Issue 101 • 13 October 1990 • 70p

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# NEW COMPUTER EXPRESS

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

## THIS WEEK

### AMIGA
When, where and why will you soon be able to hire a CDTV for only £30 a month?

### ATARI
Where can you buy a ST portable with PC and Mac emulators built-in?

### ARCHIMEDES
Now you can buy an A3000, TV modulator and £250 of software for only £650

### PC
Full-feature DTP can now be yours for only £99!

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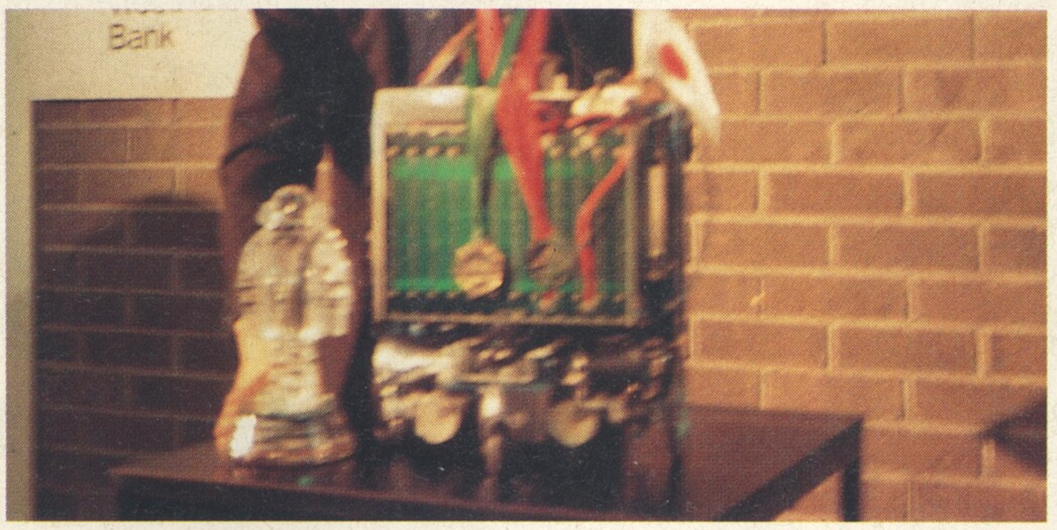
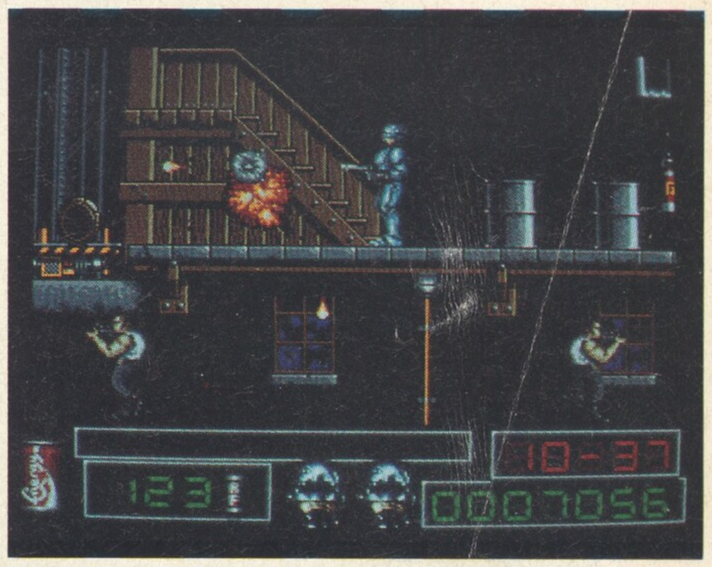



How this machine won the gold medal at the world's first ever Robot Olympics




## A LICENCE TO KILL

But will Robocop II total the Turtles to be the Xmas No.1?

# EXPOSED! AMSTRAD'S NEXT PC

ALL THE SECRET DETAILS LEAKED ON PAGE 6

## PLUS 44 PAGES OF BARGAINS

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SHOPPING EXPRESS
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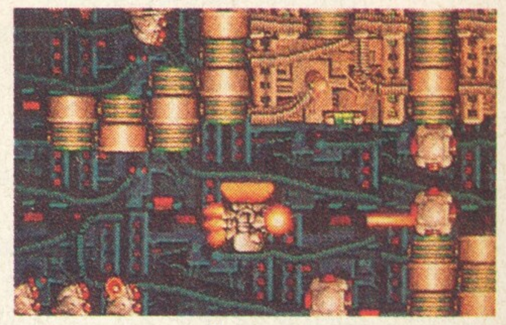
## BEAT THE JAMS

Avoid those trouble spots with a dashboard Trafficmaster



## Console Crazy?

We have all the tips and tricks you need

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# frontend

**edited by Colin Campbell**

## IN AT THE CHEAP END

**UK Home Computers has come up with what is claimed to be the best hardware bargain of the year.**

**The mail order outfit is selling a fully compatible PC with monitor for a lip smacking price tag of £299 including VAT and overnight delivery. The machine is a Tri-gem Korean job with 12-inch mono monitor and single 5.25 inch drive. It shifts at 8MHz and comes with the usual expansion facilities.**

**"Unlike some of the other so-called PC bargains this machine is fully PC compatible," commented boss Ron Gladwyn, "I think this will make a great Christmas present, it certainly knocks the stuffing out of the ST and Amiga."**

**Gladwyn has 1,500 machines in stock. You can contact the company on 0793 695034.**

## It's all the same to us

Word reaches us of a tiff between Commodore and Sanyo. Apparently, Commodore's new 286 laptop the C286-LT (*Express* 100) is a badged version of Sanyo's MBC-17NB machine.

Badging another company's computer is called an 'OEM deal' and is not an unusual thing. But it does become just a touch uncomfortable when two companies release what amount to exactly the same machines at the same time.

The only differences are that Commodore's baby has a different carrying case, a few more grey scales and a return key is in a different place. Oh, and Commodore's machine is £300 dearer than Sanyo's (£1,999 to £1,699).

Sanyo's computer manager John Culbert said: "Commodore has done this without talking to us. It hasn't told its sales people that the laptop is a Sanyo machine."

Commodore is unrepentant. "The laptop is manufactured to Commodore's specifications. It is not the same product."

● PC owners are currently gorging themselves on Accolade's brilliant **PGA Tour Golf**. But the exclusivity won't last long. The firm is working on versions for the ST and Amiga.

● Toshiba has developed a **digital still camera** which can store pictures to memory card. The MC200 can handle up to 400,000 pixels creating ultra-clear images. Pictures taken can be stored onto a PC. It costs a trifling £10,000.

● The 2nd **8-bit Micro Show** has been pencilled in for Saturday December 1 at the Tamworth Arts centre. Owners of the Speccy, C64, CPC, Sam Coupe, C16, Plus 4, Vic 20, Electron and MSX can get in for 50 pence. The show kicks off at 9.30am and will feature about 20 stands.

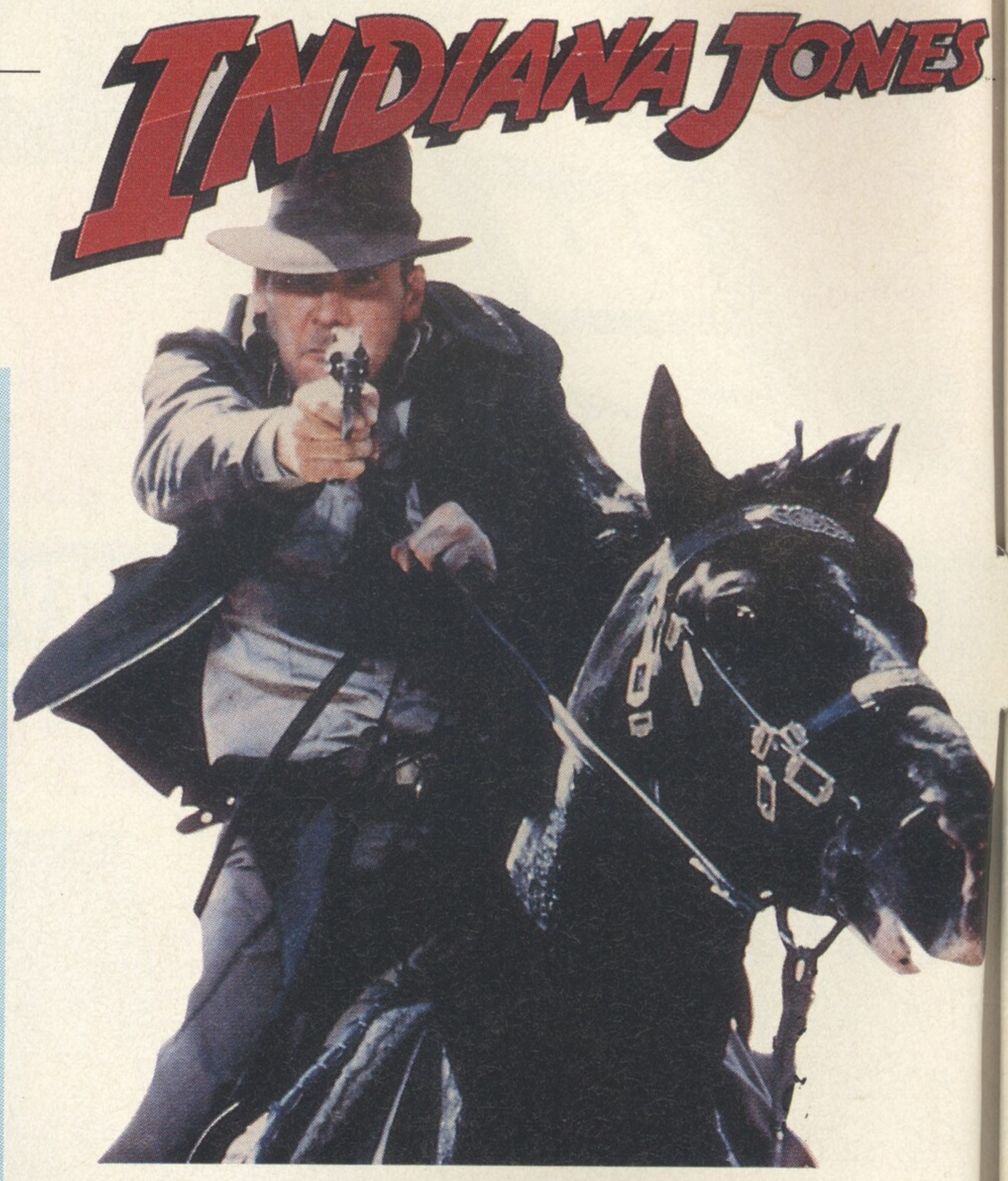
● WordPerfect has introduced a phonetic word finder for the PC which can review more than 93,000 words in search of a specified rhyme or phonetic pattern. **Rhymer** is a terminate-and-stay-resident program costing £75. Call 0932 850500.

## Car cuisine

**Those who found the computer road-route planner *Autoroute* of use may be interested to hear of the latest update from publisher NextBase.**

***Autoroute* can now, for a modest £30 (plus VAT), include an exhaustive list of AA recommended restaurants, so you can plan your eating at the same time as you plan your driving. The *Autoroute Plus* gazetter contains key information on a variety of restaurants, which appears on-screen when required, allowing you to choose a price-range and whatever type of cuisine your palate desires.**

**Available now from NextBase on 0784 460077.**

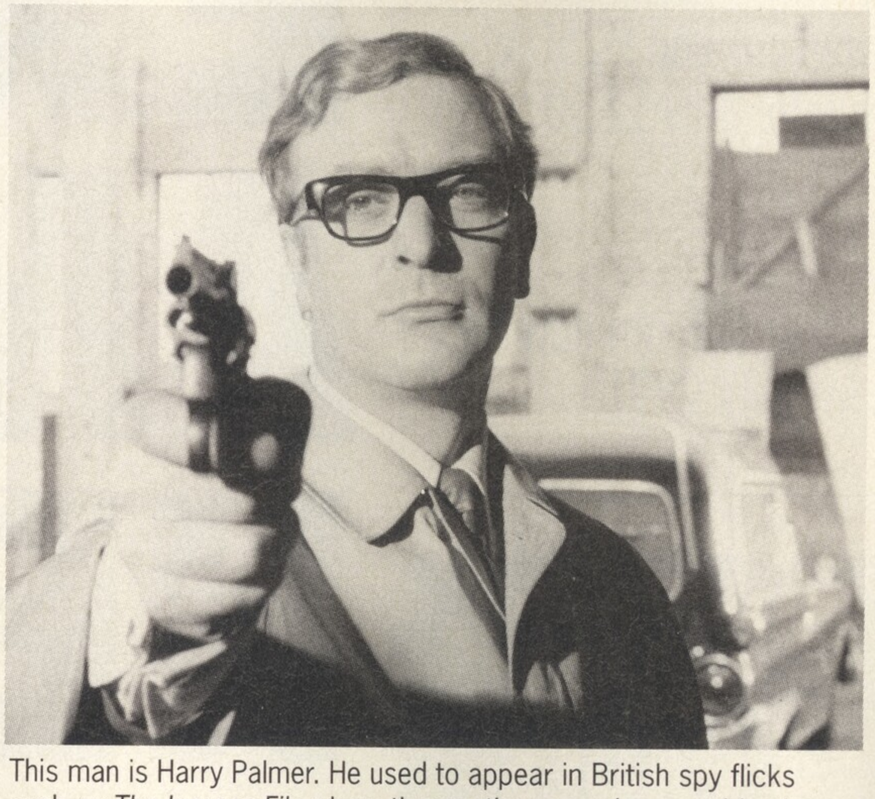



## Four tops bargain box

Games players love autumn. It's that time of the year when publishers are bunging loads of games into one box and selling them for the price of one. Yes, it's bargains time.

One compilation sure to be shooting up the charts is Ocean's Hollywood Collection. Get this: *Robocop*, *Ghostbusters 2*, *Indiana Jones* and *Batman*. It's pretty hard to imagine four bigger names in one box – and they're all cracking games to boot.

## Spy this for size



This man is Harry Palmer. He used to appear in British spy flicks such as *The Ipcress File* where the weather was always cold, where his bosses were seedy commies who thought it was still 1938, where his enemies were thoroughly nasty East German bastards who liked trips to the woods with pretty girls and Lugers and everyone drunk vodka.

His job was to track down members of the Stasi (East German secret police) and nick all their unlikely technical secrets, which MI6 could then give back to the Russians.

Unfortunately, Palmer and his like have now been replaced by the 'Men In Suits' from high-tech American corporations. With Germany now well and truly re-unified the Americans have cottoned on to the notion that these boffins know a thing or two about computers and communications. And they're hoping to find out all their secrets.

So as not to miss out on the rush, currently unemployed ex-Stasi members are taking out ads in West German newspapers advertising their skills and availability. News service Reuters noted: "The knowledge they claim of computers and installing and maintaining radio equipment suggests their duties went beyond writing press releases for the army newspaper."

# JAPANESE LAUNCH A BEAUTY

Despite an impressive technical specification, backing from some of the world's major consumer electronics companies and a Japanese user base of some four million, the MSX never quite cut it in Europe.

Now Panasonic has launched the 16-bit MSX 3, with vastly improved graphics and a running speed to leave the ST and Amiga standing. The new machine is 100 per cent compatible with previous versions, but runs at five times the speed (that's about 16MHz). It features a new CPU called the R800 which is also compatible with the Z80. Panasonic has kept a 256K RAM and decided against altering the popular operating system MSX-DOS 2.

It is being touted as a home and small business solution and comes with a special chip which enables word processed documents to be spoken. Called the FS-A1ST it will be launched in Japan later this month with a retail price of 87,800 yen (approximately £400).

Not surprisingly, no plans have been made for a European launch. The original MSX was launched in Britain in 1983, arguably home computing's darkest year (remember Oric and Enterprise?). Some have called MSX the "unluckiest machine of the 1980s"; it never shook off the 'non-starter' tag and no serious attempts were ever made to relaunch here.

Keith Neal, head of the UK MSX User Club, told *Express:* "There are about 3,000 loyal users in Britain, but I fear they're going to have problems getting hold of this beauty". MSX fans can contact the club on 0775 711108. ■

# Jocky's up to the oche

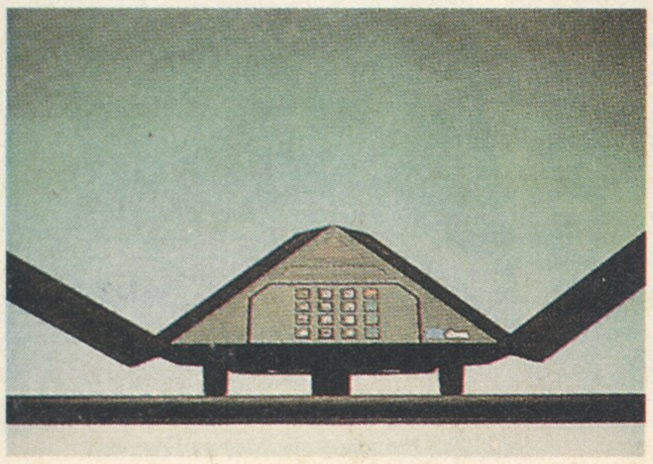
**Lager swiller extraordinaire and wicked arrow chucker Jocky Wilson has made it to the ST and Amiga.**

**The 16-bit versions of *Jocky Wilson's Darts Challenge* are launched this week, giving you the chance to shout "Game On", "Yessss" and "One Hundred and Eighteeee" from the comfort of your own home computer.**

**Up to four players can step onto the oche for a sincere battle of steady hands and keen eyes, or you can try your hand against the master himself.**

**Publisher Zeppelin has also included a tutor which will lead players through "the complexities of finishing in the quickest and easiest manner".**

***Jocky Wilson* is already available on the big three 8-bits; the ST and Amiga versions cost £9.95.** ■



# A picture of stealth

Axel's Multipoint phone system, dubbed the 'Stealth' phone because of its uncanny resemblance to the bomber, is a multi-user French device allowing for simulataneous transmission of videographic images over France's infinitely more sexy phone system.

Although calls cost some £8 per half hour, the system is proving popular with teleconferencing businesses. ■

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The first robot olympics saw the speed kings of the cybernetic world compete – page 66

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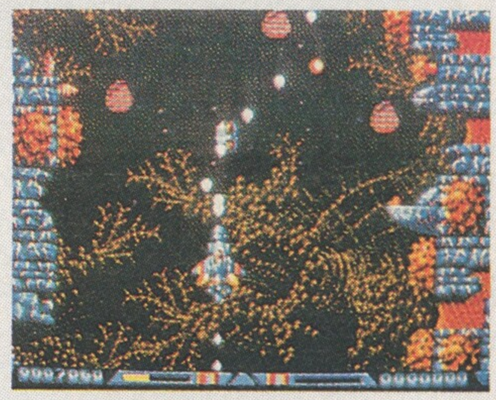

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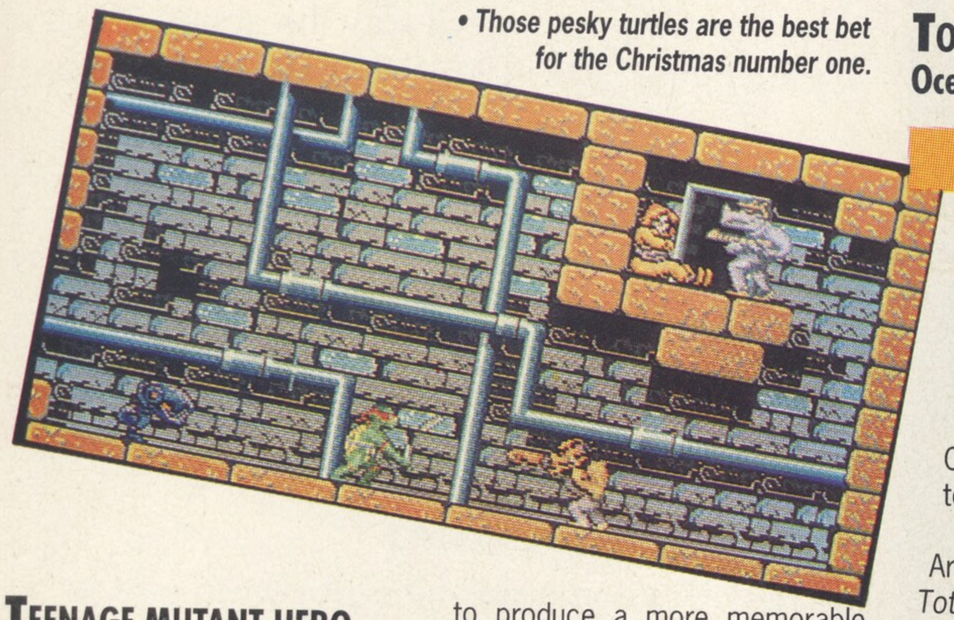
*• Arc colour hand scanner tested.*

# A TASTE OF THIS YEAR'S TO
# BIG NAMES AND

Whether you're into splatter, strategy or speed, the chances are you'll be splashing out for a computer game before the end of this year. So whether you're buying one for a friend, suggesting the granny and grandad that a version of *Funschool*, [ albeit an excellent outing for the younger brethren and sistren but not for the more astute player ] isn't really what you'd like to see in the old stocking on Chrimble morning, you should give the following spread a look. What are the big names and the best games to look out for? Mark Higham runs through the top 20 games for this Christmas. And *Express* lays the odds for the coveted Christmas Number One. Check how each game rates in the orange box under its title.



*• Those pesky turtles are the best bet for the Christmas number one.*

## TEENAGE MUTANT HERO TURTLES
**Imageworks/Mirrorsoft**

Odds 2-1 Odds

If there's one thing you can be sure of this Christmas, it's that those oversized reptiles are going to pretty damned close to the Number One slot.

Donatello, Raphael, Leonardo and Michaelangelo make it into this multi-level game, taking you through sewers and into New York in a bid to overcome evil. At the moment you can stick a turtle on anything and it'll sell.

The opinion of people in the know is that those pesky turtles might make it to Number One but the game itself is going to be pretty dire.

## GAZZA
**Empire/Entertainment International**

Odds 3-1 Odds

Last year EI signed up football supremo Paul Gascoigne on a two-year contract, then promptly released *Gazza's Super Soccer*, an appallingly unplayable game.

Now EI is releasing a second game, titled *Gazza – the Official Paul Gascoigne Soccer Sim*. This time round the firm is aiming to produce a more memorable game. *Gazza*, the game will be split into two parts – the main football action and an extensive management area.

Early demos are already available and the action part of the game looks well hard, though no one is really expecting it to outshine Anco's *Kick Off 2*

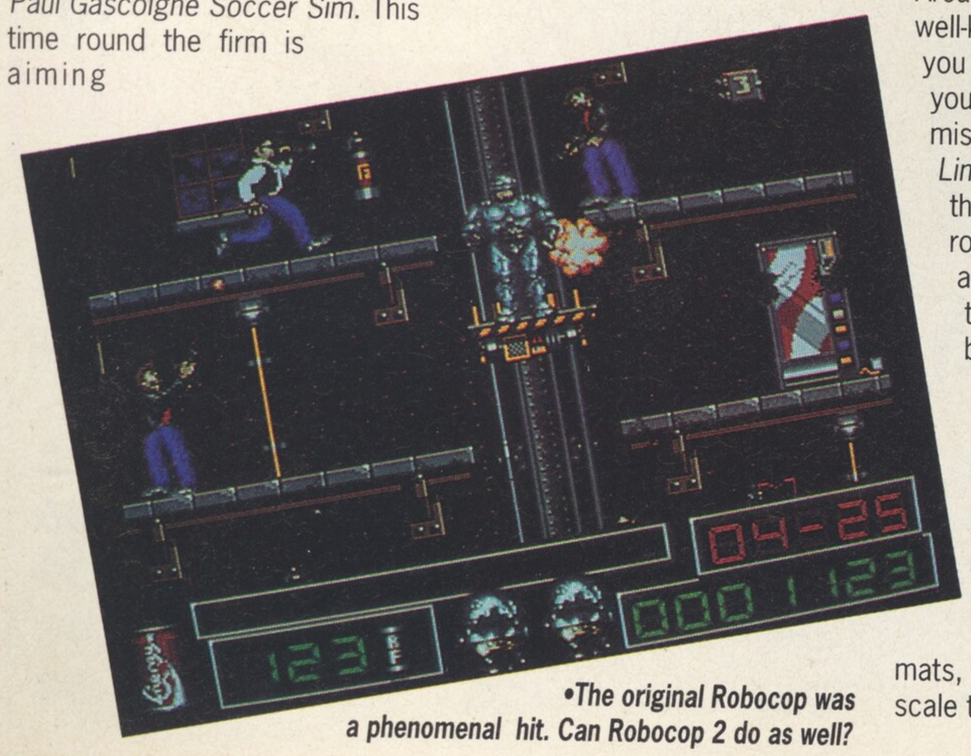
A popular choice, but after a summer of football game after football game, is anyone going to want another?

## ROBOCOP 2
**Ocean**

Odds 4-1 Odds

Ocean made computer history when its conversion of *Robocop* stayed in the charts for a year, longer than any other game. Hardly surprisingly, it's now bought the licence for the follow-up, and *Robocop 2* is going to be Ocean's strongest contender for that enviable Number One slot.

This is predictably a beat-'em-up in the same mould as the original except that it's played on separate platforms. Better visuals and hosts of new features are on offer.




*•The original Robocop was a phenomenal hit. Can Robocop 2 do as well?*

## TOTAL RECALL
**Ocean**

Odds 8-1 Odds

Certainly a big film licence, but *Total Recall* doesn't have the hype of big names like *Batman* so it's unlikely to do nearly as well. Nevertheless, it's second in Ocean's list of Xmas contenders.

Screenshots prove that Arnie looks far more realistic in *Total Recall* than he ever did in the *Predator* conversion so film enthusiasts are certain to love it.

The film offers enormous scope for a good game and early signs are that it may be a variation on the traditional shoot-'em-up with hosts of weaponry and daunting mutants.

*• Strider 2 – back with a vengeance but it's unlikely to make it into the Xmas top ten.*

## LINE OF FIRE
**Us Gold**

Odds 17-2 Odds

Arcade licences are almost as well-known as films and at least you know what type of game you're getting. For those who missed this arcade smash, *Line Of Fire* pitted you against the skills of Middle-East terrorists. Different scenarios and different methods of travel liven up the non-stop blasting.

Programmers have suggested that the arcade game is just too complex to convert onto the home micro so don't hold your breath for a realistic conversion.

Released on all formats, this could sell enough to scale the charts.

## STRIDER 2
**Us Gold**

Odds 9-4 Odds

The first *Strider* game was acclaimed as the most perfect arcade conversion ever. In version 2 you have to use your acrobatic hero to discover a route through the levels while remembering to collect pods which can change you into a robot.

*Strider 2* is the first game to be converted into a Capcom coin-op which is a good sign.

The original *Strider* was a huge hit and *Strider 2* could eventually follow in its footsteps. Although the game boasts lots of new features, this Christmas is going to be dominated by movie licences, leaving little room for an original concept.

## GOLDEN AXE
**Virgin**

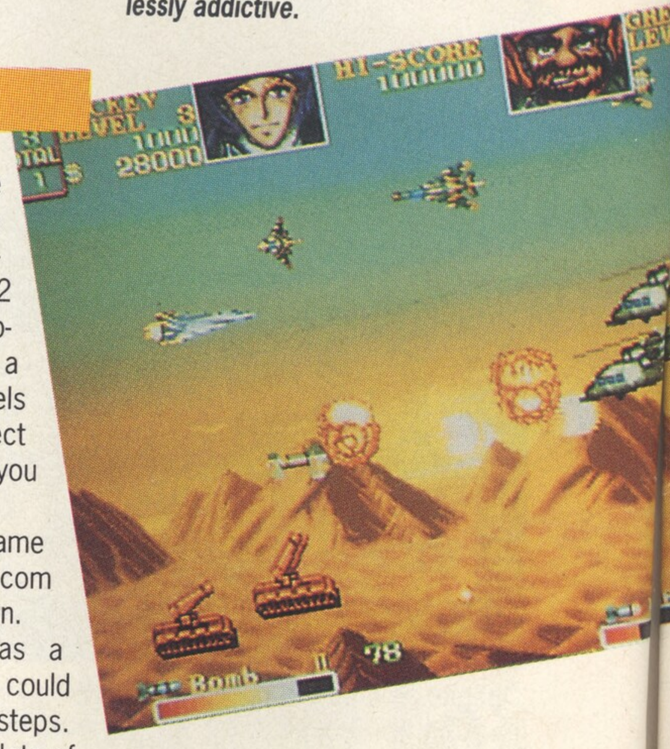
Odds 10-1 Odds

Yet another horizontally-scrolling arcade conversion this time with adventure undertones.

Play the role of any of three mighty adventurers. Depending on your choice you can be equipped with a different form of magic – Earth, Fire or Thunder. Arranged as a sequence of levels, the idea is to go monster bashing en route to Death Adder's lair. Up to two players can join in the action at once.

The beauty of *Golden Axe* is that you can defeat a dragonrider and then mount his creature and repeat this process with other opponents. A serious contender for that enviable Number One slot.

*• UN Squadron, is dated but helplessly addictive.*




## UN SQUADRON
**Us Gold**

Odds 12-1 Odds

Take to the skies, blast everything in sight and try to come back with your plane and both legs intact. *UN Squadron* was a big name at the arcades, but we've seen hosts of similar games on the home micro since.

Early 16-bit demos suggest that its gameplay just doesn't come up to scratch so make sure you read a review before investing in this one.

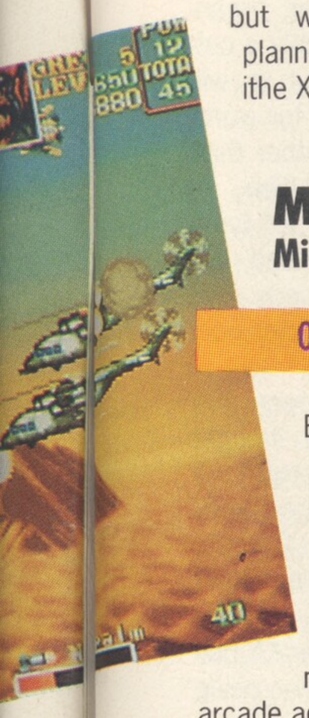
## POWERMONGER
**Electronic Arts**

Odds 16-1 Odds

*Powermonger* is an off-beat wargame played on an isometric landscape. The idea is to take control of people and put them to work building weapons or growing food for your swelling tribe. This is undoubtably going to be a big hit,

*• Powermonger could find the same success as Populous*

# S TOP TWENTY CHRISTMAS ND BEST GAMES



but with no 8-bit versions planned, it's unlikely to make ithe Xmas top ten.

## MIDWINTER 2
**Microprose**

**Odds 20-1 Odds**

Bit of a surprise, this one. We can reveal that Microprose is working on a follow-up to *Midwinter*. Few details at the moment, but it's certain to be a mixture of strategy and arcade action sequences.

We've already seen early demo proving that this time the game isn't played on just one island but many. The earth has warmed up and people are rapidly laying claim to new land. The game includes some impressive fractal landscape generators as well as some exhilirating gameplay.

It's doubtful whether Microprose can come up with the goods before Xmas.

## DICK TRACY
**Titus/Entertainment International**

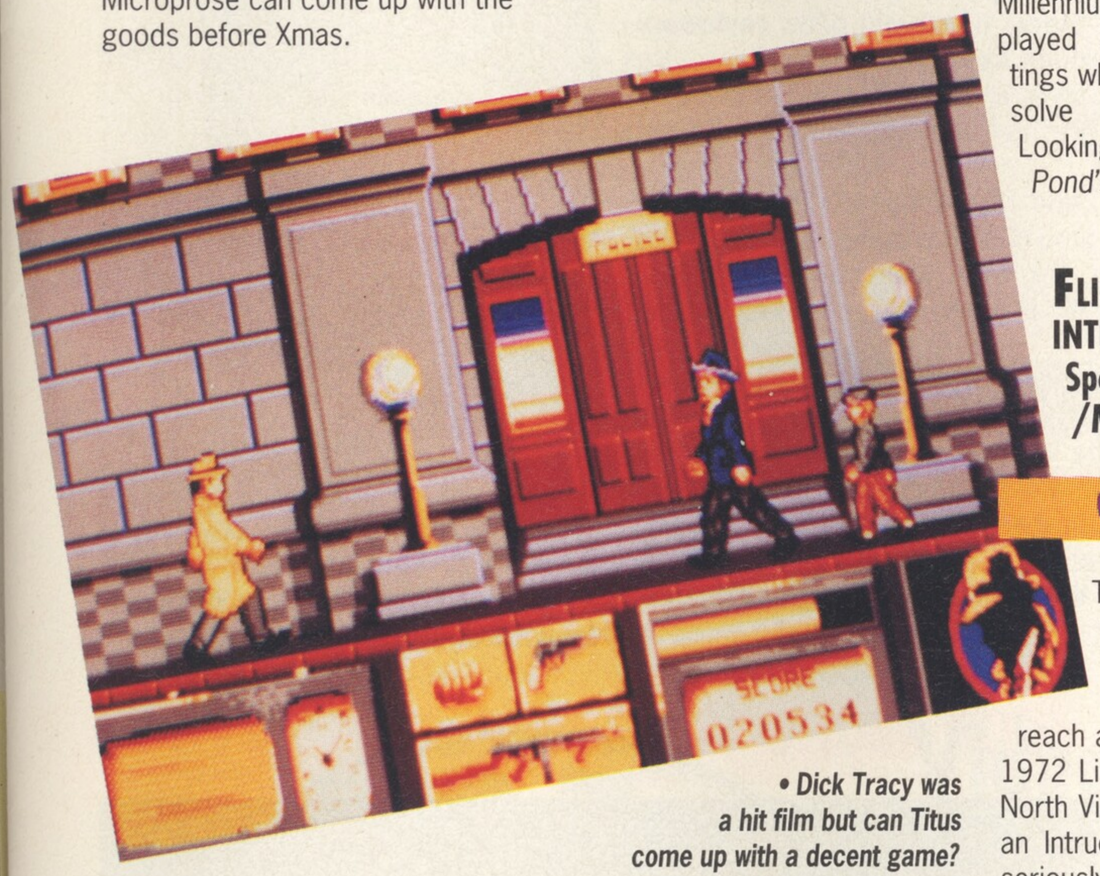
**Odds 19-1 Odds**

It was a big surprise when it was announced that Titus had the *Dick Tracy* licence, not least because it's their first attempt at a movie interpretation. Like Ocean's *The Untouchables*, Dick is going to be a pot pourri of hackneyed game styles rolled into a single release. Ugh!

## DIZZY 4
**CODEMASTERS**

**Odds 46-1 Odds**

At present Codemasters is still claiming there's no such thing as a *Dizzy 4*, but take it from us, this cutesy hero is definitely going to be popping up again at Christmas. Don't expect anything new. Yawn!



*• Dick Tracy was a hit film but can Titus come up with a decent game?*

## MUDS
**Rainbow Arts**

**Odds 22-1 Odds**

If you're bored with football games then how about this comic alternative? The *MUDS* tournament involves you in a frisbee match, playing with live frizbees – well weird! Separate management and arcade sections test your skill and strategy. Popular publisher Lucasfilm is also involved in the production of *MUDS* so this could turn out to be one hot release.

## JAMES POND
**Millennium**

**Odds 27-1 Odds**

Superspy Bond has an underwater equivalent who's given his screen debut in this comic Millennium game. *Pond* is played in underwater settings which challenge you to solve intriguing puzzles. Looking forward to seeing *Pond's* taste in females.

## FLIGHT OF THE INTRUDER
**Spectrum Holobyte /Mirrorsoft**

**Odds 29-1 Odds**

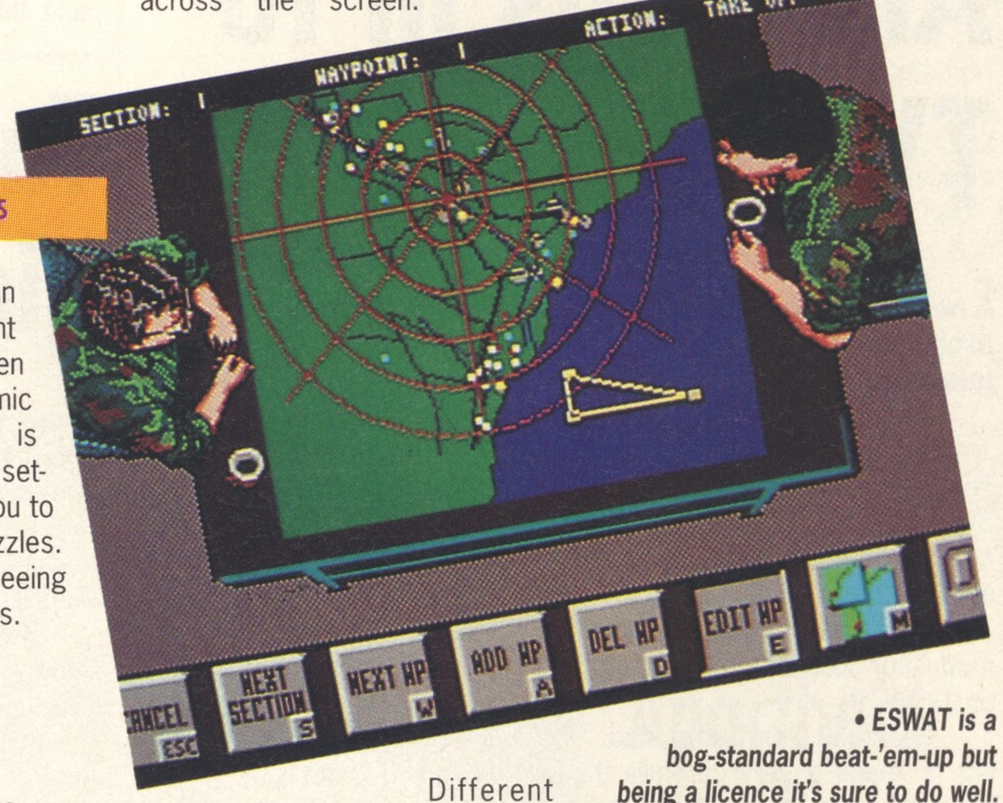
The only flight sim likely to be in the Xmas charts but with no 8-bit versions it's unlikely to reach a high position. Set in the 1972 Linebacker campaign over North Vietnam, you can fly either an Intruder or Phantom. This is seriously realistic.

*• Ballblazer finally makes it onto the 16-bits in the form of Masterblazer.*

## LEMMINGS
**UBI Soft**

**Odds 37-1 Odds**

This is the best in a line-up of original games coming from the *Psygnosis* stable. The idea is to take control of up to 100 lemmings and use them to get you across the screen.




*• ESWAT is a bog-standard beat-'em-up but being a licence it's sure to do well.*

Different lemmings have different abilities which you can use to clear treacherous terrain. Thus, if you wanted to cross a giant crevasse you would employ some of lemmings in a bridge building exercise. Early screenshots suggest that the sprites are very small but the gameplay is certainly original.

Sadly only 16-bit versions are currently being coded.

If you don't like it you could always jump off a cliff.

## ESWAT
**Us Gold**

**Odds 14-1 Odds**

Taking on *Robocop* for beat-'em-action, *ESWAT* places you in the unenviable position of Cyber Cop. Dressed only in a Police uniform and a handy bullet proof vest you need to blast everything that comes towards you – not exactly gripping original stuff. 15 levels of visually exciting action, power-ups and the traditional end-of-level guardian makes it a pretty average fight.

## DRAGON BREED
**Activision**

**Odds 17-1 Odds**

The beauty of this arcade hit is the visuals. Instead of dodging alien missiles you ride around on a Chinese Dragon using its tail to protect yourself from enemy firepower. Lots of pickups keep the game addictive but the levels are very short. This is a seriously mega arcade game but can Activision deliver the goods?

## BAT
**UBI Soft**

**Odds 21-1 Odds**

This visual-feast of an adventure has been talked about for the last two years so it's certainly a well-known name. The ST version comes with one hell of a gimmick: an additional cartridge which gives 16-channel sound the like of which has never been heard on an ST (but at £40 it's a bit steep).

By now BAT is a well-known game with incredible graphics and quality sound. It could have the edge over its closest rivals.

## MASTERBLAZER
**Rainbow Arts**

**Odds 33-1 Odds**

This is the follow-up to the original *Ballblazer*. High-speed ball games are nothing new so Rainbow Arts is hoping to attract people with quality 3D graphics. The playing field is reckoned to move even faster than the one in US Gold's *Vaxine*. Sadly, only 16-bit versions are being coded.

*• A Lucasfilm tie-up bodes well for MUDs.*

• *A3000: new bundle can plug in to the telly.*

# Arc plugs in to TV strategy

**A new bundle has been launched which will allow buyers of the Archimedes A3000 to connect their 32-bit machine to their television sets.**

Trade distributor ZCL has teamed up with Acorn to release the Jet Set pack. It features an A3000 with "monitor quality" TV adaptor. The pack also comes with four games – flight simulator *Interdictor, Superior Golf, Trivial Pursuit* and *Euclid*. The usual painting, word processing, drawing and music software is also included. Jet Set retails at £650.

Previously, it was not possible to buy an Archimedes with TV modulator included. ZCL points out that an A3000 with a monitor costs £819.

Chairman Don Carter said: "This is a real opportunity for a parent to make a very carefully thought through Christmas purchase. Long after the excitement of the Jet Pack has cooled, the benefits of the computer chosen by 85 per cent of our schools will be apparent, as will its relevance to the National Curriculum." ■

# Step inside your PC

***Vision* is a new system designed to create virtual reality environments, and it is PC compatible.**

The package makes use of the by now classic cyber tools of datagloves, stereo sound and colour visuals and is claimed to produce true VR for a wide range of applications.

Users are able to network several systems across a number of computer hosts, the PC being one such machine. It makes use of parallel processing in order to produce the speed required for a seamless cyber world.

The price tag of £100,000 will obviously put *Vision* out of the hands of most users. But for a demonstration you should jack into the Computer Graphics Show on October 9 to 11 at the Wembley Exhibition Centre.

For more information call manufacturer Division on 0454 324527. ■

## Fraud on the fly

**Nine people were arrested last week in connection with a massive £40 million computer fraud carried out at the expense of British Aerospace.**

**Police swooped on addresses in Edinburgh, London and Bristol following extensive multinational investigations in Australia, Hong Kong, Switzerland, Guernsey and the Isle of Man.**

**With Aerospace presenting a firm "no comment" on the affair, details are sketchy as to the computerised methods used by the flying fraudsters.** ■

## News leaked of a £199 briefcase 'Mobile Co

# AMSTRAD'S Z8

**Amstrad will launch a Z88 style laptop next year for £199, *Express* can reveal.**

The as yet un-named machine, unofficially dubbed the Mobile Computer Wordprocessor, will be an A4 sized portable aimed at the low-cost professional end of the market. It is being described as a "Z88 basher" and a "PCW on your knee". Hanover CeBit show next June will act as the launchpad with full UK availability by the late summer.

A price-point of £199 has been provisionally agreed upon by Amstrad chiefs although, as always with the Brentwood company, the final pricing decision is being left until the last possible moment.

The MCW will be pitched against Cambridge Computer's two-year old Z88 and Tandy's new T102 laptop. Both are enjoying success in the High Street, with retail tags of £264 and £287 respectively.

An Amstrad insider told *Express* that no disk drive will be included, but the simplicity of transferring text to desktop PCs will be stressed in advertising campaigns. Amstrad is understood to be developing link facilities to enable transfer between the MCW and both its PC and PCW range.

Software on ROM will include a word processor, organiser software and possibly a cut-down spreadsheet. But it will definitely be a machine for wordsmiths on the move, rather than a complete portable solution.

It will come with a full typewriter style keyboard and will weigh about two pounds. An RS232 interface and printer port will be included.

Details of the screen are hazy at best but it is thought that the Amstrad machine will not be dissimilar to the Tandy T102 which offers an LCD with contrast control boasting eight lines by 80 characters. Like the Tandy it will run on four AA batteries, power consumption being

# Take a taped trip around a giant computer

**A new video called *How Computers Work* has been put together in the United States which will allow reviewers to explore the Walk-Through Computer.**

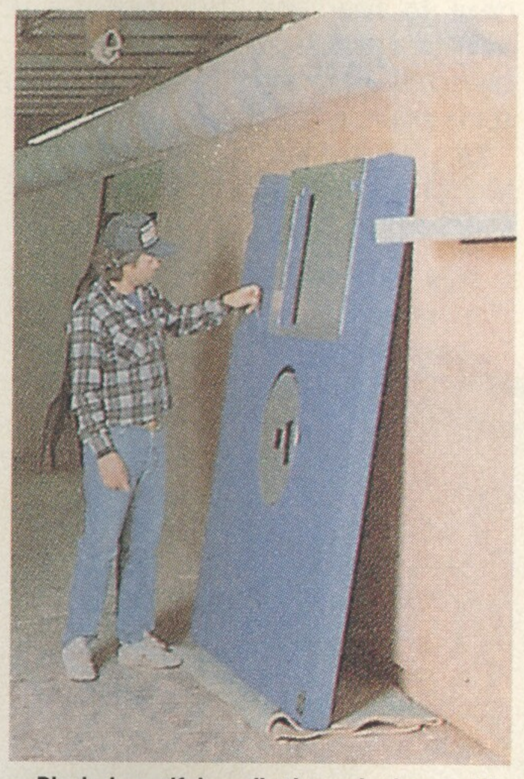
The huge computer, 50 times bigger than a normal PC, is currently stabled at The Computer Museum in Boston Massachusetts.

