Issue 154 • 19th October 1991 • £1.50

NOW WITH PACKED DISK!
FOR YOUR
• AMIGA
• ST, &
• PC
Even more value packed

NEW COMPUTER EXPRESS

FIRST NEWS • FIRST REVIEWS • BEST BUYS • YOUR WEEKLY GUIDE

ON YOUR TRIPLE FORMAT EXCLUSIVE

AMIGA

• DISKMASTER
Makes complex disk operations second nature for you

ST

• COLOURSPACE
Dazzle your senses with this psychedelic light synthesiser

PC

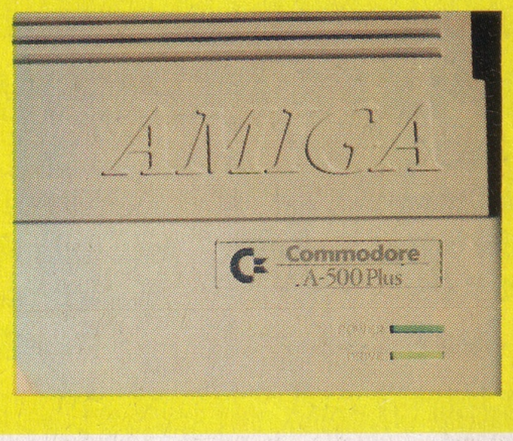
• INFOPLUS
Examine your PC in more detail than ever

• JUMPMAN LIVES
Incredibly playable platform action

Inside: all you need to know

exclusive

AMIGA ALERT!



THE HUNT IS ON...
Somewhere in the UK there are 3,000 Amiga 500 Pluses. Will you get lucky?

BOB GLEADOW GRILLED

The *Express* interview in full effect as Atari's top man in the UK speaks out about the ST, the press, the competition and himself. Pages 54&55

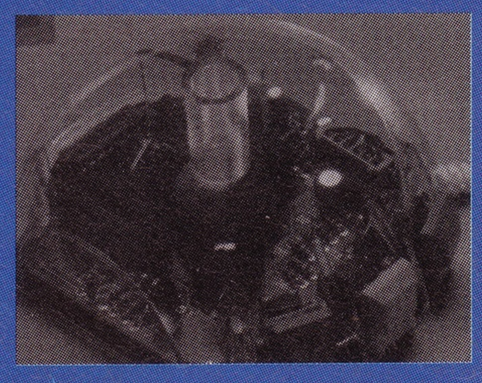


plus

REVIEWED: THE LATEST PRODUCTS FOR YOUR MACHINE







GENESIS FOR AMIGA PC720 FOR ST CRYSTAL FOR PC
HARD FACTS • VALUE RATED • HANDS-ON TESTED • NEVER BESTED

42
9 770957 064035
Future PUBLISHING
Your guarantee of value

ALL PRICES INCLUDE VAT, COURIER DELIVERY



AMIGA GALACTIC PACKS

GALACTIC PACK I

- AMIGA A500 COMPUTER
- WICKED 50 GAMES PACK
  50 great games to get you going!
- QUICKSHOT TURBO MICROSWITCHED JOYSTICK
- HIGH QUALITY MOUSE PAD
- TAILOR MADE DUST COVER

£329.99

ALL OUR AMIGAS COME WITH THE FOLLOWING AS STANDARD

- 2 YEAR GUARANTEE
- 1 mb DISK DRIVE
- TV MODULATOR
- 4096 COLOURS
- SPEECH SYNTHESIS
- AMIGA BASIC
- DIGITAL STEREO SOUND
- MOUSE
- CONNECTING CABLE
- USER MANUALS
- WORKBENCH 1.3
- NOTEPAD WORDPROCESSOR

GALACTIC PACK II

- AMIGA A500 COMPUTER
- CARTOON CLASSICS
  Bart Simpson vs The Space Mutant
  Lemmings • Captain Planet
  De Luxe Paint III
- OFFICIAL A500 1/2 MEG UPGRADE
- ADDICTIVE HITS
  Rainbow Island • New Zealand Story
  Bubble Bobble
- WICKED 50 GAMES PACK
  50 great games to get you going!
- QUICKSHOT TURBO MICROSWITCHED JOYSTICK
- HIGH QUALITY MOUSE PAD
- TAILOR MADE DUST COVER

£399.99

STEREO COLOUR MONITORS

PHILLIPS 8833/MK2

£249.95*

*Free F19 Stealth Fighter

CBM 1084S

£269.95*

*Free Silent Service II

COMPLETE PERIPHERAL PACKS

PACK 1

PROTAR 512K RAM Upgrade with clock • 40 capacity lockable disk box • 20 3.5" DS/DD disks with labels • 3.5" disk drive cleaner kit

all for just £39.95

PACK 2

PC 880B intelligent disk drive • Protar 512K RAM upgrade with clock • 40 capacity lockable disk box • 20 3.5" DS/DD disks with labels • 3.5" disk drive cleaner kit

all for just £99.95

CONSOLE CORNER

ALL PRICES INCLUDE COURIER DELIVERY & 2 YEAR GUARANTEE

CONSOLE SYSTEMS

Sega Master System.....£59.95
Sega Master System Plus.....£79.95
Sega Megadrive.....£129.95

COLOUR PORTABLES

Atari Lynx.....£84.95
Sega Game gear.....£99.95

We stock a wide range of software and peripherals for all of the above ring for details

Future computers world

PLUS A COMPREHENSIVE 2 YEAR GUARANTEE!

PRINTERS

All printers come with connecting cables free of charge

STAR
GOLD STAR DEALER

LC-20 MONO 9 pin Dot Matrix, 180/45 cps.
£149.95

LC-200 COLOUR 9 pin Dot Matrix, 185/45 cps.
£214.95

LC-24/200 MONO 9 pin Dot Matrix, 180/45 cps.
£259.95

LC-24/200 COLOUR 24 Pin Dot Matrix, 220/55 cps.
£309.95

CITIZEN
PREMIER SUPER DEALER

120D+ MONO 9 pin Dot Matrix, 120/25 cps.
£149.95

SWIFT COLOUR 9 pin Dot Matrix, 160/40 cps.
£214.95

124D MONO 9 pin Dot Matrix, 144/48 cps.
£209.95

SWIFT 24 COLOUR 24 Pin Dot Matrix, 160/50 cps.
£319.95

PRINTER STARTER PACK

• UNIVERSAL PRINTER STAND • QUALITY DUST COVER • 200 SHEETS OF PAPER

All for only £9.95

AUTHORISED PROTAR STOCKISTS

THE VERY BEST IN PERIPHERAL ADD-ONS

PROTAR 512K UPGRADE WITH CLOCK
Features compact 4 chip design, on/off switch..... **£29.95**

PROTAR 'VISTO' COLOUR MONITOR
Identical to Phillips 8833 MKII..... **£248.00**

PROTAR A500 HARD DRIVES
Features 8mb internal RAM expansion facility

A500 HD - 20 meg... **£279.95** A500 HD - 30 meg.... **£349.95**
A500 HD - 50 meg..... **£429.95**

Configurations available up to 160 meg - please call for details

POWER DISK DRIVE STARTER PACK

New PC880B intelligent disk drive featuring: Blitz Hardware, Virus Hardware, Anti-click, Thru-port, Isolating Switch • Ten 3.5" DS/DD disks with labels • 40 capacity lockable disk box • 3.5" disk drive cleaner kit

Only £69.95

ORDERING MADE EASY

BY PHONE
Simply call our Head Office quoting your Access/Visa number on
0234 218060 (5 lines)

BY CALLING PERSONALLY
Simply call into your nearest FutureWorld store where our fully trained personnel will be more than happy to deal with your requirements

BY POST
Make cheques, Building Society drafts or Postal Orders payable
FUTUREWORLD COMPUTERS LTD
UNITS 25-27 SERGEANTS WAY
ELMS INDUSTRIAL ESTATE
BEDFORD MK41 0EH

Please write cheque guarantee card number on reverse of cheque to ensure same day clearance

REMEMBER
ALL PRICES INCLUSIVE OF VAT & COURIER DELIVERY

FINANCE
Finance available to suit your specific needs. Written details on request. Instant credit is available in all FutureWorld stores.

PREMIER GOLD CARD
- 7 day money back guarantee if not completely satisfied
- 30 day exchange for new policy should a fault occur
- 2 year guarantee giving free collection and delivery service should a fault occur
- Exclusive Premier Gold Card with Personal Membership Number entitling you to special offers
- All this for only £19.95 per item purchased

2 YEAR GUARANTEE
For the whole guarantee period, warranty service will be completely free of charge

TECHNICAL SUPPORT/ON SITE ENGINEERS
Being authorised service centres for AMSTRAD, COMMODORE & STAR, we are equipped to deal with the majority of queries

FULLY COMPUTERISED ORDERING SYSTEM
This enables our telesales staff to provide up-to-the-minute stock information coupled with efficient dispatch

FULL TESTING PROCEDURE
All computer hardware is tested prior to dispatch maintaining our motto:

Simply the **BEST**



YOUR NEAREST FutureWorld STORE

BEDFORD
70 High Street Bedford Telephone 0234 217070

NORTHAMPTON
1-7 College Street Northampton Tel: 0604 33996

WELWYN GARDEN CITY
16 Church Road Welwyn Gdn City Tel: 0707 390029

PUBLIC DOMAIN

GREAT SOFTWARE

CAN BE YOURS FOR AS LITTLE AS ABSOLUTELY, TOTALLY, DEFINITELY, VERY NEARLY, JUST ABOUT NOTHING AT ALL. (HONEST)

Owning an Amiga, PC or ST now means that you can buy incredibly good software for little more than the price of a disk. Stunning games, utilities, demos, graphics, word processors and more can be found in Public Domain and Shareware software.

But (but! but!!) where do you start? How do you know which programs are completely wonderful and which ones should be re-formatted instantly? What's the best way to buy PD? And – whilst we're at it – just what *is* PD anyway?

For these answers and a whole trainload more, you'll need a new magazine called **PUBLIC DOMAIN**.

- Every issue is **packed full of reviews** – PD programs assessed for the Amiga, PC and ST.
- Every review is **screenshotted**. You can see exactly what you'll be buying.
- Every copy of PUBLIC DOMAIN comes with an incredible **program-packed coverdisk** – so you can get the very best PD for your machine every time.
- Every page is in **glorious full colour**, so you'll have unrivalled quality.
- And every edition of PUBLIC DOMAIN is backed by the full editorial resources of **Europe's most successful** news-stand computer magazine company, Future Publishing.

PUBLIC DOMAIN comes to you from the company that brings you Amiga Format, PC Format, ST Format, Amiga Shopper, PC Plus, Commodore Format, Your Sinclair, New Computer Express, Amiga Power, Amstrad Action, PC Answers, Sega Power and 8000 Plus; markets leaders all.

First issue on sale October 3rd at £2.95

INCREDIBLE PACKAGE! MASSIVE MAGAZINE PLUS PROGRAM PACKED COVER DISK!



IF YOU WANT OUR ADVICE, BUY IT!

NEW COMPUTER EXPRESS CONTENTS

19 October 1991 • Express 154

YOUR MACHINE

AMIGA

• Be prepared, this week the Cover Disk brings you no-fuss operations and speed with *Diskmaster* and *Fastdir*

• *Express* reviews *Genesis*, a means of creating a fractal world at the touch of a button..18
• Snapshot Pro – is it a really snappy digitiser?.....18
• Creating animation with the *Real Thing*.....10

ST

• Our Cover Disk puts some more colour in your life with the light synthesizer *Colourspace*

• The reliable PC720 Drive....17
• Is the Cumana disk drive worth the extra cost?.....17
• Is your ST stuck in a rut, then try Tech Tips.....42

PC

• Two programs for you on the Cover Disk. *Infoplus* lets you go exploring your machine plus the playable platform *Jumpman Lives*

• Whether it's the Wyse Decision Mate, the 486 tower PC, the new Mistation 3050G or *Mathtype* that you're looking for, the search starts here.....10
• The cracking futuristic Crystal – more ergonomical or economical than a mouse?.....17
• Perplexed about your PC, Tech Tips gives practical advice.....42

MACINTOSH

• Shop til you drop in the latest stores to hit your High Street...26
• *Monet* paints good impressions at the MacWorld Expo.....26
• Multilingual masterworks with the aid of a MacWriter.....27

CPC

• Disk prices set to take off?....27
• *Express* reviews *Terminator 2*. Yes, he's back.....29
• Cheats for infinite lives on Supertank and ProPower sims..30

C64

• Does *Express* really rave about *Rolling Ronny*?.....30
• Better your Basic with our handy pokes.....32

SPECTRUM

• *Express* takes a look into the future with fantastic games foreseen for Speccies.....33
• Spectrum bargains tracked down and located.....33
• Beat the re-releases with some jiggery-pokery!.....34

CONSOLES

• Console youself with the news that *Pro Soccer* has arrived on the Super Famicom.....34
• Are *EA Hockey* and *Hit the Ice* really hot stuff?.....35

COVER STORY



THE AMIGA 500 PLUS IS HERE AT LAST BUT WHY ARE THERE ONLY 3,000 IN THE UK?

Has Commodore cocked-up? Will incompatibility problems spoil the fun? Find out – pages 8 & 9

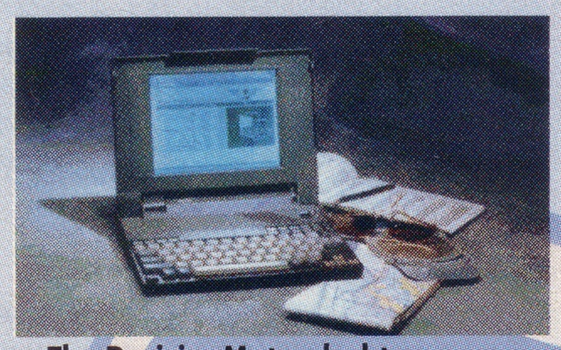
• Amiga 500 Plus: snuck in under cover of the *Cartoon Classics* bundle

THIS WEEK

News: up to the minute and down to earth – pages 4-7

What's New

A high-rise 486 tower PC, the light-weight DecisionMate from Wyse, plus an animation package and an equation editor – page 10



• The DecisionMate, desktop power yet lighter than most notebooks

COVER DISK 7

Already fondling that exciting Cover Disk and wondering what's inside? Page 12 will tell you all you need to know

THE EXPRESS FEATURE



The Interview: Bob Gleadow

Atari's UK chief speaks out on the past and future of theST – pages 54 & 55

• An Atari first: marketing meant bundles with launch of the 520STFM Summer Pack

INSIDE INFORMATION

The Amiga, ST & PC pages

All the news that *your* machine's been waiting for, with top tips and premium previews – pages 49, 50 & 52



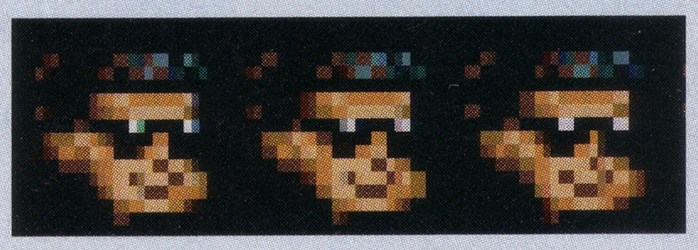
• Babe Ruth, eat your heart out – *Earl Weaver's Baseball II* from Electronic Arts

Public Domain

The bargain basement guide to low-cost software – pages 54, 55 & 56

Games Week

Following last week's review, tips for ***The*** (amazing) ***Blues Brothers*** plus ***Hudson Hawk*** reviewed – pages 60 & 61



• Bruce Willis as you've never seen him before in *Hudson Hawk*, hopefully he won't sing

SHOPPING EXPRESS

16-bit reviews	17	CPC	27	Consoles	34
Letters	21	C64	30	TechTips	42
Mac	26	Spectrum	33	On-line	45

THIS WEEK

NEWS

COMMENT

WHITHER INTEL AND MICROSOFT?

At the global press conference to announce the joint ventures, various major industry figures were rolled out to congratulate the new partners on their foresight, greatness, etc, etc. But one company was notable by its absence: although Lotus, Borland International and Novell were represented, Microsoft didn't show its face.

This could be partly due to the fact that IBM's Chairman, Jack Kuehler, stated categorically that IBM's OS/2 development strategy hasn't changed "one iota". In other words, hopes that some future version of *Windows* might become IBM's graphical user interface of choice have been somewhat dashed. And, of course, Taligent's new operating system will mean that MS-DOS may well, at least on more powerful PCs, become redundant.

SOFTWARE STRATEGIES

Intel, manufacturer of the 8086 series chips on which IBM's present PS/2 computers are based, was there – but only in the form of Ron Whittier, Vice President of the software technology group. He offered "congratulations and good luck to Apple and IBM in these new software strategies." Not a mention of hardware was made.

Could it be that Intel is a little sore that it won't be the company to develop the next generation of chips used by IBM?

And, of course, there is one more question to be asked: with the appearance by the mid to late 1990s of computers which can run Macintosh and OS/2 applications with equal ease, how long will it be before Apple and IBM come to the conclusion that a merger might just be a good idea?

International announcement reveals five major initiatives

APPLE AND IBM'S

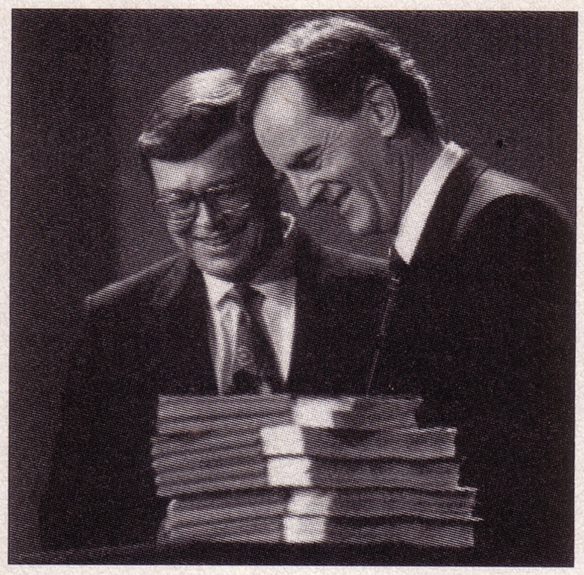
After three months of intense speculation, Apple and IBM have revealed exactly what form their joint ventures are to take.

In a press conference which was transmitted around the world, Apple chairman and chief executive officer John Sculley was joined by IBM Chairman Jack Kuehler and Motorola President Jim Norling to announce five major initiatives which, said Sculley, will "launch a renaissance of technical innovation." The announcements follow the signing of a letter of intent by Apple and IBM three months ago.

HEYDAYS

Sculley said that "the heydays of the early 1980s will seem tame in comparison with the five technology initiatives", and claimed that the agreement heralds the second phase of Apple's initiatives to move the company into the mainstream (the first was the introduction of the low-end, low-cost Macs a year ago). And Kuehler echoed the sentiment, saying that this is "the beginning of a new era (which will) forever change the way that people work."

"But," said Kuehler, "don't think for one nanosecond that (Apple and IBM) will draw back from competing." Rather, the initiatives were made with customers' interests in mind, and should mean that purchasers have even more choice in the future.



• IBM's president Jack Kuehler (left) and Apple chairman and CEO John Sculley: the forces behind the joint venture and "the beginning of a new era"

INITIATIVES

The initiatives break down into five major areas:

• **The PowerPC** – a PC architecture based on IBM's RS/6000 reduced instruction set computing (RISC) microprocessors.

• **PowerOpen** – a new open-systems architecture which will provide a standard platform for software and hardware development.

• **Better networking** – a commitment to ensure that it is far easier to connect computers together than at present.

• **Multimedia** – a new company is to be formed to provide standard multimedia data formats.

• **Object-oriented technology** – another new company will concentrate on designing a new operating system based on object-oriented programming techniques.

THE POWER

Based on existing IBM RISC technology, Motorola and IBM will develop a whole new family of microprocessors, known as the PowerPC (Performance Optimisation With

You can count on this catalogue

British electronics and PC rental specialist, Microlease has announced the release of its 1991/92 catalogue. Wide ranging, it covers 18,000 items of personal computer, computer engineering, test and measurement apparatus, telecommunications and audio visual equipment. The free catalogue includes many new introductions to the market from the foremost manufacturers.

New for 1991/92 is the introduction of MaxiRent, a long term rent facility. This enables you to hire over a longer term at a lower cost without associated lease contracts.

The catalogue is available now on request from Microlease-081-427 8822



EXPRESS...

Over six million copies of *Windows 3.0* have been sold, but analysts are predicting that the IBM/Apple link – and their new operating systems – will undermine Microsoft's position.

SNIPPET...

Window on entertainment

Volumes Two and Three of *Entertainment Packs for Windows* are on their way from Microsoft.

Volume Two includes *Pipe Dream*, *FreeCell*, *Tut's Tomb*, *JigSawed*, *Rodent's Revenge*, *RattlerFace*, and *Stones*. *Pipe Dream* requires quick reflexes and a knowledge of plumbing would be a great advantage! *JigSawed* enables you to turn any bitmap into a puzzle with varying levels of complexity.

Volume Three will contain *Fuji Golf*, *TriPeaks*, *WordZap*, *Klotski*, *SkiFree*, *LifeGenesis*, and *TetraVex*. *Klotski* is a 200-year-old game from Poland and *WordZap* is a vocabulary race against the computer.

Both packs include *IdleWild* which offers fractals, spinning spiderwebs and other moving designs, and each includes a variety of screen savers. ■

Breaking barriers

A Bengal 386/486 chipset has been developed by ETEQ Microsystems which will enable a computer manufacturer to use an Intel 32-bit microprocessor in a motherboard running at an amazing 50MHz.

The chipset also allows memory management through special cache systems and will support a Weitek maths coprocessor without extra controllers.

Since Intel began work on the 50MHz microprocessors – it has even talked about a 100MHz 32-bit chip – the market for high speed chipsets has grown rapidly.

Another advantage of the Bengal chipset is that it is compatible with both 80386 and 80486 microprocessors. This means computer builders will only need one set for both motherboards.

ETEQ also makes the Cougar 386/486 chipset which supports Intel processors running at more than 40MHz, but the Bengal has a special write-back cache which makes it more flexible and powerful. It will ship in America early next year.

LOW END LASER

Casio claims that its new low-cost laser printer will be half the price of any similar printer. Expected next year, the printer is A4 and admittedly slow but Casio is confident it will gain over 25 per cent of the Japanese market – partly because it comes with a range of Japanese fonts. A faster version, able to print 12-15 pages per minute, is also on the way. ■

Eurocrats are crackers about hackers

The European Community is finally taking the threat of computer crime seriously.

After years of bickering between the 24 member states which belong to the OECD (Organisation for Economic Co-operation and Development) a committee has finally been formed to cope with hacking, cracking and viruses.

But the biggest stumbling block will be persuading the countries to agree on a common set of guidelines before they can even draft appropriate laws.

According to the OECD there are almost 100 committees and discussion groups around the world working on various aspects of computer security, but very few seek to co-ordinate their activities. The OECD is determined that this will not happen in Europe and that member states will agree on a common policy on the international problem.

However a report released in America suggests that this is only half the battle and that there is no guarantee that Euro policies will ever turn into law.

The Eurocrats hit back at the Americans at a meeting in Paris last month. The OECD said an organised policy this side of the Atlantic was essential if hackers were to be brought to justice. ■

to "launch a renaissance of technical revolution"

VENTURE FINALISED

Enhanced RISC). These microprocessors will be used in future generations of PCs from IBM and Macintoshes from Apple, and will also be sold to other manufacturers by Motorola. Computers using the PowerPC chips will range from personal desktop machines to high-performance network servers.

Apple and IBM are also to create PowerOpen, a standard system platform which both future PCs and Macs will run. A computer running under PowerOpen will have access to applications written for IBM's OS/2 operating system, AIX (an IBM version of UNIX) and for the Macintosh. This means that users will be able to use far more applications on one machine than ever before.

The first machines to use PowerPC chips and to run under PowerOpen are expected within four years, according to the companies.

MULTIMEDIA

Until now, there has been no coherent standard for multimedia applications – it has been very difficult, if not impossible, to transfer data such as video clips and sound from one platform to another. To combat this, Apple and IBM have set up a new, jointly-owned company called Kaleida. It will be Kaleida's task to develop and sell "specifications and technologies" which allow the exchange of data such as sound, graphics, video and text between different computers. According to Dr David Nagel, vice president of Apple's advanced technology group, "we believe that multimedia technology will be the cornerstone for the next generation of computing."

Kaleida's board of directors will be made up of equal numbers of IBM and Apple representatives, and will choose its own executive staff. It is expected be based in the San Francisco Bay area.

OBJECT-ORIENTED

The other new joint company – which will be run on similar lines to Kaleida, with equal numbers of Apple and IBM representatives – is called Taligent, and is concerned with the creation of a totally new operating system, based on object-oriented programming techniques. This should make it far easier for programmers to create new applications and will, according to IBM vice president James Cannavino, "unleash significant productivity gains for users and developers."

Apple has already invested a great deal of time and manpower in this type of design, and will be contributing more than a million lines of already-written code (codenamed 'Pink') to the project.

The operating system created by Taligent will be used by both Apple and IBM in their new products, which are expected to be released in the mid-1990s. However, both companies will still continue to develop their own, proprietary operating systems (IBM's OS/2 and Apple's System 7).

Taligent will license its operating system to other hardware manufacturers in the effort to establish it as a recognised standard; because of the design, it should be "platform independent", meaning that it will work with different types of hardware such as the PowerPC, Motorola's 68000 series and Intel's 80x86 range of processors.

By Ian Wrigley

Soviets steal the show

A computer show in the USSR ended in chaos last month after the stands of top Western exhibitors were ransacked.

To add insult to injury the local special police forces were accused of aiding the criminals.

Representatives of the mighty Microsoft's Moscow office who participated in the Computer-91 exhibition, held in Lugansk, Ukraine, on September 27-29, said organisers, Astra company, made "Titanic efforts to make the show good. But they were unable to make it secure for participants."

Two companies, Summit Systems and Gateway Communications, were victims of the computer crimewave. But instead of prosecuting the criminals, the local police were apparently helping them.

Soviet and Western businessmen later stated in a joint declaration that they will not fulfill any contracts signed during the 3-day show until the criminals have been prosecuted. They also recommended other businesses avoid dealing with people from Lugansk – a 200-year-old industrial city in south east Ukraine.

Dream machines

Have you ever wished you could get hold of a machine that would save its own memory, even if the power fails? Well the dream is nearing reality with a new development in the USA.

Ramtron International and ITT are to develop a microcomputer, based on Ramtron's ferroelectric technology, which will retain its memory – even with the power off.

The chip will combine an existing ITT 8-bit micro with a Ramtron 256K ferroelectric RAM (FRAM).

FRAM allows electronic systems to be upgraded with new features. Specific areas for such improvements are likely to include disk storage, fax machines, modems, laser printers, digital television and robotics.

A spokesperson for Ramtron said that so far the company had no specific plans for a notebook or pen-based computer built around the new chip but admitted "the idea is certainly not out of the question".

The chief advantage of FRAM is that it will combine the functions of volatile RAM and non-volatile ROM into a single chip.

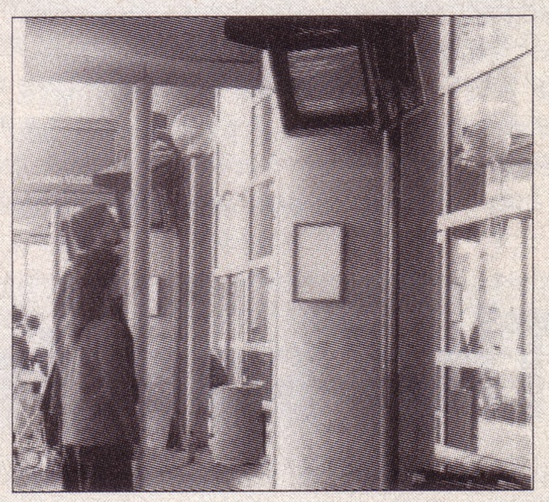
The chip is expected to be manufactured at Ramtron in Colorado Springs and sold worldwide by ITT sometime in 1992.

Plane sailing

These two happy travellers are making use of the latest multimedia set-up to arrive in the UK.

The screen above their heads is part of a £95,000 Datex system which has been installed at Gatwick airport.

For the bewildered traveller, multimedia means information relayed as it happens, from air traffic controller's strikes to fogs over LAX. 14 computer-controlled screens will be placed around one of the world's busiest airports.



Welcome to the IBM super sale

In America IBM is to cut prices on its PS/2 L40 SX Laptop by over 23 per cent, a move seen as an attempt to boost flagging sales of the PS/2 range.

Other incentives include four free software programs with models 30 up to 55, including *LotusWorks* – an integrated database, spreadsheet, graphics, telecommunications and word processing package. IBM is also offering rebates of up to $200 on certain models if IBM DOS or OS/2 is included in the deal.

● Meanwhile IBM has completed the purchase of Metaphor Computer Systems and employees assigned to an IBM/Metaphor joint venture a year ago will be offered positions with Taligent (see IBM/Apple story above).

● IBM has also announced the Powerstation/Powerserver 530H, a new RISC-based workstation or server offerings 32 per cent more processing power plus enhanced disk storage. Running at 33MHz, it has a 400Mb, high-performance disk drive with 2.5Gb of space.

Shoot from the lip

"Express in particular turned the whole thing into a national disaster" **Atari UK boss, Bob Gleadow talking about the STE incompatibility problems which plagued the machine and were openly reported in *Express*. Read the full interview, including 20 Things You Didn't Know About Bob Gleadow on pages 54 and 55 of this issue.**

"New Computer Express wees over other magazines from a great height" **Mark Wills of DJW Microsystems requested that we use this quote.**

"We (Apple and IBM) have found that we speak common languages, dollars and cents as well as Fortran and C++" **IBM president, Jack Kuehler, talking about the recent friendliness between the two old rivals.**

"Multimedia is no longer future technology, it is here now and it is based on the Amiga." **Director of Commodore's Multimedia division, Barry Thurston, making a claim that might be contested by Macintosh, Acorn and a host of others.**

EXPRESS...

Screens on which you can watch your favourite films in their original wide-screen format are all the rage in Japan. And before too long you could be playing your fave games on them too.

With a vertical to horizontal ratio of 9x16, instead of the usual 3x4, the new £3,000+ TVs also support high definition TV broadcasting with a converter.

...SNIPPET

Speech record breakers

Japanese scientists have set a new record in electronic speech recognition, claiming an amazing 50 to 60 time faster rate than before.

ATR Automatic Translation Telephone Laboratory in Tokyo, which expects to use the system to automatically translate telephone conversations in the future, uses a system based on an artificial intelligence concept which evaluates words, sounds, sentences and structures simultaneously. It is said to be able to recognise 1,000 words at one time.

Current system take between one and three minutes to recognise one sentence.

You read it here first...

Readers of *Express* will find the news of the Amiga 500 Plus not too much of a surprise.

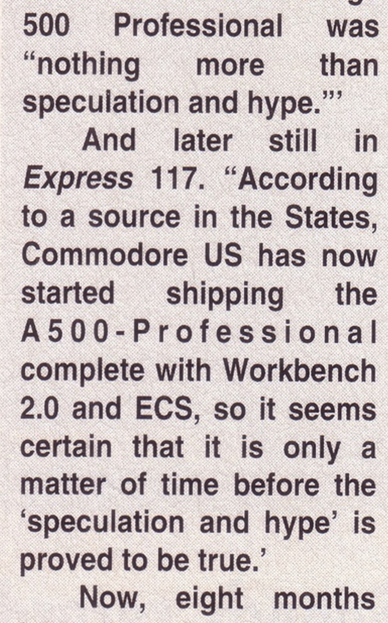
In *Express* Issue 97, (15 September 1990), we revealed the A500-Professional for the first time, which is almost identical to the A500 Plus. It was said to come with '1Mb of RAM, the full Enhanced Chip Set and Workbench version 2.0'.

Commodore denied any plans for an improved A500. Said Andrew Ball: "It's absolute speculation and hype. I haven't heard of the machine and we have not discussed such an option."

Then, in *Express* Issue 113, there was further mention of a more advanced A500 machine. 'A500s may well be left out in the cold when the company releases the new Workbench 2.0 early next year for Amigas other than the 3000 series. According to Andrew Ball, there are currently no plans to release the upgrade. And the existence of an Amiga 500 Professional was "nothing more than speculation and hype."'

And later still in *Express* 117. "According to a source in the States, Commodore US has now started shipping the A500-Professional complete with Workbench 2.0 and ECS, so it seems certain that it is only a matter of time before the 'speculation and hype' is proved to be true.'

Now, eight months later, the 'A500 Plus', has hit the streets. Since then it's specifications have changed little – one can only wonder what the hold-up was...



The first sign of the problem – in *Express*

At last – the machine that Commodore has been denying

THE AMIGA 500 PLUS

The much enhanced Amiga 500 Plus, already on sale in the USA, has finally arrived in the UK in limited numbers.

The A500 Plus has several significant features not found in older versions of the Amiga 500. It has both Workbench 2.0 and the Kickstart 2.04 operating system both of which are upgrades to the existing system.

It also features the entire Enhanced Chip Set (ECS) a major boost to the performance and productivity of the A500.

To give some kind of perspective on this; these new attributes have only been available on the high-end Amiga 3000 which costs at least £2,000 more than the A500.

ANY QUESTIONS?

With the arrival of this major A500 upgrade come questions as to the future of the Amiga range, compatibility problems, and Commodore's own marketing competence.

According to Commodore, only 3,000 A500 Ps have so far been shipped. And they are apparently hidden away in the Cartoon Classics bundle.

Commodore's sales and marketing manager, Kelly Sumner told *Express*: "We don't know whereabouts in the country they are. And I can't guarantee when any more will arrive in the country. It's a plus if you get a Plus".

As to why there are only 3,000 machines available to a public apparently so eager to lay hand on anything Amiga-related, Sumner told *Express*: "People want Amigas and I will source them however I can. I don't care whether they're 500s or Ps. It just so happened that when we got the supplies in, a few Pluses were included in the batch"

MANUAL OVERDRIVE

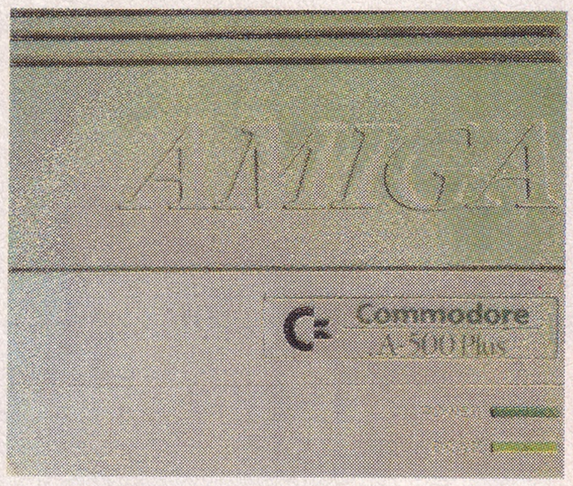
A manual entitled *Amiga 500 Series: Introducing the A500 and A500 Plus*, comes with the A500 Plus which explains its basic functional and technical details.

However, in a significant move, the 90 page booklet makes only passing mention of the standard A500, referring to it merely the 'earlier Amiga computer'.

Special mention is made of the A500 Plus's advanced operating system and the ECS chipset, implying that this configuration will be the new base Amiga standard.

Worries have already been voiced as to whether the new Kickstart and Workbench combination will lead to incompatibility nightmares with older software.

Sumner: "Out of 900 programs, there are a dozen or so that won't work, mostly older games. We have issued guidelines to developers for the last 18 months, so it's really programs created before that period that may not work.



• The Amiga 500 Plus – here at last

"The A500 Plus will not mean a great deal as far as software is concerned for the next year at least. Developers will develop for the largest base." Which, in the end, is effectively owners of the standard Amiga 500 currently available.

AMIGA REWARD

Until a few days ago, no Amiga retailer and very few people at Commodore UK actually knew that only a few thousand Pluses were in Great Britain.

According to Commodore UK's sales manager Kelly Sumner: "There are only two or three thousand Pluses in the country at the moment. It's no big deal, we've not made any big deal about it".

Sumner maintains that the new

The spectre of incompatibility

Despite Commodore's claim that it will never differentiate between the A500 P and the standard A500, there are differences which can be readily noted. These are apparent both cosmetically and within the hardware itself.

As far as specific details are concerned, Commodore is being very tight-lipped about the existence of the machine, let alone specific technical details. We have called on a wealth of technical experience in order to provide an accurate estimation of what you could be getting.

MEANING TO THE MADNESS

The changes to the internal hardware of the new Amiga 500 and the Amiga 500 Plus inevitably mean that some programs won't run properly on it. The extent of these incompatibility problems is unknown at this stage, and the fact that there are any at all is being denied by Commodore. However, it is possible that the situation could be more drastic than when the previous Kickstart was upgraded from 1.2 to 1.3.

The majority of the programs that may not work on the new machine will probably be demos and other programs that use unconventional programming methods to stretch the hardware and achieve special effects. There will also be programs such as *R-Type* and *Midwinter 1* which were created before the programmer's guidelines laid down by Commodore some 18 months ago.

HARDWARE CONFLICTS

In terms of hardware compatibility, all of the Amiga 500 Plus's external ports are the same as the standard A500 so there should be no problems connecting modems and the like to the new machine.

One potential area of hardware conflicts is the slot underneath the machine, traditionally reserved for memory expansions.

NOT JUST A PRETTY CASE

The A500 Plus's case is the same shape, size and colour as the standard A500, except, that is, for a different keyboard.

Two extra unlabelled keys have been added. The return key has changed shape, with one of the additional keys positioned to the left of it. The left shift key has been shrunk, with the extra key put in the new-made space.

These extra keys are only on the international version of the new machine – the US model has the older style of keyboard. On the British keymap settings, the new keys are not used, even though they are physically present on the keyboard. The characters accessed by these keys depend on the national keymap that is used.

When the machine is turned on there is also a major difference. Instead of the familiar 'hand holding the disk' graphic, there is the rainbow-coloured Amiga 'tick' symbol, and a picture of a disk drive which has an animated disk moving in and out of the disk drive slot.

NEW VERSUS OLD

The changes to the hardware and the operating system are not insignificant.

Owners of the new machine will get a more attractive Workbench, the new Kickstart and custom chips. These should enable the Amiga to be stretched further than before, provided, that is, developers have supported the new machine's functions.

This could well be to the detriment of owners of the old machine, who could find themselves with a computer that won't be pushed – or rather, can't be stretched – to the same extent.

On the surface, this could result in a bizarre situation. Owners of the A500 Plus may not be able to run software created for the old Amigas, whereas current Amiga owners may be left out in the cold as far as new, state-of-the-art developments are concerned.

Ultimately the ball is in the developers' court; they have to decide which machine to support, if not both.

for so long is here in the United Kingdom

SNEAKS IN

manual: "Is an international manual and only comes with the A500 Plus. What it says won't matter much to Plus owners who have already got the machine."

However, an Amiga dealer who called *Express* this week thought quite differently about the new machines. Chris Jones of CastleSoft told us: "We have the machines in and they are 100 per cent better than the standard A500, very much improved. As far as I can see, Commodore could have charged another £20 for these machines. Even the Guru has been fixed so that it takes you back to Workbench when it crashes and so it doesn't just leave you hanging there".

A SURPRISE GUEST

Just how the machines got out to dealers and consequently to the few thousand lucky buyers is not clear.

Sumner maintains that: "Nothing on the Cartoon Classics bundle actually defines the machine inside as being a 500 Plus. The reason that these machines are here in the first place is because we have been sourcing Amigas from wherever we can get them. We will not be differentiating between the two ever".

There is a difference, however, in that the new Plus has the latest version of the Amiga operating system and is equipped with the more advanced ECS chipset. However dealers and other reliable sources within the Amiga scene seem to believe that a lack of communication between Commodore UK and Commodore US has lead to the Pluses hitting the stores before an official launch could be declared. Chris Jones told us: "It looks like there was a massive cock-up on the part of Commodore".

The 'cock-up' derives from the fact that the limited supplies of the impressive Plus means that prospective buyers may feel that they have lost out when no Pluses appear in their part of the country.

Sumner, however, treats this line of reasoning with disdain: "We are making no differentiation between the A500 Plus and the A500 and we never will be. The cynical person would say that it was a cock-up on our part. But when you think about it, the A500 Plus is only the 1992 version of the A500. Some people are going loopy about this, and I don't know why they have decided to go mad".

So, with 1992's Amiga hitting the shops in Autumn 1991, does this mean Commodore has shot too early? Despite what it says about not making a big deal out of the A500 Plus, it is obviously a superior beast. People will want to buy it. So surely this must mean that Commodore will be forced into shipping more Pluses sooner than even it had expected.

The Three Amigas: are they too much of a good thing?

The A500 Plus comes with a new manual from the USA. And within it lurks a further surprise for the Amiga range. Not only does it give the full specifications of the Amiga 500 'series', the slim volume, published in the USA in June of this year, gives details of not just one new machine but two new Amigas.

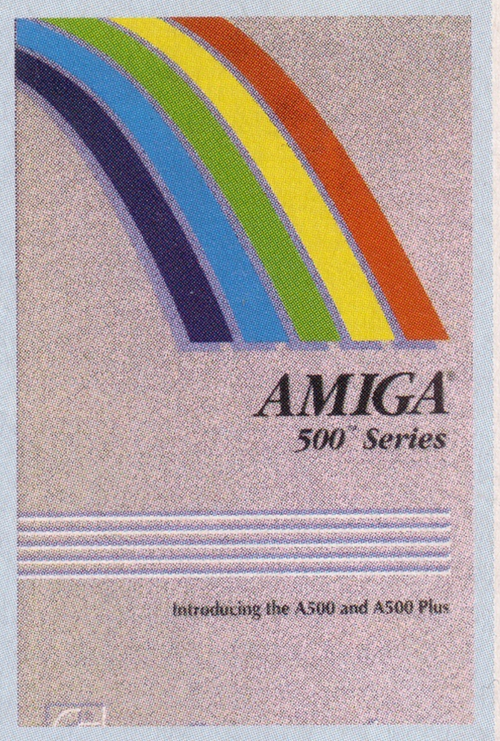
As well as the Amiga 500 Plus, there is also a new version of the Amiga 500 – which also incorporates Kickstart 2.0 and the ECS into its design.

The new A500 model comes with 512K of RAM which can be expanded to 1Mb with the standard A501 memory expansion module that plugs in underneath the machine. This expansion also includes a battery-backed clock.

Its stablemate, the Amiga 500 Plus, differs in that it comes with 1Mb of RAM and also has the clock – as standard. Both are integral to the motherboard. Memory on the A500 Plus can be expanded to 2Mb with the A501 Plus memory upgrade.

However, it is worth bearing in mind that these are the official memory upgrades as from Commdore and therefore do not take into account third-party expansions that may increase memory even further.

Both computers feature Amiga DOS 2.0, Workbench 2.0 and Kickstart 2.0. These operating system upgrades work in conjunction with the ECS chipset which is included with both machines.



The manual that reveals the existence of a new Amiga

Blame the System

The Amiga 500 Plus comes with a major upgrade to the operating system. Both Kickstart and Workbench have been upgraded to give better memory handling and screen display.

Workbench 2.0 offers a number of new features. On-screen the display looks more professional, with its grey-colour and redesigned icons. There are more menus, and Arexx, the programming control software, is supported as standard. Also, there is a maximum of 16 colours instead of four on the standard Workbench screen.

The Amiga has become renowned for its compatibility problems over the years. When the Amiga 1000 first came out it was equipped with Kickstart 1.0 and, a bit later, version 1.1, which were loaKded in off disk.

The Amiga 500 and 2000 models, however, came with Kickstart 1.2 on ROM. The new Kickstart could be loaded into the Amiga 1000 from disk, but the 500 and 2000 came with an updated chipset which left the initial Amiga enthusiasts out in the cold. This started the incompatibility problems.

In mid-1988 Kickstart 1.3 was released which caused further problems, mainly because of programs that used non-standard programming methods. This brings us up-to-date.

With the release of Kickstart 2.0 for the Amiga 3000 there were yet more problems, most of which were ironed out in version 2.04 – the version that comes with the Amiga 500 Plus.

These problems occurred because of the new Kickstart, and the way the A3000 has its memory arranged – some programs expect to find some Fast RAM, and can't run without it.

Although the Amiga 3000 was able to boot using Kickstart 1.3, this still didn't provide full compatibility.

The situation could be similar with the Amiga 500 Plus as this machine uses most of the custom chips of the 3000, albeit equipped with a different processor (a 68000 instead of a 68030). Unfortunately for Amiga 500 Plus owners, there is no way to swap back to the older operating system and thus no way of achieving compatibility with some programs – unless, of course, they're re-written.

All of these compatibility problems needn't happen, however, if developers adhere to the programming conventions defined by Commodore. At the end of the day it comes down to the developers themselves as to whether software will work properly.

Reader's with long memories will recall similar caveats were laid down regarding the Atari STE's launch. However, ST developers were still caught out.

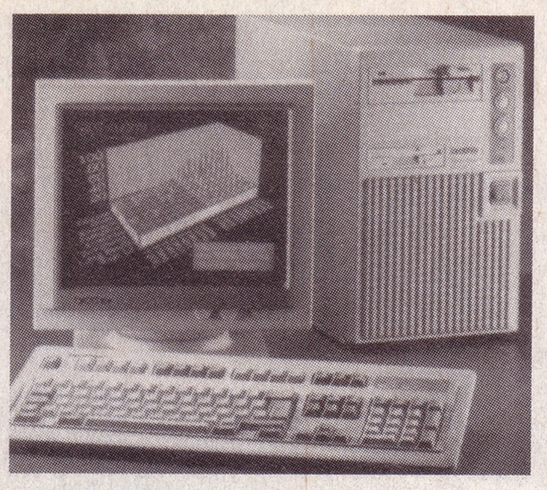
This isn't a problem with applications and utility software as many of these programs – which mainly come from the US – have been released as being compatible with Workbench 2.0 over the last two years.

For games players the situation may not be so good, as many programmers use special techniques which are designed to stretch the Amiga, which, in doing so, may not be adhering to Commodore's guidelines.

	A500	A500 Plus	A500 Extra
Standard RAM	512K	1Mb	512K
Chipset	Standard + Fat Agnus	Entire Enhanced Chipset	Entire Enhanced Chipset
RAM (exapandable to)	9Mb	10Mb	9Mb
Screen resolution in pixels	640 x 512	1,280 x 400	1,280 x 400
Workbench	1.3.2	2.0	2.0
Kickstart	1.3	2.04	2.04
Price	£299 (£399 in bundles)	£399 In Cartoon Classics bundle)	Not available in the UK
Keyboard	94 keys	96 keys	96 keys
Other extras	N/a	Clock/calendar on motherboard	Clock/calendar on motherboard

WHAT'S NEW

The latest and possibly greatest new products are displayed here in the *Express* shop window. All the facts which are fit to print...



• Brother, better known for its comprehensive range of printers, has decided to launch into the lucrative PC market with the BCN series

Oh brother!

PRODUCT: 486 tower PC
NAME: BCN range
COMPATIBILITY: PC

Brother, the driving force behind an army of high quality printers has launched a brand new range of personal computers.

With this pedigree backing them up, the BCN series looks like a good bet. Comprising 386, 386SX and 486 machines, the top of the range PCN is the 5486 Mini–Tower system.

This comes with an Intel 80486 processor running at a steady 33MHz, which is fast for a PC. It comes with 8Mb of RAM which is more than adequate to run *Windows 3.0* applications. And fortunately *Windows 3.0* is included along with MS–DOS 5 as the system software for the BCN series of computers. If 8Mb is not enough to meet your needs don't fret, the RAM can be expanded up to 64Mb.

Underlying the RAM itself is a mighty 64K of high speed cache memory with which to smooth the workings of regularly used functions.

Next down the range of BCN machines are the 386SX models. These come in two configurations; mini–tower and desktop.

Both come with 20MHz 386SX processor, and 2Mb RAM which is expandable to 32Mb. System software is again provided by MS-DOS 5.

All the machines in the range are well specified and come with Brother's normally excellent reputation for high build-quality.

Price: BCN 5486 Mini-Tower: £3,095. 386: £2,049. 386SX (desktop): £1,449. 386SX (mini-tower): £1,769.
Availability: Now
Target users: Those who require good quality, low cost machines.
Contact: Brother: 061-330 6531
Perceived competition: Toshiba, Tandon, GoldStar, IBM, Wyse.

Hard worker

PRODUCT: Workstation
NAME: MiStation 3050G
COMPATIBILITY: PC

When Mitac calls its machine a workstation it is pushing a point somewhat. In realistic terms, the MiStation is a well specified, 386DX-based machine running at 33MHz.

It comes with 4Mb of RAM on board which is expandable to 17Mb.

Its cache memory is limited to a rather meagre 16K which, when compared to other comparable 386 systems, is nothing to write home about.

Mitac is making loud noises about the fact that Welsh Water has taken up the option for these machines. Whether this is a suitable recommendation for the single user is yet to be seen, however.

Price: £2,399
Availability: Now
Target users: CAD/ CAM users
Contact: Mitac: 0952 670370
Perceived competition: SparcStations, IBM,. Macintosh.

Real life drama

PRODUCT: Animation packages
NAME: Real Thing
COMPATIBILITY: Amiga

RGB Studios has brought out two new RealThings animation packages for Amiga owners who run *DeluxePaint II* or IV as well as *Deluxe Video II* .

The two collections are Safari and Sea Life. As the name suggests, the first package comprises digitised pictures of elephants, tigers, chimps and cheetahs among other. The second pack has images of sharks, crabs, angel fish, and rays. Both sets of images were created with the help of Anglia TV's highly respected *Survival* team of film makers as well as the good offices of London Zoo, and Whipsnade Animal Park.

RGB is claiming almost 'camera realism' for its new launches which leap into full action at the click of a mouse. They are full-colour animations which are compatible with all colour modes offered on the Amiga..

Armed with a genlock and these images you could create some truly stunning performances with your Amiga.

Price: £29.95 each
Availability: Later this month
Target users: Amiga owners with a yen to create natural images.
Contact: RGB Studios: 0825 812666
Perceived competition: No one else has produced such detailed animations.



•Real life stories: new animated images of creatures from both evolutionary stages, sea and land, can appear on your Amiga soon

Rock'n'Payroll

PRODUCT: Equation editor
NAME: *Mathtype*
COMPATIBILITY: PC

Users of MicroSoft *Windows*, the graphic user interface (GUI) which could put the PC in real competition with the Mac, will be pleased to hear about *Mathtype.* This neat piece of programming enables users to create complex mathematical equations using the mouse and software interface.

Not a spreadsheet, *Mathtype*, uses over 270 symbols and mathematical components. These are available to users in the form of pull-down menus.

Font selection is carried out by the software from a wide selection of type faces which include type 1 Postscript versions. Output is via printer or via a wide variety of file formats such as TIFF, EPS.

Price: £233.82
Availability: Now
Target users: *Windows* users with the need to carry out complex calculations.
Contact: The Text Formatting Co: 081-802 4470
Perceived competition: Spreadsheets are the nearest programs to compare.

The Wyse have it

PRODUCT: Notebook PC
NAME: Wyse DecisionMate
COMPATIBILITY: PC

Wyse appears to be kicking out new machines with the regularity only normally associated with Jason Donovan singles.

This latest notebook comes with an 80386SX processor running at 20MHz. While 20MHz is respectable for this chip. it is not the quickest in the world.

The machine measures 8.6-inches by 11-inches by 1.5 inches, and weighs in at 4.5 pounds. These dimensions certainly fit the bill for a notebook PC and should not break the arms or unduly pressure the knees of regular users.

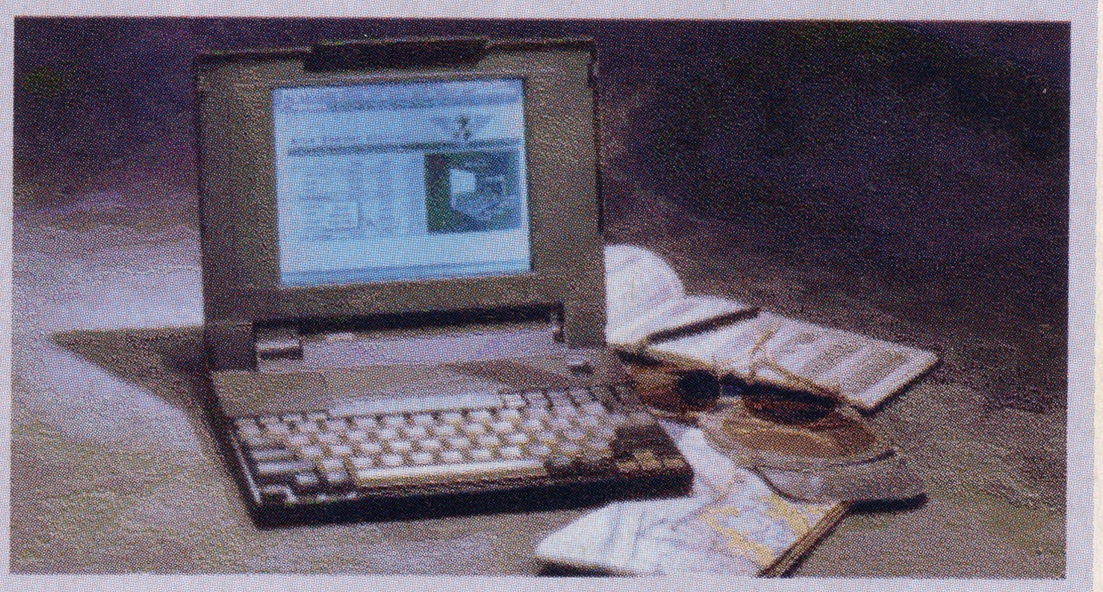
Storage is provided by a 3.5-inch floppy drive as an external, plug-in device which can be removed when travelling. There are also three hard disk configurations available: 30, 40 and 60Mb. RAM of up to 4Mb is available, although the entry-level machines comes with a standard 1Mb.

The operating system is provided courtesy of Microsoft with the latest version of its Disk Operating System (DOS) – version 5.

Also included is *Laplink*, data exchange software. The necessary cabling for file transfers between the notebook and desktop machine is also included.

The screen is paper-white, side lit, 8.5-inch, mono–VGA able to display up to 32 shades of grey.

Price: 30Mb hard disk, 1Mb RAM: £2,195
Availability: Now
Target users: Workers on the move
Contact: Wyse: 0734 342200
Perceived competition: Toshiba, Sharp



• A spanking new notebook PC from Wyse is aimed at easing the decision making process by providing powerful, mobile computing at a reasonable price

CAREER OPPORTUNITIES

with a leading computer distributor

SDL ARE APPOINTING

PRODUCT MANAGERS

To join their purchasing team. Specialists are required to cover each of the following product areas.

PC & Peripherals
Atari ST
Commodore Amiga

Each Product Manager will be responsible for:

Developing existing manufacturers accounts and keeping abreast of product developments.

Attending appropriate product shows in the UK and overseas and sourcing new manufacturers and products.

Negotiating buying terms, warranty and supply conditions.

Preparing initial sales and marketing literature.

Assessing stock requirements, placing orders and maintaining stocks at optimum levels.

Developing promotions, offers and incentives with manufacturers.

Monitoring development of product lines and instigating action when required.

You must be successful and self-motivated with good computer skills and market understanding.
Able to work at a fast pace with strong oral and written communication abilities.
A comprehensive salary and benefits package awaits successful applicants.

Applicants should write with a full CV and current salary details to:

David West - Personnel Manager,
SDL, Unit 10, Ruxley Corner Industrial Estate,
Edgington Way,
Sidcup,
Kent, DA14 5SS (Tel No: 081-309 5000)

SDL

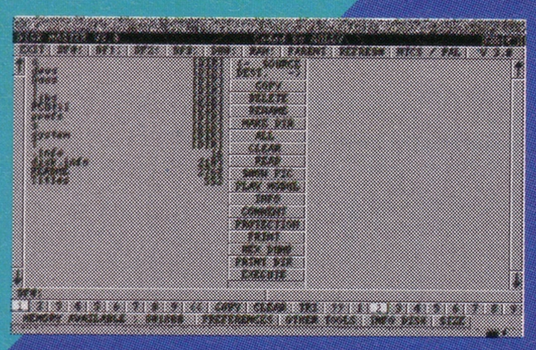
SOFTWARE

COVER DISK 7

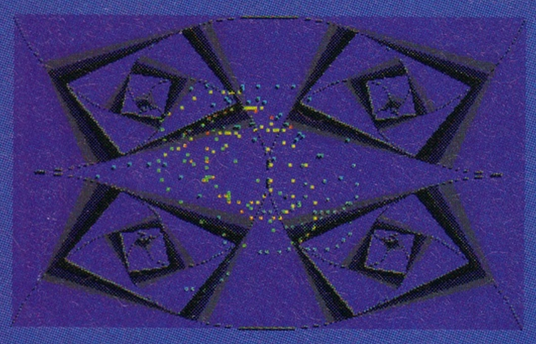
COVER DISK 7

They say seven's a lucky number, and if you're an Amiga, ST or PC owner then that's definitely the case if you've got *Express* Cover Disk 7

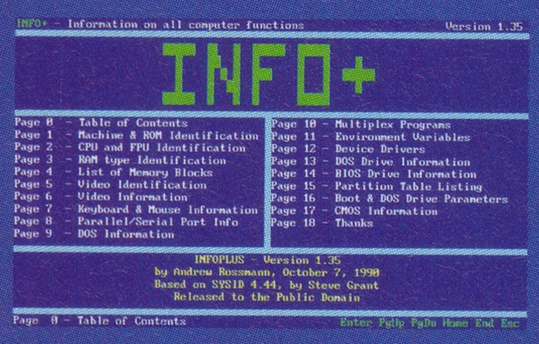
DISK CONTENTS



AMIGA
Diskmaster ● FastDir



ST
Colourspace



PC
Infoplus ● Jumpman Lives

When we called the *Express* Cover Disk dazzling, we didn't mean that you'd need sunglasses to use it. But yes, this week ST owners may have to equip themselves with such a peripheral when they load *Colourspace,* a psychedelic light synthesiser.

Diskmaster is a utility that virtually all Amiga owners will find useful; it enables previously complex disk operations to be accomplished easily and with very little fuss. This program is partnered with *FastDir,* a handy utility that enables the Amiga to access files much faster than it normally does.

PC owners have two power-packed programs on the disk. For those of you who are interested in seeing how your PC works there is *Infoplus,* an easy-to-use program that lets you see how everything is set-up in your machine. And if you're interested in games, then you won't be left out either – *Jumpman Lives* is an incredibly playable platform game.

TRI-FORMAT TRIALS

The *Express* Cover Disk uses a custom disk format that enables software for the three most popular 16-bit machines – the Amiga, ST and PC – to be put on a single 3.5-inch disk. This format was developed for *Express* by Rob Northen Computing.

Each week the disk is divided into sections that can be used by each computer. These sections vary in size from one week to the next, and it gives us the flexibility to be able to cope with programs of (almost) all sizes.

WANTED: YOUR IDEAS

Trying to fit software on the disk is not much of a problem; obtaining the software, on the other hand, can be. We try to hunt out the most useful and interesting programs to go on the disk, but this isn't always easy.

For two reasons. One: because we don't know what everyone wants; and two: we don't always have a wide range of software to choose from.

If you have any ideas on the type of software you'd like to get on the disk – and surely, you must have – then drop us a line. Send your input to: Cover Disk Feedback, *New Computer Express*, 30 Monmouth Street, Bath BA1 2BW.

And if you've got some software that you'd like to see on the disk, whether you're an individual who's written something yourself, or a company that is keen on promoting itself, then send it in to us.

PROBLEMS?

Each week *New Computer Express* duplicates almost 40,000 disks. Because of the sheer quantity of disks, it's not impossible that a few of them may have not been duplicated properly.

If you're one of the unlucky people who's received a duff disk, there is a solution. However, there is a distinction between an incorrectly duplicated disk and having a problem with the software on it.

If you have a disk that can't be loaded into your machine – that is, the computer can't read it, load anything from it, or it's physically damaged – then send it, along with an SAE, to: *New Computer Express* Disk Returns, Disk 7, Disk Copy Labs, Unit A, Westmarch, London Road, Daventry, Northants NN11 4SA.

