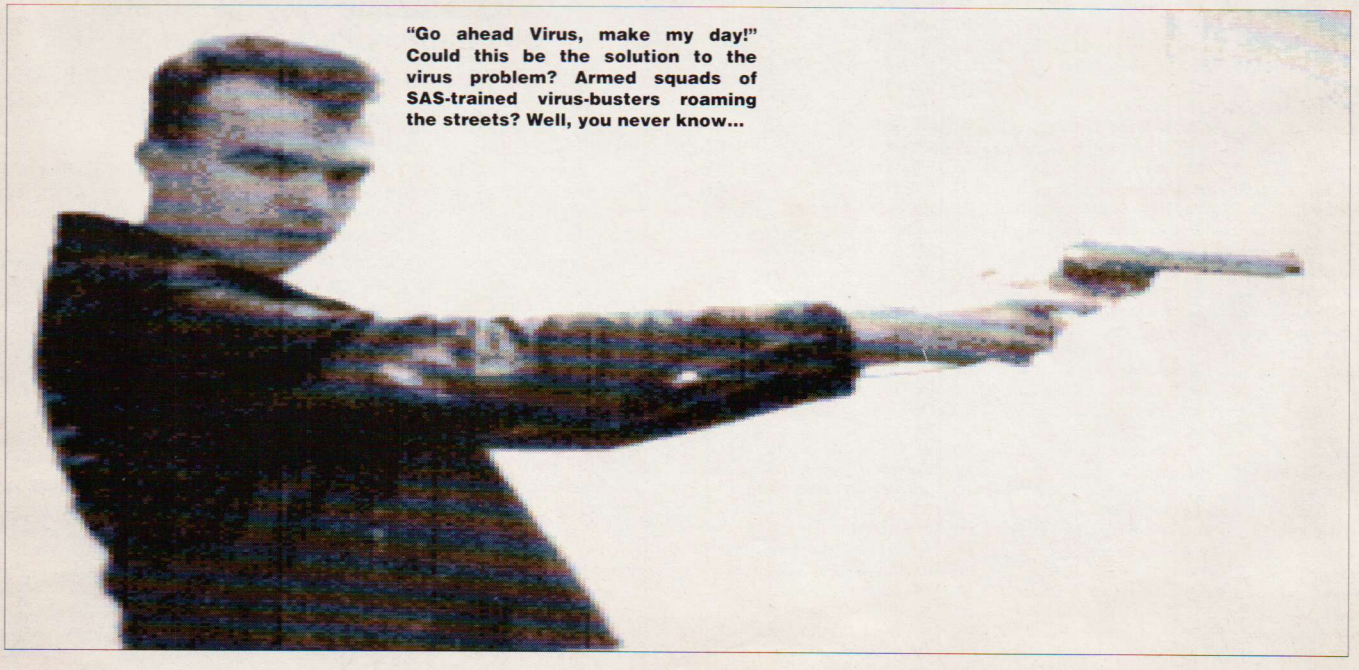
1) Why not have a secret virus killer on every disk supplied by the software industry?

2) What about a dedicated piece of hardware which plugs into your Amiga and wastes every virus it finds on an infected disk?

3) All software should have a secret built-in SAS-trained anti-virus program that can order an attack against any virus disrupting the goodie program.

Michael Tato
Aylesbury, Bucks

Errm... well you never know. The SAS approach may just work...



"Go ahead Virus, make my day!" Could this be the solution to the virus problem? Armed squads of SAS-trained virus-busters roaming the streets? Well, you never know...

GURU's MEDITATION

THE AMIGA ENGLISH DICTIONARY

THIS MONTH'S NEW WORDS

Copperlate *(verb)* The calculations performed when trying to get things to happen on the Amiga's screen.

Pludule *(noun)* One of those interfaces which, when plugged into the back of the Amiga, means it won't quite fit on the desk any more.

Postlethwaite *(noun)* The feeling you get when you open the box of a game you've been waiting for for weeks only to find an instruction sheet – and no disk.

Menopause *(noun)* The mental confusion caused when the phone rings while you are getting a high score and you realise there is no pause mode.