The video features David Heil, a American media celeb, showing four teenagers around his computer. The teens are given a tour of the CPU, disk drive, video card and RAM, in fact they get so enthusiastic that they end up playing out the parts of the components.

Animation is also used to show the interaction between software and hardware.

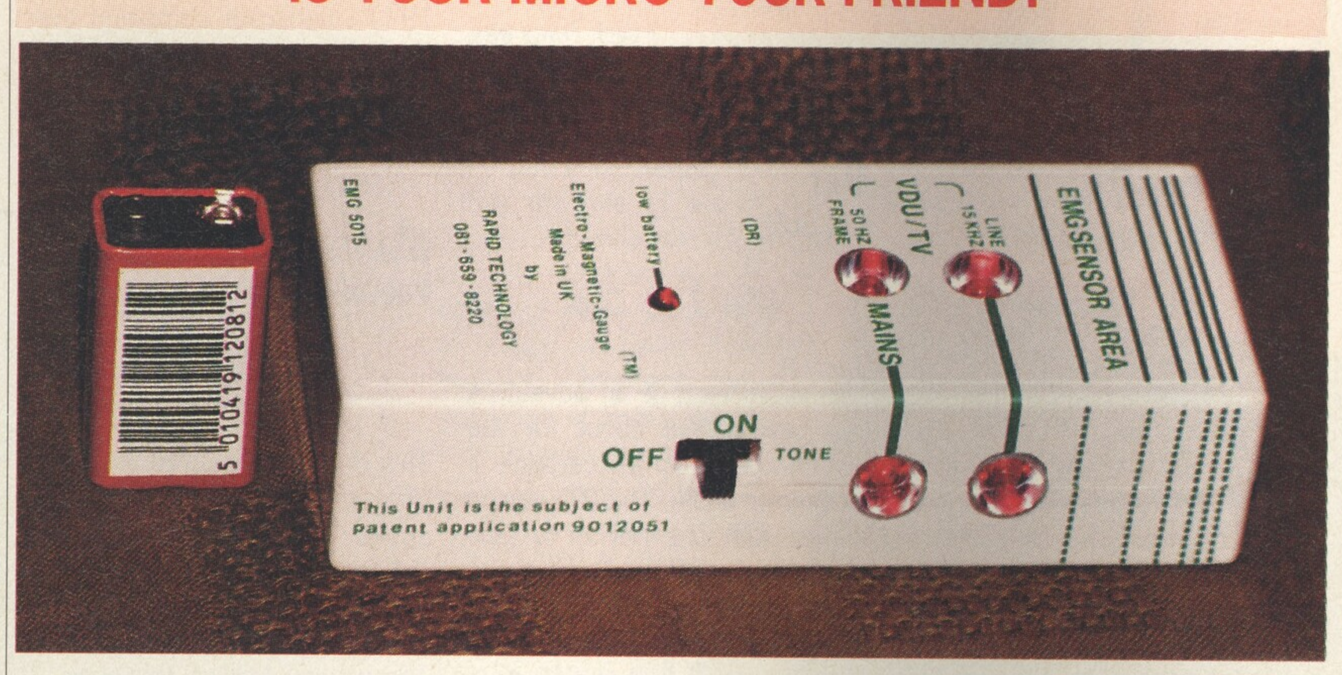
British interest in the video comes in the form of the BBC's John Palfreman who was the producer. *How Computers Work* is already available to the US public and costs $19.95. UK conversions are planned. ■

**• *Express* reported on the giant walk-through computer back in issue 78.**



• *Big is beautiful: walk through the world's biggest computer.*

## IS YOUR MICRO YOUR FRIEND?




• *The Electro Magnetic Gauge (above) is new gadget aimed at discovering how much low frequency electro magnetic radiation your computer throws out.*

*Many horror stories have arisen over the last few years about the increased chances of cancer, or of childhood leukaemia contracted from such low frequency radiation emissions. Machines such as the gauge have been developed to meet a growing demand.*

*The Electro Magnetic Gauge costs £98, but can be hired for £28 per day. For more information call 081-659 8220.* ■

• A safer kind of monitor is reviewed on page 70.

e Computer Word processor' set for summer '91 launch

# 88 BASHER EXPOSED

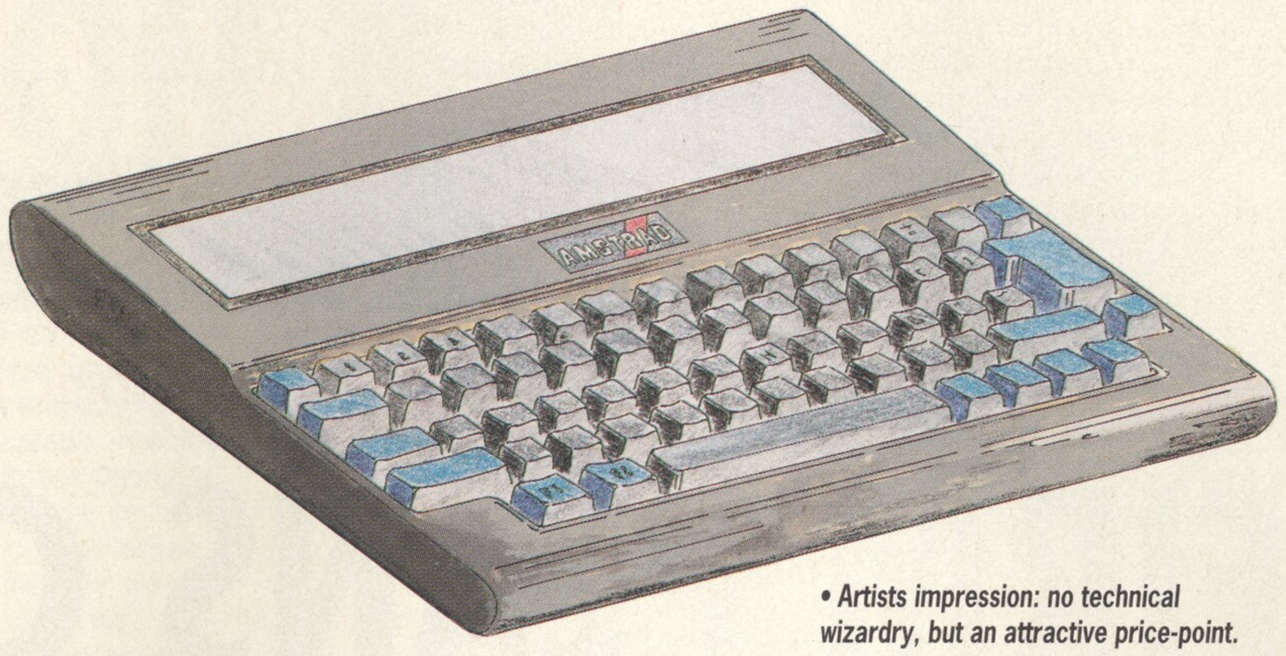
low as it has no disk drive.

At the heart of the machine will be a Z80 processor running at about 5MHz.

Not surprisingly Amstrad is entirely denying the existence of any such machine. A spokesman told *Express*: "I know nothing about this. Amstrad is moving away from the low cost end of the market. We don't think there's enough money in it."

He added: "The only low-cost machines are in the leisure area where we are firmly established as a brand name."

Nevertheless, usually impeccable sources insist that the go-ahead has been given at the highest possible level. ■




*• Artists impression: no technical wizardry, but an attractive price-point.*

# Flight sim in court over air catastrophe

**A flight training simulator is being blamed for an horrific 1987 air crash.**

**North West Airlines is taking CAE Electronics, the maker of the simulator, to court in an attempt to prove that the training received by the cabin crew lead them to make the fatal errors which lead to the tragedy.**

**The sky-high catastrophe began when the pilot attempted to take off without first correctly utilising the plane's flaps and slats. A report into the crash stated that the standard take-off checklist was not completed by the crew. This error was further exacerbated by a fluke electronic failure which resulted in warning lights and alarm signals not activating.**

**North West Airlines claims that the training simulator taught the pilot and crew to expect the full panoply of warnings, light and sound to the max, in the event of systems failure.**

**But in the real aircraft the alarm signal which is supposed to warn of an alarm system failure is a silent warning. No bells, no sirens. So when the Alarm Signal Failure alarm failed they simply assumed that all was right with the plane and took off.**

**Further to this, North West claims that its crew were confused by being able to select an option on the real aircraft which is not allowed on the simulator. Not surprisingly CAE Electronics is dismissing the claims.** ■

**• Disaster: fears are growing that computer equipment could be to blame for some air crashes.**

# Video Toaster finally ready

**After a development period of four years NewTek is finally to release its Video Toaster for the Amiga.**

It is being touted as the ultimate home computer program for video editing. The firm's Steve Peterson said: "It really puts $100,000 worth of video equipment into a desktop package. And it's true broadcast quality, not just digitised like the boards for the Macintosh. This will revolutionise the video industry, bringing the capability for professional video effects to an affordable level." It will retail in the US for $1,595.

The complete system was shown to the US Amiga Users Group last week. One attendant was quoted as exclaiming: "We left there with our jaws dropping. It was like producing MTV style video effects on a home computer."

The Video Toaster has seven input switching, digital video effects, frame grab and store, character generation, 24-bit frame buffer, 3D animation and 24-bit paint capabilities.

Wire service Newsbytes believes it will be as significant to the future of the Amiga as the introduction of the Apple LaserWriter and Aldus' *PageMaker* desktop publishing package was to the Macintosh.

As yet UK distribution has not been agreed although dedicated importers are likely to be bringing the Toaster into the country before the end of this year.

NewTek in the States can be contacted on 0101 800 843 8934. ■

# Silicon swiped

**Silicon Valley in California is experiencing a crime wave. Just last week a firm called Songtech was raided by five besuited bandits, all of of whom were armed with pistols.**

The quintet made off with $10,000 worth of chips as well as some $1,800 worth of Songtech staff's personal belongings.

It appears that the gang had spent some time planning the robbery and had visited the premises prior to carrying out the dastardly digital deed.

Although the staff were tied-up with tape it seems that the thieves were non-violent, with one notable exception. One lady was slapped around the mouth when the raiders attempted to take her necklace.

The Songtech blag is not an isolated incident. Similar raids have taken place all over the South Bay area, and the authorities have christened them 'Takeover robberies'.

A police spokesman commented "We've had this type of robbery before. It's being investigated as possibly related to others in the area where they'll come and do takeovers like this of computer companies and actually steal the chips." ■

# Apartheid attack

**A computer company based outside Johannesburg which sells equipment to anti-apartheid organisations such as the ANC recently received a parcel bomb which killed an employee.**

**Nic Cruise of PC Plus Consultants, the firm concerned, opened the package and was fatally injured in the ensuing explosion.**

**The African National Congress said that Cruise was a victim "... of dark forces".** ■

# Sew what?

**Do you often feel stitched-up by computer companies? Does software give you the needle? Well at long last there's a firm which does all this deliberately.**

**HTB Computers has released *Designer*, a program which seeks to aid knitters and embroidery freaks in their quest for fabric fun. It runs on the PCW and CPC with a PC version due out soon.**

**The price is £19.95. For more information call HTB Computers on 0794 516279.** ■

## Viral explosion

**There is an argument which says that it's not the bullet that kills, but the person who pulls the trigger. This should be borne in mind when dealing with a public domain disk from Amiganuts United.**

The disk, called Bootshop, contains over 40 viruses all of which can be examined as code. More worrying, they can also be written to the boot blocks of other disks. The general idea is that the interested user gets to examine the nasties in a 'safe' environment.

Also on the disk are a variety of virus killers. See the PD Column on page 30.

## UN goes green

**The United Nations is to set up a major Green database. Over 40 countries will be involved in the project called the International Cleaner Production Information Clearinghouse (IPIC).**

Data will include new techniques for 'greener' production of industrial materials, general research and development information, and ecologically sound information useful to governments and businesses.

IPIC will make use of the existing Pollution Prevention Information Exchange System which is run in America by the US Environmental Protection Agency.

## Special K

**Kuma has launched two new versions of its Amiga spreadsheet *K-Spread*.**

The cheapest, *K-Spread 3*, costs £79.95, sports over 200 functions covering database, financial, logical, statistical, string handling and time and date calculations. Users can define functions and add them through drop down menus.

Multiple worksheets can be loaded into memory and files can be combined.

*K-Spread 4* costs £99.95 includes all the features of its sister program, plus a number of graphing facilities and macros (enabling you to link sequences of commands).

## Business order

**One of Britain's top business centres, The London Business School, has told prospective students that they must own a computer if they want to study in 1991.**

The machines must be MS-DOS compatible so the school has teamed up with Toshiba to secure a student discount of 45 per cent on the T1000XE laptop, which normally retails at £1,795.

## The prize is right

**Atari ST and Amiga owners will have the chance to win loads of prizes when Impressions releases a new computer-based TV quiz game, *Win-A-Billion*, in November. Unfortunately, all the prizes are imaginary.**

**The game, seemingly introduced by some mutant hybrid of Jonathan Ross and Leslie Crowther, allows up to six contestants to answer question on subjects ranging from music to travel, and other Trivial Pursuit-style topics. The format is multiple-choice-based, players choosing the answers with a mouse – and they have a minute to answer an ever increasing number of questions.**

**Among the wondrous and make believe prizes on offer are - surprise, surprise - a billion dollars, and the whole of Britain. Whether the latter is supposed to be the consolation booby prize is unclear.**

• Win-A-Billion: *challenging questions, astounding prizes.*

£30 a month aims to cut out consumer risk

# FIRM PLANS CDTV RENTAL SCHEME

**You'd very much like to get your hands on an Amiga CDTV, right?**

You've heard enough about what a great piece of kit it is, and now you reckon it's time for you to to indulge?

Only trouble is, you don't have £700 spare to lay out on untried technology.

Relax, manufacturer Commodore has this covered. The firm is negotiating with a number of High Street television and video rental outlets, in an attempt to organise a nationwide CDTV rental scheme.

The idea is to introduce people to interactive Compact Disc entertainment, without them having to risk a large down-payment.

Commodore is set to launch the CDTV in the early spring, following an extensive beta testing programme. The firm's UK boss Steve Franklin firmly believes the machine to be more of a consumer electronics product than simply a computer.

He reckons that since the technology is so simple to use, it should be simple to obtain. The CDTV will be hired out through one or two High Street chains along with a selection of Compact Discs.

A spokesman for Commodore confirmed that negotiations were underway with rental outlets. "We're looking at it very closely, but nothing has been signed or sealed," he said. He could not say how much the monthly charge would be, however, a figure between £25 and £30 per month is being considered.

In the early 1980s some companies attempted home computer rental deals, but a variety of factors caused them to be failures. But the 'easy-to-use' factor of the CDTV, its CD-based software and the fact that it looks more like a video recorder than a computer, could go in its favour.

• *CDTV: rent instead of buy.*

## Infinitely better PC

**The Infinity Desktop PC from Falco Data is a new 386SX-based machine which boasts a tiny footprint of 13.67 inches by 10 and is only 2.75 inches high.**

**The PC is said to feature zero wait-state memory, and peripheral functions are incorporated into the motherboard. The expansion ports have been designed to cope with local area networking, fax, modem and graphics cards. Each configuration comes with 1Mb of RAM, expandable to 2,4, or 8Mb, a 3.5-inch 1.44Mb floppy drive and two 16-bit expansion slots as standard.**

**Prices range from £650 to £1,536 for the top end 40Mb hard disk colour monitor.**

• *The new Infinity Desktop PC.*

## Protect yourself

**London technology law firm Bird & Bird has produced a 12-page booklet for people creating, commissioning or wishing to acquire rights to software.**

*Practical Aspects of Software Protection* contains straight forward advice on protecting software rights, without getting stuck in a legal jungle. It summarises the various principles of software protection including commercial and technical considerations as well as copyright, contract, patent, confidentiality and criminal law. It also highlights precautions for those trying to protect software rights.

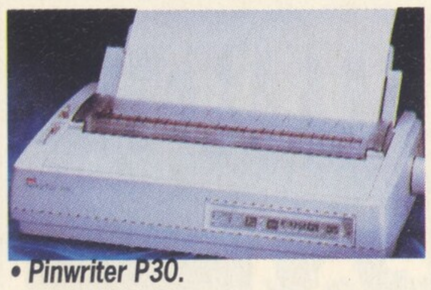
The booklet can be obtained free from Bird & Bird. Call 071-242 6681.

## Apple moves into the East

**Apple is hoping to join up with a number of Japanese electronics companies in an attempt to develop cheaper new products.**

Sony, which has done business with the Californian company before, is said to be negotiating a deal to manufacture a new Apple laptop. Details are thin on the ground although Apple boss, John Sculley, has indicated that a new notebook is on the way.

Apple and Toshiba may also be linking up to develop new optical disks.



• Pinwriter P30.

# Your wide carriage awaits

**NEC has launched what is said to be the first sub-£400 wide carriage 24-pin printer.**

The Pinwriter P30 is "aimed at the bottom end of the market, but offers speeds and quality comparable to most mid to high-end printers", according to the Japanese company.

It performs at 216 characters per second in draft quailty mode and 72 cps in high quality mode. Ten resident fonts are included as standard with 19 national character sets. A parallel interface is standard with optional serial interface..

Graphics resolution is 360 x 360 dots per inch and comes with an 8Kb buffer expandable to 16Kb. It costs £399. NEC's number is 081-993 8111. ■

# Car thieves beware

**A computer has been developed to beat car thieves. The system, known as *Lo-Jack*, is made up of a small receiver which can be hidden in a car. A central control computer will set the transmitter off when the car is stolen and will track its movements.**

***Lo-Jack* is already used in USA and boasts a success rate of 95 per cent. West Midlands Police plan to try it out over here.** ■

## Robots compete in their first Olympics

# TIN MEN TURN ON THE CHARM

**There was enough tin to keep a Heinz factory chugging along for a good fortnight. Fifty robots from 12 countries had gathered in Glasgow to compete for the ultimate accolade – winner of the first Robot Olympics.**

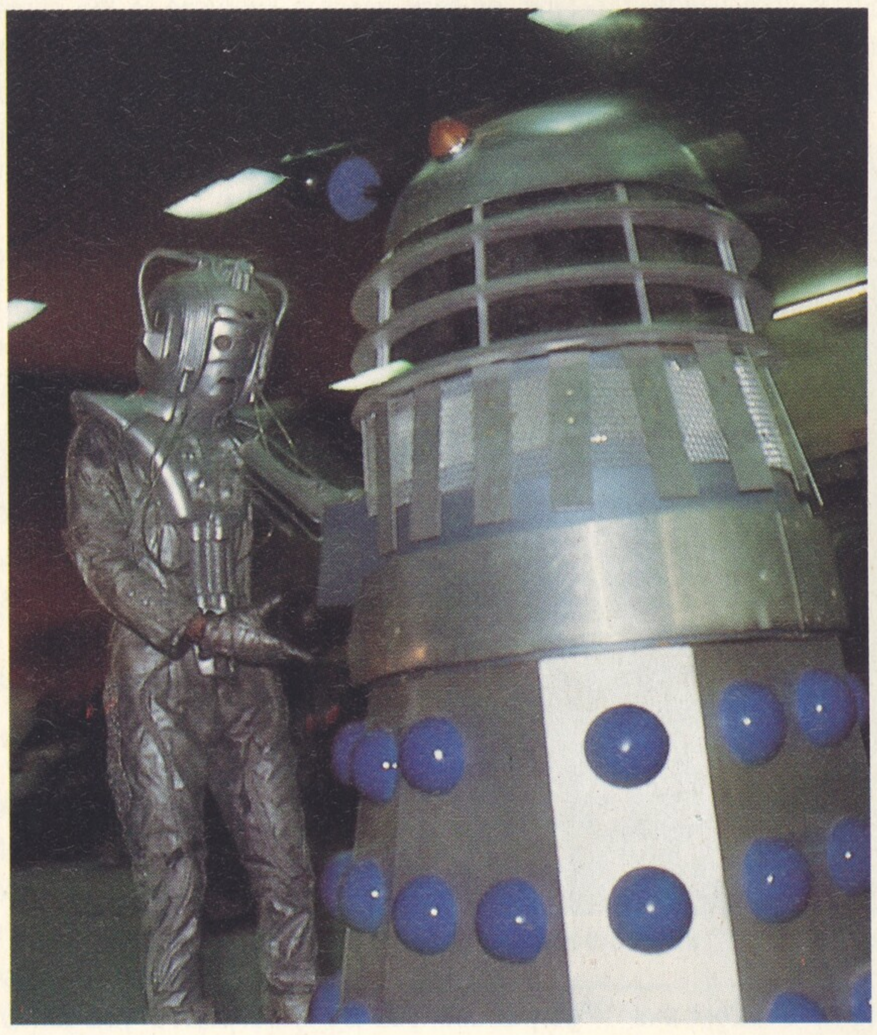
Some of the younger spectators had hoped to see R2D2 at the very least. Or maybe even something resembling Arnold Schwarzenegger in the final action scene of *The Terminator*. But it was not to be.

The winner, a Japanese creation called Yamabico, may not have the charm of a comic droid, but it can walk around obstacles without having to stop for laborious scanning and processing.

Walking wasn't the only event. Machines competed for best manipulator, best two legged racer, best javelin thrower, best wall follower and even best talker.

The winner of the last event was a home boy developed at the competition's base, the Turing Institute. Richard 1st is an artificial intelligence marvel which can zoom into objects it needs to view or pick up from where sounds are coming. And it has a broader vocabulary than your average Millwall supporter.

Another British effort, RoBug II, proved to be popular, but in the British Olympic spirit proved to be a gallant loser. It could climb up walls much quicker than the competition, but cutely, kept falling down.



• A couple of Dr Who's metal pals at the opening of the Olympics.

Most of the entrants were amateur efforts or even admirable school projects. The high powered Massachusetts Institute of Technology showed Genghis (kind of like a pool player with two piece cue and carrying case) and initially failed to get its six legged machine to budge. But in the end it delivered the goods, climbing all over obstacles and eventually winning a medal. ■

● For full details of this marvellous event turn to page 66.

# Multimedia chip for the CD age

**A chip for the CD age has been unveiled by Motorola. The 68340 is the latest addition to its 68000 range and is aimed at Compact Disc-Interactive (CDI) applications.**

The chip makes use of CPU32 core processing technology. Not only does this make it downwardly compatible with other 68000 applications it is also said to offer a 200 per cent performance over the bottom range 68000 chip. It can also transfer data between hard disk and memory at 33Mbps (megabytes per second). ■

# Prose fields Gulf scenes

**The Gulf war, as opposed to crisis, may not yet (quite) be with us. But this needn't stop armchair Saddams missing out on what history may eventually have to offer.**

**Microprose, at the cutting edge of military simulations, is rumoured to be preparing its own offensive. *F-19 Stealth Fighter*, which already features scenes of bombing missions in Iran, may be updated to include an Iraqi scenario. However, the company refused to give further details.**

**More concrete is the latest version of *Universal Military Simulation*. This tactical military simulation, dealing with famous land battles such as D Day, is scheduled for release before Christmas. It will be a continental affair that will allow the inclusion of topics such as the Gulf Crisis on a strategic scale. No firm release details have been given yet.** ■

# Show circuit confusion

The effects of the PC Show's collapse a year ago are still being felt with the one showpiece now being replaced by four events.

Last week EMAP announced plans for an autumn business show to rival Montbuild's fledgling Business Computing Exhibition (*Express* 100). EMAP already organises the Computer Entertainment Show, which was inaugurated three weeks ago to general satisfaction. EMAP's announcement causes some discomfort to both exhibitors and visitors – most will have to choose between one or the other.

Confusion is also setting in on the leisure computing exhibition circuit. EMAP's CES is being threatened by a 'trade only' show organised by Blenheim Database. Apparently, some industry bosses reckon they can do more business by leaving games players outside!

Previously, computer enthusiasts could visit the PCW Show (later called the PC Show) for all things new in computing. But that was dissolved a year ago after organisers VNU and Montbuild fell out. ■

# Extra time for footie fans

**Fans of the rapidly expanding range of *Kick Off* games are in for a treat in the very near future.**

***Kick Off II Extra Time* is soon to be released. This disk is said to include features such as sloping pitches and control of the goalkeeper (perhaps now penalties won't be such a foregone conclusion).**

**On top of this is a feast of footballing facts and playable fun with the *20 Year* disks. These contain the full team line-ups of what have been deemed England's top four first division clubs: Arsenal, Liverpool, Spurs and Manchester United. The disks have all the players from the past two decades - such luminaries as George Best, Denis Law, Martin Peters, Charlie George, Bob Wilson, Kenny Dalglish and Alec Stepney will be kicking around your computer in their original strips.**

**These two extentions add to an Anco stable which already includes *Kick Off*, *Kick Off Extra Time*, *Player Manager*, and *Kick Off II World Cup Italia '90*. At the time of going to press no release dates or prices were available.**

**Anco has received another accolade – it has been chosen as the official software for the Computer Football Association Challenge Cup. The quarter, semi and final of which will be played at the Computer Shopper Show on December 9.**

**So far some 5,000 players have signed up for the regional qualfiers. There will also be European interest with the Italian champ being paired with the eventual English winner. There is a chance that German and French players will also take part.** ■

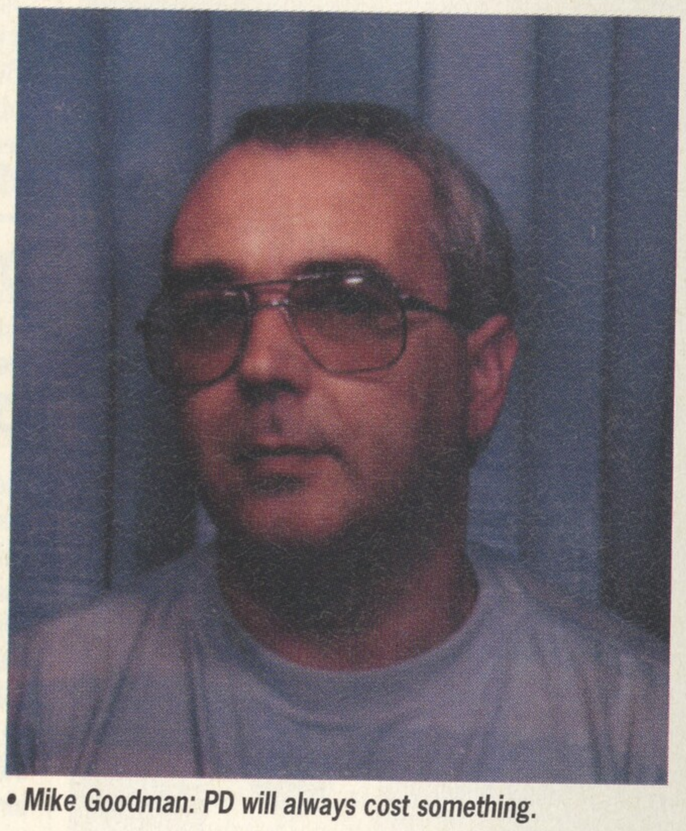
• Kick Off: *more of everything.*

# THE WEEK IN VIEW

**Public domain libraries come in for a lot of stick for their pricing policy. Mike Goodman runs one of the most popular PD concerns and answers the charge of profiteering...**

Every month or so the usual criticisms are levelled at the PD libraries. As the proprietor of Goodman Enterprises and the writer of the Atari ST *International Public Domain and Shareware Guide*, I receive many letters and telephone calls each month from satisfied customers all over the world. But for all the sceptics out there, I ask you to consider the following.

If you own a modem, don't mind paying large telephone bills, buy all the magazines with a cover disk, have many friends with STs that buy public domain and have the time to visit specialised user groups to swap disks, then a PD service is of less value to you as an individual. But what about the silent majority, the many thousands of satisfied ST users that use PD services?



• *Mike Goodman: PD will always cost something.*

Anyone who falls into the first category above (owns a modem etc), occasionally tends to forget that there is life outside computer circles; they spend most nights messing about with the latest games and utilities, know their chosen machine inside out, and virtually all the people they know own a computer of some kind, so they assume everyone is the same. Believe me nothing could be further from the truth. Only about five per cent (if that) of ST users own a modem and I estimate 75 per cent of users overall have no serious contact with others (I suspect they don't want any, as computer talk to non enthusiasts is totally baffling). This majority are the users that the PD service is mainly for and they don't mind paying for 'the service' because that is what a good PD place sells – a good service, not the software.

Obviously the number of facilities a public library offers is reflected in the prices charged, but the fact remains – whatever category of user you are and wherever you gather your PD from, it will always cost you something. ■

## Express Access

Hey! Get in touch with us! *Express* is always on the look out for news leads and tip-offs – and we'll pay you for passing them on too!

Also, if you have any burning ideas for features or surveys then drop us a line – remember, we cover every aspect of computing.

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ABC audited circulation
January-June 1990:
21,251 copies per week

We regret we cannot enter into any personal correspondence. Technical enquiries should be addressed to Tech Tips at the address below.

While every care is taken in the preparation of *New Computer Express*, Future Publishing cannot be held responsible for the consequences of any errors that may occur.

© Future Publishing Ltd • 30 Monmouth Street, Bath BA1 2BW • Tel: 0225 442244 • Fax: 0225 446019 •
Subscriptions: The Old Barn, Somerton, Somerset (0458) 74011
• Printed by Redwood Press, Melksham, Wilts
• Distributed in UK and Eire by MMC Ltd (0483 211222), rest of world by Comag (0895 444055)

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**Features:**
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- ★ **Blitter chip installed for faster graphics**

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### ACCESSORIES

| | | | |
|---|---|---|---|
| Quickshot II Turbo Joystick | £9.95 | Branded Memorex 3.5" DSDD Disks | |
| Competition Pro 5000 Joystick | £13.95 | Box of 10 | £13.95 |
| Competition Pro with Autofire | £14.95 | Memorex Disk Box | |
| Konix Speedking Joystick | £11.95 | For 40 3.5" Disks | £8.95 |
| Red Mouse Mat with Amiga logo | £5.95 | Amiga 1/2 Meg Expansion | £99.95 |
| Plain blue Mouse Mat | £4.95 | Control Centre Atari or Amiga | £44.95 |

Naksha Mouse for ST, Amiga or PC.....£29.95

Contriver Amiga and ST Mouse with FREE Holder and Mouse Pad £20.95

### PRINTERS

| | |
|---|---|
| Star LC10 including interface lead for ST/Amiga | £169.00 |
| Star LC10 colour including interface lead for ST/Amiga | £219.00 |
| Star LC24-10 24 pin including lead for ST/Amiga | £249.00 |
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T R A C K E R

## ■ SIMM city

Look, I understand bus widths lolo, but let's face it, most *NCE* readers don't. They only know that when they buy a 1Mb Amstrad and want to upgrade to a 4Mb machine, they have to buy 4Mb of RAM. not 3 Mb as they might well imagine – 1 + 3 does not equal 4 in this case.

If lolo Davidson does not regard this as a con, then maybe he would be prepared to concede that at the very least the manufacturers/vendors should be obliged to accept the original 1Mb SIMM in part exchange.

And I have here a board where I can mix 256K and 1Mb SIMMs. Where 256K and 8 1Mb SIMMs equal 10Mb total.

One 4Mb SIMM still costs vastly more than four 1Mb SIMMs, so I don't think we're arguing the toss on that aspect... yet!

*William Poel, Quarterdeck UK*

## ■ Critical view

Here's my opinion on the recent TV programme, *Hyperland.*

Interactive television is going to play a major part in our lives, even those who shun technology are going to feel its impact. *Hyperland,* then, was a golden opportunity to reveal all then, in an educational but entertaining fashion without being patronising. Some hope!

I was bored rigid with this pretentious tosh. The show was an incoherent, rambling megabore. Ideas that are never clearly explained are offputting and confusing – seeing talking heads waffling technobabble must have made Joe Public switch off in droves. The speakers were so tedious they could have cleared a room quicker than an exploding bomb. Why oh why use a ludicrous Doctor Who... lending scientific credence, perhaps?

The content was so abysmal that the writer was obviously a world authority on self-important humbug! If producing computer shows is what the BBC want, ask someone who knows the subject – a Future Publishing journo, say.

For anyone connected with *Hyperland* I say 'complete tripe – don't bother again'.

*Martin Stephens, Basildon, Essex.*

So you didn't like it then? Any more would-be TV critics fancy penning me a missive?

H F-W

# EXPRESS MAIL

**With your new and regular host, Haydn Fitz-Williams, the man with the fivers to give away...**

**Write and tell HFW what you think about anything under the Sun! Reach him at: *Express Mail, 30 Monmouth Street, Bath BA1 2BW.* Sorry, no personal replies, even with an SAE, as we're too busy writing the magazine.**

## ■ Coupé confusion

As to the argument that the demise of the Plus 3 is bad news for the SAM Coupé, do you really think that people, given the choice of a tape loading 8-bit or a disk loading 8-bit are going to buy the tape loader in preference to the disk loader? Particularly when both will run almost all of the same software?

I was one of the people who upgraded from a 48K Spectrum to a Plus 3 purely because of the disk facility. I copy all the tape software I buy to disk via a Multiface purely for the convenience of quick, relatively quiet loading and really do not see people rejecting the SAM because the Plus 3 no longer exists – they don't even use the same size disk!

Furthermore, in these times of high interest rates and impending recession, I cannot see the greater majority of new purchasers rejecting the SAM in favour of a 16-bit machine costing around £200 more. Or, for that matter, opting for a non-programmable console.

With regards to MGT, how many other software and hardware firms in the last ten years have been able to emerge from bankruptcy and continue trading? The reason for the bankruptcy, as I understand it, was that MGT were unable to get the product out into the shops last Christmas. It had nothing to do with Amstrad and MGT is not dependent on Amstrad for its sales in any way.

*D Griffith, Hammersmith, London*

I think you're missing the point a bit here, Mr G. While it is without doubt a clever piece of hardware, the SAM Coupé is not really set to be a soaraway success. It's a bit of a chicken and egg situation when it comes to launching new computers – people won't flock to buy a new computer unless there's a strong promise of a large quantity of software and other add-ons for their new toy. And such a marketplace, crammed full of innovative software and peripherals, will not grow around a computer until it becomes popular.

The Spectrum took off quickly, and went from strength to strength as software houses, hardware manufacturers and magazines sprang into life to support it. Indeed, Miles Gordon Technology first came into being as a company creating innovative devices in support of the Spectrum.

After a seriously false start, the Coupé is far from dead yet – but it is only growing slowly. There's a very limited quantity of software available that takes advantage of the Coupé's powers, so for most people owning a Coupé means running Spectrum software. And there's insufficient impetus for the major developers to start working on Coupé-specific software – the potential market for the end product just isn't there. Similarly, no-one could set up and run a news-stand magazine dedicated to the Coupé without losing lots of money.

Given the revamped Amstrad CPC range and the likelihood of further price cuts at the 16-bit end of the hardware market, my prediction is that the Coupé is never going to become a mass-market, mass-appeal machine like the Spectrum, C64, CPC, Amiga or ST. (Cue

## ■ Mondo bondage?

I have been getting your magazine since it started and it has improved over the time. Your new 'format' is a real improvement, even if the price has gone up like petrol.

But, oh yes, the big BUT, do you have to have so many articles for the Amiga? Graphics, music, fractal landscapes, different types of hardware – you name it, there has been an article on it. Believe it or not, there are other machines which have the same sort of software and hardware. So please give the Amiga a rest.

Another request. Could you give me the address of the magazine *Mondo 2000* which appeared in your excellent article on virtual reality?

By the way, I have got an original idea for the 'my computer is better than yours' debate: My Atari Portfolio is better than your Amiga. So it doesn't have any graphics. At least I will be a better lover than any of the Amiga users!

*Richard Blakeley, Portsmouth*

I can see your point, Richard, but it's hardly our fault that the Amiga is a 'happening machine'. There's so much good Amiga stuff to report on at the moment, that we have little option but to give lots of coverage to the Amiga – but our Illustrious Editor has promised to try to widen the scope of some future articles to include other machines. Apart from the MSX, Oric. Memotech etc.

As to *Mondo 2000*, the address to use if you want to get a subscription is Fun City Mega Media, PO Box 10171, Berkeley, CA 94709-5171, USA. The magazine is published quarterly, by the way and has an American subscription price of $24 for six issues, but you'll have to find out how much to add for airmail postage. Your newsagent might be able to order an import copy for you from a distributor like COMAG if you don't want to set up an airmail subscription direct.

Hmm. You'd have to be a pretty terrible lover in

***• Improve your sex life with a Portfolio.***

the first place if the Portfolio was what you needed to spruce up your sex life. An interesting twist on the MCIBTY debate though, and worth a fiver for making me chuckle. Anyone else out there care to tell me why their machine makes them better lovers?

howls of protest from Coupé owners across the land.)

And don't make the mistake of confusing bankruptcy with receivership. So far as I know, no-one has gone bankrupt over the SAM.

**H F-W**

## ■ MacFan

**As both a personal feeling and one for the company I work for, the Macintosh Graphical User Interface simply has to be the best for productivity.**

**We do not pretend to be 'expert' users, but the Mac lets us pretend we are. In the context of DTP, the section I work in produces fairly complicated technical documents, so when we set out to computerise this, we decided that only the best would do.**

**This just happened to be Quark *XPress,* which, of course, only runs on the Macintosh platform.**

**By the way, on the 'Mines better than yours' front I run an Atari ST1024. My kids prefer the Apple portable that I bring home. I taught my seven year old to use the Mac in under an hour, and my eleven year old virtually taught himself.**
*Steve Switzer*

Yup, it's a brilliant machine. And I can't wait to find out whether there's any substance to those rumours of price cuts in the Mac market – Apple could really have a runaway success on its hands if it could make the Mac as affordable as the PC. Still, it's worth mortgaging your home for a IIfx – even if you have to drive around in a tired Fiat Uno for the rest of your days as a result. 32-bit QuickDraw has to be seen in action to be believed.

**H F-W**

## ■ Boy racer

**In response to Mr Clitheroe Lanes (*Express* 98 – is that really his name?), here are some real motor racing games – none of yer poxy *Out Run* clones. All these are on the PC but may be available in other formats.**

***Grand Prix Circuit* (Accolade) – a couple of years old now, but still very playable – like *Revs* only with better graphics.**

***Ferrari Formula One* (Electronic Arts) – very sophisticated techno-tweaks available, but sadly almost unplayable as the car stops dead when you put a wheel on the grass. Loadsa features... shame really.**

***Indianapolis 500* (Electronic Arts) – proves that driving round in a circle is far more difficult than it looks. Very challenging, and don't drive into the walls...**

***The Cycles* (Accolade) – if you can face bike racing, this is the biz. Plays really well, but maybe a bit too easy.**

**All we need now is a decent 'Jaguar Wins at Le Mans' game. Here's looking forward to *Days of Thunder.***
*Mark McKergow, Redland, Bristol.*

Careful with those furry dice, Eugene. Anyone else with a top four or five games – of any type – might like to drop me a line, or better still, get in touch with Tim Smith and his Centrefold that lurks somewhere around the middle of this magazine.

As for Jaguar winning Le Mans – I was there. Last time it happened, anyway. And the year after. And I'll be there next year too.

**H F-W**

## ■ Amiga hater

**With respect to the letter Protect and Survive in *Express* 98, the argument of corporate users dictating the removal of copy protection on Amiga Software is of no consequence. It will not even rear its head as the Amiga, unlike the PC and on occasion the ST, does not even assume an identity in any market other than leisure software.**

**One way of copy protecting Amiga software and one which would suit any other games machine is to remove the keyboard and disk drive and replace them with a cartridge slot, a joypad and start button and call it a console.**

**It appears to me that if someone wishes to use a computer for any serious applications they should buy a serious computer, and not a console in computer clothing.**

**I have owned an Amiga, a PC and an ST and found the Amiga the only one of the three quite laughable in terms of serious software. It is a parody of the computer industry – a £399 rolling demo of useless routines and user-unfriendliness dressed up in a coat of many HAM-fisted colours.**
*I Richardson, Stoke-on-Trent*

And you must be a parody of an intelligent, unbiased, rational human being Mr Richardson. Before hordes of screaming Amiga owners declare nuclear war on Stoke, just let me say that you must have had your head in a bag if you can't see that the Amiga is supported by masses of serious software. Software for high-end DTP, video editing, music and graphics as well as a fair smattering of 'business' stuff.

Still, I liked that bit about 'HAM-fisted' colours. A clever put-down, that.

**H F-W**

## ■ Ten things

***Express,* since the first issue, has always been a magazine that I have both loved and hated! As you have just produced you hundredth issue, I thought I'd write and tell you the ten things that I have most loved and hated about my weekly fix.**

**Hates include:**
**1) Articles on how multimedia will change all of our lives**
**2) People who tell me to buy an Archimedes because they are the future. No thanks, I want a *now* machine – with bags of software in the High Street, fellow owners living around the corner and shelves full of relevant magazines in W H Smith.**
**3) Folks who tell me to chuck my Amiga and get a PC because they are *the* standard. Yes, standard office equipment, like photocopiers and filing cabinets. Surely not the standard for the other 99 per cent of things like home use, school use, desktop video, desktop music or even desktop publishing.**
**4) The now defunct Buyers Guide in Shopping Express for repeatedly downmarking Amiga *Protext* 4 for not having pull-down menus. My version does, honest guv.**
**5) Reports from computer shows. These are so short and lacking in detail that you must spend all week at the bar.**

**Fave raves are**
**1) Those Sun-like headlines; the name of a computer followed by words like sensation, shocker etc.**
**2) That default picture of Alan Sugar. It cracks me up every time.**
**3) The witty and informative micro biographies and learning curve articles in earlier issues.**
**4) New Computer Excess**
**5) The wicked find-the-long-word competitions.**

**Here's to the next hundred.**
*Chris Longley, Houghton Le Spring, Tyne and Wear*

Thanks for your input Chris. Much as I'd like to insult you by shoving 100 fivers your way in celebration of our anniversary, I'll minimise the insult by sending you two fivers – that's a pound for each point on your list.

Maybe I've set a dangerous precedent here, and will now be flooded by people's lists of 'Ten things'? Alright then. A tenner for the person who sends in the most amusing 'Ten Things You Didn't Know About The MSX Computer'.

**H F-W**

## ■ Insulting and cheap

**That picture in Centrefold: sexist? That'll be answered by what goes in that place next week. Do I mind? It isn't about computing, so yes, I do mind.**

**I'll try two more issues to give it a fair running-in time, but if this is to be the format from now on, I won't be getting *Express* thereafter.**

**Specifics: It's gone brash. Quiet humour has given way to forced jokery. The advertising now seems oppressively intrusive. I don't like the increased emphasis on games (since they are of no interest at all). If people wrote to Express Mail, it was because they wanted to (and the interest showed); shoving fivers at them is insulting and looks cheap.**
*Tony Kelly, Llanwrda, Dyfed*

Well I won't insult you by shoving a fiver your way then...

**H F-W**

# MAIL SHORTS

## ■ Old money

**...just got the new *New Computer Express* - Excellent. Great value for 70p (14 shillings). Whatever happened to money? And What'll *Pop* do, now it's even more Tom Tit up against your mag?**
*D Magill, Cheltenham, Gloucs*

It's got consistently smaller, that's what's happened to money. We've now got a Monopoly money fiver, a silly little 5p piece and a new miniaturised 10p on the way. In ten years' time you'll need tweezers to deal with small change and we'll all be using 64-bit computers.

As to *Popular Computing Weekly*, it's already done it. Completely Brown Bread...

**H F-W**

## ■ Rude name III

**...a few years back, I believe ICL created a disk system called M.E.D.S - short for Multiple Exchangeable Disk System. All went well until someone pointed out that in Sweden, Meds is the name for Tampax!**

**Unsurprisingly, ICL changed the name to E.M.D.S - Exchangeable Multi Disk System. And I was told than by the ex-head of ICL's programming division, no less.**
*John Earls, Swansea*

And a fiver is duly on its way. Any more unfortunate names still out there?

## ■ Brain dead

**...maybe the reason why the Spectrum Plus3 isn't selling is because it's been withdrawn, axed?!**
*E Software, Lewisham*

You sound just like the kind of guy who should head up a marketing intelligence department on a sewage farm.

## ■ Bad jokes

**Q) Why do MSX owners whinge?**
**A) Because they deserve to.**
**Q) What do you call an MSX owner?**
**A) Plonker**
**Q) How many MSX owners does it take to change a light bulb**
**A) Who cares? And anyway you can't buy light bulbs like that any more unless you join a user group.**
*Martyn Banks, London*

Er yes. Well that should have any MSX owners who are still reading this magazine well pleased.