But if you have a problem with the *software* on the disk, then send a letter explaining what happened in to us. Write to: Cover Disk Problems, *New Computer Express*, 30 Monmouth Street, Bath BA1 2BW. We'll see if we can find a solution to your dilemma.

EXPRESS DISCLAIMER

While we strive to ensure that the Cover Disk is free of all viruses and the programs on it work properly, *New Computer Express*, does in no way accept any liability for any problems that may arise from using the disk or the programs on it.

INTERESTED?

If you are a software house or run a Public Domain/shareware company and you're interested in having your software featured on the *Express* Cover Disk, we'd like to hear from you now! Call Tim Howell, Cover Disk editor, on 0225 442244.

EARN UP TO £1,000

We need your programs for the *Express* Cover Disk, whether they are utilities, games, applications or demos for any or all of the three supported formats – Amiga, ST or PC.

If you think you've written a program which other *Express* readers would find useful, interesting or just plain fun, then send it in! We're on the look out for any software for the Amiga, ST and PC, and if we use it, we'll pay for it – up to a maximum of £1,000!

As you all know, *Express* is a weekly magazine which means it comes out at least four times more often than the monthlies. So now you've got that many more chances to contribute your creation, earn some money and see your name in print.

GUIDELINES TO FOLLOW

1 Please document the software as much as possible. We'll be getting heaps of programs and to have to work out how to use them all will take up what little time we have to put together a great disk.

2 Check for big mistakes in the program such as (any) bugs, errors, or file corruptions. If you find any, fix them and send the program in some other time. Just think: if it works, then we might even use it.

3 Check for little mistakes in the program such as misspelled words. This may take a little extra time, but it will look that much more professional.

4 Test everything before you send it in. If it's a duff disk then we won't be able to do anything with it, will we?

5 In the case of PC software, try to use CGA as well as EGA and VGA graphics, and even MDA (monochrome) if possible. Also, if the program uses a mouse, try to make it so that it is an option and not an absolute necessity. Basically, try to accommodate as many PC users as possible.

NB: Unfortunately we won't be able to return any disks sent in to us. Not even if you include a SAE. The monthly magazines can do that, but because we put out a disk every week there is simply no time to arrange anything along those lines.

Once you've done all that and filled in the form on page 11, send all your contributions to: Cover Disk Contributions, *New Computer Express*, 30 Monmouth Street, Bath BA1 2BW.

AMIGA

COVER DISK 7

AMIGA INFORMATION

PROGRAM: Diskmaster
DESCRIPTION: Utility
DIRECTORY: DiskMaster
FILE (S): dskmr3.0, DSKM.INFOTXT

PROGRAM: FastDir
DESCRIPTION: CLI tool
DIRECTORY: FastDirs
FILE (S): FSDirs, FSDirs.doc

DISKMASTER

Despite many Amiga owner's claims, the machine and its operating system aren't all that friendly. Icons make the machine more accessible, but simple functions such as copying and renaming files are often long-winded and frustrating processes, particularly from the CLI.

Diskmaster makes all these, and many other functions easy and trouble-free. It's a self-contained program that can do everything from formatting disks to copying files between them. All these functions are accessible simply by clicking on the function you want and away you go.

LOADING DISKMASTER

Before you do anything with *Diskmaster*, make a back-up copy of the Amiga disk, using the instructions in the Amiga Back-up Copy box elsewhere on this page.

Unlike other programs that have been featured on the Cover Disk, *Diskmaster* isn't executable from the Workbench screen. It can only be accessed from the CLI.

To get it up and running, follow the instructions in the Making a bootable disk box at the bottom of the page.

USING DISKMASTER

Using the program is straightforward. As mentioned earlier, most of its functions are accessed from the main screen of the program.

Many of these options are self-explanatory, and and those that aren't are explained in the document file that comes with the program.

FASTDIR

One characteristic of the Amiga is that is often criticised is that its disk operating system is very slow. *FastDir* is a handy utility that enables the computer to access files quickly. It doesn't need to be executed manually each time you want to speed things up, either: putting it in the startup-sequence of a disk is enough to get it working, improving the speed of things once it has.

Like *Diskmaster* above, *FastDir* can only be run from the CLI.

USING FASTDIR

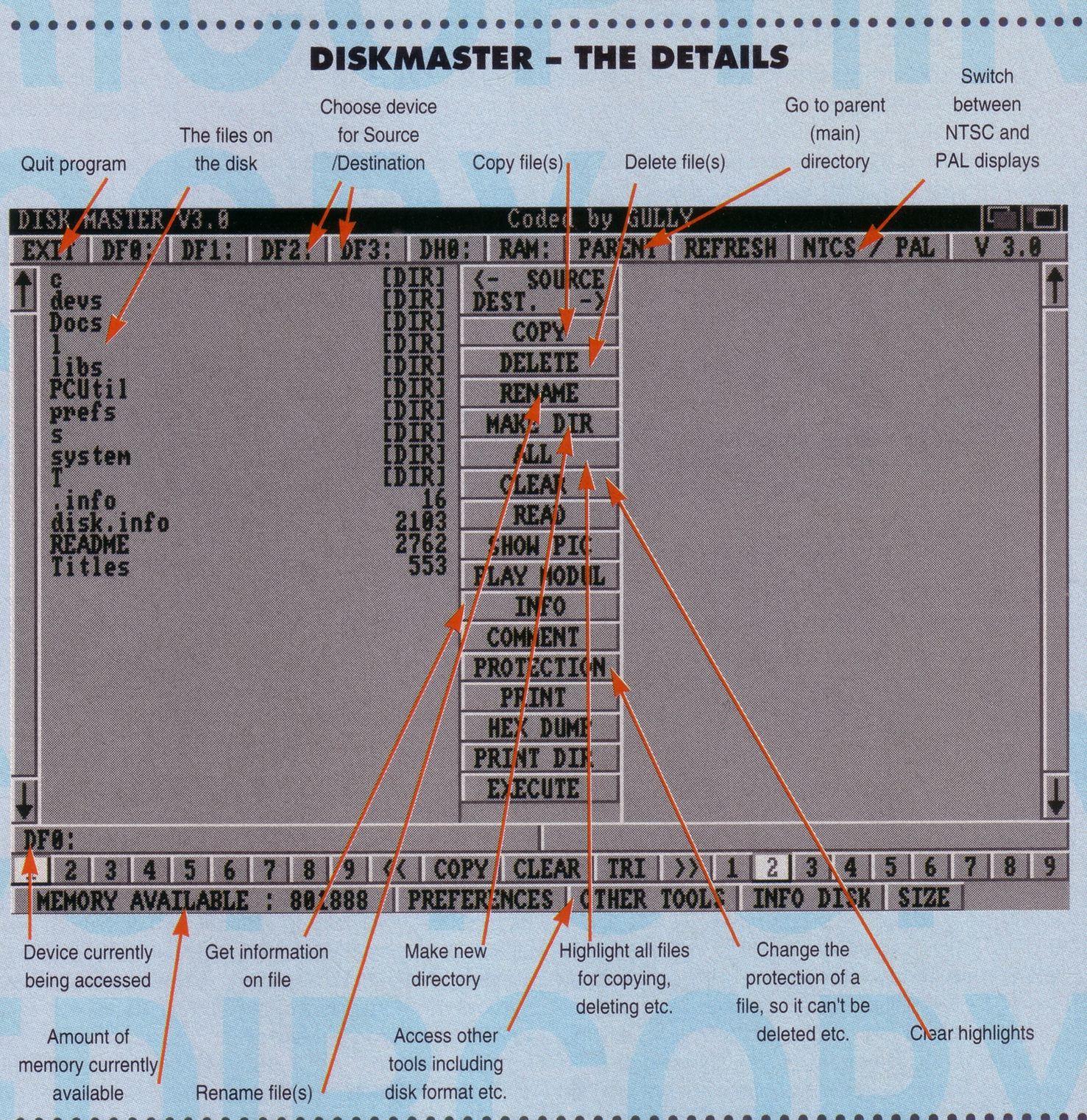
FastDir, as mentioned above, is only accessed via the CLI. It can be run from it, like *Diskmaster* can, but a more automatic process would be to access the command from the startup-sequence of one of your bootable disks.

Follow the details in the Making a bootable disk box at the bottom of this page.

Diskmaster and *FastDir* were both supplied on utility disks from Vally PD, a company that specialises in Public Domain and shareware software for the Amiga.

For more information, Vally PD can be reached at: PO Box 15, Peterlee, County Durham, SR8 1NZ. Phone 091 587 1195.

DISKMASTER - THE DETAILS



AMIGA BACK-UP COPY/MAKING A BOOTABLE DISK

1 Format a blank disk. To do this, put your Workbench disk in the machine and wait for the Workbench screen to come up.

When the disk drive has gone out, insert the disk you want to format in the disk drive. Then, hold down the right mouse button and select Initialise from the Disk menu at the top of the screen. Let go of the mouse button to start formatting the disk.

2 Now, open the CLI which is found in the System folder. Enter the following CLI commands to set things up. (remember to press <RETURN> after each. NB The '|' character is found at the top right of the Amiga's keyboard, next to the Backspace key. Press SHIFT \ to get the character):

```
COPY C:MAKEDIR|COPY|INSTALL RAM:
PATH RAM: ADD
MAKEDIR RAM:NCE
```

3 Remove the Workbench disk and put the Cover Disk in the internal drive. Enter the following:

```
COPY DF0: ALL RAM:NCE
```

4 Once all the files have been copied, take out the Cover Disk and insert the blank disk in the drive. To copy the files to the blank disk, type: COPY RAM: ALL DF0:

5 Next, type: MAKEDIR DF0:S.

6 To create the essential startup-sequence, enter: ED DF0:S/STARTUP-SEQUENCE.

When the Editor comes up, input:

```
FASTDIRS/FSdirs
DISKMASTER/dskmr3.0
```

To save the file, press ESC, then X and then press Return.

7 *FastDir* , for convenience, can be installed in the c directory of the bootable disk. To do this you can copy the file FSDirs from the FastDirs directory to the c directory on your back-up disk. To do this, insert your Cover Disk in the drive, type: COPY DF0:FASTDIRS/FSDir TO RAM:NCE. Then, once that has been copied over, take out the disk and insert the back-up disk in the drive. Type: MAKEDIR DF0:C, then COPY RAM:NCE/FASTDIRS/FSDir TO DF0:C. If the files are already in RAM:NCE you can just type: COPY RAM:NCE/FASTDIRS/FSDirs to DF0:c. To access the program,it's a good idea to run it automatically from the startup-sequence, as mentioned earlier.

8 The final step in backing up the Cover Disk is to install it to make it bootable:

```
INSTALL DF0:
```

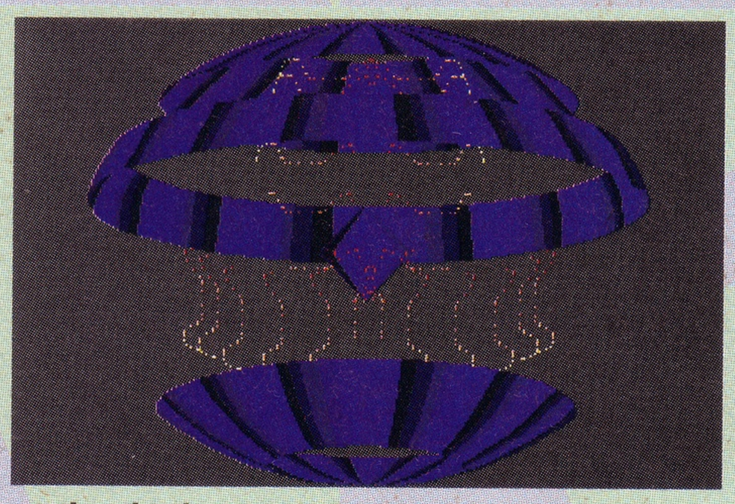
These commands will both back-up the files on your Cover Disk and set-up the programs themselves. There are more elegant ways of doing this, but this is a straightforward way of getting things going.

SOFTWARE

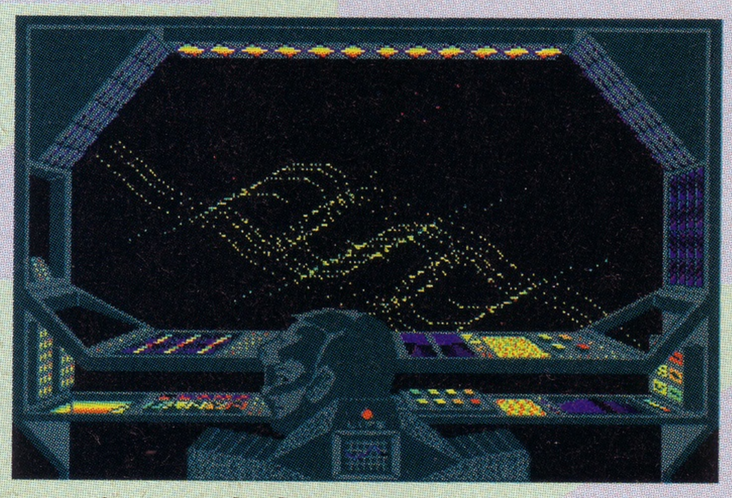
COVER DISK 7

COLOURSPACE

Colourspace is one of those weird and wacky programs that is hard to describe, let alone put in some sort of category. It's described as a light synthesiser, which essentially means that you can use it much as you would a music synth, but instead of creating music, you're actually creating patterns of graphics – in other words light – on the screen.



• When background graphics are added, especially ones that change colour, then you really do need sunglasses!



• No, it's not a built-in game but rather one of *Colourspace's* background graphics that lets you play around with the starfields

The program has a long history; development on it was started as long ago as 1984 when *Psychedelia* came out for the Atari 8-bits and, less colourfully, for the Commodore 64. Then, a bit later, *Colourspace* was created for the Atari 8-bits and once the ST came out, sporting an amazing 512 colour palette, it was one of the first programs written for this more powerful platform. Now it's been released as shareware so even more ST owners can experience its impressive abilities.

This move follows Llamasoft's successful release of *Llamatron* as shareware, which, in spite of initial concernes, has been doing really well. So far more than 800 people have paid their shareware contribution for the ST version, and it is expected that the Amiga version, released more recently, will be just as successful.

Colourspace follows a similar path – if you enjoy the program, then you're obliged to pay your £5 registration fee. For your dish you'll receive a comprehensive manual for *Colourspace*, a colourful cardboard folder to keep the program in, and the latest Llamasoft newsletter.

Both *Colourspace* and *Llamatron* have been programmed by Jeff Minter, the effervescent programmer behind such eccentrically hairy games as *Attack of the Mutant Camels*, *Ancipital* and *Revenge of the Mutant Camels*. In spite of their unusual background, all of these games were great and helped to push forward the boundaries of computer gaming in the early days of computing.

LOADING COLOURSPACE

Before you do anything with the Cover Disk, make a copy of it – see the ST Back-up Copy box elsewhere on this page for instructions on how to do this.

Set your ST to low resolution (if it's not already in that mode) by going to the Set Preferences command in the Options menu.

Colourspace will only run from the root directory of a disk, which means it can't be run in the form that it comes on the Cover Disk; that is, from the ST folder. To get around this, use the back-up copy instructions as printed elsewhere on this page, ensuring that the disk you copy the program to has *Colourspace* in its main directory. If it is, then you'll have no problem running it – just double click on the YAK.PRG file to enter the dazzling world of psychedelia.

USING COLOURSPACE

There is some documentation on how to use *Colourspace* on the Cover Disk. Full documentation for the program is available by sending in the shareware contribution of £5.

When *Colourspace* first loads you will be faced with a title screen with a starfield in the background.

Press the [key to remove the starfield. By moving the mouse you will see a little white dot on the screen move around. Hold down the left mouse button and move the mouse around to control and manipulate the graphics patterns on-screen.

The keys ZXCVBN control the symmetry of the pattern. There is an additional symmetry mode which can be toggled on and off with the W key.

Different pattern shapes are available by pressing the keys ASDFGHJK. There are also some different modes available by pressing L,E and R.

The numbers 1-9 on the numeric keypad enable you to change to different colour palettes.

Colourspace also has 20 preset modes which are available as soon as the program has loaded. To see them, press the Function keys or any of the number keys on the main keyboard. These presets show various *Colourspace* effects as well as *Neochrome* images which can be used as foreground and backdrop images for the patterns that you control with the mouse.

These presets can be customised. You can design your own pattern shapes, starfield effects and palette selections, and assign them to one of the 20 Preset slots. Banks of presets can then be saved to disk. To find out how to do this, and how to use the program to its full capabilities, register and get the manual.

FUNCTION SUMMARY

Symmetry: ZXCVBN, W for extra symmetry on/off
Pattern shapes: ASDFGHJK, LER extra modes
Starfield on/off: ; (semi-colon)
Streaks on/off: ' (apostrophe)
Change starfield mode: Delete
Change starfield symmetry: #
Gravity on radial starfield: Insert
Pixel size toggle: Backspace
Palettes: 1-9 on numeric keypad
Single strobe: Q
Continuous instant braindeath strobe: T to toggle on/off
Toggle background on/off: [
Toggle foreground on/off:]
Select presets 1-20: F1-F10, keys 0-9 on main keyboard

ST INFORMATION

PROGRAM: Colourspace
DESCRIPTION: Light synthesiser
FOLDER: ST
FILE(S): YAK.PRG, YAK.YAK, SPACE.TXT, .NEO graphics files

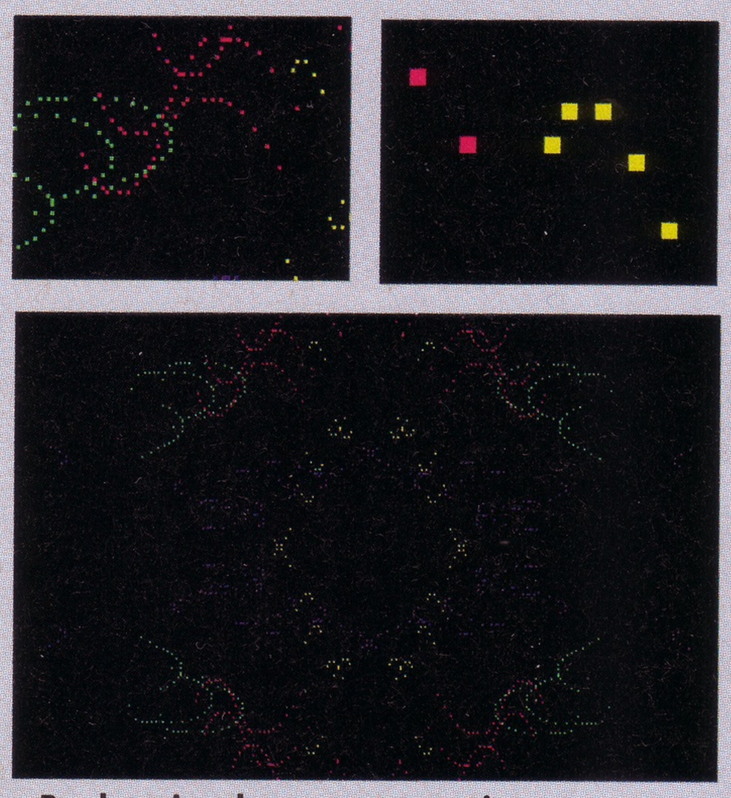
DO THE RIGHT THING

If you enjoyed *Colourspace* and want to use it to its full capabilities then pay the shareware fee of £5. For the money you will not only receive the complete manual for the program, but also a striking cardboard folder to keep the manual and disk in, and a copy of the latest Llamasoft newsletter.

Send your contribution to: Llamasoft, 49 Mount Pleasant, Tadley, Hants RG26 6BN.

Apart from the £5 contribution being the morally correct thing to do, it will also encourage more programmers to let loose and release more quality programs as shareware, which will enable you to get software at a lower price than from the commercial software houses.

And if you're really taken by the idea of light synthesisers, instead of registering *Colourspace* you can get a full copy of *Trip-a-Tron*, the more advanced version, for £20 instead of the full price of £30.



• By changing the symmetry settings, even more impressive patterns can be created

ST BACK-UP COPY

1 Format at least one blank disk.

2 Write protect the original *Express* Cover Disk (with the notch open so you can see the hole through the disk) and insert it into the drive. If you've got two drives, insert the Cover Disk into drive B. Double click on the drive B icon to open a window showing the contents of the Cover Disk. If you've only got a single drive a message appears asking you to put disk B in drive A. Just click on OK.

3 Insert one of the blank formatted disks into drive A (removing the Cover Disk if you only have one drive). Double click on the drive A icon and open up another window. You may be asked to insert disk A in drive A - you already have, so do nothing and click on OK.

4 Open the ST folder in the drive B Cover Disk window and drag it into the drive A window. Hold the SHIFT key down and highlight all the files in the ST folder. Keeping the key pressed, drag the files across to drive A.

5 If you only have one drive, you're asked to insert disk A and disk B at regular intervals. Be careful not to mix the two disks up! Remember, Disk B is the original Cover Disk and disk A is the newly formatted blank disk.

6 Don't try to use the standard Atari disk copy (dragging floppy A onto floppy B) function as it won't work.

PC INFORMATION

PROGRAM: Infoplus
DIRECTORY: PC
DESCRIPTION: Utility

PROGRAM: Jumpman Lives
DIRECTORY: PC
DESCRIPTION: Game

FILE(S): INSTALL.BAT, NCE_PC.7

NOTE: MS-DOS must be loaded on your system before you use the Cover Disk

PC

INFOPLUS

Haven't you always wanted to know how your system is set-up, but have never had the chance? If this sounds like you, then you'll be interested in *Infoplus*. This useful program will enable you to look into almost every nook and cranny of your machine, displaying the information it finds in one of its 18 built-in pages.

LOADING INFOPLUS

Infoplus is archived on the Cover Disk, but we've got an installation program that makes de-archiving it (together with *Jumpman Lives*, also on the disk) easy.

Before you do anything, though, write protect the Cover Disk (by moving the notch in the top right corner of it so you can see a whole through the disk).

Put the Cover Disk in the disk drive and change to that drive – by typing A: or B: depending on which device your 3.5-inch drive is assigned as. Then, type CD PC to access the PC directory. There are only two files in the directory: RUNME.BAT and NCE_PC.EXE. Don't run NCE_PC.EXE whatever you do: it's the self-extracting archive file and if it's run (and your Cover Disk's not write protected) it will corrupt your disk.

To Install the programs, type RUNME A:, B:, C:, or D:, depending on which device you want to install the program to. Don't type INSTALL like the program says, but rather RUNME. The filename was changed to make it more obvious that NCE_PC shouldn't be run.

USING INFOPLUS

Infoplus is straightforward and uses only a few keys on the keyboard. The PgUp and PgDn keys flip from page to page. Pressing HOME and END will move you to the first and last pages of the information. If you press ENTER, you can then type in the number of the page you want to view. To get out of the program, press ESC.

Some of the pages won't fit on the screen in their entirety, in which case press the DOWN ARROW key to display the remainder of the information.

If you want to print out a hard copy of a particular page, press SHIFT and PrtSc at the same time. On some keyboards this combination could be SHIFT PRINT or PrintScrn.

JUMPMAN LIVES

A few years ago the American software company Epyx released *Jumpman* and *Jumpman Junior* for the popular 8-bit machines of the day: the Atari, Apple II and Commodore 64. These games were the premiere platform games of their day, yet even now their playability is impressive.

Now a Shareware version of the *Jumpman* games has come out, which follows on in the same tradition. It's called *Jumpman Lives* and is on this week's *Express* Cover Disk. This program has been written by Apogee Software in the US, and is published and distributed in Europe by Precision Software Applications.

LOADING THE GAME

To get *Jumpman Lives* up and running (or jumping as the case may be), follow the instructions for loading Infoplus that were printed above. If you have already de-archived *Infoplus, Jumpman Lives* would have been de-archived at the same time. Both programs can be run from the menu that comes up after the programs are de-archived.

GAME CONTROLS

Here are the game's controls:
C – Redefine keys
T – Test the keys you've selected
P – Select number of players (between 1 and 4)
O – Ordering information (see below)
H – High score table
S – Start the game
R – Read the background story to the game
D – Game credits
E – Levels editor (not available in this version)
L – Explains all these functions

If you have played the game before you may have been prompted to save your position. If you do this, you can either start the game from this position in your next game, or from the beginning as usual.

JUMP TO IT!

Jumpman Lives is set on Saturn where you have flown in your rocket ship. Terrorists have placed dangerous TechnoBombs on every level of the top secret Segan Institute of Technology.for you to collect, and if you don't get them in time then the planet will be blown up!

To collect the bombs, you have to run up and down ladders, climb up and down ropes, as well as jump across gaps to get from platform to platform.

While you're collecting these bombs you also have to contend with other obstacles. There are bullets to avoid, which appear on-screen and, when you are horizontally or vertically parallel to them, they fire at you. These must be avoided. Added to this threat are a variety of other robots and obstacles which appear the further you get in the game.

WANT MORE PLATFORM ACTION?

After playing a few games of *Jumpman Lives* you'll be hooked. The version that's on the *Express* Cover Disk contains 12 levels of action.

A full version of the game is available that features 45 levels, as well as a Level Editor which lets you create your own. This version is available from Precision Software Applications for £34.08, plus £2 postage and packaging.

To find out more, contact the company at: Precision Software Applications, Tarnwood, 10 High Street, Tadlow, Nr Royston, Herts SG8 0ES. Or call PSA on 0767 23302.

PC BACK-UP COPY

1 If you've only got a floppy drive-based system, format at least one blank disk. Otherwise use your hard drive.
2 Write protect the original *Express* Cover Disk (with the notch open so you can see the hole through the disk).
3 Use the XCOPY command to make the backup. If you have only one floppy drive, load XCOPY from the system disk from drive A:\ with the /S option to copy the files across. So, to copy the files across type: XCOPY A:\PC*.* B: /S.Then it is just a matter of swapping disks in and out of the drive until the Cover Disk is copied. Don't worry if you think you must have two drives – the XCOPY command will treat your single drive as both, or it will copy to the B:\ drive if, in fact, you do have two drives.
4 If you have a hard drive, put the Cover Disk in drive A:\, then type: XCOPY A:\PC*.* C: /S to copy all the subdirectories to the hard drive.

£ FANCY CONTRIBUTING? THEN FILL IN THIS!

NAME:
.....

ADDRESS:.....
.....

TELEPHONE: ..... (day) ..... (night)

COMPUTER: Amiga Atari ST PC The name of the program is:

SIZE OF FILE(S): ☐☐☐ K

TYPE OF SOFTWARE:
☐ Business application ☐ Technical utility
☐ Game ☐ Art program
☐ Music program ☐ Educational
☐ Novelty ☐ Other

BRIEF DESCRIPTION:.....
.....

CHECKLIST:
☐ README.DOC file included on disk
☐ Printout of README.DOC (if possible)
☐ Disk is labelled with your name, address, phone number
☐ Disk is certified virus free

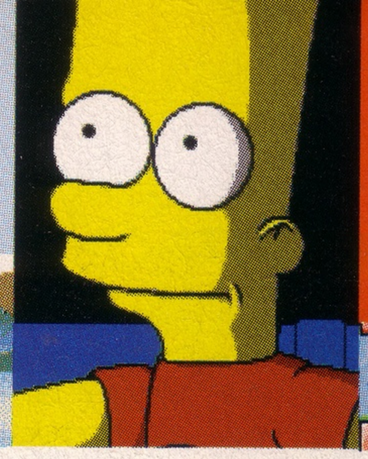
DECLARATION:This program is submitted for publication by *New Computer Express*. I have totally written it myself, and I agree to indemnify Future Publishing against any legal action that may arise due to copyright problems.

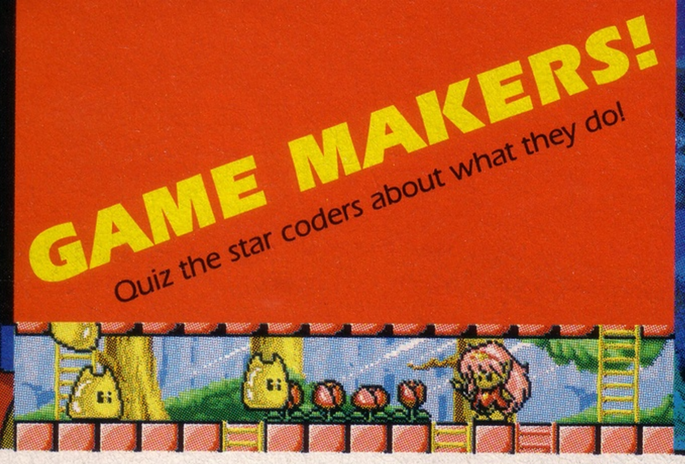
SIGNED: .....

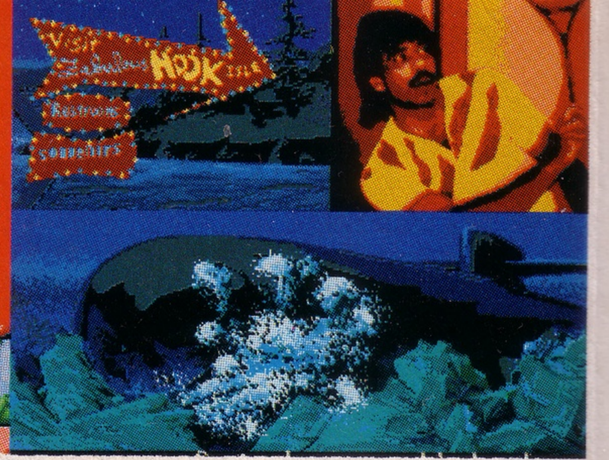
DATE: .....











Discover the Amiga at its best!

Amiga Format presents the greatest computer show this year. Earl's Court II, November 15-17 1991: be there!

Just look at what there is!

Christmas hits Ocean, Psygnosis, Mindscape, Electronic Arts, Virgin, Microprose, Gremlin, Mirrorsoft: all the leading software houses will be at the Show, with massive stands. This'll be your chance to see and **play the year's biggest games** – exclusive to the Show.

CDTV City what is CDTV? What can you do with it? What software can you buy? Discover what **the future of computing** holds in the Show's unique CDTV City.

Christmas Shopping Mall All the best games bargains are here!

Multimedia Theatre Commodore has attracted some of the biggest names in computing to **demonstrate their stuff**. See what the Amiga is *really* capable of!

Games Arcade Set your **eyes on boggle mode**: you won't believe how many incredible games you'll be able to play.

The game makers Imagine hearing direct from the leading games' programmers: just how do they do what they do?

And also... Fistfuls of competitions. Hosts of celebrities and experts. Jaw-droppingly wonderful big screen video. Virtual Reality (virtually certain). Creche. And a **lot of noise**, that's for certain...

Faxbox

Where Earl's Court II,
When November 15-17 1991
Times 9am-5.30pm November 15-16; 9am-4pm November 17
Cost Adults £6, under 14s £4
(see the special Early Booker Offer)

Who'll be there? Commodore, New Computer Express, Amiga Format, Amiga Power, Amiga Shopper, all the major games producers, a myriad of serious publishers, loads of bargain-offerers, lots of hardware developers and everyone into the world of Commodore.

AMIGA FORMAT presents

World of Commodore

15 - 17 November 1991

Commodore

EARLY BOOKER OFFER: SAVE TIME, SAVE MONEY

Be smart. You know this **World of Commodore** will attract tens of thousands of people. And you know what that means: queue City. So avoid all the foot-shuffling, hanging-around-for-ages start to the Show by booking your tickets early.
And you'll even **save money**! Bit of a barg, really. Do it now, otherwise you'll only forget and then regret it later when you're really cold and you can't wait to get inside and – (Snip! - Ed)

YES I would like to have my tickets early, avoid all the queues and save £1.05 on every ticket, please.

Name .....

Address .....

.....

.....

.....**Postcode**.....

Number of tickets .....Adult (at £4.95 each)

.....Under 14s (at £2.95 each)

Total payment

Method of Payment (please circle) Access Visa Cheque PO

Credit Card number .....Expiry date .....

CREDIT CARD HOTLINE 051 356 5085

Please make all cheques payable to **WORLD OF COMMODORE**

Send this form to

World of Commodore
PO BOX 2, Ellesmere Port
South Wirral, L65 3EA

WARNING: This offer closes on 8.11.91
If you don't want to cut up this magazine, photocopies are accepted. **NCE**

You'll think Christmas has come early!

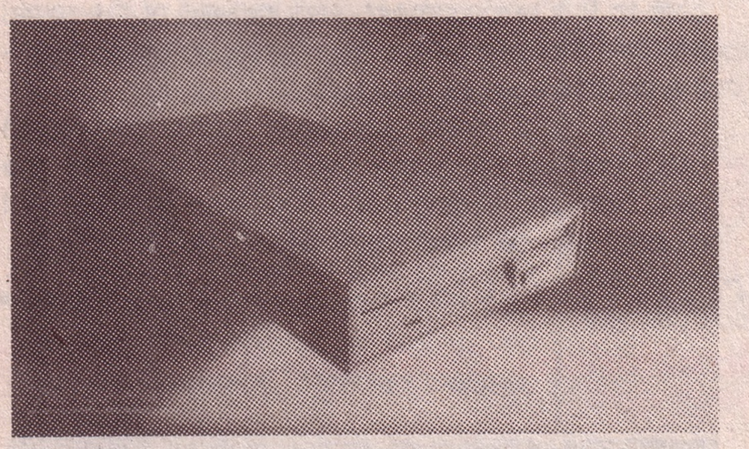


ON A SCREEN NEAR YOU...

The latest 16-bit software and hardware reviewed in bite-sized chunks

PRODUCT: PC 720 Drive COMPATIBILITY: ST FROM: Power Computing CONTACT: 0234 843388

Within this grey metal box lies the mainstay of Power Computing's ST range of drives, the Sony MPF 110-01 – one of the most reliable lightweight units on the market. Power's casing includes an internal power supply unit (PSU) complete with a metre-long mains cable (but sadly missing a plug).



• The PC7720 is a neat, reliable unit. A few had dodgy mains cables fitted, so try before you buy

The PC720 performs well and can format up to 82 tracks on most floppies, around 10K extra. It is well-built and compact (despite the PSU), and the Sony drive is quiet. However, our review machine's mains cable was loose in its strain-relief grommet.

Reliability is one of the PC720's strengths – despite a lack of ventilation slots on the casing, the power supply's transformer never seems to run hot, even after prolonged periods of use.

Sony's drive-unit comes complete with a dust-flap over the drive-slot, and an LED to show disk head activity. To this, Power Computing have added a mains switch at the rear of the unit, and a 800mm data cable for connection to your ST. Linking it up is a doddle – just plug it into the mains, connect the data cable and you are up and running.

Though the PC720 drive is reasonably priced and certainly seems worth its price-tag, it's worth checking one before you buy. If the mains cable is loose like ours, then think twice. That's one risk nobody should take.

VALUE FOR MONEY?

FOR
▲ Cheap yet reliable drive unit
▲ Neat, compact casing
▲ Internal power supply

AGAINST
▼ Poor strain relief grommet

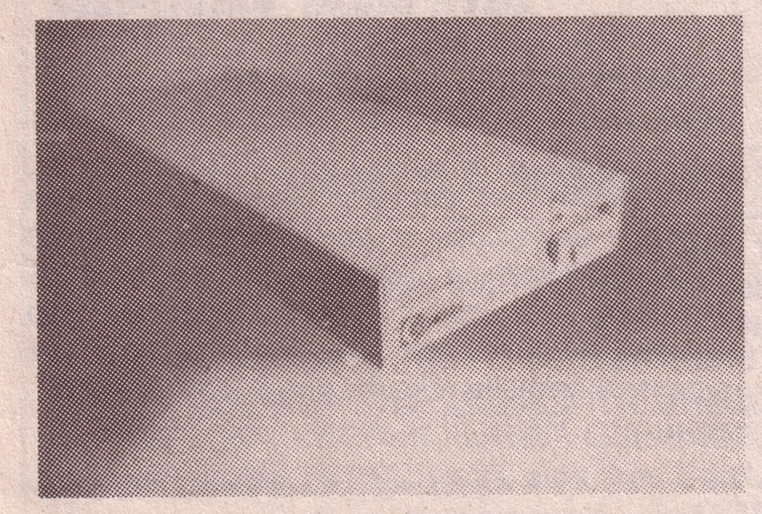
COST: £55 VALUE: Good

COMPETITION: Pandaal, Daatadisk, Cumana CSA 354, Zydec, and the Roctec RF302R

Otherwise, the PC 720 is a neat, reliable solution that's just the job for upgrading your ST. ■

PRODUCT: Cumana CSA 354 COMPATIBILITY: ST FROM: WeServe CONTACT: 0705 325354

As one of the longest-standing manufacturers of disk drives, Cumana know how to put together the definitive floppy package for your ST. They may charge a little over the odds, but Cumana certainly make it money well spent. The CSA 354 is robust, clad in thick, grey-painted steel. Its design owes a lot to the old BBC-compatible floppies that Cumana shipped to schools – and like those, the CSA 354 is built to last.



• The Terminator of the disk drive world, the Cumana CSA 354 is very tough – but not cheap

Internally the CSA 354 uses a Chinon FZ 354 drive-unit, as found on some versions of the ST and there's also an internal power supply unit. A nice touch is the addition of a two-metre mains cable with a moulded plug fitted – too often it's this aspect that stops you getting your drive up and running on Day One.

The drive itself performs well – it's possible to format up to 84 tracks when initialising disks. That's four more tracks (or approximately 20K extra data space) – but you may need good disks to get this consistently.

The drive's only fault is it's noise – a bit graunchy – but at least you know when the drive heads are working!

To connect the CSA 354 to your ST there's a 700mm long data cable protruding from the back of the case which fits into the Floppy Drive socket. The power switch is also at the back, while on the front is an LED which strobes as the head reads and writes.

If you need toughness and reliability (ie. where there are children, clumsies, or coffee-hurling evenings) then the CSA 354 is your best bet.■

WORTH THE EXTRA COST?

FOR
▲ Strong as an ox
▲ Power supply fitted internally
▲ Atari-proven, reliable drive unit

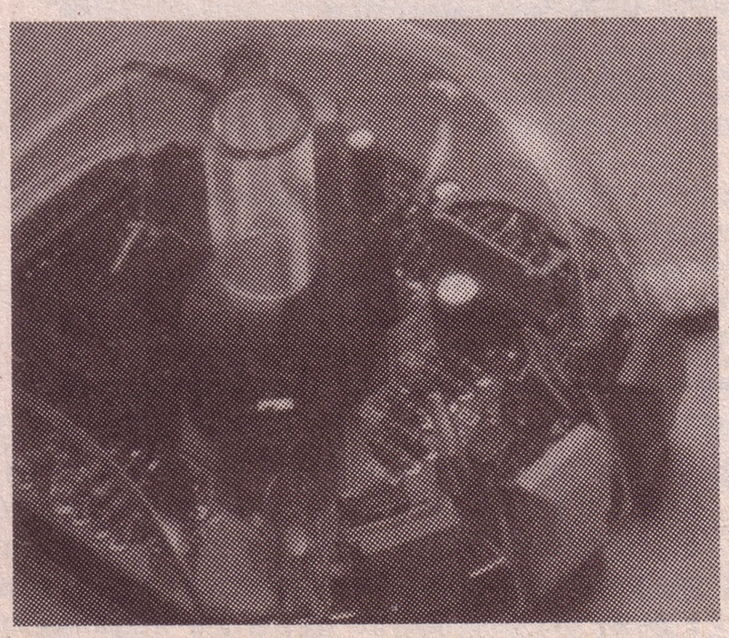
AGAINST
▼ A bit pricey but worth it
▼ Noisier than most drives

COST: £69.90 VALUE: Best buy

COMPETITION: Pandaal, Daatadisk, Power Computing PC720, Zydec, and the Roctec RF302R

PRODUCT: Crystal COMPATIBILITY: PC FROM: Suncom CONTACT: 0453 753565

Few people will doubt that the last five years have proved a boom time for the Graphic User Interface on the IBM. However, an increasingly important factor in GUI has turned out to be the mouse used – although a mouse can be purchased for as little as £20, quality should be the users main concern because of the long periods it will be in use.



•Is it a spacecraft? Is it a Christmas tree decoration? No it's a mouse – seeing is believing!

Suncom Technologies have produced what might be described as a novelty mouse, because it is encased in a transparent housing. This gives the mouse a distinctly futuristic look, but begs the question: what's the point? There appear to be no advantages to this transparency, other than the look of the thing. What's the point of having a mouse that displays its inner workings when it is always covered by your hand? A transparent hand, on the other hand...

The fact that this mouse looks like a Christmas tree decoration – even its ball has an eye-catching, green and yellow two-tone effect – may prove its downfall. In the event it is more than a marketing wonder because it serves its purpose well. It has a hemispherical case so it fits into the hand very comfortably, with easy access to the buttons – although these felt a little tinny in use.

THE ONE TO GO FOR?

FOR
▲ Comfortable shape
▲ Connects to majority of serial ports
▲ Extremely durable

AGAINST
▼ No point in being transparent

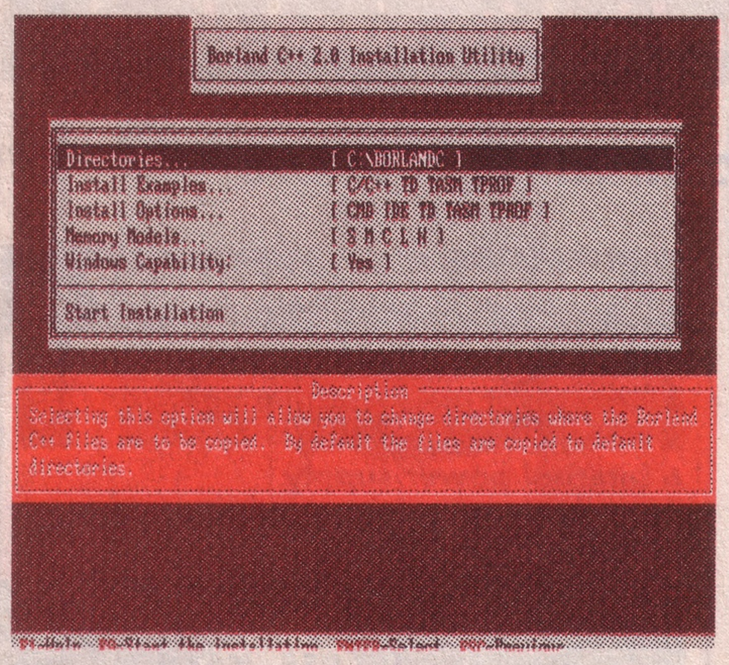
COST: £34.99 VALUE: Good

COMPETITION: Logitech, Microsoft, Naksha, etc.

Its hemispherical shape makes it larger than most but, unless you have extremely small hands, this shouldn't cause a problem. ■

PRODUCT: C++ COMPATIBILITY: Any FROM: Borland CONTACT: 0453 753565

The programming language to use at the moment is C – as you may discover if you try applying for a few of the jobs advertised in the computer press. C++ is the enhanced version of the original that includes features that do away with the need for annoying sub-routines before you can place a program into *Windows*.



• **C++ from Borland includes features that do away with sub-routines**

C has always had the advantage of being an extremely portable code – any program written in C can be compiled on virtually any computer without fears of incompatibility,

The latest release from Borland has additions to the compiler and new programming features, as well as other extras. Version 2.0 also includes a complete version of C, for any programmer familiar with the original who wants to learn the advantages of the C++ environment.

As well as *Windows*-compatible compiler functions, other additions to the programming features include advanced palette instructions. A new function *include get palette* examines the colour information held in the video RAM of a VGA or EGA card. This can prove useful for translating stored images for a non-standard 16 colour set (for example five shades each of brown and green, four shades of blue, plus black and white).

There is an excellent installation program that allows you to decide how much hard drive to dedicate to this environment, and instead of the usual b/w text flashing before your eyes, you geta running commentary as it installs.

This is a highly advanced fourth generation programming language (4GL) that removes the pain from translating code from one environment to another – be it computer type or text to GUI. ■

A GOOD BUY?

FOR
- ▲ **Portable code**
- ▲ **Comes with C compiler**

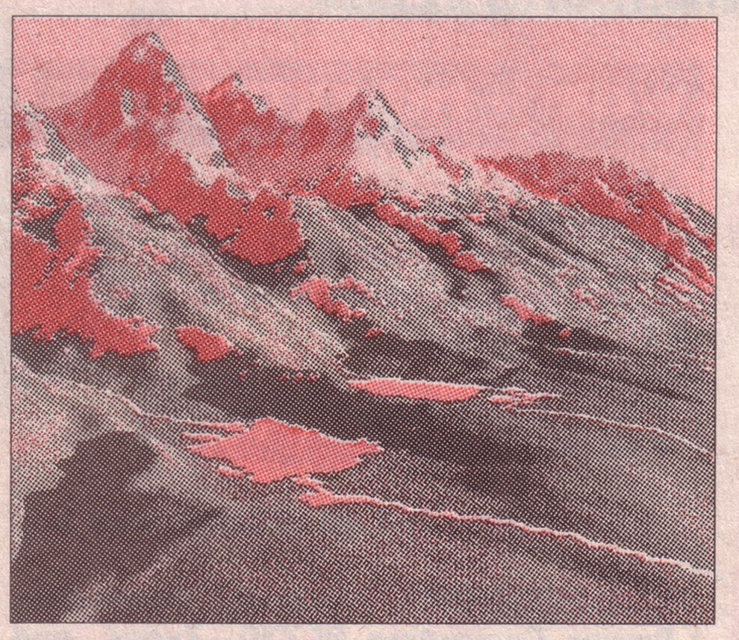
AGAINST
- ▼ **Price**
- ▼ **Memory intensive**

COST: £299.95 VALUE: Good

COMPETITION: Pacal

PRODUCT: Genesis: The Third Day COMPATIBILITY: 1Mb Amiga FROM: MicroIllusions CONTACT: 0480 496497

Some would say that God did a pretty spiffing job of creating the Earth, but there's always the occasional cynic who thinks he could have done better. Of course, proving such a claim is difficult – that is unless you've got a copy of MicroIllusions' *Genesis*, an aptly-named package released this week for the Amiga.



• **Explore the fascinating world of fractal**

As you've probably already guessed, *Genesis* is a powerful fractal landscape generator along the same lines as those other great fractal programs *Vista* and *Scene Generator*. With it you can sculpt whole new worlds in a fraction of the time that creating the real thing would have taken.

At its simplest level, *Genesis* will create a fractal landscape from a 'seed' value which you feed it. It can also be fed real geological data in standard 'DEM' format, allowing it to create scenes from the real world and even from other worlds, including Mars and the Moon. The program comes with a selection of real life American scenes including Yosemite and Caldera.

Genesis scenes can certainly be complex. You can easily create scenes that have up to 1,200 springs (all of which abide by the laws of nature), 2,500 lakes and a maximum of 225,000 polygons (which are the building materials for fractal scenes). You can command the mountains to rise and fall, govern the depth of rivers, and control the tides in the sea.

HOW DOES IT RATE?

FOR
- ▲ **Outputs to ray-tracing programs**
- ▲ **Very fast landscape generation**
- ▲ **Plenty of control over attributes**

AGAINST
- ▼ **Can't generate landscapes in 24-bit**

COST: £49.95 VALUE: Good

COMPETITION: *Vista, Vista Pro, Scene Generator*

One very nice feature of *Genesis* is that it can generate animations of fractal scenes using an advanced 'tweening' technique. Simply tell it the start and stop positions for the animation and *Genesis* will do the rest. Now everyone can create a genesis animation like the one in *Star Trek 2* ■

PRODUCT: Snapshot Pro COMPATIBILITY: 1Mb Amiga FROM: HB Marketing CONTACT: 0753 686000

Video digitisers aren't just very useful – they can also be a lot of fun. However, as anyone who has ever used a digitiser will tell you, getting decent results from pre-recorded video tape (which is the source which most people use) is an almost impossible task unless you're prepared to pay through the nose.

• **How about this for a digitised image? Good, isn't it!**

A new digitiser on the block is *SnapShot Pro*, a two-tier device that combines a real time video digitiser with a specially-designed RGB splitter. *SnapShot*'s claim to fame is simple enough – itcan grab full colour frames directly from video tape better than any other Amiga video digitiser. And, after a few weeks' play, this claim certainly seems to be true.

SnapShot supports all the usual Amiga screen modes including both overscanned displays and HAM. For those of you with something like the Harlequin board, it can also output digitised images in 24-bit format, making it ideal for generating broadcast quality graphics.

Like all good digitisers, *SnapShot* also allows you to create digitised animations. However, it goes one step further than previous efforts thanks to its comprehensive 'time lapse' and 'movement detection' functions.

These features combined with some great qualityimages allow you to create photo-realistic animations like you've never seen on an Amiga screen before.

IS IT WORTH BUYING?

FOR
- ▲ **Grabs brilliantly from video tape**
- ▲ **Supports all Amiga screen modes**
- ▲ **Very fast operation**

AGAINST
- ▼ **Rather pricey for what it does**

COST: £580 VALUE: Good

COMPETITION: *FrameGrabber 256, Videon, ColourPic*

Considering what it does, *SnapShot* is perhaps the perfect Amiga video digitiser. It's the kind of device that every Amiga owner interested in graphics has been crying out for, but its price puts it firmly out of reach for all but the wealthiest of users. If it had been priced at around £400, I would buy one today! ■

Computer Auction

Saturday 2nd November at
Bowlers, Longbridge Rd
Trafford Park, Manchester M17

Sale starts 10.00am.
Viewing and testing from 8.00am

About 1000 lots of computer equipment incl:- IBM, Compaq, Amstrad, Toshiba, Apricot, Apple Macintosh etc, monitors, printers, disks, modems, software, consumables, home computers etc.

For your catalogue ring
Computer Connections on
0254 813316

MIKE JERVIS

16 bit Computers

19 Portree Drive, Rise Park, Nottingham.
NG5 5DT. Telephone (0602) 274369

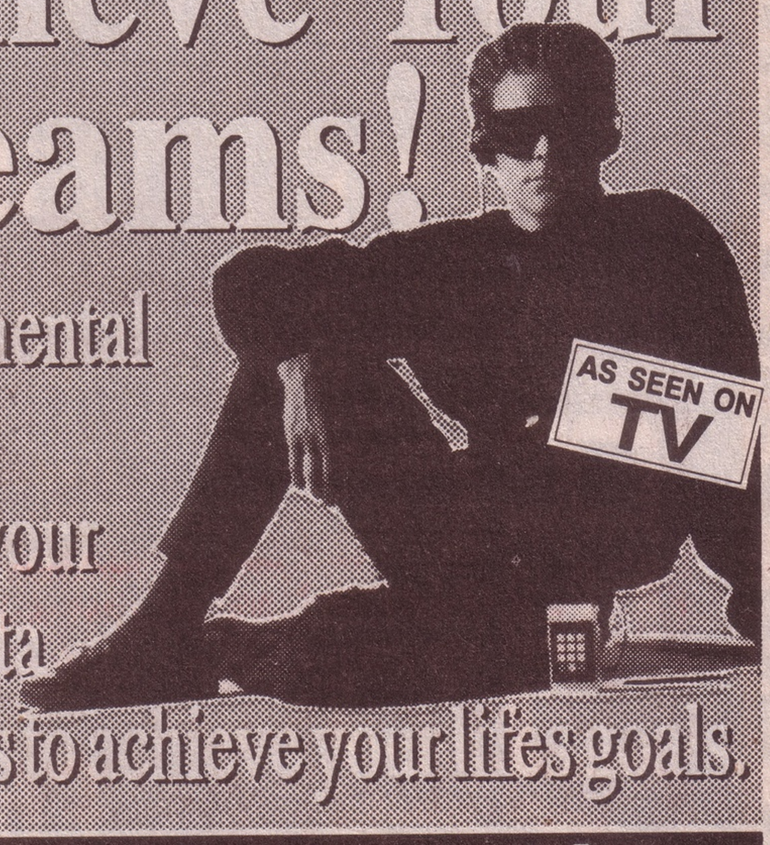
SERIOUS AMIGA SOFTWARE AT FRIVOLOUS PRICES

All prices include VAT and Postage
Access Callers Welcome VISA

Bars & Pipes Professional complete with Tool Kits A&B, Multi Media Kit and Internal Sound Kit	**£300.00**
Small Business Accounts Extra	**£76.50**
K-Roget	**£20.00**
Deluxe Paint 3	**£53.50**
Small Business Accounts Cash	**£53.50**
A.M.A.S	**£64**
Art DepartmentProfessional	**£115**
Prodata	**£49**
K-Comm2	**£20**
Pen Pal	**£65.00**
Sterling Service Bulletin Board	**£73.50**
Quarterback Tools	**£44.75**
Quarterback	**£32**
Wordworth	**£80.00**
Protext 5	**£90**
Video Titler 3D	**£89.50**
Vista	**£51.50**
Pro Video Plus	**£153.50**
Distant Suns	**£45**
GPTerm	**£50**
Amigavision	**£76.50**
DOS to DOS	**£24.50**

The above is only a small selection from our extensive stocks of hardware, software and peripherals.

Achieve Your Dreams!



Amazing mental computer harnesses your Alpha/Theta brainwaves to achieve your lifes goals.

MC² In just minutes achieve:

- Deep relaxation
- Super learning
- Hidden talent realisation
- Mental clarity
- Focused problem solving
- Closer personal communication
- Whole brain thinking



Imagine having the power to induce deep relaxation, accelerate your learning abilities and change your behaviour patterns at the touch of a button!! At last tomorrow's technology can deliver your goals, fulfil your dreams, with the amazing MC2 Dream Machine.

Developed and patented in Arizona, USA, the MC2 is a computerised audio-visual component system which induces a state of deep relaxation through the use of synchronised light and sound patterns which are scientifically programmed to the theta 4-7hz brain waves. These waves are produced when we are in the creative and learning states. So by emitting light and sound in the 4-7hz frequency band, the audio-visual stimuli are designed to effortlessly lull you into a highly motivated yet deeply relaxed state. Thus, you achieve your goals by directing your sub conscious mind to work in co-operation with your conscious desires.

Simply select any one of the 10 convenient pre-sets for relaxation, learning or motivation. From 15 minute brain-storming high energy sessions to 75 minute dream enhancing and advanced visual-isation meditations.

DREAM MACHINE™

MC2 Dream Machine is a patented integral component system with 10 preset options beta/theta. Stereo headphones, custom light scan glasses, 240v A/C mains adapter pack: option 100 learning/ relaxation cassette tapes.

Achieve your dreams now and the success you deserve send for your home trial of the amazing MC2 Dream Machine today.

Card holders ring
091 477 2555 for express delivery.

J&M INTERNATIONAL UK LTD.
17 WHITEHALL RD., GATESHEAD,
TYNE & WEAR NE8 4EQ.

PROVE IT YOURSELF AT HOME! 14 DAY MONEY REFUND G'TEE

Yes! Please rush me the MC_2 Dream Machine of 14 days money back guarantee. I understand that if I am in any way dissatisfied I may return the system for a full refund without question. I enclose a cheque/P.O. for £139.99 incl. P&P.

Name .....

Address .....

..... P/code .....

Please debit my Access/Visa. No.: .....

Signature .....

G-Vis Computers

0462-684371

SPECIAL PURCHASE

286-12 NOTEBOOK
1Mb RAM
(Expandable to 4MB)
20Mb HDD, 1.44 FDD,
VGA Display, AC adapter,
Nicad battery pack,
Cigar socket charger.
ONLY

£698.00

September only FREE
leather carry case

Call for complete price list
Motherboards • CALL
Peripherals • CALL

Introducing the BLACK BEAUTY range of computers. CALL (Black minitower case, Black monitor, Black keyboard)

Colour SVGA monitor (1024x768) multiscan £190.00
Phillip Tri-frequency CVGA monitor £298.00

Full range of co-processors in stock ring for details

SAE FOR LIST

COMPUTER AUCTION

2nd November 1991

Woosehill Community Centre, Wokingham, Berkshire
Between 800 and 1000 lots, containing computer related equipment, also a home Computer/Games section From PC's to Printers, From Motherboards to Harddrives.

For details contact:
Jason Grove, Auction Manager.

Tel: 0734 328181 Fax: 0734 732976

H & H Solutions Auction Line

Unit B1, Ivanhoe Road, Finchampstead, Berks, RG11 4QQ

EXPRESS MAIL

What makes your blood boil, your computer crash or your modem mad? Or is there something happening that's a dream for your machine ? *Express* says express yourself – get writing!

Mind the gap

I have always read Robin Alway's Spectrum-specific column with interest. Naturally I was disappointed when, in *Express* 152, most of the text on the ZX81/16 bit emulation was missing, as well as all of "the innermost secret s of the Spectrum revealed".

Instead, most of the text from page 33 was duplicated on the following page 35. Somebody must have goofed!

I trust you can promise us that it will be published soonest. The normal space for the Spectrum column should, of course, be increased accordingly!

On to another subject, the discussion of the contents of the cover disc. No doubt you have the necessary info from your surveys as to which types of machine are in the majority among your readership, and decide the contents accordingly.

If not, such a survey would no doubt prove useful. Please don't forget to find out how many owners of Plus D/Disciple disc systems for the Spectrum there are; there are a lot of us around.

There are also a lot of us with more than one type of computer.

Finally, thank you for an enjoyable magazine, which I have been reading from the very start.

Bjorn Nyberg, Glasgow

Yes, guess we goofed – sorry! Naturally the person concerned has been hung, draw, quartered and reformatted with extreme prejudice.

On the subject of surveys, these can be expensive as well as inaccurate (people too often give the answers they think you want to hear) so we depend largely on letters like yours to monitor the response to the disk – consider your points noted.

Beyond the Spectrum

So Albert Einstein's theory of Relativity, which says anything with mass (e.g. a computer) can't surpass the speed of light, was only a theory?

How about three quarters of a century of observational proof! Al changed our view of the world as we know it. The first proof came in 1919 and continues up to the present. The bending of light by gravitational fields, the variation in the orbit of Mercury, weird time dilation effects and the increase in mass as observed in sub-atomic particles in the gigantic particle accelerator at CERN in Europe. All of these are predicted and explained by Relativity theory.

So according to Al's theorem as we speed up the flow of electrons in a computer circuit and have them whizzing at light speed they can't go any faster because light is a proven limiting velocity.

But wait folks! Let's speculate a little. Certain particles such as 'Photocons' have zero rest mass. Such beauties move only at the speed of light, neither any faster or slower. Some scientists have wondered what would happen if we add what mathematicians call an 'imaginary number' to an object with zero rest mass. The result would be a particle which can only exist *beyond* light speed, a Tachyon. Do they exist? They have never ever been detected.

But suppose we could build a computer with a Photocon to Tachyon interface! A machine consisting of light beams with a Tachyonic CPU for FTL processing – the ultimate in speed. A minor drawback is that the Tachyonic CPU would be invisible as it could only exist beyond the speed of light. For obvious reasons the best name for it would be the Spectrum Mark II. I'm sure Uncle Clive would approve.

Here's to the next issue,

Harry Warren, Dublin 8, Eire

Let's face it, faster than light computing is about as likely to happen in our lifetimes as Cameroon beating Argentina at football, Western Samoa beating Wales at rugby, or Bob Beamish's high jump record being broken twice on the same day. Consider this; how can we know for sure just how fast the speed of light actually is? How can we trust science as objective fact? Are our judgements of fact based on anything more solid than leaps of faith? Karl Popper has a lot to say about all this... As for calling an FTL computer the Spectrum II, although Sir Clive might like the idea, it might be a wee bit too advanced for Alan Sugar. Now if someone else were to come up with the idea first...

A show too far

Regarding the offer of free entry to the forthcoming World of Commodore Show, (*Express* 147).

I feel that this generous gesture does nothing to help those of us who have to travel a considerable distance to get to the venue and, therefore, have no ambition to be included amongst the first 50. It is bad enough that the majority of these shows have to be held in the London area (although I appreciate that is simply a matter of hard economics) without this additional favouritism – for want of a better word. Is it not possible that subscribers at least be given a suitable opportunity to share in the 'free offer'?

On the matter of the cover disks I was grateful, as a subscriber, to be sent this without any additional charge so I hardly feel I am in a position to offer criticism. However, were I having to buy the magazine in the usual way, I don't really think I would – if you see what I mean. Having to share disk space three ways is bad enough in itself, but the standard of software so far included for the Amiga user has been decidedly average. My use of my computer leans heavily toward the more 'serious' aspects, DTP and such, so might it not be an idea to offer clip art or tutorials covering some of the more popular programs, *PageStream*, *DPaint* and so on, from time to time?

