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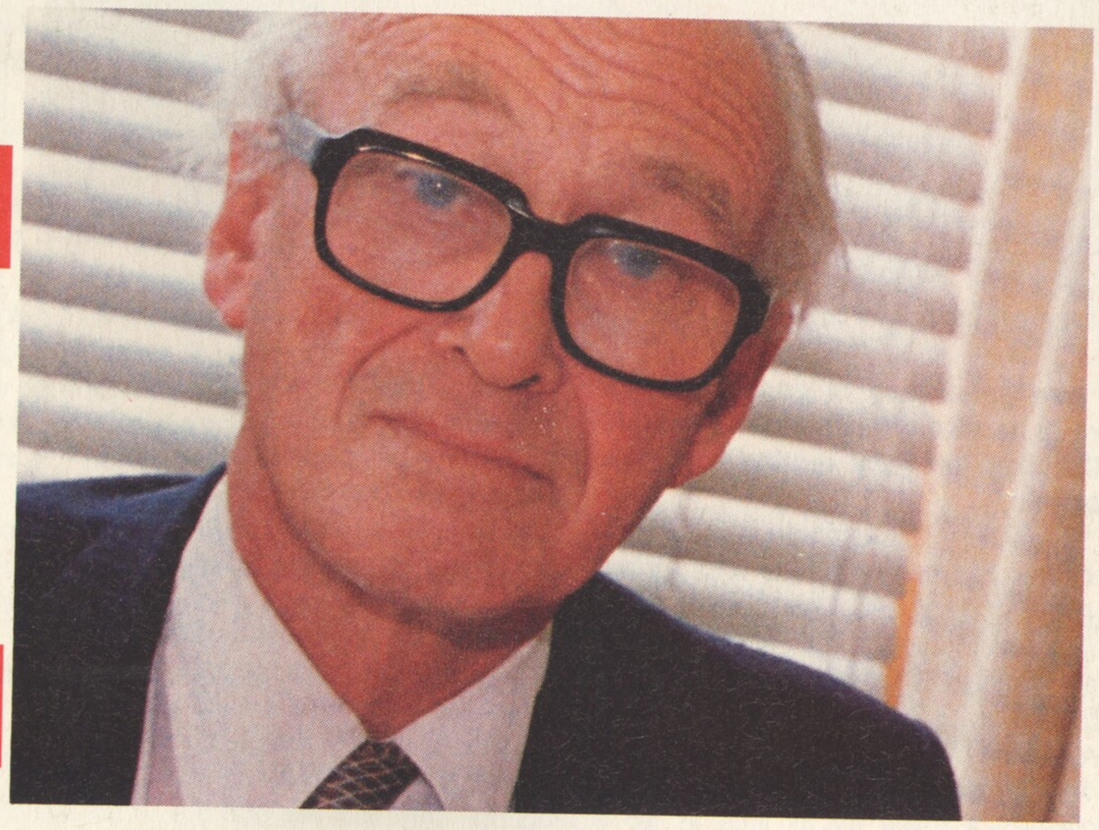

How this man has helped the hackers

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Brilliant offer for first time gamers

RENT A SEGA

• Sega: one for the rent boys

A new generation of games players are to be given the chance to sample all action fun – by renting a games console.

Sega's busy UK distributor Virgin/ Mastertronic has tied up a deal with sprawling entertainment company RCA/ Columbia Pictures. The Sega console and twenty different games will be stocked in 1,200 video rental outlets around the UK.

Anyone can join up and rent the console with a game for as little as £5 a night. And satisfied customers can go back and buy the console.

Even better, it gives console owners (who are often in their mid-teens and therefore low wage earners) a chance to hire a game for a couple of quid before spending £25.

"When you've got a product as good as the Sega the last thing you want to do is keep it hidden. We want people to have a chance to sample the machine," said Sega manager Philip Ley.

The firm is confident that the rent brigade will soon buy the hardware. "We plan to have a user base of 200,000 in the UK by February," boasted Ley.

●Meanwhile the national Sega games playing championships are in full swing. Heats are being held around the country with 11 of the 26 already completed. All the local winners will go through to a quarter final and the ultimate victor will test his skills against the Japanese and American champs live on ITV's *Motormouth* TV show. That should be screened in February.

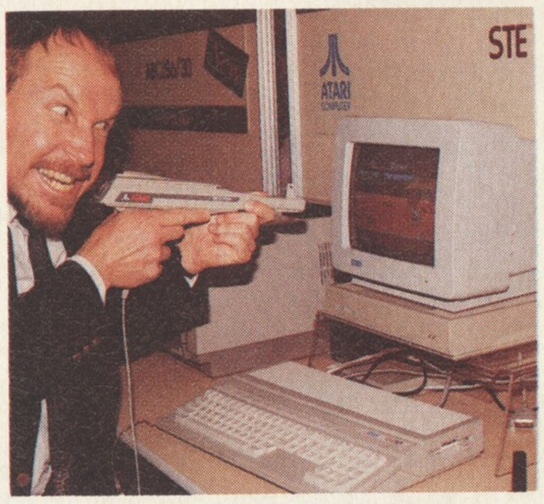
Players are currently getting to grips with *Astro Warrior* but in the final stages of the championships challengers will be expected to master a variety of platform games, shoot-'em-ups and sports simulations.■

MAKE MY DAY

Atari has shown off its first lightgun for the ST – or rather the spanking new 520STE.