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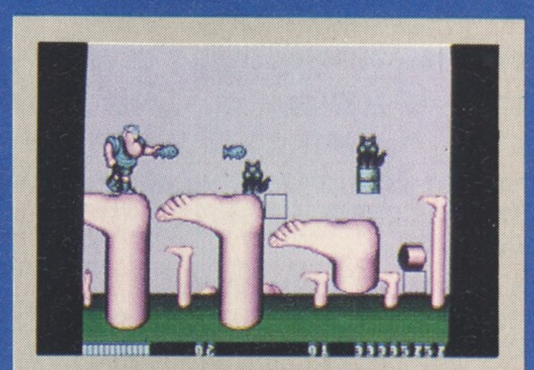

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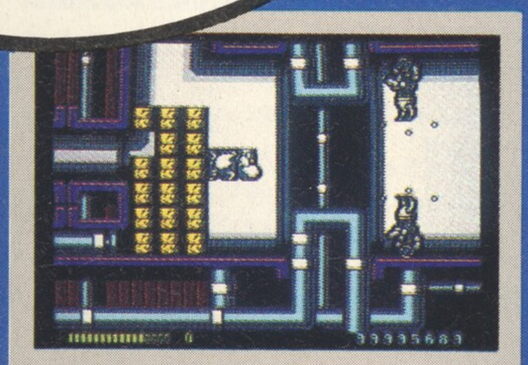

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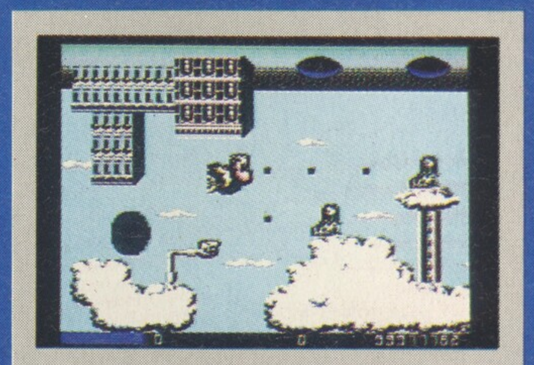

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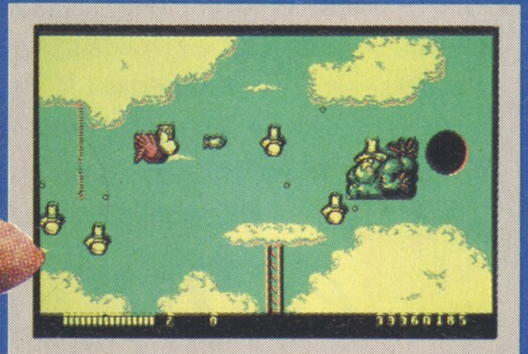

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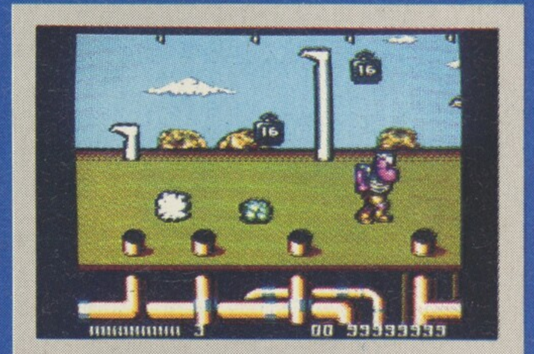

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# Amiga

## AMOS UNDER THREAT

Mandarin's AMOS is generally regarded as the BASIC language for the Amiga. No other language provides the kind of support for the Amiga's unique capabilities that AMOS provides. But now it seems that AMOS has finally got a competitor – Blitz BASIC has arrived.

Designed by Black Box Software in the States, Blitz BASIC offers the same level of control over the Amiga's hardware as AMOS, but claims to run considerably faster, making it ideal for producing heavily graphic-intensive applications such as games. However, unlike AMOS, Blitz isn't just an interpreter. The package comes complete with a lightning-fast compiler that can generate ultra-fast object code at a rate of 6,500 lines per minute. Black Box claims that Blitz-compiled applications run faster than those written in languages such as 'C', yet it is so simple that even novice Amiga users can produce spectacular results.

The language itself provides direct support for IFF pictures, brushes, ANIM brushes (such as those produced by *DPaint 3*) and sound samples. You can open dual playfield, HAM and extra half-brite screens, take direct control over hardware sprites, the audio, blitter and copper hardware. An all-new queue system makes programming the blitter simplicity itself. You can open an unlimited number of screens in different resolutions, smooth-scroll screens, double buffer screens for flicker-free animations, run sub routines under vertical interrupt, plus a whole lot more besides. Black Box has rewritten the Amiga libraries, often making them at least five times faster than their kickstart counterparts. So far, no UK distributor has been appointed to handle BlitzBASIC, but I'm they'll be queuing up for this one. As soon as I receive my copy, I'll be bringing you a full review.

## PHOTON 3 UPDATE

More news is starting to come through concerning Microlllusions' *Photon Paint 3*. Although the specification has not been finalised, it seems that the program is going to be pretty spectacular. According to a spokesman at Microlllusions, the program is being aimed squarely at Electronic Arts' *Deluxe Paint 3*. "We're not just gunning for *DPaint 3*, we intend gunning it down", the spokesman went on to say. "But *Photon Paint*'s a HAM paint package!" I hear you shout. Well, according to Microlllusions, the program has been totally rewritten and it now supports all Amiga screen modes, not just HAM. "We've included everything that *DPaint* can do, plus a whole lot more besides. When this program arrives, it's going to kill *DPaint* in its tracks", our spokesman added. Unfortunately, version 3 of *Photon Paint* isn't due until at least January of next year, but I'll bring you more details as soon as I get them.

## HARD FACTS

Built-in hard drives for the A2000 are no big deal, but now A500 owners can also get in on the act. Already Gigatron in Germany, the company which caused so much excitement with its portable Amiga project, has announced that it plans to release a built-in 20Mb drive for the 500 very soon.

The micro-sized drive is housed on a single PCB that connects to the A500 via the Amiga's memory expansion slot (the one hidden underneath your machine). The device was last seen up and running at the May Ami-Expo show in Basel, Switzerland. Nearer to home, details have been leaked concerning a similar device being developed by Cumana, a company which has been taking the Amiga market by storm just recently with its range of add-ons. Cumana's little device consists of a 512K RAM expansion board with built-in hard drive controller. Just like Gigatron's unit, the Cumana card fits into the RAM expansion slot underneath the 500. Using a ribbon cable, any standard ST506 series hard drive can be connected to the Amiga.

These drives are now being sold very cheaply, therefore Amiga users will be able to add a hard drive to their system very cheaply. Although the price is still not finalised, Cumana hopes to sell the card for a very reasonable £120. For more, give it a bell on 0483 503121

## A3000 NEWS

The Mac's got 'em. The PC's got 'em. But the Amiga A3000 doesn't. What am I wibbling on about? High density drives, that's what. Rumour has it that Commodore may soon change the 3.5-inch drives currently built into the A3000 in favour of a high density unit. Although 880K sounds pretty good to most of us, these high density drives will allow the A3000 to store up to 1.4Mb of data onto a single floppy disk. And of course, they're totally compatible with current Amiga drives. If such a device does become available, you can bet that Commodore will also make the drives available to the rest of us in both external and internal format.

On the subject of making gadgetry for the A3000 available to us mere minions, it seems that Commodore plans to release the A3000 display enhancer hardware as a plug-in card for the A2000. When used in conjunction with a multi-sync monitor, this little whizzo device de-interlaces screens, therefore removing the old eye-straining flicker from high resolution displays. It is believed already that MicroWay – the company which produces the Flicker Fixer card for the A500 and A2000 – has complained to Commodore over its plans to release the said card. MicroWay claims that such a release could kill their product (you'd better believe it).

## DYNAMIC PAINT PACKAGE

When NewTek released version 4 of its acclaimed video digitiser, it set new standards in Amiga graphics. With its all-new dynamic hi-res graphics mode, users were able to produce high resolution graphics with up to 4,096 colours on-screen simultaneously.

Unfortunately, dynamic hi-res images proved to be totally incompatible with everything but NewTek's own *DigiPaint 3* system. However, to the rescue of *DigiView 4* users comes an American company called Lake Side Logic. Lake Side has beaten even NewTek to the post with the very first paint package to work in Dynamic Hi-Res.

With *MacroPaint*, you can finally touch up Dynamic Hi-Res images without having to mess around with super bitmaps.

Rumour has it that Lake Side has also signed a deal with Pixar, the high-end graphics workstation people, to produce an Amiga version of the *Renderman* solid modelling software. *Renderman* is currently only available for powerful graphics workstations costing many tens of thousands of pounds.

### AN OBITUARY

It was with great sadness that I recently heard the news of the passing away of Rob Peck, an man of which we all, as Amiga users, owe a great debt of gratitude. Rob, an engineer, programmer and author, headed the Amiga documentation team during the early LosGatos days. He was responsible for numerous computer manuals and reference guides, including the *Amiga Hardware Reference Manual* and the *Amiga ROM Kernel Manual*. I'm sure that, without Rob's effort, the Amiga would not have achieved the success it is now enjoying.

**Jason Holborn**

# Archimedes

### SERIOUS STUFF

The Acorn world has a rather earnest look about it at times, when the word 'serious' often gets given capital letters. But then why not. No-one can really afford an Arc 'just' to play games. So after the games news of last month, and in view of the business computing exhibition coverage last week, let's take a look down the business aisle of last month's *Acorn User* show.

I spoke to several international ARM dealers at the show, who distribute Acorn machines in various European countries through Lindis International. "I've seen several products which are truly world-class," volunteered one (I can't remember whether it was the Dane or the Swede), and he singled out the A540, the Laser Direct, *Impression 2* and Interdictor as worthy of the accolade.

### AND THEN THERE WERE FOUR?

Or five perhaps.The running theme of the year has certainly been the steady growth of Archimedes DTP. *Desktop Publisher* and *Impression* are already well-established in the field, but the newcomers *Ovation* and *Tempest* made a splash along with two updated versions of *Impression*. Acorn's 1989 release *Desktop Publisher* now looks a little lacklustre, but at least it gave every other company something to aim at. Computer Concepts' *Impression*, a bonnie nine months old, has split in two: *Impression 2* and *Impression Junior*.

The main innovation of release 2 is that the frames that hold text, graphics and so on can be grouped together. Select one, shift/select a second, and you can then move both together. This is immensely useful, though what you can't do as yet is permanently group them together. Drawn graphics can be rotated within frames too.

*Junior* is just what it says — a cut-down version that retains all the word processing but ditches many of the more complex page layout features of the real thing. It's much smaller, so runs in an unexpanded 1Mb machine easily. The major feature of *Junior* is its set of 'effects buttons'. The quirky hierarchical style system of full-blown *Impression* is too complicated for novice-level wordprocessing, so Concepts has removed it. Now there are menu options for the typeface, size, line spacing and so on; plus underlining, condensed and expanded. What seems lacking is any 'bold' or 'italic' buttons. But bold is a whole different typeface, so to select bold or italic, you use the font menu. While this is technically correct, it may not be the right approach for the novices that *Junior* is aimed at. Release 2 gets the effects treatment as well, though it retains the old style editor too.

### OVATION SPELLING

Beebug's *Ovation* is a worthy competitor to *Impression*. It clearly derives its inspiration from Quark *Xpress* on the Macintosh. For example frames have an unbreakable hierarchical structure. A frame drawn within another becomes its child, and the child moves about if you move the parent. The child cannot be moved outside the parent box, although you can cut it out then paste it somewhere else. Sounds like more trouble than it's worth, but believe me, it's a boon.

*Xpress* is *the* professional DTP package right now. If you're picking a role model, *Xpress* is a good 'un. There are some very neat points to *Ovation*, like the ability to use both paragraph styles (like Acorn's *Desktop Publisher*) and local styles (like *Impression*'s effects). Unlike *Impression*, there are bold and italic effects, as well as condensed, expanded and so on. The bold button searches for the bold version of whatever font you're currently using, but it doesn't get confused if that happens to be Vogue.book — it correctly finds Vogue.demi. It does however have trouble with font families of more than one bold (for example French from the Electronic Font Foundry, with both French.bold and French.demi-bold.

Points I really don't like – you can't import text from anything except Edit, and you can't pre-tag it so it's imported with the paragraph styles already set up.

*Ovation* has been around for a couple of months now, but the ➤


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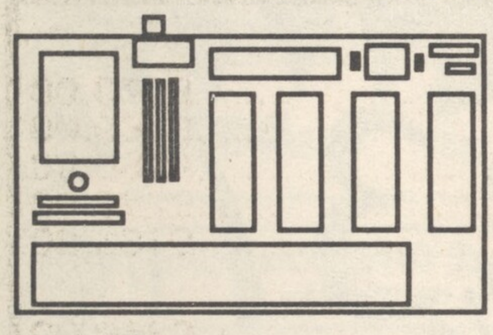

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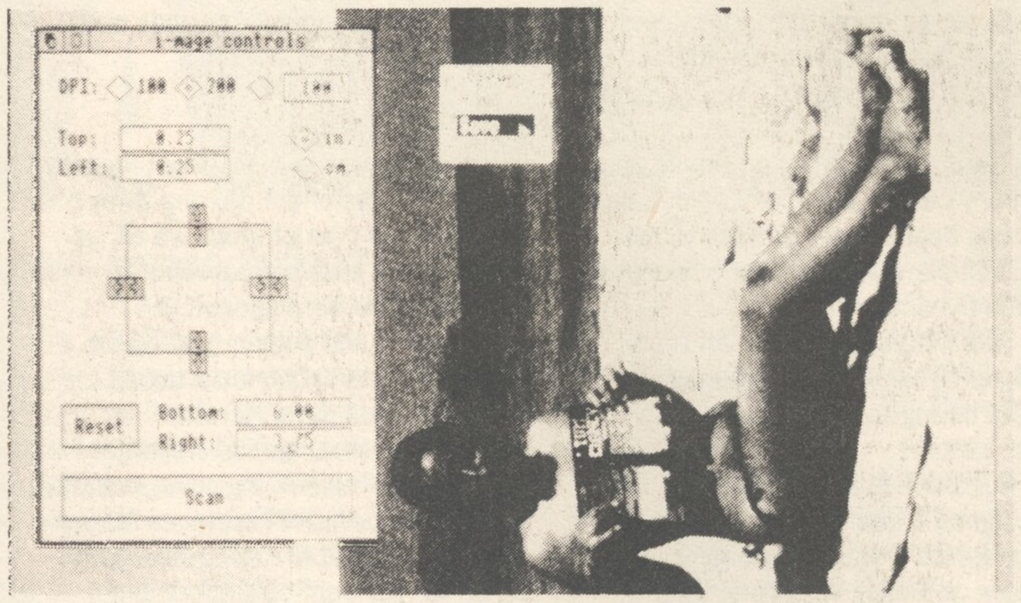



*• Colour scanning arrives for the Arc. It is in colour, honest, see page 3!*

show gave first sight of the hyphenation and spelling checker. This looked fast and neat, and should be available now. I wouldn't pick a desktop publishing package on price (or else I'd be using *Draw* for everything!), but *Ovation* looks particularly good value at £114 including VAT, and Beebug's rather nice alternative set of fonts (Palatino, Helvetica and Avant Garde lookalikes). It really needs a 2Mb machine though – with the spelling module *Ovation* is big!

Clares' *Tempest* looks like it could be a runner too. But at the show author Dave Coathupe was kept busy explaining why it wasn't quite ready yet. One thing you can definitely do is select several frames at once, or link frames and group them permanently. Its discretionary, not tied to where you draw the frame as with *Ovation*, but it doesn't seem possible to ungroup frames once grouped. There will be a fuller report when I have a copy that's nearer to the real thing.

Beebug is on 0727 40303, Computer Concepts is on 0442 63933, EFF is on 0990 28698, Clares is on 0606 48511.

## HOTLINKS

Colton Software, Minerva and Lingenuity have got together to make their *Pipedream*, *Graphbox* and *Presenter* interact more. The latest upgrades of all three use 'hotlinks'. If you make a spreadsheet in *Pipedream*, then export a section of it (as a CSV file) to *Graphbox* or *Presenter*, you can show it as a graph. The new bit is this: change the spreadsheet and the graph changes too. Someday all software will be built like this... Colton is on 0954 211472, Minerva on 0392 437756, Lingenuity on 0986 85476.

## COLOUR SCANNING

Irlam Instruments has released a new scanner, this time a 200 dots per inch colour model to complement its excellent but exorbitantly priced greyscale machine. The 'image' is based on the Sharp JX100 scanner, with an interface podule and control software. The Sharp lacks even an on-off switch (have you noticed that today's techie gear doesn't have an off switch, it has a 'standby mode' instead). It's the size and shape of a decent dictionary, but see-through. You put it on top of your pic to be scanned – it can cope up to a postcard sized image – and set it off with a mouse-click. It's fascinating to watch the scanner head trundle back and forth inside the box. But only once. So take a ten minute nap.

The software includes Acorn's *ChangeFSI* application. This converts the 24-bit colour data from the scanner into a mode 21 sprite at around 200 pixels per inch. One scan can mean around 3Mb of colour data and a 1Mb sprite! So a hard disk and lots of memory are vital. An ARM 3 would not go amiss either.

The results are impressive, but not quite as true-colour as I had hoped. Reds are too red, blues too blue. The colours are generally too vivid, turning sparrows into parrots, and there's no adjustment possible. As it stands, colour scanning is a curiosity, and an expensive one at a tad under £700. Rumours are rife of a version of *ChangeFSI* that allows 'gamma correction', so you could tone down the scanned colours. Now that might make it a little more interesting. Irlam is on 0784 451192.

Over the next couple of weeks, I hope to take a look at *Arclight* and *Rayshade*, two ray tracing packages, and then at the direct drive laser printers from Computer Concepts and Calligraph.

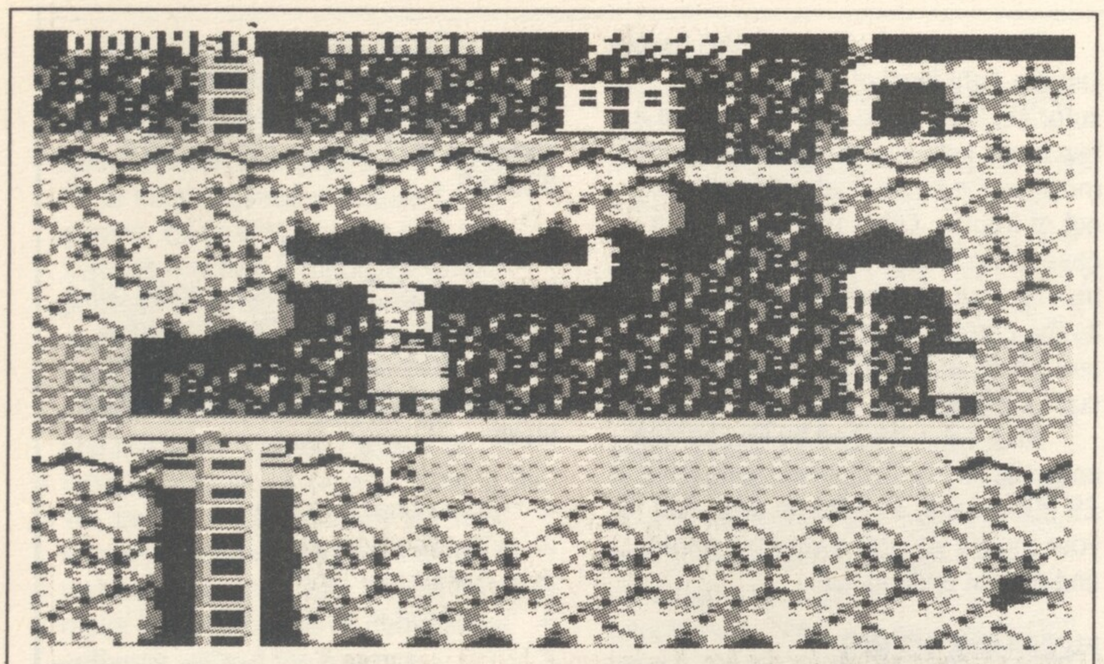
**Ken Coumarin**

# PC

## GREMLIN'S GRAPHICS

It occurred to me the other day that Gremlin Graphics has really put on a spurt of activity recently. Up until the *Lotus Challenge* launch, the only Gremlin game of note for a year or more had been *Impossamole*. So it's good to see the company launching itself back into CPC software.

The Gremlin stand at the CES was impressive too. Pride of place was taken by a gleaming, red Lotus Esprit Turbo. Needless to say, this was strictly out of bounds to the greasy-fingered gawkers clustered round the stand, but by way of consolation, two stand-up arcade consoles were demonstrating *Lotus Challenge*. And for those with a more competitive streak, there was a special *Lotus Challenge* just round the



*•The Atomic Mud Mines, and some pretty hairy moments as you ride a wagon to the ladder.*

corner.

Two players could sit in a cockpit mock-up and race each other in front of an audience. The set-up came complete with large video displays mounted above the cockpit for spectators and a live commentary from London DJ Alan Andrews. The fastest time set during the whole of the four-day show would earn the driver a cash prize of £100! On the public days, huge queues formed as eager punters sought to try their luck. Mind you, the presence of Gremlin's "bevy of beautiful assistants" might have had something to do with that.

The Amstrad version of *Lotus Challenge* is still being worked on, but early versions look fast and smooth. At the same time, Gremlin has also just about finished its first console game, *Switchblade*, and is nearing completion of its version of *Shadow of the Beast*.

All three of these games are looking very, very good, and they all have one thing in common. They use the Amstrad's four-colour mode rather than the lower-resolution 16-colour Mode 0.

As far as I'm concerned, it's paid off admirably. The extra resolution has been well worth the trade-off in colour. It gives a level of detail quite startling after the frequently blocky full-colour graphics seen on other games. It's a brave move on Gremlin's part, but it's better than trying to be too ambitious with the Amstrad graphics and coming up with a game that looks fine from across a room, but is just a colourful mess at playing distance.

I can't wait to see the finished versions of all three.

## RICK DANGEROUS II

I have to admit, when *Rick Dangerous* came out I was completely hooked right from the start. It was an old, old formula, but the graphics were so well-drawn and so humorous, and the puzzles so well-constructed and planned, that I simply couldn't stop playing it!

Well now *Rick Dangerous II* is here and – yes – it's even better. This time Rick is out to save the world from invading aliens in a five-level reflex-testing puzzler with all the incredible playability of the first.

Level one has Rick boarding the alien spaceship in Hyde Park, London, and battling through its various levels against lasers, robots, walking canisters and other nasties.

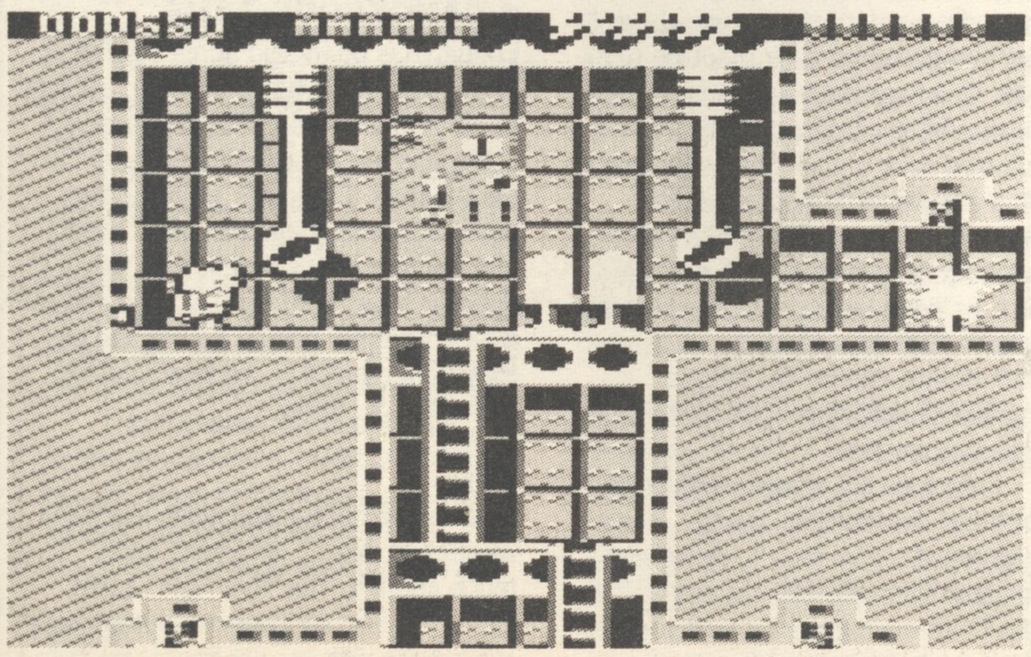
Succeed and you get to level two and the Ice Caverns of Freezie, on one of the alien planets. Here you're up against sliding ice blocks, penguins, what look like marauding norsemen and treacherous sheets of ice.

Level three takes you to the Forests of Vegetablia, where you're attacked by falling logs, spikes, monkeys and rolling rocks.

Level four is in the Atomic Mud Mines, where rolling drums, thundering wagons, foot-cloying slime all conspire to wipe you out.

And level five? Well, level five must remain a mystery – for the time being. You see *Rick Dangerous II* has this unusual game construction whereby all the levels do lead on from each other, but you can also play any of the first four at will. To reach level five, however, you have to get through the first four in sequence in one go. Ouch!

Graphics are a touch blocky, but very colourful – and funny. Sound is very good, with a different soundtrack for each level and plenty of sound effects to let you know what's going on. Best of all, though, is the fact that the game is so utterly addictive and playable.



*• Robot-dodging in Hyde Park. Watch those electrodes hanging from the ceiling!*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The thing is that the puzzles have just the right level of difficulty and surprise. With some of them you die a few times until you suss out the joystick move or the timing that will keep you out of trouble. Other times, it's just a case of watching what's happening, picking your moment and going for it. Its the careful blend of timing, thought and frantic action that makes the game such a winner.

*Rick II* is published by Microprose under its Micro Style label label. Price is £9.99 on tape, £14.99 on disk. And for your money you get a very big game and almost endless fun.

## NEMESIS NEWS

Sadly, Nemesis, producer of the classics *Bonzo Blitz*, *Super Meddler* and *Maxidos*, is no longer with us. But the software lives on, thanks to peripherals supplier Microstyle (nothing to do with Microprose's Micro Style label).

In addition, Maxidos (the only disk utility which works in Amsdos) is to be given away free with each Microstyle disk drive.

All three programs have other software bundled with them, and the asking price in each case is £13.75. Stocks are not limited, since production of the software will continue. To order, or find out more, write to Microstyle at 212 Dudley Hill Road, Bradford, West Yorkshire BD2 3DF, or call on 0274 636652.

## TURRICAN POKE

Rainbow Arts' *Turrican* is a goodie but a toughie. Never mind – this tape poke from Graham Smith gives you infinite lives and infinite vitality on the first four levels...

```
1 ' Turrican -tape-
2 ' By Graham Smith
3 ' Infinite lives
4 ' Infinite vitality
5 '
10 DATA 06,00,11,70,01,cd
20 DATA 77,bc,3a,85,01,67
30 DATA ee,75,6f,22,80,02
40 DATA c3,80,01,21,7e,00
50 DATA 22,59,1b,c3,00,1b
60 DATA af,32,f0,04,3e,c3
70 DATA 32,63,8f,c3,00,03
80 FOR j=0 TO 41:READ a$
90 x=VAL("&"+a$):y=y+x
100 POKE j+96,x:NEXT j
110 IF y<>3644 GOTO 130
120 CALL 96
130 PRINT"data error
```

**Rod Lawton**

# 64

## OPERATING AGAIN

A development version of a new C64 operating system and terminal emulation program has fallen into my lap, courtesy of Zigzak Software. According to the draft manual enclosed with the software (currently on disk, as you would expect) the developers originally wanted only to come up with programmable terms software, but as the project went on, they realised what they wanted from their system would be best delivered by a completely new O/S.

Cterm works on the basis that every element in it is modular, that these modules are themselves programmable and that nothing is bolted to the spot. You can map your memory in the configuration that best suits your requirements. The main module is called the 'manager,' and this contains all the default routines for system housekeeping. The transportability of the modules offers tremendous potential to those who still enjoy programming their machine to its limits. One example used to illustrate the possibilities in the manual is this: you could have a disk module for use with a parallel DOS that took full advantage of the speed offered, then you could have another disk module which included fast-load for normal disk systems. This is possible because any given module can be installed or removed from the main operating system at any time.

Programming is achieved via a command line interface using keywords. It's very easy to make and use batch files with this system. In fact, if the finished program lives up to its potential, anybody familiar with assembler will probably feel that they've had their hands untied once they spend a few hours with Cterm.

The purpose for which Cterm was primarily designed, however, cannot be fully explored at the moment. The fact is that the code enabling you to send mail on Compunet hasn't been included in the version sent to us. However, *Commodore Format* will be running a full review in its 'inside information' column when the time comes. Meanwhile developers may be interested to know that Zigzak has been working on what it refers to only as an interface package, which will allow Amigas to be used as cross-development systems. Whether commercial programmers, who port down from 386 based machines at the moment, will be persuaded to try it out remains to be seen. Zigzak can be contacted on Compunet (voice) 071-267 2468 and (data) 071-284 4086 or MBX them (on Id ZIGZAK).

## A DANGEROUS GAME

Enough has been said about the return of the man in the hat elsewhere, but just to confirm it for you: *Rick Dangerous II* is the best recent release for the 64 at the moment. Computer games often make better sequels than other media and the consensus here is that this has been achieved with *Rick*. Now you have a real dilemma: do you go out and buy *Rick Dangerous II* or the new Cocteau Twins album. Tricky.

## VFL

A new program backup utility has been developed, but as yet I don't know much about it. The *Very Fast Loader* backs up your software onto video tape and comes with the necessary leads to connect your C64 to a VHS video

recorder. Why? Well, apparently the *VFL* with load 64K into your Commie in the blinding speed of three seconds. Its manufacturer also says that a standard three hour cassette will store 1,000 games. Given that you can pick up a suitable machine to dedicate to this purpose for around the same price as a second disk drive, it does sound mouth watering. But I'm assuming *VFL*'s creator hasn't been disgustingly clever and made the system capable of random access. Of course, none of the *VFL* people would condone the illicit copying of software either (neither do we) and there's the rub. It's still illegal to make back-up copies of commercial software without the express permission of the publishers. So, think about it. But I still can't see why anyone with serious cash and an equally serious attitude towards their Commodore would want to be without one. An imaginative device.

## STILL HARD

While we're on the subject of plugging stiff things into your 64, I should mention (a bit overdue, this) Datel's new 3-slot motherboard. If you're sick of leaning over the back of your machine to wrench out devices and spill coffee in one fell swoop, this is the kit for you. It allows three cartridges to be plugged in at once, and flicks between them by means of a simple three-way switch. It costs a sane £16.99 and will be incredibly useful when those software houses mentioned last issue get their acts together and bring out serious cartridge based games. Talk to these people now. They hide away at Fenton Industrial Estate, Govan Road, Fenton, Stoke-on-Trent.

P.S. All those rumours last issue: it's a disgrace spreading them like that. Who's doing it? Commodore, by any chance. Surely not.

**Sean Masterson**

# PC

## HYPER HYPER

The media hysteria about viruses continues unabated, and quite a few people are doing quite nicely thank you out of it. It seems you can't move without tripping over some new virus prevention software, or Dr Alan Solomon, or both.

The latest to cash in, sorry "tackle the virus problem at its roots" is Abingdon firm Sophos with a video to help educate PC users about the virus threat. Reasonable enough you might think; the video lasts 10 minutes, with a 20 minute extra section on virus containment for advanced users. It even claims to be humorous. Fancy watching it? You'll have to shell out £295 plus VAT first. Not so keen any more, huh?

If you have money to burn phone 0235 559933.

## FORGETFUL TYPE

If you have ever saved your document and then realised you have no idea which of the dozens of files called something like 'trb126c3.doc' it is, then a new product called Fleetfinder may interest you.

Now there are plenty of pieces of software which will search your hard disk for a particular piece of text and tell you what file its in. The trouble is you can go for a coffee and a cigarette while they work – and if you've got a big hard disk you can make that a three course lunch as well.

Fleetfinder is different because it uses a hardware add-on to speed the search. Plugging into an 8-bit slot, the Fleetfinder board pulls the data off the hard disk using direct memory access techniques and uses a custom chip to search for the words you have given it.

The company which makes it, Fleetwood Systems, claims that it finds files 20 times faster than a software search. The board and its accompanying programs cost £125.

## TRUE TO TYPE

Good news for desktop publishers fed up with guessing what the finished page will look like. Adobe's *Adobe Type Manager* is to be released for Windows 3 in the next few days. *ATM*, as it is fondly known by the Macintosh community which has enjoyed its benefits for a couple of years, takes the PostScript outline fonts used by expensive laser printers and converts them into precise screen images. It does this in real time, so you don't clutter up the hard disk with lots of screen fonts you don't need and you can be sure that the exact size, style and weight will be created. Thus what you see really is what you get. Better still, *ATM* uses the PostScript outlines to produce bit-mapped fonts for non-PostScript printers, so you can use a cheap laser or even dot-matrix printer.

The down-side (there always is one) is that it slows things down and needs a good chunk of memory to do its business and store the fonts it creates in case they are needed again. The benefits outweigh the problems however, and this could be one of the major software launches of the PC year.

There are as yet no details on pricing or availability; I'll keep you informed.

## SCOT FREE

Here's an unusual approach to piracy. X-Tree, maker of, well, *X-Tree*, has offered to upgrade any pirated version of its disk maintenance software to an official version, with manuals and the rest for just £30.

All you have to do is send a printout of the X-Tree title screen and the cash and everything's all official and above board again. And the firm promises to shop you to FAST. Honest.

## KEY TO THE ARGUMENT

There are plenty of keyboards about with strange add-ons; track balls, clocks and even calculators, but one I found on the Cherry stand at the Earls Court business show takes the biscuit as far as I'm concerned.

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If you've got a really flash PC running Unix (whaddya mean you've only got a 1512 running GEM? Aspire, man, aspire!) then you can save on buying a second computer. All you need is a monitor and a keyboard to use one of the whackiest VGA cards around.

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If you fancy having an office virtually free of big beige boxes, give CID, the manufacturer, a bell on 081-942 9322.

### PAGEMAKER 4 OUT SOON

I can confidently predict that version four of Aldus's excellent *PageMaker* DTP package will be with us imminently. How do I know this? Press release? Off the record conversation with an Aldus PR person? No. In fact McGraw-Hill rather let the cat out of the bag with its release of a new book, *Using PageMaker* for the PC, *Release 4*, which, according to the latest catalogue, was due out at the end of September.

It costs £23.95 if you want to get ahead of the game – ISBN 0-07-881629-7.

### TOWN PLANNING

A much more useful book in the same catalogue is *The SimCity Planning Commission Handbook*. Full of hints and tips for the top-notch city simulator, it also attempts to explain the real-life consequences of the decisions you make in the game.

The book costs £14.95, is by Johnny Wilson and is on the Silicon Valley imprint, ISBN 0-07-881660-2.

### THINK YOU CAN DO BETTER?

Here on *Express* we're always trying to do the best for you, and we think an occasional fresh face in the PC column would do you a power of good; change is as good as a rest, a new broom sweeps clean, still waters run deep, that kind of thing.

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Interested? Then write a 1,200 word sample column and send it in to me at *Express*, 30 Monmouth Street, Bath, Avon BA1 2BW.

**Stuart Anderton**

## Spectrum

### PLUS 3 LIVES

With the sad, untimely death of the Spectrum Plus 3 a few weeks ago I thought it might be a good idea to give another plug to the Plus 3 Users' Group, a worthwhile organisation that offers a level of support and help to Plus 3 owners that Amstrad never managed. It's not run by someone with a dodgy beard either. In the wake of the depressing news, The Plus 3 UG is promising a continued commitment to Plus 3ers and say they will "run the group for as long as there are Plus 3 users requiring its services."

And what jolly good services it offers too. For a start, members get a copy of the group's monthly mag, *Plus 3 Contact*. This is a 35-page, A5, photocopied publication with a pretty interesting mix of news, tech tips, utility reviews, puzzles and the occasional special offer. The £11 annual membership fee also gets you discounts when ordering from the group's huge public domain library, which numbers 200 programs at the moment but will soon expand to incorporate another 200 from fellow Specmates across Europe. Finally there are three different helplines run by the group. They can answer your problems by post, telephone and through Micronet and several bulletin boards. I've recommended joining the group in the past, but the demise of the Plus 3 has made membership all the more essential for Plus 3 owners who want continued support and help in the machines' remaining years. Full details of Plus 3 UG are available from Garner Designs, 57 lovers Walk, Dunstable, Beds LU5 4BG.

### FANZINES

It's good to hear the regular FALUMMP! of fanzines dropping on my doormat again. One of the best I've seen recently is *Advanced ZAT Programming*, which is soon to be known by the snappy moniker of *ZAT* from its next issue on. Anyway, despite having the older and altogether less trendy title, issue three is well up to the high standard of the first two with it's neat layout, mixed bag of contents and some absolutely top hole art work. As well as the usual game reviews there's a PAW/GAC adventure writing section, letters page, interview with *Crash* magazine and a comment article on piracy. There's also lots of non-Speccy related stuff throughout the issue's 30-odd pages too, including a excellently drawn comic strip and columns for CB radio, science fiction and comics. The price is 60p and a stamp from *Advanced ZAT Programming*, PO Box 488, Tweedale, Telford, Shropshire TF7 4SU.

The next edition looks even more promising, as it will apparently include a world exclusive interview with the

swooniest dreamboat in computing, the *YS* Ed, Matt Bielby. Order your copy now, girlies.

### MIKTOR

Our faithful hacker Miktor has come up with another two pokes for your delectation. To get infinite armour in something called, or immortality in a budget title known as *Steel Eagle*, simply type out the appropriate routine, save it so you don't have to bother typing everything in again, Run and then start your game tape from the beginning.

Whilst quietly slipping me the hacks below Miktor, or M Harris as his everyday mild mannered alter ego is known, told me about a bargain he recently snapped up. The old rogue has managed to locate a printer/plotter for the Speccy that costs just £16 (plus £3 p&p), which isn't much more expensive than a ribbon and a roll of paper for most printers.

Obviously there are a few catches. For starters, this bargain is not completely compatible with our machine and, although it conforms to Centronics standards, a certain amount of fiddling is needed with both the connecting cable and printer driver. It took Miktor's plane- sized brain two weeks to get the thing working, so don't order one thinking the joys of printing will be yours as soon as it's out of the box. For people of a technical disposition however, the output from the plotter is near letter quality, if pretty slow to appear because the machine plots things with a pen rather than hammering it out in traditional dot-matrix fashion. If such drawbacks don't worry you, I'd follow Miktor's trend-setting lead and contact Bull Electrical, of 250 Portland Road, Hove, Sussex BN3 5QT for more details.

### BARGAINS

Have you discovered any absolute bargain buys for the Speccy? Help save thousands of fellow skint Spec-chums from economic depression by sending full details of your purchase to me at the usual *Express* address. And make sure the bargain in question isn't of rear-end of lorry origin.

**Robin Alway**

```
10 REM HAVOC (48 + 128) ARMOUR
20 CLEAR 3E4: LOAD "" CODE
30 IF PEEK 23296 THEN POKE 65239,84: GO TO 50
40 POKE 65215,20
50 FOR N=28160 TO 28166: READ A: POKE N,A: NEXT N
60 RANDOMIZE USR 65024
70 DATA 175,50,253,151,195,0,139
```

```
10 REM STEEL EAGLE (48 + 128) LIVES
20 CLEAR 3E4: LOAD "" CODE: POKE 65225,183
30 FOR N=64768 TO 34774: READ A: POKE N,A: NEXT N
40 RANDOMIZE USR 65024
50 DATA 175,50,127,128,195,0,128
```

*• A couple of top-notch pokes.*

## ST

### CALAMUS TIE UP?

Atari's new laser printer, the SLM605, is to be launched with specially-developed new software from DTP specialists Calamus, according to *ST Report*, a respected American on-line newsletter.

And there's speculation that the tie-up may herald an Atari complete DTP system that may put the ST into pole position in this field. Onward and backward. Incidentally, the aforementioned SLM605 laser printer is smaller, quieter and lighter than its predecessor – and, would you believe, slower – offering just six pages per minute. So much for progress.

### DON'T BREATHE A WORD

You may very well have failed to notice a tiny story in *Express* 98, overshadowed as it was by exclusive revelations of Atari's intentions to release the Panther, an ST console. (I'd quibble about the release date though: don't expect to see it this year.)

The teeny-weeny item to which I refer suggests that Atari plans to launch the Jaguar, a mid-range ST positioned between the ST and TT and aimed at low-end DTP and business markets.

According to *Express* the Jaguar will appear next spring, costing about £750. Now this is considerably more important than it may at first glance appear. For one thing, it's clear that there is a wide gap between the sub-£300 ST and the £2,000-plus TT which is hardly filled by the STE, or the increasingly vulnerable-looking Mega series.

If Atari can get the package right – and that's a big if, given the company's lamentable recent record in matters ST launch-related – two things would follow.

One, the ST would immediately gain from access to "trickle down" versions of Panther professional software, ultimately from TT developments.

Secondly, the ST's future would not only be secured, but immeasurably enhanced. Just as motor manufacturers like Ford refresh their range by incorporating features of higher models in lower ones, so the ST will gradually get faster and more powerful.

### DRIVING PROBLEMS

Of course the question of upgrading brings its own problems. Des Jones of Wolverhampton is just one of the people who've written to me over ➤


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the past few months with a complaint. "I've been loyal to the ST for four years," he writes, "but I'm beginning to wonder why.

"When I bought my ST it was a single-sided drive machine. Now, of course, things have moved on – which is fine by me. But now some games seem to be coming out as double-sided only, and if I want to get *Operation Stealth*, for instance, I have to buy it in one version, send it off and get it back, presumably some days or weeks later, in one I can use.

"What's worse, Steve" – ooer, I think I know what's coming – "I've seen you writing approvingly of this development. Come off it!"

I do sympathise Des, believe me. And yet. When Britain's biggest ST mag, *ST Format*, did a questionnaire earlier this year, it found that only 15 per cent of respondents had a single-sided drive, a number that's presumably continuing to decline as people replace old drives with new ones and – heaven forbid – STs wear out.

Your solution, if you really can't do without the current handful of programs that require a double-sided drive is either to have a new double-sided drive installed, or sell your old ST and buy a new one. Neither is particularly attractive, since both involve extra expense.

But that's progress. As hardware gets cheaper and software more powerful and therefore memory-hungry, it's inevitable and indeed desirable that older machines should be replaced.

The alternative – an ST fading as other, lesser machines overtake it – just doesn't bear thinking about, does it?

## NEW GENLOCK FOR ST

John Russell Innovations of Pittsburgh has launched an internal genlock system for Mega STs and an external one for STEs, as well as an extended colour palette board for the whole ST range which gives access to 4,096 colours.

The price in the States is just $49.95 (£35), and you can contact John Russell Innovations on 0101 415 458 9577. ST lectures to MacA groups of research students at Stuttgart University are reported to have developed STalk, a hardware AppleTack emulator for the Spectre GCR Macintosh emulator, as well as a Spectre printer driver for Atari's laserprinter.

This opens the way, potentially at least, for the ST to operate fully as a Macintosh replacement for DTP. At less than a quarter of the cost it's now possible to set up a system that can handle the very latest DTP software packages.

The STalk board costs $330 (£250) from Fearn & Music, Roemerstr 22, D-7000 Stuttgart, West Germany – or call 01149 711 602489.

## MORE GADGETS FROM GADGETS

And the genius behind Spectre GCR, Dave Small, has completed version 3 of the Mac emulator, including support for the Mac LaserWriter; compatibility for 68020 and 68030s (like the TT, for instance); formatting Mac disks on the ST; and using PC disks in Mac-mode.

Gadgets by Small can be contacted on 0101 303 791 6098.

## BAD NEWS?

I know that some people find the above two items distasteful. "If the ST is so bloomin' wonderful," is the nub or gist of their complaint, "why does it need to pretend to be another computer altogether?"

The answer is sad but true. If you want to do real, high-end, professional DTP, you need Macintosh software. *Express*, for instance, uses something very expensive called Quark *Xpress*. What you don't need if you have an ST, is a Mac. All you need is an ST and a Spectre GCR – a far cheaper option.

So there.

## DATES FOR YOUR DIARY

Atari's "Whistle Stop Tour 1990," an attempt to get away from the usual London bias, approaches rapidly. Microdeal, Mirrorsoft and Third Coast will be among those helping Atari put the ST message across at the following locations: October 23, Bristol Temple Meads (see you there); 24, Manchester Victoria; 25, Leeds; 26, Newcastle; 27, Glasgow Central, and 29, Birmingham International.

## SOUNDBLASTER BOMBS THE BASS

Siren Software's Soundblaster, a 5-watts per channel stereo amplifier, has been upgraded to include increased bass response and free stereo headphones. Cost is £52.99 from Siren on 061-228 1831.

## RETOUCH TOO MUCH

*Retouche*, you may not be altogether surprised to learn, is a package for retouching and rastering mono images for importing into your DTP or CAD program.

Offering zooms up to 1,600 per cent, with 256 grey scales, *Retouche* costs £200 from Copycare Graphic Services, 231 Northborough Road, Norbury, London SW16 4TU, or call 081-679 7307.

## PLEASE PRAY FOR ELIE KENAN

In America rumours are circulating that Elie Kenan, director of Atari France, is being appointed Director of North American Operations because "he's the guy that's going to transform Atari."

Poor, poor man. Getting rid of Atari's complacency and sheer bone-headedness is reckoned by those in the know to be a task that makes squaring the circle, beating UK inflation, solving the Gulf crisis and rescuing the Soviet Union from economic ruin look a doddle. Remember him in your prayers.