I should mention that all the other magazines I subscribe to, including *Amiga Format* and *Amiga Shopper*, are all machine specific and I only continue with *Express* because it provides the news first (usually), although some

MILLER LIGHTS UP ARGUMENT ON AMIGA

Window with Miller (1)

I have just read the interview (*Express* 152) with Amstrad's Malcolm Miller and I feel that some of his comments about the Amiga are totally unjustified. First Mr Miller states that "The Amiga is just a games chip, it doesn't do anything else." How he can say this when the Amiga is by far the leading platform for video and multi-media presentations is beyond me. One only has to look at the huge base of business and creative software available for the machine to realise that it is much more than a games machine.

Next Miller states that the Amiga 500 does not come with a hard disk and monitor, carefully forgetting to mention that a 1Mb A500 costs only £349, a 40Mb hard disk and colour monitor are available for £299 and £239 respectively, bringing the total price to £887 (including VAT). This is actually £164 less than the Amstrad machine with all the same equipment.

Miller goes on to say that the PC can do a lot of things that are not possible with the Amiga. Consider the following:

- **The Amiga has a powerful, fully multi-tasking operating system which no other computer's OS can hold a candle to.**
- **The Amiga uses a faster and more powerful processor set than the PC and, thanks to its graphics processor (Agnus), it is capable of providing real-time screen effects that are beyond the wildest dreams of a VGA card.**
- **The Amiga can run software from the PC, Mac and ST. The PC cannot emulate any of the other main platforms.**
- **The Amiga produces four channel digital stereo sound, unlike the PC which sounds like a door bell.**

For these reasons I believe that Mr. Miller's interview was both unfair and misleading.

Christopher Brown, Chesterfield

Windy with Miller (2)

Just who the hell does Malcolm think he his (*second command in a major company actually)* when he talks about the Amiga being a games machine and not anything else. I rarely use my Amiga for games. Apparently Miller feels that Amstrad's history, the CPC!, is enough to justify his misplaced rantings. Why did you print it?

Alex Powell, Northolt

Mr Miller's comments have niggled a few of our Amiga owning readers. You can take his rather bald statement that: "The Amiga is just a games chip, it doesn't do anything else... " in two ways. Either you can treat it in the same way as Mandy Rice Davis with a "He would say that wouldn't he?" attitude because he is trying to sell a machine to a cynical market. Or you can wonder why he said it. Is it a general view that the Amiga is a games machine? The reason we printed it by the way was because he said it. We are not about to cut the comments of major industry figures because they might offend. ■

LETTERS

ON THE COUCH



This week, Dr Clare Anthony, tells ALAN BUMSTEAD of STEPNEY, LONDON how to rise from the Slough of his Despond, or the Maidenhead of his Desire – depending on how his psychosis began.

All Alan had to do in order to benefit from this world-class analysis was to send in details of the machine he owns, his favourite software, and the machine of his dreams (surprisingly, that's all you have to do too). He scribbled this down on the back of a postcard, in black ink which is a clue in itself, and sent it to: Leather Couch Clare, New Computer Express, 30 Monmouth St, Bath, Avon BA1 2BW. So, it's onto the analysis and prognosis of Alan's problems.

- **MACHINE OWNED: Sam Coupé**
- **FAVE SOFTWARE: The Key Press**
- **DESIRED MACHINE: Amstrad PCW9256**

Oh dear me. Your covering note was a revelation in itself. The mere act of sending in the details would have been sufficient for an analysis. But you added: "Key Press... seeks to teach children how to get to grips with the complex paradigm which is word processing"

Complex paradigm? Rubbish. Word processing is no more than a call for help from the depths of an agonised Super-Ego/Id conflict. There is nothing complex about the inability to communicate verbally and the need to subsume the physical/intellectual inability with a bunch of brightly lit characters on screen. Jungians say word processing is merely a duality of the loss of God and faithless paranoia. Word = the word = God. Processing = a Kafka-esque fear of being lost in the system. We Freudians would say that you are suffering from immature sexual targeting. As for your ambition to change to a PCW (Personal Computer Wordprocessor), you just don't want to grow up.

PROGNOSIS:
Sell the Coupé, bin the software, invest in a Mac. The rubber imagery conjured up by the word 'Mac' should be enough to jolt your repressed Id into a more matured rational one. The realisation that word processing can lead on to Page Layout (think of that last word, Al') will resolve conflict between an overactive Superego and underdeveloped Id. Failing that, spend time at home learning Chinese and staying away from normal people.

of your contributors seem behind the times on occasion.

Sorry about the moans but maybe they might be of some small help.

R Medford, Lymm, Cheshire.

Well yes, we are more than aware that people do live outside of the smoke. Take note of the location of this August magazine, and its best selling, market leading sister titles.It is a shame that many of the biggest events in whatever sphere you care to mention do take place in London. But you can't really blame us for the fact that history mediates against us. I can assure you that neither Commodore nor *Amiga Format* chose London as a matter of spite! As for a special deal – what exactly do you mean? You're not seriously expecting us to pay train fares and hotel accomodation are you? If so, I will write immediately to the FA and demand that they put the entire *Express* team up, all expenses paid at a hotel of our choice for the forthcoming World Cup finals in the USA. Point made?

Top 20

I would like some information for my GCSE course in Technology. Can you tell me your top 20 games, (either personally or on behalf of the magazine). This will be put into a database and used for further reference. Please hasten your reply because I need to compile the database by next Friday!!

JD Maduk, Streatham, London

Here, in no particular order, are the results of an instant straw poll around the office. *Elite*, *Kick Off*, *Lemmings*, *Tetris*, *Sim City*, *Road Rash*, *Manic Miner*, *PGA Tour Golf*, *Batman*, *The Secret of Monkey Island*, *Player Manager*, *MIG29 Fulcrum*, *The Fool's Errand*, *Defender*, *Rainbow Islands*, *Indie 500*, *Air Warrior*, *Fish*, *Head over Heels* and er, *World Cup Carnival*? No perhaps you'd better substitute a favourite of your own for the last one. Tim Smith insists it's brill and triff, but we *are* talking Tim Smith here!

Do any other readers have favourite or least favourite games? Obviously they do. But how about games that haven't been written yet? I'll start you off with *Lada Esprit Sluggo Challenge*. Send your ideas to Better than World Cup Carnival Comp, *Express Mail, New Computer Express*, 30 Monmouth St, Bath, BA1 2BW.

Boring old fart

I don't wish to sound like a boring old fart here but is it really necessary to see the PC as games machine as a positive point?

Games are not the be–all and end–all of computing. Far from it, they are a minor strand to the rich fabric of the industry.

J Belstead, Harrow

Equally it doesn't mean that the PC as games machine isn't important does it?

ATARI 520STE DISCOVERY PACK

Atari 520STE with double sided disk drive, mouse, owners manual, First Basic, Neochrome, ST Tour, Indiana Jones, Super Cycle, Dragons Breath, Anarchy, Atari CX40 Joystick.

ONLY £299.95

PLUS FREE! Our software pack comprising: Wordprocessor, Mailmerge, Database, Spreadsheet, Virus Killer, Your 2nd ST Manual, eleven great games, disk of desk accessories, five programs for small children.

DISCOVERY PLUS PACK

Contains all the items in the Discovery Pack above, plus!! Vinyl computer cover, mouse mat, twin joystick extension lead, 10 blank disks, second Joystick

ONLY £319.95

Plus free! Our software pack comprising:- Wordprocessor, Mail Merge, Database, Spreadsheeet, Virus Killer, Your 2nd ST Manual, eleven great games, disk of desk accessories, five programs for small children.

SPECIAL BONUS OFFER
Buy any Atari ST Computer from us and you can buy a ten game software pack containing:- Asterix, Chess, Live And Let Die, Skweek, Onslaught, Pipe Mania, Rick Dangerous, Rock N Roll, Trivial Pursuit.
FOR ONLY £19.95

MONITORS

SPECIAL OFFER
PHILIPS CM8833 MK2
COLOUR MONITOR
ONLY £239.95
INCLUDING CONNECTING LEAD

Atari SM124 Monitor £139.95

ATARI 1040STE FAMILY CURRICULUM PACK

INCLUDES
Atari 1040STE, mouse, manual
BUSINESS MODULE:- ST Word, ST Calc, ST Base
CREATIVE MODULE:- Hyperpaint 2, Music Maker 2, First Basic
PLAY AND LEARN MODULE:- Prof Plays a New Game, Prof Looks At Words, Prof Makes Sentences
JUNIOR SCHOOL MODULE:- Answer Back Junior Quiz, General Knowledge Quiz, Spelling, Primary Mathematics.
GCSE REVISION MODULE:- Micro Mathematics, French Mistress, Geography Quiz

ONLY £364.95

PLUS FREE!! A superb disk containing eleven great games.

FAMILY CURRICULUM BONUS PACK

All items in the Family Curriculum Pack Above, Plus:- Vinyl Dust Cover, mouse mat, two Microswitched joysticks, 10 blank disks in a box

ONLY £389.95

VINYL DUST COVERS

Atari 520ST/1040ST £5.95
Commodore Amiga 500 ..... £4.95
Panasonic KXP1181 ..... £4.95
Panasonic KXP1180 ..... £4.95
Panasonic KXP1124 ..... £4.95
Star LC10 ..... £4.95
Star LC24/200 ..... £4.95
Star LC200 ..... £4.95
Citizen 120D £4.95
Citizen Swift 9 ..... £4.95
Citizen Swift 24 ..... £4.95
Atari SM125/SM124 Monitor £6.95
Philips CM8833/MK2 ..... £6.95

AMIGA 500 STANDALONE PACK

Amiga 500, Mouse, TV Modulator Manuals, Workbench etc, Deluxe Paint 2.

£299.95

CARTOON CLASSICS

Amiga 500, Mouse, TV Modulator, manuals, Workbench etc. 512K Ram Expansion with clock and Battery Back Up, Captain Planet, The Simpsons, Lemmings, Deluxe Paint 3

£349.95

Hurry!!! Limited stocks at this price

PRINTERS

SPECIAL OFFER
STAR LC20 PRINTER
£149.95
INCLUDING CONNECTING LEAD

Panasonic KXP1180 ..... £159.95
Panasonic KXP1123 ..... £199.95
Star LC200 Colour (UK) £209.95
Star LC24/200 Colour £299.95
Citizen 120D £139.95
Citizen Swift 24 ..... £279.95
Citizen Swift 24 Col £299.95
Citizen Swift 9 ..... £199.95
Citizen Swift 9 Col £219.95

ALL PRINTER PRICES INCLUDE CONNECTING LEAD

DISK DRIVES

CUMANA CSA354 ST £79.95

CUMANA CAX 354
AMIGA DISK DRIVE
£59.95

MICE

Squik Mouse (AMI/ST) £16.95
Contriver (AMI/ST) £16.95
Golden Image (AMI/ST) £18.95
Atari STD £24.95
Amiga STD £29.95
Naksha (AMI/ST) £24.95

SPECIAL OFFERS EXCLUSIVE TO READERS OF COMPUTER EXPRESS

COMMODORE CDTV

With Remote Control, Lemmings, Hutchisons Encyclopaedia.
ONLY £529.95
LIMITED STOCKS

CDTV TITLES

History, Science, Innovation £24.95
Indoor Plants £19.95
Business, Politics, Media £24.95
World Vista £29.95
American Heritage £24.95
Electronic Cookbook £24.95
Music Maker £19.95
All Dogs Go To Heaven £19.95
My Paint £19.95
Classic Board Games £19.95
LIMITED STOCKS

ACORN ARCHIMEDES 3000

Includes:- Archimedes 3000, Mouse, Manuals, Applications Software:- Draw, edit, paint, Maestro.
ONLY £549.95
HURRY! LIMITED STOCKS

JOYSTICKS

Zipstick Standard £12.95
Zipstick Autofire £13.95
Konix Speedking £9.95
Konix Navigator Autofire £12.95
Cruiser Black £8.95
Cruiser Multicoloured £8.95
Quickshot Python £8.95
Quickshot Maverick £12.95
Quickjoy Megaboard £21.95

NEW!! NEW!! NEW!! NEW!! NEW!!
GAME MATE
Play all your favourite Sega Master System Games on your Sega Game Gear
ONLY £34.95

Access

MAIL - CENTA
17 Campbell Street, Belper, Derby DE5 1AP. Tel: 0773 826830

VISA

Prices include VAT at 17.5%. Delivery charges are as follows:- Order value under £10.00. please add 50p. Order value £10.00 to £99.99, delivery free. Order value £100.00 and over, please add £5.00. Personal callers welcome at our retail shop but please bring this advert as some prices will vary. Closed Wednesdays. All items despatched same day if possible. Personal Cheques may require 7 days clearance. Proprietor Martin Bridges.

Just because you don't play games yourself doesn't mean that the news isn't interesting to other people.

Frankly, a change of this radical nature in the perception of a computer is of major importance to the community at large whether they be games players or spreadsheet junkies. Both Commodore and Atari are trying their respective bests at the moment to alter the public's perception of their machines *from* games to serious and everyone seems interested in this. I don't quite get your argument as anything other than a pointer from an insular view.

Old Computer Excess

A few friends and I were sitting around the other day pondering on our fave mag. We"ve all been readers since the very start and we want to know when *New Computer Express* stops being New and becomes *Relatively Established Computer Express* then eh?

AJ Harris, Kent

Not that old chestnut again. This letter or those of its ilk seem to come around at least once a year. The answer remains the same. The name of the magazine does not refer to the mag itself but to the fact that the information in it is new. Anyway your idea wouldn't fit on the cover!

Write Now

Write and tell Andy Storer what you think! Reach him at: Express Mail, 30 Monmouth Street, Bath BA1 2BW. Sorry, no personal replies, even with an SAE and remember, only SOME letters win a fiver

On-line mail

Own a modem? Then squirt us a letter. *Express* has its own area on Aspects bulletin board (061 792 0260) where you can leave mail and upload/ download files.

We also have our own conference on CIX. Give this on-line service a ring on 081-390 1244 and talk to us direct! You can also leave E-mail for us on Prestel and Micronet @ 011112623, or on Telecom Gold @84:txt152

WANTED!

Your honest opinion of EXPRESS

■ To help us keep improving your favourite magazine, please fill in and return this form

1.How did you buy this issue?
❒ I subscribe
❒ Newsagent delivered it to my home
❒ Asked newsagent to reserve copy
❒ Bought it on planned shop visit
❒ Just happened to see it and liked it

2. Rate *NEW COMPUTER EXPRESS* in terms of value for money:
❒ Excellent! ❒ Good
❒ Reasonable ❒ Poor ❒ Ripoff!

3. Out of ten, how much did this week's cover make you want to look inside?...../10

4. How much does this issue appeal to you overall?...../10

5. How does it compare with previous issues you've seen?
❒ Much better! ❒ Slightly better
❒ About the same standard
❒ Slightly worse ❒ Much worse!

6. Rate out of ten this and any other computer magazines you read regularly:
NEW COMPUTER EXPRESS...../10
...../10
...../10

7. Out of ten, how useful did you find this week's main feature?
...../10

8. What do you like *most* and then *least* about this issue?

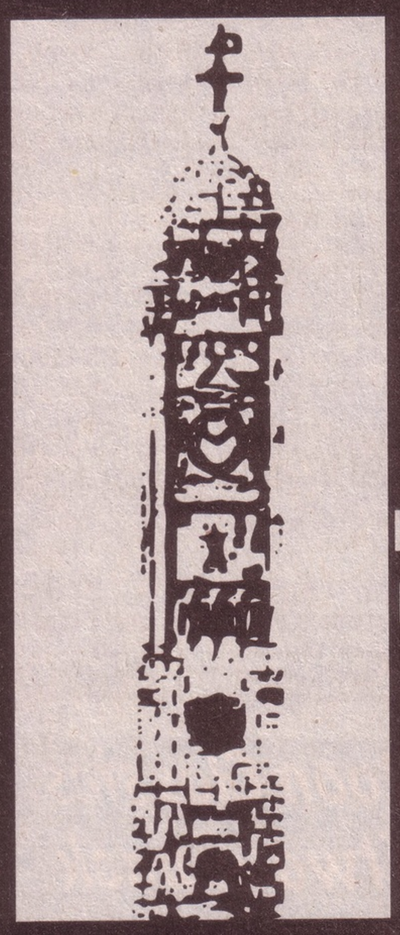
I *most* like .....
.....
.....
.....

And I *least* like .....
.....
.....
.....

Your name and address:*
.....
.....
.....

* Leave blank if you wish – but we may want to send you details of exclusive special offers
● No stamp needed if posted in UK.
Return to: ***NCE*, Issue 153 Survey, Future Publishing, Freepost, Bath, Avon BA1 2XF.**

Clocktower 081 - 341 9023
84a Weston Park, Crouch End,
London, N8 9PP



MACINTOSH
&
APPLE II

ENHANCEMENTS -
HARDWARE - SOFTWARE
NEW AND USED. REPAIR
SERVICE AVAILABLE.
APPLIED ENGINEERING
AUTHORISED
DEALER

- IIGS Products
- Memory
- Drives
- Blueprint
- Toners
- Ribbons
- Accelerators
- Modems
- Monitors
- Printers
- Syquest & cartridges
- TimeOut
- Beagle Bros
- Batteries
- Zip Chips
- Cirtech
- Free Tools Ass.
- Prosel 16 & 8
- Fax Machines
- Paper
- Power Supplies
- Spares
- Deskjet supplies

DJW MICROSYSTEMS
A Division of DJW Enterprises
Psion Communications Specialists

Workbench Screen

Amiga 500's from £309.95
Amiga 1500's from £669.95
Amiga 3000's from £1895.95
Ext. 3.5" Drives from £55.95
Hard Drives from £279.95
Memory Expansions from £24.95
3.5" Blank Disks Just 30p Each!
"Home of the Black Box Graphic System"
"The future's only just begun"

50 Belle Vue Road, Shrewsbury
Shropshire, SY3 7LR. Tel. 0743 244752

ATARI

ST Accessories

SM124 Mono Monitor	£139.00
External 3.5" Disk Drive	£69.00
Golden Image Hand Scanner	£169.00
Forget-Me-Clock II	£19.95
ST Monitor Switch Box	£15.99
STE Stereo scart lead	£12.99
STFM scart lead	£12.99
STE Stereo MKII 8833 lead	£12.99
STFM MKII 8833 lead	£12.99
Joystick/Mouse extension lead	£4.99
Replacement Mouse lead	£3.95
Mouse Mat	£3.50
Squick replacement mouse	£14.99

PROTAR
ST Hard Drives

We are official stockists of the latest in high quality / low price ST hard disk drives from Protar. All Protar hard disk drives come with a full 12 month REPLACEMENT warranty (no lengthy repairs!!), a DMA through port, device number switching and superb disk management software.

★ ST FORMAT GOLD AWARD WINNER ★

★ RATED AS "EXCELLENT" BY ST USER MAGAZINE ★

★ STE COMPATIBLE ★

Progate 20Mb Hard Disk	£279.00
Progate 40Mb Hard Disk	£341.00
Progate 40Mb with Cache	£423.00
Progate 44Mb Removable	£611.00
Progate 60Mb Hard Disk	£437.00
Progate 60Mb Tape Streamer	£581.00
Progate 80Mb Hard Disk	£486.00
Progate 80Mb with Cache	£565.00
Progate 150Mb Tape Streamer	£793.00
Progate 160Mb with Cache	£922.00
Progate 440Mb with Cache	£1588.00

STE Ram Kits

DIY 1 - 512k upgrade	£22.99
DIY 2 - 2mb upgrade	£89.00
DIY 4 - 4mb upgrade	£159.00

All STE Ram Kits come with instructions and DO NOT require soldering in most machines.

COLOUR MONITORS

PROTAR VISTO C14M

* Colour 14 inch monitor
* Stereo speakers
* 600 x 285 pixel resolution
* Improved version of Philips 8833 Mk2
* Green screen switch
* Free with STE, STFM or Amiga lead
* 12 months REPLACEMENT warranty

only £ 239.99

PHILIPS 8833 MK2

Philips 8833 Mk 2 also stocked complete with STE, STFM or Amiga cable and 12 months free on-site warranty.

only £249.99

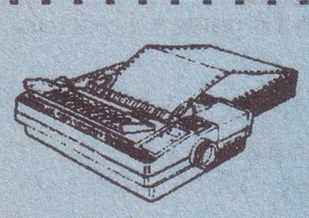
PRINTERS

ACCESSORIES & RIBBONS

All of our printers come with a parallel cable to suit Atari ST, Amiga and all standard PC etc (other cables available at extra cost - ask for details). All printers carry a full 12 months warranty. We only sell genuine UK stock - we do not offer inferior "grey imports". Phone for prices on ribbons and accessories for the printers listed below.

CITIZEN

* 2 YEAR WARRANTY *



COLOUR KIT SPECIAL OFFER! *Our FREE colour kit offer with all Citizen Swift 9, 24 and 24X printers will continue only while stocks last. So hurry and order today to get your FREE colour kit worth nearly £ 40.00.*

PRINTER BUYERS SPECIAL OFFER! *We are offering, to all buyers of Citizen printers, the chance to purchase a CITIZEN PRINTER STARTER PACK. The pack comprises of : 3.5" disk full of printer drivers for the ST, Amiga & PC; 200 sheets of fanfold tractor feed paper; 200 fanfold tractor feed address labels; 5 tractor feed envelopes all for only £12.99 extra.*

Citizen 120D + *(9-pin, 144 cps draft, 30 cps NLQ)*	£139.00
★ Citizen Swift 9 *(9-pin, 192 cps draft, 48 cps NLQ)*	£199.00
Citizen 124D *(24-pin, 144 cps draft, 48 cps LQ)*	£209.00
★ Citizen Swift 24 *(24-pin, 192 cps draft, 64 cps LQ)*	£299.00
★ Citizen Swift 24X *(24-pin, 15" carriage)*	£399.00

** Denotes FREE COLOUR UPGRADE KIT*

Other Printers .... star

Star LC200 Colour *(9-pin, 180 cps draft, 45 cps NLQ)*	£220.00
Star LC24-10 Mono *(24-pin, 180 cps draft, 60 cps LQ)*	£215.00
Star LC24-200 Mono *(24-pin, 200 cps draft, 67 cps LQ)*	£260.00
Star LC24-200 Colour *(24-pin, 200 cps draft, 67 cps LQ)*	£295.00
Canon BJ10E Bubble Jet *(ink jet, portable and compact)*	£289.00
Hewlett Packard DeskJet 500 *(ink jet, 3 pages per minute)*	£399.00

HP PAINTJET

* Colour Inkjet Printer
* upto 180 DPI full colour printing
* Colour & black cartridges supplied
* Friction & tractor feed
* ST, Amiga & PC compatible
* Plain paper + transparency supplied
* Parallel or RS232 interface
* Parallel lead supplied FREE

"EXCELLENT" rating from ST User October 91

£ 785.00 inc VAT

ATARI LYNX

The Atari Lynx is a superb full colour, hand held, games console using plug-in cartridge games. The Lynx can be used with either batteries or a mains power supply unit. All our Lynx machines come with instructions and are availabe with or without mains power supply unit and comlynx cable.

Lynx Console Only	£79.99
Lynx + PSU	£84.99
Lynx + PSU + Comlynx	£89.99
Carrying Case	£14.99
Carrying Pouch	£11.99
Car Power Adaptor	£9.50
Sun Visor/Scratch Shield	£6.99
Mains Power Supply	£14.99
Comlynx Cable	£7.99

GAME CARDS

Chips Challenge	£19.99
Electrocop	£19.99
Gates of Zendocon	£19.99
Klax	£19.99
Miss Pacman	£19.99
Rampage	£19.99
Road Blasters	£19.99
Robo Squash	£19.99
Shanghai	£19.99
Slime World	£19.99
Xenophobe	£19.99
Zarlor Mercenary	£19.99
Gauntlet 3	£23.99
Blue Lightning	£23.99
Rygar	£23.99
Ninja Gaiden ★NEW★	£23.99
War Birds	£23.99
Paperboy	£23.99
California Games	£23.99
Pacland ★NEW★	£23.99
Block Out	£23.99
A. P. B. ★NEW★	£23.99
Ultimate Chess	£27.99

AMIGA

Accessories

Protar 512K ram upgrade + clock	£29.99
A501 512K ram upgrade + clock	£29.99
A500 1.5Mb ram upgrade	£99.99
A590 20Mb hard disk drive	£284.95
External 3.5" Disk Drive	£65.00
Squick replacement mouse	£14.99
Golden Image Hand Scanner	£169.00
Amiga Stereo Scart Lead	£12.99
Amiga 8833 MkII Lead	£12.99
Mouse Mat	£3.50

A501 512K Ram Upgrade with Clock

We are proud to announce that we have further stocks of the genuine Commodore A501 512K Ram Expansion, which we are now offering at the even better, ultra low price of :

NEW LOW PRICE

A501 512K Ram with clock £29.99

PROTAR
Amiga Hard Drives

At last ... high quality hard disk drives for the Amiga A500. The new PROTAR range of A500 hard disks are destined to become THE hard disk drive for the Amiga A500. These high quality hard disks are available in sizes ranging from 20MB to 160MB ... and just look at the specifications ...

* **Perfect fitting to the A500**
* **Colour matched to the A500**
* **5 times faster than the A590**
* **1MB, 2MB, 4MB or 8MB internal ram expansion facility**
* **1 year REPLACEMENT warranty**
* **2 year warranty of Cache versions**
* **Auto parking & auto booting**
* **Ultra low power consumption from A500's own PSU**
* **Sub 24 millisecond access time**
* **Hard disk management software**
* **Seperate PSU available when ram expansion is fitted**
* **High quality – made in Germany**

Protar 20Mb Hard Disk	£279.00
Protar 30Mb Hard Disk	£349.00
Protar 50Mb Hard Disk	£429.00
Protar 50Mb with Cache	£529.00
Protar 60Mb Hard Disk	£542.00
Protar 80Mb Hard Disk	£599.00
Protar 100Mb with Cache	£639.00
Protar 160Mb with Cache	£939.00

Ram expansions for all Amiga Protar hard disk drives :

Protar 1MB internal ram	£58.00
Protar 2MB internal ram	£115.00
Protar 4MB internal ram	£245.00
Protar 8MB internal ram	£490.00
PSU for when ram fitted	£34.00

Cartoon Classics software pack

We have limited stocks of the software pack which comes with the A500 Cartoon Classics. We are offering this excellent pack at the very low price of only £49.99. This is what you get :

* Deluxe Paint 3
* The Simpsons
* Captain Planet
* Lemmings

only **£49.99** inclusive

TELESALES LINES OPEN 10AM TILL 12MIDNIGHT - 7 DAYS A WEEK - 0903 700714

BEST PRICES - AS RECOMMENDED IN THE ST FORMAT BUYERS GUIDE - OCT 91

Evesham Micros ● ALL PRICES INCLUDE VAT & DELIVERY ● Evesham Micros

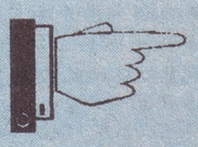
ATARI STE PACKS

ALL ATARI STE PRICES INCLUDE VAT AND UK DELIVERY. ALL PRODUCTS CARRY A FULL 12 MONTH WARRANTY. PLEASE RING US BEFORE ORDERING TO CHECK STOCKS AND CURRENT PRICES.

	512k	1mb	2mb	4mb
ATARI STE STANDARD PACK. consists of the computer with mouse, tv lead, manual and all connecting leads etc. The Standard Pack is supplied with NO software.	£289.00	£319.00	£349.00	£429.00
ATARI STE DISCOVERY A. consists of the Standard Pack and First Basic, ST Tour, NeoChrome and 4 games (Dragons Breath, Super Cycle, Indiana Jones, Anarchy)	£299.00	£329.00	£359.00	£439.00
ATARI STE DISCOVERY B. ✶NEW✶ consists of the Standard Pack and First Basic, ST Tour, NeoChrome and 4 games (Final Flight, Sim City, 9 Lives, Planet of Robot Monsters)	£299.00	£329.00	£359.00	£439.00
ATARI STE TURBO. consists of Standard Pack and STOS, Hyperpaint II, Music Maker II, First Basic and 8 games (Indiana Jones, Dragons Breath, Blood Money, Impossible Mission II, HKM, Anarchy, Outrun and Supercycle).	£309.00	£339.00	£369.00	£449.00
ATARI STE ARCADE. ✶NEW✶ consists of Standard Pack and New Zealand Story, Chase HQ, Arkanoid II, Crazy Cars, Operation Wolf, Super Hang On, Super Cars, Skidz, Switchblade and Axels Magic Hammer.	£309.00	£339.00	£369.00	£449.00
ATARI STE TENSTAR. consists of Standard Pack and Asterix, Chess Player 2150, Drivin Force, Live + Let Die, Onslaught, Pipemania, Rick Dangerous, Rock n Roll, Skweek and Trivial Pursuit II.	£309.00	£339.00	£369.00	£449.00
ATARI STE KUMA BUSINESS. consists of Standard Pack and word processor K-Word 2 (incl. K-Spell Checker), K-Data database, K-Spreadsheet, K-Graph business graphics and Metacomco Basic Language.	£319.00	£349.00	£379.00	£459.00
ATARI STE CURRICULUM. consists of Standard Pack and also 3 levels of educational software (from 5 yrs to 50 yrs !!!), a word processor, a spreadsheet, a database, HyperPaint and Music Maker II software.	✕ N/A	£369.00	£399.00	£479.00

AMIGA PACKS

ALL AMIGA PRICES INCLUDE VAT AND UK DELIVERY. ALL PRODUCTS ARE UK STOCK AND CARRY A FULL 12 MONTH COMMODORE WARRANTY. PLEASE RING US BEFORE ORDERING TO CHECK STOCKS AND CURRENT PRICES.



ALL OF OUR 1MB A500 PACKS NOW COME WITH THE GENUINE COMMODORE A501 RAM EXPANSION WITH BUILT IN CLOCK.

AMIGA A500 BASE A500 computer, mouse, tv modulator, manuals, Workbench software, all connecting leads etc. The A500 Base Packs are supplied 'bare' with no games software. **£299.00**

AMIGA A500 BASE 1MB A500 computer supplied with genuine Commodore A501 512K ram expansion, mouse, tv modulator, manuals, Workbench software, etc supplied 'bare' with no games software. **£325.00**

AMIGA A500 ASTRA A500 512k computer, mouse, tv modulator, manuals, Workbench, etc supplied with 10 great software titles (see A500 1MB ASTRA pack below for details) **£325.00**

AMIGA A500 1MB ASTRA Amiga A500 computer, A501 512K Ram expansion with clock and battery back-up, mouse, tv modulator, manuals, Workbench etc disks, plus the ASTRA 10 games pack including the following games : Datastorm, Dungeon Quest, E Motion, Grand Monster Slam, Kid Gloves, Powerplay, RVF Honda, Shuffle Puck Cafe, Soccer and Tower of Babel **£350.00**

AMIGA A500 1MB CARTOON CLASSICS Amiga A500 computer, A501 512K Ram expansion with clock and battery back-up, mouse, tv modulator, manuals, Workbench etc disks, plus the following top selling software titles : Lemmings, The Simpsons, Captain Planet and Deluxe Paint 3 **£359.00**

AMIGA A1500 BASE A1500 computer with 1MB ram, detachable keyboard, 2 x 3.5" 880k disk drives built in, mouse and all manuals. The Amiga A1500 accepts A2000 peripherals. The A1500 base pack is supplied with no software. Please note that the A1500 does NOT have a modulator. **£599.00**

AMIGA A1500 SOFTWARE consists of A1500 base pack and and the following software : Platinum Works, Deluxe Paint Version 3, Populous, Simm City, Battle Chess, Their Finest Hour (Battle of Britain) and 2 books **£655.00**

IF YOU WISH TO ORDER WITH US, THEN PLEASE SEND YOUR CHEQUES, BANKERS DRAFTS, POSTAL ORDERS, CASH ETC TO OUR MAIL ORDER ADDRESS (PLEASE MAKE CHEQUES PAYABLE TO BEST PRICES) OR RING OUR **MAIL ORDER HOTLINE (NOT AN ANSWERPHONE)** ANY TIME BETWEEN 10.00AM AND 12 MIDNIGHT, 7 DAYS A WEEK, AND USE YOUR ACCESS OR VISA CARDS. OR ALTERNATIVELY PAY A VISIT TO OUR SHOP, CHIPS COMPUTER CENTRE, AND SEE OUR WIDE RANGE OF COMPUTER GOODS AND SOFTWARE.

VISIT OUR SHOWROOM

CHIPS COMPUTER CENTRE, 53 RUGBY ROAD, WORTHING, WEST SUSSEX. BN11 5NB.

TEL : (0903) 700804.

OPENING : MON TO FRI 10AM TO 6PM. SAT 9.30AM TO 5.30PM
FINANCE / CREDIT FACILITIES (SHOP ONLY).
PART EXCHANGE CONSIDERED (SHOP ONLY).
NEW AND USED ST, AMIGA & PC EQUIPMENT ON DISPLAY
ALL TYPES OF SOFTWARE (BUSINESS / LESUIRE / EDUCATIONAL).
REPAIRS UNDERTAKEN. TRAINING. INSTALLATION. ON-SITE WARRANTIES.

VISA

Access

MAIL ORDER ONLY

BEST PRICES (DEPT NCE), 53 RUGBY ROAD, WORTHING, WEST SUSSEX. BN11 5NB.

TEL : (0903) 700714.

OPENING : 7 DAYS A WEEK 10AM TO 12 MIDNIGHT
ALL PRICES INCLUDE 17.5% VAT AND FREE DELIVERY (AVERAGE 4 – 5 DAYS).
PLEASE ADD £7.00 FOR NEXT WEEKDAY DELIVERY.
GOODS USUALLY SENT OUT THE SAME DAY WHEN
CLEARED PAYMENT IS RECEIVED BEFORE 2PM.
PERSONAL CHEQUES REQUIRE 7 DAY CLEARANCE.

All prices include 17.5% VAT and free UK delivery unless stated otherwise. All prices / specifications / special offers subject to change without notice.

BEST PRICES MAIL ORDER - OUR TELESALES LINES ARE OPEN FROM 10.00AM TILL 12 MIDNIGHT - 7 DAYS A WEEK !!!

MACHINE SPECIFICS

MACINTOSH

- **The latest Mac concept to hit the streets, Applepoint**
- **Input with the MacWriter in a multitude of languages**
- **Apple to develop System Extension to replace *ATM*?**

APPLETALK

Apple UK has announced that it is about to open the UK's first 'Applepoint' shop, in conjuction with Thames Valley Systems, an existing Macintosh dealer.

Although this will be the first Applepoint shop in Britain, there are already about 12 in Scandinavia, where the concept originated.

According to TVS' managing director, Martin Stead, Applepoint's aim is to allow customers to walk into a shop and walk out with a Mac tucked under their arm. And he says that the shop won't just be stocking Macs, but will be carrying just about everything from Macs through software and even Apple sweatshirts.

The Applepoint concept answers the critics of the AppleCentre system, who say that it is almost impossible for a home user to buy a Macintosh without difficulty.

Many AppleCentres are only open on weekdays (so no Saturday shopping), and when you do find one they are often full of corporate customers. Apple's director of channel development, Chris Calvert says that he looks forward to other high street Applepoint shops appearing over the next year.

Whether this means that Apple's plans to allows high-street retailers such as Dixons or Tandy to sell Macs, or whether it means that if such shops do sell Macs they will have 'stores within stores' remains to be seen. Whatever, the Applepoint concept has to be good news for the private customer.

ATM BUNDLE?

Following from the signing of a letter of agreement between Apple and Adobe that the latter's PostScript Type 1 font rendering technology will be implemented in a future release of System 7, speculation has been rising that Adobe's *ATM* (*Adobe Type Manager*) may very well be bundled with Macs until Apple actually manages to build the rendering software into the System.

However, the grapevine is suggesting that, rather than bundling *ATM* (which would mean a drop in revenue for Adobe, for whom *ATM* is still selling well), Apple System developers are busy working on a stopgap System Extension which would add basic Type 1 font support to the Macintosh without the full sophistication of *ATM*.

It is likely that the extension will only work with System 7 – users who, for whatever reason, decide to stick with System 6 will still have to buy the commercial version of *ATM*.

Indeed, it is likely that Apple will do nothing more with System 6 whatever – the company's philosophy is that System

POSTCARD FROM AMERICA

One of the great things about any Macworld Expo are the little booths showing fun technology. Sometimes it may be outrageous hardware, and other times some chip-shaking software.

Delta Tao was showing its painting utility, *Monet*, at the SuperMac booth. This is one of the first programs which requires the use of System 7. It lets users create impressionistic-looking colour pictures based on a separate reference picture that they've created or scanned. The results are not recognizable as "computer art" and have a remarkable spontaneous quality. *Monet* remembers every change and "brush stroke" applied to the picture, and can replay them in order. It's an instant animation festival on your desktop.

Chuck Colby, boss of Colby Systems, always shows the most imaginative combinations of Mac-based hardware technology. The Colby Nav3000 is the perfect Macintosh for the gadget hound, or spy in the family.

It's a pile of equipment that works with Colby's ClassMate notebook, which is based on the Mac Classic. The Nav3000 can include a superfast cellular modem, a video modem that sends still video frames every 10-seconds, and a Global Positioning Satellite receiver. This incredible device can fix your location within 50 feet anywhere in the world.

The same technology was used on the battlefield in Deto your belt. The screen of choice is the Private Eye display, that fits around your head, and creates a "heads-up" image in front of your eyes. Just look out for the digital, and mundane potholes in the road!

David Morgenstern

FEED YOUR ST!

HCS Computer Peripheral Supplies

2 year guarantee on memory!
14 day money back guarantee!

MEMORY UPGRADES

Access VISA

HCS STE MEMORY UPGRADE KITS

STE kits come as either SIMM or SIP type modules. SIMM modules have edge connectors, SIP have pins. All types plug into 4 sockets under the top of the case. SIMM are the most common and are supplied by default, these will be swapped if necessary. Trade in is paid as a refund after you have upgraded your computer. All kits come C/W illustrated Instructions. 2+4 Mb come C/W FREE multitasking software.

STE KITS	NORMAL PRICE	WITH 512K TRADE IN	WITH 1024K TRADE IN
512K TO 1024K	£22.00	-	-
2 MEGABYTE	£80.00	£70.00	£60.00
4 MEGABYTE	£150.00	£140.00	£130.00

STF(M) MEMORY UPGRADE KITS

There are two basic types of upgrade. The low cost solder-in type which comes complete with sockets, capacitors, resistors and instructions, or, the much easier to install Xtraram Deluxe Kit which fits inside the computer to allow upgrading to 4Mb using simms like the STE uses.

Solder-in upgrade Kit to 1Mb.....£30.00

Xtraram *Deluxe* Quality SIMM UPGRADING SYSTEM
Populated to ½ Mb £65.00
Populated to 2Mb.....☞ £110.00
Populated to 4Mb.....☞ £159.00
Fitting for above (exclusive of post).....£20.00

CHIPS

16 x 256K x 1 Dram Chips.....£24.00
16 x 1Mb x1 Dram Chips £70.00

PC EMULATORS

PC Emulators sit on top of the microprocessor of the ST. When in use, they take over control of the processor. This allows Speed and a high degree of compatibility. PC Speed runs 4 times faster than a PC. The AT Speed 8.3 times. The AT Speed co-processor socket allows the extra chip to accelerate numerical calculations 5000% (five thousand!)

AT SPEED SUPPLIED.....£220.00 FITTED £245.00
PC SPEED SUPPLIED.....£90.00 FITTED £120.00
AT SPEED STE ADAPTOR SUPPLIED £25.00

MACINTOSH EMULATORS

Spectre GCR allows the ST to emulate the MAC using the ST's own processor (as used in the Macintosh). It simply plugs into the cartridge slot and the disk drive port. (It also has a through port to allow a second drive). It will run up to system 6. The version supplied will be the most up to date, supplied by GADGETS.

SPECTRE GCR SUPPLIED £250.00
128K ROMS SUPPLIED £70.00

DISK DRIVES

The double sided disk drive kit replaces the internal single sided drive in the STFM. The PROTAR hard drives supplied are of the highest quality and are ST Format GOLD winners of 1991.

DOUBLE SIDED DISK DRIVE UPGRADE £47.00
40MB PROTAR HARD DRIVE £335.00
80MB PROTAR HARD DRIVE £485.00

HOW TO ORDER

PRICES INCLUDE VAT

Telephone orders and enquiries welcome on Tel/Fax 081 777 0751. Please make cheques/P.O's payable to:
Dept N154, HCS, 35 HARTLAND WAY, SHIRLEY, CROYDON CRO 8RJ
Goods normally despatched within 2 days of receipt. Trade-in paid as a refund E &OE

7 is the way to go, and that System 6 is now outdated, and shouldn't be used except in special cases.

PEN INPUT

Apple Computer in Japan is about to launch the MacHandwriter, a pen-based input device for the Mac. According to the company, users can input a variety of languages directly to the Macintosh using a stylus.

Apple Pacific's director of marketing, Satjiv Chahil, told on-line service NewsBytes that the MacHandwriter is "a lot easier to use than a keyboard" because of the complexity of the Japanese language.

He added that because the MacHandwriter is not application-specific, it would have the advantage of working with every Mac application available in Japan.

Although the MacHandwriter was developed by a Californian company, Communication Intelligence Corporation, there are no immediate plans to release it in the US. However, Chahil said that Apple Pacific is "looking to Canada and Australia next."

SYSTEM 7 DISK UTILITIES

Symantec Corp in the USA has released Symantec Utilities for the Macintosh (SUM) version 2.1, which is System 7-compatible.

SUM has been a popular set of disk utilities for a long time , although it was overtaken slightly by the release of Norton Utilities for the Macintosh late last year. (Symantec has since then taken over Norton Computing, so it now manufactures both of these packages.)

SUM II v2.1 has all the old favourites – *Disk Clinic*, *Recover*, *Shield*, *Tune Up*, *Backup* and so on.

However, although SUM Tools is included, it is not yet compatible with System 7.0. The company says that it will make SUM Tools System 7-compatible in a later release; for now, it is only compatible with System 6.0 and below.

Because System 7.0 uses disks slightly differently to previous Systems (for a start, the Desktop file is configured differently), none of the major disk repair and recovery programs released before System 7.0 worked properly with the new System.

This situation is now (partly) remedied with SUM II v2.1, although it would be rather nice to see Symantec actually release an upgraded version of Norton Utilities for the Macintosh – the package of choice for many Mac users everywhere because of its ease of use and extreme power.

A new version of the package has recently been announced, but as yet there has been no sign of it, not even on the distant horizon.

As soon as we know any different, we'll let you know. Until then, you can get more information from Symantec in this country on 0628 776343.

Ian Wrigley

CPC

- **Watch out disk prices could be set to rocket!**
- **Ocean's latest film blockbuster: *Terminator* is back**
- **Ubi Soft bringing sweet music to our ears**

DISKS DEMISE?

Last week's *Express* news, that Amstrad is ceasing the manufacture of 3-inch disks, is a bit of a poke in the eye for 6128 owners – especially people who've gone out and bought a 6128 Plus!

Mind you, I'm sure the situation's not as bad as it seems. Even though there may be no more disks clattering off the production line, the supply to users isn't going to dry up overnight. There must be countless thousands of the things in circulation around the trade and stockpiled in warehouses. And when supplies of Amsoft disks do start to dry up, it's only going to be a question of time before some other 3-inch disk maker sees a demand there waiting to be tapped.

The biggest worry is going to be the effect on prices. Rumours and scare stories will be flying round the trade by now, and people are going to be putting their prices up left, right and centre. You'll probably notice this with mail order advertisers first, but will it be long before the software houses start putting up the price of games?

Whether they do or not will possibly depend on how much profit they make out of disk sales already. Most games cost about £5 more on disk than they do on tape, even though the medium itself costs a fraction of that. It's all a bit cheeky, if you ask me.

At the end of the day, it may be the 464 owners who have the last laugh. All these years the pundits have been predicting the phasing out of the tape-based machines, but it could be that they'll soon be the only ones you can buy (or afford!) software for.

Someone tell me I'm wrong!

TERMINATOR 2

Ocean has really made film licences its speciality. The latest epic to appear on the CPC is the runaway box-office success *Terminator 2*. This film has done a darned sight better than *Darkman* (I reviewed the game-of-the-film last time) so will the game be better?

OK... load the thing up... first level... wow! You're in combat with the

Continued on page 29 ➤

TECHNOMANIA

Commodore Amiga Cartoon Classics Pack

3 Great Games
Lemmings (Psygnosis' Smash Hit)
The Simpsons versus the Space Mutants
Captain Planet and the Planeteers

Also Deluxe Paint III (Electronic Arts Superb Art Package) and Commodore's A501 512K Ram Expansion

£359.99

Commodore Amiga 1500

1 Megabyte of memory, two 3.5" disk drives and the following software:
Toki, ELF, Puzznic, Home Accounts and The Works (Integrated word processor, spreadsheet and database)

£659.99

With Philips CM8833 Mk2 Colour Monitor

£889.99

MONITORS

Commodore 1084S £259.99
Philips CM8833 Mk2 (inc. cable, free copy of F19 and one year on site maintenance) £244.99

PRINTERS.

(all printers include cable)

Citizen 120D+ £134.99
Citizen 124D £194.99
Citizen Swift 9 .....£194.99
Citizen Swift 24 .....£284.99
Optional Colour Kit for Swift printers £34.99

Seikosha SP1900AI (9 pin Dot Matrix) ..£124.99

Canon BJ10E £264.99

Star LC20 .....£154.99
Star LC200 colour £229.99
Star LC24-200 mono £259.99
Star LC24-200 colour £299.99

ACCESSORIES

Cumana CAX354 External Disk Drive £59.99

512K memory upgrade with clock £31.99

Squick Replacement Mouse £14.99
Naksha Mouse with Operation Stealth £26.99
Golden Image Optical Mouse £36.99

Commodore A590 20Mb Hard Drive £289.99

Dataflyer 500 fitted with 52Mb Hard Drive £329.99
Please phone for pricing of 105Mb, 210Mb and 420Mb hard drives.

VXL030 25MHz Accelerator Board for Amiga 500, 1500 & 2000 .....£259.99
VXL030 40MHz Accelerator Board for Amiga...POA
Maths-Processor (FPU) upgrades and up to 8Mb of 32 bit memory also available for VXL030.

KCS PC Emulator £224.99

Many other products available. Please phone for a price on your specific requirement.

All prices include 17.5% VAT and Next Day Delivery on hardware

Access VISA

TECHNOMANIA,
13 WELLBURN STREET
DUNDEE, TAYSIDE DD2 2RR.
PHONE: 0382 22323 FAX: 0382 400444

Please allow five working days for cheque clearance. Prices are subject to change without prior notice. Orders received by 3pm despatched same day.

EEC LTD.

QL & SPECTRUM PRICES REDUCED

***QL £85 SPECTRUM +2 £90 SP+3 £95**

MICRODRIVE EXPANSION KIT

Includes microdrive & interface 1, booklet, introduction cartridge & flex connector £59.95
As above with extra microdrive £69.95
NEW MICRODRIVES ..... £24.95 - 2 FOR £40 (WITH CONNECTOR)

★MICRODRIVE CARTRIDGES★

4 new cartridges £12.00
Box of 20 ..... £55.00
10 new program cartridges £18.00

POWER SUPPLIES ..... 48/128K £8.95, PLUS 2 & 3 £24.95

OUR PRICES NOW INCLUDE 17½% VAT - AND HAVE BEEN REDUCED!

★80Col PRINTER CENTRONICS PRINTER★

SEIKOSHA SP1900

Heavy duty printer, Centronics £120.00
190 cps. 40 cps NLQ Epson & IBM compatible
QL & Spectrum Interface for the above £24.00
OTHER PRINTERS AVAILABLE PHONE FOR DETAILS

★'UNIVERSAL' 3.5" DISC DRIVE FOR MOST MICROS★

1Mb and 2Mb 3.5" cased, complete with built-in PSU, mains switch & 13 amp plug. EXTERNAL dip switches adapt drive for Spectrum, QL, PC, Atari, Amiga etc. Comes with full instruction book, plastic cover and free DS/DD disk.
(Spectrum & QL need I/Face) - Disc Drive 1Mb £75 2Mb £85
- Lead for above £12.00
Bare 3.5" 1Mb d/drives Epson Low Profile £39.00

UK delivery: Please add £9 for PRINTERS etc. Other items £3
Outside UK add £15. Other items £5. C.W.O. OR VISA/ACCESS
INT. 1 and Spectrums may be reconditioned
ALL OFFERS SUBJECT TO AVAILABILITY - ORDERS TO:
EEC LTD 18-21 MISBOURNE HOUSE, CHILTERN HILL
CHALFONT ST PETER, BUCKS SL9 9UE

FAX: 0753 887149
TEL: 0753 888866

THE source for MODEMS

£69- for 2400 bps
(for limited period)

Our competitors come and go, but we still offer the best service, support and prices in the country. With every modem you get ***free high quality software, extensive pre sales advice and unlimited after sales support****. Our low cost modems have a 1 year replacement warranty, with a manufacturers 5 year warranty to back that up too!*

We offer consultancy services too, and can advise on every aspect of data communications. Why not call us today to discuss your needs.

All modems are fully Hayes compatible with 300, 1200 & 2400, (V.21, V.22 & V.22bis), NVR, Tone & Pulse dial, AA & AD and include a loudspeaker. For Cix, Prestel, BBS's, CompuServe, GreenNet.

2400 bps Int	£69.00
2400 bps Ext	£149.00
2400 bps Int MNP5	£129.00
2400 bps Ext MNP5	£169.00
QUAD Ext MNP5	£179.00
Comfax 3 9600 Grp 3 fax	£199.00

Personics are main suppliers for the **Amber Logic Mistral** range of modems. Fully approved, highly featured, fabulous modems from V.21to V.32bis (14400 bps!)- call for details.

EASIFLOW *fan noise reducer* **£39.00** - free carriage.

Tel: 0252 311332
Fax: 0252 311660

PERSONICS Unit 6 Orchard Road Farnham Surrey GU9 9LH

FREE CATALOGUE and information pack - call, write or fax any time

Carriage (Overnight delivery) and VAT extra.
VISA, ACCESS welcome

Price Buster READ THIS! Fast 7 day delivery

FULL PRICE	AMIGA	ST
3D Construction Kit	32.99	25.99
Bards Tale III	17.50	N/A
Castlemaster	19.99	19.99
Cruise for a Corpse	21.50	21.50
F-15 Strike Eagle II	24.99	24.99
Golden Axe	16.99	16.99
Gremlins II	19.99	19.99
Hard Drivin 2	17.50	17.50
Hydra	19.99	19.99
J. White's Whirlwind Snkr	21.99	21.99
Magnetic Scrolls	24.99	24.99
Monkey Island	19.99	19.99
Nam	24.99	24.99
Prince of Persia	17.50	17.50
RBI 2 Baseball	19.99	19.99
Realms	24.99	24.99
Robin Smith's Int. Cricket	16.99	16.99
Rolling Ronny	19.99	19.99
Rugby - The World Cup	19.99	19.99
Scrabble De Luxe	13.99	13.99
Skull & Crossbones	19.99	19.99
Smash TV	16.99	16.99
Spot	13.50	N/A
Supremacy	24.99	24.99
Terminator 2	16.50	16.50
The Simpsons	16.99	16.99
Thunderhawks	21.50	21.50
Thunderjaws	19.99	19.99
Trivial Pursuit	13.99	13.99
Viz	13.99	13.99
Wild Wheels	16.50	16.50
Wonderland	21.50	21.50

BUDGET	Amiga	ST
Advanced Fruit Machine	6.99	6.99
Afterburner	7.49	7.49
Altered Beast	7.49	7.49
Arcade Trivia	7.99	7.99
Arkanoid II	7.49	7.49
ATF 2	New 9.99	9.99
Axels Magic Hammer	7.99	7.99
Barbarian II	7.99	7.99
Barbarian	7.99	7.99
Batman & The Caped Crusader	7.49	7.49
Batman The Movie	New 7.49	7.49
Bionic Commando	7.99	7.99
Blasteroids	7.99	7.99
Blazing Thunder	7.99	7.99
Bubble Bobble	New 7.49	7.49
Burgerman	6.99	6.99
California Games	7.99	7.99
CJ's Elephant Antics	6.99	6.99
Continental Circus	7.99	7.99
Crazy Cars	7.49	7.49
Cyberball	7.99	7.99
Daley Thompson's Olympic Challenge	7.49	7.49
Defenders of the Earth	7.99	7.99
Double Dragon	7.99	7.99
Dragon Spirits	7.99	7.99
Dragon Ninja	New 7.49	7.49
Driller	7.99	7.99
Dungeons Amethysts Alchemists	6.99	6.99
Fantasy World Dizzy	7.99	7.99
Fast Food	6.99	6.99
First Division Manager	New 7.99	7.99
Forgotten Worlds	7.99	7.99
Future Bike Simulator	7.99	7.99
Gauntlet II	7.99	7.99
Gemini Wing	7.99	7.99
Ghostbusters II	7.49	7.49
Guardian Angel	6.99	6.99
Hard Drivin	7.99	7.99
Head Over Heels	7.49	7.49
Heroes of the Lance	7.99	7.99
Hong Kong Phooey	7.99	7.99
Hot Shot	7.99	7.99
IK+	7.49	7.49
Indiana Jones & Last Crusade	7.99	7.99
Interchange	7.99	7.99
Iron Lord	New 9.99	9.99
Jungle Boy	6.99	6.99
Kamikaze	7.99	7.99
Kenny Dalglish Soccer Manager	7.99	7.99
Klax	7.99	7.99
Kult	7.99	7.99
Last Ninja 2	7.49	7.49
League Challenge	6.99	6.99
Licence to kill	7.99	7.99
Little Puff	6.99	6.99
Mean Machine	7.99	7.99
Miami Chase	7.99	N/A
Mig 29 Soviet Fighter	6.99	6.99
Moonwalker	7.99	7.99
North & South	7.99	7.99
Operation Wolf	7.49	7.49
Outrun	7.99	7.99
Platoon	7.49	7.49
Power Drift	7.49	7.49
Pro Boxing	7.99	7.99
Pub Trivia	4.99	4.99
R-Type	7.49	7.49
Radio Controlled Racer	6.99	6.99
Road Blasters	7.99	7.99
Rolling Thunder	7.99	N/A
Ruff & Reddy	7.99	7.99
Scooby Doo & Scrappy Doo	7.99	7.99
Sharkeys Moll	7.99	7.99
Sherman M4	7.99	7.99
Shinobi	7.99	7.99
Shufflepuck Cafe	7.99	7.99
Silkworm	7.99	7.99
Sky High Stuntman	New 7.99	7.99
Spellfire & Sorceror	6.99	6.99
Stack Up	7.99	7.99
Street Fighter	7.99	7.99
Super Scramble	7.99	7.99
Super Grand Prix	6.99	6.99
Super Hang On	7.49	7.49
Switchblade	7.99	7.99
Tennis Cup	7.99	7.99
The Games - Summer Edition	7.99	7.99
The Sword & The Rose	6.99	6.99
Thunderblade	7.99	7.99
Tiger Road	7.99	7.99
Tilt	New 7.99	7.99
Tin Tin	New 9.99	9.99
Top Cat	7.99	7.99
Treasure Island Dizzy	4.99	4.99
Turbo Outrun	7.99	7.99
Turrican	7.99	7.99
Typhoon Thompson	7.99	7.99
Ultimate Darts	7.99	7.99
Vigilante	7.99	7.99
Violator	7.99	7.99
Wacky Racers	7.99	7.99
Wacky Darts	6.99	6.99
Wings of Fury	7.99	7.99
Wizball	7.49	7.49
World Class Leaderboard	7.99	7.99
Xenon	7.99	7.99
Xybots	7.99	7.99
Yogi & The Greed Monster	7.99	7.99
Yogi's Great Escape	7.99	7.99

COMPILATIONS

POWER UP
Altered Beast, Turrican, Chase H.Q., X-Out, Rainbow Islands. **£21.50**

VIRTUAL WORLDS
Castle Master, Driller, Total Eclipse, The Crypt **£19.99**

HANNAH BARBERA CARTOONS
Yogi's Great Escape, Hong Kong Phooey, Top Cat, Ruff & Reddy. **£15.99**

SOCCER MANIA
Microprose Soccer, Football Manager 2, Gazza's Super Soccer + Football Manager **£16.99**

HOLLYWOOD COLLECTION
Robocop, Batman The Movie, Indiana Jones & The Last Crusade, Ghostbusters 2 **£21.50**

GRANDSTAND
Gazzas Super Soccer, Pro Tennis Tour, World Class Leader Board, Continental Circus. **£19.99**

QUATTRO ARCADE
Pro Powerboat, Nitroboost, SAS Combat, Pub Trivia **£7.50**

QUATTRO SPORTS
BMX, Italia 1990, Advanced Ski, Pro Tennis **£7.50**

SPORTING WINNERS
Daily Double Horse Racing, Steve Davis Snooker & Brian Cloughs Football Fortunes **£16.99**

CALL US ON 24 HOUR CREDIT CARD HOTLINE
Access MasterCard VISA
021 440 4108
Please state name, card number, expiry date & goods required

Expiry Date _____
Number _____
Signature _____
Date _____

ORDER FORM AND INFORMATION. All orders sent FIRST CLASS subject to availability. Just fill in the coupon and send it to: PRICEBUSTER Unit 23, 14/20 George Street, Birmingham B12 9RG

BLOCK CAPITALS

Name: .....

Address: .....

.....

.....

Postcode: ..... **Tel. No:** .....

Name of game	Computer	Value
	Postage	
	Total	

POSTAGE RATES: Please add 50p p&p on all orders under £5.00. EEC countries add £1.00 per item. Non EEC countries add £2.50 per item. Cheques payable to: Price Buster

dreaded T-1000 (it helps if you've seen the film...) in a shopping mall, and the first thing you notice – and carry on noticing – is the size of the sprites, their detail and the animation. It really is excellent. In fact, you can't wait to see the rest of the level... only there isn't one. It's a one-screen level, and, good though it is, you can't help feeling it's a bit thin.

Never mind, defeat the T-1000 and you go to Level Two, which is quite different. In this one you're riding a motorcycle with John on the back, with the T-1000 (driving a truck) in close pursuit. There are lots of obstacles and hazards in the road, but you can't afford to ride too carefully, or you'll end up underneath the wheels of the truck. This is more like it...

Level Three's another combat sequence. This time you're squaring up to the T-1000 in a mental hospital. And this time he's tougher.

Level Four is another seen-from-above vertical scroller, where you're driving down a freeway trying to avoid the T-1000, which is barrelling after you in a helicopter.

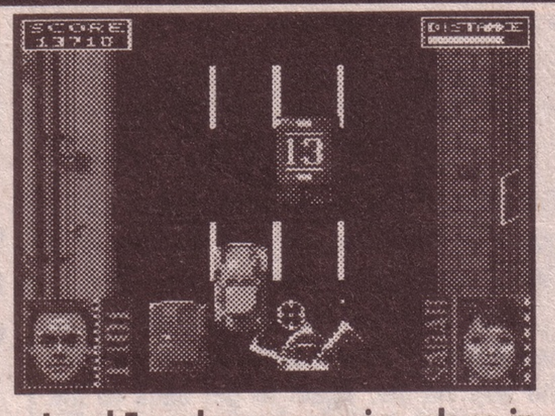
The final level is yet another of those fight sequences – you're meeting the T-1000 for a showdown in a steel mill.

Terminator 2 is yet another polished Ocean licence. Polished, yes. Inspired, no. The combat sequences look spectacularly good, until you realise how thin they are. The other levels are good and very playable though (if hard).