Flapsticate *(verb)* The frustration caused when the metal flap comes off a disk and jams it in the drive.

Areated *(adj)* When the alien mothership is at the top of the screen, the cursor is at the bottom and you die because you run out of room on the mouse mat.

Chappaquidick *(noun)* The guy in the software shop who won't let you test out a £30 game before buying it.

Cordwangle *(verb)* The futile attempts to get all the curls and kinks out of a mouse lead.

Baclurks *(noun)* The creeping feelings of horror when a document crashes and you remember you have not backed it up for an hour.

Yarmouths *(noun)* Expletives uttered when poor collision detection unfairly takes one of your lives.

COMP WINNER

The lucky winner of the murder weekend, courtesy of Electronic Arts and their game *The Hound of Shadow*, is Neil Roberts of Kenilworth, Warwickshire. Happy sleuthing, Neil!

OH DEARY, DEARY ME

Here's a good one, a real corkeriffic of a cock-up – Issue Nine's spine was the wrong way up. OK, so anyone lucky enough to possess a binder won't have noticed, but it will make a good trivia question for a future quiz.

There was also a problem with the stand-alone *Notepad*, as many of you discovered, and you can find the corrections for that on this month's Workbench pages. Apologies for time wasted and hair torn out over that one.

NEXT MONTH

The June issue will be on sale on Thursday 10th May. It's an extra-special one because it's the only Issue 11 we will ever produce. So it will be a real collector's item – a bit like all the other issues so far. We did think about having two Issue 10s, but decided it was a bloody silly thing to do.

Anyway, Ish 11 will have bags of gorgeous goodies including a fascinating piece on fractals, an indispensable guide to printers, a full guide to spreadsheets, an extended games section, a truly helpful playing guide to Rainbow Islands, several exciting page numbers, absolutely no potatoes.

Advertiser's Index

17 Bit Software....120
16 Bit Centre....128
AB Computer Supplies....176
Ace Repairs....102
Accolade....21
Activision....16, 22, 46, 97
Adamsoft....76
Amiable PD....114
Amiganuts....110
Ampower....176
Anco....31, 109
Animatix....149
Ark....135
Ashcom....123
Athene Consultants....78
Audition Compact Services....88
A-Z Computer Services....173
B & B Computer Supplies....78
BBD Dust Covers....175
B.C.S....146
Byteback....52
Bytes & Pieces....125
Calco Software....175
Capricorn Computers....132
Checkmate Systems....178
Computer Conversion Services....76
Computer House UK....61
Computer Store....120
Computerwise Brighton....138
Crazy Joe's....113
Data & Electronics....94
Dataplex....156
Datel....80-81, 82-83
Delta Pi....141
Digicom....90
Digitec Computer Supplies....146
Disk Express....152
Domark....42, 53
Dowling Computers....101
DS & K Designs....173
Dukes Marketing....10
Electronic Arts....6
EMPDL....114
Entertainment International....27, 51
ESP Software....141, 159
Euromax Electronics....49
Evesham Micros....148
First Choice....132
FM Computer Supplies....176
First Micro....74, 75
George Thompson Services....25
GFA....76
Gonzo Games....34
Guiding Light....76
Hammersoft....136
Harwoods Computers....32-33
Hi Soft....15
Hobbyte....159
Home Based Business....87
Impex....70
J.C.L....93
JD Lewis Computers & Repairs....70
Joy of Life Arts....113
JTS PD....113
Kadsoft....113
Ladbroke Computing....174
Lincsoft Software....70
Linel....67
Logtron....57
Magnetic Media....113
Manor Court Supplies....110
Matrix Software....87
MD Office Supplies....117
Media Direct....142
Medusa....78
Megaland....71
Memory Expansion....60
Merlin Express....14
Micronet....8
Microsnips....98
Microtek....136
Microtext....102
Midi Tech....135
Mindscape....11
Mirrorsoft....58
Mistral Computer Supplies....175
MJC Supplies....149
Music Matrix....135
Mutant Sortware....102
Newport Business Supplies....123
Newtek Incorporated....OBC
Nova....114
Oasis Services Ltd....168
Ocean Software....IFC-3, 38, 88
Official Secrets....155
Once Bytten....156
Palace Software....41
Photofile....141
Power Computing....165, 166-167
Premier Mail Order....160
Premier Micros....131
Premier PD....110
Proton software....149
Psygnosis....54
Pdom PD Amiga....105
Rainbow Arts....68
Ramsoft....156
Red Computers....138
Riverdene PDL....114
Saddlers Computer Services....48
Sector 16....113
Seniac....110
Siren Software....87
Soft Exchange....146
Soft Machine....142
Softsellers....145
Softville PD Services....114
Software City....169
Software Super Store....147
Softwise....176
Solid State Leisure....160
Special Reserve....155
Speedysoft International....102
TC Computers....131
Third Coast Technologies....136
Tof Wear Ltd....106
Tonic Audio....132
Track....98
Trilogic....84
Turbosoft....137
UK Amiga User Group....87
Unique Technique....135
US Gold....28, 63, 64, 119
Vertical Reality Laboratories....142
Virgin Mastertronic....IBC
WCA Business Systems....135
Worldwide Software....138
WTS....138
Yuppies Computer Club....131