**Steve Carey**

**WAIT!**
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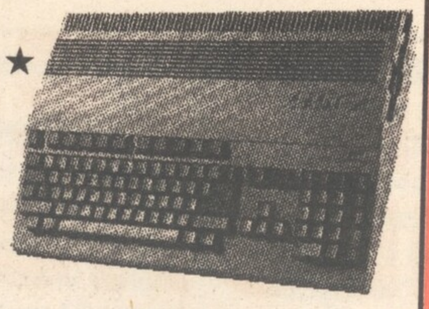

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| DATABASE | Superbase Personal 2 | £99.95 | **£29.95** |
| | Prodata | £79.95 | £59.95 |
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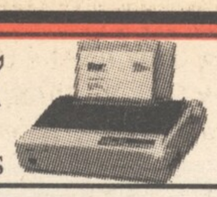

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# THE PD COLUMN

**There's a wealth of free software out there which is yours for the price of a disk. This week Adam Waring looks at some of the gems which are out there just waiting to be discovered...**

**Bootshop • Amiga • Amiganuts • Disk 728**

Viruses are nasty things. Anyone who has been unfortunate enough to catch one will know that. They're destructive little programs that transfer themselves from disk to disk, spreading like a biological virus does between people. After certain conditions have been met, they go off, sometimes doing serious damage to your important programs and data.

Why anyone would wish to release a disk crammed full of viruses must seem puzzling at first. But there is method in this madness and the only way to combat viruses is to find out what they look like and how they work. *Bootshop* is intended for exactly that purpose.

Before you are allowed access to the viruses you are asked a set of questions. This, apparently, is to check whether you are a lamer or not. (A lamer is somebody who doesn't know too much about the ins and outs of the Amiga, and hence could do damage with such a utility.)

There are over 40 viruses to select. Once selected you can examine them. An ASCII dump is presented on screen, you can look through this for tell-tale signs so you can recognise them in future.

Then there is the option to write the virus into the bootblock of a disk. Obviously this should be done with extreme care and then only to test any virus killers you may have, or may be working on.

It's not all germs without an antidote though. There are a large selection of PD virus killers on the disk too. You can check these out to immunize yourself against viruses that may find their way into your collection.

*Bootshop* is not a program for the unwary. It is only intended for use by people who know what they're doing. Nor is it intended as a supply of viruses to attack your mates with. Any such misuse of the program is illegal. You have been warned.

There are plenty of other utilities on the disk. Speed up the Amiga's flagging disk drive. Perform a diagnostic test on your machine to make sure it's feeling OK. There's also the latest version of

## PUBLIC DOMAIN TOP TEN

**What are the best-selling PD disks for your machine? What are people buying and why? Well, now you can find out! Every now and again, we'll be bringing you the top ten best-selling pieces of PD software from one of the best PD libraries around. We kick off with the top selling Amiga software from Amiganuts.**

**AMIGANUTS TOP TEN**

| | | |
|---|---|---|
| 1 | Disk 571 | *MED* by Teijo Kinnunen |
| 2 | Disk 645 | North CC compiler |
| 3 | Disk 639 | Three disk C Manual |
| 4 | Disk 521 | English version of *Star Trek* |
| 5 | Disk 581 | SID the CLI replacement |
| 6 | Disk 576 | Children's education |
| 7 | Disk 680 | The Word Square solver |
| 8 | Disk 700 | *Tetracopy* copier disk |
| 9 | Disk 705 | *Amibase Professional* |
| 10 | Disk 706 | Three games from PH Software |

**If you run a PD library and you'd like your top ten to get a mention, send one in next time you send us some software.**


# *Lorenzo's Domain*
## Amiga P.D. & Shareware

### A SMALL SELECTION FROM A GREAT COLLECTION

**MUSIC**
101: Definitive Docklands by H.C.C: Fantastic colour pictures and music
102: Lorenzos music utility disk :Rippers and Players galore
103: Digital Concert no 4: by Flash Productions
104: Lorenzo's musical delight
105: Future composer
106: Noise Tracker Collection (3 disks)
108: Freek'd out by the Crusaders
109: Flash by Queen : (2 Disks)
111: Rave Demo (1 Meg) by H.C.C
113: Dmob Music Demo No 2
114: New music demo by HCC

**DEMOS, INTROS & MEGADEMOS**
204: 8 radical demos by Abandon, Cave, Dual Crew, Kefrens, Mahem, Vision etc
205: The Dexion Megademo: Cooooool stuff baby
206: 5 major demos including: The Revenge Of Babbnassen, Cebit 90 by Red Sector
207: 6 of the best including: Follow Me by Red Sector, Celtic, T.P.L etc
208: The CryptoBurners: Megademo 2
209: Scoopex: Mental Hangover
210: Alcatraz: Megademo 4 : (3 disks)
211: Outsiders: Acid Demo
212: The Kefrens: Megademo 8 (2 disks)
213: The Dragons Megademo
214: The Silens Megademo
215: The Predators Megademo (2 disks)
218: The Silents: Fantasy: (2 disks) great pictures
219: Bacteria: The Crusaders
220: Collection of intros including Trip to Mars and Meg Zarjaz
221: Popeye Meets the Beachboys: It's ravin mad pal.
222: BudBrain Mega Demo X (2 disks)
223: Deathstar Mega Demo (2 disks)
224: H.C.C Toxteth Demo: Hilarious
226: Freddy Krugar Rap
227: Mindwarp Megademo Vol II
228: Robocop demo.

**GRAPHICS PICCYS AND ANIMATION**
300: Graphic Slideshow by The Dark Wizard
301: IFF Picture Show
304: Fish 295: Mandel Mountains
305: Lorenzo Graphic Utilities
306: Newtek Demo Reel 3 (1 Meg) (2 disks)
307: Luxo Teenager animation: (1 meg) : A very good animation of a desklamp
308: Nightbreed Slideshow by H.C.C: These are the best pics I've seen yet.
309: Forgotten Realms Slideshow by Fraxion
311: Viz Slideshow: 12 Great digitised pics fromVIZ 1990 Calendar
400: Puggs in Space by Dionysus: Great anims and Brill music.. Yeehaa
403: Agatron Slideshow: More great stuff from Tobias Richter
404: Magician & Runner: Very good
405: Agatron Anim £25: The Run (1 Meg) Could be his best yet
407: Walker 1 Animation (1 meg). Been around for a while. A classic
408: Walker 2 Animation (1 meg). Yep! You got it, another classic
412: The Education of Cool Cougar (1 meg): Brilliant
413: The Probe Sequence
414: Space Ace Demo: (1 meg) Animation Sequence from game
415: Fillet the Fish Animation by Jester Bros International

**ALL DISKS 99p each**

**GENERAL**
500: Jazzbench: Jazz up your workbench
501: Fonts Disk: Loads of fonts
502: Wordprocessor
503: Spreadsheet
504: Database
505: Ghostwriter and Rainbowriter: Intro Writers
506: Dope Intro Writer
507: Virus Killer disk

**GAMES**
700: Lorenzo Games Collection 1: Old faithfuls Invaders etc
701: Fish 347: Drip Game: Pure dead brilliant
702: Star Trek 3: (2 disks) :absolutely fantastic
703: Return to Earth
704: Blizzard Game
705: Monopoly
706: Star Trek (1 meg) (2 disks)
707: Paranoid: Arkanoid like game with its own screen editor.

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**706:** 3 NICE GAMES by PH SOFTWARE. THE TURN, TRICKY AND MARBLE SLIDE £2.50
**717:** MUSIC DISK with 53 tracks lasting OVER 90 MINS! (A MUST) £2.00
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**740:** MED V1.12 The VERY LATEST version of this FANTASTIC music utility has been re-vamped with a host of new additions, including synth sounds £2.50
**741:** NorthC V1.2 The VERY LATEST from Steve Hawtin, this new set comes on TWO DISKS and is packed with extra progs/examples/advice on bugs. £5.00
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**756:** PSUEDO-COP A VERY HARD TO PLAY PD GAME, VERY WELL DONE. £2.00
**759:** The FANTASTIC Crionics Auto-run demo called "NEVERWHERE'. £1.50
**760:** Letter writing disk by GRIZZLY, set up and ready for your letters £1.50

AT LAST! HERE IS A NEW DISK THAT ALL CODERS HAVE BEEN WAITING FOR.

**ACC-1:** The very first issue of a new disk for coders, even if you are new to the Amiga, this is the one to buy if you want to get into assembling. Advice/source etc, (devpak). Edited by MARK MEANY. INTRODUCTORY OFFER £1.50

OCTOBER COMPETITION ISSUE CATALOGUE DISK IS NOW AVAILABLE, YOU COULD WIN £100 WORTH OF PROGS. (3 PRIZES). SEND £1.00 AND ASK FOR YOUR COPY NOW.

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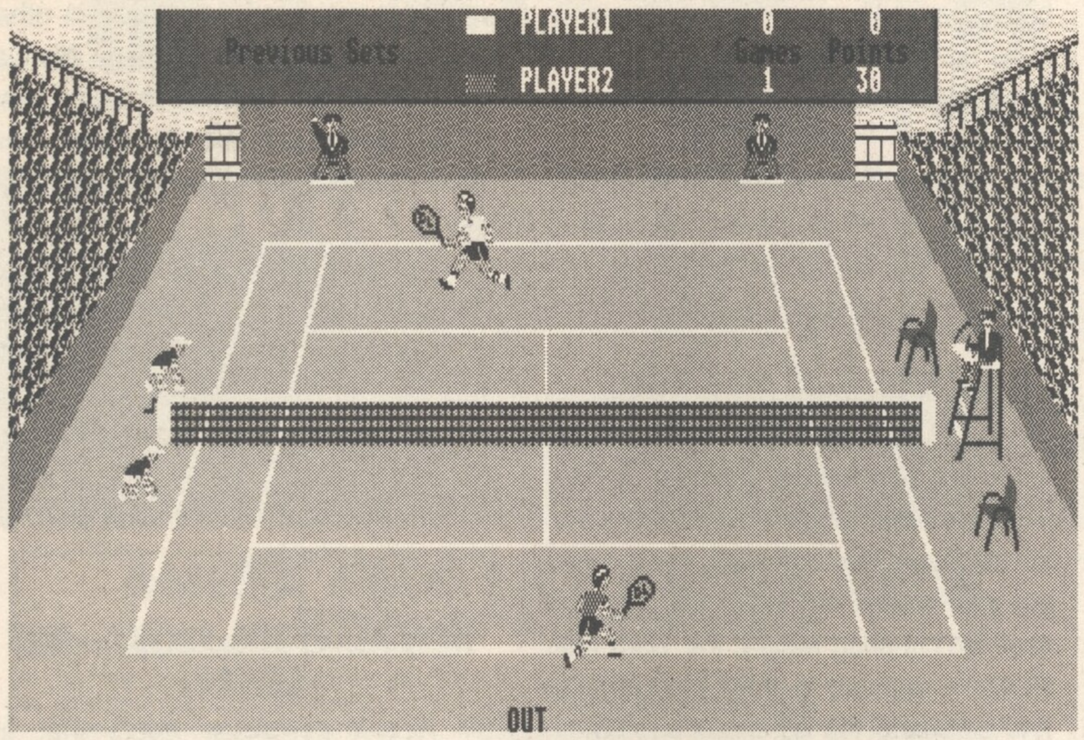


• **Tennis : *one to love.***

*Noisetracker*. Great fun to play around with, but a tad complicated to use properly. The lack of a proper DOC file doesn't help!

### Tennis • ST • PDQ • GAME 39

Anyone for tennis? Well now you don't have to search in vain for a partner, you don't even have to go outside. So the fact that you haven't got any friends and it's raining needn't spoil your fun.

You see, your ST can provide the perfect match – from the comfort of your armchair. Tennis simulates the sport of log throwing on screen. You can chose to play a human adversary, or a computerised one. All the rules are observed, and the scoring system is as you'd expect.

There are plenty of options to choose from – there are three levels of difficulty, which selects the proficiency of your computerised opponent. It's better than me in all of them.

The joystick, mouse or keyboard can be used to control your little stick man as he moves around the court. The controls are fairly straightforward. You move around with the logical keys and fire takes a swipe at the ball.

The action is viewed from a pseudo 3D perspective. You watch the match from the perfect TV camera angle. The player at the front has a slightly bigger area than the one at the back, but they swap sides after each bout, making sure nobody has an unfair advantage.

The best part of the game (to my mind anyway) is the incidental graphics. If the ball goes out of play, little line judges stick their hands up. When the ball hits the net, miniature ball-boys run on and retrieve it!

Oh, and on top of all that, it's quite a good game too!

## PD NEWS

If fractals are your thing, and the Amiga is your computer, then you just may be interested in a new PD project. *Amiga Fractal Exchange – Ami-FX* for short is a quarterly disk-based exchange of all things fractally. Subjects covered include art, animations, programs; anything in fact as long as it's fractal related. It's freely distributable and any Amiga-using mathematical explorers are welcome to get in touch with Cade Roux, the magazine's editor.

Issue one is available now and comprises three disks containing three animations, two programs and some IFF artwork. Future issues are planned and contributions of re-distributable software are required for them, so if you've done anything of note – get in touch!

Cade also distributes a variety of fractal-related PD and shareware on his own compiled disks.

After all this, I expect you're dying for the address. Anything to oblige: Cade Roux, Editor, *Amiga Fractal Exchange*, Gonville and Caius College, Cambridge CB2 1TA.

## ADVENTUROUS

Maybe you're looking for something slightly more adventurous to boost your CPC's PD collection. A brand new adventure-only library is emerging for the CPC.

Debby Howard, the proprietor of Adventure PD, is on the lookout for more adventures to add to the library. So it could be a good opportunity for budding writers to get their adventures seen by other enthusiasts. Prices per disk are yet to be finalised. ■

## WHERE TO GO

**PDQ Games, PO Box 38, Eastleigh, Hampshire SO5 5WR. PDQ specialises in games for the ST. It currently has over 500 in stock. To see for yourself send them a large SAE and you'll get a free catalogue in return.**

**Amiganuts United, 169 Dale Valley Road, Hollybrook, Southampton SO1 6QX. Telephone 0703 785680. Nuts about your Amiga? Then call Amiganuts – a library that caters for the Amiga and the Amiga only. Got that? Disks start at £1.50.**


NBS

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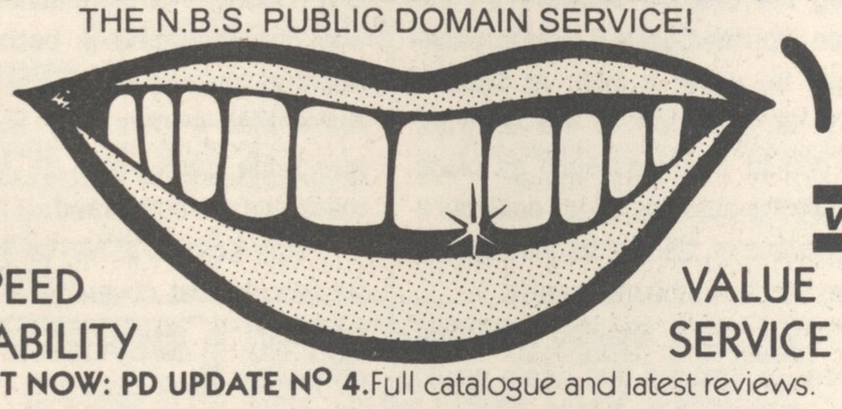

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D040 GIANTS MEGADEMO...packed with great demos (2 DISKS)
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D052 ANARCHY NEW DEMOS...Compilation of August releases.
D318 FRAXION FANTASY PICTURES...Mythology Pictures (2 DISKS)
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D332 GORILLA SKETCH...From Not The 9 O'Clock News (2 DISKS)
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D516 WALKER DEMO 2...Classic popular demo (1 MEG)
D518 TBAG DISK 41...Includes JUGGETTE animation (1 MEG)
D519 RAIDERS FILM ANIM...Digi extract from "The Lost Ark" (1 MEG)
D520 FRACTAL FLIGHT...Very clever animation (1 MEG)
D528 STAR WARS, THE MOVIE...(EXCLUSIVE) 1 MEG 2 DISKS 2 DRIVES
M063 DEPECHE MODE...Get the Micro treatment.
M069 D-MOB MUSIC 4...The long awaited music demo (2 DISKS)
M070 CRUSADERS BACTERIA...Highly rated, brill music
M088 HCC DOCKLANDS DEMO...JMJ at docklands slideshow
M115 COMIC STRIP PRESENTS...An original music mix!
M116 DARKSTAR MUSIC DISK 9...Best music from recent demos
X110 FRAXION HORROR...Absolutely brilliant cartoon horror disk!!
**GAMES**
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G119 PACMAN 87...A good pacman game
G123 PD GAMES COMP... Sys, Sky Flight, Bleed, Shoot Out. No F/A
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# WHOLE WIRED WORLD

## A new regular trip around the world with Steve Gold

### NOTEBOOK PC WARS CONTINUE

If 1990 was the year when pocket PCs arrived, in the shape of the Atari Portfolio and the Poqet PC, 1991 will be the year of the palmtop computer – a machine slightly larger than a pocket PC, but a lot more powerful.

Just out in Japan and due in the US later this month, is a Sony machine at around the $2,000 mark. For the money you get a 68000-driven machine running Unix with proprietary software. No keyboard comes with the unit, which instead relies on a 'point and click' stylus system. Weird.

Better is NEC's new palmtop which draws heavily on the Japanese giant's experience with the Ultralite series. The palmtop unit tips the scales at four pounds and measures 10 x 7 inches – rather large for a palmtop, but very light as notebook PCs go.

Like the Atari/DIP Portfolio, the as-yet unnamed NEC machine uses RAM and ROM cards – the NEC's are credit-card sized, and come with a suite of business software (including telecoms) supplied in a standard package costing around the £1,000 mark. The machine will ship later this year in Japan, although – with the Ultralite still not out in the UK – who knows when it will sell over here. Over to you NEC.

### ATARI TT 030 – 32MHZ

Len Tramiel of Atari has confirmed that the TT030, the 68030 'super ST' machine that's been two years in the making, will have a 32MHz microprocessor fitted as standard. Early versions of the machine seen at shows and in developer's hands had been fitted with a 16MHz microprocessor.

Also announced is that Gem has been rewritten for the TT030. According to Ron Kovacs' *Z-Net* on-line ST newsletter, the new GEM bears a strong resemblance to Gribnif's *Neodesk*. Rick Flashman of Gribnif, a key figure in the design team of *Neodesk*, is quoted by *Z-Net* as saying that, while no-one from Gribnif had a hand in designing the new GEM, Atari has publicly acknowledged that *Neodesk* influenced its design concepts.

Features of the TT030's *GEM* include: customisable, editable icons which can be dragged 'live' across line boundaries, and a much-improved GEM control panel.

While the new GEM will not be adapted for use with the existing ST family of computers, *Z-Net* says that the control panel at least will be ported over to the STE environment. Reports also suggest that the Mega STE series, provisionally scheduled for launch in the spring of next year, will include a full code port of the new GEM, including the new control panel, whose animated head wearing earphones (to show stereo balance) everyone seems to have fallen in love with.

### ANTIC READYING NEW FLASH

If you're into comms on the ST, then you'll have heard about Antic Software's *Flash* telecoms program. At the recent Glendale Atari show in the US, Antic's senior executives revealed that the company is working on a brand new version – Version 2 – of *Flash*, with almost all the main features recoded from scratch. No shipment date, pricing or specifications as yet, but it's coming "real soon now."

### NEW VERSION OF CALAMUS IN THE PIPELINE

Also in the pipeline – but nearer than *Flash 2.0* – is a new version of *Calamus*, the popular desktop publishing package for the ST. New features include a text raster shading system and faster screen writes and general program execution.

*Calamus 1.09N* will be available by the time you read this column, but now the bad news: for the first time since *Calamus* appeared in late '88, there will be a charge to upgrade. The charge is quite hefty – $29.95 – although you do get a lot of program documentation with the software.

Also available with *Calamus 1.09N* is a new library of clip-art files; disk 3 includes a full range of GEM Metafiles (300 in total) and costs $49-95.

### SHORTAGE OF MAC ROMS AHEAD

If you were thinking of getting a Spectre GCR cartridge for your ST to allow you to run Apple Mac software, you'd better get your skates on. While the cartridge itself isn't in short supply, the 128K Mac ROMs – required to drive the cartridge and persuade the ST that it's really an Apple Mac – are in extremely short supply in the US.

The reason is that a character in the US called Dennis Hayes (no relation to the famous modem manufacturer) has pleaded guilty to counterfeiting what amounts to cartloads of the ROMs and selling them on to interested parties. And guess what? The interested parties tended to be Spectre GCR users, who wanted the ROMS to run Apple Mac software. The jigsaw is difficult to piece together, but what with Apple's reluctance to supply the ROMs on their own for obvious reasons, I'd guess that a lot of Spectre GCR users are running their cartridges with ROMs sourced through Hayes.

Although supplies of Mac 128K ROMs have yet to dry up on this side of the Atlantic, watch out for the selling price to edge upwards as demand starts to exceed supply.

### DC DESKTOP 1.2 RELEASED

If you can't wait for Atari to get round to updating the desktop software on the ST, then Double Click's *Desktop* package may be worth a look. At $39.95, version 1.2 (just out) of the software allows you to do things such as place icons directly onto the *Gem* desktop – even documents, as well as introduce a recovery facility to the trash utility.

The program is reported to contain a number of features that users would pay a lot more for individually in other packages. The on-line 88-page manual gives all of the facilities in fairly terse detail, which perhaps illustrates how many new and improved facilities it offers.

Double Click has its own area on Genie (Double-Click) and Compuserve (GO ATARI IV, area 13) as well as its own BBS on 0101-713-944-0108 where you can learn more about this revitalised package.

And you can even phone them on 0101-713-977-6520.

### NEW ATARI TOS ABOUT – BUT BEWARE

*ST Report* newsletter notes that an alpha test version of TOS, the ST's operating system, has somehow slipped out from Atari's development operation. Version 2 of TOS is, however, incomplete and liable to do nasty things to your disks if installed. If you come across the package, STR advises you to ignore it – it's an unauthorised release. Best to wait for the official launch.

The same can be said of a West German version – TOS 3.01 – that's rumoured to be doing the rounds of the pirate BBSs in the US. This version is said to be fully working although it comes with no guarantees and, unless you speak German, can get very confusing!

### SHOPPER US DROPS ST COVERAGE

*Computer Shopper US* has taken the unusual step of announcing it will not be covering the Atari ST with effect from its December 1990 issue onwards. The reason for the drop in coverage? Editor in Chief Bob Lindstrom says that the ST is a minority interest machine and anyway, the magazine is becoming more oriented towards MS-DOS. Amiga and Apple Mac owners may find the mag going the same way as far as their machines are concerned.

Ron Kovacs' *Z-Net* on-line newsletter reports that coverage of the Amiga and Mac is also under consideration chop-wise. ■

### A SECOND PORTABLE ST

**News just in from Australia is that Austech Computers is preparing to release its own portable ST called, appropriately enough, Tracy. The machine will not be a true portable, but more of a hybrid designed to be plugged into a monitor or TV on the move.**

**Tucked away inside the ST-style case is a 286-based PC and Apple Mac emulator (the latter using Dave Small's Spectre GCR cartridge) as well as a 40Mb hard disk and 2Mb of RAM.**

**Sounds interesting – full details in next week's *Express*.**

***• The ST: getting a new portable.***

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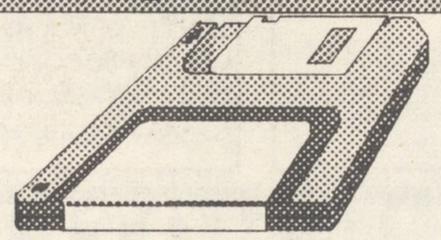

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# EXPRESS ON-LINE

**Your weekly guide to the hundreds of bulletin boards and user groups which are waiting to hear from you. This week's featured bulletin board is Arkham BBS. And if you run a board, don't forget to write!**

## ● USER GROUPS

**STEN - ST ENTHUSIASTS**. Contact: Dave Mooney, 14 School Rd, Morningside, Newmains, Lanarkshire. Tel: 069-382 380

**TURBO** - For Sam Coupé owners. Basic tips, games reviews, SAM news from New Zealand, interviews etc. SAE to A Bettis, 8 Healey Lakeside, Tamworth, Staffs B77 2RF.

**PC/PD CLUB**. Stacks of excellent PD/shareware. Contact PC/PD club. 15, Maple Drive, Charlton King, Cheltenham, Glos GL53 8PB

**EMULATE**. For Amiga, Amex. With monthly newsletter. Write to Pat 12b Northbrooks, Halrow, N Essex

**SPECIAL INTERESTS GROUP**. For Acorn and IBM compatibles. Aimed at microcomputer users but will try to cater for business and education interests. Offers programming lessons, lectures, discussion etc. Membership is free but a charge of £2 per meeting. First one is on October 3. Contact SIG, PO Box 2934, Dublin. Ireland

**LYNX DISK USER GROUP.** J Koushappas. 172 Pasteur Gdns, London N18. Tel: 081 807 3859

**MEMOTECH**, run by Phil Eyres of Southampton, is now defunct.

**CHOICE** on-line help. Telephone: 0308 23224 7-9 AM only for now.

**EIGHT -BIT BACK-UP** Essex computing's 8-bit user group for all. 25p plus sae. to: 8-bit back-up, 1 Northolme Close, Grays, Essex.

**AMOS USER CLUB** also STOS user club. Contact: Aaron Fokergill, Lower Moor, Whiddon Valley, Barnstaple, N Devon EX32 8NW. Telephone: 0271 23544 or Chris Payne, MD of Mandarin Software on 0625 959333

**STOS USER GROUP** send sae to L. Tredinnick, 19 Speldhurst Close, Bromley, Kent BR2 9DT.Free registration. Newsletter, disk

**AMIGA DISK FANZINE** Specialises in public domain. Send sae for details: Chris Jackman, 3 Albion Terrace, Lexham Road, Litcham, Kings Lynn, Norfolk E32 2QQ.

**CHANGE OF ADDRESS** QL and similar, Phil Borman becomes: QL and related Operating Systems, David Johnson, Quanta, The Corner House, Loxley, Warwick CV35 9JT. Tel: 0789 842543.

**SPECTRUM** Plus- 3 UG. Contact D Garner. Telephone: 0582 472067

AMATEUR RADIO (CBM) - Simon Lewis GM4PLM Commodore Radio Usrs Gp, 69 Irvine Drive, North Clippens, Linwood, Paisley PA3 3TB

AMSTRAD CPC HOME USERS - Steve Williams, WACCI, 9 South Close, Twickenham TW2 5JE. 081-898 1090

AMSTRAD 1512/1640/PPC - PC Independent User Group, The Computer Advice Centre 87 High Street, Tonbridge, Kent TN9 1RX 0732 771 512

AMSTRAD BUSINESS USERS - Amstrad Professional User Club, enterprise House PO BOX 10, Roper St, Pallion Ind Estate, Sunderland SR4 6SN. 091-510 8787

AMSTRAD LOCAL GROUPS - Amstrad Groups Federation, 4 Sutton Roadc, Gorton, Manchester M18 7PN

AMSTRAD PCW - Bob Ellis "Rowan" 100 St Peters Close, Moreton-on-Lugg, Hereford HR4 8DW. 0432 761 860

ARABIC COMPUTING - Rich Lackey, Arabits, 9 Bellview road, Worthing, West Sussex BN13 1EY

ASHTON TATE SOFTWARE - Silvia Robinson, Baseline, Ashton-Tate, 1 Bath Road, Maidenhead, Berts 0628 33 123. Prestel page 43221

ATARI PORTFOLIO - D Gilpin, Atari Portfolio User Group, 84 Cambridge Avenue, Gidea Park, Romford RM2 6QU. 0708 730764

ATARI ST - Paul Glover, The ST Club, 9 Sutton Place, 49 Stoney Street, Nottingham NG1 1LX. 0602 410241.

BBC MICRO - BEEBUG, 117 Hatfield Road, St Albans, Herts AL1 4JS. 0727 40303.

C LANGUAGE - Martin Houston CUG (UK) Houston Technology Ltd, 14 Arden Oak Rd, Sheldon Birmingham BS26 3LX 021-722 3168

CAMBRIDGE Z88 - Roy Woodward, Z88 Owners' Club, 68 Wellington St, Long Eaton, Nottingham NG10 4NG

CD ROM - UK CD-ROM User Group, High Wings, Salem, Treforys, Abertawe SA6 1XX 0792 844 370

CHURCH ADMINISTRATION - Rev Stoker Wilson, Church Computer Usr Gp, St John's Vicarage, Greenside, Ryton, Tyne & Wear NE40 4AA. 091-413 8281

COLECO ADAM - Keith Mamer, UKAS 33 Homer Road, Croydon CXR0 7SB

COMMODORE ALL MICROS - Jack Cohen, ICPUG 30 Brancaster Road, Newbury Park, Ilford IG2 7EP 081-346 0050 home: 081 579 1229 day.

COMMODORE AMIGA - UK Amiga Uders Group, 144 Charles Street, Leicester LE2 00D .0533 510066 voice; 0533 517615

COMMUNITY COMPUTING - Community Computing Network 2nd Floor, 35 Pink Lane, Newcastle, NE1 5DW 091-261 0317

COMPUNET - Independent Compunet Club, 148 Furzehill road, Boreham Wood Herts. WD6 2DX

CONFERENCING - Compulink, suite 2, The Scantuary, 23 Oakhill Grove, Surbiton, Surrey KT6 6DU Voice 081-390 8446 CIX BBS 081-399 5252

CPM & MSDOS USERS - Nicholas Higgins CPM & MSDOS Users Group, 42 Birkbeck Road, Wimbeldon, London SW19 9NZ. 081-543 0824

CRYPTOGRAPHY & CODES - Mike Barlow, American Cryptogram Association 5052 Chestnut Avenue Pierrefonds, Quebec HBZ 2A8 Canada

DISABLED - Jeff Hughes, Special Needs User Gp, 39 Eccleston Gardens, St Helens WA10 3BJ 0744 24608

DRAGON - Paul Grade, National Dragon Users Group, 6 Navarino Road, Worthing, Sussex 0903 207585.

ECONET - Michael Ryan, Econet User Gp, Balkeerie Cottage, Eassie by Forfar, Angus DD8 1SR

EDUCATION - Charles Shannon, TECUG, 35 Wellington St, Gravesend, Kent DA12 1JG. 0474 567 931

EINSTEIN - Graham Bettany, UKEUG 80 Dales Road, Ipswich IP1 4JR

ENTERPRISE - Tim Box, Independent Enterprise User Group, 50 Holdenhurst Avenue, Finchley, London N12 0HX. 081-346 8032

FLIGHT SIMULATOR (MSDOS) - Alan Hawkins, SIMFLY Club 2 Henley Manor Raincliffe Ave, Scarborough YO12 5BU

FORTH Language - Douglas Neale, FIG (Forth Interest Group) UK, 58 Woodland Way, Morden, Surrey SM4 4DS.

FRACTALS/CHAOS THEORY - Andy Lunness, 69 Bronte Avenue, Bury, Lancs BL9 9RN. 061-764 6469

GENEALOGISTS - Computer Group, Society of Genealogists, 14 Charterhouse Buildings, London EC1M 7BA. 071-251 8799.

GENERAL HOME MICROS - Steve Winter, Chic Computer Club, PO BOX 121, Gerrards Cross, Bucks SL9 9JP 0753 884473

HITACHI MBE 16002 PC - Bruce Ainge HICUPS 16 Nine Acres Road, Cuxton, Kent ME2 1EL. 0634 715759

HOUSING ASSOCIATIONS - Caroline Maries, Micro Users Ltd, Beaver Housing society, 23 Lewisham High Street, London SE13 5AF. 081-318 1126

IBM PC - The IBM PC User Group PO BOX 360 Harrow HA1 4LQ.081-863 1191 BBS 081-863 6646

JUPITER ACE - John Charter, Jupiter Ace Forth User Group, 17 Spring Wood Close, Dunston, Chesterfield S41 8BS. 0246 237555 SAE

LOTUS PRODUCTS - Lotus User Group, 79-80 Peascod St, Windsor, Berks SL4 1DH. 0753 841686

LYNX - R B Jones, Lynx User Group, 39 Ashton Close, Needingworth, St Ives, Cambs

MEMOTECH - Phil Eyres - Memotech Owners Club, 23 Denmead Road, Harefield, Southampton SO2 5GS .0703 585106

MICROSOFT WORD - Lesley Port, Microsoft Word User Group, Folly House, Madeira Walk, Bachelors Acre, Windsor, Berks SL4 1EU. 0753 831001

MOTOROLA 68xxx MICROS - Rick Applegate, 68 Microgroup, 8 Great Cob, Springfield, Chelmsford, Essex. BBS 081-316 7402

MSX SYSTEMS - Keith Neal, MSX Link, Austerby House, 80 Austerby, Bourne, Lincs PE10 9JL

NASCOM/80-BUS/CPM - Scorpio Systems, PO BOX 286 , AYLESBURY, BUCKS HP22 6PU. 0296 624868

NEWBRAIN - Ron Bury, NewBrain Support Grp, 70 Cranberry Lane, Darwen, Lancs BB3 2HL 0254 771891

NIMBUS/RM AX/VX - Dr Martin Hatfield NIMBUG, 13 Belle Vue Ave, Gosforth, Newcastle-upon-Tyne NE3 1AH 091-285 7806

NORTHSTAR - Brian Haines, North Star & CP/M Grp, 9a Sharpleshall St, London NW1 8YN.

OS/2 - Karen Burns, OS/2 User Group, Cecily Hill Castle, Cirencester, Glos LG7 2EF 0285 655 888

OSBORNE/CPM/MSDOS - Jeremy Browne BOOG, 102a Aldershot Road, Fleet, Hants GU13 9NY. 0252 621745 voice, 626233 BBS

PC SOFTWARE - PC Serve, 1147 Greenford Rd, Greenford, Middx UB6 ODP 081-864 2611, BBS 081-864 2633

PRESTEL - Andy Leeder, ClubSpot 810, Church Farm, Stratton St Michael, Norwich,NRQ15 2QB

PSION ORGANISER - Mike O'Regan, IPSO, 130 Stapleford Ln, Beeston, Nottingham NG9

## Get yourself listed!

**If you run a user group or bulletin board, don't miss out – fill in the form for a free entry today!**
**Send it to Express On-line, 30 Monmouth Street, Bath BA1 2BW**

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**CHIBA CITY**. For Amiga and IBM. D McIntosh 3 Bank Street, Whitburn, W Lothian EH47 ODU. Tel: 0501 44262

**LOCH LOMOND BBS**. The new board in Scotland for the PC, Atari and Amiga. Echomail, running Telegard 2.5 over 200 GIFs, V22 and V22bis. On-line 24 hrs Call 0389 55762

**AFTER HOURS BBS**. Freenet & Eidonet Echomail. V22, V2bis. 24hrs Call 0276 52096.

**MACH II BBS.** Speeds up to 2400. One of the best in Glos. Plenty of files and on- line help.24 hrs. Call 0242 260 685

**OPEN ACCESS BBS** On-line 6pm til 8am Mon-Fri and 24 hours weekends. Give our friendly board a call now on 081-427 3974.

**THE SATURN BB** 10Mb of software on-line. Sub-boards and much more. Phone 0282-23570 after 10.30pm, or see Prestel 811220044 for info or MBX 219998996.

**S-A-C BBS** V21, V22, V23, V22 bis for Amiga and PC. Don't miss out - phone now on 0242-260685. On-line 24 hours

**BARNEY'S RUBBLE BBS** Birmingham-based, 24 hours 300-2400 baud. MNP5 Amiga, IBM PC. Programmers, Penpal, Comms sections. 100Mb downloads plus 30 local and echo conferences. Fidonet (2:253/153) Call 021-441 1801.

**SOUTH LINCS BBS**. On-line for news, files , On-line mags and a real club atmosphere. Fun starts on October 15. 11 PM to 6 AM, Monday to Friday. Call 0780 63954.

**SCABBS**. 22bis. Call 0909 479080

**ALTERNATIVE SOLUTION** BBS. Telephone: 0742 325232. V21, V22, V22 bis, 8N1, Free. 24 hours. Mainly PC based, but hoping to expand to include Amiga, Atari, BBC downloads. Already specialised areas for these machines. 'Babble' has stacks of downloads, on-line games, areas for students etc, incl foreign languages. Runs British BBS software. Eazihost.

**BATH BBS** the only Atari-based multi-line board in the UK. Telephone: 0225 835841/840060. Chat rooms, downloads, games, the Goodmans gateway, and now the ST Format SIG.

**BABBLE BBS**. New and on-line now for your entertainment. Loads of on-line games and downloads. V21, V22, V22bis. 24hours. Call 0532 785964

**MACH II BBS**. The best in Glos for the Amiga. On-Line 24 hrs. Growing fast but needs your suppport. Loads of files and on-line help. V21, V22, V22bis. Call 0242 260685

**CARGO BBS.** Running Eazimost. Open (weekdays) 1800 to 0830 (weekends) 24 hours. V21, V22, V22bis. Don't delay, connect today. Call 0420 475462

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| It Contacts | 0482 500286 | |
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| Jersey Bbs | 0534 37779 | V21/22/22b/23 |
| Jersey Opus | 0534 39389 | V21/22/22b/23 |
| Jocks Away! | 031-225 5368 | V21/22/22b/23 |
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| Kashmir'S Bbs | 0472 347882 | V21/22/22b/23 |
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| Key-board | 0908 668398 | Hst |
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| King Of The Castle | 0233 620228 | V21/22/23 |
| Kirklees Opus | 0484 665415 | V21/22/22b/23 |
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| Labyrinth | 051-724 4458 | V21/23 |
| Lamplight Qbbs | 0705 811531 | V21/22/22b/23 |
| Laser Tbbs | 0532 438430 | V21/22/22b |
| Lau'S Ql Bb | 081-751 6096 Rb | V23v |
| Lightfinger's Place | 0202 485723 | V21/22/22b/23 |
| Linelight | 0580 212043 | V23v |
| Linx Bbs | 0522 511277 | V21/22/22b/23 |
| Liquorice Allsorts | 0633 279985 | |
| Liverpool Mailbox | 051-428 8924 | V21/22/22b/23 |
| Liverpool Ros | 051-931 4271 | V21/22/23 |
| Loft | 0442 230461 | V21/22/22b/23 |
| Log On In Tynedale | 0434 606639 | V21/22/22b/23 |
| London Bb | 081-455 6607 | V21/22/22b/23 |
| London City Mag | 081-468 7648 | V21/23/23v |
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| Mactel Hq (grn Box) | 0602 455444 | V21/22/22b/23 |
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| Magic Castle Bbs | 021-430 3761 | V21/22/22b/23 |
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| Magnum | 0274 547006 | V21/22/22b/23 |
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| Microlog | 0422 71921 | V21/22/22b/23 |
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| Mirror Ii | 0628 810889 | V21/22/22b/23 |
| Mirrorworld/quest 1 | 0883 844044 | V23 |
| Mission Impossible | 0602 654329 | Hst |
| Mk Board | 0908 311005 | V21/22/22b/23 |
| Mkbbs | 0908 504556 | V22/22b |
| Monkey Tree | 0952 677002 | V21/22/23 |
| Monusci | 0293 545665 | V21/22/22b/23 |
| Motor Exchange | 0484 435314 | V21/22/22b |
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| Murdoch'S Hangout | 021-711 2620 | V22/22b |
| Murky Caverns | 081-426 9386 | Hst |
| Mwcfe | 0926 421844 | V22bis |
| My Little Phoney | 0865 773277 | V21/22/23 |
| Nicc Mid-west | 0341 250377 | V21/22/23 |
| Nite Life | 071-976 6807 | V21/22/22b |
| No Escort Required | 081-200 3817 | Hst |
| No.1 Bbs | 081-958 1689 | V21/22/22b |
| Norpac | 0434 608324 | V21/22/22b |
| North Wales Bb | 0978 88372 | V21/22/22b |
| North Yorks Qbbs | 0423 868065 | V22/22b? |
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| Nova | 0455 553371 | V21/22/22b |
| Nova-net | 0274 370760 | V22 |
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| Organic Garden | 081-464 3305 | V21/22/22b/23 |
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| P'S & Q'S Tel | 051-236 3105 | V21/22/22b/23 |
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| Sounds Of Mercia | 0203 682896 | V21/22/22b/23 |
| Sparx | 0793 480287 | V21/22/22b/23 |
| Split Infinity | 0342 712248 | V23v |
| Pook Bbs | 0268 767365 | V21/22/22b/23 |
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| St London Bbs | 081-443 2432 | V21/23 |
| Stabb | 0793 855176 | V21/22/23/22b |
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| Tabbs | 0225 743797 | V21/22/22b/23 |
| Taecomm | 0994 6709 | V21/23 |
| Taff'S Retreat | 0834 4562 | V21/22/22b/23 |
| Tardis | 0772 27236 | V21 |
| Tasque | 0355 222664 | Hst |
| Tasug Opus | 0904 760129 | V21/22/22b/23 |
| Tavern | 081-445 6514 | V21/22/22b/23 |
| Tbbs-rovoreed | 081-542 9767 | V21/22/22b/23 |
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| Terminal Net 5 | 0402 456135 | V21/22/22b/23 |
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| Track 83 | 0953 851351 | V21/22/22b/23 |
| Trans-atlantic Res. | 0375 25375 | V21/22/22b/23 |
| Transylvania | 0274 621668 | |
| Tranz-com Bbs | 081-952 6273 | V21/23 |
| Trinity I | 0392 410210 | V21/22/22b/23 |
| Trinity Ii | 0367 22764 | V21/22/22b/23 |
| Tug Ii | 0905 775191 | V21/22/22b/23 |
| Twilight Zone | 081-788 0884 | V21/22/22b/23 |
| Twilight Zone Ii | 071-608 1485 | Hst |
| Typesetter's Wkshp | 0274 491606 | V21/22/23 |
| Uk Healthlink | 0942 722984 | V21/22/22b/23 |
| Unisys Etoi Bbs | 081-453 5739 | V21/22/22b/23 |
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| Whitehall Pent | 071-930 3903 | V21/22/22b/23 |
| Wild Imaginings | 091-263 4303 | V21/22/22b/23 |
| Winchester Remote | 0962 69322 | V21/22/22b/23 |
| Wolverhampton Ros | 0902 745337 | V21/22/22b/23 |
| Womble Base | 081-979 9606 Rb | V23 |
| Woodgreen Bbs | 081-889 5624 | V21/23 |
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**Arkham BBS is a small BBS running *RemoteAccess* software on a PC/AT. Arkham's sysop encourages participation on the board, and keeps restrictions to a minimum.**

**Arkham supports Multi-User Games (MUGs). People involved in writing and running MUGs call regularly - it's a good place to pick up news. There's even a small on-line game written by the sysop, which can support more than one player at a time.**

**There are also message and file areas for the PC, ST & Amiga, as well as message areas for music, comms and others of common interest.**

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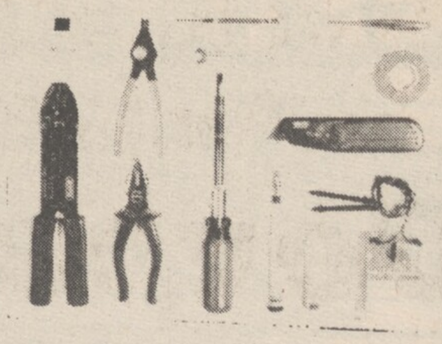
# CIRCUIT CITY



**Tired of the aging CPC and want to upgrade to an ST or Amiga but can't afford a monitor? Keith Pomfret welds your 16-bit wonder to the Amstrad colour monitor in a couple of shakes of a soldering iron.**

When you upgrade from one machine to another, the first thing that it seems logical to do is sell the old machine. Not everyone wants to do this though: favourite games and utilities may not be available on the new one or valuable data may not have yet been transferred. Second-hand computers of a generation ago may not retain much resale value so it's up to you to make the best of your existing kit while upgrading.

## POPULAR UPGRADE

The STFM has a built-in TV modulator and various Commodore Amiga packs contain an external RF modulator. The average games player or occasional user may be satisfied with a TV resolution display but if you've any plans for word processing, DTP or anything that involves high resolution displays, you'll need a display that doesn't wander or flicker.

One of the most popular upgrade paths is from Amstrad's 8-bit CPC series to the 68000-based ST or Amiga. Those fortunate enough to already possess the colour monitor from the CPC can save some cash by connecting it to the ST or Amiga.

There are specialist firms who will manufacture a cable to do the job but if you don't mind the smell of hot solder and flux – and you can handle a fiddly job – you could save a bit of cash and produce the cable yourself.