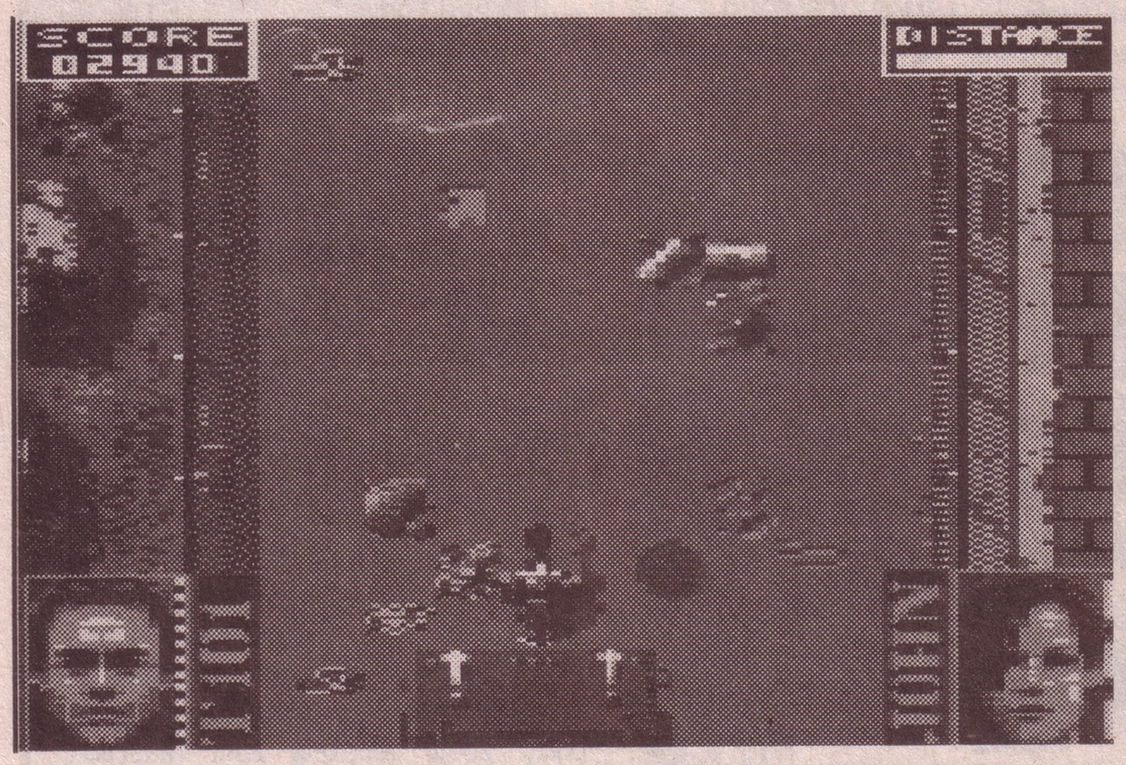
If you're an Arnie fan, and really into beat-em-ups, buy it. If you're not, save up your loot (£10.99 cassette, £15.99 disk) for one of the other Christmas treats on their way from the software houses.



● Yike! Terminator stabs you with a spiky finger.. it's only Level One!



• Level Four has you racing along in hot pursuit in a helicopter



● Level Two's an arcade-style sequence section. That's you on the bike, about to be mashed by the T-1000's juggernaut...

SPRING EQUINOX?

Well, you probably won't have to wait that long, actually. And no, we're not talking about the Vernal Equinox (see, I know these words). We are in fact talking about a new music package from French software house Ubi Soft.

New serious software from the big names is in very short supply these days (well, OK, there isn't any), so this new program from Ubi Soft is very exciting indeed.

Don't get too excited yet, though, since distribution deals have still to be arranged in the UK. Indeed, the product's not likely to be available in the shops at all, only via mail order. At the moment I'm looking at the program for Ubi Soft so that the company can make the decision whether to go ahead in the UK. I'll let you know the result...

GETTING SERIOUS

SD Microsystems is gearing up for Christmas with one whole new line and an interesting new software package.

The new line is, in fact, the supply of 3.5-inch disks! The mechanisms themselves are TEAK units which fit into a casing a tiny 1-inch thick.

SD will be supplying the drives complete with all the stuff you need to get up and running, together with five disks and special high-density software which will allow you to store 396K on each side of a disk. You can switch disk sides with both hardware and software controls.

The price will be £79.95 plus delivery. You can either have the drives

MEMOREX COMPUTER SUPPLIES

Each Memorex product is subjected to the toughest quality control procedures in the industry. Every diskette is guaranteed to be 100% error free at the highest clipping levels. Exceeding all ANSI standards.
All disks include labels and envelopes.

MEMOREX BRANDED DISKETTES	1 Box 10	10+
3.5" DS DD 720K	£7.80	£7.40
3.5" DS HD 1.44Mb	£12.80	£11.90
5.25" DS DD 500K	£4.90	£4.60
5.25" DS QD 1Mb	£5.80	£5.50
5.25" DS HD 1.2Mb	£7.80	£7.40
MEMOREX BRANDED COLOURED (Yellow, blue, orange, red, green) 2 of each colour per box		
3.5" DS DD 720K	£8.90	£8.10
5.25" DS DD 500K	£6.80	£6.20

PLAIN LABEL DISKETTES	1 Box 10	10+
3.5" DS DD 720K	£4.50	£4.20
3.5" DS HD 1.44Mb	£6.60	£6.10
5.25" DS DD 500K	£3.80	£3.40
5.25" DS QD 1Mb	£4.10	£3.70
5.25" DS HD 1.2Mb	£5.20	£4.70
PLAIN LABEL COLOURED (Yellow, orange, red, green, white) 2 of each colour per box		
3.5" DS DD 720K	£5.70	£5.40
5.25" DS DD 500K	£5.00	£4.80

BULK DISKETTES	25	100	250	500
3.5" DS DD 720K	£9.25	£34.00	£82.50	£160.00
3.5" DS HD 1.44Mb	£15.00	£57.00	£140.00	£275.00
5.25" DS DD 500K	£6.25	£24.00	£57.50	£110.00
5.25" DS QD 1Mb	£6.75	£26.00	£62.50	£120.00
5.25" DS HD 1.2Mb	£10.25	£39.00	£95.00	£185.00
BULK COLOURED (Yellow, orange, red, green, white, black, grey)				
3.5" DS DD 720K	£11.25	£44.00	£107.50	£205.00
5.25" DS DD 500K	£8.50	£30.00	£72.50	£140.00

PRINTER RIBBONS

AMSTRAD	2	6	12
8256/8512/LQ3500MS	£4.10	£3.85	£3.50
8526/8512/LQ3500FA	£4.10	£3.85	£3.50
DMP2000/3000	£3.50	£3.20	£3.00
DMP3160/3250	£3.50	£3.20	£3.00
DMP4000	£4.50	£4.20	£3.90
LQ5000DI	£5.50	£4.70	£4.40
PCW9512MS	£3.50	£3.20	£3.00
BROTHER			
HR5	£3.30	£3.00	£2.80
HR15/20/25/35/40MS	£3.30	£3.00	£2.80
HR15/20/25/35/40FA	£3.50	£3.10	£2.90
M1009/1109/1209/1224	£3.50	£3.20	£3.00
M1409	£4.50	£4.20	£3.60
M1509/1709	£5.40	£5.00	£4.70
M1724	£4.70	£4.40	£4.20
CITIZEN			
120D/180E/LSP10/100	£3.20	£2.90	£2.80
HQP40	£3.30	£3.00	£2.80
HQP40 colour	£23.00	£21.00	£20.80
HQP45	£4.90	£4.50	£4.30
MSP10E/40/50	£2.70	£2.50	£2.30
MSP10E/40/508/R	£2.70	£2.50	£2.30
MSP15E/25/45/55	£3.50	£3.20	£3.00
Premiere 35MS	£2.50	£2.30	£2.10
Premiere 35FA	£2.80	£2.50	£2.30
Swift 24	£3.30	£3.00	£2.80
Swift 24 colour	£18.30	£17.00	£15.90

EPSON	2	6	12
EX800/EX1000	£3.60	£3.30	£3.10
FX100/105/1000/1050	£3.50	£3.20	£3.00
LQ1000/LQ1050	£3.90	£3.60	£3.40
LX400/800/850	£2.80	£2.50	£2.30
MX/FX80/85/800/850	£2.80	£2.50	£2.30
LQ400/500/550/800/850	£3.30	£3.00	£2.80
LQ860/1060/2550	£4.20	£3.90	£3.60
PANASONIC			
KXP1080/81/82/83	£3.30	£3.00	£2.80
KXP1124	£3.30	£3.00	£2.80
KXP1180	£3.30	£3.00	£2.80
KXP3131/3151MS	£2.20	£1.90	£1.60
KXP3131/3151FA	£2.60	£2.40	£2.30
KXP1540	£4.50	£4.20	£3.90
KXP1592/1595	£3.30	£3.00	£2.80
STAR			
DP510/DP515	£1.60	£1.30	£1.20
GEMINI 10X/SG10/SG15	£1.60	£1.30	£1.20
LC10/NX1000	£2.40	£2.20	£2.10
LC10 colour/rainbow	£8.10	£7.50	£7.00
LC15/FR10/FR15	£3.30	£3.10	£2.80
LC2410/LC2415	£3.30	£3.10	£2.80
NB24-10	£4.70	£4.30	£4.00
NB24-15/NB-15	£5.10	£4.70	£4.40
NO10/NL10/NR10	£4.20	£3.80	£3.60
NO15/NR15/NX15	£4.60	£4.30	£4.00
Powertype MS	£2.20	£1.90	£1.60

BRANDED ORIGINAL TONER CARTRIDGES		
CANON/HP/WANG		
LPB-8/HP1	£58.00	£55.50
LPB-8II/HPII	£58.00	£55.50
LPB-4/HPIIR	£58.00	£55.50
PPB-3/HP3Si	£112.00	£107.00
DATA PRODUCTS		
LZR 2600 pkd 6	£107.00	£97.00
LZR 1200 pkd 6	£118.00	£111.00
LZR 650	£40.00	£37.00
EPSON		
6000	£12.50	£12.00
IBM		
4216	£19.00	£18.00
4019E	£170.00	£160.00
3816 pkd 2	£69.00	£64.00
KYOCERA		
F8/10/22/3000	£23.00	£22.50
F18/3300	£33.00	£30.00
MANNESMANN		
MT 905	£23.00	£22.00
MT 910	£89.00	£83.00
RICOH		
30/4080/81/4150	£38.00	£35.00
6000	£12.50	£12.00

DATA CARTRIDGE				
TYPE	LENGTH	CAPACITY	1+	5+
DC1000	185'	20Mb	£12.90	£12.30
DC2000	205'	40Mb	£13.30	£12.90
DC2120	307.5'	120Mb	£17.80	£17.20
DC300XLP	450'	45Mb	£13.70	£13.10
DC600A	600'	60Mb	£15.80	£15.20
DC6037	150'	37Mb	£19.30	£18.80
DC6150	600'	150Mb	£18.20	£17.60
DC6250	1020'	250Mb	£22.30	£21.70
DC6320	620'	320Mb	£22.90	£22.30

DISKETTE STORAGE		
SIZE	SPECIFICATION	PRICE
5.25"	10 disk box	£1.10
5.25"	50 disk box with lock	£4.70
5.25"	100 disk box with lock	£5.30
3.5"	40 disk box with lock	£4.50
3.5"	80 disk box with lock	£4.90
3.5"	10 disk box	£1.10

CONTINUOUS LISTING PAPER		
PRODUCT	QUANTITY	PRICE
11 2/3 x 9.25 plain EPP	70GSM 500 sheet pack	£6.20
11 2/3 x 9.25 plain EPP	70GSM 1000 sheet box	£11.70
11 2/3 x 9.25 plain EPP	70GSM 2000 sheet pack	£20.90
11 2/3 x 9.25 plain EPP	80GSM 500 sheet pack	£6.70
11 2/3 x 9.25 plain EPP	80GSM 1000 sheet box	£12.70
11 2/3 x 9.25 plain EPP	80GSM 2000 sheet box	£23.30

EURODATA
12a Adam & Eve Street, Quakers Yard,
Market Harborough, Leicestershire, LE16 7LT.
Tel/Fax: (0858) 433992.

MasterCard VISA

Prices subject to change. E. &.O.E.
All prices include VAT @ 17.5%.
Add £2.95 postage & packing. Cheques made payable to Eurodata.

MACHINE SPECIFICS

CHEATS FOR CODIES

Two Codemasters 'simulator' titles get a good kicking this month, thanks to J Falcus and David Higgins.

On *Supertank Simulator*: press ESC to pause the game and then type in "STANK" (ho ho). Hit ESC again to get back to the game and you'll have infinite lives!

Meanwhile, to get infinite lives in *Pro Powerboat Simulator*, pause the game with the ESC key and then hold down 1, 2, Z, X and SPACE simultaneously.

delivered by normal post at a cost of £4.50, or by special next-day delivery at £7.00.

There are quite a few suppliers of 3.5-inch drives for the Amstrad now – this could be the way to go if the supply of 3-inch disks is going to dry up! (Don't panic just yet, though.)

The second product on its way from SD Microsystems is an art package called Picasso. It will run on a 64K machine, too.

Both products will be ready shortly, but in the meantime if you want to know more, you can contact SD Microsystems at: PO Box 24, Hitchin, Herts SG4 0AE.

Rod Lawton

Rod Lawton is editor of *Amstrad Action*, Britain's biggest and best-selling PC leisure magazine

CPC

- ***Rolling Ronny*, the errand boy with flair and style**
- **Could 16-bit emulators be the next step?**
- **Handy pokes for programming with Basic**

ROLLING ALONG

The life of an errand boy is not an easy one, no siree. Apart from delivering packages and making the coffee, our hero (Ronny) is also an undercover agent in the town of Fieldington.

His latest mission is to recover the sacred town jewels, mercilessly stolen by an unscrupulous gang. After a tip-off the gang are lying low for a while, and have subsequently dispersed the jewels around the town.

If you ignore the ludicrous plot and get down to basics, Ronny traverses each horizontal level (of which there are nine), collecting any jewel cases he finds. Money can also be gleaned for use in the shop, where additional weapons can be purchased – these include the superjump, megahonk (invincibility), a goodie-magnet, a baddy-stopping cheese, and a peppery smart bomb. In addition, extra energy and time can be purchased too, the latter being essential for survival.

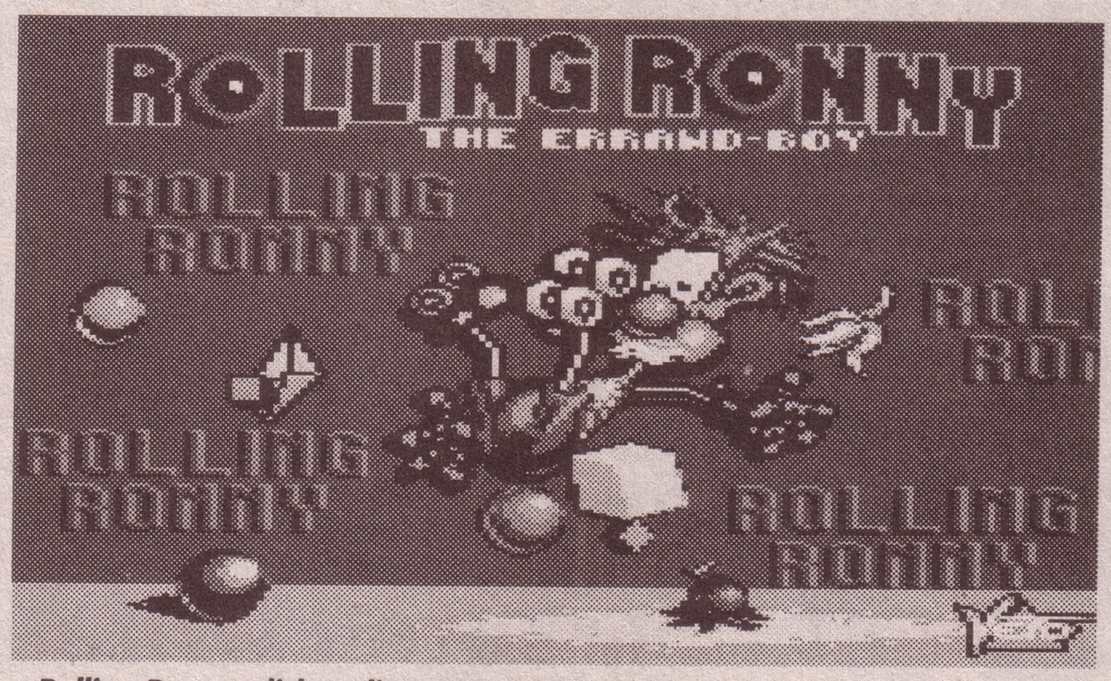
Apart from collecting the jewels, Ronny can utilise his errand-running skills to earn some extra money.

By interacting with other characters along the way, Ronny can choose to deliver packages to certain buildings in return for a bartered amount. However, if he chooses to bargain too much he can lose the deal altogether.

Ultimately the aim is to get to the end of each level, having collected all the jewels on the way, but that isn't all – certain levels can only be completed if you have enough money. To finish level one, for example, you must have enough money to catch the bus to level two... sneaky, huh?

Rolling Ronny is a simply beautiful game. The characteristic introduction screens are just a taster for the exquisite in-game graphics. Ronny himself is made up from hi-res sprites, and is superbly detailed as a result. The lengthy backdrops are intricately detailed and, at times, utilise all 16 colours on screen simultaneously. The animation is also excellent – some of the enemy sprites boast some amazing light reflection effects, and Ronny's skating movements

Continued on page 32➤



• ***Rolling Ronny*: slick coding, exquisite graphics, fun to play!**

MASTER YOUR FINANCES

PROFIT FROM YOUR MICRO £14.95
Comprehensive step-by-step 60 page guide

Recession? What recession? Make your micro earn

- Whatever the make of your micro, you can use it to make a good income even with only a couple of hours spare each week. Ideal for those at home/unemployed.
- NOT pie in the sky, make a million before breakfast nonsense but a true report of exactly the sort of steps we took ourselves at Intraset.
- Easy, sensible business ideas which can easily be used by anyone with any micro. Part or full-time.
- No computer expertise required. Earn £££ from home doing what you enjoy – using your computer.
- Very little capital outlay needed – you probably have everything you need to start earning
- Learn how to find hundreds of potential customers in your area who will gladly pay for your services.
- Full step-by-step 60 page book

Phone or Fax for lightning service.
Send cheques or postal orders to INTRASET LTD
FREEPOST, 10 Woodside Avenue,
Clayton-Le-Woods, Chorley, Lancashire. PR6 7BR.

TEL 025 72 76800
Main office & 24 hr order line
Fax 025 72 74753
Helpdesk 0490 3284
Weekdays 3-4pm

All major credit cards accepted
All prices include P&P and VAT
Overseas orders add £5.00

Intraset Ltd

CASHMASTER
Home and business accounts £39.95

Cashmaster is the easiest to use, most versatile accounts program yet written for both small business accounts or home finance. We wrote CASHMASTER for our own use, out of sheer frustration with other 'easy to use' packages.

Just look at Cashmaster's main features:

- **Easy, natural data entry** – just like a handwritten ledger.
- **Full vat analysis** if needed
- VAT inclusive, exclusive or zero-rated entries
- **Unlimited no. of ledgers at one time** – limited only by disc space
- **Span any time period** – no set period or 1 year limit
- **1000 User-definable class and 1000 accounts codes**
- **Detailed statements** by selected Classes and Accounts
- **Profit and loss-type statement**
- **Tagging of entries for selective reports**
- **Automatic repeat of entries** – standing orders etc. (Yearly, Half-Yearly, Quarterly, Monthly, Fortnightly, or Weekly)
- **Automatic date-sorting of entries** – entries can be inserted anywhere in ledger
- **Output reports to screen, printer or disc file**
- **Reference field for each entry** – Invoice or Cheque no.
- **Split and merge ledgers at any time**
- **All functions available from main program screen** – Class and Account codes visible at all times
- **Pop-up running-total calculator** with one key press.

The **most** user-friendly, powerful and versatile accounts package yet – ***you won't be disappointed.***

CASHMASTER INVOICING & STOCK CONTROL
Companion to Cashmaster or standalone program £39.95

- Full Customer Data file – easy to find account records
- Full Stock Data file, Price Lists, Re-order lists
- Full invoicing with user-defined messages
- Full invoice editing, Invoice To & Deliver To fields
- Settlement, No-Return and Line discounts

A standalone, or integrates with Cashmaster for a **fully featured accounts/invoicing package** costing less than a quarter the price of its rivals.

SPECIAL OFFER – both programmes £69.95 **Saving £9.95**

THE GRAPHOLOGIST
Handwriting analysis program £49.95

'Uncannily accurate' 8000 Plus Magazine
'Recommended highly for the novice and the professional' Micromart

From the beginner to the expert, use The Graphologist to analyse your handwriting, your partners, friends, business associates, prospective employees.

With a sample of handwriting, answer the on-screen questions and follow the instructions. Anything from a signature analysis to a full 15 page complete character report, including career ambition and health through to sexual preferences and megalomania. Edit this report using your word processor for a professional presentation.

The Graphologist is a valuable business tool as well as entertaining and fun. Comes complete with comprehensive manual of graphology.

Q. Which is the only Amiga magazine solely dedicated to using the Amiga as a serious computer?

A. Amiga Shopper

Q. Which Amiga magazine takes 16 pages of each and every issue to answer readers' questions?

A. Amiga Shopper

Q. Which Amiga magazine has monthly columns from some of the Amiga world's most respected writers?

A. Amiga Shopper

Q. Which Amiga magazine costs a third the price of the others, and gives you only the information you need?

A. Amiga Shopper

AMIGA SHOPPER

ONLY 99p

LATEST ISSUE OUT NOW

MACHINE SPECIFICS

SHOPPING EXPRESS

POKE POWER

If you like to dabble with BASIC, then the following POKEs may be of great use – they are some of the best methods of protecting your BASIC listings from prying eyes.

● POKE 788,52 – This will disable the RUN/STOP key, making it difficult to break into programs.

● POKE 808,234 – This disables the RUN/STOP-RESTORE action, as well as affecting the LISTcommand.

● POKE 774,134:POKE 775,227 – Will disable the LIST function, leaving your program intact.

● POKE 774,226:POKE 775,252 – This is mean – it resets the C64 when LIST is typed!

● POKE 774,0 – When the program is listed, only the line numbers appear.

● POKE 657,0/ POKE657,128 – These two POKEs disable and enable the shift keys (respectively).

● POKE 649,0/ POKE 649,10 – These will disable/ enable the entire keyboard!

◀ are brilliant. Add to this some superb music, and you have an immensely enjoyable game.

While the gameplay is a little too simple for my taste, there are numerous touches which make the game that little bit special. Take the gorgeous parallax clouds, for example, or the ability to leap off the screen into the top border... German programming in a nutshell. *Rolling Ronny*, from VIRGIN, is due mid-October. I can't recommend it enough.

EMULATION SPECULATION

Emulators for the 16-Bit machines have been cropping up at an alarming rate recently, mainly dealing with the C64, 48k Spectrum, and the ZX81. 'Aha!'you boast, 'I can sell my C64, buy an Amiga, and still use my old software collection.'

Well, quite simply, you can't. I use a C64 emulator a great deal, its main task being to transfer graphics on to the Amiga (which is how the screenshots for this column are produced), but that is where the emulator stops being useful.

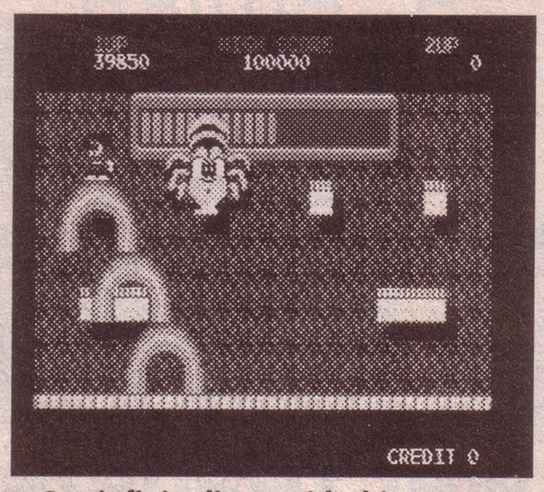
Practically anything can be loaded in from existing C64 disk drives, and yes, it can even load some commercial programs, but with just one drawback – it is 43 times slower than a C64.And since most games need to run at full-frame rate (50 frames per second), you'd need one heck of an accelerator board to play something half-recognisable.

No matter how tempting the thought, you would be nuts to sell your C64 on the basis of using an emulator on a 16-bit machine. You have been warned.

Andrew Roberts

RAINBOW LISTINGS

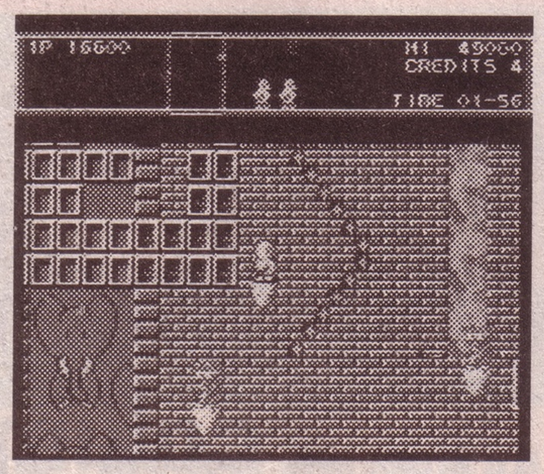
The Rainbow Collection is fast becoming one of my favourite compilations, especially *New Zealand Story* (which, despite my criticisms, I find totally compulsive). If the reset POKEs printed a couple of issues ago were nouse, try these listings instead (for infinite lives).



• Get infinite lives with this fantastic poke for *Rainbow Islands*

```
0 REM *RAINBOW ISLANDS*
1 CLR:FOR A=271 TO 299:READ B:POKE
A,B:C=C+B:NEXT
2 IF C=3211 THEN POKE 157,128:SYS
271
3 PRINT"DATA ERROR"
4 DATA
32,86,245,169,169,141,87,3,169,189,
141,88,3,169
5 DATA
141,141,89,3,169,132,141,90,3,169,1
11,141,91,3,96
```

```
0 REM *NEW ZEALAND STORY*
1 CLR:FOR A=271 TO 299:READ B:POKE
A,B:C=C+B:NEXT
2 IF C=3107 THEN POKE 157,128:SYS
271
3 PRINT"DATA ERROR"
4 DATA
32,86,245,169,169,141,87,3,169,173,
141,88,3,169
5 DATA
141,141,89,3,169,143,141,90,3,169,1
2,141,91,3,96
```



• And again infinite possibilities for *New Zealand Story*



DISCS

	3.5"* DS/DD 1.0mb	3.5"* DS/HD 2.0mb
25	9.99	15.49
50	18.99	26.99
100	32.99	49.99
250	76.99	119.99

*All 100% guaranteed complete with free labels.



SNAP COMPUTER SUPPLIES LTD

SORRY! MAIL ORDER ONLY

ALL PRODUCTS SUBJECT TO AVAILABILITY

L O O K!!
120 Capacity Box complete with 100 DISKS
3.5 DS/DD £38.49
3.5 DS/HD £55.49

LOCKABLE DISC BOXES

40 x 3.5	-	£3.99
80 x 3.5	-	£4.49
120 x 3.5	-	£6.49

ALL PRICES INCLUDE VAT. PLEASE ADD £2.99 POSTAGE AND PACKING.

VISA

Hotline Number 0345 045 455

1st Floor, I-Mex Business Park, 42 Flaxley Road, Stechford, Birmingham B33 9HL

SPECTRUM

- **Bait your breath! Good games are Spectrum bound**
- **Cheap Spectrums spotted sneaking up on us**
- **Budget re-release poke special**

FUTURE ATTRACTIONS

Good games are like buses. You wait all summer for one then about 12 come around the corner at once. Set for release soon or just out and looking very promising indeed are the following gasp worthy efforts:

Smash TV
(Ocean £10.21)
A coin-op conversion of William's excellent Robotron rewrite. Violence abounds in a futuristic game show which expects you to kill lots of things rather than answer questions. The original was brilliant and this looks like another top notch Spectrum version by Ocean. Oil your joystick in preparation.

World Class Rugby
(Audiogenic £11.99 cass / £15.99 disk)
With rugby fever gripping the nation (?) it's fitting that this looks like being the best rugby game on the Spectrum ever. If not the only one. Everything seems to have been included with a mix between playability and complex game plans that other sports sims would do well to learn from.

Xybots and Batman The Movie
(£3.99 each from Hit Squad)
Two of my old favourites now available for budget(ish) prices. *Xybots* is a 3D maze game with a good two player option, lots of robots to shoot and a powerful sense of tension driving it on. Very playable and worth getting at this price. *Batman* is the game of that hyped film of a few years back and proved to be a thoroughly professional effort with the now standard different-levels-represent-different bits-from-the-film design. Over the five levels you get platform and ladders shoot-em-ups and driving sections. The graphics and animation are beautifully done and the game's well worth sampling.

FORMAT

Recently buried under usual fan mail, requests for autographed photographs and invitations to open bridges was a lone magazine for Spectrum and SAM users called *Format*.

According to the editorial team it's been going for an impressive five years and although this is the first one I have ever seen it looks like a definite boon for Spectrum and SAM users who are into the more serious side of computing.

Amongst its 40 A5 size pages was a *Machine Code Without the Tears* tutorial, help section, utility reviews, puzzle page and several listings to type in including a game for the SAM and Speccy UDG designer.

It's all beautifully presented and should of interest to anyone who whinges about the games based nature of shop bought publications. A copy of Format costs £1.25 from Format Publications, 34 Burton Road, Gloucester GL4 0LE.

BARGAIN HUNTER

Keen eyed Kevin Sanders of Edinborough recently ran up to me shouting about cheap Spectrums. He tells me, in the style of a persistent double glazing salesman, that Bull Electronics (of 250 Portland Road, Hove, Sussex BN3 5QT) have "Speccies at cut down, low prices.

They are currently selling +2s for £60 and +3s for £80, brand new with manuals but no bundled software." Blimey, that is pretty cheap and well worth considering if you want to upgrade from your dear old rubber key 48K model at long last. Thanks for letting us know and possible saving some of us money Kevin. Don't know about you but I need every penny at the moment.

COCK UP

Ah. I think there was a bit of a cock up on the printing front in *Express* 152. In case you didn't notice, there was more repetition than usual in that week's Speccy column due to a large chunk of stuff quietly drifting into the mistake zone and the first part being printed all over again.

Profuse apologies of almost unbelievable sincerity but it wasn't my fault/ It was a computer error/ I missed my bus/ My kit's in the wash etc. Please accept this note from my Mum. I'm sure you'd hate to miss out on a single letter of my work so here, more or less, is what mysteriously disappeared.

ZX81 LIVES!

I suppose it's just possible that in our midst are some traitorous, two-timing types who own a Speccy and another computer as well.

As repellant as that is, I mention such things because of various Sinclair-related software available for the ST and Amiga that are worthy of mention here. Something I've recently been playing with on an ST (erm, borrowed for research purposes only of course) is the totally fabulous ZX81

Emulator: This is a public domain program that somehow manages to recreate in the comfort of your own home the black and white, soundless, 1K

Continued on next page➤

FREE CATALOGUE

The 'World's Best' just got better!

General Shareware Volume 2

You have an idea of the software you want - but can you find it? - NO. Why can't you get a set of demo programs to try? - Well, now you can.

There are over 12,800 files to try on this software collection in areas as diverse as Wordprocessing, games, spreadsheets, programming, databases and many more.

Programs for you to try in the comfort of your own surroundings and, when you've found the program you want, simply send the author the cost and in return you'll receive the most recent version of the software and any other files or documentation that may be necessary - OFTEN AT A MUCH LESSER PRICE THAN EQUIVALENT COMMERCIAL SOFTWARE.

If ever you needed a reason to buy a CD-ROM drive - this is it! Look at these other features too:

a. Search for files by filename, category or description and decompress direct to disk!

b. Incorporates a complete BBS. Run your own BBS in minutes.

c. Unique sound blaster file collection.

d. Windows section now contains over 440 files.

e. Audio track describes installation and a tutorial.

This is the Micro Haus General Shareware Disk Vol 2. All files current as at 1 Sep 91.

Ordering Information

Tel: (0452) 371707
Fax: (0452) 610022
Write: PO Box 149
Gloucester
GL3 4EF

We accept payment by cash, cheque, Visa and Mastercard.

The price for Volume 2 is:
UK - £88.00 inclusive
EEC - £80.00 inclusive

MICRO HAUS LIMITED

The Best CD-ROM Bundle Available

Searching for the best way into CD-ROM? Then look no further!

Only £320 + VAT

For a limited period only we are able to offer the GenStar 2000 External drive and SIX free software titles for the incredibly low price of £320 plus VAT and delivery.

The software titles included are:

- Mammals - A multimedia extravaganza of picture and sound
- Illustrated Encyclopedia - THE learning tool for all generations
- World Atlas - The globe at your fingertips
- Times and Sunday Times - The Gulf War edition
- Information World Review - Featuring the SimpleFace system
- Micro Haus General Shareware Volume 1

The final disk is the Micro Haus General Shareware Volume 1, a world class product which enjoyed huge success in the CD-ROM arena. Containing 10,000 files, it features some of the best Shareware and Public Domain software ever to be published. It is probably the best method of reviewing software on a 'try before you buy' basis.

Six Free Titles!

Please note: All cheques and correspondence should be addressed to Micro Haus Ltd

MACHINE SPECIFICS

HOW TO BEAT THE RE-RELEASES

Here are some Multiface pokes for some recently re-released games.
GAME POKE EFFECT

- ***Batman The Movie*** `24336,201` **Invincibility**
  `24881,201` **Infinite lives**
  `24973,52` **No timer**
- ***Chase H.Q.*** `39937,0` **Time**
  `47621,0` **Credits**
- ***Cabal*** `39245,201` **No baddies**
  `39202,201` **Smart bomb**
- ***Bubble Bobble*** `3835,150` **Infinite lives**
- ***Toobin*** `61721,0` **Infinite lives**

SHOPPING EXPRESS

(expandable to 16!) wonder of the Spectrum's lovable forerunner. Sir Clive himself couldn't tell the difference between this and his own creation once it's loaded. The display is identical, Sinclair BASIC has been installed without change and the unfairly maligned keyword entry system has hijacked the sleek ST keyboard. This makes typing a bit difficult but an on screen map can be loaded to help out.

Also included on my disk were 35 further programs to load in with the time honoured LOAD "" command. These included such classics as *Crazy Kong*, *Breakout* and *Invaders*, written completely in BASIC and had to be RUN on loading.

If you're too young to remember the ZX81 or threw yours out years ago this is essential. It'll remind you what real computers were made of, necessary if you own an ST. The ZX81 Emulator should be available from all good ST PD libraries.

Also in the Public Domain, this time for the Amiga is a Spectrum Emulator. I haven't seen this myself but reports suggest it's pretty compatible although there's a considerable loss of speed. Just as long as colour clash remains intact I'd be happy.

The Amiga Spectrum Emulator should be available from any good PD libraries listed in Express's PD section.

Does anyone out there know anything about the Spectrum Emulator on the PC? This was apparently nearing completion some time ago but vanished without trace. Let me know.

NEWS WANTED

Have you got news for me? Send all gossip, release details and things for review of a Spectrum nature to Robin Alway at The Spectrum Column, *New Computer Express*, 30 Monmouth Street, Bath BA1 1EJ.

Please keep sending all your tips, cheats and pokes to me at the usual *Express* address. Cheers

Robin Alway

CONSOLES

- **Japan is in the grip of a brand new custom**
- **Immortality from the Action Replay cartridge**
- **Chill out with *EA Hockey* and *Hit the Ice***

COSTLY CONSOLES

I would like to give you the low-down on what the console scene is like compared to the other two main countries – Japan and America in terms of price.

In a few words – we pay nearly double what they do in all areas!!

In the US, you can pick up an Atari Lynx together with a game, for only $99.99, while we have to shell out around £150 for the same. In Japan, it's even cheaper, you can easily pick up the basic machine for around £43. Get a Game Gear in the US and you get a copy of *Columns* thrown in, while we have to buy the game separately. In Japan, the official price of the Megadrive is around £90, although you can easily pick one up for around £50!

As for software, games in the other countries are a lot cheaper too, but over in the US, you also get a lot of freebies.

JAPANESE CUSTOM

In Japan, a new craze is hitting the console scene – that of customising your machine. This all started off when someone put his name on his Game Boy, but now it's become more technical – reshaping and painting the casings in great detail, or totally redesigning new ones. For example, someone has customised their PC Engine Core Grafx so that it looks similar in style to a Megadrive in black with blue bits and red lettering round the circular rim. Then there's a customised 8-bit Famicom that looksj ust like a Super Famicom. Some of these can even be bought too – I wonder if it will ever catch on over here.... now, let's see if I can turn my PC Engine to look like a Neo Geo?!!

KICK OFF

At long last, Anco's incredible footie game makes its way to a video console, Nintendo's Super Famicom.

So what is it like? With a suite of buttons on the joypad, you should be able to perform a host of moves – but alas this isn't so, Imagineer has done a cockup! *Pro Soccer*, as it's called in Japan, has the same options as *Kick Off II* with practice, *World Cup*, etc.

However when it comes down to

Continued on page 35 ➤

COMPUTER REPAIRS
AND UPGRADES

Access VISA

● COMMODORE ● ATARI ● AMSTRAD ● SINCLAIR ● IBM ●

- Commodore registered, Amstrad authorised
- Fixed prices on many machines.
- Most computers should be repaired 24hrs from booking in
- Over 3500 square foot engineering complex at your disposal
- First class technical advice available from over 20 technicians/engineers

Amiga 500	£44.95	*(£25 additional premium if disk drive unit or keyboard are not repairable and require complete replacement)*
Atari 520 STFM	£15.00	*Diagnostic fee plus quote (Typically £45.00)*
Commodore 64	£29.00	
Spectrum 48K	£21.00	
Spectrum +2	£29.00	
Spectrum +3	£35.00	
Spectrum 128K	£24.00	
Amstrad 464	£32.00	
Amstrad 6128	£36.00	
IBM/Clone	P.O.A.	
Other Machines	P.O.A.	

PREMIUM SERVICE

To utilise our premium service simply send or hand deliver your machine to our workshop address below, enclosing a fault description and daytime telephone number plus payment, and we will do the rest. Please add £5.00 if you require 24hr to your door courier or else contract parcel post will be used.

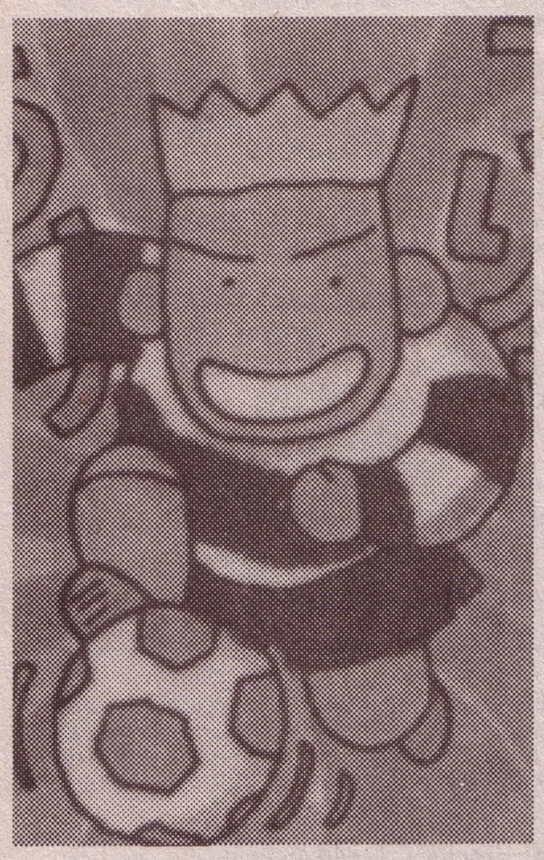
(W.T.S. reserve the right to refuse machines which are in our opinion beyond economic repair - Handling charge may be applicable)

TEL: 0582 491949 (4 lines)

W.T.S. ELECTRONICS LTD, Chaul End Lane, Luton, Beds., LU4 8EZ.

actually playing the game, it's terrible. The scrolling isn't very smooth, the graphics are awful, sound is minimal and playability is very frustrating. Apart from controlling your players with the joypad – which is near impossible, just touching another player usually results in a foul, and the goal keepers are useless... kick the ball at goal and most of the time it goes right through him!

If you have a Super Famicom as well as an Amiga then avoid this like the plague, if you don't, then try before you buy!



• Make sure you're right on the ball when you play *Prosoccer*

LET'S DO IT AGAIN

From Datel Electronics Ltd., comes the Action Replay cartridge for the Sega Megadrive.

No!, it's not a backup device like ones on the computer formats, but a device that cracks games by giving you infinite lives, unlimited power, fuel or ammo, and so forth.

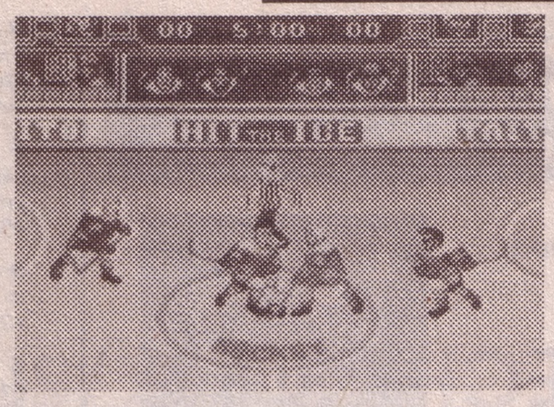
The cartridge slots into the Megadrive, and then the game cartridge slots in the Action Replay. The device contains it'sown on-board LSI chip, so you can effectively re-program their games cartridges.

To use, parameters are entered using the joystick/pad, which are detailed in a free magazine called *Gamebusters* published each month by the company itself. If you own an official Megadrive, it also doubles up as a Japanese cartridge converter, so saving you money. It will cost £49.99 and should be available in November. For more info. contact Datel on 0782 744324.

ICE HOCKEY CRAZY!!

If you're after a real sports game, then you can't go wrong with *Ice Hockey*! And if you have either a Megadrive or PC Engine, then you're in for a treat, as each machine has a version for it.

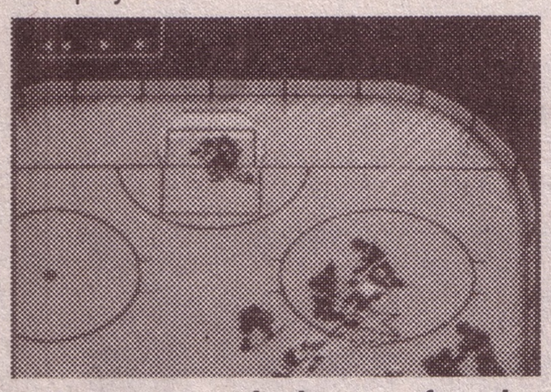
On the MD, there's the excellent *EA Hockey* from Electronic Arts. Viewed from top-down, the game's the nearest thing to *Kick Off II* on ice, as it's really fast, with great playability, plus the possibility of shoulder-barging your opponents. Definitely a must buy!



• Slip and slide your way coolly towards the net in *Hit the Ice*....

On the Engine, there's *Hit the Ice* from Taito. This is a conversion of the ace coin-op game, and apart from the sound effects, it's a near exact copy. Unlike EA's, it's viewed side-on, and there are only three players on each team including the keeper.

Hit the Ice is slightly more violent than *E.A. Hockey*, as each of the players have a special attack move, from a punch in the face, a swing with the stick, to the very painful kick in the family jewels!! Great fun, and can be played with up to four players!!



• Keep your cool when you face the goalie in *EA Hockey*



• The opponents look hot, let's hope they don't melt the ice!

Thanks to Console j7Concepts for the above games. Tel: 0782 712759.

IT'S NO PLAY

If you're sick of people playing your console, or the kids are not doing their homework because they're playing 'Ninja Grannies from the retirement home 3' or want to protect your machine from burglars, then you need Time Out.

Time Out is a device produced by US firm Niche Technology which blocks the cartridge slot of an NES or Sega Genesis, so that you can't use the machine unless you have the key to unlock it! It costs $9.99 from retailers.

Talking of devices, I mentioned some time ago that the Super Famicom was compatible with the 8-bit Nintendo, and all that was needed was a pin converter from 72 to 62. Well, apparently, Nintendo of America already have such a device, but is unwilling to release it to the public until the time is right. Tight gits!!

Onn Lee

WATCH THIS SPACE EVERY WEEK! FOR COMPUTER SUPERDEALS FROM THE SUPERDEAL SPECIALISTS.

COMMODORE

AMIGA A500 BASE PACK:
A500 computer, mouse, T.V. Mod., manuals, Workbench
£299.00

AMIGA A500 CARTOON CLASSICS:
As A500 base pack + 512K RAM Exp. with clock, mouse, T.V and manuals, Lemmings, The Simpsons, Captain Planet, Deluxe Paint 3
£389.00

AMIGA A500 SCREEN GEMS:
As A500 base pack + A501 RAM Exp. + 4 great software titles + Deluxe Paint 2.
£389.00

AMIGA A500 CLASS OF THE 90'S:
As Screen Gems but with 8 software titles, 10 disks, mouse mat, Resource File, Introductory Video.
£459.00

ATARI

ATARI 520STE DISCOVERY PACK 2:
512K computer, mouse, manuals + all leads, 4 games + ST Basic
£315.00

ATARI 1040STE CURRICULUM:
1Meg RAM, Educational software, Word Proc., D.Base, Spreadsheet, Hyperpaint 2, Music Maker 2.
£369.00

BUSINESS MACHINES & PERIPHERALS

We sell a range of P.C's from Goldstar & Strand.
e.g. Strand 80286 VGA with Works V2.0 **£789.00**
Monitors from **£118.00** (SVGA Mono).
Multi Scanning Monitors from **£350.00**
Printers from **£118.00** (9 pin), **£199.00** (24 pin)
Please phone for your specific requirements.

ATTENTION BUSINESS USERS!
BUSINESS MACHINES CAN PLAY GAMES AS WELL!!!

VAT: All prices are inclusive of 17.5% VAT
DELIVERY: Please add £5.00 for delivery within UK.
PAYMENT: Cheques/PO's made payable to DATACITI COMPUTER SERVICES
PERSONAL CHEQUES: Please allow 5 working days for clearance
GOODS NOT OFFERED ON TRIAL BASIS.

DATACITI COMPUTER SERVICES
UNIT 27, DARIN COURT, CROWNHILL, MILTON KEYNES, MK8 0AD
TEL: 0908 262210

Open Monday to Friday from 10.00am to 5.30pm, Saturday 10.00am to 1.00pm

EXPRESS SALES

Want SLIDES, PHOTOGRAPHIC Prints or COLOUR copy of YOUR Computer Artwork?

35mm Slides in 24 hrs from £3.50
- We can use Mac, PC, ST & Amiga Artwork.
Photographic Prints.
A4 / A3 Colour Printing.
- £3.00 - A4 / £4.00 - A3
OHP's/A3 Flip Charts.
Presentation Slides.
Slide, Photo & Colour Print Titling
Colour Scanning ; up to 1850 dpi.
Postscript Printing.
Fax Proofing.

1701D

Telephone / Fax / Modem : 0522 529925

1701D, 2 Victoria St., West Parade, Lincoln. LN1 1HU
Please add £1.50 to all orders, any size, for P&P.

♦ ST

● **ATARI 1040 STFM**, Star LC10 printer, 'Microsoft', word processor, VIP Spreadsheet, 'MIni Office', presentation graphics, plus games, software, introduction to Midi Programming (book). All equipment in original packaging £390. Phone Jon on 0843 41102 after 6pm.

● **ATARI ST** Eprom programmer/ROM drive fits in to cart port and can act as hard drive. Cost £180. Sell for £90 o.n.o. Tel: Pete 0322 662747.

● **TOS 1.41**, £30. Autoroute. £35. Tel: 0760 755402.

● **FREE ST** PD. Honest, it's yours if you want it. Enclose SAE for a copy of my collection. Tel: 0752 366292.

● **ATARI 520STFM** 1 meg RAM, 1 meg drive, 1 meg external drive, power pack software, PD magazine disks, two joysticks, dust covers, various books, boxed. Very good condition. £300. Phone Port Talbot. 0639 884603. May deliver if distance reasonable.

● **ST** Happy cart plus all software for sale, only £60. Ring Simon on. 0904 625016.

C.M.D.
UNIT H (DEPT CE)
PURDON IND. EST.
GLASGOW G11 6AB

SPECTRUM, AMSTRAD, COMMODORE
THE LARGEST & RAREST TITLES.
SEND LARGE S.A.E. FOR LISTS
SCOTLAND'S NO.1
FOR ALL YOUR COMPUTER NEEDS!

● **ATARI ST** with joystick and few games. Quick sale. £145 or swap for Amiga A500, plus cash. Phone 081 882 5953 anytime.

● **FOR GREAT VALUE** Atari ST PD. Send £1 for the Power PD disk catalogue. 25 Windmill Way, Reigate, Surrey, RH2 OJB.

● **GAMES FOR SALE.** For details send SAE to 274 Mackets Lane, Halewood, Liverpool, L25 9RT or phone Andy on 051 428 4930.

★ THE DISK ISSUE FIVE ★
Send £1.50 for the latest demos, reviews and utilities!
S. Lord, 6 Stubbing Brink, Hebden Bridge, West Yorkshire HX7 6LR.

● **ATARI 520STFM** for sale. £900 worth of software, good condition, 1 year guarantee, only £350 o.n.o. Top games titles like Lemmings, Turrican 2. For more details ring Ali on (0274) 725636. Buyer collects.

● ***ATARI SOFTWARE*** Timeworks DTP. £35. First Word Plus v3.2, £25. Superbase Personal, £15. Degas Elite, £10.Scrabble, £10. Phone Port Talbot. 0639 884603.

● **1040STFM** for sale with lots of software, two joysticks, must sell due to baby on the way! Tel: Phil 0633 601830.

● **ST PD**, hundreds of files for download. Free membership and no waiting for access. Call the budget BBS on 021 311 1068 24hours upto v22Bis.

● **ATARI** mega 4 ST, B/W monitor, twin disk drives, hand scanner, software, disks. £500. Telephone 0642 816050.

● **520STE** 1 meg internal drive, 1 meg memory upgrade, all cables and manuals and some software, also Panasonic KXP1180 9 Pin Dot Matrix printer with extra ribbon and cable. Worth £700. Sell £550 o.n.o. Call Joe 081 681 1940.

★ ATARI STFM ★
One year old, double sided disk drive, joystick, mouse and mouse mat, dust cover, disk box. £295.00.
Tel: 0525 370821.

● **ATARI 1040 STE**, £400+ software, £20. Joystick, mouse, disk box, £150+ magazines, all worth £1000+. will sell for £350. 081 309 1587. Orpington.

WIN A 286 PC
Yes your own 286 VGA PC Compatible with mouse, keyboard, VGA monitor, hard drive + software
DIAL 0839 36 36 37
ALL CALLS CHARGED AT 36/48p PER MIN CBS NW6 6RG

AT LAST ITS HERE!!!
THE UK'S FIRST PAY SYSTEM
THE PINPOINT BBS
TEL: 0839 363600
Access to over 20 Gigabytes
WITH DIRECT LINKS TO THE USA
ALL CALLS CHARGED AT 36/48p PER MIN CBS NW6 6RG

● **SUPERCHARGER** State Of The Art, PC Emulator, £175, plus various ST games and PC programs and games. Call Marlowe. 2.30-5pm. Tel: 0420 82317.

● **520STFM**, fully working, with some software, swap for 386, Motherboard or cash or W.H.Y., or unwanted girlfriend! Phone Lawrenence 071 328 4588.

● **OVER** 60 magazines, ST World, User, Format, to current date. £20. Buyer collects. Tel: 081 889 4276. Tottenham anytime.

● **ATARI ST,** software, Word Flair, £35. Harlekin, £15. Mastersound and TCB TRacker, £25. Call Hakan after 6pm. 081 533 2188.

● **SUPERBASE** personal data base program with full manual, excellent conditon. £25. Phone (0603) 505029. (0603) 58611. Office hours.

● **STE** 1 meg, external drive, Citizen printer, colour monitor, clock cartridge, mountainous software, serious, games, magazines, PD. £650. (0943) 608706.

● **50Mb** third coast technologies hard disk. £300. Philips 14" colour monitor, £150. Supercharger, boxed as new, £175. Aladin Mac, Emulator, boxed as new, £125. various midi boxes. Call for details. Johnathan Kirkpatrick. 0225 336273 or 0249 656194.

● **ATARI STFM** 1 meg plus 2nd disk drive, loads of software, magazines. £300 o.n.o. 0722 333 082.

● **BACK ISSUES** of St User, Word Format and St/Amiga Format, many with disk, exchange for anything Z88 related. Write to Mr Beed, 72 Hazelton Way, Waterville, Hants, PO8 9BT.

● **TOS 1.41** Rom chips includes fitting instructions, £40. Signum 2, as new includes Deskjet printer driver. £80. Pete 0322 662747.

● **ATARI STE** 1 meg in tower case with extra 1.44" meg drive. £350 o.n.o. Tel: 061 681 7494. Ask for Tony.

● **1 MEG** internal disk drive to upgrade your ST, fully compatible with all software full fitting kit + instructions. £30 +p+p. Tel: 0322 662747.

● **95 MEG** hard disk drive. £250 o.n.o. Tel 061 681 7494 ask for Tony.

● **ATARI 520STFM** internal and external disk, drives, joysticks, mouse, printer, cable, lots of quality software, mint. £400 o.n.o. Harrison. 0548 852701.

JENNIX PD for the best in Atari STE/FM PD software at only £1.25 per disk. Over 500 titles available. Send 50p for disk catalogue to: Jennix PD, 66 Abbey Road, Strood, Kent, ME2, 3QB.

● **ATARI 520STE**, with £1000 worth of software, mouse/mat, joystick, 3 month warranty. Master Sound 2, Sampler worth £1350. Sell for £250. Call Mat on : 077 585 3296.

● **SEX!** (oops I mean ST) owners of this excellent machine, wanting to swap hints + tips etc. Contact Peter, 31 Clifford road, North Shore, Blackpool, Lancs, FY1 2PU.

● **WANTED:** ST demo contacts write to: Mac SYS Data (POV), P.O. Box 40, Thornton, Cleveleys, Blackpool, FY5 3PH.

● **POWER MONGER** for Atari ST, only used once, £10. Phone 02205 3870 after 6pm.

♦ AMIGA

● **AMIGA A500** with upgrade, external drive, joystick, Publishers Choice software plus games, extended guarantee. Phone 0543 577819. Staffordshire. £420 o.n.o.

● **ORIGINAL** games. £10 each. Xenon-2, Bloomoney, Shadow Of The Beast, Wings, Lord Of The Rising Sun, Chrono Quest, Populous. Phone Gan (0734) 391552 evenings.

● **ORIGINAL** games. £5 each. Batman, Marble Madness, Teenage Mutant Queen, Xenon, Zoom, Tanglwood. Phone Gan. (0734) 391552 evenings.

● **COMMODORE A1040** disk drive, £35. Miniscribe SCSI hard disk, £50. Datachat v23 modem, £20. MIniamp 2 speaker, £12. Phone Gan (0734) 391552 evenings.

● **AMIGA 500**, 1 meg + clock, 2nd drive, Philips monitor, Digiview Gold, Sound Sampler, Midi I nterface, Music-X, loads of games, joystick. £600. No offers. Phone (0942 604434).

● **AMIGA PD** 60p a disk. Send £1 for list, and details. Simon Johnson, 138 Guildford Street, Grimsby, South Humberside, DN32 7PW.

COMPUTER REPAIRS
☆ FREE ESTIMATES ☆
All makes & models repaired and serviced - including printers & monitors
For further details call
Hawkwell Electronics,
Southend-on-Sea. 0702 207593 (24 hrs)
Amstrad registered repair centre

● **CBM AMIGA** A500 with half meg upgrade, and over £1200 worth of games, demos, magazines, inc Turbo Challenge, Indy 500, Xenon 2, Rainbow Islands. Sell for £405, offers welcome. Tel 021 447 7005. All mint condition.

● **AMIGA PD** exchange. Would you like free software? Then send SAE to Paul, 2 Poltisko Terrace, Penryn, Cornwall, TR10 8PL.

● **ORIGINAL** Amiga software, hardware, books, magazines. SAE for lists. Chris, 3 Albion Terrace, Lexham Road, Litcham, Kings Lynn, Norfolk, PE32 2QQ.

CUSTOMISED CABLES
made to your specification
Many types of custom cables for business, home computers and peripherals.
★ Printer Cables ★ Monitor Cables
★ Extension Cables ★ Power Cables
FOR PRICE LIST WRITE:-
TECTEL LTD.
63 Upway, Rayleigh, Essex, SS6 8AA
Tel 0268 778162

● **VIDI AMIGA** Digitiser with Vidi Chrome and Scart lead worth £120. Sell for £50 or £80 with ten Amiga originals games and two joysticks, hardly used and emaculate condition. Phone Mark on 0509 844166 after 5pm.

★ DO YOU WANT DEMOS? ★
We have got demos!! Megademos, Mastersound Demos, Vector Demos, Cuddly Demos. For an amazing catalogue disk just send a blank disk to: **State 808 PDL, 3A Old Lanark Road, Carluke, Scotland ML8 GHW**

● **PODSCAT** Graphics Tablet, boxed with Stylus, pen and Aprodraw Amiga software was £255, accept £140 o.n.o. Rob after 6pm. 0277 260587.

● ***AMIGA*** the best hard disk back up system byte and back £5. SupraRAM 2000 8Mb card populated 2Mb, new boxed guaranteed. £150. Amstrad SM2400 modem nearly new, boxed. Totally reliable with software. £150. Tel: 0692 402927.

● **WANTED** hard drive A590 for Amiga 500. Reasonable price paid. Tel: 0455 824752 evenings. Ask for Patrick, 39 Deskford Road, Leicester, LE9 9LG.

EXPRESS SALES

● **AMIGA GAMES** unwanted gift and Death Stealth Fighter F15 unopened. £15 each. Also Atari games used fire brigade and various adventure and strats. Tel 081 470 8563. H. Miller, 17 Sheridan Road, Manor Park, London, E12 6QT.

● **BEST** sensible offer secures Amiga 500 with clock expansion. 2nd drive, modulator, mouse etc. 8833 monitor, 20 meg hard disk, plus 1 meg, manuals, games, books, only 14 months old. Write G. S. D., 40 Grafton Road, Harwich, C012 3BD.

● **AMIGA** books for sale, Amiga ROM, manual, Amiga hardware manual, Amiga tricks and tips, inside Amiga graphics and lot more. Also some software for sale. Please write to Simon Law, 88 High Street, Credition, Devon, EX17 3LB.

● **AMIGA A500** with half meg upgrade, secnd internal drive and £1300 of software. £430. Tel: 021 447 7005 o.n.o. Bargain!

● **AMIGA** Dos wanted and Comms manuals wanted. Also help with down loading compressed or archived files. Phone Steve 0782 612393. 9 Osborne Road, Hartshill, Stoke-On-Trent.

● **A500** 1.3 1 meg external drive, complete with leads, books, etc. 40+ games. Also 40+ PD disks. All goods boxed. £500. Tel: 0495 759640.

● **AMIGA PD**. Write to A Hines, 44 School Lane, Eaton Bray, Bedfordshire, LU6 2DT. Enclose 30p in stamps for catalogue disk.

DISCOVER THE WORLD OF
DISKOVERY
PUBLIC DOMAIN SPECIALISTS

DISKOVERY,
108 The Avenue,
Clayton, Bradford,
W. Yorks BD14 6SJ

24HR TELEPHONE HOTLINE
☎ 0274 880066

WE HAVE OVER 1,200 P.D. DISKS IN OUR LIBRARY
HERE IS A SMALL SELECTION

DEMO'S
D20/21 - Red Sector mega demo (2)
D14/15 - Predators Mega demo (2)
D24/25 - New Tek Demo Reel 3 (2)

MUSIC
M4 - Popeye Meets The Beach Boys
M15 - D-Mob III
M30/31/32 - Do The Bartman* (2)

ANIMATIONS
A8 - Walker anim*
A10 - Puggs in Space
A20 - Miller Lite Advert.

ACCESSORIES
3½" DSDD 10 Pack + labels.....£4.50
3½" DSDD 50 Pack + labels....£17.50
40 Capacity 3½" disk box £4.99
80 Capacity 3½" disk box £5.99
Mouse Pocket £1.99
Mouse Mat.....£2.80
Zipstick Autofire joystick.....£13.50

ALSO
Fred Fish 1-520
T-Bag 1-49
CATALOGUE DISK ONLY 50P

★ SPECIAL OPENING OFFER ★
10 PD disks, mouse pocket, mouse mat, 10 cap disk box and catalogue disk **ONLY £11.99**

*** = 1 MEG REQUIRED**
(2) = SECOND DRIVE REQUIRED

WHY BUY FROM US?
We offer a fast and very friendly service to all our customers.
All disks are virus free. Stocks always held. Same day despatch. No minimum order. Trade enquiries always welcome.