CheckMate

CheckMate Systems Limited,
80 Mildmay Park, London N1 4PR
Telephone: 01-923 0658. Fax: 01-254 1655

Checkmate A1500 details:

BASE UNIT - Includes the following:-
System unit for housing the A500 circuit board. **Plus** - DFO will be turned round to face the front; DF1 will fit next to DFO, or you can fit any half height 3.5inch hard disk unit eg. the A590. The hard disk interface will fit inside the base unit.

The standard edge connector will remain so as to allow use of existing bulky equipment. The joyports and keyboard case will be extended to the fornt of the base unit. A new keyboard cable will house the existing A500 keyboard. The whole system can be mounted in a standard 19 inch rack. Most important is that this equipment can be assembled by most confident people. Or we can assemble it for you and give you a new warranty, the length of which will depend upon the age of your machine.

OPTIONS

We can fit a full Amiga video slot for use with equipment, such as the Flicker fixer, Genlocks etc. All this is inside the base unit out of sight. This is the only part that must be fitted by us.
We can fit a full MIDI interface internally if required.

EXPANSION UNITS

This simply plugs into the top of the base unit, and gives you three expansion slots which will take any A2000 card, including processor boards. This box is also designed to be rack mounted. Purchasing this unit will probably need a higher rated power supply which we will supply as an option. Extra expansion units can be bought for installing more cards, or for fitting extra 3.5" half height hard drives.

01 923 0658

Virgin Games

DAN DARE III
The Escape

RELEASE DATE APRIL 14th 1990

IBM PC

ATARI ST

AMIGA

CBM 64

SPECTRUM

AMSTRAD

IBM PC	£24.99
ATARI ST	£19.99
AMIGA	£19.99
CBM 64	£9.99 (CASS)
	£14.99 (DISC)
SPECTRUM	£9.99 (CASS)
	£14.99 (DISC)
AMSTRAD	£9.99 (CASS)
	£14.99 (DISC)