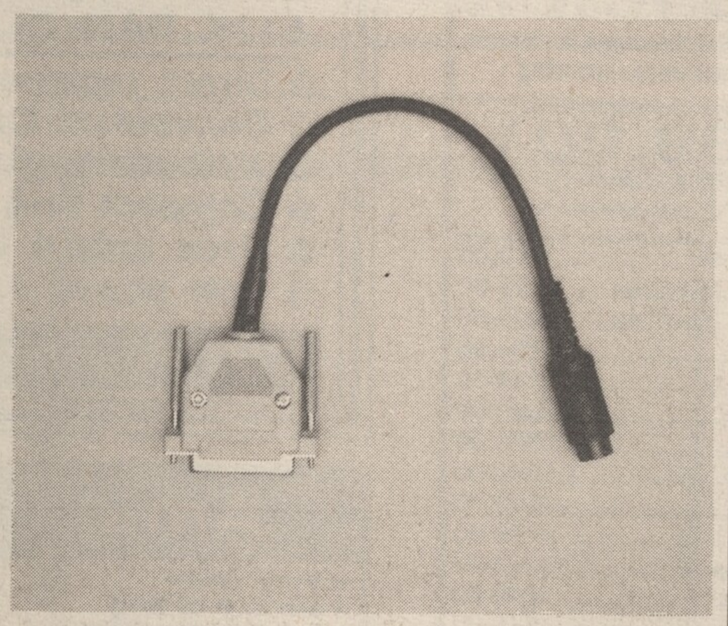
The ST and Amiga have different video connectors but the theory for both jobs is the same. Both machines put out red, green, and blue signals and those signals have to be synchronised.

The Amstrad monitor expects slightly different levels of signal than these machines provide so the tints of the colours may not be accurate, but the colours will certainly be recognisable.

Amstrad has recently enhanced the CPC range with the CPC Pluses. This project won't work with a CPC Plus monitor as the pin configuration is different.

We'll be running a project to connect various machines to the new CPC monitor when there are a few more of them around but if you feel that you must do it now, the monitor connections are in the CPC Plus manual (as are the Amiga and ST pinouts in their respective user manuals). For now, if you have the new CPC and want to connect an ST or Amiga to it, keep watching Circuit City for the details.

The colour hue attained using an Amiga or ST with a CPC monitor varies from machine to machine and monitor to monitor but none of the combinations we tried gave any startling combinations. All were crisp and useable and provided a much more stable and accurate picture than using a TV modulator.



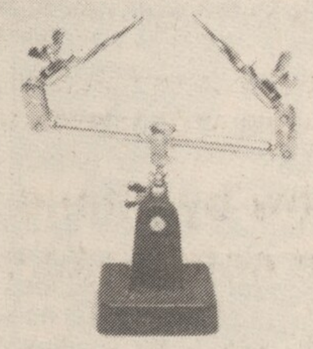
*• The completed lead ready to give your ST or Amiga colour.*

## WHAT DO YOU NEED?

In order to make the cable you'll need a length of cable approximately 12 inches long with four colour coded cores and a braided shield for ground. You'll also need a soldering iron and some solder with integral multicore flux and the connectors for either end. The Amiga uses a female 23-pin D-type connector, the ST a circular 13-way connector and the CPC an 8-pin DIN connector to the pattern shown in the diagram.

Although some companies produce solderless connectors, these are prone to trouble and are no substitute for a good soldered connection. A pair of 'helping hands' (see photo) is useful for this sort of job as it can hold a hot job steadily allowing you time to position and solder the job correctly and efficiently.

You'll also need some wire strippers.



*• A set of 'helping hands' can make delicate soldering easier.*

## THE JOB

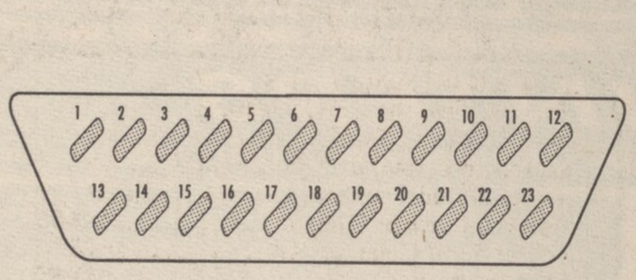
Check that you've got a connector for your ST or Amiga and one for the CPC. Take the four core flex and using a pair of wire strippers, remove 3cm of the outside plastic shielding. Slide back the braided shield and unravel it from the flex.

Twist the braid together to form a tight tail. Take the individual cores and pare them to the metal to 5mm from the end. Do this with both ends of the cable.

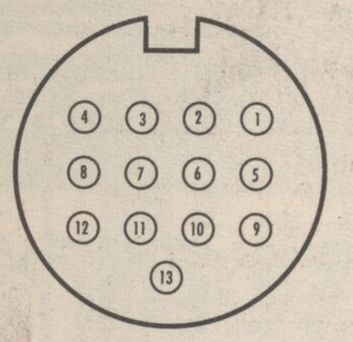
Tin the exposed ends of the cables and the twisted braid. Tinning is the application of a thin coat of solder and is done by warming the cores and braid with a soldering iron and allowing a thin stream of solder to drip on to them and form a thin coating. This makes the joints 'take' better during the soldering.

Once the cores and braids are tinned refer to the diagrams. Solder the appropriate connections, check the job and you will have a working ST or Amiga to CPC monitor lead. ■

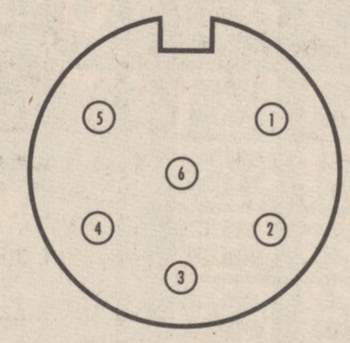
*Next week I'll be taking a look at the ready made projects available from parts supplier Maplin and targetting a couple for future development in Circuit City.*




*• The Amiga socket.*




*• The Atari socket.*




*• The Amstrad socket.*

## AMIGA LEAD

| | | |
|---|---|---|
| Amiga pin 3 | to | Amstrad pin 1 (red) |
| Amiga pin 4 | to | Amstrad pin 2 (green) |
| Amiga pin 5 | to | Amstrad pin 3 (blue) |
| Amiga pin 10 | to | Amstrad pin 4 (synch) |
| Amiga pin 16 | to | Amstrad pin 5 (ground) |

## ST LEAD

| | | |
|---|---|---|
| ST pin 6 | to | Amstrad pin 1 (red) |
| ST pin 7 | to | Amstrad pin 2 (green) |
| ST pin 10 | to | Amstrad pin 3 (blue) |
| ST pin 9 | to | Amstrad pin 4 (hsynch-synch) |
| ST pin 12 | to | Amstrad pin 5 (vsynch-synch) |
| ST pin 13 | to | Amstrad pin 5 (dround) |

## WHERE TO GET IT

Try any of these suppliers for the parts:

- Any branch of Tandy (0922 710000 for your nearest branch)
- Maplin (0702 554161)
- Simpson Electronics 0332 760353 (1100-1900)

Or you could contact a specialist such as RSD Connections who will make up any lead for a mutually agreed price. RSD is on 0992 584205.

# Evesham Micros

## RETAIL SHOWROOMS

**63 Bridge Street**
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fax: 0223-322883
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**Call us now on ✆ 0386-765500**
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Government, Education & PLC orders welcome
All products covered by 12 Months Warranty
All goods subject to availability, E. & O.E.

## ATARI

All our ST prices include: mouse etc. plus 5 disks of software including 'First Word' wordprocessor, utilities, 'Neochrome' graphics utility, game and demos.

### NEW - 520 STFM DISCOVERY PACK

Good quality, good value package based around the 520STFM computer including 512K RAM, 1Mb Drive and built-in TV modulator. Also supplied is:

STOS Game Creator
Carrier Command
Space Harrier
FirST BASIC
Outrun
Bomb Jack
Neochrome
Atari ST Tour
*plus* 'Discovering your Atari ST' Book

**£259.00**
**Including VAT and delivery**

### 1040 STE PROFESSIONAL PACK

Excellent starter package, including the very latest 1040STE machine with 1Mb RAM, 1Mb Drive, plus the following extras :

Kuma Wordprocessor
Kuma Database
Kuma Spreadsheet
Kuma Business Graphics
STAC Adventure Creator
Hyper Paint (STE version)
FirST BASIC
'Prince' game

**£429.00**
**Including VAT and delivery**

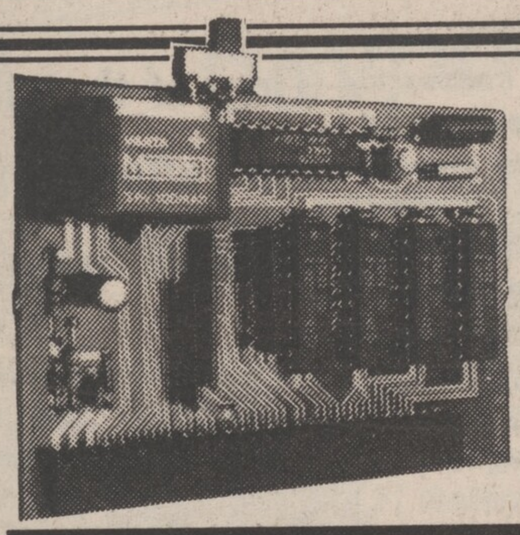
### NEW! 520 STE *TURBO PACK*

Features the latest 520STE with 1Mb drive, joystick, mouse, user guide, 5 disks of public domain software, plus a high quality selection of entertainment and creativity software, including :

Indiana Jones & the Last Crusade
Impossible Mission II
Human Killing Machine
Dragons Breath
Hyper Paint 2 (STE version)
Music Maker 2 (STE version)
Blood Money
Super Cycle
Out Run
Anarchy
FirST BASIC
STOS

**£339.00**
**Inc. VAT & Delivery**

| | |
|---|---|
| 520STE RAM upgrade to 1Mb, includes 2x256K SIMMS modules | £40.00 |
| 520/1040STE RAM upgrade to 2Mb, includes 2x1Mb SIMMS modules | £119.00 |
| 520/1040STE RAM upgrade to 4Mb, includes 4x1Mb SIMMS modules | £235.00 |
| 520STFM 1Mb Drive Upgrade Kit with full fitting instructions | £54.95 |
| 520STFM 1Mb Memory Upgrade Kit, requires soldering | £59.00 |
| Mega ST1 with monochrome monitor | £599.00 |
| Mega ST2 with monochrome monitor | £849.00 |
| Mega ST4 with monochrome monitor | £1099.00 |
| SM124 monochrome monitor | £99.00 |
| SC1224 colour monitor | £279.00 |
| Philips CM8833 14" colour monitor (stereo sound) c/w ST cable | £259.00 |
| Vidi-ST 16-tone video frame grabber inc.digitising software | £89.00 |
| NeoDesk V3 Desktop replacement | £29.95 |



### AMIGA A500 512K MEMORY UPGRADE

**ONLY £37.95 inc.VAT & delivery**

**512K RAM/CLOCK EXPANSION FEATURES :**

- ☆ Direct replacement for the A501 expansion
- ☆ Convenient On / Off Memory Switch
- ☆ Auto-recharging battery backed Real-time Clock
- ☆ Compact unit size : Ultra-neat design
- ☆ Uses only 4 D-RAMs for High Reliability
- ☆ Low power consumption

RAM expansion without clock, only ..... £32.95

## Amiga & ST 3.5" Drives

- ★ Very Quiet
- ★ Slimline Styling
- ★ Fully Compatible
- ★ Top quality Teac/Citizen drive mechanism
- ★ On/Off switch for Amiga
- ★ External plug-in PSU for ST
- ★ Throughport for Amiga
- ★ 1Mb unformatted capacity

*Fully compatible, high quality 3.5" external drives for the ST and Amiga*

**Amiga version only £59.95**
**Atari ST version only £64.95**
**Prices include VAT & delivery**

## Amstrad PC Range

***All Amstrad Products include 12 Months On-Site Maintenance***

**'LOCOSCRIPT PC'** *FREE* **with any PC1640!**
**'LOTUS 1-2-3 v2.01'** *FREE* **with any PC2086!**

**All PC models include 'Top 10 Solid Gold' Games Package!**

CREATE YOUR OWN HARD DISK CONFIGURATION FOR ANY 1512/1640/2086 MODEL ! Using a Western Digital Filecard, which includes XTree and SpeedRead software, we can upgrade the PC for you before despatch. Using the 'SD' column of the price table, simply add £225.00 inc.VAT for a 21Mb configuration, £239.00 for a 32Mb configuration, or £279.00 for a 41Mb configuration.

| | SD | DD | AMS H.D. |
|---|---|---|---|
| MONO 1640 | 390.43 / 449.00 | 477.39 / 549.00 | 651.30 / 749.00 |
| CGA (COLOUR) 1640 | 477.39 / 549.00 | 564.35 / 649.00 | 738.26 / 849.00 |
| EGA (ECD) 1640 | 564.35 / 649.00 | 651.30 / 749.00 | 825.22 / 949.00 |
| 2086 MONO | 433.91 / 499.00 | 520.87 / 599.00 | 694.78 / 799.00 |
| 2086 CD | 564.35 / 649.00 | 651.30 / 749.00 | 825.22 / 949.00 |
| 2086 12" HRCD | 564.35 / 649.00 | 651.30 / 749.00 | 825.22 / 949.00 |
| 2086 14" HRCD | 607.83 / 699.00 | 694.78 / 799.00 | 868.70 / 999.00 |

### upgrades / accessories

| | | | |
|---|---|---|---|
| PC1512 memory upgrade to 640K | £29.95 | Enhancer 101 replacement keyboard | £74.95 |
| Maths Co-processor 8087-2 | £109.00 | 3.5" drive (720K) for SD models | £79.95 |
| NEC V30 (8086 replacement) | £24.95 | PC2000 series compatible 5.25" (360K) external drive | £84.95 |
| Archive XL 40Mb Ext. tape streamer | £379.00 | Genius GM6000 Mouse package | £34.95 |
| Amstrad Modem Card V21/23 | £99.00 | Konix Joystick & Controller Card | £28.95 |
| Communicate Fax Card SR | £199.00 | | |

Low price External 3.5" Floppy Drive (720K), suits any Amstrad PC 1512/1640 inc. Double Drive and Hard Disk models, uses no expansion slots ..... £99.95

### Amstrad Laptop Portables

*prices in brackets are excluding VAT.*
N.B. Amstrad ALT Portables Do Not Include On-Site Maintenance

| | | | |
|---|---|---|---|
| PPC512S | (£373.04) £429.00 | PPC640D | (£546.96) £629.00 |
| PPC512D | (£433.91) £499.00 | ALT286 | (£1390.43) £1599.00 |
| PPC640S | (£477.39) £549.00 | ALT386sx | (£1738.26) £1999.00 |

## Western Digital Filecards

Upgrading your PC to hard disk? Look no further, we offer the best prices on top quality filecards, with ultra-competitive speed ratings. Thorough documentation supplied, low power consumption, with free XTree file management software and Speedread. For Amstrad PC users we supply filecards tested and formatted, with our simple software installation procedure. The best packages available!

**21MB...£225.00 32MB...£239.00 41MB...£279.00**

### $3^1/_2$" disks

10...£ 9.95 in plastic case £11.95
25...£22.95 in 40 cap case £29.95
Fully guaranteed double sided media

### $5^1/_4$" disks

25...£11.95 in 50 cap box £18.95
in 100 cap box £20.95
Fully guaranteed double sided media

## PRINTERS

All prices include VAT, delivery and cable

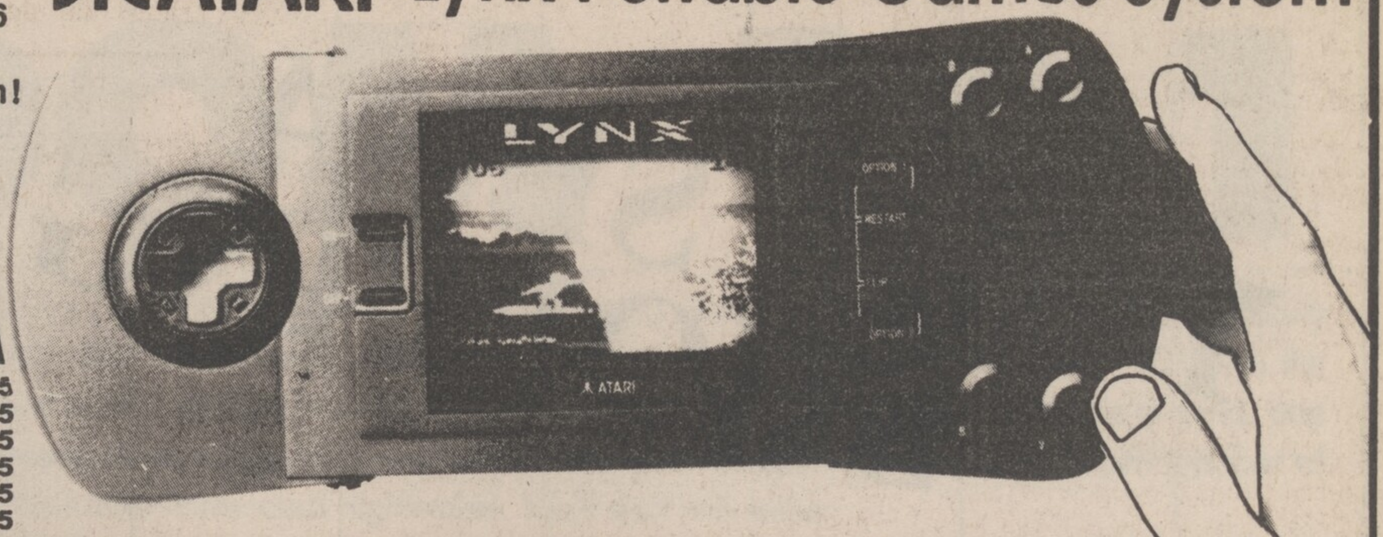
star

EVESHAM MICROS SPECIAL OFFER - ALL STAR PRINTERS INCLUDE 12 MONTHS ON-SITE MAINTENANCE!

| | |
|---|---|
| Star LC24-10 feature-packed multifont 24 pin printer, amazing low price | £239.00 |
| Star LC10 best-selling 144/36cps printer, 4 NLQ fonts | £159.00 |
| Star LC10 7-colour version of above printer | £209.00 |
| Star LC15 wide carriage version of LC10 | £329.00 |
| Star LC24-15 wide carriage version of LC24-10 | £409.00 |
| Star FR-10 Professional 9 pin 300/76 cps, 31K buffer, 16 NLQ fonts, EE-PROM configuration memory and 12 months on-site maintenance | £399.00 |
| Star FR-15 9 pin as FR10, wide carriage version | £499.00 |
| Star XB24-10 Professional 24 pin: 27K buffer, 4 SLQ & 25 LQ fonts with EE-PROM configuration memory and 12 months on-site maintenance | £499.00 |
| Star XB24-15 wide carriage version of XB24-10, with 41K buffer | £649.00 |
| Star Colour Upgrade Kit for XB or FR series printers (please state which) | £39.00 |
| **Hewlett Packard Deskjet Plus 300dpi inkjet printer - special offer!** | **£399.00** |
| **NEC P2+ budget 24pin, special low price!** | **£239.00** |
| Panasonic KXP1180 super 9pin with over 3400 typestyles, 11" carriage | £179.00 |
| Panasonic KXP1124 good quality 11" multifont 24pin printer | £269.00 |
| Panasonic KXP1624 wide carriage version of KXP1124 | £399.00 |
| Epson LX400 popular 10" 180/25 cps | £159.00 |
| Epson LQ550 good 24pin printer 150/50 cps | £349.00 |
| Mannesmann Tally MT-81 130/24 cps | £149.00 |

# ATARI Lynx Portable Games System

- Fantastic hand-held portable 16-bit video games machine
- Excellent built-in high definition, full colour LCD display
- Capable of displaying up to 16 colours out of a possible 4096
- 32-bit audio processor produces superb 4-Channel sound
- Left or right hand play easily achieved with screen flip option!
- Multiplayer Competitions possible using COMLYNX cable (supplied) to connect with other Atari Lynx systems
- Free California Games (multiplayer) game card supplied!
- Uses 6 x AA batteries (not supplied) or AC adapter (supplied)




**ONLY £159.00** including VAT and delivery

**Game Cards now available :**

| | |
|---|---|
| Blue Lightning | £19.95 |
| Gates of Zendocon | £19.95 |
| Electro Cop | £19.95 |
| Chips Challenge | £19.95 |
| Gauntlet III | £22.95 |
| Rampage | £22.95 |

## SPECIAL DEALS

All A500 Packages also include the following : Karate Kid II, Leatherneck, Battle Squadron, Jaws, Defcon 5, High Steel, Wordwright (w processor), Nigel Mansell's Grand Prix, Better Dead than Alien, Super Huey, Goldrunner, Night Walk

| | |
|---|---|
| **Amiga 500 512K Screen Gems pack** including 5 software titles and TV modulator | £379.00 |
| **Amiga 500 512K Flight of Fantasy pack** includes 4 software titles and TV modulator | £379.00 |
| **Amiga 500 512K Batpack** includes 4 software titles and TV modulator | £379.00 |
| **Amiga 500 1Mb (Batpack *or* F.O.F. Pack *or* Screen Gems pack)** upgraded using our 512K RAM/Clock | £415.00 |
| **Amiga 500 (Batpack *or* F.O.F. Pack *or* Screen Gems pack) with Drive** includes our 3½" External Drive | £435.00 |
| **Amiga 500 1Mb (Batpack *or* F.O.F. Pack *or* Screen Gems pack) with Drive** features our 512K RAM/Clock Upgrade *plus* 2nd 3½" External Drive | £470.00 |

| | | | |
|---|---|---|---|
| External 5.25" 40/80 track switchable drive | £99.00 | MiniGEN Genlock Adapter | £95.00 |
| MIDI interface | £19.95 | Philips CM8833 colour monitor inc.cable | £259.00 |
| Vidi-Amiga video digitiser package | £95.00 | Contriver Hi-Res replacement Mouse pack | £22.95 |
| Kickstart 1.3 Upgrade pack | £29.95 | Amiga 500 dust cover | £4.95 |

## CBM A590 HARD DRIVE

Good quality 20Mb Hard Disk from Commodore, including its own PSU. Features sockets for up to 2Mb of FAST RAM expansion (see below). 80ms Access time, with up to 2.4Mb/sec transfer rate. Will autoboot when used with Kickstart 1.3. Has built-in cooling fan.

**A590 (20Mb) only £379.00**
**40Mb version only £499.00**

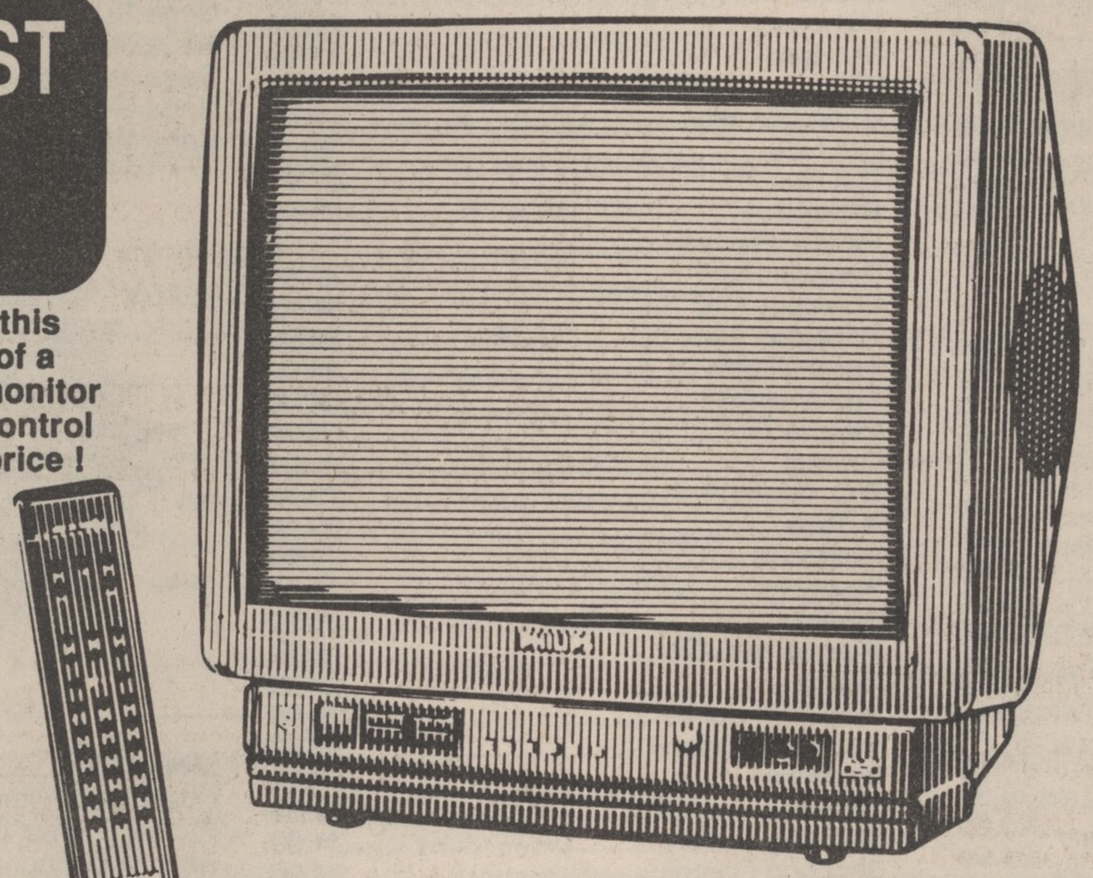
| | |
|---|---|
| A590 512K RAM Upgrade kit | £36.00 |
| A590 1Mb RAM Upgrade kit | £70.00 |
| A590 2Mb RAM Upgrade kit | £135.00 |

RAM upgrades fitted free when bought with A590.

# PHILIPS 15" FST TV/Monitor (MODEL 2530)

**With its dedicated monitor input, this model combines the advantages of a high quality medium resolution monitor with the convenience of remote control Teletext TV - at an excellent low price !**

- ✔ Suits ST or Amiga (cable supplied)
- ✔ Teletext facilities; on screen graphics
- ✔ Full infra-red remote control
- ✔ SCART Input/Output Connector
- ✔ Audio/Composite Video inputs
- ✔ 60 TV tuner presets
- ✔ Headphone private listening jack
- ✔ External aerial input (loop supplied)





**£269.00**
**includes VAT, delivery and computer connection lead**

# ATARI ABC-286

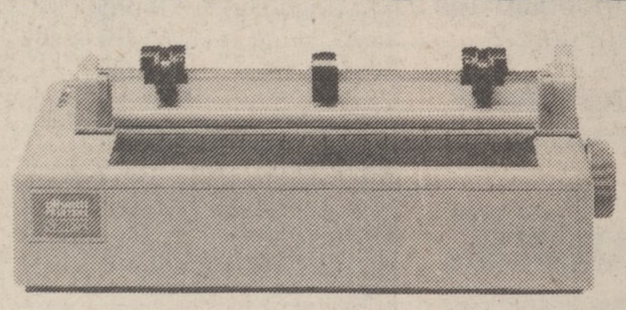
**FREE with all ABC-286 machines : Logotron '8-in-1 Professional' inc. W/Processor, Database, Spreadsheet, Graphics, etc.**
***PLUS* 12 MONTHS ON-SITE MAINTENANCE**

- ☆ 80286 Processor with 8 Mhz clock speed
- ☆ 640K RAM standard, expandable to 1 Mb
- ☆ 3 AT / XT compatible Expansion slots
- ☆ Disk controller supports 2 floppy & 2 hard drives
- ☆ One 3.5" (1.44Mb) floppy drive and a 30Mb hard disk drive fitted as standard
- ☆ Socket for 80287-8 Maths Co-Processor
- ☆ Video graphics adapter supports EGA, CGA, MDA and Hercules, with digital video port
- ☆ 102-key DIN spec. AT-Protocol keyboard
- ☆ Supplied with MS-DOS 3.3 and GW-BASIC

**ABC286 SD/30 Mb base unit . £803.85**
**ABC286 SD/30 Mb with Mono Monitor ..... £861.35**
**ABC286 SD/30 Mb with EGA Monitor ..... £976.35**
**Prices include VAT/Delivery and 12 months On-Site Maintenance**

**Optional 5.25" 1.2Mb internally fitted floppy drive available ..... £119.00**

# olivetti DM100S



**Top value, high performing 9-pin dot matrix printer**

- ○ 200 cps draft, 30 cps NLQ print speed
- ○ Pica, Elite and Condensed printing
- ○ Standard Centronics Parallel interface
- ○ Friction and Tractor feed
- ○ Optional auto cut sheet feeder available

**ONLY £129.95**

Cut sheet feeder available for only £79.95
**Prices include VAT, delivery and 12 months on-site maintenance!**

# olivetti PCS 86/286

**FREE With All Models :**

- ✔ 12 Months On-Site Maintenance
- ✔ PS2-compatible Mouse with software
- ✔ Logotron 'Eight-In-One' Integrated Package
- ✔ 'Top 10 Solid Gold' Games package

***FREE* WITH EVERY PCS286 : OLIVETTI DM100S 9-PIN PRINTER !**
or, if you prefer, £129.95 inc.VAT allowance on another printer of your choice.

| | SD | DD | SD 20MB | SD 40MB |
|---|---|---|---|---|
| PCS86 MONO | 549.00 631.35 | 649.00 746.35 | 849.00 976.35 | N/A N/A |
| PCS86 COLOUR | 699.00 803.85 | 799.00 918.85 | 999.00 1148.85 | N/A N/A |
| PCS286 MONO | N/A N/A | 949.00 1091.35 | 1049.00 1206.35 | 1149.00 1321.35 |
| PCS286 COLOUR | N/A N/A | 1099.00 1263.85 | 1199.00 1378.85 | 1299.00 1493.85 |

- ◆ 101/102 key AT-layout PS/2 compatible keyboard (Mini-DIN)
- ◆ 1 x RS232 Serial interface and 1 x Centronics Parallel interface
- ◆ VGA compatible (OVC) display controller fitted standard
- ◆ VGA monitors: 14" Colour / 12" Mono. (dot pitch 0.39mm)
- ◆ Socket for Optional Maths Co-Processor
- ◆ Hard Drive versions: 20Mb (27ms access time) / 40Mb (29ms)

**Logotron 'Eight-In-One' package includes Wordprocessor, Database, Spreadsheet, Graphics etc.**
**'Top 10 Solid Gold' games pack includes Arcade, Adventure, Creativity, Simulation & Strategy titles.**

**PCS 86**

- ◆ NEC-V30 microprocessor 10Mhz clock speed, 0 wait states
- ◆ 640K RAM standard, upgradeable to 2.5Mb on motherboard
- ◆ Single or Twin 3.5" floppy drives with 720K formatted capacity
- ◆ 3 Full size XT-compatible 8-bit expansion slots

**PCS 286**

- ◆ Intel 80286 microprocessor 12MHz clock speed, 1 wait states
- ◆ 1Mb RAM standard, upgradeable to 4Mb on motherboard
- ◆ Single or Twin 3.5" floppy drives with 1.44Mb formatted capacity
- ◆ 3 Full size expansion slots; 1 x 8 bit and 2 x 16 bit (XT/AT style)

## ACCESSORIES

| | |
|---|---|
| 5.25" 1.2Mb/360K drive with controller | £129.95 |
| PCS 286 2Mb RAM Upgrade Kit | £119.00 |
| PCS 286 4Mb RAM Upgrade Kit | £235.00 |

# YOUR SEGA SHOPPING LIST

| | |
|---|---|
| **Master System** | **79.99** |
| Master System Plus | 99.99 |
| Control Pad | 6.99 |
| Handle Controller | 39.99 |
| Light Phaser | 29.99 |
| Light Phaser + Cart | 44.99 |
| Rapid Fire Unit | 5.99 |
| 80 Commander | 9.99 |
| 3D Glasses | 39.99 |
| Control Stick | 14.99 |
| Mains Adaptor | 6.99 |
| * Aerial Assault | 29.99 |
| Action Fighter | 12.99 |
| After Burner | 29.99 |
| Alex Kidd | 24.99 |
| Alex Kidd-High Tech | 29.99 |
| Alex-Kidd-Lost Stars | 29.99 |
| * Alex-Kidd-Shinobi | 29.99 |
| Alien Syndrome | 29.99 |
| Altered Beast | 29.99 |
| American Baseball | 29.99 |
| American Pro-Football | 29.99 |
| Assault City | 29.99 |
| Astro Warrior/Pitpot | 24.99 |
| Aztec Adventure | 12.99 |
| Bank Panic | 17.99 |
| Baseball Nightmare | 29.99 |
| Battle Outrun | 29.99 |
| Black Belt | 24.99 |
| Blade Eagle 3D | 29.99 |
| Bomber Raid | 29.99 |
| California Games | 29.99 |
| Captain Silver | 29.99 |
| Casino Games | 29.99 |
| Chase H.Q. | 29.99 |
| Choplifter | 24.99 |
| Cloud Master | 29.99 |
| * Columns | 24.99 |
| Cyborg Hunter | 24.99 |
| Dead Angle | 29.99 |
| Double Dragon | 29.99 |
| * Double Hawk | 29.99 |
| Dynamite Dux | 29.99 |
| Emduro Racer | 9.99 |
| * Eswat | 29.99 |
| F16 Fighter | 17.99 |
| Fantasy Zone | 12.99 |
| Fantasy Zone TM | 24.99 |
| Fantasy Zone 2 | 24.99 |
| * Grim Ground | 29.99 |
| Galaxy Force | 29.99 |
| Gangster Town | 24.99 |
| * Gauntlet | 29.99 |
| Ghostbusters | 29.99 |
| Ghost House | 17.99 |
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| Missile Defense 3D | 29.99 |
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| My Hero | 17.99 |
| Ninja | 9.99 |
| Operation Wolf | 29.99 |
| Out Run | 29.99 |
| Out Run 3D | 29.99 |
| * Paper Boy | 29.99 |
| * Parlour Games | 17.99 |
| Penguin Land | 29.99 |
| Phantasy Star | 39.99 |
| Poseidon Wars 3D | 29.99 |
| Power Strike | 24.99 |
| Pro Wrestling | 24.99 |
| Psycho Fox | 29.99 |
| Quartet | 24.99 |
| R.C. Grand Prix | 29.99 |
| R-Type | 29.99 |
| Rambo III | 29.99 |
| Rampage | 29.99 |
| Rastam | 29.99 |
| Rescue Mission | 9.99 |
| Rocky | 29.99 |
| Scramble Spirits | 29.99 |
| Secret Command | 12.99 |
| Shanghai | 24.99 |
| Shinobi | 29.99 |
| Shooting Gallery | 24.99 |
| Shooting Games | 24.99 |
| Slap Shot | 29.99 |
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| Space Harrier 3D | 29.99 |
| Spellcaster | 29.99 |
| Spy Vs Spy | 17.99 |
| * Submarine Attack | 29.99 |
| * Super Monaco-G-Prix | 29.99 |
| Super Tennis | 9.99 |
| Teddy Boy | 9.99 |
| Tennis Ace | 29.99 |
| Thunder Blade | 29.99 |
| Time Soldiers | 29.99 |
| Transbot | 9.99 |
| Ultima 4 | 39.99 |
| Vigilante | 29.99 |
| Wanted | 24.99 |
| Wonderboy | 24.99 |
| Wonderboy-Mon/Land | 29.99 |
| Wonderboy III | 29.99 |
| World Games | 24.99 |
| World Grand Prix | 12.99 |
| World Soccer | 24.99 |
| Y's | 32.99 |
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## OPENING TIME

Welcome. After a slow start, the mail has been piling in. I'm not sure whether this is because you're all friendly, literate people (except for dear old Tree that is) or because you're an avaricious bunch of grabbers. Frankly, it makes no difference to me at all.

What with all the parties to celebrate issue 100, it's been a hectic last few days. We were treated to a joint bash with the lads from *Amstrad Action* [they're five and behave like it] at the very chic Club de Terrysocks et Grolschtopper. Tarquin St John-Sprout, our office sanitation executive, tried to get off with everything in sight, including Ms Hanks the coffee machine operative who wore a most pleasant 1973 coffee-cream paisley hot pants outfit.

What really tiffed me off was that my personal colour NeXT machine was also in the line of fire. Tarquin evacuated his lunch all over the new add-on Motorola 56001 DSP chip. He then proceeded to spill a Grolsch all over the eraseable optical drive, and the 1.4Gb hard drive was treated to the "Do you have any Eton in you? No? Would you like some! Haw, haw, haw."

We had to take Tarquin outside and shoot him with the Ouzi which Andy editor picked up in Belgium. We only winged him and he has since put it down to a hangover.

Well, that's about it for this week so get out of this column and don't come round here collecting for QL users against the Gulf again.

**STOP PRESS**

I just thought you'd like to know that so far not one vote has been received for the 'Best Two Pages in the Middle of a Computer Magazine' award. So, no more Centrefold. It's been dropped by the Ed and the publisher... Or has it?

# ROOM 101

Issue 101, nothing special about that you might think. Well that would make you one of the people who obviously haven't read George Orwell's dark and searing indictment of the future... er the past, 1984. Room 101 was the place where those who would not toe the line were sent in order to meet their greatest fears. With this in mind, and after buying drinks for everyone down at the Hack and LaserWriter (our local), I managed to get each member of the Express team to tell me their most horrendous nightmares. We'll start with mine:

**Tim 'Centrefold' Smith's 10 Greatest Fears (Staff Writer)**

1) Pedants who can't spell and don't like football
2) Synchronised swimmers called Tammy
3) Meeting royalty when they've been drinking too much
4) Guiness poured in under five minutes
5) Catchphrase with or without Roy Walker
6) Fear itself
7) Clichés
8) People who think chess is boring
9) Hippies with attitude
10) Converstations with people wearing anoraks

**Next up...**
**Helen 'Trump' Kirkhope (Advertisment Manager)**

1) Good looking men... too much temptation
2) Going bald
3) A wig shortage if I do go bald
4) Losing my cash card and chequebook.
5) Being invited to the *Express*' 2,000th birthday party
6) Realising that I'd taken out a year's subscription to *Popular Computing Weekly*.
7) *Viz* going bust
8) Relocating to Swindon or Slough
9) Being reborn as a man called Richard Head
10) Finding a curly black hair in my onion bahji

**Your turn...**
**Keith 'Luciano' Pomfret (Technical Editor)**

1) Being found out
2) Not being found out
3) Having to listen to Stock, Aitken and Waterman
4) Ad executives bearing gifts
5) Acorn product launches (they only serve pizza)
6) Diets (Oink Oink)
7) Standard Class on the train
8) The Inland Revenue
9) Customs and Excise
10) P45s

**Earth calling...**
**Steve 'Cyberman' Coulter (Sub-Editor)**

1) Losing at computer golf to people who think they're good but aren't.
2) The big cockroaches you get in the tropics that fly and carry diseases and end up in your mouth when you are asleep
3) Not getting all my copy in on time because it annoys the deputy editor
4) Dying in a nasty car crash
5) Living in a bedsit full of Christians
6) Learning that Newsnight has been taken off the air.
7) Flying ( crashing)
8) Eating coconut by mistake
9) Losing my good looks
10) Meeting Cilla Black and thinking she was my mother

**Now...**
**Colin 'Pilger' Campbell (News Editor)**

1) Amstrad's lawyers
2) Very hungry giant wasps
3) Being stuck in a lift with Peter Walker (Atari's PR man)
4) Pocket calculators
5) A world without David Platt (Saint David if you don't mind)
6) Hattie Jacques
7) Another *Police Academy* flick
8) Lots of sand (in case of conscription)
9) Stuart Anderton on deadline day
10) Being the one who sings on *Blind Date*

**Now...**
**Andy 'Reg'n'Ron' Storer (Editor)**

1) Drowning in a bath full of slugs
2) Seeing old photos of myself
3) Sharing a stomach pump with Rik 'Hitman' Haynes
4) Being features editor on a PCW magazine
5) Working for *The One*
6) Being art editor on *Mondo 2000*
7) Giving the inaugaral speech at a X-25 protocol conference
8) Being a product tester for Level 9
9) Being Angela Rippon
10) Getting worried about anything

**Excuse me sir, it's...**
**Graeme 'Godfather' Kidd (Publisher)**

1) Going to the bathroom barefoot and treading on some cat poo
2) Waking up and finding that it IS all a dream
3) Having my photograph taken with cartoon characters
4) Eating too much pizza and turning into a turtle
5) Dying and coming back as Cathy Campos' (Mirrorsoft's PR person) washing machine
6) Not being able to be rude to Tim Smith every day
7) Interviewing New Kids On The Block for a magazine article
8) Having to find an excuse not to take all my clothes off for Playgirl's photographer
9) Waking up in the morning
10) Running out of ten pee pieces when I can get an all time high score on *Golden Axe*.

**I say, that wouldn't be...**
**Amanda 'Crayons' Cook (Art Editor)**

1) Flying birds.
2) Brown moaning pecking chickens.
3) Hidden sweetcorn in my food.
4) Starlings that fall down the chimney and shit on your lampshade.
5) Looking as thick as shit when playing Trival Pursuits.
6) Tim Smith looking trendy all the time with his Timberland lookalikes.
7) Finding the coconut sweet in a bag of Rebels.
8) My smelly Doc Martins throwing themselves away in the dustbin before I buy a new pair.
9) Waking up with a daddy long legs up my nose.
10) Buying the Walkers crisps in the blue packet thinking they're salt & vinigar when they're bloody cheese & onion.

**And heeeeeere's...**
**Stuart 'Sir James' Anderton (Deputy Editor)**

1) My round
2) Deadlines
3) Shoelaces
4) Waking up
5) Kylie Minogue
6) Paul Gascoigne
7) Slime (blenophobia. Not many peole know that)
8) Being turned off
9) Council houses
10) Air

**Last but not least...**
**Julie 'New Kid on the Block' Tolley (Production Editor)**

1) Falling
2) Putting my foot in it
3) Rottweilers
4) The loony on the street who always chooses me
5) That the man in the car I've just cut up will get out and hit me
6) Public toilets
7) Zits
8) Senile dementia
9) Doctor's waiting rooms
10) Finding a cockroach in my chinese takeaway

**That's it then. The more astute of you will have noticed that lot adds up to 100 fears. So where's the 101st? Well, our concerted opinion, after several pints, was that our greatest fear was losing all our readers... to a psychotic, axe wielding, bloodsucking freak in a strange serial murder.**

# Tim Smith's CENT

Write to 30 Monmouth Street, Bath BA1 2BW (If you dare)

## READER'S CHART

Yet again a week goes by without a reader's chart. Frankly I'm thinking of dropping this section, what do you think? Instead I contacted a friend of mine, Count Ken Mosley, to tell us what his fave computer flicks are. Yes, it's the return of Ken [Chaos] Mosley. Please note that since his return from Tehran, he's been living in cyberspace

1) *Death Race 68000* (102 mins)
2) *Another 48Ks* (2 mins)
3) *Blood SEUCKing Freaks* (3 days)
4) *Big Blue Velvet* (1,220 mins)
5) *A Kind of Loading* (21 months)
6) *RISCy Business* (2 seconds)
7) *A Day at the Ray Traces* (60 mins)
8) *Big Footprint and the Hendersons* (12 mins)
9) *Dial M for Sugar* (120 mins)
10) *A Disk Called Wanda* (666 mins)

THE WORST
*2001 A Space Oddessy*

## THE TOSH TEN

Every week we bring you 10 completely useless things which could be used a conversation starters or ice breakers at particularly boring parties. This week it's definitions, have all been sent in by Matthew Miller from York. Write and tell me what you'd like to win Matty boy.

1) Byte = 8 bits, only one of which is wrong
2) Easy to learn = Hard to use
3) Fax = The opposite to fixion
4) GEM = Gross Exhauster of Memory
5) Hood = Two bits, as in "You two-bit hood"
6) Loop = See Loop
7) Shareware = You write it, we'll share it
8) ST = A defence mechanism for enraged Amiga owners
9) Turtle = A shell routine
10) Control character = A

## I WISH I'D SAID THAT

Have you read or heard any computer related wibble which has made you laugh, cry or react at all? It could come from a manual, an advert, even a magazine.

"I would rather live with the occasional vandal than the police state" Richard Stallman of the Free Software Foundation quoted in *New Scientist*.

"Replacing the cross seam in the crotch of your pants with a gusset means that at the end of a long drive, a shift at your desk or a trip into cyberspace, your mind maybe frazzled, but you won't have to tug at the tender places grimacing." Advert for cyber clothes by Chipants.

## Letter Spray

Want to see your name in print? Then write to Centrefold. This week's replies by Pope Alexander I's hairdresser's son's wife's insurance dealer..

The postbag which takes the views of it readers and utterly ignores them. Would you like to see your name in print? Well write something interesting, keep it brief, and you might stand a chance. Try and keep it computer related.

Yo Tim, *(now that's quite enough of that)* I would like to complain in the strongest possible terms about the picture of the two female type persons of homo sapiens persuasion in a state of undress that you saw fit to print in this week's Centrefold *(well it was a couple of weeks ago)*. Pictures like this should be printed in colour.

As if this wasn't enough, I am most disappointed with the new mix of the *Neighbours* theme tune, it is quite appalling. Don't let it happen again.

May a swarm of locusts make a home in your favourite pair of trousers.
The Android, Rhyl, Clwyd.

*Dear Android, What is it with Rhyl? Is that the place that all the dead computers go? As for your sexist comments, I have passed them on to* Angry Wimmin Against People with Stupid Names. *The whole point of printing that photograph was to start a stream of ideologically sound abuse which I could then use to prove that computer users are not predominantly male, have deep seated personality problems and couldn't score in a harem. Never mind, I guess that stereotypes live on. By the way, the new* Neighbours *theme was mixed using an ST so it can't be that bad. Can it?*

Sir, I have been buying *NCE* from No. 4 edition and find it and excelent [*sic*] read and value for money, the new format looks even better in spite of the 12p increase.