HOW TO ORDER:-
1-9 DISKS £1.25 ea. 10+ DISKS £0.99 ea
DELIVERY:- UK £0.60, per order
Europe £1.20 per order, World £1.80 per order.
Cheques & P.O's payable to "Diskovery"
FREE CATALOGUE DISK WITH EVERY FIRST ORDER

MAKE YOUR COMPUTER EARN!

Yes making money with your computer becomes incidental when you know how!

Your computer 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, King and Queen Street, NCE20
Walworth, London, SE17 1DR.

● **30 AMIGA** games for sale, all originals: Corporation, £5. Golden Axe, Narc £7. Predator 2, Eye Of The Beholder, £10. £120 the lot! Phone 081 960 4218 between 6 and 8pm for full list.

● **BOOKS.** Rom Kernel manual, includes Autodocs, £14. Libraries, devices, £14. Hardware manual, £10. Mapping Amiga, £10. Dos inside out, plus disks. £10. Kickstart Guide, £7. Machine Language, £7. All new plus £2 postage. Telephone 0332 360199.

● **AMIGA A500** 1.3 (one meg). Boxed, 11 months guarantee upgrading to PC. £280 o.n.o. Marcus, 23 Rudgwick Drive, Bury, Lancs, BL8 1YA.

● **JAY-DEE'S** Amiga PD, for catalogue, send SAE and disk to: Jay-Dee, 389 Scalby Road, Newby, Scarborough, N. Yorks, YO12 6TG. Catalogue updated monthly.

● **BANTAM** AmigaDos manual 2nd edition. £10 +p+p or swap for Mig 29 or F-15 II originals. Tel: Gary 0473 713715 between 6-9pm.

● **AMIGA** to Scart lead £5+p+p. 68101 CPU. £10+p+p. Honda RVF to swap. Tel: Gary 0473 713715 6-9pm only.

● **A2000** 1Mb 80Mb hard drive, XT Bridge Board and 51/4 drive, two 31/2 drives. 10845 colour monitor. Mint condition. £1600. Neg. 071 371 6486. Julian.

● **AMIGA PD**, Clip Art, 10 disks, completely full. IFF Format, Virus free. Quality Media, £7.50, including postage. Tel: (0636) 71275.

● **AMIGA PD**. Just supply disks. Write to Marcus Goodwin, 6 Churcher Close, Gosport, Hants, PO12 2SL. All enquirys replied to.

● **A500+** extra memory, second drive, Star LC200 colour printer, Hitachi colour 14" TV wedges of software, all for only £750 o.n.o. Phone 0492 512850.

◆ PC

● **AMSTRAD PC COMPTER** 2086D 30 meg HD 2 x 31/2" floppys mono VGA monitor keyboard, mouse, Windows manual. Very good condition. £625 o.n.o. 0462 684995.

● **OLIVETTI** Prodest PC1, 20Mb hard drive, 3.5" floppy, colour monitor + expansion box. £400. Call Joe on (0268) 527320 evenings and weekends only.

● **COMMODORE CLT 286** notebook 286 with PC with 20 meg hard drive and 1 meg RAM only £950 o.n.o. Phone 0582 769152 eves/weekends.

● **EPSON** AX 286 PC 640K 20 meg portable plus Kodak portable printer, mint and boxed. Manuals genuine bargain. £750. Telephone 081 5711 494.

● **BBC** model B computer with Cumana 40-80 disk drive, plus lots of games. Good working order. £150. Telephone 091 4874245.

★ ZENITH SUPERSORT 286 ★
Laptop. 20Mb HD, 640K backlit LCD, Nicads, charger with MS-DOS 5 installed.
£500 no offers.
Phone Dave 081-661-1057

● ***WANTED*** PC penpals, male and female overseas welcome. Send details to: L Richardson, Little Paddocks, Landulph, Saltash, Cornwall, PL12 6ND.

● **TOSHIBA** Laptop T1000 extra memory 712K plus disk. call Marlowe. 230 630 0420 8230. £210.

● **IBM** 4707 mono 5" VGA monitor, excellent condition, unique style, worth over £200. Quick sale, £90 o.n.o. Tel: (0727) 837993 evenings.

● **BO286** Motherboard, 16MHz, 2mb Ram, AMI B105, neat chipset, reason for sale, upgrading. £90 o.n.o. Mono + printer half card, £15 XT. Bisync card. £15. Tel: (0727) 837793 evenings.

● **IBM** Cherry keyboard, boxed. £30, including delivery. Ring 0258 450404 also 400 51/4 shareware disk. £120, inlcuding delivery.

● **IBM COMPATIBLE** computer brand new, cost £800. Will accept £650 o.n.o. Ring Robert. 0761 453716.

● **PC COMPATIBLE** shareware and PD for sale or swap. Send list or SAE to: 543 Longbridge Road, Barking, Essex, IGII 9DA.

● **750** +770 PC programs/files in two shareware packs, £12. £16 inc p+p. All the standards. Tel; Paul Trainer on (0532) 498985. Post cheque/P.O. 1 Montagu Gardens, Oakwood, Leeds, LS8 2RN. Phone evenings only for details.

● **GENUINE** IBM 286 AT, colour CGA 51/4", 31/2" drives 20 meg hard disk, mouse, 1P/15, 1 meg Ram card (exanpadable 2 meg). £550 o.n.o. 0752 267346.

● **AMSTRAD PC1640** DD, Hercules monitor, Locoscript PC, only two months old, Light Use, upgrading £300. (Will have to collect from Chelmsford area). This is a bargain not to be missed! Phone 0245 32089.

Upgraded from C64 to PC or AMIGA ?

● Use your old C64 printer ● Read your old disks

Our interface cable and software connects C64 peripherals to any IBM PC Compatible or Amiga except the A1000 - Attached via parallel printer port.

● Use MPS, DPS, VIC, Star, Brother, Seikosha and Citizen printers
● Epson graphics output on dot-matrix printers ● C64 Not required
● 1541 file transfer program ● Fully MS-DOS/AmigaDos compatible

Standard "Ami-64-Link" **£35.25** "CBM-PC-Link" **£35.25** (State disk size)
Budget* "Ami-64-Link" **£23.50** Prices include VAT and delivery

** Budget locks Amiga during printing, no performance lost with Standard*

Access **York Electronic Research (0904) 610722** VISA
The Paddocks, Jockey Lane, Huntington, York Y03 9NE

ARROW PD (formerly Scotsoft International PD)

6 Kents Orchard, Perry Street, South Chard, Somerset, TA20 2QB

PD SOFTWARE FOR THE ATARI ST(E) RANGE

"THE ULTIMATE COLLECTION" £4.99
4 disk collection containing the Opus Spreadsheet, DB1 database, Gemini desktop and much more - 4 D/S disks
ST FORMAT "GOLD" (93%) May 91 - *"What a collection!"* NCE 125

Send an s.a.e. plus a blank disk or £1 now for disk catalogue detailing 450+ disks of the best PD!

● **AMSTRAD PC1640** EGA monitor 30 Megabyte har disk 51/4" floppy drive, mouse, £600 o.n.o. Phone Paul 0474 872777.

● **AMSTRAD PPC** 640s complete, boxed, £239. Protext CP/M+ version, £29. Protext Office CP/M + version, £15. The Amstrad CPC6128 colour £199. Offers considered. Telephone 0536 712068 (Northants).

★ HIGH QUALITY ARTWORK★
and Digitized pictures in GIF format ported from the Amiga. 12 720k disks
£14.99 or £1.50 each.
Phone 0903 210279.

● **PC DISK** drive 31/2" 720K internal drive, new £30 o.n.o., or will swap for 1-2Mb 51/4 drive. Phone Reading (0734) 665842.

● **D-RAMS** for sale, 1 meg x1, £2 each. 256k x1, 50p each. All desoldered and tested (plus p+p). 0752 267346.

● **PPC640D** (not perfect) 4 slot expansion box, 40 meg hard card, £140 each. Will split. Call 071 622 6078.

● **PC COMPATIBLE** 33MHz +64 cashe super VGA hard drive, 31/2+ 51/4" drives, 4 meg of memory, monitor. Worth £1600. Sale for £1100 o.n.o. Only 4 months old. Phone Leigh, Bristol. 637102.

◆ 8-BIT

● **WANTED** 48K Spectrum and 31/2" DSDD disk drive with Interface, please write to K Snowdon, 6 Glebe Terrace, Dunston, Gateshead, Tyne And Wear, NE11 9NQ.

● **AMSTRAD CPC464** colour monitor with software, magazines and desk. £160. Buyer collects. Phone (0282) 862610.

● **C64+4** boxed games, joystick, datasette etc, also C64 bits, datasette adaptor, joysticks. Offer or exchange + cash. BBC Master. Colin 0704 533397.

● **FOR SALE** to fit CPC464 Silican disk, £75. 256K memory expansion, £55. 6128 Rom, £30. Phone 0983 882197.

● **GENUINE** Amiga software for sale.The Works Platinum, £50. Various games for list and prices, call 0506 (Livingston) 35406 evenings.

● **AMIGA A1500** CDL, 5 meg RAM, 20 meg hard disk, Work Bench, Kickstart 1.3/2.0, lots of extras, £850. Tel: 0253 724607 (Blackpool).

● **AMIGA PD** 35p/disk. Catalogue disk with PD 70p. Chris Jackman, 3 Albion Terrace, Lexham Road, Litcham, Kings Lynn, Norfolk, PE32 2QQ.

● **A500**, 1Mb, 2nd drive, monitor, Work Station, Sound Blaster, Syncro Express 2, magazines, manuals, software, excellent condition. Boxed. Phone David (Uxbridge) 0895 271815.

● **AMIGA A500** with upgrade, external drive, joystick, Publishers Choice software plus games, extended guarantee. Phone 0543 577819. Staffordshire. £420 o.n.o.

● **ORIGINAL** games. £10 each. Xenon-2, Bloomoney, Shadow Of The Beast, Wings, Lord Of The Rising Sun, Chrono Quest, Populous. Phone Gan (0734) 391552 evenings.

● **ORIGINAL** games. £5 each. Batman, Marble Madness, Teenage Mutant Queen, Xenon, Zoom, Tanglwood. Phone Gan. (0734) 391552 evenings.

● **COMMODORE A1040** disk drive, £35. Miniscribe SCSI hard disk, £50. Datachat v23 modem, £20. MIniamp 2 speaker, £12. Phone Gan (0734) 391552 evenings.

On-line

A breakthrough in MULTI-PLAYER entertainment
Got a modem - Join instantly!
Playing now,
the award-winning adult space fantasy **FEDERATION II**
Flying now the Multiplayer 3D combat flight simulator **AIR WARRIOR.**
COMING SOON....The original, the legendary, the classic **MUD**
FREE Membership as a special introductory offer.
LOG ON NOW TO FIND OUT MORE CALL **081-539 6763**
642a Lea Bridge Road London E10 6AP

EXPRESS SALES

● **RE-RUN** user group, for all 8-Bit computer owners. Send SAE for details to: Re-Run, 1 Northholme Close, Grays, Essex, RM16 2NX.

● **FREE!** Helpline for CPC range. No problem too small. Write to Chris. 6 Frank Street. Great Horton. Bradford, BD7 3BT. Enclose SAE.

● **FLEET STREET** Editor Publishing little used. £20. Tel: 0457 763817.

● **MAXAM II** Macro Assembler CPC/PCW not used. £20. Tel: 0457 b763817.

● **AMX** mouse, Desktop Publishing for CPC (disk), little used. £40. Tel: 0457 763817.

● **BBC B** with colour monitor, twin 80 track disk drives, twin joysticks, extension Rom socket, manuals. £200. Also 7 years Acorn user. Magazine, excellent condition. £40. Phone 0908 664538.

● **EXCELLENT** condition Spectrum +3, ideal for young enthusiast, very nice condition with mouse and various extras, only £180. Phone 0605 49339 (David).

*Absolutely **ALL** hardware, software, games and consoles wanted for cash or exchange. Absolutely **NONE** refused (also vast selection on sale)*
Bring or send by post with S.A.E. for cash to:
Music & Video Exchange
(Top Floor) 64 Notting Hill Gate, London, W11
Tel: 071 727 3538

● **MAXAM II** Macro Assembler CPC/PCW not used. £20. Tel: 0457 b763817.

● **SPECTRUM +2**. PSU, manuals, over 100 pounds worth of games, joystick, £100 the lot. Phone after 8pm. (0227) 720598.

● **MASTER 41** 51/4inch disk drive good condition. Commodore 64 and/or cassette deck, Star NL10 printer C64, action replay cartridge. Offers please for any bits. Tel: 0689 823688.

● **SPECTRUM +**, excellent condition, still in box, portable television, 2 data recorders, over £1000's worth of software, Light Pen, worth over £500. Will sell for £200. Phone 0908 643189. Ask for Andrew.

● ***BBC B*** computer, £120. Olivetti JP101 spark jet printer. £80. Buyer collects. Phone 081 472 4335.

● **C64** +1541 MKII + datasette + £400+ of disk tape software, 3 games, carts + Action Replay MKV1 PD disks. Bargain £230 o.n.o. Will split. Mark, 60 Adam Gardens, Rotherhithe, SE16 4JG.

● **FIRMWARE** Soft 968, £15. Devpac by HighSoft, £10. Tel: 0457 763817.

● **DD-1** disk drive for CPC464, some software eg, Rainbow Islands, blank disks, manuals, excellent condition, bargain at £70 o.n.o. 0480 61253.

● **AMSTRAD CPC 6128** CTM 644 colour monitor, joystick, software, manuals, £199. CPC 464.664.7128 Firmware Guide Soft 968, £10. Tel Kettering 0536 712068.

● **AMSTRAD CPC6128** with colour monitor, soeech synthesizer, Light Pen and over £400 worth of games. £300. Phone (06333) 66134.

● **TOSHIBA** MSX/HX10 with data recorder, joystick, manuals, games, £30. Tel; 021 744 5871.

● **ATARI 800XL** 1050 d/d, printer interface, loads of disks and books. £150. o.n.o. Phone 0538 753137.

● **SPECTRUM** 48K , cassette recorder, software, magzaine, books, manuals: £50. MGT + D disk Interface and disk drives, plus manuals and software. £50 or £90 the lot! (0865) 724349. Buyer collects (Oxford).

● **BBB C**, twin dual disk drive, joystick, Wordwise Rom, Replay Rom, printer cable, loads of software, loads of magazines, excellent condition, £200. Phone 021 308 4775.

● **SAM COUPE** 256K Ram disk drive, manuals, mind games, 1 & 2 programs on disk and Spectrum, tapes plus Format magazines and disk box. £150. Phone 081 313 9445.

● **WANTED** MP1 modulator (for Amstrad CPC 464). Tel: 061 797 0179.

● **MIDI INTERFACE** for CPC 6128, sequencer software. £50. Amstrad CP/M assembly language manual. £4 plus other books. Tel 0202 571410.

● **CPC 464** colour monitor with joystick, 30 games, excellent condition and has not been used much, gone off computers. £150 o.n.o. Tel: (0621) 741634.

● **COMMODORE 64**, cassette recorder, mouse, joystick art package and games. Excellent condition, bargain at £100. will separate. Tel: 0454 316263.

● **PANASONIC KXP-1124** 24 pin printer in perfect condtiion., £150. Telephone 081 422 9099.

● **STAR LC200** colour 9 pin printer, superb paper handling and parking facilities, will demonstrate, with parallel loads, and original box, still guaranteed. Spare ribbons, £150. (no offers). Bought inkjet. 0707 334289. 0860 374783 Welwyn Garden City, Herts.

● **COMPUTER** concepts, laser direct Qume, £800. Less than a year old, original toner/drum, suits Archimedes, only. Call Glenn. 0932 567614.

● **EPSON** LQ500 printer, excellent condition. £185. Tel: Chris on 0285 821543.

● **AMSTRAD** computer user, 30 issues between Feb 99 to June 91. Also Amstrad Action Nos 52,54, 55, 56, 58-70, includes cover tapes. £10. Amstrad Action £25. ACU o.n.o. Write to: J. Blackham, 5 Turnstone, New Barn, Longfield, Kent, DA3 7NR.

● **ELECTRON** hardware for sale, send SAE to Darren, 38 Camrose Walk, ST Dials, Cwmbran, Gwent, NP44 4NN. Phone 0633 871742 evenings only.

◆ MODEMS

● **WANTED** inexpensive modem for Amstrad PCW. Phone James on Norwich 0603 31275, between 9am-6pm. Leave message or in evenings 6pm-9pm on same number.

● **TANDATA** TM722, Auto-dial, etc, Auto-Detect, 1200, 2400DPS, cables and instruction manual, harly used, excellent order. £99. Phone 021 777 8808.

K-RAM COMPUTERS

16B Fairmount Road
Bexhill-on-Sea
East Sussex
TN40 2HN

AMIGA PD DISKS

GAMES

GA040	Cubulus - Puzzle Game by Agatron
GA042	Advanced Lode Runner - 64 Classic
GA046	Atic Atac - Spectrum Classic
GA047	Legend Of Lothian - Ultima Style

DEMOS

DE150	Decay Simpsons Demo - 1Meg
DE151	Phenomena 91 Demo - Brilliant
DE156	VIZ Crap Jokes - 2 Disks
DE167	Devils Labyrynth Demo

UTILITIES

UT104	Speedbench - Fast Replacement
UT114	Anti-Flicker - Cures Interlace
UT116	Windows Bench - 2 Disk PC Look
UT118	K-RAM Disk 11 - Inc. NUKE!!

ACCESSORIES

10 3.5" DSDD Disks + Labels	5.00
3.5" Head Cleaner Kit	2.99
512K Ram (Full 16 Chip)	29.99
512K Ram + Clock (16 Chip)	34.99
Amiga Dust Cover	2.99
External Amiga Drive	59.99
Monitor Dust Cover	5.99
Quality Mouse Mat	2.99
Squik Replacement Mouse	16.99

1-5 Disks £1.25 each
6 + Disks 99p each
(2 disk PD is charged as 2 disks)

Full catalogue disk £1.00. Cheques payable to 'K-RAM Computers"

SELF ADHESIVE COMPUTER DISK LABELS

DISK LABELS - 3" & 3½" Disk, 70 x 70mm, on tractor feed backing for computer overprinting, White: 500 - £18.88, 1000 - £26.19, 2000 - £31.30. Tinted labels in - Blue, Pink, Grey, Cream, Yellow, Orange, Green: 500 - £25.53, 1000 - £36.43, 2000 - £50.95.
5¼" Disk, 95 x 36 mm, White: 500 - £15.74, 1000 - £21.36, 2000 - £25.27. Tints as above: 500 - £20.87, 1000 - £29.25, 2000 - £40.40.
DATA LABELS - printed with horizontal ruled lines for data disc labelling of both 5¼", 3" and 3½", these labels are coloured red, green, blue or old gold, and can be supplied in single colour or four colours along the roll, perforated between labels. **5¼"** 1000 - £25.35, 2000 - £32.81, 5000 - £57.34 **3/3½"** 1000 - £31.30, 2000 - £41.48, 5000 - £62.22
All prices are inclusive of VAT & carriage.

We are specialist computer label makers and can provide printed labels in 24/48 hrs. For price list and sample brochure of our full range of self adhesive micro computer labels plus details of excellent quantity discounts.

Sittingbourne (0795) 430792 / 428425 (24 hrs) Fax: (0795) 422365

Industrial Process SELF ADHESIVE LABELS **SUPERFAST**

Unit 15
Church Road
Business Centre
Sittingbourne
Kent ME10 3RS
England

◆ MONITORS

● **ARCHIMEDES** monitor. Amiga, ST, PC compatible, H/V stretching, H/V positioning, green screen option, fully boxed. £195. 0964 613027 evenings. Oliver Marshall.

● **WYSE 650,** VGA colour monitor, cost. £500. will accept £300. Call Paul 0602 206382.

● ***SWAP*** realistic 200 channel AM/FM radio scanner for colour monitor, prefered Philips 8833. Will collect if possible. Cash adjustment. Tel: 0639 844105.

★ ARCADE 24"★
Colour stereo monitor. Works with Amiga and most games machines. £150 includes speakers and cables.
Rochdale 0706 341272.

● **PHILIPS** colour monitor, model CM8533, good conditon with cable for Amiga, £135 o.n.o. Telephone 0925 755316. Cheshire area.

● **PHILIPS** green monitor 80 12" screen, £20 o.n.o. Commodore 16 plus 4 games, £15 Vic 20. Offers reading 0734 665842.

● **MICROLINK** modem for C64 or Atari ST, £70. WS2000 modem for C64, £70. Andy Smith, 12 Castlegate, Penrith, Cumbria.

● **DATACHAT** v23 modem, ideal for processing Prestel, CIX, speedling, etc. £45 o.n.o. Call Gary (0604) 863191 evenings.

★ FAX MODEM 9600★
2400 internal send/receive. New, boxed, unused with software, compatible with Winfax £150.
Phone Angus 0232 862237

◆ CONSOLES

● **SEGA MEGADRIVE** with Sonic hedgehodge game, 2 weeks old. £95 o.n.o. Sega Game gear with 4 games. £100. Tel: 0922 404023.

● **ATARI** Lynx, P.S.U., Complynx, games, headphones, batteries; recharger. I need the money so only £100. Phone Peter on 0733 233314.

● **ATARI** Lynx (white) with power supply, California Games, Pouch, £50, also Rygar, Zarlor Mercenary, Robo Squash each, £15. Phone Paul 0474 872777.

● **BBC** model B + view 40-80T drive, £200. Elcetron inc +1 interface. recorder, £40. Spectrum j/s interface, recorder, £30. Phone Peter 081 841 5076. West London.

● **ATARI** 8-Bit magzines, Analog, Antic, Page 6, Atari User. All in excellent condition. Anyone out there interested? Phone 0268 752825 evenings.

● **SPECTRUM 48K** ZX printer, twin microdrums, loads of games/serious software. £80 o.n.o. or swap for Atari ST disk drive or printer. Phone Ian 0572 813387.

◆ PRINTERS

● **STAR LC10** colour 9 Pin printer with cable. 1 year old, very good condition, selling to upgrade to laser printer. £140 needed. Contact Matt Drakard at Milton Keynes. 0908 670816 after 6.30pm or leave message anytime.

● **AMIGA** compatible printer wanted, must be cheap (around £60). Condition not important, just as long as it works. (0323) 26790.

Sharow Electronic Supplies

COMPUTER SALES - REPAIRS
Access/Visa most welcome
Phone us on 0765 607887 anytime

TOMSOFT P.D.

RSI Demo maker package (6 disks) only £6
Disks for 90p (+ 50p P&P)

All great titles including..... CHUBBY BROWN, JAZZ BENCH LUMBERJACK SONG (2 DISKS)

For further information send 50p (+50p P&P) for catalogue disk to....

Or call
0222 862890

TOMSOFT P.D.
31 Trevelyan Court,
Caerphilly, S. Wales

(Cheques & Postal orders made payable to: G. Callaghan)

SAM COUPE AND SPECTRUM MAGAZINE!
PROGRAMS, UTILITIES, INFO IDEAS! NEWS, REVIEWS AND HOMEGROWN SOFTWARE
"OUTLET"
GRAPHICS, AND HELP PAGES, SERIOUS SOFTWARE MONTHLY SINCE 1987!
SPECIAL OFFER! Latest issue.£2.50 to newcomers on:-
+3, DISCIPLE/+D, MICRODRIVE, OPUS, TAPE, SAM DISC
CHEZRON SOFTWARE, 605 LOUGHBOROUGH RD., BIRSTALL, LEICESTER LE4 4NJ

EXPRESS SALES

◆ SOFTWARE

● **BBC SOFTWARE** disks: Play It Again Sam 13, The Empire Strikes Back, The Living Daylights, Return Of The Jedi, Strykers Run, Beebug Members disk, Turtle Logo, Lets compute club disk. wanted: Superior collection 2. Tel: 0762 881366.

● **SPECTRUM** software, many titles including Robocop 2, Narc, Midnight Resistance, Batman, Turrican, Shadow Warroiors, 20 mostly full price games for £30 o.n.o. Ring Wolverhampton (0902) 25813 and ask for Parwaz.

● **ATTENTION** all members of Burman PD! It has changed for the better! For details and an updated catalogue, return the catalogue disk with a stamp or an order! You'll like what I've got. R. Burman, 41 Pinner Park Gardens, Harrow, Middlesex, HA2 6LQ.

● **SHAREWARE** for PC AT £1/disk. Send disk and SAE for list to T. Wishart, 3 Berwick Road, Port, Glasgow, PA14 5QN.

● **SEQUENCER** one (ST), £40. Gajits Companian (Amiga), £40. Quartet (Amiga), £20. Ten assorted Amiga games, £25. Phone Jeremy on 061 969 2991.

● **AMSTRAD CPC** games for sale, new and second hand. Phone (0782) 658708. Also Atari Lynx, £55 o.n.o. Phone (0782) 659106.

● **BBS** host software for basic Master to run you own Viewdata BBS for details ring Genuis BBS on: 0226 340425 24hrs. Viewdata key *host#, when online for information.

● **PC SOFTWARE** Amstrad Accounts Master, £15. Amstrad Pay Master, £15. Money Manager PC, £15. Phone Robin after 6pm on 0228 32150.

● **ST GAMES** for sale, all originals. Prices £5 to £15. Phone Trevor on 081 471 0584.

● **PC SHAREWARE** £1.25 per disk for list. SAE to: Kevin Martin, Flat One, 28-34 New Road, Portsmouth, PO2 7RB.

● **WANTED** for IBM-PC digitised sounds for mixing. Call Paul 0602 206382.

● **APRICOT** XI software required. Anyone interested in starting an Apricot XI Club? Please write to Mark, 81 Toorack Road, Harrow Weald, Middlesex, HA3 5HS. Hardware + manuals also sought.

● **LOADS OF GAMES** for sale for Amstrad CPC, disk also Multiface II, £25 + Sprites Alive (computer version). £10. Ring Steve on 0208 812236.

● **FRACTAL** and science fiction clip art for IBM's. Large SAE for details. A. J O'Conner, 310 Cooks Lane, Kingshurst, Birmingahm, B37 6NF.

● **WANTED**: MSX games and serious software. Anything considered. Tel: 061 799 1813 evenings.

● **AMIGA** games sell/swap 200 games, original boxed, titles, big collection to choose from. Send SAE, 13 Bournville Lane, Birmingham, B30 2JY.

● **WANTED** printer driver for H.P. Paintjet XL for Mac computer. Tel: 061 681 7494. Ask for Tony.

● **SEGA MEGA DRIVE**, cartridge, John Madden Football, unused prize. As I have no mega drive. A1 condition. £30. 0389 58050.

● **ATARI ST** original software for sale, all boxed. Cheap prices. Phone Chris on 061 788 8386 for more information weekends after 5pm, weekends anytime. Also wanted Rainbow Islands on the Sega Megadrive. Cash waiting.

● **AMSTRAD CPC** software, all top titles, all for just £3 each, or full list write to Wayne at 52 Cross lane, Radcliffe, Manchester, M26 9GY.

● **FIVE** of the best PD only, £2.50. All latest verisons from extensive list. J. Cardall, 3 Moorend Avenue, Chemsleywood, Birmingham, B37 5SD.

● **AMIGA** Page Setter 2, £15. Quartet, £15, Deluxe Music Con, £15. Photon Paint 2, £10. Deluxe Paint 2, £15. Yamaha PSS 790 midi keyboard, cost. £200. As new £130. Phone 0827 51738.

● **HAS** anybody got a copy of the following (for Amiga). Jet Set Willy, Chuckie Egg, or Manic Miner. Send details + price wanted to Mr S. Thibeault, 21 Keswick Drive, Bury, Lancs, BL9 9LT.

● **NEC PC8201A** Lap Portable computer with extra 16K memory, mains adaptor and BT approved answercall MM 100/UK modem. All very good condition, with manuals, cables etc. £110. Phone 0272 834610.

● **ARCHIMEDES A310** Riscos, 20Mb hard disk, colour monitor, 2 slot backplane software, manuals, and books. £750 or best offer. Contact Wayne (0703) 243358 after 6pm weekdays (Southampton).

● **ATARI ST** basic revised edition with source book and tutorial boxed as new. £10. 21 Zero magazines with cover disks, £20 or offers. Tel: 0773 747987.

ENTERPRISE DISKS LTD
9, East Silvermills Lane, Edinburgh, EH3 5BG
Tel: 031 557 4237 Established 1988

3.5" Disk - 880K - Guaranteed error free
32p.
All disks are individually wrapped, pin numbered and come complete with labels.
3.5" Disks - 1.4 meg - Sony bulk
65p.
A500 - 16 chip upgrades ½ meg £22.50, with clock £27.50.
Cumana A500 external drive - the best!
£60.
STE Simms 1 meg £30 ½ meg £17.00.
Amiga ST Dust Covers only £2.95.

All prices now include everything - what you see is what you pay - same day dispatch.

◆ OTHER

● **WANTED** HAM-E system for Amiga. CCTV lens (not 8 wide mm 16mm) wanted. Vidi chrome wanted. 40 meg + hard drive with interface wanted. Handheld colour LCD TV 2" + wanted. Cash on delivery only please, will pay postage. Steve (0628) 72275.

★ URGENTLY REQUIRED★
Sinclair QL service manual.
Phone John Lawrence 071-583-5533
(24 hrs)

● **YAMAHA PSS-580** midi keyboard, midi in midi out, 100 voices, stand, power supply, manuals. Boxed as new. £75. Tel: 0203382477.

● **EXCHANGE** DF1 HS3000 hand scanner for 8-Bit VGA card and hand held VGA monitor. Phone 091 2372329 after 2pm.

● **ROLAND EP3** Digital piano, midi equipped with integral speaker, five towes, unwanted prize (proof available), worth £299. Yours for £249. Reason , saving up for a v-20 Synth. Box unopened to guarantee condition. Robert 081 864 3154.

● **YAMAHA PS12-37** full size midi keyboard, full midi spec 100 voices and oval voice function inc over £30 of tuition books, bargain. £150 o.n.o. Phone 0602 505356 after 6pm. Buyer collects Nottingham.

● **AMIGA** utility disk, full of all the best utilities, eg Powerpacker, Conmaster Sid etc, only £1.50, including postage and packing, and disk. send cheque to: M. Butierworth, 34 Paston Road, Mundesley, Norwich, Norfolk, NR11 8BW.

● **UV ERASER** wanted with timer if possible, cash waiting. Also information on stag PP39 programming required. Tel Pete (0322) 662747.

● **WANTED** information on how to write viruses for ST's and PC's, or some kind of DIY virus kit. Write to Patrick Gasden Jr, 72 Station Road, Petersfield, Hants, GU31 4AH.

● **MEGABIT!** The new console Fanzine for Gameboy, Super Famicom, Megadrive, Nintendo, Gamegear, Master System, PC Engine, news, tips, charts, everything for console owners! Send SAE to 2 Bridge End, Billington, Nr Blackburn, Lancs, England with cheque/P.O.95P.

● **WHY** are console charts so expensive, do you have unwanted charts in the house? Swap them! Join console exchange. (All consoles catered for) B1 monthly news letter. Send cheque/P.O. to P. Gray, 34 Bourn Lea, Shiney Row, Tyne And Wear.

● **3 DATA** switch boxes: 1A;IB;IC and IA;IB and Aa Bb;Ab Ba types. £15. Cables made to suit your perripherals at costs. Phone 0925 754816.

● **SINCLAIR 48X** Spectrum, requires repair, £10. Interface one requires repair, £10. Microdrive unit working, £7. Sinclair Spectrum +3 Multiface three, £15. Deluxe Paint II for Amiga £7. Tel: (0908) 611070 after 6pm.

● **WANTED:** Dead QL or QL Outfit. Tel: 0760 755402.

● **SUPRA HOST** adaptor in excellent condition, includes manual, lead software etc. Unsed item. Also DTP books for sale and Mac bible, all in mint condition. Phone Eves. Tel: (0256) 843690.

● **FIVE** hand held games for sale: Mad Fighter, Ghost Catcher, Zelda, and a fast fingers game. If you are interested write to Tyoek Yin, 16 HIgh Street, Grimethorpe, Barnsley, S. Yorkshire, S72 7LS.

● **POWER CARTRIDGE** C64 version plus program teaching books, also on tapes, loadsa games disk/tapes. £45. 0703 893566. So'Ton.

Let this advertising space work for YOU!!
For only £61
Contact Charlie Nicholls on
0225 442244

● **BURMANS PD** has changed! You can still get PD for 40p but just 65p 1'll supply the disk! Send a disk and stamp tp Burmans PD, 41 Pinner Park Gardens, Harrow, Middlesex, HA2 6LQ. Do it today!

● **FOR SALE!** New soft for C64, Amiga, Atari-ST, PC. Order our booklet (includes lists and instructions) for free. We send it in 24hours. Write soon to: P.O. Box 44 in A1165 Vienna (Australia).

● **YOU** want new stuff for you computer: (C64, Amiga, Atari-ST, PC). Order our boklet (lists and instructions) for free. Write soon to: BGC, P.O. Box 44 in A-1165 Vienna. We answer into 24hours!

● **SPECTRUM +3** software for sale. For list phone Steve 0782 612393, also part exchange my Akai video for Amiga modem, hard drive etc.

● ***THE POWER PD*** disk catalogue is now up to version 1.2 so send £1 to: 25 Windmill Way, Reigate, Surrey, RH2 OJB.

● **STEN#6** now out! Send an SAE and a disk for your free ST disk magazine. Sten: 49, Haylett Gardens, Surbiton Crescent, Kingston, Surrey.

● **WANTED** CPC disk verison of Giants and Gold Silver Bronze collections. Contact Carl Surry, 37 Fairfield Way, Barnet, Herts, EN5 2BQ.

● **WANTED** Pagestream v2.1 complete \with manuals for use with Amiga. Telephone 0925 755316.

● **WANTED** ST Format, cover disks without magaiznes. Phone Graham. Nottingham. Tel: 0602 625649.

● **SPECTRUM+ 2** games for sale. Prices range from £2 to £6. All new titles, send SAE for list to Keith Moore, 95 Moses Street, Liverpool, L8 4SY. (P.S: all originals).

● **AMIGA GAMES** for sale, all originals, Railroad Tycoon, F15, Eagle 2. F19, Stealth fighter, £15 each or £40 the lot. Write to SImon Law, 88 High Strret, Credition, Devon, EX17 3LB.

● **ALL FORMAT** software exchange, buy/sell/swap software through our regular list. SAE for details. N.H.C.U.G, 10 Harrington Road, Stockton, Bristol, BS15 8LD.

● **DRT'S** copyist apprentice music editing and transciption and printing program, good condition, easy to use in mint condition, original disk and manual. £30 o.n.o. Tel: 0628 36020. Maidenhead.

● **WANTED** lake forest logics disk machine and disk clerk will exchange for my new boxed games, not used. Phone John 0642 315670.

PC SHAREWARE
Over 9000 US/UK based programs at only £2.35 inc VAT per Disk.
Adventure, Card, Arcade, Board Games, Spread Sheets, D Base, W/Processors, Graphics, Animation and lots more.
Send £1.00 for Catalogue Disk stating 5¼" or 3½" payable to:
COMPUTER GAMES SHOP,
UNIT 1, CENTRAL MARKET, SCARROTS LANE, NEWPORT,
ISLE OF WIGHT PO301JD TEL: 0983 821222

● **SWAP MY COMPUTER** illiterate son of 15 years, he keeps breaking my joysticks, for 3 new joysticks. He is strong and good and Speedball. Write: UGS, 22 George Street, ST Mathews, Leicester, LE1 ELP.

● **ST FORMAT** including disks, issues 1-3, 5-7, 7-22. £4.10 each. ST/Amiga format issues 2 and 13, £4 each. Xenon 2 (ST) £9.10 includes postage. Phone (081) 550 7793. Ask for Khalid please.

● **WANTED** manual for Epson LQ500 printer. (Buy, rent or loan). Phone Peter after 6pm. 081 449 0068.

● **TATUNG EINSTEIN** computer system disks, no manuals, CPM based. Offers? Also 1200 baud modem. Please phone 061 9592991. Ask for Jeremy.

● **SINCLAIR QL**, with manual and original software. Also Centronics Printer Interface and data cassettes. Only £70. Contact Sansay. 061 203 4101 daytime.

● **NEW COMPUTER EXPRESS,** issues 1 to 100 complete and uncut, £25. Computer historians: Home computer course, 24part work from early 80's. £20. Features Oric, Memotech, Lynx, Vic-20. (0869) 47656. Oxon.

EXPRESS SALES

● **MINI** pool table game for sale for £10 and Tomy Super Cup Football for £16. Both in good condition, if interested write to: Tyoek Yin, 16 HIgh Street, Grimethorpe, Barnsley, S. Yorkshire, S72 7LS.

● **HELP!** Been trying to track down Text Adventures by Scott Adams, information gratefully received. Steph: 186 Eastern Avenue, Kingsthorpe, Northampton.

● **ATARI ST**, 1 meg RAM, 2 DS/DD Drives, Philips colour monitor, over £1000 worth of software and accessories. £450. (0638) 665194.

● **AMSTRAD CPC** disk drive DD-1 plus 64K expansion pack, excellent condition, only £95. Ring 0543 424813. Ask for Simon.

● **LEARN** how to build samplers, add-on boards etc, with practical electronics magazine from Jan 87 to current issue (two missing) 56 issues, only £25 o.n.o. Ring warren (0424) 712633 evenings. Buyer collects, East Sussex.

● **PC, BBC, ELECTRON**, and Speccy clearout! Software, hardware and books. Send SAE for list to: Mr Warren, 16 New Park Avenue, Bexhill, East Sussex, TN40 1QR. No callers please.

● **AKAI VISEO**, for sale or part payment for Amiga hard drive, scanner 24 Pin colour printer, fax machine or modem. Also Spectrum +3 for sale. Expanded beyond beleif. Phone for details. Steve 0782 612393.

● **ARCHIMEDES**, A310M, Backplane, EMR Sound Sampler, PC Emulator, Acorn DTP, 1st Word PLus 3, Render Bender, Chocks Away 2, + extra. Will split. Phone 061 973 0529 (after 6pm on weekdays).

● **15 BASF** tape streamer cartridges + cleaning kit. £200. Call Paul 0602 206382.

● **WANTED** external modem V22 Bis, Hayes plus any ST software. Phone Steve (0538) 371987. (Staffs).

● **WANTED** Tandy 102 or WP2 noTebook or Z88 up to £100 paid depending on condition and extras. Mr Beed, 72 Hazelton Way, Waterlooville, Hants, PO8 9BT.

● **NINTENDO** games system, nine months old, complete with gun and six top games. All boxed as new, worth £400. Want £250. Phone Norwich 0603 614732. Ask Andrew. Buyer pays postage.

● **ROLAND CM321** sound module, perfect for midi freaks, less than 1 year old. £220 o.n.o. Also Musix X for the Amiga. £20. For full information. Phone Steve on Windsor (0753) 864382.

● **ATARI ST** ballistix boxed original + 5 ballistix, boxed original + 5 blanks disks with labels + 4 ST User disks full of PD. All for £15. Tel 0773 747987.

● **QL + BROTHER** HRS printer in good condition, Supercharge, compiler and Parallel Interface for QL. Full pack of paper for HR5. £90 the lot or will split. Phone 0253 404287 (after 8pm please).

● **FOR SALE** Psion LZ64 Organiser with Thesaurus and spelling checker, power pack and manuals. All perfect condition. Phone 0789 763010.

● **PSION ORGANISER** model L2 (32K RAM) with extra 16K Rampak, leather case + PSU. Brand new (worth over £200). Quick sale, yours for £100. Call eves 0634 723659.

● **HELP!** Been trying to track down old text adventures, by Scott Adams. Titles such as Voodoo, Adventure Land and the Count, on C64. Information gratefully received. Also C64. Contacts wanted. Steph, 186 Eastern Avenue, Kingsthorpe, Northampton.

● **SWAP** Casio Synth Midi Interface compatible plus Atari 7800 console and Oric 1 48K for your modem, V22Bis. Tel: Stamford. 0780 721 806.

● **PSION ORGANISER**, 32K model L2 with extra 16K RAMpak, leather case and PSU. Brand new, cost over £200! Yours for £140. Call (eves). 0634 723659.

● **25 WAY** data switch box, switches serial or Parallel, Serial Peripherals per port, leads made at costs. £10. Phone 0925 754816 after 6pm.

● **WANTED** Z88 or Tandy 102 not book computer Mr P. Beed, 72 Hazelton Way, Waterlooville, Hants, PO8 9BT.

● **TAMIYA** off road avante full race specification, mint condition. (used once). Just needs, 2 channel R/C to complete. Phone 0637 850117. £160.

● **CASIO FX1** sampler keyboard, 16 Bit 8 Timber as new. Contact Mike 0602 602 321, plus Oki Micro Printers. £120 o.n.o.

OCTOBER BARGAIN PRICES THAT CANNOT BE MISSED

AMSTRAD 3" DISK DRIVES, these are cased and with lead and own power supply, bargain September price only **£35.00**

AMSTRAD 3.5" DISK DRIVES, these are again cased and with lead, September price of these **£35.00**

AMSTRAD PSU 13.5v at 1.9A encased and with leads and output plug only **£6.00**

EPSON 3.5" and 5.25" disk drives, these are double sided, double density but uncased but do come with makers handbook. Price **£39.50.**

110 WATT ASTEC PSU, 230v mains operated, outputs of 38v 2.5A and 5v 3A, September price **£6.00.**

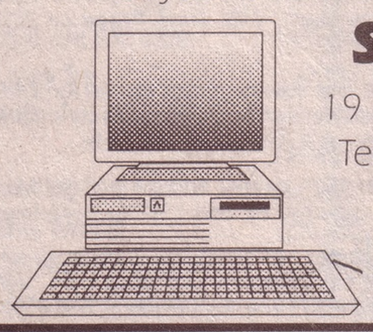
Please add £3.00 postage and package to your order.

M&B ELECTRICAL SUPPLIES LTD,
12 Boundary Rd, Hove, Sussex. BN3 4EH.
Tel: 0273 430380 Fax: 0273 410142. Telephone orders welcome

..... COMPUTERS .....

For probably the best prices and deals on Home and Business Computers, Acorn, Archimedes, Atari ST's, Lynx, Commodore 64's, Amiga's, Amstrad, Star, Citizen, Canon, Panasonic, Sega Consoles, Goldstar. Plus printers, disk drives, monitors, memory upgrades and accessories etc. Great deals on PC's.

* FAX M/C's * ANSWER M/C's * PHONES *
Joysticks from £4.99 Blank disks 5.25", 3.5" 3"



SGM ELECTRONICS
19 Charles Street, Wigan, Lancs, WN1 2BP
Tel: (0942) 321435 Fax: (0942) 821273
Mon-Thurs 11.00am - 9.00pm
Fri - Sat 11.00am - 7.00pm or later
Repairs to most makes of computers

● **WANTED Z88** note book computer up to £75 paid. Mr Beed, 72 Hazelton Way, Waterlooville, Hants, PO8 9BT

● **WANTED** Tandy 200, note book, computer up to £75 paid. Mr Reed, 72 Hazelton Way, Waterlooville, Hants, PO8 98T.

● **WANTED**: computer suitable for word processing, by newcomer. All hardware/software needed. Welcome all offers. Must be cheap. Letter replies only. No phone calls. Charles Trager, 7 Grantley Street, Glasgow, Scotland, G41 3PT.

● **COMMODORE 64/128** 3D Light Fantastic package, including Light Gun, 3D games, utilities etc. Unused £25 p+p included, also Datel 64/128 Midi Interface with Midi cables and advanced music system, unused. £18 p+p included. Tel: (0625) 827033.

● **OLYPUS** OM-40 camera outfit with loads of accessories. A bargain, only £270. Phone 0275 375496 between 9am and 6pm. F. Nord.

● **WANTED**, dead QL or QL outfit. Tel: 0760 755 402.

● **Z88 LAPTOP**, 160K Ram, PC-Link, PSU, carry case, wp, spread sheet, database, 3 months od. Worth £300, offers to Howard 0992 461757.

● **AMSTRAD PCW:** Desktop Publisher software. £15 o.n.o. issue 7, 9 and 33 "8000 Plus" magazine. £2.50, including postage Sega Master games, £15 to £20. (cost £25 to £35, originally). Excellent condition. Tel: Luton (0582) 480887.

● **AMSTRAD PCW** 8256 complete + good working order, including printer + software + covers. £200 o.n.o. 081 808 0773.

● **DISK DRIVE**, 3 inch, £10. Tel: (0482) 440148 evenings.

● **APRICOT 896K RAM** 10Mb HD, £180+pp. Wanted Xen manuals/paper white monitor, wanted any knackered Xens, swap or cash. Mike 0480 75036.

How to place an advert – for free!

★ New! With! And! Plus! Also! Featuring! Etcetera! ★
Did you know you can now attract the attention of Britain's 25,000 most active home computer users with a boxed out ad? That's right! Just £5 buys you two weeks' space in a box very like this one (though note that the limit's 20 words). Simply fill in the form below, remembering to enclose a cheque for £5 made out to Future Publishing Ltd. Couldn't be easier!
Send your cheque for a fiver to: Shopping Express Reader Ads, 30 Monmouth St, Bath BA1 2BW

■ IF you wish YOUR advert to appear in a box like the one on the left (and how could you not?), THEN simply TICK this box and ENCLOSE a postal order/cheque for £5 made out to Future Publishing Ltd with your advert. NOTE: random use of WORDS in CAPITALS is NOT compulsory. And here comes that box mentioned above. Any minute. Here it is.....❑

Write your advertisement very clearly indeed in the grid below, one word per box:

Tick the category you wish your advertisement to appear in:

❑ ST ❑ PC ❑ Printer ❑ Software ❑ Modems
❑ Amiga ❑ 8-bit ❑ Monitors ❑ Consoles ❑ Other

Those terms and conditions in full...

- **Sorry, absolutely *no* trade ads under any circumstances (please call Siobhan Kennedy-Hall on 0225 442244 if you would like to place a display trade ad in this section)**
- **We cannot vouch for the quality of goods or services offered in this section. All ads are accepted in good faith**
- **We reserve the right to amend or refuse reader ads at our discretion**
- **Don't offer pirated software through these columns, if you value your liberty: FAST is watching!**
- **We can't guarantee reader ads will appear in particular issues of *Express* – but we'll try**
- **Ads appear for two consecutive issues**
- **Please sign the following declaration, which constitutes acceptance of the above terms and conditions:**

My advertisement conforms to the terms above and is legal, decent, honest and truthful

Signed.....

Send your reader ads to:
Shopping Express Reader Ads,
30 Monmouth St, Bath BA1 2BW

■ Please make cheques for boxed out ads payable to Future Publishing Ltd

ALL PRICES INCLUDE VAT & DELIVERY ● EveshamMicros ● ALL PRICES INCLUDE VAT & DELIVERY ●



SUGAR LUMPS!

AMSTRAD'S LOSS - *YOUR GAIN!*

This is your chance to pick up an *INCREDIBLE* deal on Amstrad 2000 series computers with VGA Displays!

	PC2086 S.D.	PC2086 SD/41Mb
VGA MONO	(254.47) 299.00	(424.68) 499.00
VGA COLOUR	(339.57) 399.00	(509.79) 599.00

Full specification Amstrad 2086 models, featuring 640K RAM, with MS-DOS 3.3, mouse and all manuals supplied. Prices indicated within brackets are excluding VAT.

'286 VGA COLOUR FOR ONLY £699 inc. VAT

Full specification PC2286 & PC2386 models, including MS-DOS 4.011, mouse and all manuals. All Colour Models are shipped with Hi-Res Colour monitors (0.29mm dot pitch). 2286 features 12MHz 80286 & 1Mb RAM; 2386 has 20MHz 80386DX & 4Mb RAM.

	PC2286 HD40	PC2386 HD65
VGA MONO	(509.78) 599.00	(899.00) 1056.32
VGA HI-RES COLOUR	(594.89) 699.00	(999.00) 1173.82

Tell your friends - tell the world - but move quickly; once we sell out you may never see such value again!

FREE SOFTWARE

We have secured a deal with a leading Software company to include :

TOOLWORKS OFFICE MANAGER

***FIRST CLASS* INTEGRATED BUSINESS SOFTWARE, featuring :**

☆ WORD PROCESSOR ☆ SPELL-CHECKER ☆ SPREADSHEET ☆ DATABASE FILER ☆ FILE MANAGER

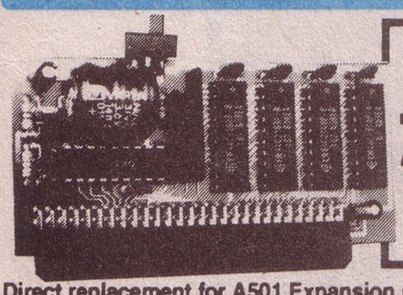
OFFICE MANAGER NORMAL RRP : £51.05 INC.VAT

Plus! Free with all Colour Models: 'TOP 10 SOLID GOLD GAMES'

ALL PC2000 MODELS INCLUDE FREE 12 MONTHS ON-SITE MAINTENANCE

2286 RAM Upgrade to 4Mb ..£ 160.00
2086 Maths Co-Processor .....£ 99.00
2286 Maths Co-Processor .....£ 75.20
2386 Maths Co-Processor ....£ 190.35
External 5.25" Drive (360K) for all models .....£ 49.95
External 5.25" Drive (1.2Mb) for 2286 & 2386 models ....£ 89.95

AMIGA 500 512K RAM/CLOCK UPGRADE



£28.99

also available without clock for only £24.99

Direct replacement for A501 Expansion ● Convenient On/Off RAM Switch ● Auto-recharging battery-backed Clock ● Ultra-neat, compact design

A500 1.5Mb RAM Expansion (needs Kickstart 1.3) **£79.00**

Kickstart 1.3 upgrade available from us for only £ 29.95

CLEARANCE CORNER

All items covered by 12 Months Warranty

GOODS CONDITION: *N* = New *S* = Shop Soiled

Amstrad PC1512 DD with Colour Monitor	£249	S
Amstrad PC1512 (5.25" & 3.5" Drives) HD30 with Colour Monitor	£349	S
Amstrad PC1640 HD20 & Mono Monitor	£299	S
Amstrad PC2286 HD40 & 14" VGA Colour Monitor with 1 Year OSM (on-site maintenance)	£649	S
Amstrad PC2286 HD40 & VGA Mono Monitor & 1 Year OSM	£549	S
Olivetti PCS-86 HD20 & 14" VGA Colour Monitor & 1 Year OSM	£719	S
Atari 1040STE	£315	S
Atari 520STE with 1Mb RAM	£269	S
Olivetti CWP-1 Complete Wordprocessing System	£199	N
Philips Colour Monitors	£175	S
Philips TV / Monitors	£199	S
Atari SC1224 Colour Monitor	£199	S
Amstrad FX9600T Fax Machine	£299	S
Commodore A590 20Mb Hard Drive	£249	S
9-Pin Printers (Mono & Colour)	from £50	S
24-Pin Printers (Mono & Colour)	from £150	S
Amstrad DMP4000 15" Wide Carriage 9-pin printers	from £ 75	S

3½" EXTERNAL FLOPPY DRIVES

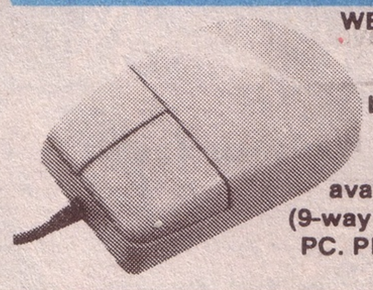


Compatible with the ST or AMIGA

Very quiet ● Slimline design ● Cooling Vents ● Sleek, high quality metal casing ● Suits any Amiga or Atari ST ● Full 1Mb Unformatted Capacity ● Quality Sony / Citizen Drive Mechanism ● Convenient On / Off switch on rear of drive ● Long reach connection cable for location either side of computer

AMIGA VERSION ONLY £51.99 | **ATARI ST VERSION ONLY £54.95**

TRUEMOUSE FOR THE ST, PC or AMIGA



WE GUARANTEE that this is the smoothest, most responsive and accurate mouse you can buy for your PC, ST or Amiga. Excellent performance, amazing low price ! Versions available for ST/Amiga, PC Serial (9-way & 25-way), PS/2 and Amstrad PC. Please state which version you require when ordering.

AMIGA / ATARI ST Compatible Version - Only £17.95

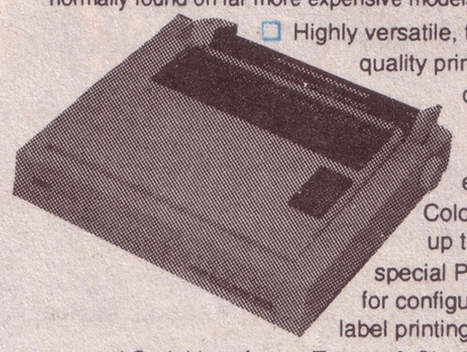
PC Compatible Version - State *Serial*, *PS/2* or *Amstrad PC* when ordering £22.99

CITIZEN PRODOT-24C

Professional COLOUR Printer

A TRUE PROFESSIONAL PRINTER - AT A BUDGET PRICE !

Combining the presentational advantages of advanced COLOUR output with the *superior* quality of Professional 24-pin printing, the Citizen Prodot-24C represents excellent value for money! Handles sustained levels of output with ease, with its high speed and reliability. Features an amazing array of facilities normally found on far more expensive models, yet are supremely easy to use.



❑ Highly versatile, full featured professional letter quality printer ❑ Fast 200 cps output in draft, 66 cps in Letter Quality mode (5 true letter quality fonts) ❑ Full control from easy to user front panel ❑ 7 Colour output; Graphics resolution up to 360 x 180dpi ❑ Includes special ProDisk 24 menu-driven s/ware for configuration, font customisation and label printing ❑ Fast set-up, with Parallel and Serial Interfaces, Tractor & Single Sheet Feed as standard ❑ **Complete with cable & 2 Year Manufacturers Warranty**

Citizen Prodot-24C Normal RRP: £ 746.35 inc.VAT

ONLY £269.00 including VAT, delivery and cable

Citizen Prodot-24C Automatic Cut Sheet Feeder only £89.95

EVESHAM MICROS SPECIAL OFFER - All STAR PRINTERS include 12 MONTHS ON-SITE MAINTENANCE

NEW! Star LC20 supercedes LC10, faster 180/44cps.....£ 139.99
Star LC 200 9-Pin Colour, 4 fonts, 180/45cps ..... £ 209.00
Star LC 24-10 24-Pin multifont, 180/60cps ..... £ 209.00
Star LC 24-200 24-Pin multifont, 200/67cps ..... £ 229.00
Panasonic KXP1124I super-fast multi-featured 24-pin .....£ 279.00

EveshamMicros

RETAIL SHOWROOMS

Unit 9 St. Richards Road, Evesham, Worcs WR11 6XJ
☎ 0386 - 765180
fax : 0386 - 765354
Open Mon - Sat, 9.00 - 5.30

5 Glisson Road, Cambridge CB1 2HA
☎ 0223 - 323898
fax : 0223 - 322883
Open Mon - Sat, 9.30 - 6.00
IBM Dealer ● Corporate Specialist

1762 Pershore Road, Cotteridge, Birmingham B30 3BH
☎ 021 - 458 4564
fax : 021-433 3825
Open Mon - Sat, 9.00 - 5.30

ALL PRICES INCLUDE VAT @ 17.5% AND DELIVERY

Same day despatch whenever possible. *Express Courier* Delivery (UK Mainland Only) £6.50

MAIL ORDER DEPARTMENT

Unit 9 St Richards Road, Evesham, Worcs WR11 6XJ

Access

Call us now on ✆ 0386-765500

Lines open Mon-Sat., 9.00 - 5.30. Fax: 0386-765354
Technical support (open Mon-Fri, 10.00 - 5.30): 0386-40303

VISA

Send an Order with Cheque, Postal Order or ACCESS/VISA card details. Please allow 5 working days for Personal Cheque clearance.

Government, Education and PLC orders welcome
All products covered by 12 Months Warranty
All goods subject to availability.

ALL PRICES INCLUDE VAT & DELIVERY ● EveshamMicros ● ALL PRICES INCLUDE VAT & DELIVERY ●



TECH TIPS

PC programming – the cheap answer to software, get your dead disk up and running, has Calamus got you stumped? Fret no longer – all the answers are here

Just remember this...

When I bought my second-hand PC I made sure I asked the man I bought it from how much memory it had, and he told me two megabytes. When I got the machine home and was reading the manual I discovered that the command CHKDSK shows you how much memory you have – being a suspicious soul I tried it and this is what it printed:

```
21170176 bytes total disk
space
53248 bytes in 2 hidden files
114688 bytes in 52
directories
20606976 bytes in 741 user
files
395264 bytes available on
disk
655360 bytes total memory
600144 bytes free
```

Only 655,360 bytes of memory! Now I don't mind being conned that much, but I do need the memory, what's the best way to fit more?

David Pearce, Winchester

DON'T PANIC DAVID, you may well not have been conned at all! The CHKDSK command only shows the amount of memory which MS-DOS is using, and MS-DOS is limited to the first 640K (or 655,360 bytes) of memory. The rest of the two megabytes may well be tucked safely away inside, but the CHKDSK program would never show them!

So how can you tell if they're there? Well various commercial utilities such as Norton or PC Tools will tell you, as well as giving you a lot more technical information about your machine, but the easiest way is to watch the screen closely when you first switch the machine on. The PC does a memory test, and counts up the memory chips on screen. If the count goes up to 2,024K then the two megabytes are present and correct.

You don't say what you want to do with the extra RAM. If you have a 286 PC you can use it as a hard disk cache, which can seriously improve your disk speed, or as a RAM disk for lightning fast access to small files which you use a lot.

Most programs don't let you use that extra memory however, as they are limited to the same 640K as DOS. The major exceptions are programs which work under Microsoft Windows, which will happily use every last drop of memory you have.

Keen to learn

I have a PC which my father gave me when I started college last month. It's got a word processor on it, but that's about it for software. I'd like to learn programming, but being a student I'm strapped for cash. Any suggestions as to where to start?

I'm a European Studies student, so it doesn't have to be any particular language, if you see what I mean.

Sean Jackson, London E7

SKINT BUT NEED SOME SOFTWARE? Shareware's the place for you my son. This is cheap software, not free software, but it's damned reasonably priced and you get to try it out before you buy.

Most programming languages are available as shareware, but I'll stick my neck out and say go for C. Classic Shareware (☎ 0977 794876 and tell them Tech Tips sent you) offers a C compiler, C interpreter, C libraries (useful files) and even an on disk C tutor for only £1.75 a disk for 5.25-inch disks or £2.25 for 3.5-inch. You still have the shareware fee to pay on top of that, but a commercial C compiler can cost hundreds of pounds so it's a bargain.

Smaller doesn't work

I've recently pulled out the old 5.25-inch second disk drive of my ancient Amstrad PC and replaced it with a 3.5-inch model.

The drive slotted in fine, and the disks I had brought home from work worked fine. But then I tried to format a disk. It seemed to work OK, but came up with "362496 bytes free" at the end, instead of the 700,000-odd I was expecting. What can I do?