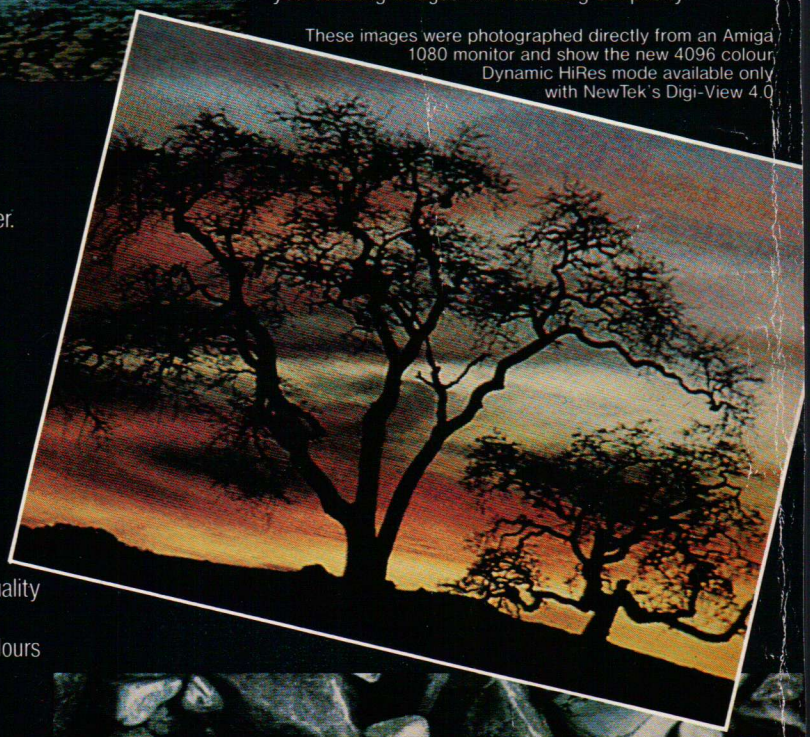
© 1990 Fleetway Publications/Dan Dare Ltd. Part of the Dan Dare nostalgia collection licensed world wide by Dan Dare Ltd.
Virgin Mastertronic, 2-4 Vernon Yard, 119 Portobello Road, London W11 2DX.

DIGI-VIEW GOLD

4096 Colours in High Resolution... is just the beginning

With the all new Digi-View 4.0 software you can do the one thing most people thought was impossible—digitize and display all 4096 colours in high resolution! We call this revolutionary new graphics mode Dynamic HiRes. Amiga Format magazine calls it "breathtaking, easily the best images ever seen on an Amiga screen." But that's just the start of what makes Digi-View 4.0 a breakthrough. Other new features include: Dynamic HAM (fringe free HAM), Noise Reduction (for the sharpest images ever), ARexx support, super bitmap digitizing, 24 bit colour support and dozens of other new features making Digi-View Gold the hottest Amiga graphics product ever.

And it's still just as easy to use. Simply focus your video camera on any object or picture, and in seconds Digi-View Gold turns it into Amiga graphics that glow with vibrant colour and stunning clarity. Whether you are creating graphics for desktop publishing, presentations, video, or just for fun, Digi-View Gold gives you dazzling images with amazing simplicity.



These images were photographed directly from an Amiga 1080 monitor and show the new 4096 colour Dynamic HiRes mode available only with NewTek's Digi-View 4.0

Digi-View 4.0 and Digi-Paint 3 Become One
with the ultimate link between digitizer and paint program. With Digi-View 4.0's Digi-Port feature they can both share the same screen so that touching-up your digitized images is easier than ever. Transfer 768 x 592, 4096 colour super bitmaps from Digi-View 4.0 to Digi-Paint 3 with a simple menu command, make changes such as combining images or adding titles, and redisplay them as Dynamic HiRes or other resolution images.

Only Digi-View Gold:

- Digitizes in all Amiga resolution modes from 320 x 256 up to 768 x 592 (full HiRes overscan)
- Includes powerful Digi-Paint 1 software for retouching digitized images or creating original artwork
- Uses 2 to 4096 colours (including halfbrite)
- Has exclusive Dynamic modes for 4096 colours in HiRes
- Digitizes in 21 bits per pixel (2.1 million colours) for the highest quality images possible
- Has advanced dithering routines that give an apparent 100,000 colours on screen simultaneously
- Has a special line art mode for desktop publishing
- Comes with an icon driven slideshow program for presentations using both IFF and Dynamic images
- Has complete software control of colour saturation, brightness, sharpness, hue, resolution, and palette
- Digitizes in full overscan with no borders for use with video genlocks
- Offers an unprecedented lifetime warranty

If you want the best graphics possible for your Amiga, then get the best selling video digitizer of all time: Digi-View Gold.

Only £149.95 Inc. VAT

For a NewTek authorized dealer near you contact HB Marketing, Ltd. at 0753 686000

Now includes Digi-Paint 1

NEWTEK INCORPORATED

*Requires standard gender changer for use with Amiga 1000. Dynamic HiRes requires 2 megs of RAM. Digi-View Gold is a trademark of NewTek, Inc.