There is only one critisism [*sic*] I have to make, I collect the magazines and being the owner of an STE I enter the competition for any software that I have not got, so I now have several magazines with a hole in an article from where the entry coupon came.

Can you please try to put the competition forms on the back of an advert instead of an article, I am sure there are other readers like myself who find this most anoying[*again sic* ].

Now thats [*sic again* ] off my chest, keep up the good work.
P.S Anything lying about your desk for the STE would be put to good use.
D S Price, Bolton

*Dear D S, get it together laddie. How am I supposed to take your, valid criticisms seriously if I'm laughing my head off at your atrocious use of the English language? This applies to all of you out there; check your letters to make sure that, even if the subject matter is utter garbage, they read well. As for your request about the coupon, the reason that magazines such as ours don't print competitions on the back of adverts is that advertisers whinge and moan about their ads being mutilated. It appears that the sound of a weeping advertiser upsets the powers that be too much. As for STE software, I'll see if there's a copy of* Pong *hanging around.*

Sir, Having read issue No.95 1st of September the list of winners for the *Yolanda* competition, I was surprised to see my name included as one of the winners. Up to date, their [*sic*] has been no sign of the disk arriving at my home. Have I been forgotten, or has somebody made a mistake in the number of winners or disks, that were available. I would be pleased if you can let me know what is happening about this matter and oblige.
Yours, anonymous.

PS in issue 96, page 56 there is an error, not a spelling error. Has anyone else spotted this?

*Dear person, Oblige? Me? Get ahead of yourself. The* Yolanda *comp did run into some trouble but I have been assured that this is now cleared-up.So, much as I hate to say it, I'm sorrr, I'm sorrrr-orr-or, I apologise, alright!*

*As for your "there was a mistake but I'm not telling you what it was to naa naa na-na naa and yarr-boo sucks "comment, if there is one thing I despise it has to be mysterious pedantry. A prize goes to anyone who can tell me what the mistake was.Any more pedants will have their retina sliced off with an atomic wafer-scaled, but very rusty nail, if you see what I mean.*

## QUICK QUIZ

**• David Vine, rumours in the Centrefold offices say that this is the man to replace Bob Holness when he becomes the next Dali Lama**

**Here we go with yet another Quick Quiz. Due because I have been out of my tree and off my face (or traced as it is known in hip circles) after dosing myself with Neurofen, and Mad Margot's patent cold cure and scabies salve, I've had the flu, I have decided to present a virtual reality prize to the lucky winner; three of William Gibson's cult books (I can't be bothered with them).**

**For the competition itself we proudly present the Centrefold version of Bob Holness' neurally taxing *Block Busters* TV quiz and cult visual experience. Of course we'll begin with "A 'P' please Bob".**
**"What P was a Commodore golden oldie?"**
***An A please Bob.***
**"What A is large company which makes STs?"**
***I'll have an H please Bob.***
**"What H goes with Disk, Drive, and Bastard?"**
**If you can answer the questions before our panel of Emlyn Hughes, Ian Botham, Bill Beaumont and St David Platt you will win the prizes. Send your entries to "I'll Have A Prize Please Tim". Centrefold, *New Computer Express*, 30 Monmouth Street, Bath BA1 2BW.**

# TREFOLD

## Tale Spin: Stories from the other side

**Tales Spin, the place where dreams become reality, the cyberspace of *Express*, the virtual reality of the computer magazine market. Do you have any stories? Send them in and I'll consider printing them. Then I'll send the office sprog out with a prize.**

**D-WRONGO**
We had a letter addressed to *Computer Shopper* News delivered this week. Oh very funny. What with *Shopper* making rash claims that it's the biggest and the best and the hardest and wibble, wibble, this struck us all as highly amusing. The letter dribbled on about some 8-bit show.

**ODE-DEAR**
What follows is a poem from the 60s called *All Watched Over by Machines of Loving Grace* by Richard Brautigan. It really is horribly embarrassing:

"I like to think (and the sooner the better!)/ of a cybernetic meadow/ where mammals and computers/ live together in mutually/ programming harmony/ like pure water/ touching a clear sky.

"I like to think/ (right now please!)/ of a cybernetic forest/ filled with pines and electronics/ where deer stroll peacefully/ past computers/ as if they were flowers/ with spinning blossoms

"I like to think/ (it has to be!)/ of a cybernetic ecology/ where we are free of our labours/ and joined back to nature/ returned to our mammal/ brothers and sisters/ and all watched over/ by machines of loving grace"

Conclusive proof that LSD fries your brains.

**NOT RIGHT ON**
There once was an artificial intelligence program called *Tale-Spin* (seriously, Prof Roger Schrank of Yale wrote it) which attempted to write children's stories with characters who could interact. These are few examples of its work:

"One day Joe Bear was

• *Nigerian potto*

hungry. He asked his friend Irving Bird where some honey was. Irving told him there was a beehive in the oak tree. Joe threatened to hit Irving if he didn't tell him where the honey was."

Whoops. Try again...
This time Irving has told Joe about the beehive and no threat of violence ensued but... "Joe walked to the oak tree. He ate the beehive."

Wrong again. What about this...
This time Irving doesn't even tell him about the beehive so...

"Joe offered to bring him a worm if he'd tell him where some honey was. Irving agreed. But Joe didn't know where any worms were, so he asked Irving, who refused to say. So Joe offered to bring him a worm if he'd tell him where a worm was. Irving agreed..." and so on.

Conclusive proof that Enid Blyton was a computer (not really, Enid's executors.)

**IT NEVER WAS. WAS IT?**
In 1950 Norbert Wiener produced a report called *The Human Use of Human Beings*. It was a cut down version of his 1948 work *Cybernetics*. Blimey that was a while ago.

**MORE READER ADS**
Yes, those free reader ads drew some wonderful responses. Try these two.

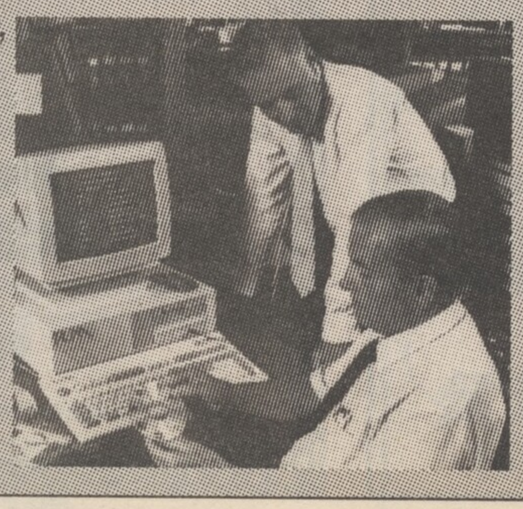
From P Tatman of Gosport, Hants
"To 'M' my loving wife. I love my Amiga. But always remember I love you more. Here's to the next 100 years. Your one and only 'P'."

Ahhh innit lovely.
From K Hugill of Coventry
"Please draw this advert out of the draw. I could do with a £100 and send it to K Hugill..."

Cheeky beggar.

## CAPTION FULL STRENGTH

**Here we have a picture of two old men, a PC, and a CD. So far, so good. But surely there must be something extra to pep it up. What are they doing in the Munster's house? Do they realise the importance of the disc which they are holding? What is on it? Do you know? Write me one witty caption; it could be in the form of speech bubbles or it could be a straight picture caption. If the general consensus in Centrefold corner is that your entry is witty, apposite and clean enough, it will be printed and you will win a prize of my choice. Don't forget to tell me which computer you have, and please mark your entries with the issue number.**



## FROM THE ARCHIVE

I hope you've recovered from last week's mega-archive explosion, because I most certainly have not. Being the new boy in the office, only 20 issues, I hadn't realised that the rest of the team would blub uncontrolalibly at the mere thought of issue 0. Bloody pathetic nostalgia freaks. You will have noticed that lots had to be left out because it was just not up to the amazingly high standard expected. Anyway, this week we're back on the tracks with the normal person-sized Archive. So, what happened a year ago this week?

**YOU CHEETAH, I'M TELLING YOUR MUM**
Pow! Zock! Wham! and other such exclamatory remarks. Cheetah announced the imminent arrival of its Defender lightgun for the Amiga and ST. Already available for the Speccy, and included in the C64's Light Fantastic, the piece was to come with bundled software. How lucky were you feeling punk?

**DEBASE dBase DEALINGS**
Reading-based CyberSoft were busted by FAST with the help of Ashton Tate to the tune of £12,000. The reason for this was that Cybersoft had been selling dodgy copies of dBase III. When its premises were searched some 1,300 illegally copied software packages were discovered. There were also 700 copied manuals. Ashton Tate's boss, Paul Sloane commented "We will pursue any such cases that come to our notice and we're extremely relieved that there is now the legal protection to make this possible."

**INTEL-IGENT**
Intel decided to set up offices in Europe. It opened a major chip shop in the Republic of Ireland.

**STABBED IN THE MAC**
Apple Macintosh and one of its Japanese dealers were to be investigated by the Japanese Monopolies Commission. It seemed that the Mac lads had been using strong arm tactics in order to flog their products in the land of the rising Yen. Apple had been accused of telling its dealers not to bother mending any equipment unless it had been imported directly via the company. The dealers, Canon Sales had also allegedly "pressured" four magazines not to take advertising from unofficial importers. Both Apple and Canon had their offices searched by officials from the commission (for what is another question).

**MERRY BLOODY XMAS**
AAhhhh! Urgghhghgh! Expletive deleted and then some! It was only October, and 1989 years ago the three wise men would hardly have set off across the desert, Joseph and Mary would still have been in Nazareth and Herod would have been in a reasonably good mood. However, 1989 later Alternative Software was already tracking down Santy Claus for a new £2.99 Christmas game. Happily, a percentage of the profits were to go to Save the Children.. ahhhh.

**HACKER DELIGHT**
The Complete Virus Handbook was released. Costing £14.95, the book listed 74 known viruses, evaluated 39 virus killers, and gave detailed analysis of various tactics and techniques of viral protection.

**BULLISH**
French company Bull (you have to remember even now to mention Honeywell don't you? You don't, er alright then knowall) leapt into the PC market with the purchase of Zenith's computer arm. This gave them the edge they needed and of course you've seen millions of Bull PCs lately haven't you.

Well that's it for another year, so keep your head on your neck and keep retching in bars.

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**IBM** PC Clone at, 20MB hard disk, 3 1/2 + 5 14 hi density floppy, UG A colour screen, £750. 0444 400763 (West Sussex).

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**BEEB** Public Domain! Send SAE to: Rafael Jay, Onslow House, Weston Road, Bath, Avon BA1 2XX for catalogue.

**ZAT** the Fanzine for Spectrum and coupe users! Issue 4 out now. Interviews, strips, and more. Send 60p and stamp to: ZAT, PO Box 488, Tweedale, Telford, Shropshire TF7 4SU.

**MESSYDOS** problems on Amiga? After placing on mountlist and mounting type dir msh: For the Amiga to recognise the new file system (KFC.).

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**STEN** – ST enthusiasts newsletter – free, send disc and SAE for your copy. Dave Mooney – 14 School Road, Morningside, Newmains, Lanarkshire (0698) 382380.

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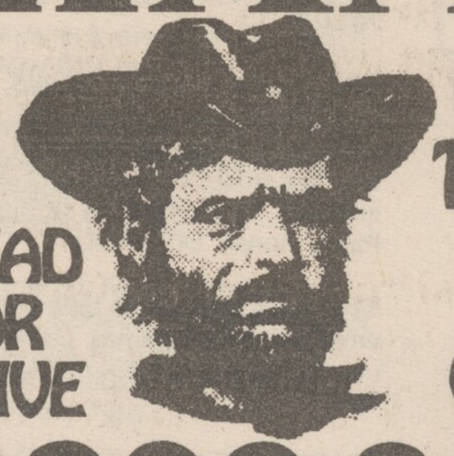


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# TECH TIPS

**Does your PC keep packing up? Is your Amiga less than friendly? Would your ST try the patience of a saint? Write to Keith Pomfret's Tech Tips and we'll soon see you right. Send your sorry stories to Tech Tips, Beauford Place, 30 Monmouth Street, Bath BA1 2BW.**

## ■HELP! PC stuff

**A couple of questions to test your grey bits, concerning the Commodore PC20:**

**1) Commodore recommends the use of the 1352 mouse (presumably their own, expensive, version. Can a third party mouse be used? There seems to be quite a few bargains available.**

**2) I would like to fit a second drive to the PC20, preferably 3.5-inch unit. Would it be possible, or indeed practical to fit one (or both) of the units from a SAM Coupé? The making of a cradle to carry the drive would be no problem. How about configuring the drives?**

**3) I would like to delve into the world of DTP on the PC, having previously used the *DTP Pack* from PCG on the Spectrum. I don't wish to spend a vast fortune and have been looking at a DTP package from Eigen by the name of $T_eX$. It's a PD affair, costing around £25. Have you, or any of colleagues at *Express*, had any experience of this product? If so what are your views on it?**

*Barry Walton, Tyne and Wear.*

1. Third party serial mice are available that connect to the serial port of your PC and after running their own software they will act in the same way as the official Commodore squeaker

2. Silly idea. Try getting the similar (but not the same) Lifetime Drives from EEC on 0753 888866. These drives originally came from Coupé company MGT but on its demise were transferred to EEC. The Lifetime drives have DIP switches allowing them to be configured for nearly all machines.

3 $T_eX$ is a document processor which is a bugger to use; it's really powerful but not at all intuitive or WYSIWYG. Try for an early version of *Timeworks* or *Finesse*. These sometimes go cheap more than a canary.

## ■TIP! ST file transfer

**With reference to Chris Evan's problem of transferring Degas *Elite* files to an Amiga (issue 98); I believe there is a way to import these files directly, without any need for 'tweaking'.**

**While I have had no occasion to use this (and therefore test this), I remember reading that when Degas saves a block (as opposed to a picture), it saves it in IFF format. All that is necessary then is to cut the entire screen as a block, save it, and then rename its .BLK extension to .IFF. The files cab then be converted in the normal way using *Cross-DOS* or equivalent.**

**In return for this tip, I wonder if you could help me with a problem. I have recently had the ATOnce PC emulator fitted to my ST, and while I find it to be an excellent emulator, an annoying problem has cropped up. Like many emulators, even with the `config.sys` file set to use the UK keyboard, the positions of the ST keyboard do not match with those of a true PC keyboard. I would like to know if there is a shareware or PD utility around (on the PC) that can reconfigure the keyboard to a custom set-up. In this way I can set up the layout to match my ST's keyboard exactly, and end the hunting around I occasionally have to indulge in. I would be grateful for any advice in this matter and thank anyone who tries to help me in advance.**

*Ian McCall, Sheffield*

Thanks for the advice on file-fettling. The problem that you're having with the ST keyboard in PC emulation is a new one on me although I'm sure that one of our PC experts out there will know of some twidget or utility that can do the business. Consult our luxuriant list of user groups (in Shopping Express) for a PC group who may have done the trick.

Full Circle Technologies informs me that the current version (1.18) reconfigures as a UK British keyboard. The upgrade path depends on where you got the product. If it came from FCT, send the original disk back and it'll upgrade you for free. If it came from elsewhere, consult your supplier for details of current situation and upgrades.

## ■ADVICE! Old Cobollers

**Regarding the letter from I Keillans concerning formatting CP/M disks and Nevada Cobol. A single drive is all that is required, the PD CP/M emulator beds the format program, then prompts for insertion of the disk to be formatted.**

**If anybody wants a copy of the emulator and utilities then they can either send the blank disks and SAE to me or a postal order for £5 and I will supply the disks. I also have a copy of Nevada Cobol for sale, if I Keillans is interested.**

*M Knight, Daventry, Northants.*

And another Tech Tipper gallops in to the rescue. If you want to send Mr Knight a fiver, send it to me at *Express* and I'll pass it on. If Mr Keillans cares to write to me again, I'll pass on your address too.

## ■HELP! Making the link over to the Macintosh

**At work we have just started using Quark *Xpress* and *MacWrite* on the Apple Mac IIcx, while at home I use an Atari 1040STFM with either *1st Word* (not plus) or Microsoft *Write*. My home set-up is the 1040, plus Evesham Micros second disk drive and SM124 monitor.**

**According to the Quark manual, work prepared with *Write* can be imported onto pages. Since some of my work is done at home it would quite obviously cut out some tedious retyping work if I could write to disk on my Atari in such a way that it could be read straight into the Mac.**

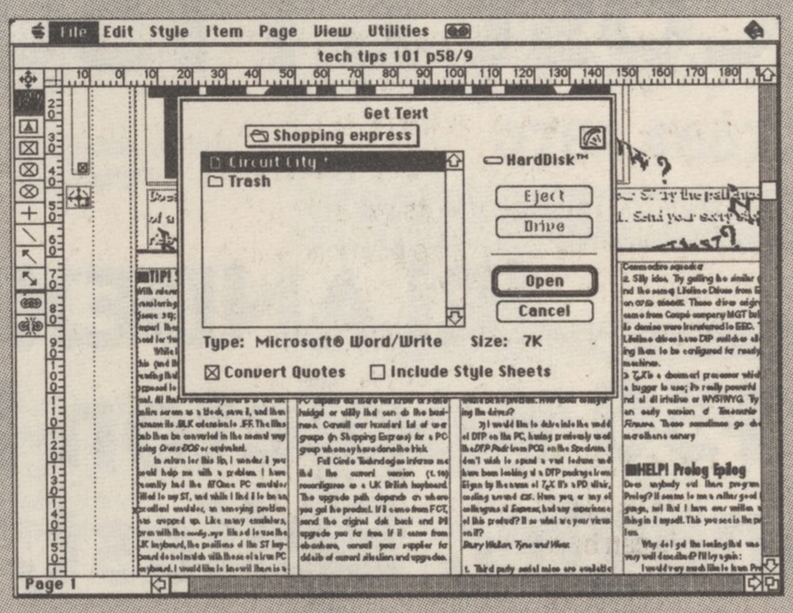
**Can you tell me whether it is the Atari version of *Write* that is being referred to and, if so, how do I carry out this operation?**

*Neil McAdam, Oxon.*

The simple way to do what you require is to format disks on your IIcx as MS-DOS 720K.

The *Apple File Exchange* program on the Mac will hapilly do this for you. Use these disks as data disks to save your word processor files on your ST which should read the standard MS-DOS formatted disks..

The files should be saved in ASCII format on the ST. When the disk is placed in the Mac, the files should be copied across to the hard drive using *File Exchange* again. These ASCII files will hapilly load into *MacWrite* or Quark.




***• You can indeed get Microsoft Write files from an ST onto a Mac and into Quark XPress, here laying out this very page.***

You can use raw *Write* files if you change the 'File Finder Attributes' with a file editor to the appropriate code for Microsoft *Write*. I'm afraid I don't know what the code is, but Microsoft *Word* is type WDBN, creator MSWD, so you could try that or something similar. Have a play and see if you can get it to work. You'll need the MS *Write* Filter installed in the same folder as Quark *XPress* first.

## ■HELP! Prolog epilog

**Does anybody out there program in Prolog? It seems to me a rather good language, not that I have ever written anything in it myself. This you see is the problem.**

**Why do I get the feeling that was not very well described? I'll try again:**

**I would very much like to learn Prolog as it seems to me to be the ideal language for my purposes. I have recently bought a book called *Prolog for Beginners* which reckons that it could teach, even me, to program on any of the major implementations. This is all fine and dandy for those who know what the major implications are! This is my problem – I do not. (Perhaps this wonderful book could not teach me after all – I'm still stuck on the introduc-**

tion!)

I don't want to spend a great deal of money but I would like to know a few things:

1) What are these 'major implementations'?

2) Can any of them be used on an Atari 520STFM? Or an Apricot PC/xi, or Point 32 with MS-DOS 3.10?

3) Are there any PD versions that would work well enough to learn the language? I really hope so!

*Chris Jones, Norwich, Norfolk.*

Prolog is a mystery to us here at *Express*. We neither use it nor know much about it so we'll have to leave that wide open to the publishers of books on the subject and those thousand or so Prolog aficionados that avidly read *Express* for the answers.

## ■HELP! Connections

**I am planning to buy an Amiga or Atari ST in the near future, but before I do, could you answer a few questions?**

**At present I have an Amstrad CPC 464 with CTM 644 colour monitor. Recently I was talking to a man in my local computer shop who said that with a special cable you could use the Amstrad monitor with an Atari ST or Amiga. Could you tell me if this is possible and if so where can I buy this cable.**

**Could you also tell me what is the difference between an Atari STFM and a STE, is it worth paying the extra money for an STE?**

*Johnathan Menezes, London E6.*

You picked the right week to ask the Amiga/ST/CPC monitor question. Turn to Circuit City on page 39 for the full in depth story on how to do it.

The STE has enhanced graphics and sound, but they are not that much enhanced. I'd stick to the STFM and buy five extra games.

## ■HELP! Canon fodder

**I have a Canon Typestar 90 typewriter and an Amstrad CPC6128. Can I link the two together and use the typewriter as a computer printer?**

**If I can what do I need and can you recommend a word processing program (including spell checker) to make it work?**

*D. Clarkson, Newport, Isle of Wight*

If the Canon has a parallel port and understands Epson codes, you can plug straight in. If it has a serial port you'll need the Amstrad/PACE serial port to be able to connect the two together.

Either way you'll need to be sure that you use software with the appropriate printer drivers. The combination that you need is *Protext/Prospell* from Arnor. It is available on ROM or disk but the ROM version is at least seven yards better. Arnor is on 0733 68909. You'll need leads to connect the computer to the printer.

## ■HELP! Not enough info

**Do you have any idea where I can get a machine specific printer driver for the Seikosha GP100 printer, as although I seem to be able to print using an Epson RX80 driver, I cannot get bold, italics, underlining, etc? I would rather not have to spend £2 or whatever on a PD disk full of printer drivers 99.9 per cent of which I don't want and am in doubt whether it actually has the right one in or not. If any fellow readers can help, I would be most grateful.**

*Mark Freestone, North Ferriby, Hull.*

We scanned the office for a crystal ball with a serial port but as none was to be found we were unable to work out what machine you use. Oh dear. Try again.

## ■TIP! Virus time

**In reply to George Garven of Ayrshire's plea about the malfunction of his clock either gaining rapidly or the total report by the system of the clock not existing at all. This could very well be a virus or rather one of two viri. The first one accelerates the battery backed up clock at incredible speeds. Two solutions are used for the remedy of this: remove the battery and short out the terminals, dodgy, or run a program called *Clock Doctor.***

**The second virus seems to be a mutant strain of the first. This turns off the clock completely. When the system tries to access the clock it reports that the clock is not present. Again the removal of the battery and shorting the connections will solve this, but *Clock Doctor* will not cure this one.**

**DON'T PANIC! I suffered with the second strain, even resulting in me sending my memory expansion with on board clock back to the shop. When it returned it was fine for a while, then it went again, but by this time I had found the *Chronos* prog, which will cure both strains of the virus. I have included with this letter, a disk containing *Chronos* and documentation. Could you please forward a copy of this disk on to Mr Garven.**

**Mr Garven will still have to find the disk which contains this virus, which unfortunately is trial and error as *Virus-X* 4 does not recognise this virus (as far as I know).**

*Andy Bennett, Chesterfield , Derbyshire*

But have you got a cure for the flu virus that is doing the rounds here at *Express*? I've tried chewing *Virus-X* disks and even rung the infamous Dr Solomon but still my head aches and my throat dries.

## ■THANKS! everyone

**Further to my letter of August 18 1990 which appeared in your Tech Tips issue no 93, I should like to pass on to you my thanks for your help with regards to purchasing the silicon ink from WACCI for re-inking printer ribbons. It arrived this week.**

**I should like to thank Mr A D Francis re the details for the Z88 to Amiga transfer software and lead, these have been purchased and are now in use. Thanks also to Mr T Meredith regarding printing the Roman/Cyrillic alphabet on the Amiga by way of F Fish's disk which also arrived this week.**

**Last but not least thanks to Mr P Bates of Derby who also replied to my cry for help.**

**Once again my grateful thanks to all concerned.**

*A Dale, West Bridgford, Nottingham.*

Which goes to prove that Tech Tips is inhabited by people with something to give as well as people needing help. Keep the queries and the tips flowing in.

## ■HELP! Where is it?

**Way back in the far distant past (*NCE* issue 51) reference was made to the development of a Spectrum Emulator for the Amstrad PC. Since then, a few issues have made passing references to this and the latest news was that such an Emulator was under review at the *NCE* office back in issue 85.**

**There must be thousands of Spectrum Plus 2 owners who are dying to learn of further details of the above, so please, please, will you publish your deliberations soon as I would like to transfer all my Spectrum Plus 2 software over to my Amstrad PC 1640 before the grim reaper 'boots' my 68-year-old body to the big database in the sky!**

**Desperately seeking help**

*Richard Roberts, Norwich, Norfolk.*

We saw it, we tried it. It fell over. We tried it some more. It fell over some more. Now we're waiting for a version that works. Watch this column. ■

## ■ADVICE! A bit on the side about purity

**With reference to D Tweedies problem on purity (issue 98).**

**"Pure bit not set" is an error generated by the Command Resident. Because the Amiga is a multi-tasking machine you cannot just make any program Resident. Resident programs are programs that can be executed simultaneously by several tasks. The program must be re-entrant and re-executable. This is so with most of the commands in the directory C:.**

**Commands that can be made resident are known by a flag in AmigaDOS 1.3, called the pure flag. Resident looks to see if this flag is set and only loads if it is. Otherwise you get the message "Pure Bit not Set." You can force resident to load a program which does not have its pure bit set by using Resident command PURE. Be careful, the program will give you a Guru if not suitable for the Resident list. Try running it from two different shell windows at the same time to test it.**

**Also, see the "Protect" command (6) below.**

**Syntax:** `PROTECT filename FLAGS r,w,d,e,s,p,a`

**(1) r = file can be read.**
**(2) w = file can be written to**
**(3) d = file can be deleted**
**(4) e = file can be executed**
**(5) s = script file**
**(6) p = file is pure**
**(7) file is archived – hard disk backup use.**

**Hope this helps.**

*D Hoy, Hampshire.*

**On reading your page in issue 98, I was astonished to read that you were unable to help D Tweedie with his problem with his hard disk. The problem concerns the protection bits, in his case, of the L:Shell-Seg file that he copied onto his hard disk. There are seven of these protection bits: script, pure, archive, read, write, execute and delete and it is the second of these that concerns Mr Tweedie.**

**Setting the pure bit of L:Shell-Seg allows this program to become resident (which is absolutely necessary with this program). Unfortunately, AmigaDOS does not preserve these protection bits when using the Copy command (unless you tell it to with the NpPro parameter) so his hard disk's L:Shell-Seg program has only the read, write, execute and delete bits set, hence the "Pure bit not set " error!**

**The solution to Mr Tweedie's problem is as follows: double click on the Shell icon from Workbench and enter:**

```
Protect DH0:L/Shell-Seg +P
```

**This assumes that your hard drive is called DH0. If not then replace it with the correct device name. Another way would be to copy the program from floppy again, using:**

```
Copy L:Shell-Seg DH0:L/NoPro
```

**Now if you type:**

```
List DH0:L/Shell-Seg
```

**you should get something like:**

```
DH0:L/Shell-SSeg 7116—p-rw-d 04-Nov-89 00:00:00
```

**and no error message should be displayed when booting up in future. I hope that this will be of some help to any other of your readers who have also experienced the same AmigaDOS error message.**

*Roy Freeman, Luton, Bedfordshire*

And I'm astonished that we're not all shell-shocked. Thanks for the advice. All tips and advice are gratefully received.

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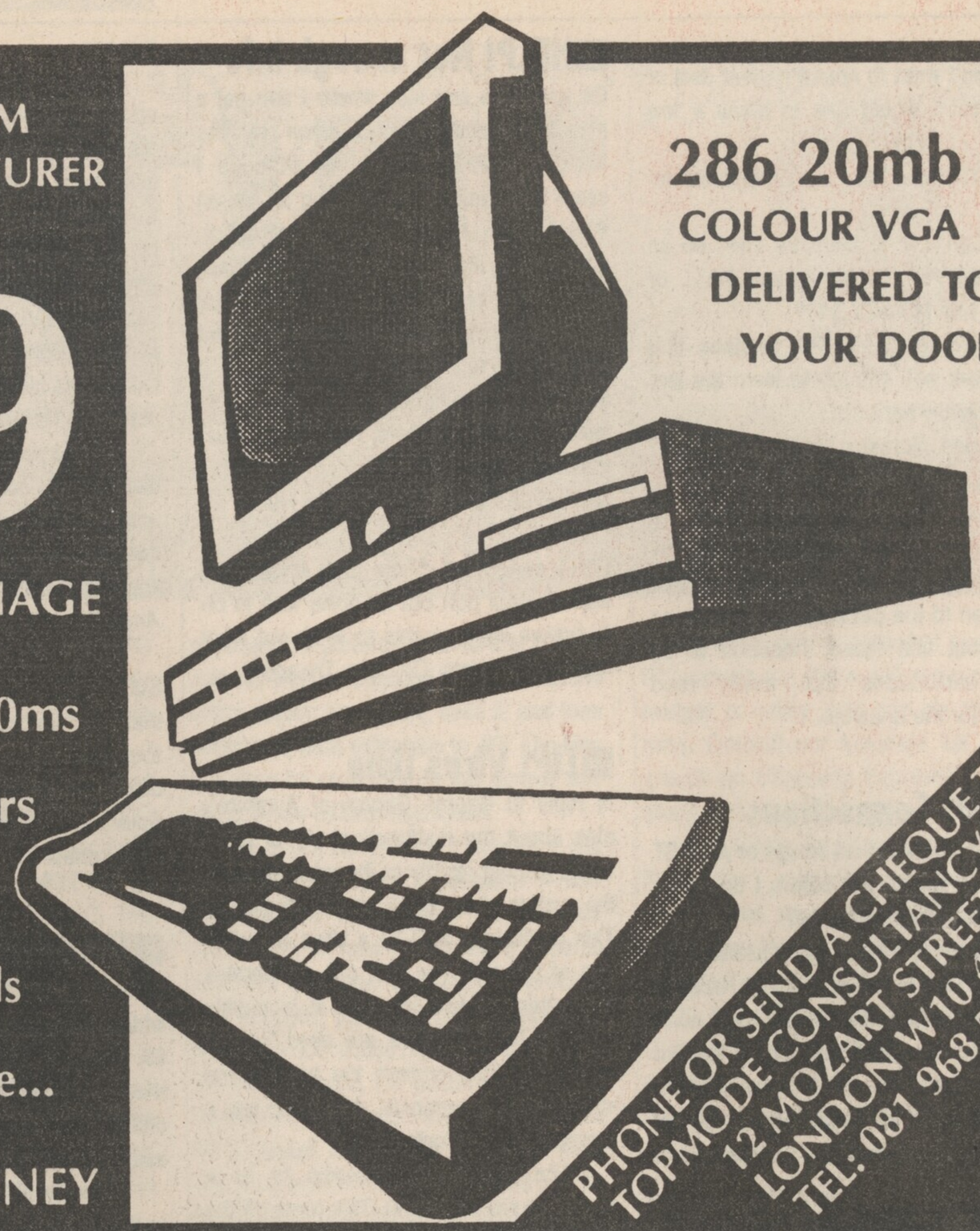

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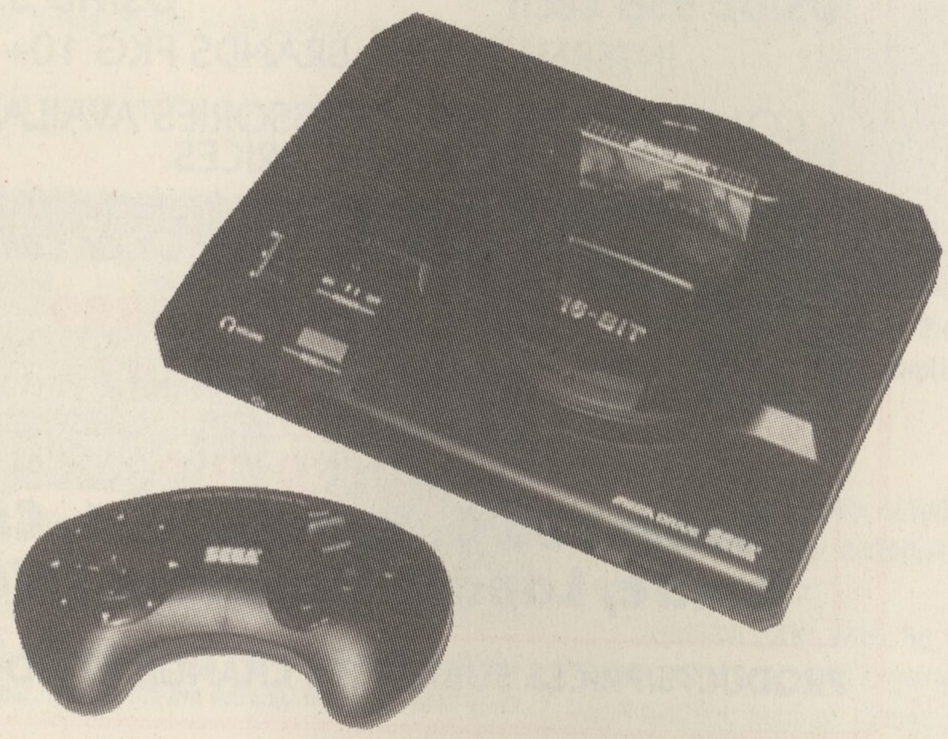

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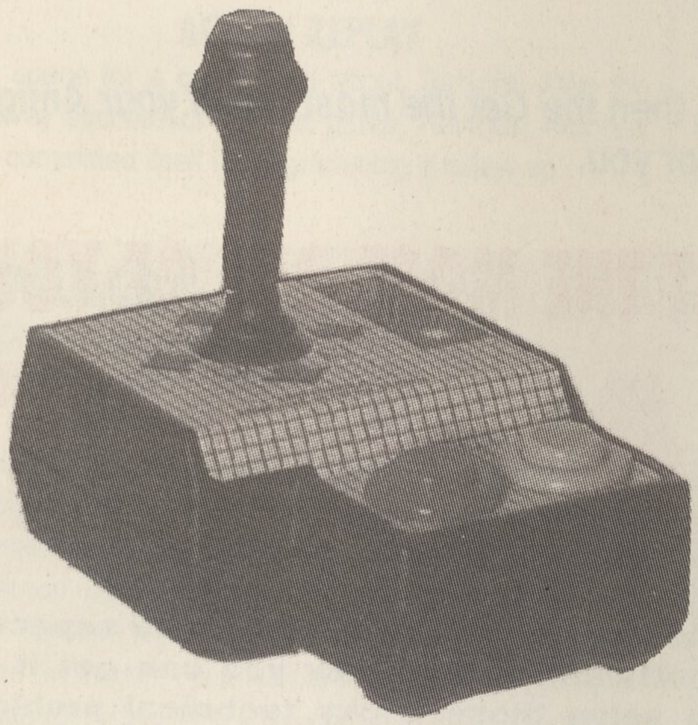

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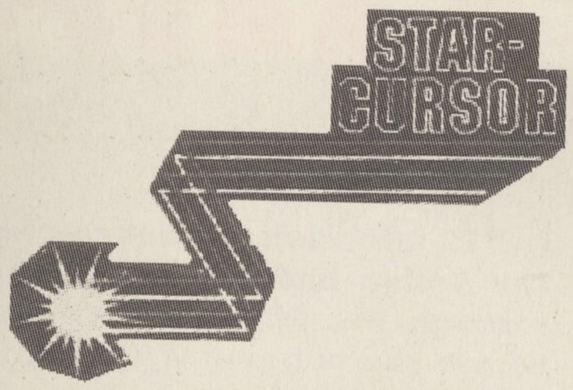


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# Mark Higham's GAMES WEEK

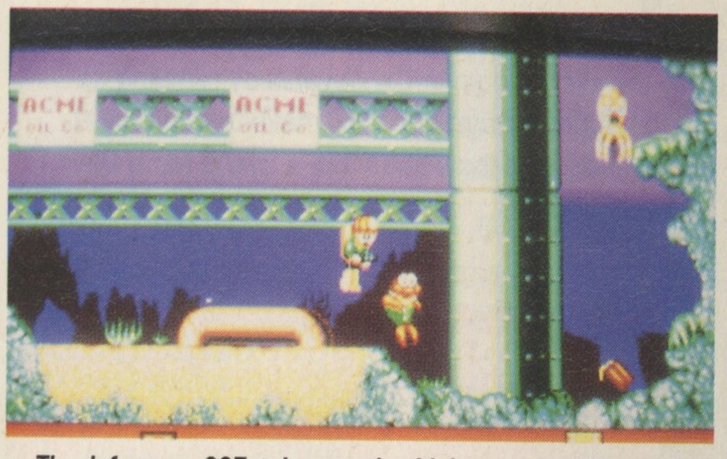
There's something fishy going on here. Domark is still writing conversions of James Bond films, but suddenly Millennium has popped up with its own Bond game. Bond with humour, no less.

This particular 007 isn't so much of an undercover spy as an underwater fish. 007 – or James Pond as he's known to his friends – is more than keen to take on any mission, however dangerous.

The game is divided into a host of levels, each one set in the sea. Some are played deep on the ocean bed while others are close to the shore. At the start of each level you are given a mission objective. This may be to collect keys which release trapped crabs from their basket or to find dynamite and pile it round the legs of an oil platform.

It's an unlikely idea for a game, but with colourful, lively visuals it might just end up being a surprising contender for the Xmas charts – or tumble into a watery grave.

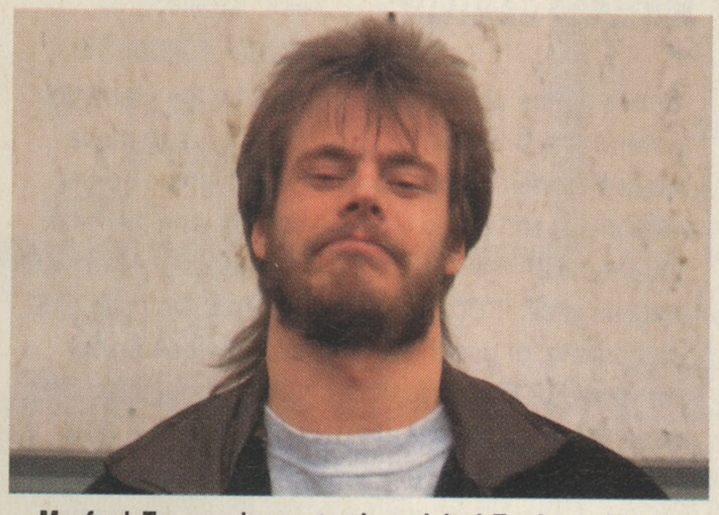
Watch this space for the full review in a couple of weeks' time.



*• The infamous 007 takes to the high seas in Millennium's James Bond spoof. Find out if the intrepid Mr Pond ends up in a watery grave.*

## ACTION REPLAY

Just space for a quick word about *Turrican*. After the runaway success of the first game, Rainbow Arts has now committed itself to programming a follow-up.



*• Manfred Trenz, who wrote the original Turrican. Now he's writing a follow-up – not surprising when you consider the heaps of cash it made.*

Rather predictably called *Turrican 2*, the new version is provisionally scheduled to appear towards the middle of next year.

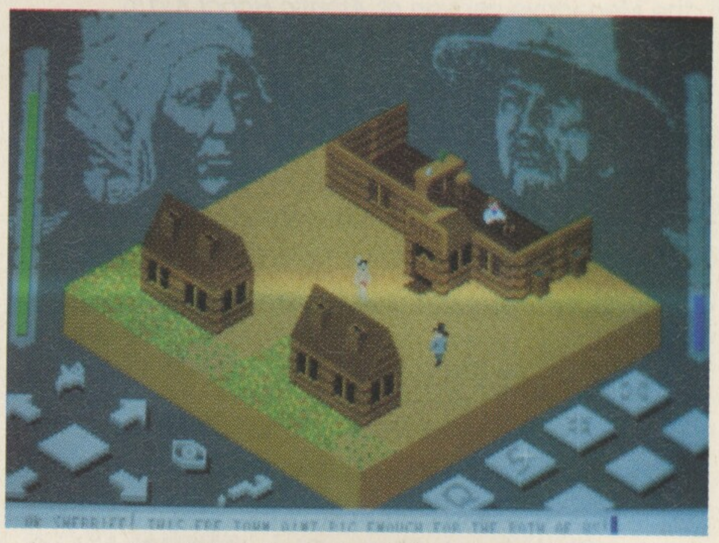
Version one was an absorbing and colourful shoot-'em-up so what's going to make it into version two? Nothing original, I'll bet. The plan is to incorporate more of everything – more aliens to blast, more bonuses to collect and more levels to scour. So start saving more of your cash.

The game will be programmed by Manfred Trenz who designed the original concept and coded the C64 version. As before, ST, Amiga, Amstrad CPC and Spectrum versions are scheduled with the C64 version leading.

## AWAKEN YOUR SPIRITS

Last week I went potty over a new game from Millennium planned for release next spring. This seriously mega game is played on a *Populous*-style isometric landscape and the idea is to use your role as an Indian spirit to influence characters in the game.

Currently called *Outlands*, the scenario and name may change in the months leading up to its release. In the meantime, this is the first screenshot to be released so sit and drool. ■



*• It's new. It's original. It's radical.* **Outlands** *could be as big as* **Populous.**

# THIS WEEK'S GAME REVIEW

## SIMULCRA

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Fed up of straightforward scrolling shoot-'em-ups? Bored by the traditional end-of-level guardians? Seeking something with more originality? *Simulcra* could be just what you need.

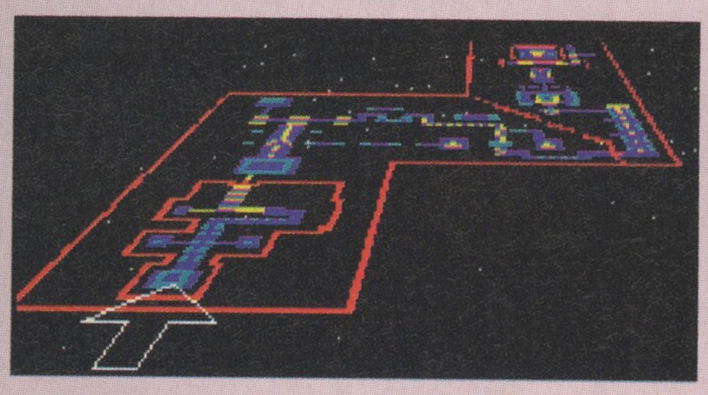
*Simulcra* looks vastly different from any shoot-'em-up on the market. For a start, it's arranged as a series of scenarios. Within each scenario you have five matrices to complete; each a complete level.

At the start of a game the matrix pops up to show you the game map and indicate your location and direction. The idea is to work your way from one end of the matrix to the other. The matrix is contructed as a series of panels, all linked together to provide a network of possible routes. These essentially "float" in outer space.

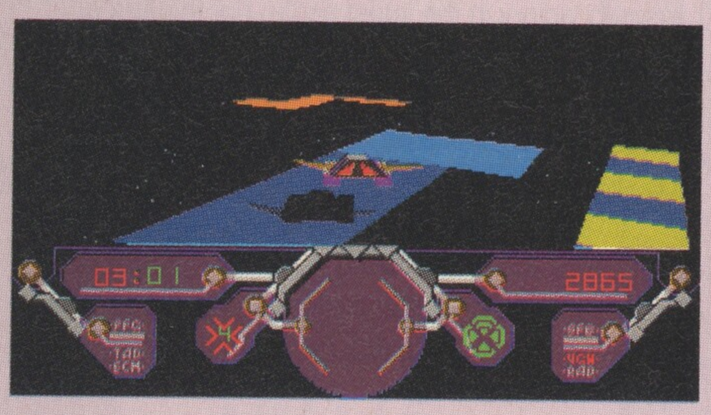
Unfortunately, this isn't a simple maze game. Instead of hunting out a winding route to the end, part of the problem involves obliterating red energy barriers which restrict your access to areas of the level. You can't just toss a well-timed grenade at the solid red wall, instead you need to locate the energy generator found somewhere around the barrier and bomb it.

To move through the game you have two methods of travel. You can either steer over the maze of linked panels – by far the easiest method – or you can fly through the sky.

Flying is faster but it's very easy to lose control and plunge into an energy barrier. You're also under attack from more flying craft and you can only fly if you're equipped with wings. These are destroyed when you crash so they won't always be at hand. Fortunately, you can still glide over small gaps even without wings attached.



*• You can call up the game map at any time during play to work out how you're doing. The red lines indicate energy barriers which still have to be broken down. Locate the energy generators and blast them to proceed through.*




*• Extend the wings and you glide over short gaps. Flying is certainly the quickest way to reach the energy barrier but it's also the most dangerous. In flight, you're susceptible to attack from other flying craft. You also need to watch out that you don't fly straight into the energy barrier.*

Of course this wouldn't be a decent game if there weren't a few bad guys traipsing round the universe. 3D flying craft, legions of enemy installations and stationary obstacles all present you with nightmarish problems. You can blast most of them, though it's tricky lining up to aim correctly. When you fire at some of the enemies, they drop bonus pods which you can pick up to gain extra power. Some reward you with more points, others give you new lives and still others improve the performance of your craft – perhaps by giving you radar to scan for enemies or new wings.