James Tomlins, Bristol

OLDER PCS expect disk drives to be

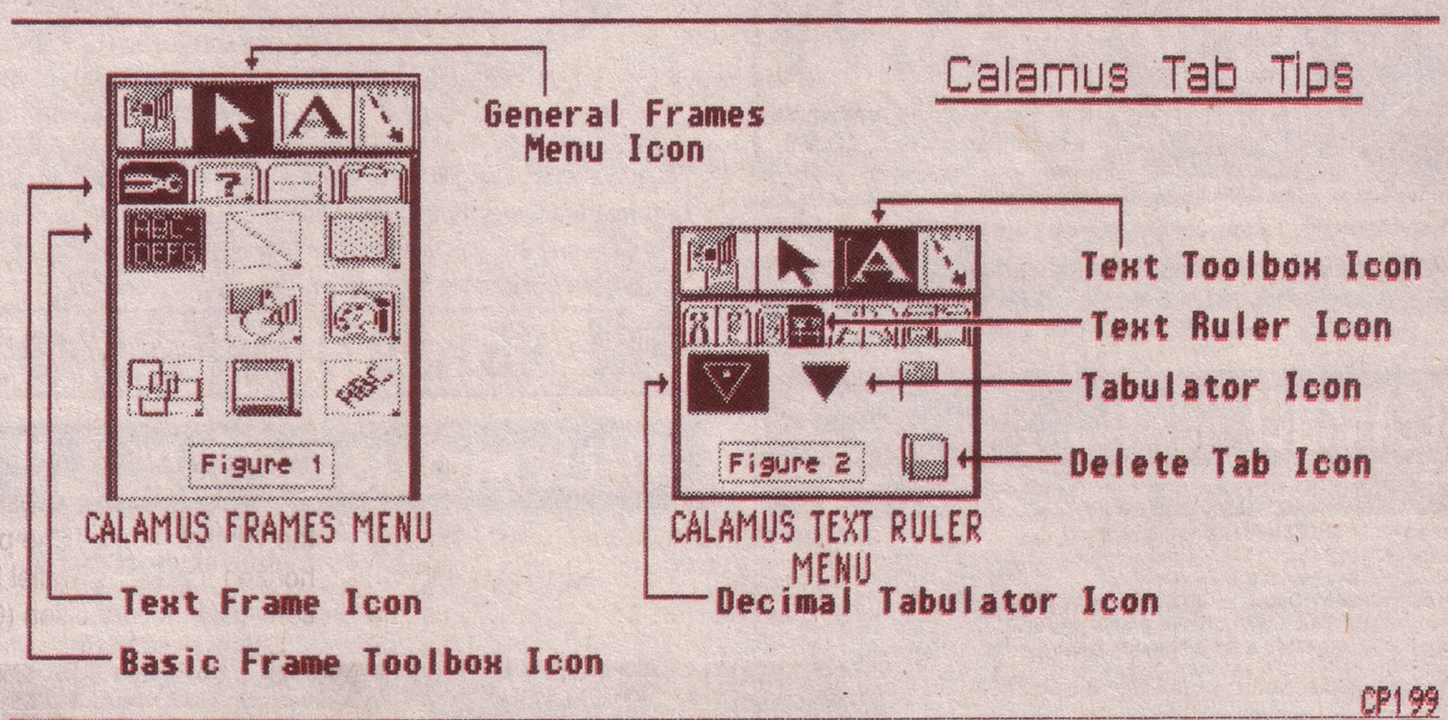
Calamus queries

Help! I cannot find a Hewlett Packard Deskjet 500 Printer Driver on my Calamus Disk.

The only H.P. drivers listed are the HP_LJET2.CPD and HP_LJETP.CPD. Are any of these two drivers compatible with the Deskjet 500? The only reason I ask is because I cannot test them myself as I haven't got the printer as yet.

Also, how on earth do you set 'TABS' in Calamus, it has me completely stumped. Any help or advice would be greatly appreciated. Thanks.

Thomas A R Irvine,
Newtownards, Co. Down



THE H.P DRIVERS supplied with the program are for the Laserjet Series of laser printers. I have enquired with The ST Club PD library, which supplies printer drivers for many ST programs, and they inform me they will work, although rather slowly.

I have spoken to Signa and they have informed me that they have the raw data for the Deskjet 500 driver prepared and the final product will be ready "within a week". They also have a driver for the Canon BJ10e nearing completion as well.

For details Signa can be contacted at Signa Publishing Systems, Alexander House, Station Road, Aldershot, GU11 1BQ. Telephone 0252 370066.

The ST Club can be contacted on 0602 410241.

To the second part of your query, setting tabs in *Calamus*. We will assume that a new document is going to be worked on.

Select the "General Frames" icon (the large arrow) which will bring up the *Calamus* Frames Menu, see Figure one in the diagram above. Select the "Create New Document" option from the "Files" drop down menu.

Now select the "Text Frame" icon and create a text frame of the desired size. Go to the "Text" drop down menu. Select the "Text Rulers" option so that a tick appears next to it. A text ruler will now appear at the top of the text frame.

Select the "Text Toolbox" icon (the large capital A) which will bring up the text toolbox menu. Now select the text ruler icon, which is the forth from the left, which brings up the "Text Ruler Menu". See figure 2 in the diagram above to identify these icons. Select either the "Decimal Tabulator" or the "Tabulator" icon, these are inverted triangles. Move your cursor over to the text ruler and click with the left button where you desire a tab to appear. The tab should now appear as a small inverted triangle on the text ruler. Repeat as many times as you wish to add more tabs. To remove unwanted tabs, select the "Delete Tab" icon and then click on the tab you no longer desire.

Go to chapter 3 of your *Calamus* manual, Text Toolbox. On page 124 there is a section called "Text Ruler Operations". All the information you need to set up tabs is set out clearly in this section.

HELP TV monitor problems

I have just splashed out and bought myself a TV/Monitor and have a small problem with it, any advice you could offer would be gratefully received.

The monitor is a TELEFUNKEN model no. MP-142 M running via a scart socket. I am using a 520ST upgraded to 1 megabyte recently.

The problem is that once the desktop is displayed and a window is full, the screen flickers and scrolls downwards leaving only the top half of the window visible, with a thick black line through the screen.

I have tried changing the display from 50 to 60 hertz which has made little difference. I finally discovered that changing the RGB value of the background colour from white value 7 7 7 to 6 6 7 via the Control Panel solves the problem, with a few exceptions. Any program that resets the palette and uses a large white area on screen is impossible to use. Thank you for your help.

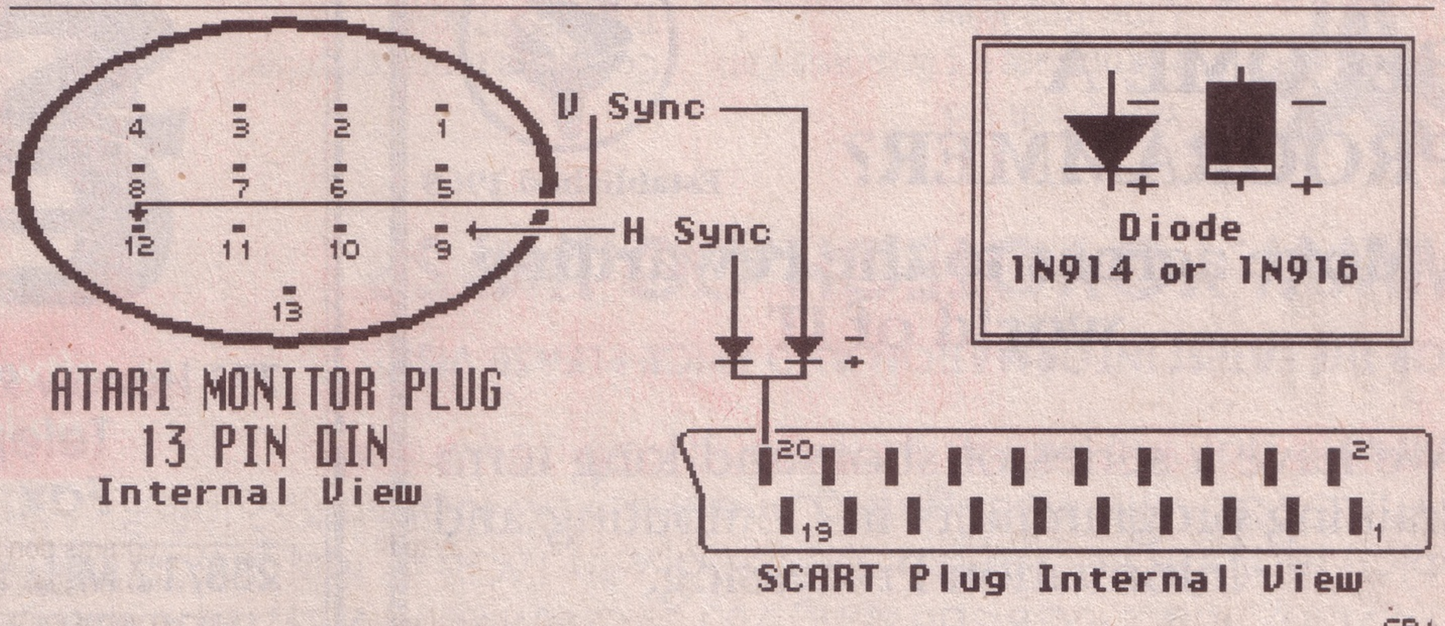
Gary Dunne, Ballymun, Dublin, Eire

THE FAULT SOUNDS LIKE a 'sync problem'. The best thing you can do is to connect two diodes in the ST's two sync lines and strap the cathodes (blocking end) together and feed them to the monitors sync input. Remember that the cathode end of the diodes should be the end connected to the sync input of the SCART plug, to prevent any chance of current flow to the ST from the TV.

This should feed the two overlayed signals to the monitor and cure the problem. See Diagram below.

The sync connections from the ST are pins 9 and 12 from the 13 pin DIN monitor socket. You will have to check the manual for your TV to see which is the sync input on the SCART socket, although the accepted standard for synchronisation input in a SCART RGB input is pin 20, which is normally used for composite video input in normal TV's and VCR's.

Recommended diodes either 1N914 or 1N916 cost 5 pence each from any local electronic store, or available from Maplins order nos. QL71N or QL72P. Maplins are on 0702 554161 sales or 0702 552911 enquiries.



360K drives and you have to override that default. You can do it by adding various flags on to the back of the FORMAT command, but it's better to add a line to your CONFIG.SYS file to tell the PC all about the new second drive. The line goes like this:

```
DRIVEPARM= /d:2/f:2/t:80
```

Add this to the CONFIG.SYS file and all should be fine. You can achieve the same effect with the device driver DRIVER.SYS, but it's a touch more complicated.

Oh, if your interested you can override the defaults of the FORMAT command by typing:

```
FORMAT B: /t:80 /n:9
```

The "t" parameter is the number of tracks, the "n" is the number of sectors per track. You can produce some weird disk formats by playing with command, although why you'd want to I have no idea...

HELP Getting into 3D graphics

For some time now I have been planning to write an Amiga spaceship simulator along the lines of *Star Wars*, but with much more complex game-play. I have the whole thing worked out, and have begun writing it in C, but one thing still eludes me: how do I get 3D graphics?

I realise you can't go into too many details, but I'd be most grateful if you could outline the basic principles. If not, an earth-shattering game may never see the light of day.

Bill Small, Coventry, West Midlands

MOST 3D ROUTINES are built around the concept of vectors. A vector is simply a line, but as well as having a length, it also has a direction. A square is made up of four vectors, each at right-angles to the other two it touches.

There are two ways of storing vectors in your program. The first involves storing co-ordinates (in the form (x,y,z)) for the start and end point of each vector. Then, plotting the shape is a simple matter of going through each of the vectors in turn, and drawing lines between their start and end co-ordinates.

The second method is to store an object as a series of vertices, each vertex being made up of a set of co-ordinates representing its position in space. In this case a second set of data needs to be stored, saying which corners are joined to which.

In the case of a square with sides of length five pixels, the first method would yield a data structure of the sort:

(0,0,0) (0,5,0)
(0,5,0) (5,5,0)
(5,5,0) (5,0,0)
(5,0,0) (0,0,0)

whereas the second would give:

vertices: (0,0,0),(0,5,0),(5,5,0),(5,0,0)
links: vertex 1 to 2, vertex 2 to 3, vertex 3 to 4, vertex 4 to 5

Although convoluted, the second method comes into its own when dealing with more complex shapes, especially when several lines converge at the same corner.

The co-ordinates for objects are all relative to some point within the object, usually its centre. The object must have another set of co-ordinates defining its position in the virtual reality in which it will be moving. This space has three dimensions, so three co-ordinates are necessary. The main problem is in converting the third co-ordinate (z, which represents depth into the screen) into a representation on an x,y screen. This is done by the tried and trusted method of perspective.

Drawing the object becomes a matter of drawing a series of vectors with a line drawing function. Take each of the vectors in turn, adding its relative co-ordinates to the object's absolute co-ordinates. Then divide the resulting x and y co-ordinate by the resulting z co-ordinate. The x,y co-ordinate pair that you end up with is a point on the screen. Care must be taken that z never equals zero, or you'll get a division by zero error. You might also like to multiply the result by a constant scaling factor to get the objects to appear at the size you want for a given z co-ordinate.

This division process assumes that the vanishing point (the point on the horizon to which parallel lines seem to converge) is at position (0,0) on the screen. Since this is not the case, you must also add a screen offset to the x and y co-ordinates BEFORE you do the division. It's usual to make the centre of the screen the vanishing point, so in 320x200 resolution, you would add 160 to the x co-ordinate and 100 to the y co-ordinate.

All of these operations are performed as the object as plotted; they do not affect the data of the object itself, which must remain intact, but are simply a coversion of the object data into screen data.

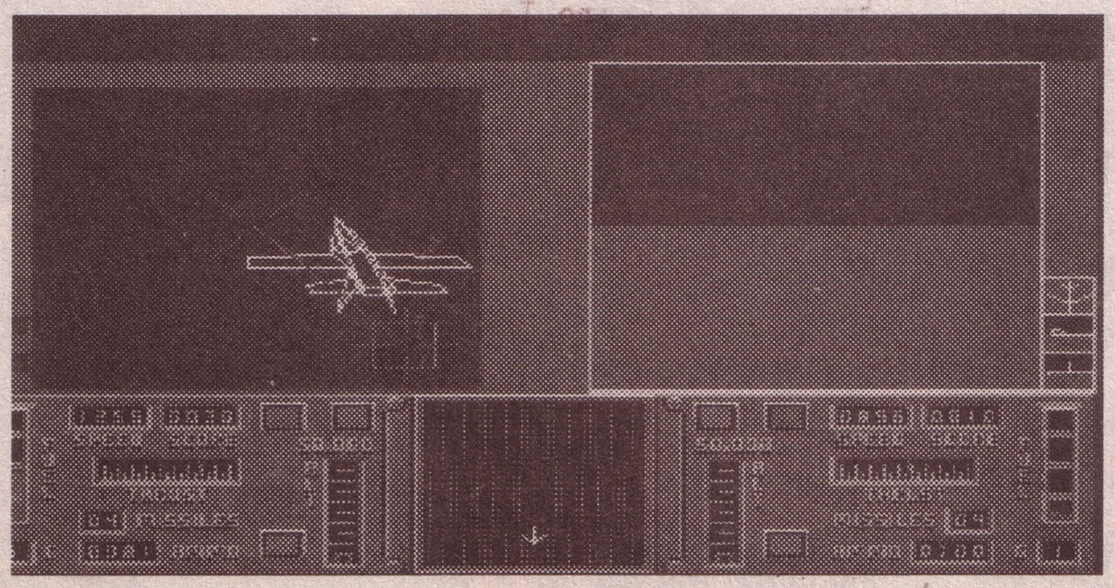
Since the perspective in 3D simulations is usually fixed, whenever the player's spaceship moves, what in fact happens is that the rest of the virtual reality moves in the opposite direction and the spaceship stays where it is, always at co-ordinate (0,0,0). Similarly, if the spaceship rotates in a clockwise direction, then everything on the screen will appear to rotate in an anticlockwise direction.

Rotating an object is performed using some fairly simple trigonometry. You can only rotate in a plane, that is in two out of your possible three dimensions. A rotation of theta degrees in the x-y plane (ie, about the z axis) is achieved by modifying the co-ordinates of all the objects' vectors as follows:

x=x*cos(theta)-y*sin(theta)
y=y*sin(theta)+y*cos(theta)

Note that the x and y values on the right-hand side of the equations refer to the old values of x and y. The objects absolute co-ordinates don't have to be modified at all, since the object has not moved in space, but simply been rotated. Similarly, if the object moves to the left, then its absolute x coordinate must be reduced, but there is no need to affect the relative co-ordinates of its component vectors.

As you can see, there's quite a lot to 3D graphics. I hope that's gone some way towards clearing things up for you. ■



• An aeroplane can be built up by a few simple lines. Hopefully our readers game will be much better than this one – *Skychase*

DO YOU WANT TO BECOME A PROGRAMMER?

Established 1968

Move across to the rewarding world of IT

We have a series of short and long term training programmers in Computing and Information Processing.

* C & G 424/425 Certificate in applications programming.
* C & G 418 Computer Programming & Information Processing.
* Evening courses in DBASE, WP, Spreadsheet Analysis.
* Evening courses in Pascal, BASIC & COBOL.

Contact Central London College on 071-580 4596.

TRAINING FOR YOUR FUTURE

---

future PUBLISHING

Production Sub/Editor

Salary Circa £14K

- launched in 1985
- Now over 220 staff
- 17 national news stand magazines
- Market leader in computer titles
- Exciting launch plans
- Britain's fastest growing publisher

Can you spot a mistake a mile off and write punchy standfirsts, headlines and captions? Do you thrive under pressure? Does heat set web-offset mean anything to you?

New Computer Express needs an experienced production sub/editor with excellent writing skills, desktop publishing (Quark Xpress) experience and knowledge of printing/production methods.

New Computer Express is Britain's best selling weekly computer magazine bringing home computer user readers up-to-the-minute news, reviews and features, so you also need to have a working knowledge of computers.

If this sounds like the job you've been waiting for then send your CV to Steve Carey at the address below.

Future Publishing Ltd., Beauford Court, 30 Monmouth Street, Bath, BA1 2AP. Tel: (0225) 442244

Sudbury Electronics

771 Harrow Road, Sudbury, Wembley, Middx
Telephone: 081 908 1888
Fax: 081 904 8002

288/12 MHz System
1 meg memory
40 Mb hard disk drive
1.2 Mb and 1.44 Mb floppy drives
102 key keyboard
2 serial and 1 parallel ports
VGA colour monitor **£650.00**

386/25 MHz System
2 meg memory
90 Mb hard disk drive (18 M/S)
1.2 and 1.44 floppy drives
102 key keyboard
2 serial and 1 parallel ports
0.28 DPI SVGA monitor
SVGA card with 1 meg on board..... **£1099.00**

386/33 MHz system
4 meg memory
64K Cache
120 Mb hard disk drive (18 M/S)
1.2 and 1.44 Mb floppy drives
102 key keyboard
1 serial and 1 parallel ports
SVGA 0.28 DPI monitor
SVGA card with 1 meg on board **£1290.00**
Above Spec but with 90Mb hard disk **£1200.00**

466/33 MHz System
4 meg memory
256K cache
120 Mb hard disk drive
1.2Mb and 1.44 Mb floppy drives
102 key keyboard
1 serial and 1 parallel ports
Super VGA 0.28 DPI monitor
SVGA card with 1 meg on board **£1650.00**

Other systems configurations available. Please phone for prices.

Siemens 3100 24 Pin high quality dot matrix printer £160.00

High quality 102 key keyboards made by Bull with I.B.M. P.S.2 Adpator £27.50

High quality 102 key keyboard made by Epson AT/AT auto switching keyboards.....£15.00
VGA colour monitors (0.31 DPI) with VGA card £185.00

Lots of other bargains for the PC Builder and Electronics enthusiast.
Add 17.5% VAT to all prices

Access VISA

EXPRESS ON-LINE

This week *Express* gives Fanzines their place in the On-Line Hall of Fame. Whatever you're looking for, it'll be here.....

EXPRESS IS NOW ON-LINE!

NEW ARRIVALS

Fanzines

• ALL ABOUT AMOS - New mag published by Peter Hickman, essential reading for all Amos users. Send SAE to: 36 Cleverly Estate, Wormholt Rd, London W12 0LX

• ICPUG - Journal for all Commodore computers + IBM/PC compatibles. Write: ICPUG, PO Box 1309 London N3 UT

•THE LYNX ATARI - Quality design and info, 1st issue out now, £1 to P Day, 29 Birchwood Drive, Ravenshead, Notts

• PC GAMER - Monthly diskzine for strategy simulation adventure fans. SAE to: P Edwards, PO Box39, Dagenham, Essex RM10 7UN

• ZAT THE FANZINE FOR SAM AND SPECTRUM USERS - News, reviews and more. For details send SAE to PO Box 488, Tweedale, Madeley, Telford, Shropshire TF7 4SU

Fanzines

A

AOK – Amstrad CPC fanzine. Fifth issue out now. Just 90p. Write to 31 Colebrook Road, Shirley, Solihull, West Midlands.

ATARI LYNX USER - Competitions, reviews. Send 50p + SAE or just 80p to: Lynx User 11 Montgomery, DR, Spencers Wood, Reading. We need your support.

AMOEBA QUARTERLY – Colourful monochrome Amiga fanzine with coverdisk. Send an SAE to 369 Wanstead Park Road, Ilford, Essex, IG1 3TT for further details, now! (Please).

APOCALYPSE – New C64 quarterly fanzine. Featuring reviews, tips, cheats and news. Send £1 (Inc postage) to APOCALYPSE, 276 Burton Road, Midway, Swadlincote, Derbyshire DE11 7LY.

APOCALYPSE – Disk version of Apocalypse fanzine, featuring extra programs. Send 50p, 5.25-inch disk and SAE to D B Read, 276 Burton Road, Midway, Swadlincote, Derbyshire DE11 7LY.

ATARI LYNX FANZINE – For Sample copy please send\ a first class stamp to Andrew Reid, 63 Croftway, Selby, North Yorkshire YO8 9DD.

ATARI LYNX CONSOLE USER – The brand new magazine dedicated to the Atari Lynx. 30p plus SAE to Lynx User, 11 Montgomery Drive, Spencer's Wood, Reading, Berks.

MCB – The great new fanzine dedicated to owners of the truly wonderful PC. 10p plus SAE to: OFFSHOOT Publications, 8 St John Street, Coleford, Glos. GL16 8AR

CONSOLE MAGAZINE – The magazine for game consoles. Send large SAE for free sample copy to 125 Arnold Road, Bestwood, Nottingham NG5 5HR.

AMIGA CHEAT DISK – Issue six on two disks for only £3.50. Write to JS Smith, 45 Maplecroft Crescent, Wincobank, Sheffield S9 1DN.

AMIGA DISK MAG –with a new style with over 100 pages of news, reviews, art, music, and PD on two disks. Send £3 to Paul Harthen, 43 Boyds Walk, Dukinfield, Cheshire, SK16 4AX

AMIGA LA FANZINE – Only £2 including membership. Write to L Stacey, 3 Norfolk Close, Bewbush, Crawley, West Sussex, RH11 8GJ

AMIGANUTS Disk Fanzine – Two disks, issue one out now. Only £2.50. Loads of PD demos, reviews etc. SAE for info or cheques/POs to N Gilling, 1 France Furlong, Great Linford, Milton Keynes, Bucks, MK14 5EM.

AMOEBA QUATERLY – Amiga fanzine (with cover disk). Send SAE to 369 Wanstead Park Road, Ilford, Essex IG1 3TT for free details now. (Please!)

ASTAC – a new Atari ST and console mag. For details send an SAE to Astac, 383A Drayton High Road, Hellesdon, Norwich, Norfolk, NR6 5BG.

ATARI ST DISK MAG – Stellar Issue 1 out now. Free PD software, reviews and more. Send double sided blank disk, SAE and £1 to Mark Nobes, Newholme, Aston Road, Chipping Campden, Glos GL55 6HR.

ATARI ST USERS – ELECTRON. 2 disks plus 40 page mag. Reviews, articles, games, advice, electronics, software library (PD 50p each) and Chess. £3.50 inc membership (refundable). Andrew Betts, The Mount, Wood Lane, Gallowstree Common, Reading, Berks, RG4 9BG

AXS QUARTERLY JOURNAL – The leading light's AXS Quarterly Journal. Amiga disk-based fanzine of PD, Comms, etc. £5 years subscription! Send for yours! 14, Meads Road, Guildford, Surrey.

C

C64 RESET POKES – Only booklet with over 300 pokes. Only £2. Old and new games. Write to C64 Pokes, 12 Dudley Road, Brighton, East Sussex, BN1 7GN.

C LANGUAGE – Bi-monthly newsletter, C source library and BBS. £14pa. Contact Francis Glassborow, 64 Southfield Road, Oxford, OX4 1PA.

CHESS COMPUTER WORLD – Independent newsletter with results and ratings from the world of Computer chess. Subscription only. £3.50 a year for four issues. Write to Bryan Whitby, 16 Mansefield Road, Kingsley, Warrington, Cheshire, WA6 8BZ.

COIN-OP '91 – Everything on where to stick your 20 pences. Tips, news, reviews, Amiga, ST, consoles. 60 A4 pages. £1 plus SAE to Highover, Udimore, Rye, East Sussex TN31 6BG

COMPUTER LYNX – Amiga disk magazine. Only £1.50 plus 50p p&p. Huge range of PD from £1 per disk. Write to 187 Perrysfield Road, Cheshunt, Herts, EN8.

CONSOLE CRAZY – New fanzine! With news, reviews and virtual reality sections. Only 80p to: 28 Watergate Lane, Woolton, Liverpool L25 8QJ. An even more amazing Issue two due soon, so keep watching these pages for further details.

CVu – The journal of the C Users Group (UK), Volume Three, Issue four (May) out now. Price £2 for 60 pages. Write to Francis Glassborow, 63 Southfield Road, Oxford 0X4 1PA.

Let all the world know

Do you run a user group or bulletin board? Do you publish a fanzine? Let the world know about it through *Shopping Express*. Fill in this form and send it to us at: Express On-line, 30 Monmouth Street, Bath BA1 2BW.

(Tick as applicable) ☐ Group ☐ BBS ☐ Fanzine

Your name .....

Address: .....

.....

● Write your ad in block capitals on the grid below using one word per box.

FANZINE LISTING

D

THE DISK – Issue 4 for Amiga users, includes – typing tutor, Tron '90, Label Print, Pop info, plus plenty more. Send £1 for 24 hour despatch or phone 0422 844215

F

52Q/1040 MAGAZINE – New Fanzine in preparation. 520/11040 for STs. First issue out soon. Details from basoft PD, 357, Church Road, Basildon, Essex. SS14 2EU. Disk based!!!

FUNZINE 64 – C64 fanzine (issue 1) plus newsletter. Send 50p and stamp to: Lukas White, The Old Church, Newmill, Keith, Banffshire AB55 3UA. Hurry!

G

GENERAL AMIGA – The monthly disk-based magazine. Covering all areas of Amiga computing. Compiled by enthusiasts for enthusiasts. Only £1.50 per issue. Send to: General Amiga, 19 Earn Court, Alloa, Clacks, FK40 1PT.

GONG! – The new surrealist spectrum tapezine! 128K only. Send £1 to (address) for one issue. It's a world beater! (But not really!)

GUG (UK) – GEOS user group, the only disk-based magazine in the UK. Send blank disk to GUG (UK), 110 Deansway Woodloes Park Warwick LV34 5DQ.

H

HIDDEN MOVEMENT – the magazine exclusively for ST wargamers. Send £1 for issue one to p Raeburn, 360 Windmill Road, Ealing, London W5 4UR.

L

LAZERDISK – The Amiga Disk Magazine that's full of utilities, games, demos, etc... Send £1.50 (Payable to J Deavall) to: 57 Adamthwaite Drive, Blythe Bridge, Stoke on Trent, ST11 9HL.

LYNX USER – Atari Lynx console user, the brand new magazine dedicated to the Atari Lynx. 35p and large SAE to Lynx User, 11 Montgomery Drive, Spencer's Wood, Reading, Berkshire.

M

MAGNETIC MEDIA HANDLE WITH CARE – Amiga disk fanzine with news, reviews, music, games, utilities, userhelp. At least two disks per month. Each issue £2.80. Write to Magnetic Media HWC, 25 Rigbourne Hill, Beccles, Suffolk NR34 9JC.

P

PC-MONTHLY – A monthly magazine disk packed full with software, news and letters. For more information write to: Richard Lillycrop, 19 Nelson Court, Watton, Norfolk IP25 6EL.

PC-PLOP – an interesting and educating read for pc owners and lovers. Send just 60p for latest issue to 8 St John Street, Coleford, Glos.

PDNR – PD companies and other PD enthusiasts, send SAE to me for information on a special fanzine. James Thoroughgood, 114 Sandringham Way, Frimley, Surrey GU16 5YF

PLAY MATES – CPC games fanzine called play mates just £1.30 per issue full of reviews and bonzo news. Carl Surry, 37 Fairfield Way, Barnet, Herts, EN5 2BQ.

PROGRAM PACK – The all-new spectrum fanzine requires contributions for issue one. You could earn a year's free subscription! Call Alex on 081-777 6241.

PROJECT 'X' – Fanzine, club and shareware library for PC owners. Send stamp for details: 48 King William Dr, Cheltenham, Glos GL53 7RP. Prestel 01-111 5474.

R

RE-RUN – 8-bit Fanzine for the Spectrum, C64, Amstrad CPC, BBC, ZX81 and Atari. Only 50p including P+P to: RE-RUN, 1 Northolme Close, Grays, Essex, RM16 2NX.

S

SCANNER – Amiga disk magazine. Packed with games/demos/utils/reviews/competitions plus much more. Send stamped addressed envelope for details to Telescan, Handsworth Road, Blackpool FY1 2RF.

SPANDEFANG SOFTWARE – 68000 and coders magazine. For free first issue send stamped addressed envelope and blank Atari ST disk to 4 Cambridge Terrace, Harrogate, N Yorks HG1 1PA.

SPECTRUM ADVERTISER – New Speccy tape fanzine for advertising. Each issue is full of adverts and PD. Send an SAE to my address for more details. Michael McLarnon, 29 Newtown Gardens, Co. Antrim, Belfast, BT 36 7BX.

ST DISKBOX – This is the latest diskzine to hit the ST. No need for blank disks. Send £2 to Steven McCarron, 1,571 Dumbarton Road, Scotstown, Glasgow G14 9XE.

ST GAMES NEWSLETTER – Games, reviews, previews etc for Atari ST. Send SAE for Newsletter to Ben Dobson, 1 Ryedale Way, Selby YO8 9BP.

ST WORLD DISK MAG – Join the fun, buy ST World the brilliant new ST Disk mag! For the pilot issue send £1.50 or £1 and your own disk to Martin Betts, ST World, 5, Hempsted News, Lakeview Park, Chapel Break, Bowthorpe, Norwich.

STANZINE – The best ST disk-based fanzine. For details send an SAE to Stanzine, 5 Hempstead Mews, Chapel Break, Bowthorpe, Norwich, Norfolk NR5

➤

THE COMPUTER TECHNOLOGY FAIR

at

THE CORN EXCHANGE

CHURCH STREET

BRIGHTON

SUNDAY OCTOBER 20th

DOORS OPEN 10 AM - 4 PM

ADULTS £2.50 CHILDREN / OAP £1.00

Hardware - Software - Floppy Disks - PC - Amiga - Atari ST - Atari 8 Bit - Commodore - Amstrad - Spectrum Nintendo - Sega - Hard Disks - Disk Drives - P.D. Libraries - Second User Equipment - Joysticks.....

In fact ANYTHING (well nearly!!) you could ever want for your computer.

Info - Jenny 0273 607633

BARGAINS GALORE ACROSS ALL FORMATS

Complete Systems Auctions

Next Auction

Sat 19th Oct.....HAYDOCK RACECOURSE

Castlemaine Suite - Haydock Park Racecourse, Merseyside

Catalogues - £1.00

For further information or details of private treaty deals please call our Auction Hotline on

(0384) 67885

STEN – the ST enthusiasts newsletter issue three now ready. Send a disk and stamped addressed envelope for your copy now. Postal Trivia League starting. Interested? Write to 14 School Road, Morningside, Newmains.

STOS magazine, out every month.Send an SAE for full details to 11 Shore Crescent, Bishops, Waltham, Hants SO3 1DZ

STUD – The ST users disk. Crammed full of programs on every subject. Send £1.50 to Shane Rodwell, 19 Collings Place, Newmarket, Suffolk CB8 OEX for issue one of *Stud*.

STYLE – Free Atari PD newsletter. Published monthly by Jennix PD. For your copy send a SAE to STyle, Jennix PD, 66 Abbey Road, Strood, Kent.

SYRACUSE ARCHIMEDES DISK MAGAZINE – out now only £4.99. Includes the magazine disk plus two disks of public domain software. Send to Aste Wythenee House, 10 Alastair Crescent, Prenton, Wirral, L43 0UR.

T

THUNDERNEWS – CBM 64 user magazine on disk/tape. Send sae for details and competition to 159 Hough Road, Wallsall, West Midlands WS2 9BG.

THE PLACES TO BE . . .

Making the Difference
Now – Tue 31 Dec
Science Museum, Kensington, London. Info: 071-938 8080

Computer Technology Fair
Sun 20 Oct
Brighton Corn Exchange, Church Street. 10am – 4pm. Info: 0273 607633.

Charles Babbage's Impact on Modern Computing
Wed 23 Oct
The Science Museum, London at 17.30. Info: 071-938 8196.

Image Processing '91
Tue 29 – Thu 31 Oct
Birmingham NEC. Info: 081-868 4466.

System Builder
Wed 30 – Thu 31 Oct
Sandown Exhibition Centre, Esher, Surrey. Info: 0822 614671.

Computer Animation Festival
Thu 31 October – Fri 1 Nov
To accompany the Computer Graphics '91 Conference, this festival acknowledges work of outstanding creative and technical excellence in visualisation, research and development; features and shorts, best title; best on-screen presentation; idents and stings, programme and content and student. Marble Arch Odeon (rescheduled from 5 November owing to a screening of the epic film *Spartacus*). Info: 081-868 4466.

Computer Technology Fair
Sun 3 Nov
Southampton Guild Hall, Civic Centre. 10am – 4pm. Info: 0273 607633.

Computer Graphics '91
Tue 5 – Thu 7 Nov
The Alexandra Palace, London. Developments in technology, software and applications. Topics include graphics: a world perspective; design; modelling natural phenomena; computer animation; Virtual Reality and visualisation. Info: 081-868 4466.

Desktop Cad '91
Tue 5 – Thu 7 Nov
As above.

Open Systems '91
Wed 6 – Fri 8 Nov
Olympia, London. Info: 0784 472200.

All Micro Show and Radio Rally
Sat 9 Nov
Bingley Hall, Stafford. Info: 0473 272002.

Computers in the City
Tue 12 – Thu 14 Nov
The Barbican Centre, London. Info: 081 868 4466.

World of Commodore Show
Fri 15 – Sun 17 Nov
A show for all things Commodore, , presented by the *Amiga Format* team. At Earls Court, London. Info: 0462 420785.

The Next Generation; Computing with Light
Thu 21 Nov
Lecture at King Edward VI College, Totnes. Info 0803 863821.

Vision and Reality
Thu 28 – Fri 29 Nov
A conference on multimedia at Jaarbeurs, Utrecht, The Netherlands. For more info: +31 (0)70 3560666.

Computer Technology Fair
Sun 1 Dec
Manchester Whitworth Hall, Manchester University. 10am – 4pm. Info: 0273 607633

South Wales Computer Fair
Sun 1Dec
The Afan Lido, Port Talbot. For info call: 0792 310865.

CASTLESOFT

Prices include VAT and Delivery

AMIGA MADNESS!!

AMIGA CARTOON CLASSICS PLUS!!
The NEW AMIGA 500+!! (includes Workbench 2.0!)
Much improved new Amiga, enhanced Graphic modes, easily expandable to 2Meg (1 MEG on board) a joy to use!
Only from CASTLESOFT : 15 GAMES!! including:
SIMPSONS, CAPTAIN PLANET, LEMMINGS, DELUXE PAINT 3, and WORD PROCESSOR, plus Free Hotel Accommodation.
And JOYSTICK for only £385!!

1 MEG Amiga and 22 Games, Word Processor....only £346!
AMIGA 1500 (inc. £395 worth of software)....only £650!

FED UP WITH A STICKY-OUT MODULATOR? TRY OUR COLOUR MONITOR/TV (with SCART lead).....only £165!
Suitable for ST and AMIGA

ATARI STE CRAZY

New 520 STE Discovery pack!
14 Games including
SIM CITY, 9 LIVES, ROBOT MONSTERS and FINAL FIGHT
6 Serious (Word Processor, Database, Spreadsheet)
4 Art Programs (includes Neochrome Master)
and 6 Educational Programs and Joystick.
Free Hotel Accommodation only £309!!

QUALIFIED STAFF: HELPLINE: REPAIR SERVICE
BEST VALUE IN U.K!
CASTLESOFT
LEVENMOUTH BUSINESS CENTRE
LEVEN. TEL 0333 21243 (24 HOUR)
CALLERS WELCOME
Access VISA

THIS IS NOT A MISPRINT
GUARANTEED DISKS AT CRAZY PRICES

3.5" DISKS

50 DS/DD	£19.95
100 DS/DD	£34.00
200 DS/DD	£64.00
250 DS/DD	£75.00
500 DS/DD	£145.00
50 DS/HD	£30.00
100 DS/HD	£35.00

5.25" DISKS

50 DS/DD	£12.50
100 DS/DD	£22.00
50 DS/HD	£20.00
100 DS/HD	£35.00

ALL DISKS COME WITH LABELS

100 3.5" DS/DD + 100 CAP BOX .....ONLY £37.50

100 3.5" DS/DD BULK ONLY £40.00

SONY

200 3.5" DS/DD + 2x 100 CAP. BOX .....ONLY £69.95

Access E/OE VISA

100% PRODUCT SATISFACTION OR MONEY BACK

LUXURY STORAGE BOXES: LOCKABLE + ANTI-STATIC

10 Cap * (x5)	£4.95
50 Cap *	£3.95
80 Cap *	£4.50
100 Cap *	£5.50
BANX (90 Cap)	£8.95

Printer Stands	£7.95
Re-Ink	£12.95
Dust Cover *	£3.95
Head Cleaner *	£2.95
Mouse Mats *	£2.95

ALL PRICES INCLUDE V.A.T. and P&P

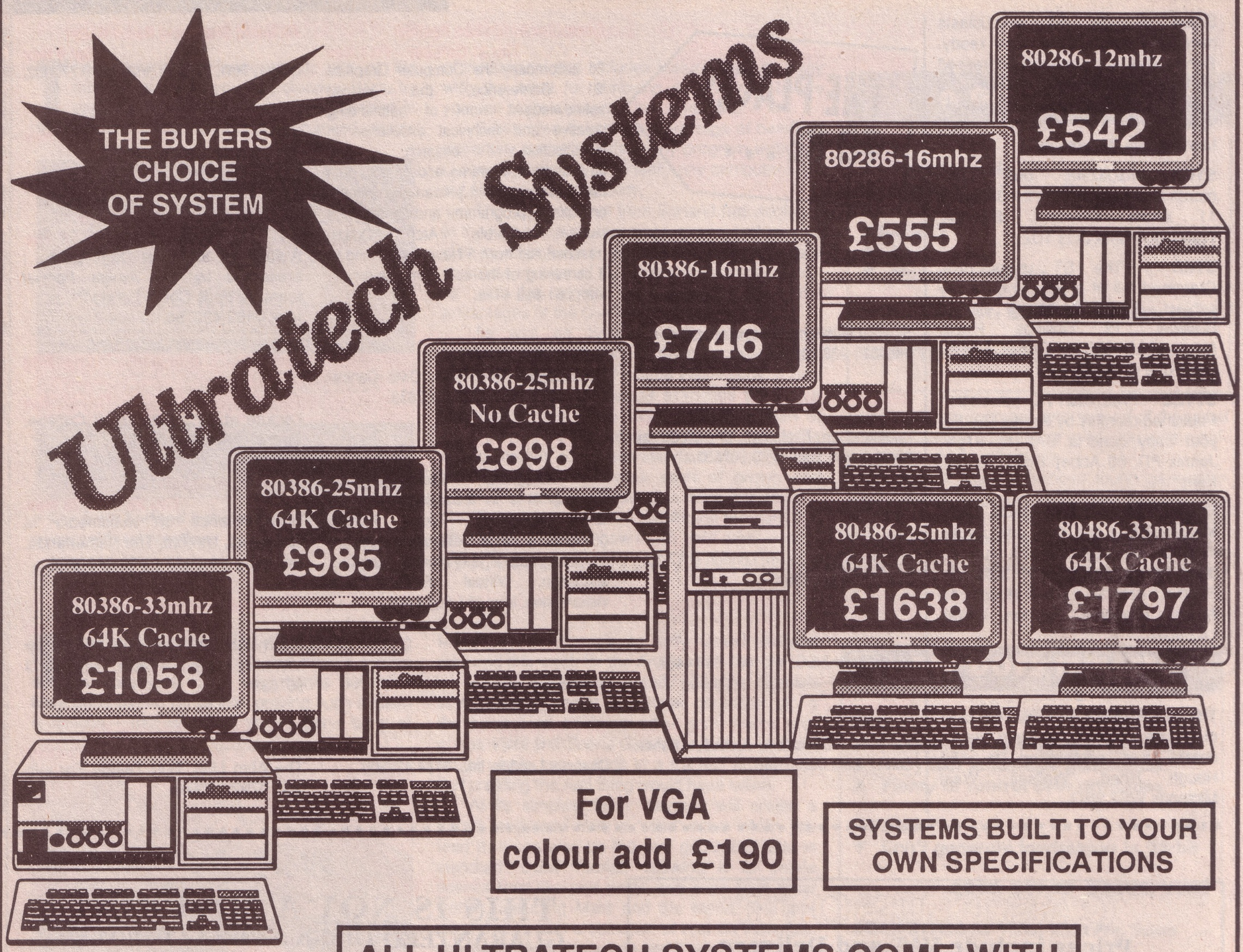
DIAL A DISC
6 Walsingham Road
St. Pauls Cray
Kent BR5 3BW

"PERSONAL CALLERS BY ARRANGEMENT"
* ONLY IF BOUGHT WITH DISKS

081-309 5556

THE BUYERS CHOICE OF SYSTEM

Ultratech Systems



For VGA colour add £190

SYSTEMS BUILT TO YOUR OWN SPECIFICATIONS

ALL ULTRATECH SYSTEMS COME WITH 12 MONTH'S "ON SITE" WARRANTY

Standard Systems come with :-

1MB fast Ram, 40MB (IDE) Hard disk drive, 1.2MB OR 1.44MB Floppy Disk Drive, 1 Parallel & 2 Serial ports, 102 key (UK) Keyboard, MDA graphics card & 12 inch Mono Monitor. Complete with all hardware reference manuals. Technical Support is always available.

OPTIONS.

Additional floppy drive, larger hard disk drives, 1024 X 768 VGA colour monitor, Tower case, Memory upgrades, Tape Streamers, MS Dos, Mice, Printers etc..... Whatever your requirements please call us. We also sell components so you can build your own system. Please call for a price list.

Ultratech Systems are manufactured in the U.K by :-

Microtech Business Systems,

Unit 1, 139A Moorland Road, Weston-super-Mare, Avon BS23 4HU.

VISA Access

Tel (0934) 633875 or Fax (0934) 612011

All prices are exclusive of VAT & delivery. Prices subject to change without prior notice.
All sales are subject to our Terms & Conditions a copy of which is available on request.

AMIGA

- KCS PC Emulator card comes to the A1500
- Softwood launches new Compugraphic font-compatible word processor
- Connect any AT-style keyboard to your Amiga
- Get into desktop video with Roctec's new genlock

SCENE USA

Not only is America the place where it all started, but the land of Mom's Apple Pie continues to produce products which push the Amiga even further.

And what a busy lot those Americans have been just recently! Here's a rundown of the hottest new products eager to wing their way across to an Amiga near you.

Impact Vision 24 (Great Valley Products) – OK, I've already told you all about GVP's new 24-bit Harlequin killer, but the company has already added extra features to this impressive product. Not only can the IV24 display 24-bit images, but it can also generate them, using either its built in 24-bit frame grabber or the bundled rendering software.

It also comes complete with a flicker fixer as standard, so B2000 owners can use it as a complete one -stop solution to the problem of displaying 24-bit images without the flicker.

The flicker fixer also 'fixes' non-24 bit modes, removing the need to buy a dedicated flicker fixer like the unit sold by MicroWay.

One feature that sounds like a lot of fun is its Picture-in-Picture facility which, like a video recorder, allows you to display both the Amiga output and a real time RGB video signal simultaneously, with one displayed within a resizable window which can be placed anywhere on the screen.

With this board installed inside your Amiga, your machine will finally be capable of displaying true digital video. GVP have also bundled some very nice software with the unit. They include a 24-bit version of Octree's *Caligari* (an absolutely brilliant solid modelling program), 24-bit *Scala* and a 24-bit paint package in the shape of *MacroPaint IV24.*

SunSet (Blue Ribbon SoundWorks) – After the success of *Bars & Pipes Pro*, Blue Ribbon (great name, eh!) have announced the release of *SunSet*, a sophisticated sample manipulation program which has been specifically designed to compliment SunRize Industries' new 12-bit Sampler card forthe B2000.

Also new from Blue Ribbon is *JAM*, a program designed to allow even the most tone deaf amongst us to produce MIDI compositions which sound great. Sounds a bit too much like 'M' to me, but who knows?

X-Specs TV (Haitex) – Crikey, this brings back some memories. Veteran Amiga owners may remember Haitex' X-Specs system, a Virtual Reality-like headset system which allowed you to view Amiga-generated images in 3D. Well, Haitex is back with a new release of X-Specs which enables you to view 3D images directly from videotape. Hmm, I'll reserve my judgement until I actually see X-Specs TV in action.

KB Talker (C-Tronics) – Fancy being able to connect an IBM AT-style keyboard to your Amiga? Well now you can, thanks to a handy little widget developed by Co-Tronics Engineering.

The device supports any keyboard designed for the an AT compatible PC (not an XT).

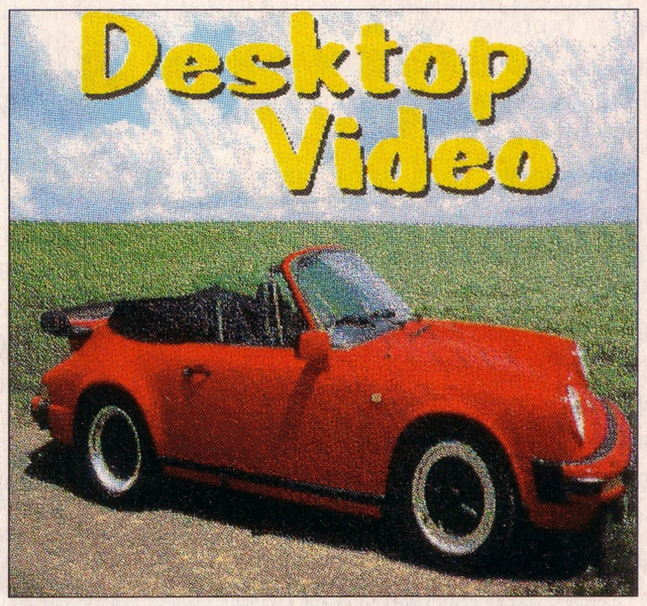
Final Copy (SoftWood) – Yet another Amiga word processor is released this week in the shape of *Final Copy* from Amiga veteran developer SoftWood. What's special about this program is that it fully supports Compugraphic Outline fonts, allowing you to produce documents that look as if they've been professionally typeset. Sporting a full spell-checker and thesaurus facilities, plus support for IFF graphics, *Final Copy* sounds good, very good. Expect a review from me in the very near future.

Jason Holborn

Jason Holborn is a contributor to *Amiga Format*, Britain's biggest and best-selling Amiga magazine.

NEW ROCGEN UPGRADE

Following on from the monumental success of its first genlock, the RocGen RG300C, Hong Kong-based Roctec Electronics announces the launch of a successor which addresses many of the criticisms levelled at the original. The new model continues where the original left off, bringing several new features which are sure to make this genlock as successful as its predecessor.



• This new genlock is an upgraded release of the RG300C system

HOW TO BRIDGE THAT GAP WITH THE NEW KCS CARD FOR THE AMIGA

I've always been a great fan of Bitcon's KCS Power PC Board for the A500. Despite the fact that I'm also the proud owner of both an XT Bridgeboard (which lives inside my B2000) and a 286-based Vortex AToncе card, the KCS card is by far the best.

The AToncе card has a number of points in its favour, but these are far outweighed by its unstable operation (mine keeps crashing!) and the lack of any bundled software (come on chaps, it would be nice to get a copy of MSDOS at least!). Multitasking support is very practical, but this really does seem to make AToncе somewhat unstable.

Up until now, the only choice for B2000 owners was Commodore's own Bridgeboard, a rather aged 'PC on a card' which is available in both XT and AT forms. The AT Bridgeboard is good, but the XT Bridgeboard leaves a lot to be desired. Running at just 4MHz (the same as the original IBM PC XT), the XT Bridgeboard is hardly a speedy performer.

In a move which is sure to bring delight to the lives of many A1500 and B2000 owners, Bitcon Devices has announced that it is soon to release a version of its popular PC emulator card for use on Commodore's high end Amigas. Instead of redesigning the card from scratch, Dutch developer KCS has designed an adaptor which will allow the existing Trapdoor-based KCS card to be fitted inside the A1500 upwards.

The company had not originally intended to produce such an option, but market forces convinced it to rethink its decision.

Although both the B2000 and the A1500 are very much in the minority in this country, the Europeans love them, buying them in preference to the A500. The new KCS Card will be available in late October in two forms.



• Now Amiga owners can get their fave machine cheaply thanks to Bitcon Devices adaptor

For A1500 and 2000 owners who do not already own a KCS card, the complete pack consisting of KCS Card, Adaptor, MSDOS 4.01 and various other items of software will be available through both Bitcon and third party vendors.

For those of you who already own a KCS Card and wish to upgrade to an A1500 or better, the adaptor alone will be made available for a nominal charge through Bitcon alone.

Prices are yet to be fixed, but rest assured that I'll bring you more as soon as I hear firm pricing details from Bitcon.

However the good news doesn't stop there. Following on from a recent price drop of almost £90, Bitcon has dropped the price even further to £219.95.

When you consider that the KCS Card also doubles up as a half megabyte RAM expansion and you get all that extra software, there's never been a better time to take the plunge.

☎ You can find out more by phoning Bitcon Devices on 091 4901919.

This follows in the wake of the recent news that Vortex is working on a '386 version of its AToncе card. Despite promising great things, it seems that the card isn't all that impressive.

According to a source close to the German developer, it seems that the new AToncе card does not perform that much faster than the existing '286-based AToncе. In general, the new card performs just 10% faster than the already speedy AToncе. ■

INSIDE INFO

THIS WEEK

ST

- ***Neodesk* and *Multidesk* – utilities to tidy up and transform your desktop**
- **Camel capers in *Revenge of the Mutant Camels***
- **Make beautiful music with *Vivace***

WRITE IN STYLE

You may remember last week that when I was burbling on about *Protext I* mentioned something called *Stylewriter* but gave no other details. Well, er – forget about it.

Stylewriter is a style and usage checker for your text. This means that, unlike a simple spelling checker, it would pick up on things like "more perfect" or "they is bad" and alert you to them. In all, it can recognise 20,000 of these problems. Such programs are useful even for the experienced writer, because everyone makes mistakes, whether they've been writing for five or 50 years (that, for instance, was a cliché).

That's the good news. The bad news is that it's currently only available on the PC, even though it's featured in the Help menu of the ST version of *Protext*. Arnor, *Protext*'s publishers, say that they will be doing a version for the ST if there's enough demand. Since at the moment there are no such programs at all on the ST (the PC has hundreds of the things), it wouldn't exactly be faced by stiff competition.

So if you've gone all weak-kneed just thinking about the program, let Arnor know. Don't let the ST miss out.

FOR SCORE

Desert Software have announced the imminent release of a sequencer for the ST. Yes, another one. But the big difference with *Vivace* (for that is indeed its name) is that it represents every note of your MIDI data as standard music notation. Most sequencers use a strange hybrid form of numbers or graphs which can be off-putting for musicians used to the stave notation.

As well as inputting via MIDI, you can type scores directly into the program. There are 81 tracks available in all, including 16 volume tracks and a dedicated tempo track. Things such as pitch bends, after touch and breath control can be drawn with the mouse as a graph.

All the other usual sequencer functions are included. *Vivace* sounds like it's ideal for musicians who are familiar with traditional notation and don't want to change just because they're using a sequencer. Unfortunately if you want to print out any of your creations you'll have to wait until February of next year when the print module is released.

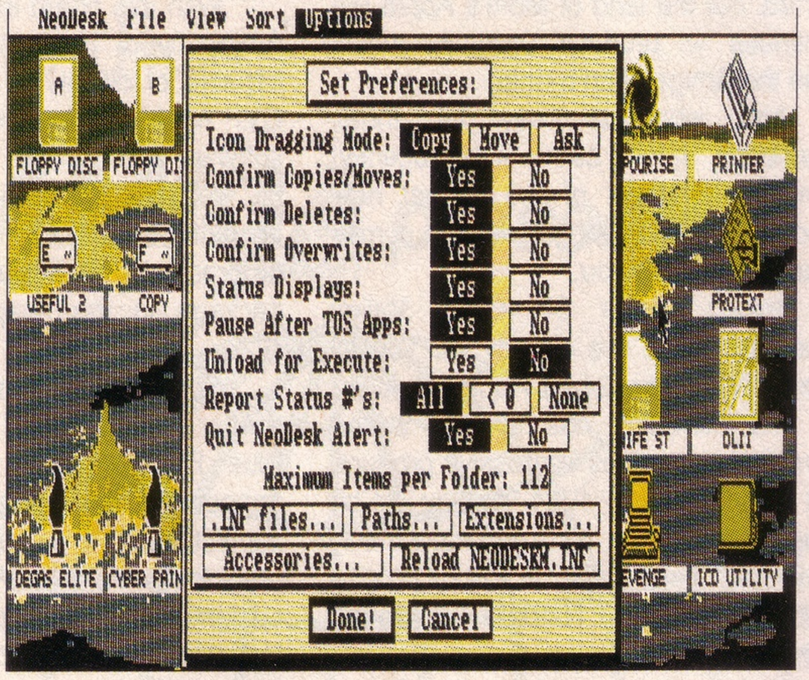
Vivace runs on a 1Mb ST and is yours for £236.50 inclusive from Desert Software, PO Box 123, St Helens, Merseyside WA9 5LD.
☎ 051 430 7400.

NEODESK 3, WORD PLUS 1

Electric Distribution are giving away a free copy of *NeoDesk 3* with every copy of *1st Word Plus* sold during November and December.

This is a shrewd move by Electric. After all, 1st Word Plus is getting on a bit now and there are plenty of better, faster and even cheaper WPs around. On the other hand, if you've never used *Neo 3* you really don't know what you're missing. Get used to it and any time you're forced to use the standard GEM Desktop you'll find yourself floundering around like a fish on a particularly dry dock.

So if you've ever needed any incentive to get *1st Word Plus*, you've got plenty now. You may even end up liking the free product more than the "main" one.



● *Neodesk 3* – more utilities than a tap, a boiler and a light combined. (Just think about it!)

MIX 'N' MATCH MULTIDESK

Another fine program is *MultiDesk* from CodeHead Software.

The basis of this program is that it allows you to have more than six Desk Accessories in memory at once. Not only that, you can load and delete accessories without needing to reboot. If you have a 1 Mb machine or more, this means you can have virtually every accessory you own on tap and accessible at any time.

Now CodeHead are about to release MultiDesk Deluxe. The main change in the Deluxe version is the ability to designate accessories as non-resident, so that they're only loaded when you call them.

Atari's new XControl Panel, found on the TT and Mega STE (and also on *ST Format*'s Cover Disk 26) works in a similar way, by using extensions called CPXs.

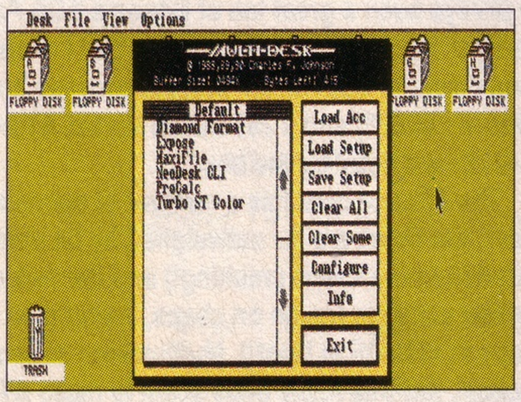
CodeHead reckon this means that not only does the program consume less memory, but it's also quicker to boot up with, because it's not necessary to load every accessory. While this is true, it seems to me to negate the point of Desk Accessories completely. After all, the main reason you have them in the first place is so that they're always accessible. If you're going to wait for them to load every time you need them, you may as well quit whatever you're doing and load up another program that does the same job – it'd probably take the same amount of time in the long run.

No further details of price or availability yet, and as CodeHead are an American company, it may be a while before we hear anything. CodeHead are at PO Box 74090, Los Angeles, CA 90004, USA.

The CodeHeads are also eager to point out they really will be producing new programs for the ST – having previously made a statement to the opposite effect.

They say although this was true at the time, it was misinterpreted. Quite how it can be true and untrue is a mystery, but it's good to hear that a company with such an impressive track record still supports such an impressive machine.

Ed Ricketts



● If you thought *MultiDesk* was impressive, wait until you see the new improved version. It'll change your life or, your Desktop, at the very least!

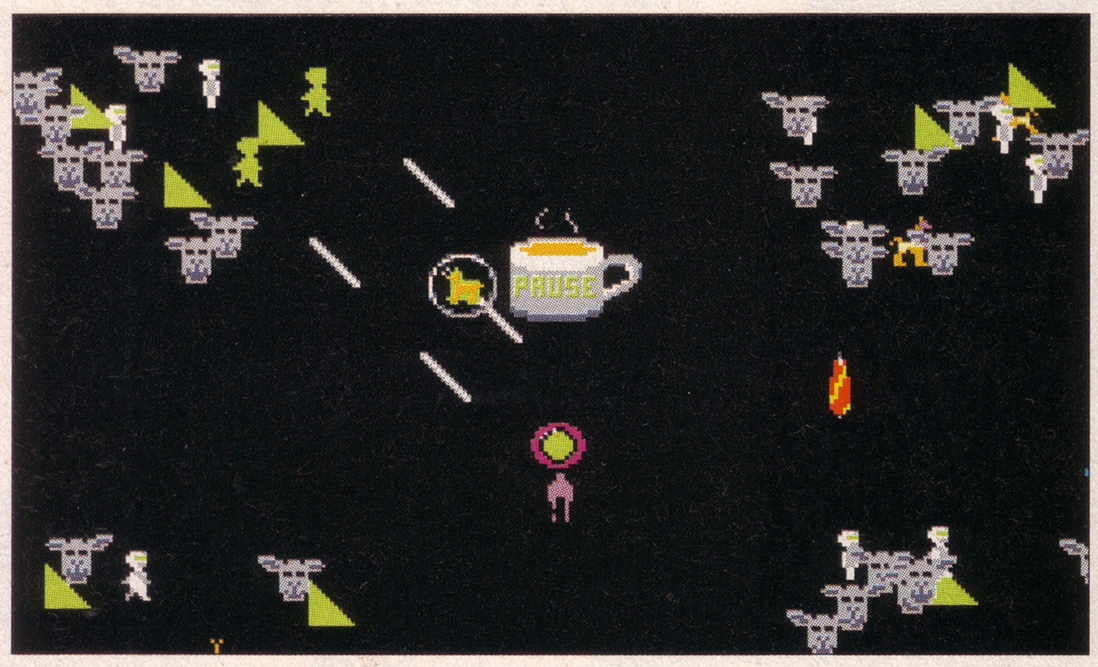
THAT DISTINCTLY MINTER FLAVOUR

It's good to hear that Jeff Minter is releasing *Colourspace* as a shareware title into the Public Domain. It's even better to hear that he's following up the incredible *Llamatron* with *Revenge of the Mutant Camels*.

Jeff is always a shot in the arm for the games industry; refusing to bow to commercial pressure, he plots his own course with complete confidence that what he's doing is right. Jeff is perhaps the only surviving programmer who actually knows what makes a good game, rather than merely what will sell it.

Minter knows that if there's no adrenaline, no guts to the game, no amount of fancy presentation will disguise it in the end. To him, programming and playing games isn't just a job, it's a whole way of life.

Let's hope that the success of *Llamatron* (he reckons he's made around £4,000 from the ST version alone) is repeated with the *Camels*. If anyone deserves it, Jeff Minter does. (And can I have my money now, Jeff?)



• *Revenge of the Mutant Camels* – more than your average game. With great graphics and action, you'll want to play it until the camels come home

Ed Ricketts writes for ST Fromat, Britain's biggest and best-selling ST magazine.