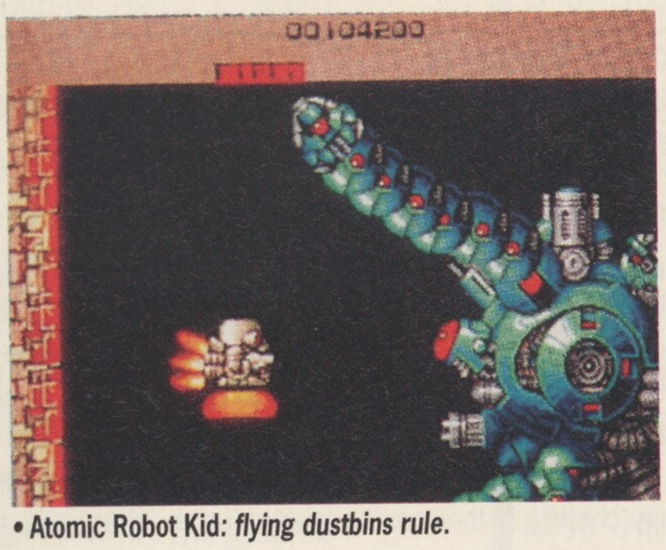
The visuals prevent this from being another boring and traditional shoot-'em-up. All your opponents, bonus pods, enemy installations and hosts of stationary obstacles are represented as 3D plains, effectively shaded. The actual matrix itself is shown as connecting coloured tracks which extend into the horizon to give a real impression of depth.

*Simulcra* adds new life to a tired and hackneyed game genre. If you're looking for furious, high-speed joystick action, heaps of bonuses and fearsome enemies all rolled into an innovative new shoot-'em-up, *Simulcra* is it.

# THE CONSOLE ZONE

**Your weekly guide to console gaming with Richard Frederick.**

## SEGA MEGADRIVE




• **Atomic Robot Kid: *flying dustbins rule.***

Treco, the 'total leisure planner', has just released the Megadrive version of *Atomic Robot Kid* in Japan. This multi-scrolling coin-op conversion features one of the most unusual central characters ever seen in an arcade game – a sort of flying dustbin armed with a multitude of impressive weaponry. *Atomic Robo-Kid* is standard shoot-'em-up, far enlivened with some attractive graphics and easy-to-get-into gameplay. It costs 6800 yen (£27).

**PLAYING TIP**
Play any *Golden Axe* level by selecting arcade mode, hold down [Lower Left] to spin the characters around on the character selection screen. Simultaneously hold [Button B] and [Start] to make the number appear in the top left corner of the screen. Use [Up] and [Down] to alter the starting level.

## NEC PC ENGINE

**PLAYING TIP**
Enter a secret mode in *Ordyne* by holding down [Run] and pressing [Select] six times on the title screen. Release. Simultaneously hold [Button], [Button] and [Upper Left]. This secret mode lets you select any round, number of ships, turn on autofire, and run a second test.

## HI-SCORERS

**So you think you're good eh? Send us your best scores on your favourite games for the Megadrive, Gameboy, Sega Master, NES, PC Engine, Lynx and Neo-Geo.**

**GAMEBOY**

| | | |
|---|---|---|
| *Super Mario Land* | 331,860 | Alex Taylor |
| *Tetris* | 115,998 | M O'Brien |

**MEGADRIVE**

| | | |
|---|---|---|
| *DJ Boy* | 3,531,300 | Alex Taylor |
| *ESWAT* | 277,900 | Alex Taylor |
| *Final Blow* | 2,525,040 | Alex Taylor |
| *Forgotten Worlds* | 653,900 | Alex Taylor |
| *Ghouls 'n' Ghosts* | 102,400 | Alex Taylor |
| *Golden Axe* | 414.5 | Alex Taylor |
| *Super Shinobi* | 1,968,500 | Alex Taylor |

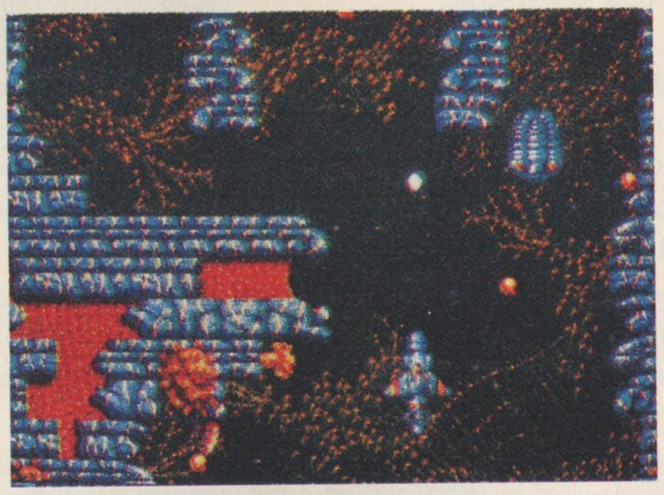
## NINTENDO GAMEBOY

*Boxxle* is "the ultimate brain teaser for the Gameboy system", says its creator, FCI. "Your job is to move boxes into their proper spaces, to straighten up the warehouse and get to the next screen, and the next, and the next! The challenges keep coming – over 100 screens in all. It *Boxxle*s the mind! Plus, you can pick your puzzle, or use the edit function to create your own screen." *Boxxle* features 108 screens, three edit screens and password memory.

FCI (Fijisankei Communications International) is the video game arm of a giant Japanese company that also includes Pony Canyon Inc (a leading Japanese producer of video casstte, with a 25 per cent share of Virgin Records, also representing A&M Records, Disney, RCA Columbia Video, MGM/UA Video and Vestron in Japan), Fuji TV network (Japan's largest commercial network reaching over 90 per cent of Japan's population of 120 million) and Nippon Broadcasting Co (Japan's largest radio network). There ends our Japanese business study!

**PLAYING TIP**
Find the secret room in *Castlevania* by climbing up the fifth rope in stage one. You move through the bricks and out of the screen into a bonus room filled with four goodies.

## SEGA MASTER SYSTEM



• **Xenon II: *coming soon on the Sega.***

Imageworks is converting its popular 16-bit game *Xenon II* onto the Sega Master system. "*Xenon II* is the shoot-'em-up to end all shoot-'em-ups," says Imageworks. "The plot behind *Xenon II – Megablast* sees a return to the sorry state of affairs that existed at the start of *Xenon I*, with the Xenites poised to launch a major offensive on earth.

"This time they have used the services of a warped but very creative scientist, who has found a way to travel back through time. Using this device the Xenites have planted a series of time-bombs in each major area which, when detonated, will trigger a natural disaster, providing the opportunity for the Xenites to move in and take control. By corrupting the past they control the future, and will have assured victory in the latest battle. For the lure of cash you decide to help the Xenites in their evil plan. Your task is to travel through time, detonating the bombs, while blasting the hell out of anything that gets in your way."

Imageworks confirms, "Now Sega owners can experience the breathtaking graphics, hot sound-track and fast action that makes *Xenon* II the world's best shoot-'em-up. Coming for the Sega Mega system next year".

**PLAYING TIP**
For as many *Black Belt* lives as you like, choose a one-player game and press [Reset] just before the game starts.

## WANTED DEAD OR ALIVE

**We need your playing tips, cheats and maps for any video games available for the Megadrive, Gameboy, Sega Master, NES PC Engine, Lynx and Neo-Geo. Send everything to the usual address.**

## NINTENDO ENTERTAINMENT SYSTEM

Taito Software Inc is about to release the NES version of *Indiana Jones and the Last Crusade*. "*The Last Crusade* was the blockbuster movie for 1989 (grossing over $440 million worldwide)," says Taito. "Our video game, which accurately follows the film's storyline, was developed for play on the Nintendo system under an exclusive licensing agreement with Lucasfilm Ltd."

"*Indiana Jones and the Last Crusade* is the ultimate in high-adventure video games," according to Alan Fetzer, president of Taito. "Using a memory configuration of two megabits, plus 64K SRAM, plus a MMC1 memory chip, making it one of the most advanced NES games available, it pushes the Nintendo Entertainment System to its very limit, and allowing us to create greater video game detail than ever before. This highly expanded memory impacts the graphics capability by providing *The Last Crusade* with life-like animation throughout."

*Indiana Jones and the Last Crusade* costs $49.95 (about £30) on the NES. It is the first product completely designed and programmed by Taito's US research and development centre in Seattle.

**PLAYING TIP**
Find a bonus stage in *Kung Fu Heroes* by walking anti-clockwise around the screen, touching each corner.

## ATARI LYNX

**PLAYING TIP**
The next seven *Chip's Challenge* passcodes:
11: DCKS, 12: BTDY, 13: COZQ, 14: SKKK, 15: AJMG, 16: HMJL, 17: KGFP

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# IDEAS IN ACTION

**Glasgow, European city of culture 1990, played host to the world's first International Robot Olympics in September. Our roving reporter, Stuart Low, took a look at what it had on offer.**

This two-day event was described as "fun with a serious purpose" by the Turing Institute, the organisers and artificial intelligence unit of the University of Strathclyde.

The Olympics was the brainchild of the organiser Dr Peter Mowforth and it attracted over 50 entrants from 12 countries from as far afield as the USA, the USSR, India, Mexico and Japan. Sylvester McCoy – better known as Dr Who – officially opened the show, while the pole-balancing robot 'Trolleyman' lit the Olympic flame. The grand parade of robot athletes single-filed into the University sports hall.

Dr Mowforth told me that the purpose of the Olympics was to attract people's attention and that the event could be considered a platform for the presentation of "first division ideas in action". The largest gathering of robotic technology ever to have taken place, it afforded roboticists from around-the-world a chance to share their knowledge and experience. It also showed the media and the public just what the capabilities of these machines are.

The Olympics had only been made possible through the sponsorship of The Scottish Development Agency, the National Westminster Bank and the IEEE Robotics & Automation Society. Dr Mowforth put that down to "a lack of committment from the Government and Industry for high level robots". British Government interest mainly lies in using robots in hostile environments. The governments of Japan and the USA however, have been quick to realise the benefits of using robotic technology in the service industries. In the United States robots with on-board sensors patrol prison corridors, while it is possible to hire robots in some Japanese and American hospitals to provide, for example, a meals-on-wheels service.

Dr Mowforth admitted that the use of robotics in British industry, other than for welding or spray painting, was limited. But he did stress that Britain was no different in this respect to the majority of other developed countries, with the exception of the US and Japan, although 'Prometheus', the world's largest robotic project, involving tests using a driverless car on the motorway, is a German initiative.

Dr Mowforth further explained that "the definition of a robot differs greatly from country to country and it is therefore very difficult to establish the extent to which robots are used". He indicated that the robotics industry is experiencing a move away from the development of automated industrial machines and added that "a new generation of robots is now emerging from research laboratories all over the world."

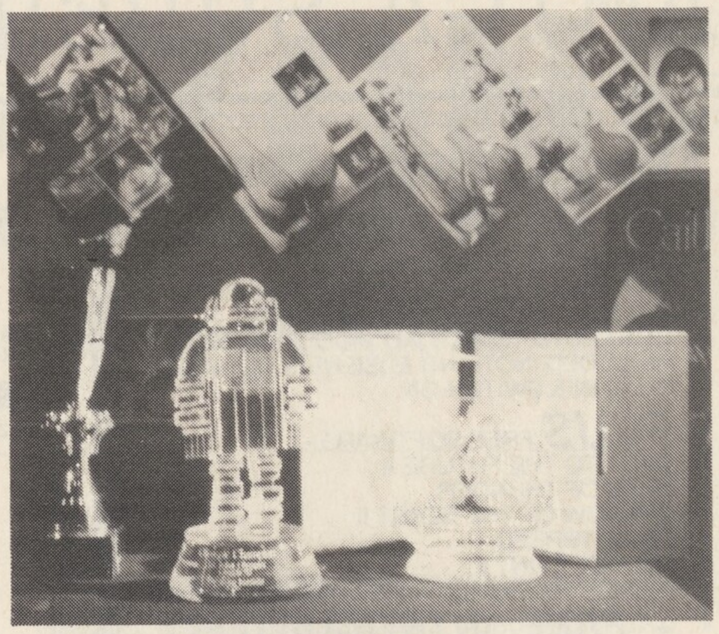
## A BIT OF HISTORY

The advance of robotic science has been intermittent. According to Jack Donald, Executive Director of the Turing Institute, the main problem with the robots of the 1970s was their poor perception capabilities. This, and other problems, led to a cut in UK government funding in the mid-1970s. Thus Britain lost not only her lead in the robotics field, but also many of the experts who went overseas to continue with their work.

Interest wained in robotics until 1982, when Japan announced its 5th Generation project. A fresh impetus began, but was once again thwarted as the difficulties associated with robotic research once more became apparent. As the last decade drew to a close, what difficulties remained, began to be resolved. The tools needed to continue with more advanced research beginning to appear.

**The Olympics drew together the diversities in contemporary robot design**

Even more important was a major shift in scientific thinking, which was to have a profound effect on the future of robotic research. It was realised that robots did not necessarily have to follow the principles of humanoid design, nor did they have to possess wholly human functions. Once this was appreciated, interest revived and several projects were set up to investigate how robots could best be constructed and applied to cope with various situations.



*• The Olympics special awards (from left) – Young Roboticists Award, Champion of Champions Award, Nat West Prize for Technology.*

## THE CONTESTANTS

This Olympics event drew together the diversities which now exist in contemporary robot design.

Among the entrants were two bi-pedal robots, one from the University of Wales College, Cardiff (UWCC), the other from Paisley College of Technology. A spokesman for UWCC described the bi-ped as "a machine which could venture into places which had principally been designed with man in mind".

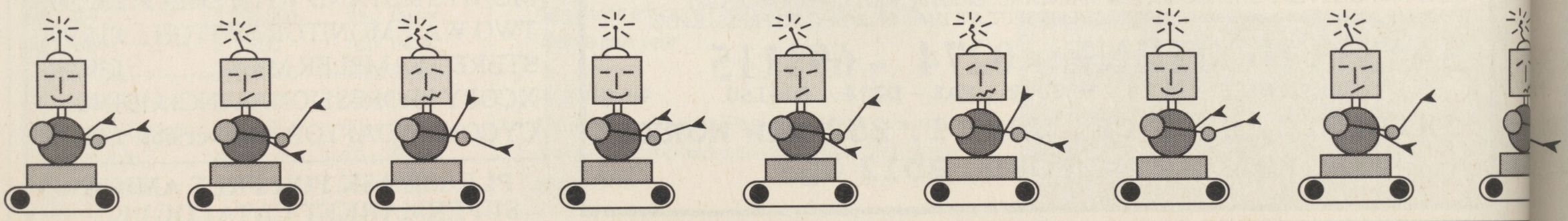
Bi-peds call for great precision in their design in order to achieve balance and require more powerful motors to drive the legs. They also have to be lightweight in construction and are limited to carrying lighter payloads. They do, however, offer greater movement ability and are well suited to coping with rough terrain and difficult obstacles. Thus machines of this type are ideally suited to applications such as fire fighting and surveillance.

Three years into its development, the UWCC Bi-pedal Walking Robot weighs in at around 30Kg. DC Servo motors, connected to off-board amplifiers, power the ankle, knee and hip joints, while on-board sensors measure joint-angles and monitor the state of foot contact with the ground.

The robot did develop a slight technical problem, which impaired its performance in the bi-ped races, but it still managed to finish in first place, securing an Olympic gold.

The University of York has spent 9 months developing its autonomous guided vehicle. RONIE (Remote Observation Navigation Investigation Equipment) is based around a 68000 processor and was programmed using an Atari ST. Ultimately, research of this type is geared towards the driverless car or the pilotless plane. The vision system was rather crude, although it was capable of identifying general shapes.

TAG, an Alnwick-based technological consultancy firm, hopes to develop a robotic industrial floor cleaner and a firefighting/security machine based on a prototype called Hilda II, within the next two years. More immediate plans include the release of an off-the-shelf behavioural programming package for the Atari ST range. TAG hopes this will be available from April 1991. Such a program could present a major breakthrough for many roboticists, as behavioural programs normally have to be written from scratch. Hilda II is also capable of storing several compiled behaviour patterns, dispensing with the need for reprogramming between tasks.



## AND THE WINNERS ARE

A few of the entries had been damaged in transit and were unable to compete in their dedicated events, others had been entered as static exhibits.

● DARS (Domestic Automated Robotic System) was entered by Rudy Spencer from London. This independent entry is based on a 286 processor and was programmed using Turbo Pascal. DARS uses a wheelchair motor powered by a 24V battery. Described as a house servant, DARS, once completed, should be capable of a host of applications including voice recognition and intruder detection through its vision system and on-board infra-red and proximity sensors.

● In the wall climbing event Zig-Zag, developed by Arthur Collie at Portsmouth Polytechnic, held on to an early lead as firmly as it held on to the wall. It beat off stiff competition from the Russian RVP1 and RVP2 models, which normally act as inspection vehicles, entered by Professor Valerie Gradetsky from the USSR Academy of Sciences. Professor Gradetsky's RVP's faired better against Portsmouth Polytechnic's Robug II, which put on a dramatic display when it ran out of compressed air half way up the course. Frantically it threw its legs in all directions as it tried to re-attach itself to the wall, before finally falling back on to its support rope.

● 'Attila', a Hexapod model entered by the Massachusetts Institute of Technology, stormed home to take the gold in the four, six and eight-legged race. MIT's entry also scooped the Nat West Prize For Technology which included a reward of £200.

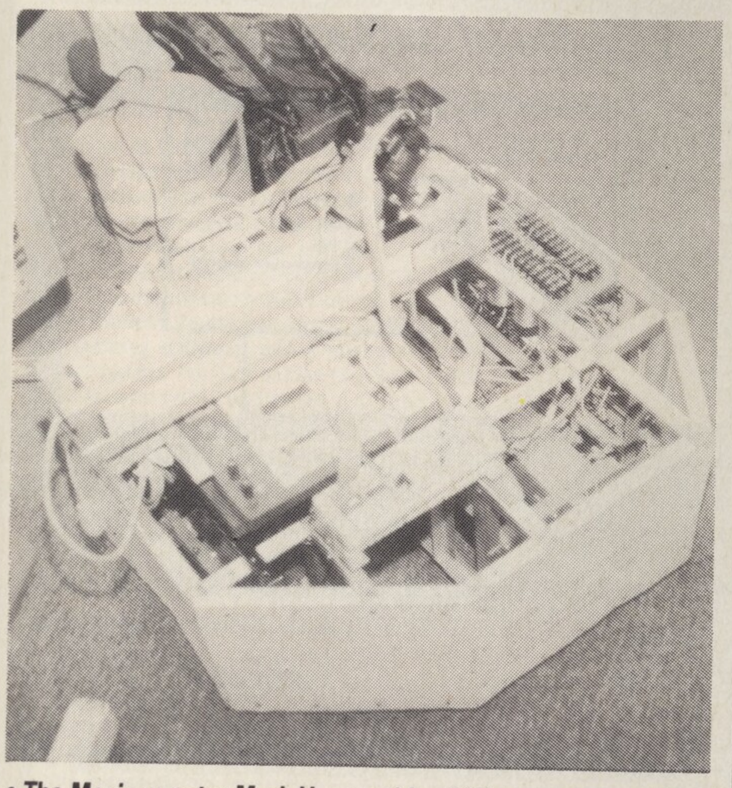
● The Javelin event proved that robotics has still to learn a thing or two from the old masters. Here the gold went to the 'Japanese Archer' from the Museum of Automata in York.

Built around a Block and Cam mechanism the 140-year-old Archer took first place with a throw of 3.3m. East London Polytechnic's robot arm 'Wilberforce' came second (1.5m) while the 'Elephants Trunk' developed by Heriott Watt University was placed third.

● Schoolboy Brian Carr's 'armed robot', entered by St Patricks High, Coatbridge, took the silver medal in the manipulators category.

Brian's robot was completed in under three months Part as part of his fourth-year project. His project also earned him the Young Roboticist Award presented on behalf of the IEEE Robotics and Automation Society.

● Mexico's entry from the Instituto Tecnologico y Des Estudios Superlores De Monterrey was described as an "experimental remote probe" by its parent Guillermo Haza. Mark V, is capable of 3D image processing using an on-board laser linked to its vision system.



• The Mexican entry Mark V – capable of 3D image processing.

● The Champion of Champions Award, sponsored by Caithness Glass, went to the Japanese entry 'Yamabico'. Fifteen years in development, this research project from the University of Tsukuba also took gold in the wall following and bronze in the obstacle avoidance events. Project parent Shooju Suzuki, who has been involved with the robot for three years, explained that 'Yamabico' was built around three 68000 motorola microprocessors. These control on-board ultrasonic sensors, a laser range-finder and handle the motion program execution.

Shooju is currently developing two further 68000 processors with a view to upgrading the two existing 6809 processors, which at the moment control the voice synthesis unit and the locomotion of the robot.

● The London based Shadow group entered a variety of robots from dedicated vision systems to its ultimate long-term project 'Shadow Walker'. Over two years in development, 'Shadow Walker' is still under construction. Richard Greenhill, who is involved in the 'Walker' project, said that the final version was based on a humanoid design and would be very friendly in appearance. He added: "It should be able to do the housework and the washing-up and is expected to sell for the price of a new car".

● Ashish Panwar from the City Montessori Inter College in Lucknow, India, had entered his school project SIAS. He said that the study of robotics in India was very limited as parts are very difficult to get hold of.

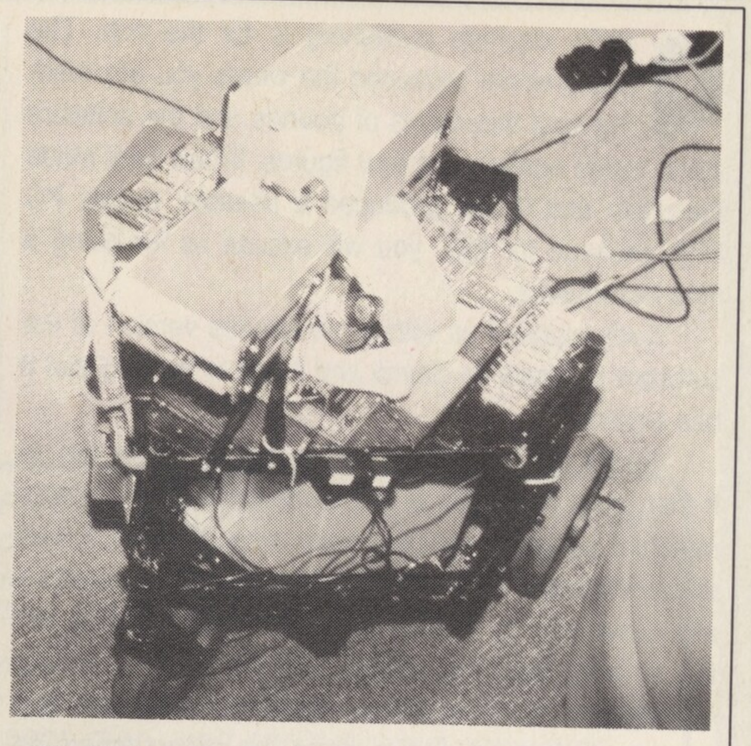
● The Turing Institute entry, Richard I, as well as incorporating a speech synthesis unit which earned it first place in the talking event, acts as a development vehicle for advanced vision and aural systems. As well as tracking abilities, the enhanced vision system is also capable of zooming in on a subject, while Richard I's sophisticated 3D hearing ability put other similar projects in the shade. Not only can it pick up sounds, it can also identify where the sound originated.

## SO WHAT OF THE FUTURE?

Robotics, at the cutting edge of technology, is an expensive and difficult business with concrete reward rarely apparent at the genesis of a project. A high profile is therefore vital to keep development funds flowing. So is there a robotics future in this country?

The next large-scale application of robotics envisaged by Dr Mowforth is within the toy industry. If this happens it could lead to the accelerated use of robotics in other areas, such as the disabled, as the initial research costs would have been borne by the toy manufacturers. The large number of disabled visitors who attended the Robot Olympics proved that this type of technology was of considerable interest to the handicapped. For the disabled, robotics is a potentially very liberating technology. As Dr Mowforth put it: "Imagine an intelligent wheelchair which would stop automatically at the top of a flight of stairs for instance, or the benefits vision systems could bring to the blind".

The attitude to robotics differs greatly between Europe and the United States. A very pragmatic approach has been adopted in the European arena where projects attract mainly commercial funding. Many of the research projects undertaken by the Turing Institute are funded by Westinghouse, British Aerospace and IBM.

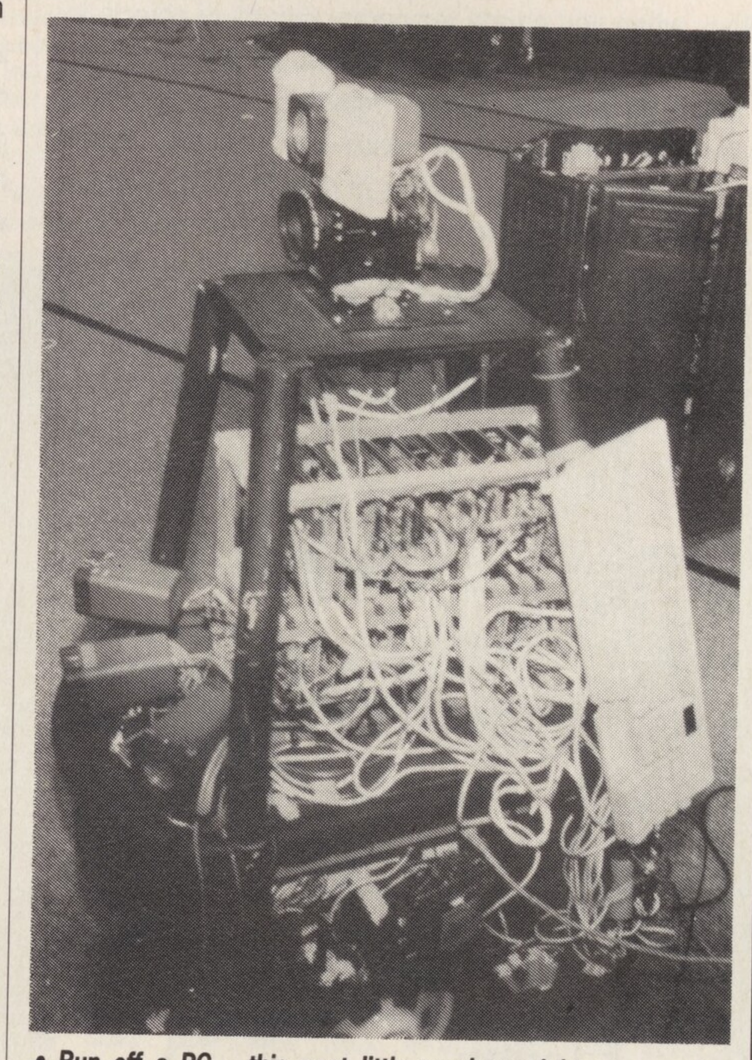


• The final version of 'house servant' DARS will recognise voices and detect intruders.

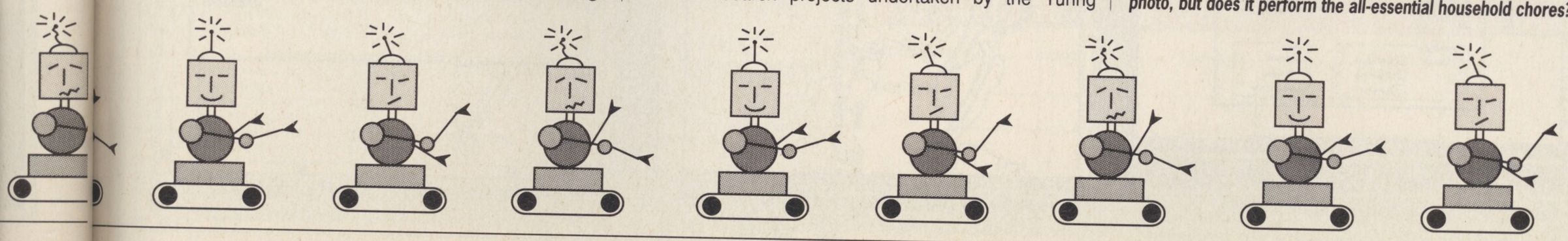
In the US robotics are treated with mistrust. Many early American projects had huge financial backing from the military and millions of pounds were lost when several projects folded.

Dr Mowforth felt that the remaining problems in robotic development lay within the limitations of present computer technology. He said: "At the moment computers are unable to process the volume of sensory information needed to control robots effectively".

The Robot Olympics is set to become a bi-annual event, returning to Glasgow every fourth year. Nagoya, in Japan, has already expressed an interest in hosting the 1992 Olympics. Now that enthusiasm for robotic research is on an upward spiral, with government and commercial funding more readily available, it will be interesting to see how the experimental projects of 1990 evolve in the years to come.■



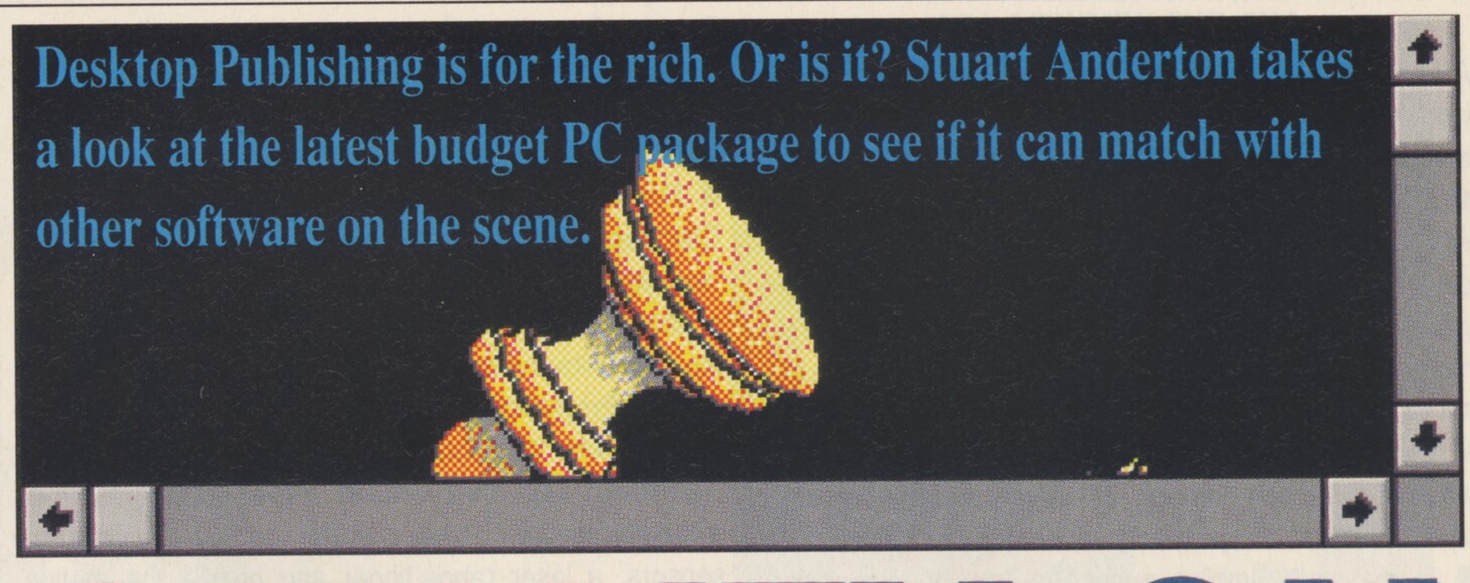
• Run off a PC – this neat little number might snap a nice photo, but does it perform the all-essential household chores?



# DESKTOP PUBLISHING

**PAGEPLUS**

Desktop Publishing is for the rich. Or is it? Stuart Anderton takes a look at the latest budget PC package to see if it can match with other software on the scene.



# QUALITY ON A BUDGET

Quality desktop publishing is for the rich. The setup which produced the words you are reading cost thousands of pounds and the software alone would easily make four figures. When Serif made the claim that it had produced a useable, quality PC DTP package for £99, you will excuse us for being a mite incredulous.

Serif supplied us with a pre-release version of the software to check its claims and it has to be said that it has a point.

Serif's DTP, called *PagePlus*, has a quality feel to it that other packages in the same price range cannot match. It has achieved this in two ways. First off, it runs under Windows 3. Windows 3 has already been virtually canonised by the computer press and now is not the time to recap its virtues, but it has an extremely visually smart user interface which makes almost any program look good. It also helps the programmers as windows, menus, screen redrawing and so on are all handled by Windows.

The other way *PagePlus* scores in the feel stakes is by only running on fast machines. You won't persuade it to start up on any machine which doesn't have at least a 286 and a megabyte of memory, but give it a more powerful machine and it can really stretch its legs. Other budget programs struggle along on an 8088 machine and are limited by the constraints of an XT.

## FEATURES GALORE

In use *PagePlus* strongly resembles the DTP classic *PageMaker*. There is a pasteboard surrounding the page onto which you can place items and there is a toolbox which floats around the screen from which you can select lines, boxes and text tools.

Items sit directly on the page; there are no frames into which you pour text. Graphics overlay text unless you specifially choose the run-around options.

There are a few additions to the *PageMaker* scheme of things which raise *PagePlus* well above the status of a mere clone. For a start, text can be rotated. Also, when you create temporary groups of objects by Shift-clicking them you can scale the group together.

But most powerful is the Property Panel. This is an interactive dialogue box which lets you alter type's attributes and see the effects in real time. For instance you can highlight some text, select 'size' and use a scroll bar to increase and decrease the typesize. As you pull the bar up and down the effects of your action are shown instantly on the screen. This is a unique feature to *PagePlus* and one which I would not be surprised to see surfacing in other programs shortly.

## PLENTY OF FONTS

Serif promises that *PagePlus* will ship with around 40 scalable fonts, including LaserWriter-compatible versions of the common ones. It supports all Windows-compatible printers – and that's most of them.

It includes stylesheets, but templates and master items are absent. Many features were yet to be implemented in the pre-release version which had a tendency to crash and was a trifle slow. However Serif promises that it will ship with a full library of fonts and clip art and hopes to include Pantone colours – the pre-release version has RGB and CMYK as colour models.

When *PagePlus* is finished it will be ideal for knocking out the odd page flyer or leaflet. It's not a document processor, more of a single page layout tool. At £99 it will almost certainly become a standard Windows add-on alongside *Write* and *Paintbrush.*

According to Aldus Corporation, creator of *PageMaker*, *PagePlus* resembles and operates much like *PageMaker*. It has threatened Serif with "any and all legal remedies" over the user interface of *PagePlus* for the Windows program and has demanded that Serif "refrain from marketing or distributing *PagePlus* until it is non-infringing".

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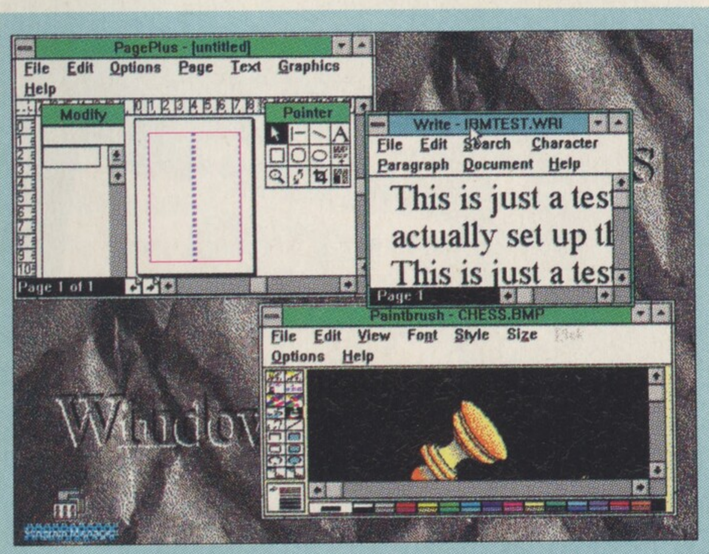
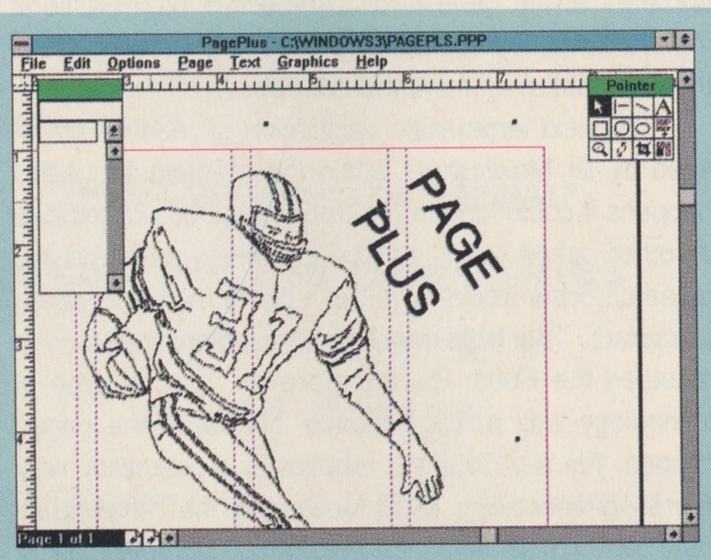
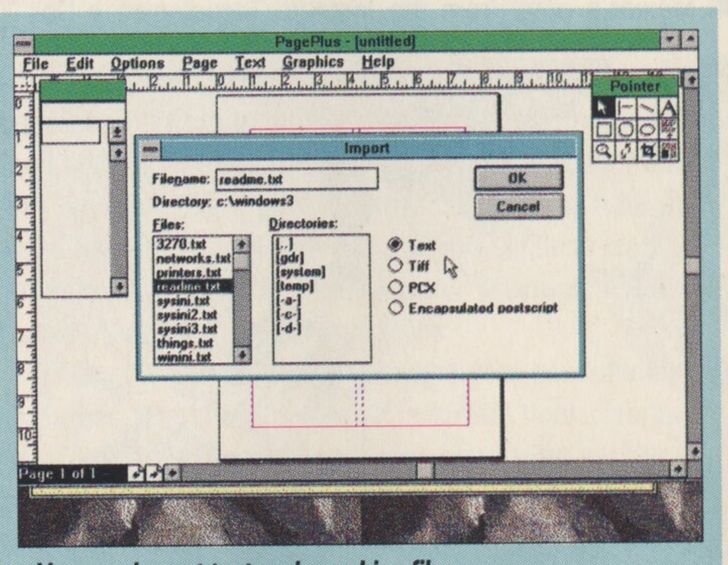
*PagePlus* will be available from November 26. Contact Serif (Europe) Ltd, PO Box 15 West PDO, Nottingham NG7 2DA, Tel 0602 421502.■



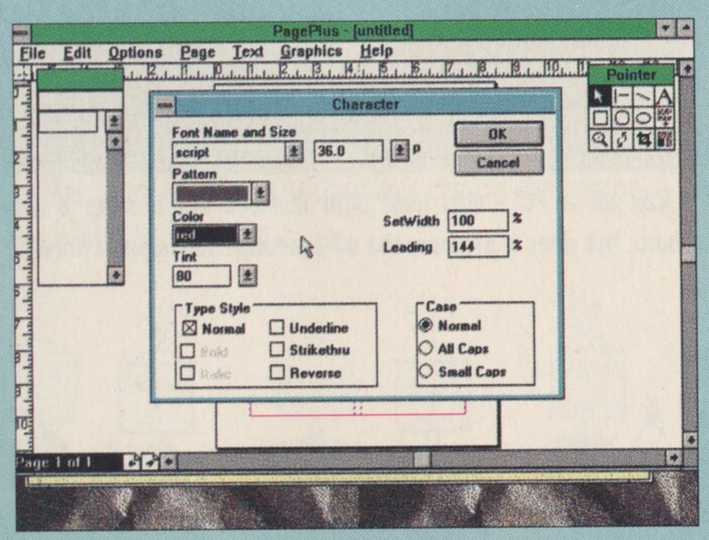

• *Multi-task PagePlus with other Windows applications.*



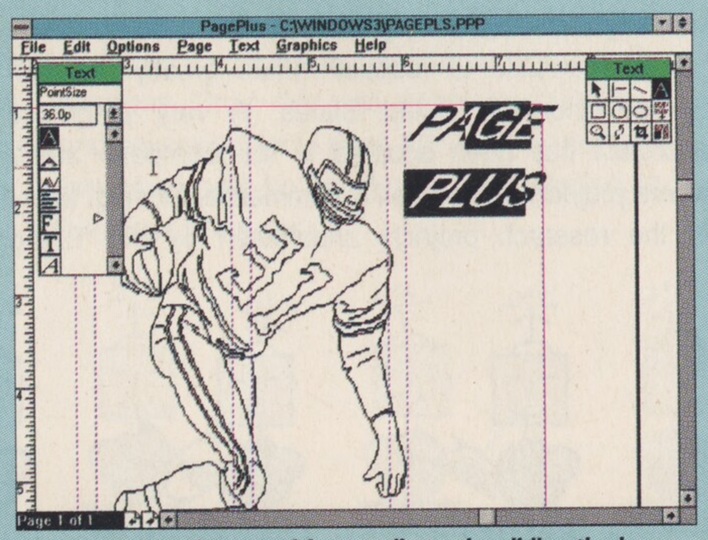

• *Text and graphics can be rotated.*



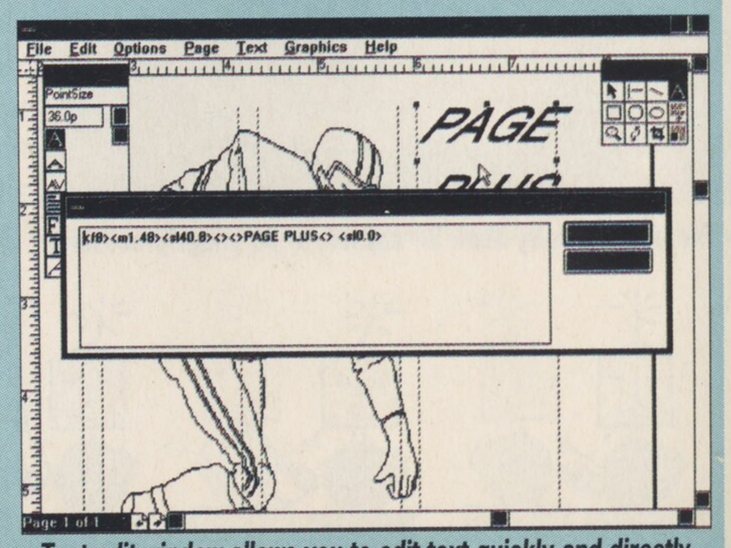

• *You can import text and graphics files.*




• *Full font and style control is available.*




• *You can directly control font attributes by sliding the bar.*




• *Text edit window allows you to edit text quickly and directly.*

★ POCKET SIZED ★ PC-COMPATIBLE ★ PERSONAL ORGANISER ★

# ATARI Portfolio

## THE PC IN YOUR POCKET

*The new Portfolio from Atari is the world's first pocket-sized electronic organiser that is also a powerful PC compatible computer, with a full QWERTY keyboard and scrolling 80×25 character display.*

*Portfolio includes everything you would expect from an electronic organiser - an address and telephone book, time manager, diary and sophisticated calculator.*

*Portfolio also includes several functions that you would not expect - a spreadsheet for your personal budget and expense records, as well as a text processor for typing memos and letters.*

*And, because Atari's Portfolio is PC compatible, it can communicate with your desktop PC at home, or in the office. You can transfer files from one to the other, to enable you to update your reports and figures with the Portfolio while you are on the move.*

**FOR ONLY £199 INC VAT**

## SPECIFICATION

- ★ ***Processor:*** Intel 80C88 at 4.9152Mhz.
- ★ ***Operating System:*** Compatible with MS-DOS 2.11.
- ★ ***Internal ROM:*** 256K containing BIOS, operating system and applications suite.
- ★ ***RAM:*** 128K with an internal RAM disk, configurable from 8K. Externally expandable to 640K RAM.
- ★ ***Keyboard:*** 63 keys, QWERTY, IBM PC BIOS compatible. Buried numeric pad and function keys. Optional key click.
- ★ ***Character Set:*** Extended IBM ASCII (255 characters).
- ★ ***Mass storage:*** credit card sized memory cards (32K or 64K or 128K RAM).
- ★ ***Display:*** Graphics LCD, supertwist technology, MDA compatible, 40 columns x 8 lines, 240 x 64 pixels (with the option to window a full 80 x 25 character display). Keyboard controlled contrast.
- ★ ***Peripherals:*** 60 pin expansion BUS to take serial and parallel ports and memory expansion units.
- ★ ***Size:*** 8″ x 4″ x 1″ (200mm x 105mm x 29mm).
- ★ ***Weight:*** 495 grammes (with batteries).
- ★ ***Applications:*** calendar and diary, address and phone book, Lotus 1-2-3 compatible spreadsheet, text processor, communications software.

## COMING SOON!

In addition to the excellent software built-in to the Portfolio Free of Charge (see right), other software and peripheral products, such as the sophisticated Pocket Finance package and serial/centronics interfaces are available. And it doesn't stop there. Many manufacturers have recognised the potential of the Portfolio and have already started to design new peripherals and software. Products currently under development include: Serial interface with built in mini modem, Apple Macintosh interface, business, utility and programming software plus a range of adventure and battle strategy games. For further free details on the Portfolio range, fill in the coupon below and return it to Silica Systems now.

## 5 BUILT-IN APPLICATIONS TO GET YOU ORGANISED!

To get you started, Portfolio comes with a suite of five useful functions built-in, all accessible from a simple menu display.

### TIME MANAGER

More than just an electronic diary, the Portfolio Time Manager enables you to plan your appointments via a comprehensive calendar and diary. It can even be programmed to sound an audible alarm at specific times to remind you of important appointments.

### CALCULATOR

Your Portfolio will be invaluable in the office or at home as a powerful pocket calculator. It has a full range of functions, including factorial, power and root calculations, all with multi display formats and memories.

### ADDRESS BOOK & DIALLER

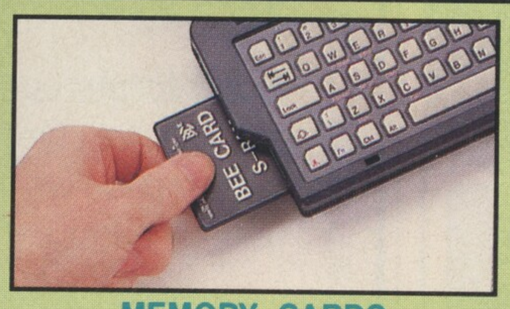
Portfolio has a complete address book facility that allows you to store hundreds of addresses and phone numbers. And, at the touch of a button, you can retrieve any one of them, or search for a specific grouping, such as "all Italian restaurants". And, when you are ready to book your table, hold your Portfolio to your telephone mouthpiece and use its special built-in tone dialler to dial the number for you.

### TEXT PROCESSOR

The Portfolio's built-in text processor program includes word wrap, line and column count, string search, in fact most of the functions you would find in a word processor. It handles printer and word processor control codes and allows easy transfer of files between Portfolio and your desktop PC.

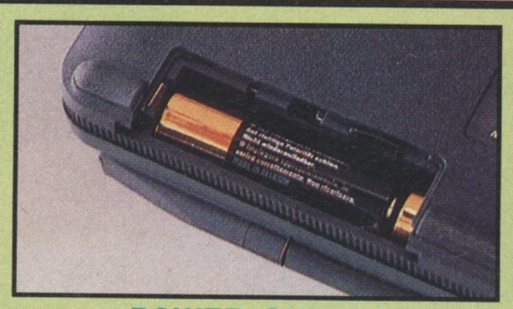
### SPREADSHEET

For real calculating power, Portfolio has a Lotus 1-2-3 compatible spreadsheet built-in. It has 127 columns x 225 rows and reads/writes Lotus V1.0 and V2.01 files, so you can transfer data to and from Lotus 1-2-3 on your desktop PC. The Portfolio's 256K ROM includes MS-DOS and PC BIOS compatible systems software.




### MEMORY CARDS

Portfolio can store and retrieve data and programs from its own RAM, or from small credit card size memory cards, that slot into its built-in card drive. The cards are available in three sizes, 32K, 64K and 128K, so you can carry a library of data in your pocket. The card drive also accepts ROM cards, which can contain commercial or custom software.



### POWER SUPPLY

Portfolio is powered by three AA batteries which will run for up to six weeks with normal use, or from the mains using an adaptor. All the peripherals take their power from the Portfolio, so no extra batteries or adaptors are required. A 'battery-low' warning and memory back-up ensure that information is not lost when the batteries are changed.

### INTERFACES & PERIPHERALS

Portfolio can communicate with other computers and supports a growing range of peripherals via a built-in 60 pin bus connector. Peripherals available include serial and parallel interfaces and memory expanders (to 640K). You can also add a card drive to your desktop PC, to enable it to read/write to Portfolio's cards.

## SILICA SYSTEMS OFFER YOU

***FREE OVERNIGHT COURIER DELIVERY:*** On all hardware orders shipped in the UK.
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***CREDIT PAYMENT TERMS:*** Silica are licensed credit brokers - details on request.

Before you decide when to buy your new Atari Portfolio, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after buying your Portfolio, 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 Portfolio products? At Silica Systems, we ensure that you will have nothing to worry about. Silica Systems is a new division of Silica Shop, the UK's leading Atari specialists. This new division has been established to provide a service to the more serious home user, as well as to business and education purchasers. Silica have been established for over 12 years, and have an annual turnover of £13 million. 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".

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**PLEASE SEND INFORMATION ON PORTFOLIO**

Mr/Mrs/Ms: ..... Initials: ..... Surname: .....

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Tel (Home): ..... Tel (Work): .....

Company Name: .....

Which computer(s), if any, do you own? .....

E&OE - Advertised prices and specifications may change - please return the coupon for the latest information.

# EASY DOES IT

We've been reading a lot in the press recently about the dangers of computer monitors. It appears that electromagnetic radiation and low frequency magnetic pulses can have a deleterious effect on your health – although this is vigourously contested by some leading medical authorities.

There is no doubt, however, that monitors, and in particular colour monitors, are hard on the eyes and can often make you end up with a splitting headache.

Laptops of course don't suffer from these problems. Their screens are nice and easy to look at, and rock solid. This, however, is also their main disadvantage. Because the individual pixels on an LCD screen take their time to fade, you can get ghosting of images; a sort of trail left behind them by a moving object. On LCD screens it also takes a long time for a pixel to spring to life. This means that fast-moving cursors, and particularly mouse pointers, disappear completely.

Despite these problems, for long term use with text files an LCD display is extremely pleasant to work on. Realising this, the British firm Sygnos (071-600 1661) has produced an LCD screen for a desktop PC.

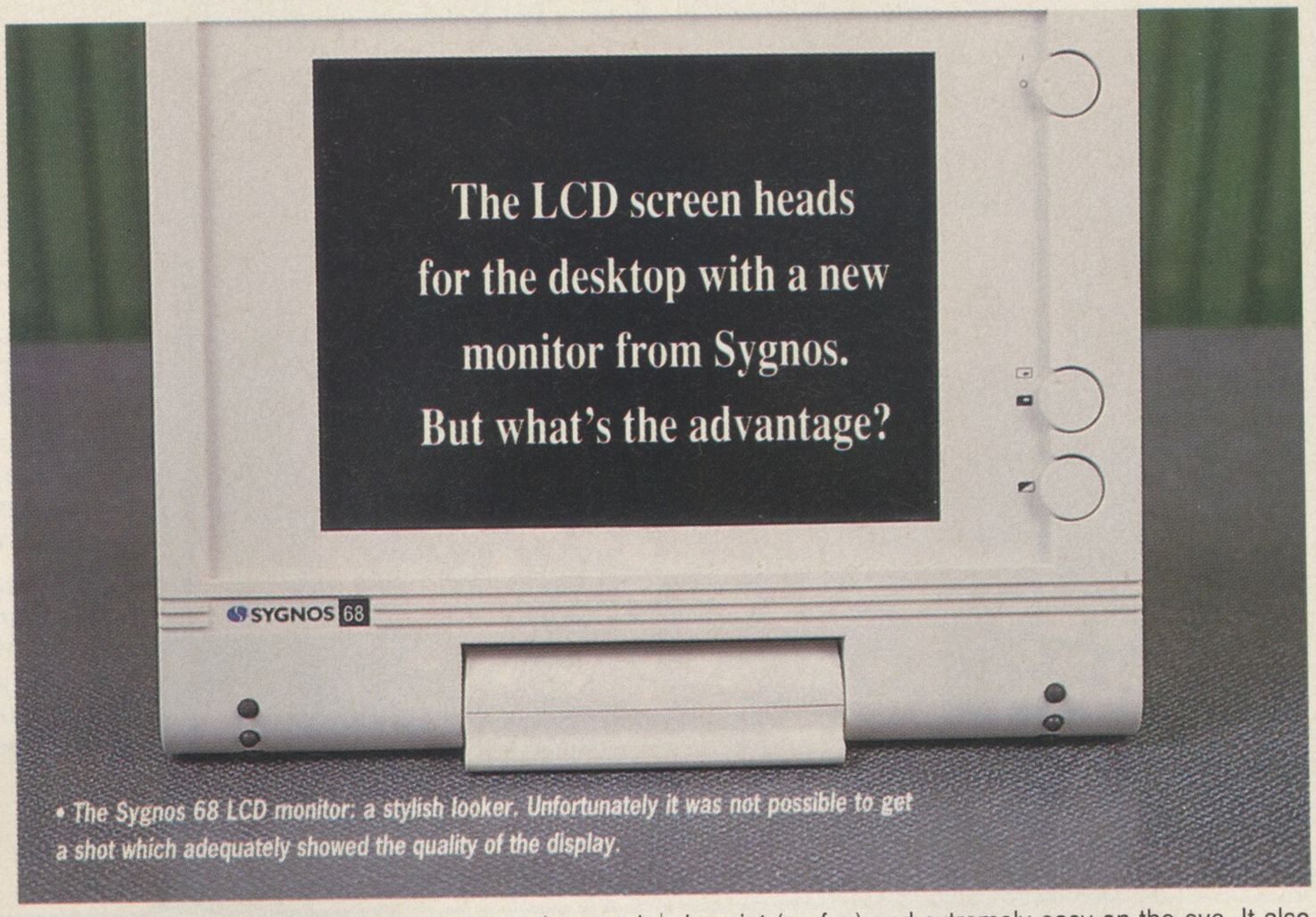
The Sygnos 68, as it is called, offers VGA resolution – 640 x 480 – and can display 32 shades of grey at once. In the 265-colour low resolution VGA mode the greys are mapped to the possible 32 in a sensible way. The screen is backlit to provide a paper white display, and since there are no power constraints on a desktop monitor the lighting is strong and even.

To run the LCD screen Sygnos supplies a special VGA card which is also capable of driving a conventional RGB monitor. Installation is as simple as plugging the card into a spare expansion slot (16-bit) and running the supplied utility software. With this software the screen can emulate CGA, EGA and Hercules displays.

The Sygnos is extremely pleasant to use for text-only applications such as word processing and databases. Although it works with graphical systems such as Windows, the tendency of the mouse pointer to disappear makes it hard to use properly.

The best word to describe the Sygnos is 'restful'. It is quiet (no fan) and extremely easy on the eye. It also looks smart, and would fit nicely into a stylish office.

The main problem with the Sygnos 68 is its price: £799 is expensive, even with the VGA card. The price will have to drop for it to become a general option. ■




*• The Sygnos 68 LCD monitor: a stylish looker. Unfortunately it was not possible to get a shot which adequately showed the quality of the display.*

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# THE ATARI ABC

***Now, there's a PC-AT compatible that not only solves problems like other AT compatibles, it also solves the one problem that its predecessors have created ... affordability.***

Silica Systems are pleased to present the new Atari ABC. The ABC is a 286 AT compatible that runs at over 5 times the performance of the IBM XT. This is achieved by combining the power and speed of a 16-bit 286 processor, with Atari Corp's development experience and engineering capabilities, which use the very latest in design technology. However, the Atari ABC's are available at 'XT prices' and many XT owners will wonder why they paid more, but got less!

The ABC is a reliable, high performance computer, built to exceptionally rigorous standards. It is well designed, to a state of the art specification, maintaining maximum expansion capability for the future. This includes up to 4Mb of RAM and 3 AT expansion slots. Plus, unusually for a PC at this price, the ABC has the ability to install two or three extra drives, with the cabling already inside the CPU.

The ABC has a host of impressive features, all built-in as standard, encouraging simple installation and ease of use. In addition, the ABC's small footprint and quiet operating, mean that you will notice it less on your desk than other PC's. Except, of course, when you begin to take advantage of its AT power.

At its remarkably low price point, the ABC is ideally suited for home, office and educational use and will take full advantage of the vast range of PC compatible software. And, with 12 months FREE on-site maintenance (8 hour response), you can rest assured that your ABC will be fully supported.

The ABC is the latest addition to a comprehensive range of both 286 (8Mhz or 12Mhz) and 386 (16Mhz and 20Mhz) PC's, from the Business Systems Division of Atari Corp. Atari's PC range offers an unsurpassed combination of reliability, compatibility and expandability, with unique features like Atari's 44Mb removable hard disk on their PC4. Return the coupon NOW for further details of the complete range of PC products from Atari's Business Systems Division.

**ABC TURBO**
AVAILABLE: JUNE 90

To put the ABC even further ahead of the competition, we have introduced a special 'Turbo' version, which includes a super fast RLL hard disk controller to increase the data transfer rate from 150KBytes/s to 800KBytes/s, with a performance index of 4.801. Plus! to provide exceptional graphics with an outstanding colour resolution of up to 1024×768, we have included a Super VGA graphics adaptor and a 14" VGA colour monitor (which also supports 1024×768 resolution), all for an additional price of only £300. Check the ABC Turbo against the competition, at only £1299 (+VAT) with 30Mb hard disk, Super VGA colour graphics capabilities, plus 12 months on-site maintenance, it offers unbeatable value.

## LOW PRICE - HIGH SPEC!

| | |
|---|---|
| CPU+MOTHERBOARD | • 8Mhz 80286 16-bit CPU<br>• Landmark Speed = 10.3Mhz, Norton SI Test = 9.0<br>• Latest NEAT (New Enhanced AT) technology chip set<br>• Has user selectable bus, DMA speeds & wait states<br>• Programmable to operate at 0 or 1 wait states<br>• 640K RAM base memory (expandable)<br>• Motherboard expandable to 4Mb RAM memory<br>• Real time clock with battery back-up<br>• Full 16-bit data line capability<br>• Socket for 80287-8 numeric Co-Processor<br>• 3 16-bit AT expansion slots (max) |
| DISK | • 32Mb RLL hard disk - 150KBytes/s transfer - 60ms access<br>• Fast disk controller - 800KBytes/s transfer - *Turbo version*<br>• 1.44Mb built-in 3½" floppy disk drive<br>• Space for two 5¼" and two 3½" drives (max) |
| I/O | • Parallel port built-in (25-pin Centronics)<br>• Serial port built-in (9-pin RS-232)<br>• Mouse controller port built-in (9-pin serial) |
| GRAPHICS | • Super VGA video graphics controller - *512K - Turbo vers*<br>• Super VGA: 256 colours in 800×600 res - *Turbo vers*<br>• EGA video graphics controller built-in<br>• EGA: 16 colours available from a palette of 64<br>• EGA: 256K of dedicated Video RAM built-in<br>• MDA, CGA and Hercules graphics controller built-in |
| PHYSICAL | • Low noise operation<br>• Ergonomic small footprint (38cm×41cm×15cm)<br>• Keyboard - 102 key enhanced AT (12 function keys)<br>• Keyboard - has 2 position height adjusters |
| PLUS! | • Fully OS/2 compatible (requires 4Mb RAM)<br>• Supports Industry Standard Networks<br>• MS-DOS 3.3 with GW BASIC 3.22<br>• 12 Months FREE on-site maintenance included |

# 286 AT

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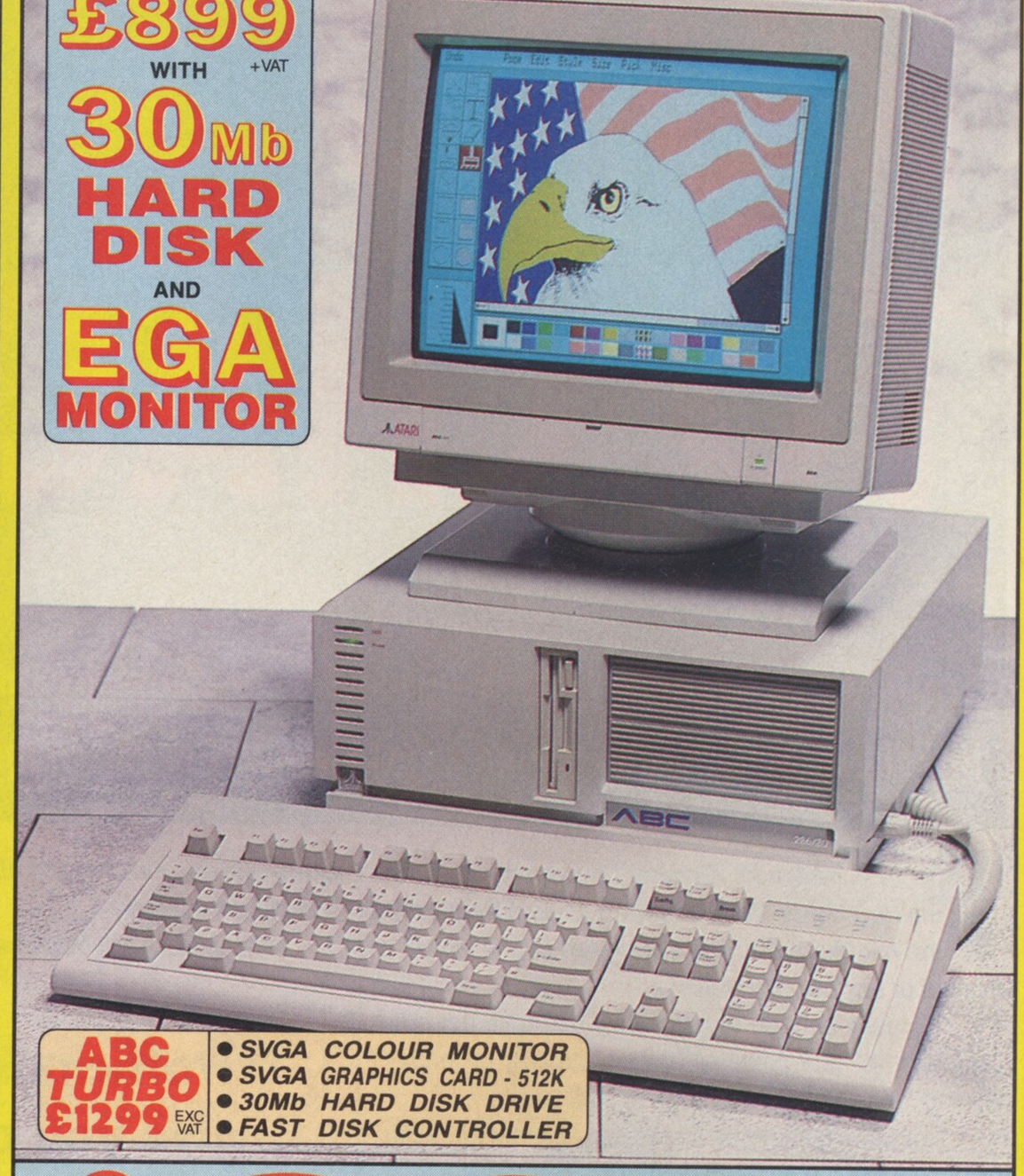


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ATARI

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| + EGA MONO | £699 +VAT = £803.85 | £899 +VAT = £1033.85 |
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***100% QUALITY CONTROL:*** Every ABC is tested/burnt-in before despatch.
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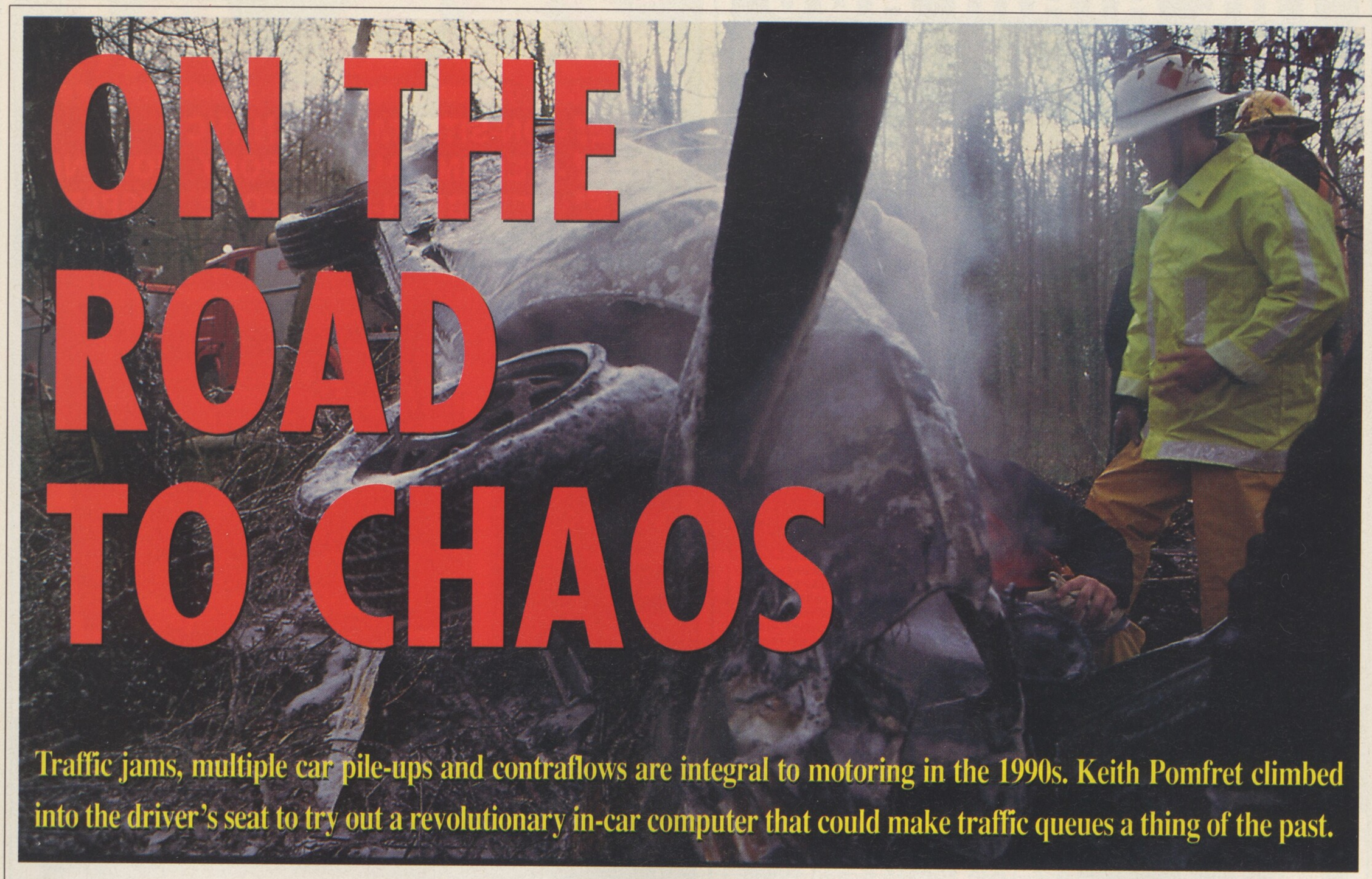
# ON THE ROAD TO CHAOS



**Traffic jams, multiple car pile-ups and contraflows are integral to motoring in the 1990s. Keith Pomfret climbed into the driver's seat to try out a revolutionary in-car computer that could make traffic queues a thing of the past.**

The nice lady from General Logistics handed me the keys to the Trafficmaster-equipped Peugeot in the heart of Soho, she apologised for the lack of a manual or any documentation.

"It's easy enough to use, you'll not have any difficulty with it," she promised before strolling off briskly, leaving me to find my way back to civilisation.

Trafficmaster isn't a navigation system as such, more of a road information terminal.

Trafficmaster will give you dynamic information about delays and problems. The unit beeps an audible warning when an update finds a problem and a single keypress takes you to the offending area.

Initially, Trafficmaster is set up to work around the M25 and the motorway approaches to the capital. Sensors above the outside lane of the motorways bounce an invisible infra-red beam off the traffic passing below and relay information about traffic control back to a computer in Luton.

The sensors are placed every couple of miles and the information is updated constantly. The overall traffic picture seen by the main computer is detailed and up-to-date.

**Trafficmaster will give you dynamic information about delays and problems**

The main computer analyses all of the incoming data and broadcasts any slow downs or hold ups to the in-car units. To the driver, it works like a message pager but with the larger LCD graphic screen, it is able to broadcast pictures as well as alpha-numeric characters.

The adjustable display module sits on the dashboard and the gently backlit LCD screen makes it readable in all lighting conditions. A 'black box' resides elsewhere in the vehicle and between them they relay up-to-date traffic information to help the driver avoid delays.

The M25 and surrounding area currently covered is split into quadrants which correspond to NW, NE, SE and SW. As well as the M25, the main screen display shows all of the motorway approaches from about 30 miles out. The A1 is also included.

When the unit is switched on the driver is shown

## THAT'S THE THEORY BUHO

**The traffic warden in Soho Square was making gestures with his pen so I scrabbled for the 'on' button, turned the key in the ignition and realised just what a sod London is to drive in.**

**Mid-afternoon on Friday is hardly the best time to drive in the metropolis and with the restrictions in force on Oxford Street I set off along ... Oxford Street.**

**The Trafficmaster screen came to life with a screen full of advertising for manufacturer General Logistics which then cleared to reveal a screen offering a choice. The quadrants covering the capital blinked in front of me so I greedily selected all of them.**

**Two hundred yards into my journey and disaster struck. The friendly policeman saw the verbotten Peugeot and signalled for me to pull over.**

**I opened the passenger window and he bent down to give me a ticking off and possibly a ticketing off. He spied Trafficmaster on the dashboard and told me he'd heard about it, but never seen it.**

**As we talked it beeped its message. Standing traffic at the City end of the M4. Intrigued, he radioed in to find out if it was accurate and confirmed we'd got the information as quickly as his colleagues.**

**I'm sure he didn't believe that it was necessary to test the thing in Oxford Street, but he kindly waved me on. Back through the heavy traffic to Earl's Court and I picked up a brace of motoring journalists who'd promised me their opinions on the product.**

**Friday teatime and the Hammersmith Flyover was surprisingly clear. Trafficmaster beeped a warning that all was not well from the junction before the M25 until the junction after. As the M25 anti-clockwise was the chosen test route, the prognosis looked ominous.**

**Sure enough, the Trafficmaster's guess at 10 miles per hour proved an accurate average and the stopwatch/odometer ratio gave a mean average of 12 miles per hour through the troubled section.**

**This was to be the first of many encounters with the concertina effect so common when the quart of traffic tries to fit into the pint pot of road at rush hour.**

**Normally a motorist would avoid slow moving traffic, but with a true test in mind we put on our masochistic hats and went looking for chaos.**

**A few miles later a flag on the screen warned us of stationary traffic at the M25/M23 junction, but this time it was clockwise. We could check it out without delay. As we approached the junction, Trafficmaster flashed up a message saying that an accident had blocked the clockwise carriageway.**

**Continuing around the M25 (called London's biggest car park by some) the Dartford Toll Tunnel bottleneck brought no new surprises and the display gauged the delay accurately.**

**Over a welcome cup of coffee at South Mimms Services we discussed the system. We concluded it was simple enough to operate without prior instruction and unintrusive enough to sit**

the available areas. These are currently the quadrants around London but as other areas are brought on line, they too will be accessible.

Once the unit is bought and installed a rental is paid for each area covered in the same way as a message pager. If, for example, your regular journey took you from the South West to London, you might only need the section that shows the M4.

A rep or delivery driver might have a varied route and need a more comprehensive set of information areas – area of coverage can be added or subtracted according to needs.

At present, the system works 24 hours a day automatically but three shifts of operators back up the computer with a human touch between 6am and 8pm. The human operator is able to watch the system on the computer and if there is an unexpected hold up they can contact the emergency services and traffic organisations for details.

**With a true test in mind we went looking for chaos**

These details can be used to supplement the display and a driver can be warned if an accident or some other calamity had totally closed a section of the road.

The display flashes a box on the map at the problem area and the box flashes details of speed and direction of the hold up.

Trafficmaster defaults to 25mph as the speed at which it tells the driver of a problem. This could be reset at any speed, but extensive research has shown General Logistics that this is the optimum speed at which delays on motorways and arterial roads begin to happen. The speed shown on the in-car display is an average taken over the three previous minutes and the manufacturer claims it is an average speed that one can expect to get through the delay rather than at a constant speed.

*• The screen maps out where traffic problems are and alternative routes to take.*

The concertina or tidal effect in heavy traffic means that when a vehicle slows down the vehicle behind it slows down slightly. This effect 'ripples' through a moving traffic queue and although the first vehicle may have only slowed by a few miles per hour, a car 40 or more vehicles back may end up stationary as a result.

The tidal flow of traffic in this way blocks and clears a road quickly and the three minute update of Trafficmaster isn't fooled by this effect.

The result is that while the display gives a speed of say 20mph, a driver may be alternately be driving at 45mph and then be in stationary traffic for a few seconds. The average, however, should correspond with the display.

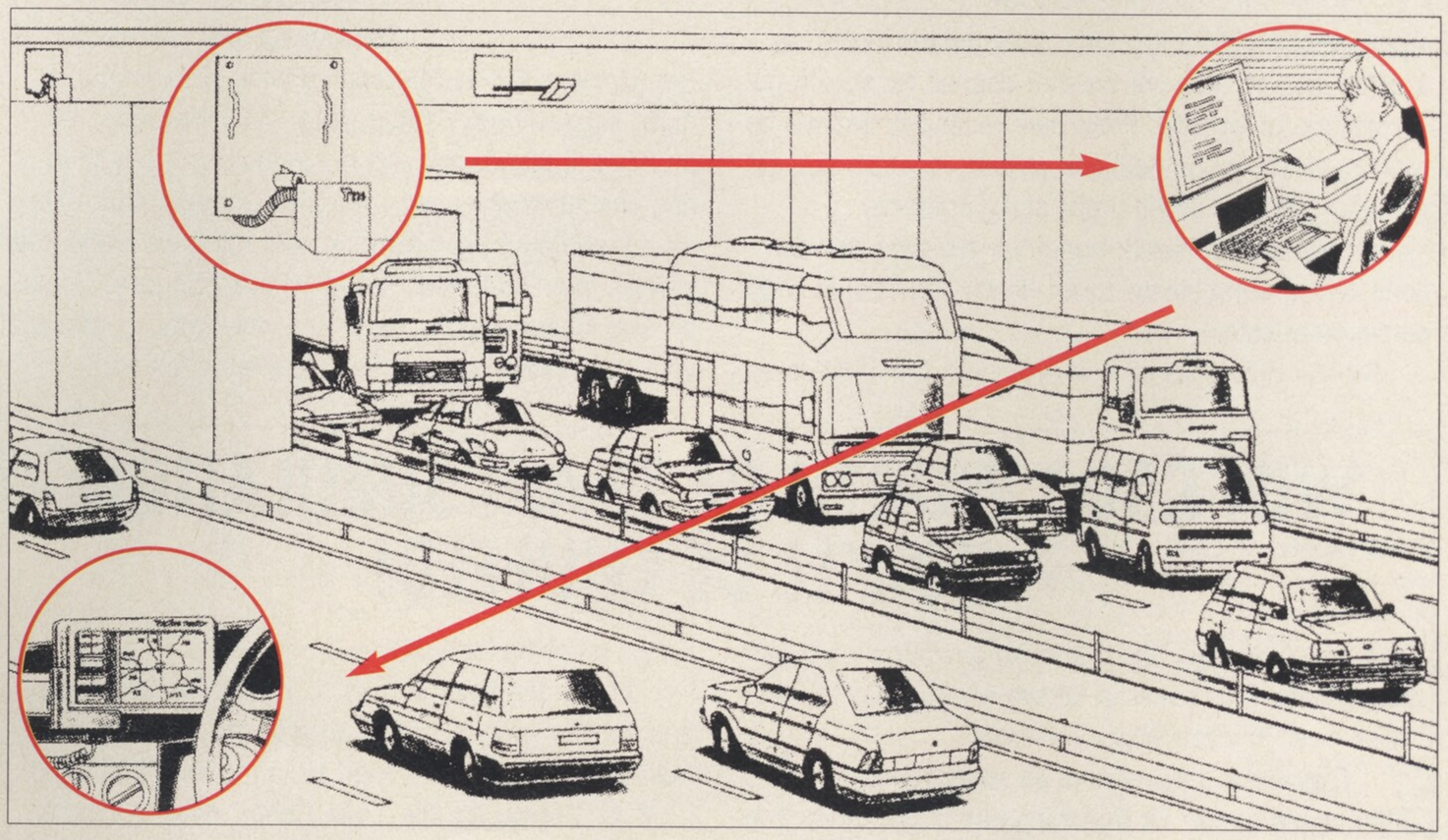
Because the information fed to a vehicle equipped with Trafficmaster is at most 180 seconds old, it is claimed to be the most up-to-date travel information service available for motorists.

Also available with Trafficmaster is a full message paging service. For an additional rental, the system can be used in the same way as an alpha-numeric pager. This feature allows a company to get a message to a vehicle so equipped without the costly rental and airtime associated with in-car cellphones. ■

## FACTS ON TRAFFICMASTER

General Logistics
Luton Airport, Luton, Bedfordshire LU2 9LU
Phone 0582 484414

| | |
|---|---|
| **PRICES** | |
| Trafficmaster | |
| Hardware (including fitting kit) | £295 |
| Installation | £65 |
| Connection charge | £30 |
| Airtime | £17.50 per month |
| **MESSAGE SERVICE** | |
| 80 character | £17.50 per month |
| 160 character | £23.50 per month |
| Extra Region | £ 1.00 per region |
| **MAINTENANCE** | |
| 12 months | Free |
| 2nd year | £50 |
| 3rd year | £75 |



*• The Trafficmaster network updates the driver minute by minute on the changing circumstances on the road.*

# BUT HOW DID IT PERFORM?

on the dashboard without causing safety compromises.

I dropped my passengers off at a convenient tube station and settled down to plan the rest of the weekend's test. Saturday brought a see-sawing across London trying to find 'black spots' where the system would fail. It beat me hollow. Mid afternoon and it was time to see how far out of the city I could get before it turned up its toes and gave up. I planned a route up the M1 thinking that when it stopped functioning I could probably grab a bite at Toddington, Newport Pagnell, or at absolute furthest, Watford Gap.

My plans were re-arranged as I sailed past the A38M junction for Birmingham City Centre and I eventually had my snack at Sandbach, well up the M6 in Cheshire. Hasty overnight arrangements were made and I settled down for the night.

With a good northern Sunday lunch inside me, I started the roundabout trip back to London. As I passed Sandbach Services, Trafficmaster pinged back into action. I decided to approach London from another direction and took the M5 turn to head for the South West.

The M5 must be the black hole for radio transmission as the system blinked off a couple of times on the way south.

It must be said that Trafficmaster currently only covers London and surrounding areas and my test was a little harsh to say the least.

I parked up for Sunday night under the street lamp outside the *Express* office in Bath and prepared to return the car in the middle of the Monday morning rush hour. On the way along the M4, Trafficmaster accurately warned me of road works and congestion on the approach to the city. After a full weekend with it, I was loathed to give it back and it was only the thought of a BR table service breakfast that made me return the car to that dark narrow street in Soho.

Back in the office we discussed Trafficmaster. One colleague bemoaned the lack of any navigational help, but the system doesn't claim any skills in that direction. Trafficmaster is claimed to be an affordable system that can be tailored geographically to the needs of the user. The page facility and 'human' operators add icing to an already tasty cake.

Navigational embellishments were added by the use of a Collins large scale road Atlas, a London A-Z and to be totally self-indulgent, a 386 VGA laptop running *AutoRoute Plus and Pan-European Navigator*. These little extras meant that had we wished to avoid problems, we would have saved time and cash.

Trafficmaster is a fine product that won't break the bank.

• Soon to arrive are computerised satellite navigation systems to sit under the dash of your battered Escort or juicy Jaguar.

Watch this space for details of devices that can locate you to within a yard anywhere in the world and direct you to any location by the most direct route.

# WIN! WIN! WIN! WIN!

## WIN £2,000 OF PANASONIC LASER PRINTER IN THE *EXPRESS* MONTHLY GIVEAWAY

MONTHLY COMPETITION NCE

We've brought you the weekly *Express* competition. We've even brought you the mega massive birthday comp. Now there's a another way to win, yet another chance for you to get something for nothing. From here on in *Express* will be running monthly competitions as well, in which you get the chance to win some pretty porky products.

At the start of each month we will print two questions and a competition token which you should keep somewhere safe.

WAIT! Don't send it in yet. For the next three weeks we will print another token and question which also needs to be answered. At the end of the month all you have to do is complete a form with all five questions answered. Then send it in with the tokens. One month after this we draw the winner. Simple isn't it? Yes it is.

This month we are offering a Panasonic KX-P44 50i laser printer. This would normally set you back £1,995 (plus VAT). You could win it for nowt. It stands tall and mean looking ready to print out unsmudgeable text, graphics so pure that Titian would willingly have given his right hand for it and it is quieter than a church mouse with a hangover. Laser printing documents is really the only way to present your work in this day and age, so why be left out?

The printer is capable of 11 pages a minute, comes with 28 print styles, has a one year on-site warranty, and if you need to, you can add 4.5Mb of additional memory. Being a Panasonic there is plenty of back-up and you won't have to seek high and low for those essential add-ons such as toner and ink. SO, do you think that you could be the one to carry off the prize? Of course you do. Now get on with it!

**QUESTIONS**

**1) Which of the following is NOT a font?**

A) Helvetica
B) Courier Bold
C) Times Grecian

**2) What was the name given to old newspaper printing?**

A) Flat leaded
B) Hot metal
C) Roller copy

## WIN £500 WORTH OF TRAIN SIMULATION – YOU'LL BE CHUFFED!

Yes, you could win the chance to drive your own loco from Kings Cross to who knows where and you don't even need to leave your own home.

*Express* is offering enough software to make that famous old hacker Dr Beeching turn in his grave. The tracks of Great Britain are open to you, everywhere from Paddington to Burlington North. Even Bath Green Park, which I happen to know has now been turned into Sainsbury's, is included.

The software enables PC and ST users to pretend that they are the fat controller. There is no actual train driving to be done here, no it's far more complex than that. You are in command of a major league British terminus for a day.

There are three sets of 11 simulators to be won and all you have to do is answer the following four train related questions. Then fill in the form and send it off to: Cripes! It's the Train Comp, *New Computer Express*, 30 Monmouth Street, Bath, Avon BA1 2BW. Entries to be in by Monday October 30.

**QUESTIONS**

**1) What was the original gauge of the Great Western Railway?**

A) 2 miles
B) 7ft
C) 2 inches

**2) Where was the prototype 'Deltic' manufactured?**

A) Leningrad
B) Ilford
C) Preston

**3) What is the wheel arrangement of Thomas the Tank Engine?**

A) 0-6-0
B) 4-4-2
C) James Last

**4) Which locomotive holds the World Steam speed record?**

A) Thomas the Tank Engine

NAME.....

ADDRESS.....

.....

I own a PC ☐ ST ☐

The answers are:
1) 2) 3) 4)

And complete the following sentence in no more than four words – *I would like to be an* Express *competition winner because* .....

## WINNERS

An arcade machine in your home, that was the prize we offered in issue 97. And the winner is.... Graeme Kaddesley of Osset, West Yorks. Well done Graeme, the machine is on its way to you.

But, but, but there were also 50, that's five-oh runner's up prizes to be won in the form of Virgin Games' *Edition One* games compilation. The lucky people are as follows:

William A Mead, Aberdeen, Scotland; Mr M Brunt, Cowes, Isle of Wight; Tom and Ann Zunder, Rotherham; N S Ravat, Leicester; S Coles, Hastings, East Sussex; Anthony Richardson, Cambridge ; N Martin, Braintree, Essex; Robert Billington, Sale, Trafford ; Sue Rorke, Sidcup, Kent; Hugh Hanratty, Solihull; Leander R Jordan, Cwmbran, Gwent; Noel Summer, Lymm, Chesire ; Colin Howard, Jarrow, Tyne and Wear; Alan Timmington, Rickmansworth, Herts; Richard Goodwin, Bedford, Beds; , Bryan Kennerley, Rhyl, Clwyd; Mr D Caspersz, Aylesbury, Bucks; Simon Lacey, Aylesbury, Bucks.; Mark Bond, Colchester, Essex; Bill Cassidey, Stockport, Cheshire; Rueben Willinson, Little Hadham, Herts; Jim Blackler, Lancaster; Michael Brady, Leeds, West Yorkshire; Adam Dawes, Brighton; Pete Walsby, Colchester, Essex; Kushel Vadgama, East Barnet, Herts; Mr S Macey, Enfield, Middx.; Stever D. Sharples, Harden, Near Bingley, West Yorkshire; Philip Chong, Cheltenham, Glo; Lee Coles, Didcot, Oxon; Shazan Kazi, Handsworth, Birmingham; A Kalam, Central Hill, London; Dylan Payne, Millbrook, Nr Torpoint, Cornwall; John Oakes, Shotton, Clwyd; Dan Gibson, Jesmond, Newcastle upon Tyne; Andy MacDonald, Wakefield; Shaun M Wilkinson, Exeter, Devon; Stephen Martin, Palmers Green, London; David Rhodes, Pudsey, West Yorks; A H Foster, Bassett, Southampton; Martin Faikclogh, Kenton , Middx.; D Miller, Bassingbourn, Herts; Guy Edmondson, Faversham, Kent; D A Beck, Barwell, Leics ; Rafael Jay, Bath, Avon ; Mr Philip Saunders, Croydon, Surrey; James N. Bradbury, Springhead, Oldham; Benjamin Reilly, Warrington, Chesire; Mark Owens, Tolleshunt Major, Essex; James Williams, Norwich, Norfolk

## SHADOW OF THE BEAST

Due to major redesigns and other organisational difficulties, the *Shadow of the Beast II* competition has not yet been drawn. Now it can be done. The winners are:

T Meredith, BFPO
Martin Connell, Crosby, Liverpool
M A Reed, Kenley, Surrey
Colin Watkins, London
B Hobson, Huddersfield, W Yorks
Jonathan Dicks, South Petherton, Somerset
Philip Brown, Gedling, Notts
Rick Billson, Staines, Mddx
R S Evans, Runcorn, Cheshire
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## Commodore A500 Flight Of Fantasy

# £399 INC VAT

## A500 BATMAN PACK

The Commodore A500 Batman Pack must surely rank as one of the most popular computer packs ever! The pack features the **Commodore Amiga 500 computer** with **mouse controller** and **TV modulator**, plus four top software titles. The software includes: **'Batman The Movie'** - Rid Gotham City of the cunning joker, in Ocean's top selling title based on the blockbuster Batman film; **New Zealand Story** - high quality conversion of the leading arcade game; **Interceptor** - Dogfight with two F-16's in this leading flight simulator; **Deluxe Paint II** - top quality Amiga graphics package which set the standard for others to follow. Return the coupon for further details.

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| New Zealand Story | £24.95 |
| Interceptor | £24.95 |
| Deluxe Paint II | £49.95 |
| *TOTAL RRP:* | £549.78 |
| *Less Pack Saving:* | £150.78 |
| **PACK PRICE:** | **£399.00** |

**£399** INC VAT

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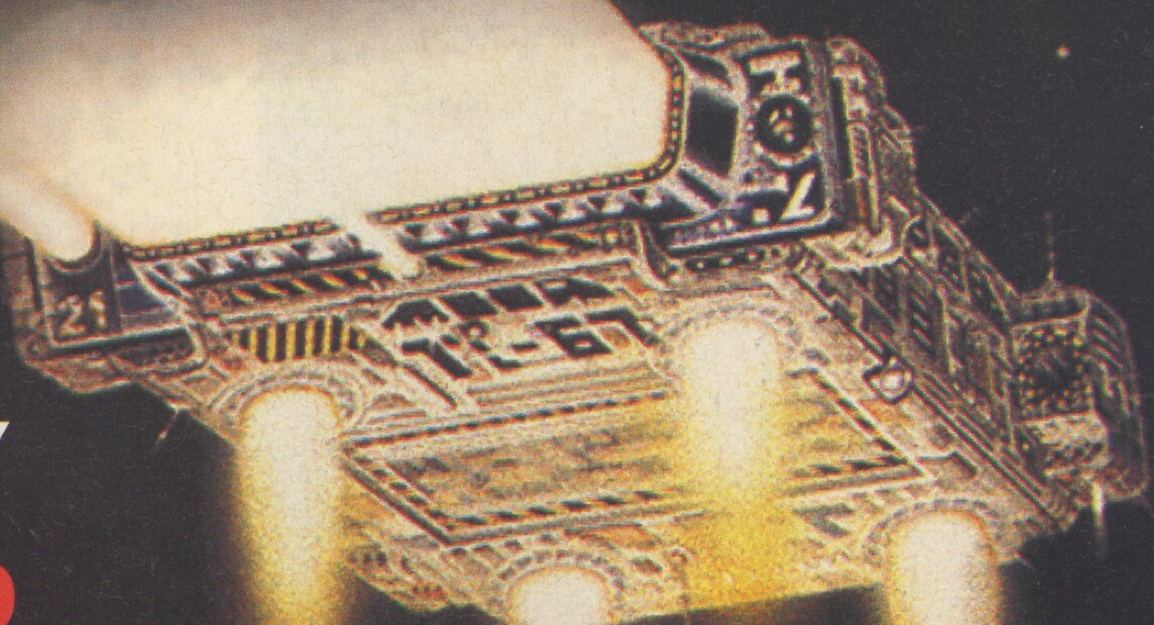

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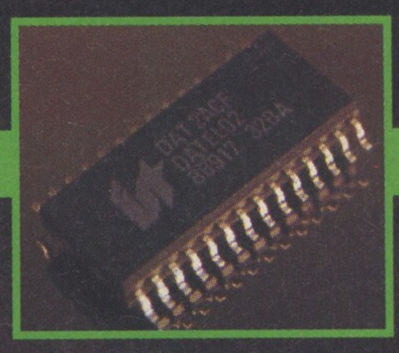

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