PC XT NOTEBOOK

- **BUILT-IN CGA DISPLAY**
- **WEIGHS ONLY 3¾lbs**
- **3 HOUR BATTERY LIFE**
- **1 YEAR ON-SITE WARRANTY**

SPECIFICATIONS

- *80C86 10MHz PROCESSOR*
- *BUILT-IN 3½" 1.44Mb DISK DRIVE*
- *1Mb RAM*
- *SOFTWARE - RESIDENT: MS-DOS 3.3 IN ROM*
- *SOFTWARE - SUPPLIED: GW-BASIC 3.22, MICROSOFT WORKS 2.0*
- *REAL-TIME BATTERY BACKED CLOCK*
- *80 KEYS - EMULATING 101/102 KEY ENHANCED KEYBOARD*
- *HIGH CONTRAST LCD CGA DISPLAY*
- *RESOLUTION: 640×200 PIXELS*
- *SERIAL, PARALLEL & VIDEO PORTS*
- *LED INDICATORS FOR POWER, FLOPPY DISK & BATTERY LOW*
- *POWER - MAINS & BATTERY: 4 RECHARGEABLE NI-CAD CELLS. POWER MANAGEMENT GIVES APPROX 3 HOURS OPERATING TIME*
- *DIMENSIONS (W×D×H): 11"×8⅔"×1"*
- *WEIGHT: 3¾lbs*
- *OPTIONAL: ADDITIONAL RECHARGEABLE BATTERY PACKS*

The super-compact Philips PCL 101 Notebook, takes up less surface area than an A4 page, weighs just 3¾lbs, is just over 1" thick, yet only costs £449+VAT. The PCL 101 is fast (10MHz CPU) with 1Mb RAM and a 1.44Mb, 3½" standard floppy disk drive.

The easy to read LCD CGA screen measures just 3½"×7½" and displays crisp, clear characters and sharp graphics at CGA resolution (640×200 pixels). The keyboard has 80 full size, full travel keys with 12 separate function keys, emulating a full-size industry standard keyboard.

Industry standard serial, parallel and external monitor ports, are all included. Power can be supplied from the mains via an auto-sensing, multi-voltage adaptor and charger, or by a Ni-Cad battery pack that snaps flush into the main body case. With its sophisticated power management, the battery lasts for about 3 hours (and takes 4 hours to recharge). The PCL 101 offers automatic audio 'battery low' warnings, to help ensure that you never lose any valuable data.



PACKAGE INCLUDES

- *MS-DOS 3.3*
- *GW-Basic 3.22*
- *Microsoft Works 2.0*
- *PSU/Battery Charger*
- *Protective Pouch*
- *1 Year On-Site Warranty*

£449

REF: NBC 7101 +VAT = £527.58

286 + 386 PC AT NOTEBOOKS



- **BUILT-IN VGA DISPLAY**
- **20Mb HARD DRIVE**
- **6 HOUR BATTERY LIFE**
- **1Yr ON-SITE WARRANTY**
- **WINDOWS 3 + MOUSE**
- **TEXTURED CASING**

In stylish grey casing with a non-slip, textured finish and using the very latest technology, Commodore's 286-LT and 386sx-LT Notebooks are available from Silica at incredibly low prices.

Both models have a 20Mb hard disk, 1Mb RAM, expandable to 5Mb RAM using two 2Mb RAM cards, a 3½" 1.44Mb floppy disk drive and industry standard parallel and serial ports to allow connection to a wide range of printers, mice, modems and LAN adaptors.

Bright, backlit LCD screens display VGA graphics at 640×480 resolution, with a port to plug in a colour VGA monitor to show the graphics full potential.

These compact Notebooks weigh just over 5.9 lbs (7 lbs with battery) and measure 12¼"×10"×2". They can be powered from the mains, via the multi-voltage mains adaptor, or by their own batteries, which can be recharged while in use, or independently in approximately one hour. Commodore's Powersave feature increases battery life to up to 6 hours and, along with optional rechargeable battery packs, gives you continuous PC power on the move!

SPECIFICATIONS

	286	386
PROCESSOR	286	386sx
CLOCK SPEED	12MHz	16MHz
LANDMARK (MHz)	11.5	21
1Mb RAM EXPANDABLE TO 5Mb	●	●
2Mb RAM UPGRADE	£299	£299
20Mb 23ms HARD DISK DRIVE	●	●
VGA GRAPHICS - Res: 640×480	●	●
3½" 1.44Mb FLOPPY DISK DRIVE	●	●
PARALLEL, SERIAL & VGA PORTS	●	●
UP TO 6 HOURS BATTERY LIFE	●	●
1 YEAR ON-SITE WARRANTY	●	●
WINDOWS 3.0 + MOUSE	●	●
MS-DOS 4.01 + GW-BASIC	●	●
80387sx CO-PROCESSOR UPGRADE	—	£279

286 WITH 20Mb HDD

£999

+VAT = £1173.83

40Mb HARD DRIVE VERSION - £1199

386sx WITH 20Mb HDD

£1199

+VAT = £1408.83

40Mb HARD DRIVE VERSION - £1399

SILICA SYSTEMS OFFER YOU

- ***FREE OVERNIGHT COURIER DELIVERY:*** On all hardware orders shipped in the UK.
- ***TECHNICAL SUPPORT HELPLINE:*** Team of technical experts at your service.
- ***PRICE MATCH:*** We normally match competitors on a "Same product - Same price" basis.
- ***ESTABLISHED 12 YEARS:*** Proven track record in professional computer sales.
- ***BUSINESS + EDUCATION + GOVERNMENT:*** Volume discounts available for large orders.
- ***SHOWROOMS:*** Demonstration and training facilities at our London shop & Sidcup branch.
- ***THE FULL STOCK RANGE:*** Your PC requirements from one supplier.
- ***FREE CATALOGUES:*** Will be mailed to you with offers and software/peripheral details.
- ***PAYMENT:*** By cash, cheque and all major credit cards.

Before you decide when to buy your new Notebook computer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after buying your Notebook, when you may require additional peripherals or software, or help and advice with your new purchase. And, will the company you buy from contact you with details of new products? At Silica Systems, we ensure that you will have nothing to worry about. We have been established for over 12 years and, with our unrivalled experience and expertise, we can now claim to meet our customers requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest FREE LITERATURE and begin to experience the "Silica Systems Service".

MAIL ORDER HOTLINE
081-309 1111

SILICA SYSTEMS

MAIL ORDER: 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX **Tel: 081-309 1111**
Order Lines Open: Mon-Sat 9.00am-6.00pm No Late Night Opening Fax No: 081-308 0608

LONDON SHOP: 52 Tottenham Court Road, London, W1P 0BA **Tel: 071-580 4000**
Opening Hours: Mon-Sat 9.30am-6.00pm Late Night: Thursday until 8pm Fax No: 071-323 4737

LONDON (SELFRIDGES): 1st Floor, 369 Oxford Street, London, W1A 1AB **Tel: 071-629 1234**
Opening Hours: Mon-Sat 9.30am-6.00pm Late Night: Thursday until 8pm Ask for extension 3914

SIDCUP SHOP: 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX **Tel: 081-302 8811**
Opening Hours: Mon-Sat 9.00am-5.30pm Late Night: Friday until 7pm Fax No: 081-309 0017

To: Silica Systems, Dept NCE-1091-70, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

PLEASE SEND FREE NOTEBOOK LITERATURE

Mr/Mrs/Ms: ..... Initials: ..... Surname: .....

Address: .....

.....

.....

Postcode: ..... Tel: .....

Which computer(s), if any, do you own? 70A

E&OE - Advertised prices and specifications may change - please return the coupon for the latest information.

PC

- From DTP to KP – Electronic Arts hits the paint trail once again
- 286 PCs are not quite dead – according to Autodesk
- Hit a home run... or an axe-wielding gnome via EA

KID PIX

New from Electronic Arts, via US- based Broderbund, is *Kid Pix* – a new paint program especially created for the children aged 3-12 years.

Positioned in Broderbund's Creative Workshop Series, *Kid Pix* combines special effect art tools, picture stamps (over 100 images, from cats and dogs to pictures of the moon), 20 different brushes with names like`The Looper' and `Leaky Pen', sounds (every brush and tool has its own sound effect), different erasers (one, called the *Firecracker*, actually erases the whole screen with a whopping BOOM!) and `magic screen transformations'. Included with the manual are 30 colour stickers to decorate print outs, skateboards and the like. Supporting screens modes from EGA upwards plus the popular *Sound Blaster*. PS/1 sound and Tandy digital sound *Kid Pix* will be available from Electronic Arts during mid to late October for £34.99.

☎ Electronic Arts on 0753 549442

SHOW BUSINESS

Graphics and type programs took centre stage at the recent Seybold Computer Publishing Conference and Exposition in San Jose, California.

Aldus introduced a Windows version of *Freehand* that will be equivalent to its Macintosh drawing and illustration program. Software Publishing announced *Harvard Draw for Windows*. The program will offer a preview mode, WYSIWYG text entry, integrated auto-trace for black-and-white and colour bit-mapped images, special effects creation tools and colour management facilities. Due out in November, the software will also include 47 scalable Bitstream typefaces, 12 preset palettes, and will be compatible with the forthcoming *Harvard Graphics for Windows* presentation program.

On the type front, Adobe Systems announced Type 1 coprocessor technology based on BluePoint Technologies. That technology, which speeds up the process of rendering text, will be made available to users through Adobe's printer OEMs. Adobe also unveiled some specifics on its Multiple Masters technology announced in May. Aldus introduced two typefaces and also showed off Adobe *Premier*, a video editing program based on *ReelTime*, a product it recently acquired from SuperMac Technologies Inc. Bitstream showed off its *Windows 3.0* and *3.1* software for creating special effects with type. *MakeUp* lets you create banners, logos, and illustrations and supports Type 1, TrueType, and Bitstream Speedo fonts. The company also introduced typeface packages for the Mac and PC. Priced at $149, *Type Essentials* gives users a selection of fonts and includes 13 typefaces.

DOS 5 CORNER

Problem: I have recently installed DOS 5 on my hard disk. Whenever I attempt to run *Desqview*, an error message appears mentioning QEMM and memory locations which then crashes the computer.

Answer: DOS=HIGH. This parameter tells DOS 5 to load the DOS kernel into high memory area HMA (the first 64K of memory). Only one program can use the HMA. When *Desqview* is allowed to use the HMA it loads 63K of its own code up there, whereas DOS 5 only uses about 40K of that memory. The result is that you lose 24K or so when using DOS=HIGH.

Of course this means that any *Desqview* owners should stay away from DOS=HIGH for this very reason.

A TALE OF BARDS AND BASEBALL

I don't know about you, but I was disappointed to hear that Channel 4 had decided not to follow their unique American Football coverage with similar coverage on American Baseball.

However, for the down-hearted among you, be upstanding for Electronic Arts which, during November, will be releasing *Earl Weaver's Baseball II* for £29.99. *EWB 1* was highly respected for utilising physical characteristics such as the force of gravity on a baseball when it is thrown, amongst other things.

On top of that was a highly playable, good-looking action/simulation. *EWB 2* looks to top the original with the addition of impressive looking VGA graphics, unlimited camera views, smooth animation, digitised sound, a manager



• *The Bards Tale Construction Set* lets you build your very own dungeons of horror

construction set, 30 pitcher ratings, 50 different hitter/fielder settings and a stadium construction feature.

Two other modules: the *Commissioners Disk II* and the *1990 MLBPA Player Statistics & Manager Profiles Disk* will follow soon.

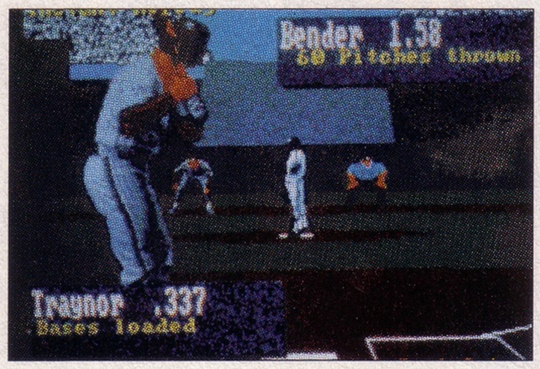
The Bard's Tale series of RPGs were some of the most popular and successful games of their genre. Now you can construct your own dungeons with the *Bards Tale Construction Set*.

Available for £29.99 during late November the *BTCS* will allow you to place traps, pits, stairwells, teleport squares, anti-magic areas, etc, etc in your own, specially designed dungeon. Your own monsters can be created via Deluxe Paint as well as artefacts, magic spells, treasures and so on. Digitised sound effects are also supported.

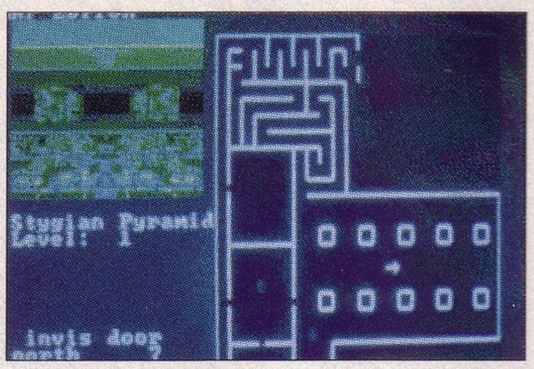
☎ Contact Electronic Arts on 0753 549442



• Brush up your batting skills for *Earl Weaver's Baseball II*



• Re-enact your own Field of Dreams with *Earl Weaver II*



•With *BTCS*'s map editor you can be as creative as you dare

FAST BACKUP

Fifth Generation Systems has begun shipping an update to its backup software that reinstates many of the features from previous versions. *FastBack Plus*, *Version 3.1* will remedy incompatibility with *FastBack 2*, said Barry Bellue Sr, president of Fifth Generation. The company fielded complaints from 12 to 14 per cent of *FastBack 3.0* users about the lack of backward compatibility with versions that used compression. The maintenance release will be backward compatible with all other versions and will restore the old command line; function-key commands will resemble those of previous versions. "Since [*3.0*] has more of a Windows look-and-feel operation, we did receive some complaints [from users]," said Sandra Lyle, product manager for *FastBack*.

The release will also add keyboard use to *FastBack*'s graphical interface. Upcoming versions of *FastBack* should include expansions for tape, network, and true *Windows 3.0* support.

Contact Fifth Generation Systems 0101 504 291 7221.

WHAT IF...

Decisioneering is introducing a new add-on that lets *Windows* users do graphical financial forecasting in Microsoft Excel. Designed to perform 'what if' calculations, *Crystal Ball* illustrates a range of possibilities, rather than a single value as would a spreadsheet working on its own. *Crystal Ball* lets you choose from an array of graph presentations.

By altering the range of certain variables – such as projected sales or operating expenses – you can project a wide array of possible outcomes. *Crystal Ball* operates with *Dynamic Data Exchange* to share numbers with *Excel* spreadsheets. Changes made to an *Excel* spreadsheet are instantly reflected in *Crystal Ball* simulations. *Crystal Ball for Windows* is scheduled to ship in mid-October for $195.

☎ 0101 303 447 6464.

286 CAD

Autodesk has shipped a version of *AutoCAD Release 11* that supports 80286-based PCs. *Release 11* improves design and drafting, makes it easier to share data on a network, and provides file locking and drawing recovery.

You can now exchange drawings across a network to machines running *AutoCAD*, whatever the operating system. There were no UK prices going to press.

Paul Rigby

Paul Rigby contributes to *PC Format*, Britian's biggest and best-selling PC leisure magazine.

SOUND MAN

The Audio Solution's $49.99 Digipak Digitized Sound Package includes 12 sound drivers and a set of DOS tools for playing, mixing, and compressing and decompressing sound samples to add to DOS applications. It supports all third–party PC sound boards.

☎ For more information contact Audio Solutions on 0101 314 567 0267.

ATTENTION £1.50 INC

J.T.S. SOFTWARE

SHAREWARE
PUBLIC DOMAIN

ATTENTION £1.50 INC

TOP QUALITY SHAREWARE WITH HELP JUST A PHONE CALL AWAY IF NEEDED
NO MINIMUM ORDER 3.5" OR 5.25" THE SAME PRICE.
VAT AND POSTAGE INCLUDED
WITH OVER 400 CAREFULLY SELECTED PROGRAMS TO CHOOSE FROM
ORDERS PHONE 0274 678198 24 HR DISPATCH

WORDPROCESSING	DISKS
GALAXY LITE, Ideal for beginners	(1)
PC WRITE With split screen & macro	(1)
PC TYPE 4 Advanced WP	(3)
MINDREADER Powerful WP	(1)
BLACK MAGIC Hypertext WP	(3)
CLICHE FINDER Improves your style	(2)

SPREADSHEETS	
AS-EASY-AS 123 Style spreadsheet	(1)
PC CALC + Multi-feature spreadsheet	(3)
123 TUTOR For 123 beginners	(1)
LOTUS WORKSHEETS 3 Worksheets	(1)
FREECALC Good for beginners	(1)

DATABASES	DISKS
PC FILE V Competes with the best	(3)
SR-INFO Relational database manager	(2)
ZEPHYER This database is fast	(3)
WAMPUM Reads dBase files	(2)
CARD INDEX A simple filling system	(1)
CATALIST Powerful mailing list manager	(2)

DRAW/PRINTING	
PC KEY DRAW Popular cad package	(4)
ONSIDE Print sideways on 9 pin printer	(1)
BRADFORD LQ form 9 pin printer	(1)
FONTASTIC Fonts galore +	(1)
T SQUARE Fantastic cad package	(4)

SPECIAL OFFER BUY 10 DISKS FOR ONLY £12
VAT & CARRIAGE INC
WHY PAY MORE
FREE CATALOGUE WITH FIRST ORDER

J.T.S. SOFTWARE, 83 St Enochs Road, Wibsey
Bradford, W. Yorks, BD6 3AD. Phone:- 0274 678198

INTERVIEW

BOB GLEADOW

ATARI: PAST TENSE, FUTURE PERFECT?

In a frank and wide ranging interview, Atari UK's managing director and motivating force, Bob Gleadow, talks to Stuart Dinsey about the past, present and future of the ST

Bob Gleadow is a man to be reckoned with. Although he hates having his picture in the press, he is far from being a faceless mogul at the head of Atari UK. He is a hands-on manager who takes a personal interest in the Atari range. He has strong views and is not scared of expressing them.

In the following interview, he discusses the history of the Atari ST range; its development, its faults, the incompatibility problems which plagued the early days of the STE, especially with relation to the press, the resurrection campaign and his plans for the ST's future.

PAST VERY TENSE

Until October 1990 the Atari STE was viewed by consumers, retailers and the press alike as a problem machine. Reflecting on this Gleadow comments: "We were castigated in the press for not doing anything about the problems. The problems are now over and we still haven't done anything". This is not Gleadow being complacent however. He is still adamant there never were any problems with the machine in the first place.

When Gleadow arrived at Atari in October 1986 he says, rather diplomatically, that "the original plan to establish the ST as a small business system was looking flawed". Atari needed a new ethos with which to sell its 16-bit machine. At first it was pitched not as a games machine but as a rounded, all-in-one, home computer. Gleadow's gamble paid off.

By the end of 1986 30,000 STs had been shipped. And 1987 saw the machine picking up even more steam. This was brought about by evolving the ST into a single boxed system. First it had become an STM, with a TV modulator which meant there was no need for a bundled monitor. A further modification was the STFM with a modulator and built-in floppy drive.

With everything running smoothly the ST was set to dominate the home computer market of the late eighties and early nineties.

"TEETHING PROBLEMS"

It would seem that Atari has two major defences, or what Gleadow calls "blind spots", against chages of incompatibility. In Gleadow's words these were that "our French company had shipped the STE four months earlier than us and had no problem with compatibility. Secondly, we tested it with the 20 Powerpack games and there were no problems. We were aware of some problems with earlier games, but that was all fairly elderly stuff".

But press and software company reactions were correct. The STE did have a compatibility problem and rightly suffered a loss of gloss, earning itself the reputation of being a problem 'child'.



• Atari's answer to The Great Chip Shortage Disaster of 1988: the 520STFM Summer Pack

CHIP SHOPPED

However, the smoothly running engine that was the ST's marketing plan was suddenly and dramatically disrupted by a rather weighty spanner. "We were thrown completely off plan by the shortages of D-RAM"

The worldwide D-RAM (Dynamic Random Access Memory) chip shortage hit Atari and many other computer makers – excluding Apple – a body-blow.

According to Gleadow "It certainly slowed *(the sales and development of)* the machine down dramatically".

This is quite a different statement from Gleadow when compared to his feelings on the crisis as it was happening around him in March 1988.

At that time he considered that the chip problem would "Disturb but not damage" the success of the ST. As a result of the price increases, which were necessitated by the D-RAM famine, the shop price rose from £299 to £369 and Atari was forced to cancel its 1988 advertising campaign.

In order to increase the ST price and add value to the product, a revolutionary step was taken in the form of a software/hardware pack – the Summer Pack 520STFM. It included 22 free games from software houses such as Electronic Arts, Mirrorsoft, Ocean and Activision, worth £400 .

However it is undoubtedly true that the ST suffered as a recognised brand by the lack of ads.

A lack of advertising meant that those people who would have seen the ST and contemplated a future purchase didn't. In addition a further price increase to £399 meant there wasn't a great difference between the ST and Commodore's up and coming Amiga.

Gleadow sums it all up: "Atari was worse hit than other companies by D-RAM" and "couldn't fulfill the natural sales momentum we actually had".

CRUCIFIXION

For Gleadow the ST is more than a piece of hardware. He claims that it "...is a machine that has a lot of people emotionally attached to it". From 1985 to 1987 a group who Gleadow terms as "opinion formers" in the computer press became ST enthusiasts. Gleadow picks out Jack Schofield of *The Guardian* as a prime example.

Now, in a brilliant piece of rhetoric which deflects attention from the ST itself, Atari's top man claims that these people were "an establishment which new people in the industry wanted to have a pitch at. We were the innocent bystander, but we had to be crucified to get to the establishment".

Gleadow is actually saying that the computer press were fighting among themselves, attacking respected figures rather than concentrating on the machine itself.

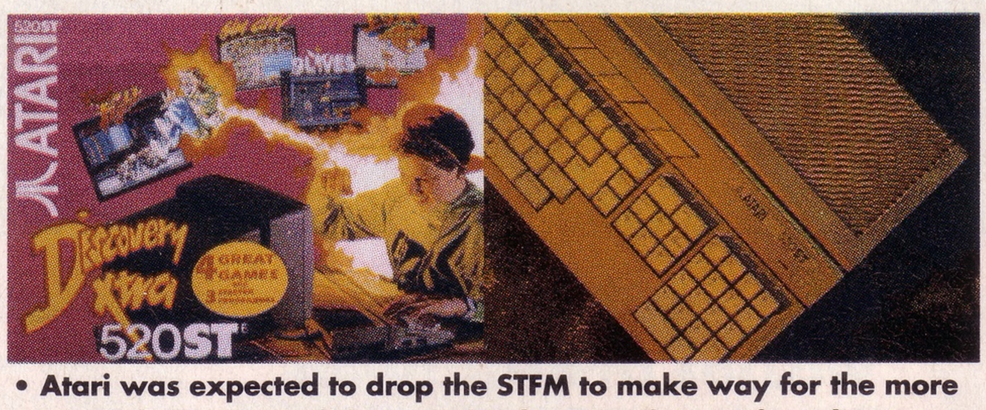
THE LIFE OF THE ST – BUNDLES OF FUN

The ST was launched in September 1985 at £749 with a mono television monitor, external drive and no TV modulator.

Bob Gleadow joined Atari from Commodore, in October 1986 as ITS UK managing director.

In 1987 the ST became the STM with a modulator and was priced at £299. It subsequently became the STFM with a modulator and built-in floppy drive. These were launched with a successful television advertising campaign.

March 1988 saw disaster in the shape of the D-RAM chip shortage. As a result the price of the STFM was increased to £369, and the 1988 advertising campaign was cancelled. Instead the first of the bundles was launched with 22 free games to compensate for the price increase:



• Atari was expected to drop the STFM to make way for the more advanced STE. But it did not and only proved to confuse the market with too many ST machines available

● APRIL 1988 – SEPTEMBER 1988
Summer Pack 520 STFM, £399, 22 games.

● SEPTEMBER 1988 – APRIL 1989
Super Pack 520 STFM, £399, 21 games, one productivity program.

● APRIL 1989 – APRIL 1990
Power Pack 520STFM/STE, £399, 20 titles, two productivity programs.

● APRIL1989 – APRIL 1990
Explorer Pack 520STFM, £299, one game, one productivity program.

● APRIL 1990-MARCH 1991
Discovery Pack STFM, £299, four games, four productivity programs.

● JUNE 1990 – PRESENT DAY
Turbo Pack 520STE (mail order), £399 (now £359), eight games, four productivity programs.

● APRIL 1991 – SEPTEMBER 1991
Discovery Extra 520STE, £299, four games, three productivity programs.

● APRIL 1991 — PRESENT DAY
Family Curriculum 1040STE, £399, five education/productivity modules.

● SEPTEMBER 1991 – PRESENT DAY
Discovery Extra Plus 520STE, £299, four games, three productivity programs.

A DREAM GOES DOWN THE DRAIN

Another devastating blow to the development of the ST was the loss of one of its developmental gurus.

Shiraz Shivji was head of engineering for Atari until 1988. He was responsible for the development of the ST Plus. Atari was already suffering from the misery of acquiring the ill-fated Federated US chain when Shivji left. To this day no-one close to or within Atari will commit themselves as to whether he was pushed or if he jumped.

The departure of Shiraz Shivji, who Gleadow saw as a man 'committed to a better ST' stunned the Atari group. Gleadow explains that, for the ST, the loss was like "Taking your car to a garage and the mechanic takes it apart and he lays all the bits out and he knows what the problem is, and he gets run over, and the second mechanic takes over and looks at bits and thinks: 'What was he doing? How was he going to put all these bits together to make something?' "

So the mistake Gleadow confesses is that 'we tried to put new people in to finish Shiraz' dream. And because they didn't have a grasp of what his dream was, we lost time. We eventually had to abandon the inheritance we had from Shiraz and his people and start afresh. "

Gleadow, as it were, did not get where he is today by accepting criticism of his machines.

A TARNISHED PRODUCT

For Gleadow 1990 was "a flat year" with sales again at 150,000. Having run short of STs in 1989, the STE was shipped in December engulfed in the compatibility storm. Gleadow insists that within weeks of the product's launch Atari was "having to market a tarnished product".

As a result Atari kept the STFM on at £299, with the new Discovery Pack, while the Powerpack was made into an STE bundle.

But now, with the emergent Amiga showing through, the STFM was causing problems for Atari's marketing strategies.

It is a widely held opinion that the beginning of 1990 should have seen the demise of the ancient and revered STFM, allowing Atari to concentrate on the more advanced STE, which was far more comparable with the Amiga.

It did not and thereby put itself at a disadvantage by confusing the market with too many ST machines. Gleadow explains: "The original plan before the compatibility scare was to be out of the STFM and concentrate on the STE in the early part of 1990, as we're doing this year. It was the trade, rather than the public who were all of a sudden apprehensive about this machine called the STE". He admits that by not dropping the STFM "we were announcing that the FM was inferior to the E and, therefore, the Amiga".

"The STE compatibility issues cost us a year on product development. That's the fundamental issue which gave the Amiga its advantage – because it didn't change. We, by virtue of the STE, admitted that the FM was an inferior product".

It was this admission of inferiority which greatly disappointed the ST camp. Gleadow says that "asked to fix something that we couldn't identify, there was a 90 day controversy about our lack of action and that we refused to accept responsibility for this incompatibility, meant we were a manufacturer to be avoided. What could I do? I could have sued the press. The machine wasn't at fault. We have not changed the machine – and yet its no longer incompatible. Publishers were taking a newsworthy position. The problem that never was has gone away."

RESURRECTION

"We believe the Amiga would have had a good nine months. We targeted Christmas 1990 as our resurrection, spending money on end users, getting them to go into the store saying 'I want to buy an ST for £299'. We also invested in improved communication and merchandising support at retail level. The improved communication came in the form of the now departed marketing manager, Peter Staddon.

This more positive strategy followed the 'Atari against the world' attitude which had further confused retailers throughout 1990.

By Christmas that year Atari saw itself in a better marketing position with the ST. This was proved by another 150,000 machines being shipped and a return to confidence with retailers. At the beginning of 1991 the ST had 550,000 machines out in the UK.

Gleadow's economic view of 1991 had been both tough and pessimistic. He predicted that economic conditions would cause the market to shrink by 20 per cent. Realistic or pessimistic? As it stands at the moment, Atari is bullish about Christmas this year.

The acceptance of the STE Discovery pack as a good value bundle has played a major part in a successful 1991 for the ST. Also part of this success is the £399 1040 STE Family Curriculum education pack which, according to Atari, is one of its most successful ever packages in the UK.

The 'machine nightmares' of the ST would appear to be over, with 1991 going down as possibly its best ever year. So far approximately 50,000 520/1040STEs have been snapped up. An additional 130,000 machines are predicted to sell through the autumn and winter of 1991. That is also taking into account that Family Curriculum was out of stock during July and August.

However, with the emergence of the games-only consoles, the Sega Mega Drive and Master System and the Nintendo Entertainment System (NES), as major players in the market, Atari is once again having to redefine its machines. The pitch this Christmas is "Seriously, it's the better computer." The 'seriously' here is a valid attempt to pull the public's gaze away from ST as merely games machine. Gleadow, as you would expect, is full of hope for his family of machines. ■

EXPRESSING DOUBTS

Gleadow claims that *New Computer Express*, in particular, turned the STE's incompatibility problems into "... a national disaster...". He also maintains that the issue was blown out of all proportion.

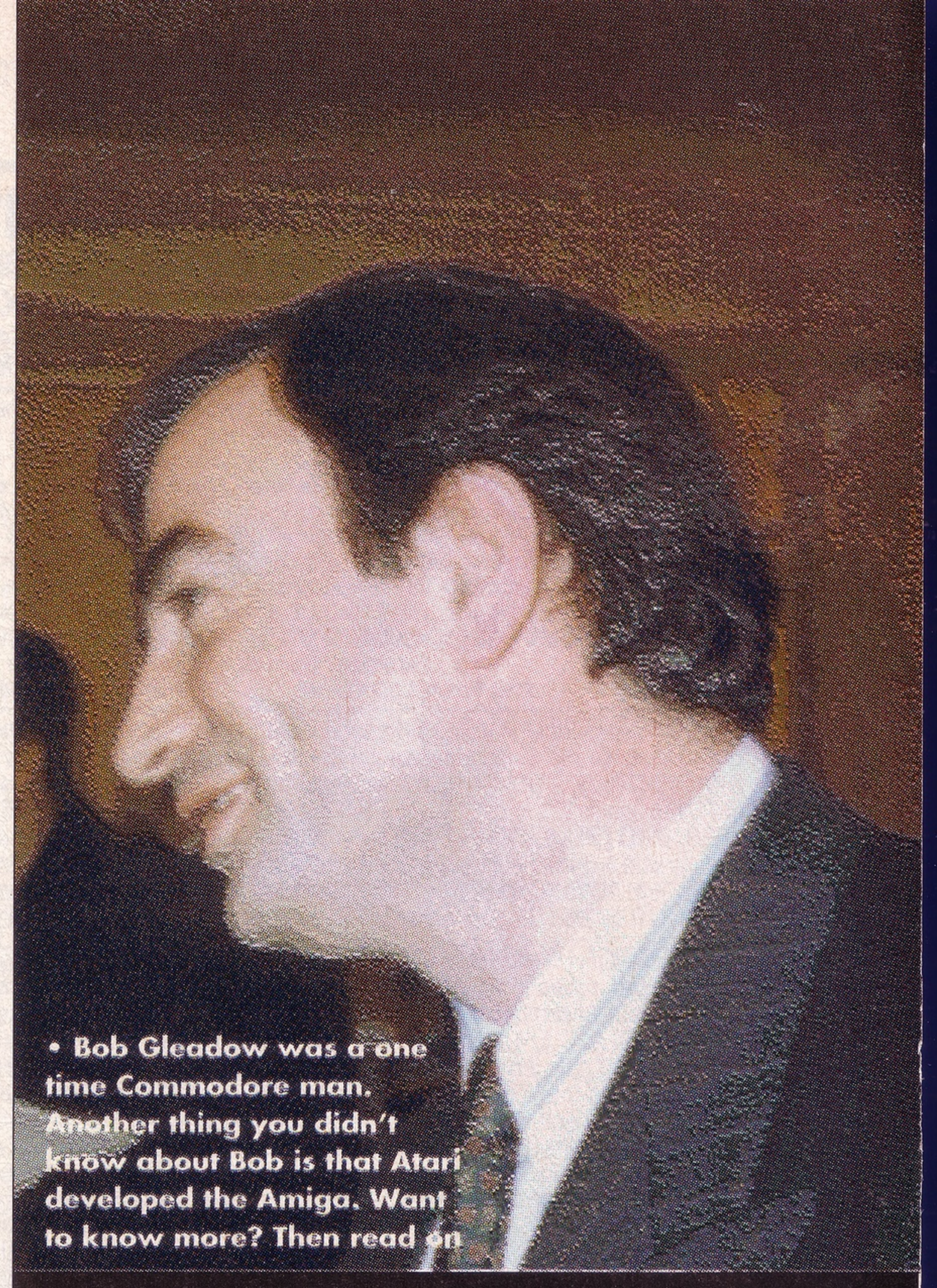
The STE arrived on to the UK market very late in 1989, two years later than expected, in fact.

Its teething problems, in Gleadow's view, were due "to press and software reaction rather than reality. We were roundly criticised for shipping a machine that was incompatible".

In particular Gleadow accuses *New Computer Express* of turning the whole thing into a national disaster. Indeed the compatibility problems on high profile games such as *Stunt Car Racer* and *Kick Off* were highlighted by us and quite correctly.



• ***Express'* coverage of the introduction of the STE in 1989 is criticised by Gleadow as "creating a national disaster"**



• **Bob Gleadow was a one time Commodore man. Another thing you didn't know about Bob is that Atari developed the Amiga. Want to know more? Then read on**

20 THINGS YOU DIDN'T KNOW ABOUT BOB GLEADOW

1) Bob was born in Consett, County Durham before Phileas Fogg and his crisp factory got there.
2) He's happily married with two kids
3) Bob's favourite films are the *Terminator* and *Indiana Jones* series
4) As far as sport is concerned busy Bob says he loves soccer, but doesn't have time to play any.
5) His favourite soccer team is Liverpool. He supports them "by distance" and says he grew attached to the team during their heyday in Europe. What a patriot!
6) Bob's favourite food is steak.
7) As to whether he likes it well done, medium or rare would probably depend on current ST sales.
8) Asked whether he had a favourite drink Bob replied "you couldn't publish it" but did say he used to drink in Durham City. The mind boggles!
9) Bob tells us he's "into anything that goes fast". In fact he has a very sporty Morgan Plus 8.
10) Speedster Bob is also a four-wheel drive fan, a Range Rover being his other car.
11) Space fan Bob lists 'Hal' the 2001-A Space Odyssey computer as his all time favourite machine.
12) If he was stranded on a desert island cunning Bob would "Take a boat".
13) And how would he keep himself amused on a desert island ? "Nothing could remove the boredom".
14) Singer-come-actor Phil Collins is currently Bob's favourite music on CD.
15) "I'm a compulsive reader " says Bob, always picking up a book for the trip at an airport. His last read was Tom Clancy's *Patriot Games*.
16) Flyaholic Bob says you can't beat British Midland for in-flight service.
17) At home Bob's computers are two Atari Lynx consoles and a 1040ST.
18) Family man Bob tests all new software and hardware on his kids.
19) His kids' favourite games are *Lemmings* on the ST and *Chequered Flag* on the Lynx.
20) Asked what was most important to him for Atari's future, radical Bob replied "We want evolution rather than revolution".

As told to Matthew Squires of New Computer Express

AMIGANUTS UNITED

169 DALE VALLEY ROAD, HOLLYBROOK, SOUTHAMPTON, SO1 6QX.

Worldwide distributors of the dedicated Amiga Coders Club disks.
European distributor for the world famous T.BAG disks from Merlin Software

THE (1Mb) EIGHT CHANNEL MIDI COMPATIBLE OctaMED V2 now contains full notation, including an editor with notation printing, 5-7 channel modes for high quality, non-CPU stressing audio/split channels, sixteen track display for Midi use plus a host of other new MIDI features. includes latest V3.20 of the PD four channel Med which is also encoded into the program. Bargain at £20.00 European countries, (£25.00 for non-European), inc VAT but not post/packing. Payment in pounds sterling only. Overseas, send a bankers order/Eurocheque etc. (Credit card orders will not be accepted). **IMPORTANT NOTICE TO ALL REGISTERED PURCHASERS OF OctaMED V1** if you return your original Amiganuts disk, containing V1, you can have V2 for half price, (ie £10.00 Europe). Remember you must return your original V1 copy. **EVERY ORDER FOR V2 WILL BE ENTERED INTO THE OctaMED V2 FREE PRIZE DRAW**

1st Prize: Golden Image Hand Scanner
2nd Prize: LCD Colour TV **3rd Prize:** £50.00 FREE progs.

MASTER VIRUS KILLER V2.2 It recognises The destructive Saddam Virus.....£5.00
BUG-BASH: Kill the bugs, clean up the trash in the garden a great kids game £3.50
877: 1 ACROSS 2 DOWN A fully fledged crossword program (data disk no1 is supplied FREE!) for only .....£6.00 Data Disks 2,3,4 and 5 now ready at ...£2.50 each
1068: MOD PROCESSOR V1.92. Make picture and/or music progs, adjust pic height/width this version will load the new 8 channel Octamed music and is excellent.....£3.50
1139: THE ADVANCED SCREEN DESIGNER, (a boon to all you programmers out there).....£3.50
1161: INTUIMENU V3: The easy way to execute your programs. Treat yourself! £4.50

INTO CODING? - Want to learn? The Amiga Coders Club is for you! ACC 1/4 is the first four compressed issues of an excellent series for coders. Even if you are new to the Amiga, if you want to learn Assembly, using Devpac (or our own new ACC special Assembler disk), this is the club for you! ACC 1/4 (compressed) £1.50. The Amiga Coders Club disks are packed with source, hints, tips, advice form many of the well known coders that are on the Amiga scene today. Issue numbers 5 to 16 are now available. PLEASE NOTE (excluding the Compressed Introductory Disk (ACC 1/4) and NO:12 The price for each issue of the ACC disks is only.....£3.00
ACC 12 is our birthday issue, it is a 2 disk set, and therefore, the price is £6.00
Amiga Coders Club Special. Here is a low price Assembler package for all you coders out there in Amigaland (see review in last months Amiga Format).....£5.00

If you would like to get hold of the Amiga Coders Club disks as soon as they are published, why not send £33.00 and ask to go on the ACC mailing list now? We will send you each issue as soon as it's ready (applies to issue 14 onwards). Please note that issues released prior to ACC 14 must be purchased separately.You can now also take out a years subscription for the USA T.BAG disks, (applies to issue 50 onward), simply send £33.00 and we will send you each issue well in advance of them becoming available from any other supplier. (Note that issues 50 to 56 are ready now and will be sent upon joining). Issues released prior to T.BAG 50 must be purchased separately @ £2.00 each. (Subscription orders from non- European Community, please add extra £6.00 for postage)

MIKE SIMPSON'S A-GENE V3.28 (full version) is now available directly from us. Price: Europe **£15.00**, Rest of World **£20.00**. Simply the best Genealogy prog.

AMIBASE PROFESSIONAL III is here! The additions to this new two disk version database make it a must have. Also contains a program to convert files made with previous versions of Amibase. It is excellent. **£10.00** EC - **£15** R.O.W.

Excluding the T.BAG , none of the above programs are Public Domain. Prices include V.A.T. but add the following to your order for return postage: - All EC Countries (inc. UK), add 50p - Europe (non EC) £1.00 - Rest of world add £2.00.
Final 1991 catalogue is ready, send for your copy now! £1.00 (includes post/pack)

PHONE NOW FOR FREE CATALOGUE

WE HAVE OVER 1600 TITLES LISTED
Games, Demos, Utilities, Music, Adults Only and many more
0432 341879

GAMES

0670	Monopoly
0595	Caverunner
0843	Metagalactic Games
1043	Letrix
1020	Master of Town
0849	Holy Grail
1382	Terror Lines II (18)
0126	Star Trek A 1 meg
0127	Star Trek B 2 drives
0128	Star Trek C Game
1389	Star Trek Next Gen
1446	Return To Earth
0853	Golden Fleece
0856	Xenon 3
0936	Auto Bahn 3000+

UTILITIES

0671	Rim Database
0631	202 Utilities
1208	D.B. Wiz
0333	Voices 8
0065	Demo Maker
0654	Video Applications A
0655	Video Applications B
1508	Ami Base
1162	Home Utilities
0857	Clip Art
1078	Essential Utils 2
0659	Essential Ulits 1
1146	Icon Magic
1151	C-Light

DEMOS

1117	Budbrain Megademo
0439	Fantastic Demos
0587	Brainwave
0559	Deadly Pursuits
0993	Hellish Megademo
1337	Sam Fox
0933	Mike Tyson 1 meg
1355	Techno Flight
1142	Amaze
1460	Do The Bart Man
1591	Flimbos Quest Demo
0454	Dragons Megademo
0469	Beastie Boys Demo
0593	Thunder Birds Demo

ANIMATIONS

0014	Walker Anim 1 meg
0015	Walker 2 Anim 1 meg
0538	Dragons Lair 1 meg
1103	Iraq Demo
1095	Batman Movie 1 meg
0155	Space Ace Demo
0196	Puggs in Space Demo
0524	Juggler Etc
0927	Swinging Frog Anim
1079	5 Ways to Kill a Mole
1100	Bruce Lee Demo
1201	Another 5 Ways to Kill a Mole
1214	Madonna Anim 1 meg
1123	Robocop Digi Movie
1169	Millenium Animation

Games Galore 1-4 (4 Disks Set) £4.00. Huge Range of Adults Selection on Catalogue.
This is just a selection of our range. All P.D. is £1.25 per disk. Buy 10 pick 2 FREE.
Send P.O's or Cheques to P.M. Rowe. Add £1 P&P. Over £20 FREE.

P.M.R SOFTWARE
P.O. BOX 147,
HEREFORD, HR2 7LS

RING NOW FOR OUR FREE 1600 TITLE CATALOGUE. ALSO IN CATALOGUE JOYSTICKS, DISKS, STORAGE BOXES, EXPANSIONS, EXTERNAL DRIVES + MUCH MORE. 0432 341879.
24 Hour despatch on cleared funds.

"FLOOD"

The Unique Multi-User Conference System
0839 770007
(Baud Rate v21, 23, 22, 22bis, 32, 42, MNP 1-5)
Do you fancy your chances as a
SUPER SLEUTH
Use your powers of deduction to
WIN
A COMMODORE CD TV!!!
Test your ingenuity and solve the mystery of
"DER GOLDENE HERR (C)"

All baud rates supported up to 9600.
8 databits no parity 1 stop bit.

- No Registration fees
- No Extra On-Line Charges
- No On-Line Restrictions
- Multi-User Chat Facility (chat with other users)
- Multi-User On-Line Entertainment

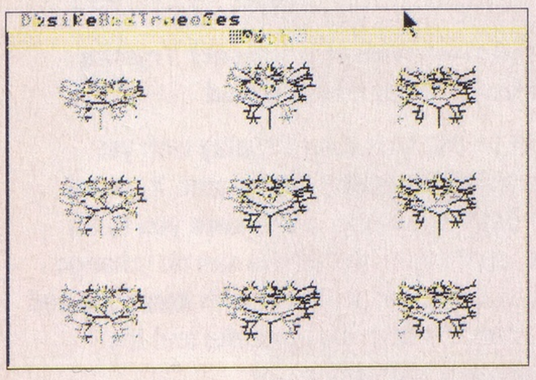
THE SERVICE FOR ALL YOUR NEEDS

Special areas include full Technical Support for CAD users.
Free symbol libraries to download. Also included full technical support for Superbase 4 (Tm) from THE company with years of experience in D.M.L.
Multi-lines supporting up to 20 users 24 hours a day.
(For live help with your logging on problems ring 0839 770044)
All calls charged at 36p Cheap Rate and 48p all other times.

THE PD COLUMN

A program that lets you 'grow' life, two new shoot-em-ups and an old favourite, hints on making money with your computer – and avoiding slow PD suppliers. James Leach keeps you in touch

Are you an Atari musician looking for samples to incorporate into your work? Then look no further. Riverdene PDL has released a range of disks packed with drum sounds, noises, bleeps, burps and Timmy Mallett-style 'Oh yeah's. All the sounds are saved in SPL format (which, I believe, makes them useable with most music progs), and they all run in 8MHz. Most of the sounds are taken from CDs which, ignoring the copyright aspect, makes them dead good quality. The disks are called ***Artemis Samples*** and the numbers are 919 to 931. Chart success should be guaranteed.



• Recreate your ancestors by natural selection with *Biomorph*

MORPH AND FRIENDS

Star PD seems to have struck out in a new direction with its Public Domain representation of evolution on the ST. On its imaginatively titled ***Misc 8*** disk it has a program called ***Biomorph***. This recreates the process of natural selection (the theory proposed by the venerable Charles Darwin) and takes it further into the land of genes and evolutionary trees. Star PD says that the prime reason for this program is to accompany a book by Richard Dawkins called *The Blind Watchmaker*. This explains how evolution may occur and shows what happens when it does. The program builds graphs to show the spreading of genes down through successive generations until rather pretty snowflake-like structures are formed. Whether it means a great deal to anyone but hardened evolutionary biology professors is doubtful but it *is* interactive – allowing you to create your own life forms and watch them develop into, er, snowflake-like structures. However, it does come with a fair amount of on-disk documentation to help you.

Biomorph must rank as one of the most specialised PD disks I've seen, but if you're interested in the evolution of species (or doing a biology course somewhere) it could prove fascinating, informative and useful.

SMALL CHANGE

Also on ***Misc 8*** is a Shareware program called ***Money***. This is subtitled ***How To Make Money Using Your Micro***. The program doesn't actually go into details, but seems to be more of a database, listing computer magazine publishers, software houses and useful contacts. There is also data (all text) about video graphics, how to sell ideas and programs to potential publishers, and plenty of other encouraging snippets for those who want to make their ST pay for itself.



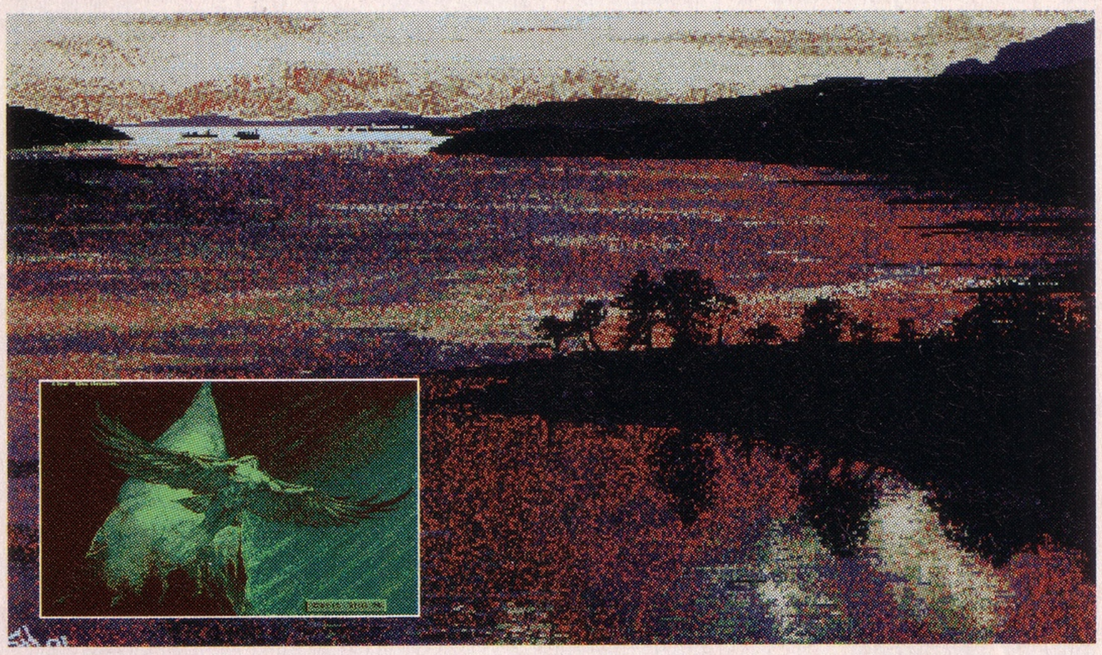
• What's the best way to make cash with your micro? Use your brain

How To Make Money Using Your Micro is actually a bit of a misnomer, because all the information contained in it could easily be gleaned elsewhere (in magazines, books and fanzines) and, as the programmers warn, it becomes dated very quickly.

For example, all the Future Publishing magazines are included, but at an address the company vacated nearly two years ago. Also included in its lists are magazines like ***MacPUBLISHING*** and ***Crash***, which don't exist anymore. If you are really serious about making some dosh with your machine, this probably won't tell you anything you don't already know.

AMIGA ART

Chris Hill is a well-known name in the world of Amiga art, and his latest collection is available now from 17-Bit Software. ***Disk 1025*** contains a slideshow of ethereal images, designed to astonish and impress Amiga owners across the nation. The images are HAMmed, and there are about 20 on the disk so all you need is a dark room and an Enya CD to complete the ambience.



• Thrill to er, lifelike images with Chris Hill's artwork on the Amiga Freak out with stunning Amiga pictures from 17-Bit Software

TEXT ON TAP

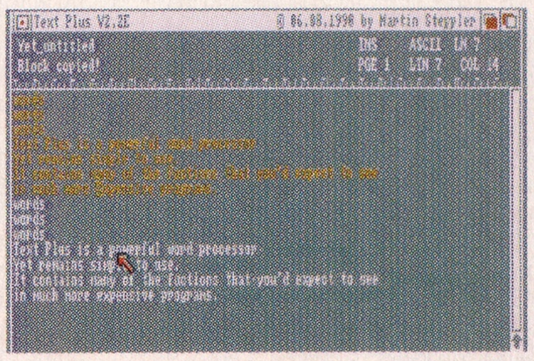
17-Bit has also got a disk with two text editor/word processor packages on it and a disk track counter.

The track counter does exactly that. It's a small box that displays the tracks currently being examined by your drive, and it works for df0 or df1. As 17-Bit says, it obviates the need for an expensive external drive which includes an LED track display.

The first text-processor is called ***Text Plus v2.2E***. This is a menu-driven utility which allows you to type away to your heart's content (on that great ifantasy novel or tax return), save, load, print, save as ASCII, cut and paste and much more. It has also got a fast search and replace function.

All it needs is a spelling-checker and it will be ready to take on the bigger boys – costing twenty times as much.

Uedit is a slightly simpler version of



• Process that text with Textplus. It couldn't be simpler

SHOOT TO THRILL

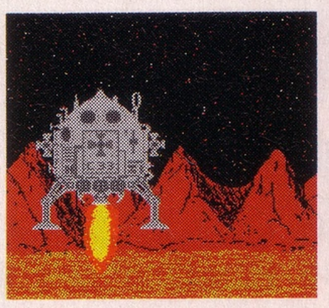
A couple of very playable ST blasters have found their way into the PD Column this week. Let's take a quick peek at how they compare.

Onyx is the sort of game which *everybody* loves playing. It's a horizontally-scrolling shoot-em-up, with big, joyful graphics and addictive gameplay. The plot isn't particularly taxing – you are flying over a planet populated by nasties. They come zipping on to the screen in such an aggressive manner that you are left with no option but to blast them out of existence. It's a great deal of fun, and made a bit trickier by the fact that your fuel supplies dwindle alarmingly. When a wave of aliens is destroyed, the last one always drops a fuel canister, which you have to collect before it reaches the ground and disappears. It's even more incentive to fire on everything that moves. *Onyx* is a large amount of fun, to be sure.

Exterminator from Riverdene PDL is in a similar vein to *Onyx*. This time you must travel through underground passages and caves, also in a left-to-right direction, blasting at swarms of nasties that do their damnedest to get in the way. You have a nicely drawn sprite of a little character sitting in what looks like a bobsleigh. After the rather lengthy intro, where a lunar lander-type rocket descends slowly to the planet's surface, the character emerges and zips straight into the catacombs.

The aliens fiends he encounters are much fiercer than those in *Onyx*. They're smaller, faster and not as cuddly, but this could fire you up to kill even more of them. Impressive scrolling backdrops whiz by as you get further into the game, and the idea is to reach an egg which contains a devil. If you beat the countdown timer and get past the egg's guardians, you must destroy it with all of the weapons you have accumulated and thus free the universe from all unpleasantness. Who writes these storylines?

Exterminator is faster than *Onyx*, but doesn't have the cutesiness. It's a bit more polished and would appeal more to veteran joystick-wagglers. But overall, I think *Onyx* is the more enjoyable game. If you've got an ST, then get *Onyx*.



• In *Exterminator* you're after the devil



• Lots of colour, aliens and fun. That's *Onyx* for the ST

PUBLIC DOMAIN

the same thing. One advantage is that it allows you to program the functions you use most often when word processing or editing. So if you spend a lot of time bashing out text pieces you might well welcome this feature.

NO BONKING

Fantasia Shareware has got a large amount of software for the Macintosh ranging from mono games to business applications. On review this week are two educational disks.

Educational Disk 4 contains a program called ***3D Mole***. It's not a ***Bonk The Gonk*** rehash but a program which allows you to set up, rotate and drool over molecules. Several kinds are already in the program when you get it, such as three different types of water (you didn't know there *were* three types, did you?), ethylene and a number of other molecular structures. It all looks very impressive but you'll need to be a microbiologist to get the most out of it.

Another program on this disk is called ***Organ Bath***. Intriguingly, it simulates what happens when you tense and relax your muscles. It also allows you to inject various drugs into the muscles to study the effects. It must be said that ***Organ Bath*** easily beats ***Biomorph*** for specialisation. But if you are that medical student, it could be right up your street.

Educational Disk 3 is for budding wordsmiths. It has a selection of games based around anagrams, word search puzzles and letter games. In some cases you have to stretch your Scrabble-playing abilities to make words out of seemingly random letters and in others you must simply be quick and thinking of synonyms. It's a lot of fun for a hack like me, and it'll improve your vocabulary too.

COMPLAINTS

With the number of PD libraries now in operation, it was inevitable that complaints about some companies would arise.

I received a letter from Louis O'Brien in which he wonders what can be done to help the PD-using public to avoid the pitfalls when dealing with various PD companies. He cites examples of companies which advertise '24-hour dispatch', and don't send out the software for over two weeks.

Waiting for orders in the post is an experience most computer users will be familiar with, and the usual time is 28 days for delivery, but if a company advertises a shorter time, it's up to them to get the goods off in that time.

Louis also brings up another point. With PD companies trying to make increasing number of programs available, problems can arise simply because the wrong stuff is sent out. In his case, he ordered a program on a 3.5-inch auto-booting floppy and was sent a version compatible only with a hard drive. Not surprisingly it was totally useless to him.

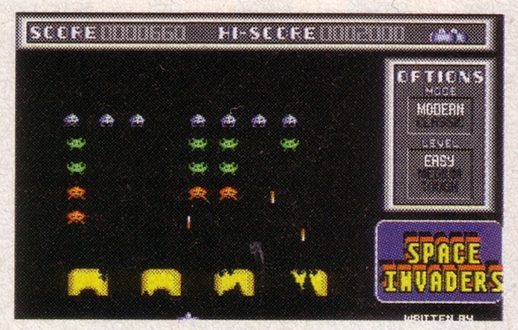
QUALITY CONTROL

It seems that Louis has had a run of bad luck, but the points he has made are valid, and the ever-vigilant ***PD Column*** has started a file for complaints of his kind. But what can the average user do to minimise problems?

The first thing is to clearly state what you're ordering and what computer you've got. A phone call to the PD library beforehand is a good idea, to check on the program's availability – and find out whether it's completely compatible with your machine. Only using the libraries that appear in the ***PD Column*** or advertise in ***New Computer Express*** is a wise precaution.

Most libraries provide an excellent service, though, and if you write to the ***PD Column*** and let me know which ones are the best, I'll pass on that information to thousands of others and the world will be a better place. ■

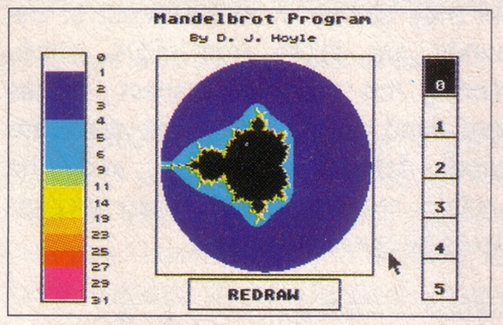
A FAVOURITE FRIEND



• By 'eck this'll take you back – here's *Invaders* for the ST

Purple PD, purveyors of ST software, have got a great version of, wait for it... *Space Invaders*. Yes, *Space Invaders* just like it used to be! It's smooth, colourful, playable and in short, everything the original was. Great game, very old, 'nuff said.

FRACTALLY YOURS



• Bored with the jet-set? Try the Mandelbrot Set instead

ST fractal fans can now play with yet another Mandelbrot generator. It comes from Floppyshop, and allows you to do everything all the others can do (change colours, zoom in, fiddle with iterations and so on. It's fast, it's colourful and it's infinitely regressing.

PD OR NOT PD?

Atari has recently demanded the withdrawal of 44 ST games which it claims are not PD at all, because it holds the copyright on them. As well as games like *Joust, 9 Lives, Crystal Castles* and *Borodino*, Atari owns the copyright on the popular *Neochrome*.

But currently doing the PD rounds is a utility called *Neochrome Master*. This, according to Atari, "bears so much resemblance to *Neochrome* it's obvious. It's illegal and it must be stopped."

The legal version of *Neochrome* still makes Atari around £3,000 per year in sales, but of course it isn't just the money Atari is interested in. If people abuse PD libraries to circulate copyrighted software, it will open a whole new can of worms.

PD LIBRARIES A-Z

You've read the column, so now you want to know where you can get hold of the software. That's where the *Express* PD library listing steps in...

8 BIT PUBLIC DOMAIN – Spectrum, BBC, Amstrad CPC and ZX81 public domain software. Stamp and 10p for list.: 1 Northolme Cl, Grays, Essex, RM16 2NX.
17-BIT SOFTWARE – PO Box 97, Wakefield, West Yorks WF1 1XX. Tel: 0924 366982.
ADPD – For the cheapest Amiga PD around, some even free. Send SAE for details or disk for lists. 15 Deanes Close, Dovercourt, Essex CO12 4JH.
ADVANTAGE – 54 Bath Road, Cheltenham, GL53 7HJ. Tel: 0242 224340.
AERIAL SHAREWARE - IBM PC compatibles. Catalogue on a disc (free, state size). 7 Valehead, Monkseaton, Whitley Bay, Tyne & Wear NE25 9AY[5]
AKORE SHAREWARE – 7 Fishergate Point, Lower Parliament Street, Nottingham NG1 1GD. Tel: 0800 252221.
ALDRO AMIGA PD SWAP CLUB SAE and blank disk for details. Lists growing every day. Send to: 24 Water Meadow, Quepgeley, Gloucester GL2 6XR[4]
ALPHA PD - Amiga PD, monthly update of cat disc, £1 per disc. 22 Ceylon Place, Eastbourne, East Sussex BN21 3JF. Tel: 0323 26790[5]
AMAZING AMIGA PD - Over 500 disks, simply send extra blanks to cover costs + SAE for list to D Hopkins, 70 High St, Delabole, Cornwall PL33 9AH[6]
AMIGA ANSWERS – Integrated programmers PD library and problem solving service £1.50 for cat and programmers utility disk. 11 Mill Hill Rd, Norwich.
AMIGA GOLD - Good quality PD at favourable prices. Write: 6 Churcher Cl, Gosport, Hants PO12 2SL[5]
AMIGA NON-RIP OFF PD – For good Demos send disks+ postage to Mark, 50 Victoria Ave, Sleaford, Lincolnshire NG34 7LN.
AMIGA PD BREAKTHROUGH – You've tried the rest, now try the best! PD from 18p per disk. Swift dispatch of all orders. Contact Darryl, 12 Kent Avenue, Ross-on-Wye, HFDS HR9 5AQ, NOW!!
AMIGA PD - 2 megs free PD. we are giving away free Amiga PD, send a 2nd class stamp for the info-pack to: 16 Hermisto, Monkseaton, Whitley Bay, Tybe and Wear NE25 9AN
Amiga PD Exchange - Get PD At Postage costs only.Why Pay? SendSAE for list and detailslan Walsh, 123 Risedale Road, Barrow in Furness, Cumbria,LA13 9QZ[7]
AMIGANUTS UNITED – 169 Dale Valley Rd, Hollybrook, Southampton SO1 6QX.
AMIGA SOFTWARE EXCHANGE - Small and friendly gmaes group, adventures, sims and arcade, SAE for info to 13 Bournville Lane, Birmingham B30 2JY[6]
AMOS PD – 0942 495261.
ANDRIKKOS PC LIBRARY – PC Megapack: 14Mb compacted Shareware, £16 . Cheque/PO or SAE for list : Andy Kyriacou, 17 Parkhurst Rd, London N22 4JQ.
ANGLO AMERICAN SHAREWARE – £1 a disk. Over 2,000Mb of top Anglo-American titles. Send two first class stamps for menu driven catalogue disk to 37 Deven Place, Newport, Gwent. Tel 0633 259847.
ARCH ANGEL PD – Over 230 disks of Archimedes software. Send 75p for catalogue/demo disk to 9 Chancel Court, Pinhoe, Exeter, EX4 8QE.
ARCH PD – 200+ disks of Archimedes PD. Send £1 or SAE and disk to Arch, PO 109, Ferry Rd, Hullbridge, Essex, S55 6EL.
ARROW PD formerly Scotsoft – ST PD. Send an SAE and blank disk or £1 to 6 Kent Orchard, Perry Street, South Chard, Somerset TA20 2QB.
ASGARD PD - New programme (Amos) 'The Cheat Machine' - build your own Cheat library £1.50: 20 Langdale Drive, Flanshaw, Wakefield WF2 9EW Tel: 0924 361101[5]
ATARI ST DEMO SPECIALIST – Range of POV , megademos,singles, music modules, slideshows, uilities. £1 for catalogue disk. Unit 1, Johnson's Shopping Centre, 29/31 Bond St, Blackpool FY4 1QB.[3]
BASOFT PD – Original PD plus the best of the rest. SAE to BASOFT, 357 Church Rd, Basildon, Essex SS14 2EV. £1 per disk. New disk catalogue in exchange for blank disk.
BATTLEAXE PD - Amiga only, £1 a disk and digitising service, 80p for cat with free samples: 25 Kingswood, Thorpe Marriot, Norwich NR8 6UN . Tel: 0603 261060[6]
BEGINNERS' PD – ST PD starter disks. Two available. Over ten programs. £3 the lot. Write to James Thoroughgood, 114 Sandrigham Way, Frimley, Surrey, GU16 5YF. Also send suitable SAE.No cheques.
BBB (BIG BAD BRIAN'S) PD library. 3.5-inch only from £1. Send formatted disk and SAE for catalogue to BBB, 35 Grangeside Ave, Hull HU6 8LP.
BENETECH – PC PD. 21 Loughborough Road, Leicester LE4 5JL.
Binary Zone PD - The very best PD for CBM64 Disk Users! All the newest demos, plus all the classics!34 Portland RoadDroitwichWorcs WR9 7QWPhone No: (0905) 779274
BOOT UP PUBLIC DOMAIN – Amiga Public Domain. Only £1 per disk Send 75p for catalogue disk to Carol Wellington, 30 Sunnings Lane, Upminster, Essex RM14 2DQ.
BROADSWORD PUBLIC DOMAIN – Atari ST PD. 70p per disk. Send disk plus SAE to Flat 4, Moreton Court, 212 Dover Road, Walmer, Deal, Kent CT14 7NB. Over 350 disks.[2]
BUDGIE UK – 5 Minster Close, Rayleigh, Essex SS6 8SF
BURMAN'S PD – Amiga PD for 40p. For a cat diosk, demos and a game send stamp + disk : Burman's PD, 41 Pinner Park Gdns, Harrow, Middlesex, MA2 6LQ
BYTEBACK – 6 Mumby Close, Newark, Notts NG24 1JE. Tel: 0636 79097
BYTES - Amiga PD software, over 1000 disks, call now for cat: 295 Peniel Green Road, Llanamlet, Swansea, SA7 9BJ. Tel: 0792 772745
C˜S PD LIBRARY Sam Coupe PD Software. Send SAE and disk (or 80p) for disk catalogue to: CMS PDL, Donald Drive, Chadwell Heath, Romford, Essex[4]
CALEDONIA PDL – 250 Oldtown Rd, Hilton, Inverness IV2 4PT. Tel: 0463 225736.
CAPRICORN COMPUTERS – 35 Warwick Rd, Olton, Solihull, West Midlands B92 7HS.
CHEAP SHAREWARE - PC shareware at 50p per program, send stamp and disk for list to: A Wishrt, 3 Duart St, Glasogw, G20 0EG[7]
CHEZRON SOFTWARE – 605 Loughborough Rd, Birstall, Leicester LE4 4NJ.
CIRCULAR PD LIBRARY – 14 Morrison Drive, Lennoxtown, Glasgow G65 7BA
COLONIA PDL – PD swap shop! Amiga and ST. Over 350 titles. One for one. Swap free. For list write to 4 Eastfield Street, Lincoln LN2 5ES.[2]
CRAZY DIAMOND PD – For the ST. Send SAE and blank disk for catalogue and free PD to 58 Hillside Rd, Sudbury, Suffolk CO10 6SA.[2]
CRAZY JOE'S - Amiga PD, catalogue disk 50p. Tel: 0709 829286[5]
DATA PD – For Amigas and Amstrad CPCs. For disk-based catalogue and sample programs send £1 (Amiga) or £2.50 (CPC). Cheques/POs to T Kingsmill, 202 Park St Lane, Park St, St Albans, Herts AL2 2AQ.[3]
DB Soft, PC Shareware - Send £1 for catalogue disk 100's of Disks! 29 Birchwood Drive, Ravenshead Notts NG15 9EE Phone No: 0623 793641[7]
DELTA C64/128 PUBLIC DOMAIN –SAE: Delta PD, 39 Station Rd, Claydon, Ipswich, Suffolk IP6 OHS.[2]
DELUXE AMIGA – Exclusive review of Terminator 2 in issue 1. Send a £1 cheque/PO to Antony Grace, 2, Furzefield Crescent, Reigate, Surrey RHZ 7HQ.
DISCOVERY PD – Coming soon. For Atari ST. Wide selection and excellent after sales help. Disks £1-1.50. Disk catalogue 50p. Write to J Thoroughgood, 114 Sandringham Way, Frimley, Surrey GU76 [2]
DIGITAL APPLICATIONS - have changed their name to Essex Computer Systems, 118 Middle Crockerford, Basildon, Essex SS16 4JAGENERAL AMIGA - A comprehensive Amiga PD Library. All disks. Only £1. Monthly catalogue/magazine £1.50. Cheque or P.O. General Amiga, 19 Earn Court, Alloa. FK10 1PT4
THE DISK – Stephen Lord, 6 Stubbington Brink, Hebden Bridge, West Yorkshire HX7 6LR.
DRAGON PD – Programmers wanted for Amstrad, CPC 6128 PD library. For more info, write to: Dragon Road, 415 (flat) Whitehall Road, Bristol, BS5 73P.
DSD SOFTWARE -ST users interested in art, graphics, poictures? then contact the PD library that specilises in them: 5 Leinster St, Runcorn, Cheshire WA7 1ER.
DW SOFTWARE - For the Amstrad CPC,send for free list: 62 Lascelles Ave, Withernsea, N Humberside, HU19 2EB[6]
Dynamic Designs PD - Amiga PD, only.90p for a catalogue or informationWrite to:-DDPD with SAE and disk, 63 Daleside Avenue, Pudsey, Leeds, West Yorkshire LS28 8HB Phone no: 0274 667634[7]
EUROPA PD - ST PD All disks D?S from 75p, send blank disk or £1 cheque/PO to 1 Hindmans Rd, East Dulwich, London SE22 [6]
DYNAMIX PD – PC, Amiga and C64 Public Domain. All new and best titles. For free detals contact 132 Springwood, Llanedeyrn, Cardiff CF2 6UF. (SAE)
EAST MIDLAND PUBLIC DOMAIN LIBRARY – 54 Watnall Road, Hucknall, Nottingham NG15 7LE.
EDLIB – Interactive, educational and productivity compilations of PD for Amiga. £1.50. All regular PD only 89p. Graphics Master 1 + 2, graphic image manipulation PD software: £3. Contact Edlib, Scotland Farm, Stockwood Rd, Brislington, Bristol BS4 5LU.
ELMSOFT – PO Box 17, Loughton, Essex IG10 2EE.
ESSEX SHAREWARE LIBRARY – Beginners pack of the best of PC Shareware. Ten disks £14.99.

69p

SPECIAL OFFER AMIGA PD

69p

YES IT IS TRUE PD FOR JUST 69p - OFFER ENDS 31/12/91
HERE IS A SMALL SELECTION FROM OUR VAST RANGE
OVERSEAS ORDERS ADD 25p A DISK FOR EUROPE 60p R.O.W.

*= 1MB
(2)= No of disks

ENQUIRIES TEL:
0424 712349

SOFTWARE

DEMOS

D113) Silents Scroller
D115) Utopia Cartoon Slides
D117) Bunsen Burner
D119) The Link Megademo
D122) Ghost Pool
D124) Scoopex Seven Sins
D126) Disney Slideshow
D128) Sleeping Bag Demo
D130) System 5 Demo
D132) Alpha Flight Megademo 2
D134) Share And Enjoy 46
D136) Thames TV Demo
D138) Vision Megademo
D140) Fast Cars Slideshow
D142) Mobed
D145) Kefrens Wall Demo
D147) Beast 2 Preview
D149) Treacl
D151) Share and Enjoy 47
D153) Simpsons Mini Mega (XXX)
D155) Glass World Animation
D157) Congaman Animation
D160) Anarchy Scratch Pack 39
D162) Bugs Bunny Anim*
D164) Smurf +Cokeman Anims*
D166) Juggette Animation

UTILITIES

P02) A68K Assembler
P04) North C
U001) Jazzbench
U004) Visicalc Spreadsheet
U006) Intro Maker
U008) Sidney And Friends
U011) XLS Disk 1
U013) Clip Art
U015) The Magicians Utilities
U017) Steel Moon Utilities
U019) CADV
U021) Super C Disk
U024) Red Devil Utils 4
U026) Amibase V3.76
U031) Bootbench
U033) C-Light 1+2
U035) System Checker
U037) Tetra Copier
U053) Text Plus Wordprocessor
U056) Wordwright Wordprocessor
U058) Running Man Update
U060) Mag Media Disk Utilities
U063) Pendle Europa Utils
U065) Fonts
U067) ICPUG Printer Utilities
U069) XLS Best Of PD 3
U100) RSI Demo Maker

GAMES

G004) Breakout Construction Set
G006) Star Trek (2)
G008) Drip *
G010) Quiz Master 2
G012) Popeye
G014) Tennis *
G016) Flaschbier
G018) Treasure Hunt
G020) Wet Beaver Games
G022) Workbench Games And Hacks
G024) PD Games Compilation
G026) Movie Games
G028) Eatmine
G030) Return To Earth
G032) Klondike
G034) Trek Trivia
G036) Pipeline
G019) Battleforce
G021) Arcade Games
G023) Star Trek The Next Gen.
G027) Hack
G029) PDOM Games
G031) BIP
G033) Stoneage
G035) Jeopardy
G041) Frantic Freddy
G045) Llamatron

DISK CATALOGUE
50p
CONTAINS DETAILS OF ALL OUR DISKS AND IS UPDATED FREELY WITH EVERY ORDER. INCLUDES 2 FREE GAMES + A DEMO

We also stock APDL, Amicus, T-Bag and Fred Fish Disks.

All orders dispatched within 24 hours.

Buy now while the price is so low

Please add 50p postage + packing to all orders.

PLEASE MAKE ALL CHEQUES AND POSTAL ORDERS TO S.P.D.

S.P.D. 62 MANOR ROAD, HASTINGS, E.SUSSEX, TN34 3LJ

Cheques/PO to Essex Shareware, 221 Branksome Avenue, Stanford-Le-Hope, Essex.

FORMFINDER - (ST) from Adam Squibb 11 Beaulieu Place, Peel Common, Gosport, Hampshire, PO13 0QP[6]

FORTISS PD – Amiga PD. Watch the magazines for our advert or send £1 for catalogue disk to Fortiss PD, PO Box 2, Earl, Shilton, Leicester LE9 8LU.[2]

FREAKS PUBLIC DOMAIN LIBRARY – Disks filled from a huge range. Ribbons re-inked, recycled packaging, send stamp for catalogue to Freaks, 29 Leap Valley Crescent, Downend, Bristol BS16 6TQ.

FREEWAY PD – For the Amiga. Loads of titles for only 99p including p&p. Send disk for list. Freeway PD, 11 Elizabeth Place, Somting, Sussex BN15 9U3.

FUTURE PD - Amiga PD only, 60p a disk, send £1 for list & demo to: 138 Guildford St, Grimsby, South Humberside DN32 7PW[5]

GARFIELDS PD - £1 a disk, inc P+P and 50p for cat disk: 40 Penrhos Cres, Rumney, Cardiff CF3 8PB

GARNER DESIGNS – Spectrum PD. 57 Lovers Walk, Dunstable, Bedfordshire LU5 4BG.

GOODMAN PDL – 16 Conrad Close, Meir Hay Estate, Longton, Stoke-on-Trent, Staffs ST3 1SW. Tel: 0782 335650

.ICPUG - Free PD for Commodore, IBM/PC compatibles. Wrie: ICPUG, PO Box 1309, London N3 2UT[5]

IMG CLIP ART – GDOS fonts for sale or swap. For catalogue send blank disk plus SAE or £1 to E Renner, 62 Broxholme Lane, Doncaster.

IMAGE ART ST PD LIBARY Hundreds IMG Picts. Calamus Fonts and more. SAE £1.50 for catalogue. Image Art, 19 Brenda Rd. Tooting Bec SW17 7DD[4]

JASE PD - PD software, £1.25 a disk. Write: 9 Broadfield Sq, Enfield, Middlesex EN1 3PA or call 081 8057749 (6.30pm)[5]

JENNIX PD – Celebrating our second birthday in style. For the best ST PD around, the most competitive prices and the best service talk to us. Send 50p for catalogue disk to Jennix PD, 66 Abbey Road, Strood, Kent. Tel: 0634 723659.[3]

KEANSOFT PD – ST PD for sale. Send SAE and blank disk for copy of latest catalogue. Write to Keansoft PD, 42 Lords Croft, Clayton-Le-Woods, Nr Chorley, Lancs PR6 7TP.

L & D PD – Amiga PD from 35p per disk. Monthly competition to win PD of your choice. Also a new digitising service is available. For info send SAE and disk to L & D PD, 10 Hornbean Green, Pontefract, West Yorks WF8 2DX.

LAPD – Worldwide reputation for quality PD for the ST. Thousands of programs available. Disk catalogue only £1.00. Credit cards accepted. Telephone 0773 605010 or 0773 761944.

LARD PD – Only 95p per disk. Amiga only. For catalogue write to Lard PD, 41 Craven Road, Hemsworth, West Yorks WF9 4SB. Enclose SAE.

LEMMING SOFT – Amiga demos to swap. over 300 disks, List keeps growing by day also want two meg demos write to ;- John Simmons, Flat 45, 2 Silvermere Road, Sheldon, Birmingham, B26 3XA.

MR MARTIN - PD Masterpack Atari ST, 2 disk compilation, 18 progs inc art, games, utilities etc. Only £3.25/ SS drives£3.90 for 3 disk set: Mr A Martin, 28 Neston Rd,Leicester LE2 6RD[7]

MERSEY SHAREWARE – PC Shareware. £1.50 per disk. (3.5/5.25). SAE for list. Any title obtained. Phone with details of requirements. 17 Ullet Road, Liverpool L17 3BL. Tel: 051-733 1178.[3]

MERTON PD – Cheap ST PD. Send £1 or blank disk for catalogue with SAE (cheques payable to T Huq) to: 10 Grasmere Avenue, London SW19 3DX.

MONSTER CABLE – Free ST PD, honest! Just the price of a stamp. Puts all others ST PD libraries to shame. Send SAE for more info to M Sandhu, 25 Welbeck Road, Maidenhead, Berkshire SL6 4EB.[2]

MYSTIC MERLIN PD - Suppliers of Amiga software to PD libraries, animations and digitising: 74 Conniburrow Blvd, Central Milton Keynes, NK14 7DA. Tel: 0908 692829[6]

NEURAL IMAGES PD – Send an SAE to4, Flint Walk, Throston Grange, Hartlepool, Cleveland. TS26 DTE for your free PD Disk. No catches!

NBS Public Domain - have changed their address to:1 Chain LaneNewporIsle Of WightPO30 5QA

NIGHTSHIFT – 8 Bertelin Road, Beaconside, Stafford ST16 3JJ

NO NAME PD - Free Atari STE PD service, just send blank disk and SAE for catalogue: MBesser, 57 Chestnut, Crescent, March, Cambs PE15 9TD[7]

NWPD - Amiga PD. For cat send blank disk and SAE to 24 Damien St, Longsight, Manchester M12 4GW[5]

OWN PC CLUB - 25p per program. Help offered, free of charge: T Meadows, 73 A East Street, Blandford, Dorset, DT11 7DX[7]

PAD PD AND SHAREWARE LIBRARY – For Amiga users. SAE for details: PAD Public Domain Library, 41a Saint Augustine Street, Norwich, Norfolk, NR3 3HF.

PARADISE COMPUTERS (GLOBAL) – 9 Westfiled Crescent, Brighton, East Sussex BN1 8JB.

PC SHAREWARE - £1.25 a disk, for list SAE to K Martin, Falt 1, 28-34 New Rd, Portsmouth, PO2 7RB[6]

PC SHAREWARE/PD - £1 Disk + P&P. 2000 MB/AVA. Top titles. Chose programs to fill disk. 2 f/class stamps for menu cat disk, 37 Devon Pl,, Newport, Gwent.[4]

PD ST - Club games, utilities, demos from 19p. 95 Elton Rd, Sandbach, Cheshire CW11 9NF. Tel: 0270 762520[5]

PD for the ST – No connection with 'South West PD'. The South West Software Library, PO Box 562, Wimborne, Dorset, BH21 2YD[4]

POWER PD - Amiga Pd at 35p a disk, cat disk with free PD 70p: C Jackman, 3 Albion Terrace, Lexham Rd, Litcham, Kings Lynn Norfolk. Tel: 0328 701622[6]

PSION OPL PDORGANISER, Send SAE for list - printed or disc Psion OPL PD, 23 Mill Road, London SW 19 2NE Phone No: 081-540-6271[7]

PROPHECY PDL –ST PD. Send SAE and disk or a cheque for £4.50 to Prophecy PD, 390 Coulsdon Rd, Old Coulsdon, Surrey, CRS 1EF. Competitive prices.

REAL PD – Amiga PD libraries – wanna join real PD? For more info write to Mark, 50 Victoria Avenue, Sleaford, Lincolnshire NG34 7CN.[2]

RISC PD - Archimedes PD at just 95p each. Printed catalogue for SAE 14 Killydrum Road, Derry Gonnelly, Co Fermangh, N. Ireland ,Phone No: (036564) 354[7]

PD SOFTWARE for the ST. Only the best programs. Get into our library. Send 50p. or blank disk + SAE 95, Elton Road, Sandbach, Cheshire CW11 9NF[4]

PKPD SOFTWARE - For 600 titles availsable from £1.50 Tel: 05033 713867[6]

PPD PUBLIC DOMAIN - (st shareware and videos) 24 Marlborough Road, Ramsgate, KentCT11 9BU[6]

REDLAW PD - QualityAmiga PD! Friendly efficient service our priority. From only 30p. Blank disk and SAE gets you catalogue disk by return: Redlaw resources, 74 Durban Rd, Patchway, Bristol BS12 5HQ Tel: 0272 760600[7]

RIVERDENE PDL – 30a School Road, Tilehurst, Reading, Berks RG3 5AN.

SAINT JOHN'S SCHOOL LIBRARY PDL – ST PD software sale or swap: St John's School Library PDL, c/o Mark Ash, 54 Beaconsfield Road, Sittingbourne, Kent ME10 3BB Tel:0795 425653 after 4pm.

SCOTBASE PDL ASSOCIATION – Affordable Shareware for PC users. Blank disk and SAE for catalogue and details to: Rosie, 63 Springboig Road, Glasgow G32 0DB.

SELECT PD – For the ST. From 35p a disk. Send £1 coin for disk catalogue to RC Newman, 22 Hall Road, Leckinghampton, Cheltenham, Glos GL53 OHW.[2]

SHAREWARE ELITE – Over 1,300 shareware disks for PCs. Send blank disk and SAE for catalogue to 25 Cades Parc, Helston, Cornwall. Tel: 0326 564164.

SHAREWARE KING – PC shareware, support, membership, discounts. SAE and blank disk to C Smith, 10 Penwood Close, Westbury, Wilts, BA13 3LW. Tel 0373 865263.

SHAREWARE/PD – Windows, clip-art and GIF shareware for the PC. Send disk and SAE for list to T Wishart, 3 Berwick Rd, Port Glasgow PA14 5QN.[3]

SHAREWARE UNLIMITED - Hire /buy latest PD programs in un/zipped format. Free offers. Details: 081 551 3571[5]

SHIELDSOFT PD – Now from only 50p per disk. Catalogue disk 75p. For details SAE to M Daniels, 63 Churton Rd, Rhyl, Clwyd LL18 3NB.

SINGER PD – 62 Manor Rd, Hastings E Sussex TN34 3LJ.

SOFTVILL - Amiga, PC, ST Includes 'get up and go' service on all disks sold: UNITS, Stratfield Park, Elettra Avenue, Waterlooville, Hants. Tel: 0705 266509 Fax: 0705 251884[7]

SOLENT SOFTWARE – Atari ST. 53 Rufus Gardens, Totton, Hants SO4 3TA.

THE SOURCE PD – For the ST. Compacted demos disks. £1.50 each. Write to: 7 Shearwater Lane, Norton, Stockton, Cleveland TS20 1SH.

SOUTH LINCS PD - Amiga PD, 95p a disk, cat 50p: 10 Linden Rise, Bourne, Lincs, PE10 9TD. Tel: 0778 393470[6]

ST - ProgSpecialist PD - for the St Programmer. Covers basic C Modular, Forth, Lisp and Utilities. Send for catalogue. Intro pack £1-50p: 23 Ashcroft Lane, Shenstone Staff, WS14 OEF, Phone No. 0543 480 459[7]

SOUTH WEST PD – PO Box 562, Wimbourne, Dorset BH21 2YD.

THE ST ADVENTURER'S PD LIBRARY – Catalogue disk just 50p. Write to John R Barnsley, 32 Merrivale Rd, Stafford, ST17 9EB.

STAR PD – Atari ST PD library fast 'n' friendly! Disk and SAE for free PD and our disk-based catalogue: Star PD, 1 Solva Rd, Clase, Swansea SA6 7NX.

STATE 808 PDL – Atari ST demos, art packages and soundtrackers. Cheaply priced. Send blank disk to: State 808, 3A Old Lanark Road, Charluke, ML8 4HW.

START COMPUTER SYSTEMS – Dept A, Barbican House, Bonnersfield, Sunderland SR6 0AA. Tel: 091-564 1400.

TANK PD – disks only 60p (members), 75p (non-members). Hundreds of titles. Send blank disk and SAE to: 4 Chandos Road, Redland, Bristol BS8 6PE.

TOWER PD (ST) – For POV and other Atari ST PD software. £1.50 per disk. Send £1 for disk catalogue to PO Box 40, Thornton-Cleveleys, Blackpool FY5 3PH.[3]

TRUST PD – 18 The Park, Southawram, Halifax, HX3 9QY. Tel: 0895 53521.

VENUS SHAREWARE – IBM Shareware: Amateur radio, technical, engineering, education, Windows utilities and more. Tel 0252 837860 for free catalogue.

WARLOCK PD CLUB – New Amiga club and library all tested and virus free. No fee. Tel Mark on 0582 761723. 2 Manland Avenue, Harpenden, Herts AL5.

WARPDRIVE - Amiga PD 89p +60p P+P, ring for free cat: 110 Burton Ave, Balby, Doncaster, DN4 8BB. Tel: 0302 859715[6]

WIZBIT PD LIBRARY – New Mac PD library. Disks £3. Around 100 disks available. Intro pack £1 from Wizbit PD, 38 Greenbank Gardens, Edinburgh EH10 5SN.

WORSOFT – Michael Andersson, Tjardalsgrand 11, 18341 TABX, Sweden.

XT SHAREWARE + PD - For PC, from £1 5.25" disks and £1.20 3.5": Kowalik, 24 West Chilton, Ferryhill, DL17 0HH[6]

ZEON'S LAIR – C64 PD. Send 35p stamp :12 Castle-gate, Penrith, Cunbria for free catalogue and software.[3]

ZOMBIE PD – Latest ST disk cat available. No charges! Send blank disk + SAE and your list to 41 Buckingham Avenue, Penwortham, Preston, Lancs.

GAMES WEEK



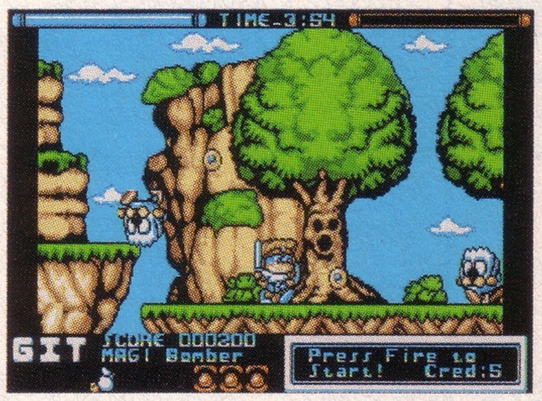
Outgoing, outspoken, but never outclassed, Stuart Campbell's reviews, tips and news tell you what's best for you and your machine

STAR RATINGS

★★★★★ = Parachute
★★★★ = Fishpaste
★★★ = Bonnie Langford
★★ = Kangaroo
★ = Twelve

...IN A VERY REAL SENSE

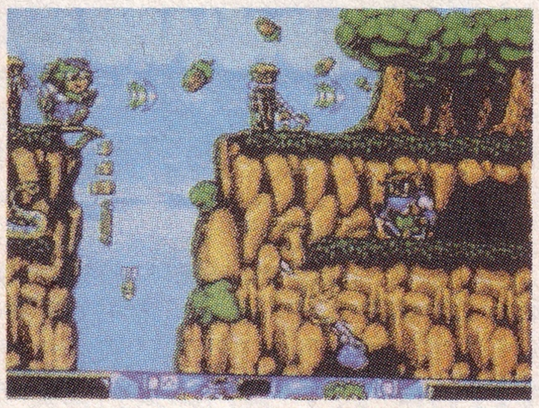
It's been a funny old week for me, game fans. First I came across two practically identical platform games (***Blues Brothers*** and ***Hudson Hawk*** – see review elsewhere on these very pages), then what should crop up but ***Magic Twins,*** US Gold's latest CapCom coin-op licence? ('So bloody what?' – reader's voice). 'So bloody what?' I hear you cry, but the odd thing about ***Mega Twins*** is...***Video Kid***. ('Sorry?' – reader's voice). Yes, Gremlin's new scrolling shoot-'em-up ***Video Kid*** also hove into view very recently, and the similarities between the two are distinctly unsettling. Imagine my complete lack of surprise, then, to find out that the two games are being programmed by the very same team, Twilight. While in truth the two games are quite different (***Vid Kid*** being a shoot-'em-up, while ***Mega Twins*** is more platform-orientated in style), it still seems a rather unfortunate coincidence that they're both going to hit the streets at more or less the same time. Doubtless USG and Gremlin know what they're doing, but it looks to me like someone's going to suffer.



• ***Mega Twins*: platform action**

...AND MORE MEGA TWINS

Remember all the fuss about the original ***Elvira – Mistress of the Dark***? Well if➤



• ***Video Kid*: shoot-'em-up action**

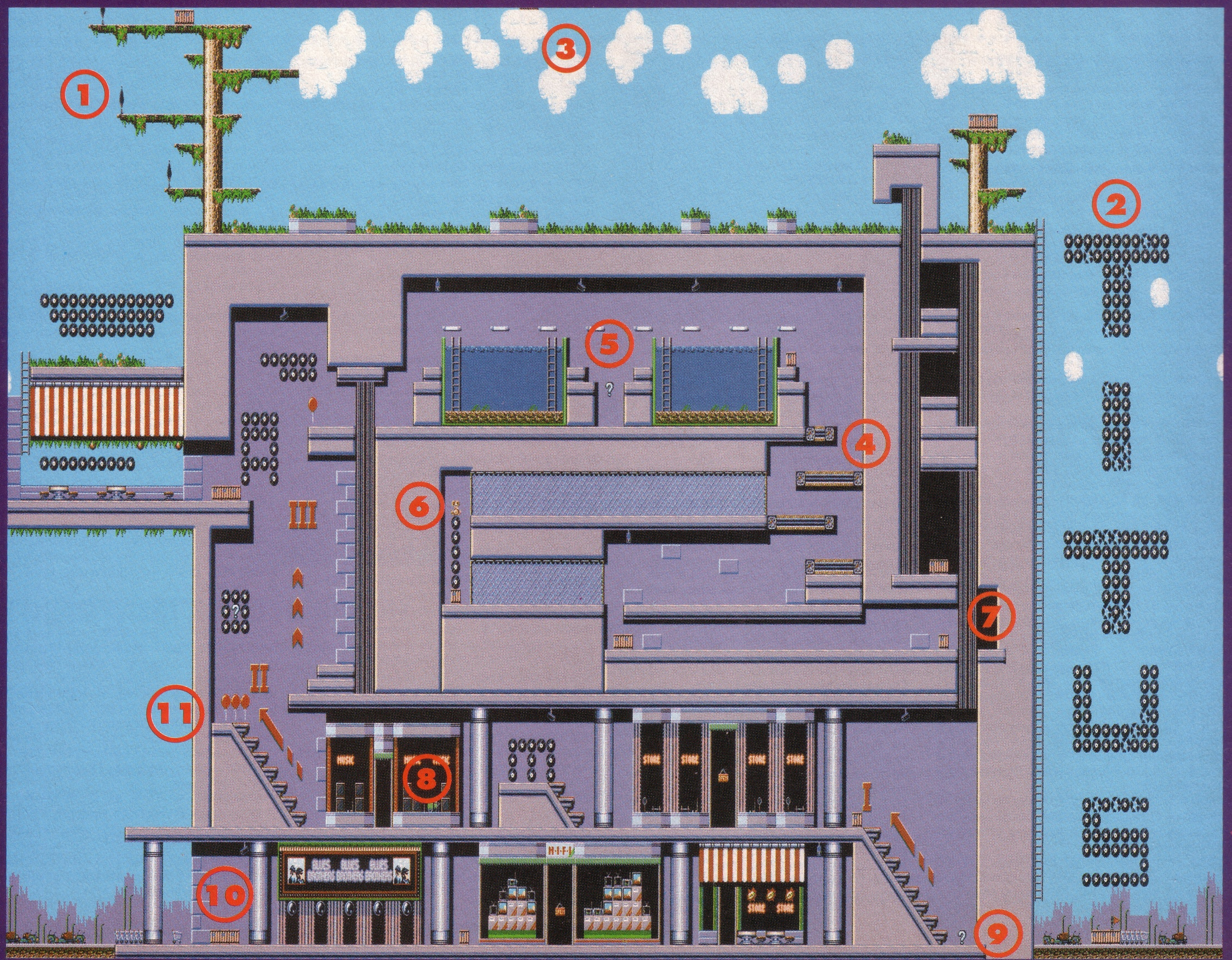
playing tip

CARRIER COMMAND

(Mirror Image/ Realtime)

If the other week's complex and involved tips seemed like a bit too much trouble for you, why not try this alternative tactic? It's very simple, just find the enemy carrier right at the start of the game, launch all your Mantas and Walruses at it with weapons bristling from every mounting, and crash them into it once they've fired everything. The Omega will blow into a million little tiny polygon pieces, and the game's yours!

THE BLUES BROTHERS: LEVEL ONE -THE DEPARTMENT STORE



TOP 10

ALL FORMATS BUDGET

THIS WEEK	LAST WEEK	TITLE	PUBLISHER	MACHINE
1	2	*New Zealand Story*	Hit Squad	SP CO AM ST AG
2	1	*Bubble Bobble*	Hit Squad	SP CO AM ST AG OT
3	3	*Dragon Ninja*	Hit Squad	SP CO AM ST AG
4	7	*Turbo Outrun*	Kixx	SP CO AM ST AG
5	4	*Batman the Movie*	Hit Squad	SP CO AM ST AG OT
6	30	*Return to Europe*	Anco	ST AG
7	6	*Indiana Jones - Last Crusade*	Kixx	SP CO AM ST AG OT
8	5	*Shinobi*	Mastertronic	SP CO AM ST AG OT
9	10	*Moonwalker*	Kixx	SP CO AM ST AG OT
10	21	*Dizzy Panic*	Codemasters	SP CO AM

ST = Atari ST AG = Commodore Amiga PC = IBM PC or compatible SP = Spectrum
CO = Commodore 64 AM = Amstrad OT = Other.
Chart compiled by Gallup. © European Leisure Software Publishers Assoc.

you drooled over that, hang on to your glands – the second Elvira game is well and truly on the way. However, our well-endowed heroine won't be mucking around with any of that yawny old adventuring rubbish this time around. ***Elvira – The Arcade Game*** is a scrolling platforms and ladders thing with a distinct ***Shadow Of The Beast***-esque look to it, and it doesn't look too terrible at all at the moment (although a bit of animation wouldn't hurt). Unfortunately, MicroValue (for 'tis they who are responsible) has promised faithfully that the game won't contain anything that might upset your granny – so there go half the potential sales right away...

COMPETITION CORNER

This weeks's top software prize goes to whoever writes in and tells me the source of this devastating piece of impartial and reasoned criticism from a review in a current issue of Amother Computer Mag, well known for its 'editorial integrity'...

'*The first thing we should get out of the way is that* Ninja 2 *(the bad game) was released by Activision,* Ninja 3 *(the good) game is being released by System 3 so it's going to be good.*'

Love ya, Deborah.

playing tip SPECIAL

1 The umbrellas up here are invaluable for crossing the clouds

2 Float down here gently and you'll find enough records for an extra life heart – but watch out for the broken ones, which'll cost you 10 out of your current total!

3 Meteorological shock! These clouds are, rather unusually, almost completely solid. Indeed, you'll never make it without them

4 These conveyor belts are no problem

5 The question mark icons are a bit misleading - there's nothing mysterious about them at all. For example, the one here will always take 20 records away

6 A teddy bear? What you'll actually find over here is a heart, or extra life point

7 The lift shafts can catch out the unwary - careful you don't miss the lifts

8 Nip into this shop and you'll find your stolen guitar

9 This icon is the 'dance bonus' one - collect it and have a boogie

10 You'll need all three of these crates...

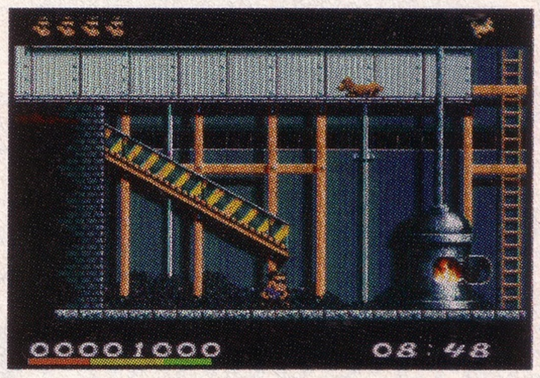
11 Balloons provide a handy means of speedy elevation - just don't burst them

HUDSON HAWK

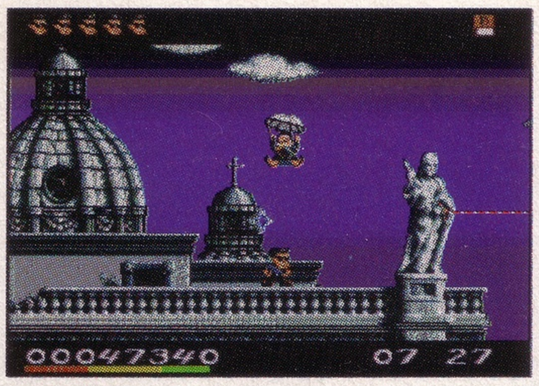
Ocean • Amiga and ST • £25.99 • 8-bits £10.99 cass. £15.99 disk

Yikes! Deja vu vibes in the area, or what? After last week's *Blues Brothers* review, you can imagine my surprise when someone gave me another copy of it to review. At least, that's what I thought it was, until a closer look revealed it to be, in fact, *Hudson Hawk*, Ocean's latest misguided attempt at turning a crap movie into an interesting computer game.

Amazingly though, it's NOT another lots-of-little-sub-games-flimsily-based-on-bits-of-the-movie-which-are-all-crap-and-add-together-to-make-nothing-very-much-at-all effort. This time, respected programming team Special FX has decided to take one genre and stick to it, with the result that *Hudson Hawk* has a more coherent feel to it than almost anything Ocean has released all year.

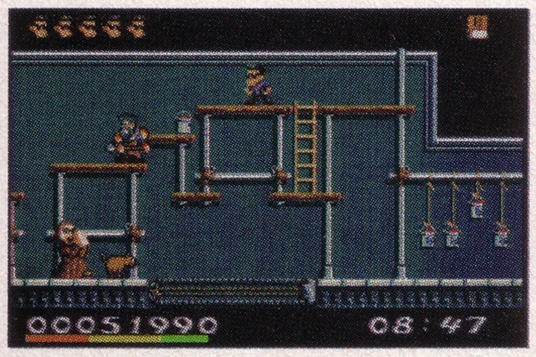


• Hudson the rather heavy-footed hero scales the heights of adversity



• *Hudson Hawk* at the mercy of the control system

What you get is 15-odd levels (with various sub-levels within those) of straightforward no-nonsense cartoon platform action, all of which bear more than a passing resemblance to Titus' aforementioned *Blues Brothers* licence.



• Hindrances and handicaps for Ocean's *Hudson Hawk*

Sadly though, the comparison between the two isn't a flattering one for *Hudson*. While both games are loaded with character, *Hudson Hawk* falls down in one crucial area – playability. For reasons best known to itself Special FX has lumbered the poor thing with one of the most unfriendly control systems I've been tormented by in a long time.

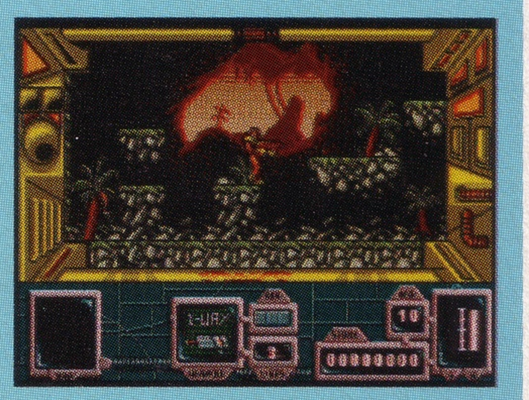
Your hero leaps around in an unhelpful diagonal manner when you try to make him jump, but worse is the movement. Old Hawk's got more inertia than a ten-ton juggernaut on a greasy ski-slope – he takes an age to get moving properly and even longer to skid to a stop, and in a precision-movement platform game like this one (with loads of lengthy levels and no password system), it's a misjudgement that almost wrecks the whole thing.

That it doesn't is a testament to Special FX's skill in other areas of the game, but if it hadn't hamstrung itself like this *Hudson Hawk* could have been brilliant. As it is, it's the best movie licence game from Ocean since *Batman*, but the excellence of the strikingly similar *Blues Brothers* is likely to overshadow it completely.

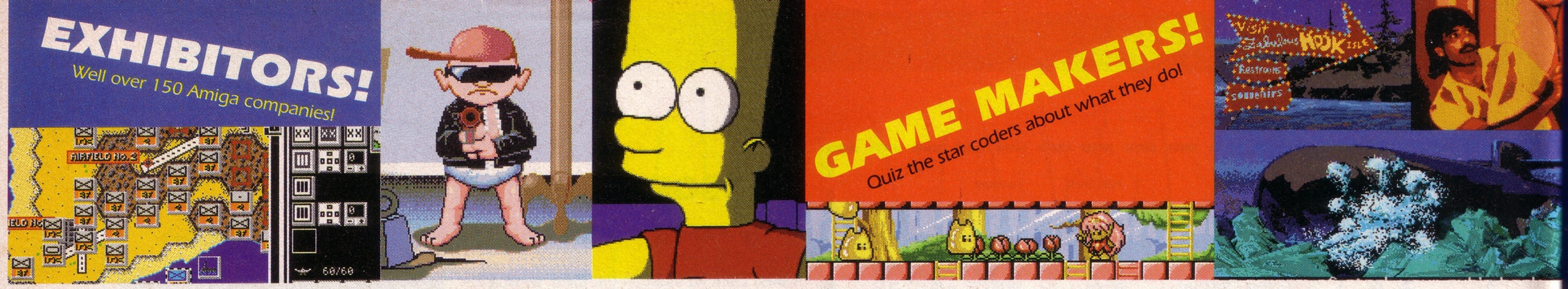
TRASHED AND BURNED

What's smouldering in the NCE asbestos bin this week. Two things, as it happens...
ZONE WARRIOR • Electronic Arts • Amiga and ST • £25.99

This is a strange one. There's nothing strange about *Zone Warrior* itself, it's a staggeringly dreadful platform shoot-'em-up which I can only assume the normally-impeccable Electronic Arts has released as some kind of sick joke. Pitiful graphics, useless sound, and the most tedious and repetitive gameplay since, ooh, *Pong* or something, go together to make up a painful disgrace to humanity the like of which hasn't been seen since Bryan Adams got to No.1. No, what's strange about *Zone Warrior* is that a 'pair' of Other Computer Magazines (and remember, this is Deja Vu week in NCE) have somehow managed to twist themselves into enough of a knot to award it 92%. Legal considerations prevent me from suggesting that anyone's tongue has been in places where it shouldn't be, but really, something funny's going on. If a single reader writes to me and honestly suggests that *Zone Warrior* is deserving of anything less than utter contempt, I'll take it all back, but I can't see it happening. Honest differences of opinion are one thing, but some people just can't be trusted. ■



• *Zone Warrior* - is this some kind of sick joke or what?



Discover the Amiga at its best!

Amiga Format presents the greatest computer show this year. Earl's Court II, November 15-17 1991: be there!

Just look at what there is!

Christmas hits Ocean, Psygnosis, Mindscape, Electronic Arts, Virgin, Microprose, Gremlin, Mirrorsoft: all the leading software houses will be at the Show, with massive stands. This'll be your chance to see and **play the year's biggest games** – exclusive to the Show.

CDTV City what is CDTV? What can you do with it? What software can you buy? Discover what **the future of computing** holds in the Show's unique CDTV City.

Christmas Shopping Mall All the best games bargains are here!

Multimedia Theatre Commodore has attracted some of the biggest names in computing to **demonstrate their stuff**. See what the Amiga is *really* capable of!

Games Arcade Set your **eyes on boggle mode**: you won't believe how many incredible games you'll be able to play.

The game makers Imagine hearing direct from the leading games' programmers: just how do they do what they do?

And also... Fistfuls of competitions. Hosts of celebrities and experts. Jaw-droppingly wonderful big screen video. Virtual Reality (virtually certain). Creche. And a **lot of noise**, that's for certain...

Faxbox

Where Earl's Court II,
When November 15-17 1991
Times 9am-5.30pm November 15-16; 9am-4pm November 17
Cost Adults £6, under 14s £4
(see the special Early Booker Offer)

Who'll be there? Commodore, New Computer Express, Amiga Format, Amiga Power, Amiga Shopper, all the major games producers, a myriad of serious publishers, loads of bargain-offerers, lots of hardware developers and everyone into the world of Commodore.

AMIGA FORMAT presents

World of Commodore

15 - 17 November 1991

Commodore

EARLY BOOKER OFFER: SAVE TIME, SAVE MONEY

Be smart. You know this **World of Commodore** will attract tens of thousands of people. And you know what that means: queue City. So avoid all the foot-shuffling, hanging-around-for-ages start to the Show by booking your tickets early.
And you'll even **save money**! Bit of a barg, really. Do it now, otherwise you'll only forget and then regret it later when you're really cold and you can't wait to get inside and – (Snip! - Ed)

YES I would like to have my tickets early, avoid all the queues and save £1.05 on every ticket, please.

Name .....

Address .....

.....

.....

.....**Postcode**.....

Number of tickets .....Adult (at £4.95 each)

.....Under 14s (at £2.95 each)

Total payment

Method of Payment (please circle) Access Visa Cheque PO

Credit Card number .....Expiry date.....

CREDIT CARD HOTLINE 051 356 5085

Please make all cheques payable to **WORLD OF COMMODORE**

Send this form to

World of Commodore
PO BOX 2, Ellesmere Port
South Wirral, L65 3EA

WARNING: This offer closes on 8.11.91
If you don't want to cut up this magazine, photocopies are accepted. **NCE**

You'll think Christmas has come early!



GoldStar

QUALITY, PROFESSIONAL PC's AT AFFORDABLE PRICES

EVERY PC COMES WITH:

1 YEAR ON-SITE WARRANTY
VGA GRAPHICS AS STANDARD
FREE UK DELIVERY

GoldStar is a key division of the Lucky GoldStar Group, one of the world's largest international corporations, employing over 100,000 people with a turnover approaching £14 billion. GoldStar, with their unrivalled resources and technical ability, have manufactured and labelled computers for many of the world's leading computer companies for over 30 years! In fact, other PCs you may have been considering, because they have a different brand "name" on the outside, may well be a GoldStar on the inside!

Silica Systems, an official GoldStar appointed dealer, are pleased to recommend this comprehensive range which combines the very latest technology with years of manufacturing experience. GoldStar's quality and reliability coupled with the Silica Systems service, provide you with the perfect PC solution for the home, business or education. From an entry level 286 desktop workstation to a powerful 486 EISA tower system, Silica and GoldStar have the answer, at an affordable price!

286 12MHz £399 +VAT

+£100 for VGA Mono Monitor
+£200 for VGA Colour Monitor

- *12.5MHz 286 (Landmark 17MHz)*
- *1Mb RAM (4Mb max on Motherboard)*
- *2Mb RAM on Plus Series*
- *EMS (LIM 4.0)*
- *42Mb, 130Mb or 210Mb IDE Hard Disk*
- *3½" or 5¼" Floppy Disk Drive*
- *3 Expansion Slots*
- *VGA (Paradise-1M) Graphics - 256K RAM*
- *Serial, Parallel & PS/2 Mouse Ports*
- *12 Months On-site Maintenance*
- *DOS 4.01, DOS Shell, GW BASIC, EMS 4.0, & Utility Software*
- *PLUS SERIES (from £599), Includes:*
  - *Dual Floppy Disk Drives*
  - *Mouse, Mouse Mat & Windows 3*
- *Price - £399+VAT without Hard Drive*

£499 GT212 WITH 42Mb HARD DRIVE



Model Shown is GT212 286 12MHz
PLUS SERIES with GS1425 VGA Colour Monitor

* All the GT212 PLUS SERIES models include 2Mb RAM as standard, so that they can run Windows 3.

Model	PROCESSOR	RAM INC	MAX RAM ON BOARD	1 YEAR ON SITE	EXPAN-SION SLOTS	LANDMARK MHz	CO-PROCESSOR SOCKET	VGA CHIPS	VGA VIDEO RAM	VGA 640×480	VGA 800×600	VGA 1024×768	NO HARD DISK + Single Floppy 3½" or 5¼"	42Mb HD + Single Floppy 3½" or 5¼"	PLUS SERIES WITH DUAL FLOPPY, WINDOWS 3 & MOUSE: 42Mb HD + Dual Floppies 3½" & 5¼"	130Mb HD + Dual Floppies 3½" & 5¼"	210Mb HD + Dual Floppies 3½" & 5¼"
GT 212	286 12MHz DESKTOP CASE	1 or 2 Mb	4 Mb	●	3 2×16-bit 1×8-bit	17 MHz	287-10	PARADISE	256K RAM	16 Colours	16 Colours	N/A	£399 +VAT= £468.83	£499 +VAT=£586.33	£599* +VAT=£703.83	£799* +VAT=£938.83	£1099* +VAT=£1291.33
GT 316	386SX 16MHz DESKTOP CASE	2 Mb	8 Mb	●	5 4×16-bit 1×8-bit	21 MHz	387SX-16	PARADISE	256K RAM	16 Colours	16 Colours	N/A	£599 +VAT=£703.83	£699 +VAT=£821.33	£799 +VAT=£938.83	£999 +VAT=£1173.83	£1299 +VAT=£1526.33
GS 318	386SX 20MHz DESKTOP CASE	2 Mb	8 Mb	●	5 4×16-bit 1×8-bit	25 MHz	387SX-20	PARADISE	512K RAM	256 Colours	256 Colours	16 Colours	£699 +VAT=£821.33	£799 +VAT=£938.83	£899 +VAT=£1056.33	£1099 +VAT=£1291.33	£1399 +VAT=£1643.83
GS 320	386DX 20MHz DESKTOP CASE - FULL SIZE	2 Mb	10 Mb	●	8 5×16-bit 2×8, 1×32	25 MHz	387DX-20	OAK	256K RAM	16 Colours	16 Colours	N/A	—	—	£899 +VAT=£1056.33	£1099 +VAT=£1291.33	£1399 +VAT=£1643.83
GS 347	386DX 25MHz DESKTOP CASE - 32K CACHE	4 Mb	8 Mb	●	5 4×16-bit 1×8-bit	40 MHz	386DX-25	PARADISE	256K RAM	16 Colours	16 Colours	N/A	—	—	£1399 +VAT=£1643.83	£1599 +VAT=£1878.83	£1899 +VAT=£2231.33
GS 335	386DX 33MHz TOWER SYSTEM - 64K CACHE	8 Mb	16 Mb	●	8 6×16-bit 2×8-bit	50 MHz	386DX-33	ATi Wonder+	512K RAM	256 Colours	256 Colours	16 Colours	—	—	—	£2099 +VAT=£2466.33	£2399 +VAT=£2818.83
GS 425	486DX 25MHz EISA TOWER SYSTEM - 8K CACHE	8 Mb	16 Mb	●	8 8×EISA	114 MHz	N/A	ATi Wonder+	512K RAM	256 Colours	256 Colours	16 Colours	—	—	—	£3499 +VAT=£4111.33	£3799 +VAT=£4463.83

14" VGA MONITORS

MODEL N°	MONO/ COLOUR	DOT PITCH	VGA 31.5KHz	S-VGA 35.2KHz	E-VGA 35.5KHz	1 Yr On-Site	Tilt & Swivel	EXC VAT	INC VAT
GS 1405	MONO	N/A	640×480	800×600	—	●	●	£100	£117.50
GS 1425	COLOUR	.39mm	640×480	—	—	●	●	£200	£235.00
GS 1430	COLOUR	.31mm	640×480	—	—	●	●	£230	£270.25
GS 1460	COLOUR	.28mm	640×480	800×600	1024×768	●	●	£250	£293.75

OPTIONS

DESCRIPTION	EXC VAT	INC VAT
1Mb×9-bit SIMM Memory Board	£50	£58.75
287 -12MHz Maths Co-Processor - For GT 212	£100	£117.50
387sx-16MHz Maths Co-Processor - For GT 316	£85	£99.88
387sx-20MHz Maths Co-Processor - For GS 318	£100	£117.50

OPTIONS

DESCRIPTION	EXC VAT	INC VAT
387dx-20MHz Maths Co-Processor - For GS 320	£150	£176.25
387dx-25MHz Maths Co-Processor - For GS 347	£150	£176.25
387dx-33MHz Maths Co-Processor - For GS 335	£160	£188.00
337Mb SCSI Hard Disk Drive - 10.7ms Access	£999	£1173.83

SILICA SYSTEMS OFFER YOU

- ***FREE OVERNIGHT DELIVERY:*** On all hardware orders shipped in the UK mainland.
- ***TECHNICAL SUPPORT HELPLINE:*** Team of technical experts at your service.
- ***PRICE MATCH:*** We normally match competitors on a "Same product - Same price" basis.
- ***ESTABLISHED 12 YEARS:*** Proven track record in professional computer sales.
- ***BUSINESS + EDUCATION + GOVERNMENT:*** Volume discounts available for large orders.
- ***SHOWROOMS:*** Demonstration and training facilities at our London & Sidcup branches.
- ***THE FULL STOCK RANGE:*** All of your requirements from one supplier.
- ***FREE CATALOGUES:*** Will be mailed to you with offers and software/peripheral details.
- ***PAYMENT:*** By cash, cheque, all major credit cards, or extended payment plan.

Before you decide when to buy your new GoldStar PC, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after you have made your purchase, when you may require additional peripherals or software, or help and advice. And, will the company you buy from contact you with details of new products? At Silica Systems, we ensure that you will have nothing to worry about. We have been established for over 12 years and, with our unrivalled experience and expertise, we can now claim to meet our customers requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest Free literature and begin to experience the "Silica Systems Service".

MAIL ORDER HOTLINE
081-309 1111

SILICA SYSTEMS

MAIL ORDER:	1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX	**Tel: 081-309 1111**	
Order Lines Open: Mon-Sat 9.00am-6.00pm	No Late Night Opening	Fax No: 081-308 0608	
LONDON SHOP:	52 Tottenham Court Road, London, W1P 0BA	**Tel: 071-580 4000**	
Opening Hours: Mon-Sat 9.30am-6.00pm	No Late Night Opening	Fax No: 071-323 4737	
LONDON SHOP:	Selfridges (1st Floor), Oxford Street, London, W1A 1AB	**Tel: 071-629 1234**	
Opening Hours: Mon-Sat 9.30am-6.00pm	Late Night: Thursday until 8pm	Extension: 3914	
SIDCUP SHOP:	1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX	**Tel: 081-302 8811**	
Opening Hours: Mon-Sat 9.00am-5.30pm	Late Night: Friday until 7pm	Fax No: 081-309 0017	

To: Silica Systems, Dept NCE-1091-66, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

PLEASE SEND ME A GOLDSTAR CATALOGUE

Mr/Mrs/Ms: ..... Initials: ..... Surname: .....

Address: .....

.....

..... Postcode: .....

Tel (Home): ..... Tel (Work): .....

Company Name (if applicable): .....

Which computer(s), if any, do you own? 66B

E&OE - Advertised prices and specifications may change - Please return the coupon for the latest information.

THE GALAXY

RANGE OF COMPUTERS

Classic simplicity
Superior technology

286/386/486

SUPPLIED READY TO USE

24 HOUR DELIVERY!



SYSTEM	MONO	M-VGA	C-VGA	VGA+ 0.28dot pitch	S-VGA 0.28 dot pitch	SPECIAL SYSTEMS			
						S-VGA+ 1Mb Video RAM	NEC3D Non-interlaced	NEC4D 16" non-interlaced	NEC5D 20" non-interlaced
286 12MHz	£536	£582	£709	£736	£772	£786	£996	£1474	£2188
286 16MHz	£551	£596	£724	£751	£786	£801	£1011	£1488	£2202
386SX 16MHz	£665	£711	£838	£865	£901	£915	£1125	£1602	£2316
386SX 20MHz+CACHE	£711	£756	£884	£911	£946	£961	£1171	£1648	£2362
386 25MHz	£782	£828	£955	£982	£1018	£1032	£1242	£1719	£2434
386 33MHz+CACHE	£868	£914	£1041	£1068	£1104	£1118	£1328	£1805	£2519
486 25MHz+CACHE	£1396	£1442	£1569	£1596	£1632	£1646	£1856	£2334	£3048
486 33MHz+CACHE	£1518	£1564	£1691	£1718	£1754	£1768	£1978	£2455	£3169

These are actual CPU speeds not landmark speeds

SPECIFICATION

All Galaxy Systems are supplied ready assembled. They are thoroughly soak-tested and set up with any software options purchased and feature as standard.

- Modern style case
- Quality Motherboard
- AMI BIOS
- 1MB Fast RAM (expand.)
- Hard Disk Controller
- Parallel Printer Port
- 2 Serial Ports (mouse etc)
- Game Port
- HD Floppy (3.5 or 5.25)
- HDD, Turbo & Power LED's
- Reset Button
- Turbo Switch
- LED Speed Readout*
- 102 Keys Keyboard
- Video Card/Monitor
- 40MB Hard Disk Drive

* Not available on slimline case

ONE-YEAR ON-SITE WARRANTY

If any of these features are not required please phone for possible price reduction.

WE WILL TRY AND BEAT ANY PRICE FOR THE SAME SPEC!

HARDWARE OPTIONS

Additional Floppy Drive	+£43
Hard Disk up to 80MB	+£143
Hard Disk up to 125MB	+£199
Hard Disk up to 211MB	+£429
Add. Memory per MB (286)	+£38
Add. Memory per MB (386/486)	+£44
Internal Tape Backup Unit	+£219
Mini Tower Option	+£10
Full Tower Option	+£95
Microsoft Compatible Mouse	+£20
Mouse with Software, Mat and 'House'	+£26

SOFTWARE OPTIONS

MS-DOS 4.01	+£49
MS-DOS 5.0	+£69
MS-DOS 5.0 (upgrade)	+£57
MS-Windows 3	+£49
MS-Windows 3 plus mouse	+£79
MS-Works	+£112

☆ ☆ ☆ ☆ ☆ **TRADE ENQUIRIES WELCOME** ☆ ☆ ☆ ☆ ☆

☆ ☆ ☆ ☆ ☆ **DEALERS REQUIRED** ☆ ☆ ☆ ☆ ☆

Delivery is usually within 48 working hours from receipt of cleared funds. Prices and specifications subject to change without prior notice. Goods offered subject to availability and conditions of sale. Our standard terms and conditions apply at all times. Errors and omissions excepted.

GALAXY COMPUTERS

Access · AMERICAN EXPRESS · VISA

FCC Corporate Member

PETERBOROUGH CHAMBER OF COMMERCE & INDUSTRY

ALL PRICES ARE EXCLUSIVE OF VAT AND CARRIAGE

SALES HOTLINE **0733 68899**

FAX 0733 897227

Unit 21, "The Computer Works," Second Drove Ind. Est.
Fengate, Peterborough, Cambridgeshire PE1 5XA.

NEW COMPUTER EXPRESS

Our last issue

Dear Express reader

We're sorry to have to tell you that this issue of *New Computer Express* is the last that will be published.

Over the past few years there has been a seemingly unstoppable trend in the computer magazine market toward monthly titles dedicated to individual machines.

The result has been that computer weeklies have been on a downward circulation trend, and *Express* has been no exception.

Despite outlasting its former rivals Gamesweek and Popular Computing Weekly, *Express* has found it more and more difficult to compete with the growing numbers of monthlies.

And while the triple-format disk introduced in September did increase sales, the increase is not enough to encourage us to believe that *Express* will ever be as popular with readers or advertisers as the monthly titles.

For example, while *Express's* circulation is just over 20,000 copies a week, iits sister monthly magazines *ST Format, Amiga Format* and *PC Plus* have circulations ranging from 70-120,000.

Everyone working on *Express* will be offered jobs on the other computer magazines produced by Future Publishing, and we sincerely believe that one or more of these will be able to provide you with a full service of news, information and support for your machine. These titles are generally recognised as the leaders in their individual markets. They are:

Amiga Format, Amiga Power, Amiga Shopper

ST Format,

Public Domain (for ST, Amiga and PC owners – now doubling its frequency to monthly)

PC Plus, PC Answers, 8000 Plus (for Amstrad PCW owners)

Your Sinclair, Commodore Format, Amstrad Action

I would like to offer heartfelt thanks to the readers and advertisers who have supported *Express* during the past three years. It's been an exciting ride. We're proud of what the magazine achieved and look forward to keeping in touch with you through its sister titles.

Chris Anderson
Managing Director
Future Publishing
30 Monmouth St
Bath BA1 2BW

P.S. A note to subscribers

If you have a current subscription to *Express,* please wait a few days. You will receive a letter explaining how you can go about redeeming your payment for the issues you will not now receive.

Please do not ring our subscriptions department. They cannot help you, and will we working hard to arrange for you to receive the information you will need.