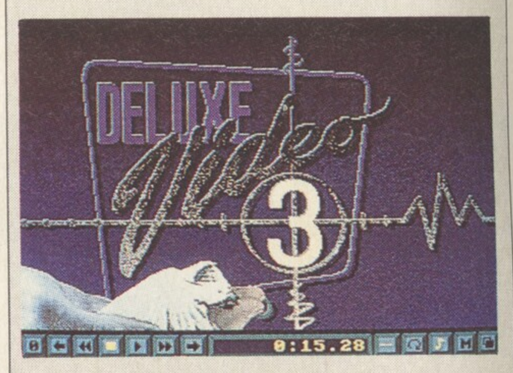
The gun looks much the same as its sister for the Atari XE. It's able to run with the new STE because of the video chip included. Dave Staugas, an Atari software design engineer and author of Neochrome, (above) was getting to grips with Ocean's over the top 'blow-'em-away' Operation Wolf at the recent Comdex.

The gun should be here in the new year. However, Atari has yet to decide on an appropriate price point.■



• Seeing the light: Atari's shooter

Deluxe delights



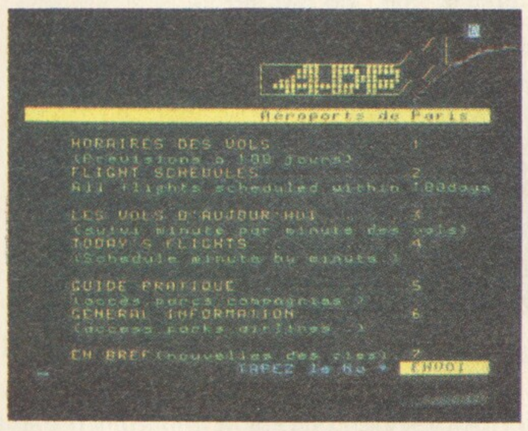
***DeluxeVideo III* is now available for the Amiga and as you can see from the accompanying animation sequence, the package takes Amiga desktop video and presentation to new heights.**

The companion product to *DeluxePaint III* supports all resolution modes, super bitmaps, high speed animation, MIDI output and IFF sound and music files. Combine these with a variety of transition effects, frame accuracy of 1/60th second, overscan and auto-scrolling backgrounds and you have a desktop system able to produce sophisticated audio-visual presentations.

Supporting SSVx and SMUS music files, *DeluxeVideoIII* is also completely compatible with *DeluxePaintIII* Anims and AnimBrushes. A visual script lets you create and arrange videos using only the mouse enabling you to control motion editing and trace and edit object motion easily and effectively. Publisher Electronic Arts also claims this object-orientated interactivity gives you *HyperCard*-like flexibility. The only drawback to the range of features is a sytem requirement of 1 Meg of RAM or more and 2 disk drives. Given these requirements, pro-quality output is easily achived. *DVIII* can control MIDI, genlocks and videotape recorders enabling material to be recorded to both videotape and disc.

The package is available from Electronic Arts on 0753 49442 for £79.99 before March 1990 when it rises to £99.99. Upgrades for existing owners cost £45.

Tap into Minitel



• Minitel: Gallic comms

For many years the French have had their own version of the UK's highly popular Prestel.

Known as Minitel, the information service held on computer is larger and has many more users than our own. Everything from stock exchange data to the latest on French horse racing keep French comms enthusiasts well informed.

Unfortunately, prohibitive telephone charges and limited access to the system meant that British comms users couldn't enjoy the benefits of using the bulletin board – until now...

Communications specialist Aldoda International based in London is offering a subscription service providing access to all of the 10,000 functions of Minitel at a fraction of the normal cost.

All that's needed is a 1200 baud modem and comms software costing £149. Once up and running, users can access Minitel by buying 'blocks' of time from Aldoda. The blocks are in various sizes starting with two hours for £20.

Many large companies such as BP and Shell already make use of Minitel's extensive range of information and Aldoda expects interest in the service to be high.

Aldoda International can be contacted on 01 586 5686.■

No computer legislation in Queen's speech

COMPUTER SNOOPS ESCAPE CRACKDOWN

Hackers and computer criminals were last week celebrating as the Government failed to include an anti-hacking bill in its proposed legislation for the year ahead.

As predicted in *Express* (Issue 52) the Secretary of State for Trade and Industry, Nicholas Ridley, has turned his back on warnings concerning the dangers of computer crime.

The Queen's speech listed 15 bills for the next year but didn't even mention computers. This is despite intense pressure from the computer industry and business in general to come down hard on hackers.

Ostensibly, the Government has decided to concentrate on more popular and sensitive legislation (such as 'green' bills). However, it is clear that the DTI does not regard computer misuse as a major problem.

Backbench MP Emma Nicholson has been campaigning hard for legislation and attempted to introduce a private member's bill last July. Despite her bill's failure the Government indicated at the time that it would be looking to include computer crime in the Queen's speech.

• State opening: but no computer talk

But even a recommendation from the Law Commission, published just six weeks ago has not convinced the DTI.

The Government's rejection of anti-hacking legislation was roundly criticised by worried representatives of business, industry and the Law. Consultant to the Law Commission Jeffrey Chapman commented: "One assumes that the reluctance to legislate is a reflection of the Cabinet's collective ignorance on the subject."

He said it was "extraordinary from a Government that purports to support business and industry".

Tim Hackworth of the British Computer Society echoed many feelings about the Government's position: "We are facing a major calamity. If someone dies or a business goes under because of hacking then the Government may have to take the blame because they have done nothing about it."

Late last week the DTI handed a sop to its critics with the announcement that a private member's bill would attract Government support.

"There may be an opportunity for a private member to introduce the bill," a spokeswoman said. "If that could be carried forward the Government would be very glad to see it and would give as much help as possible." This will not pacify disappointed campaigners.

Furious Nicholson has already branded Ridley "computer illiterate"■

Mark Smart sat down with an Everex 386 PC, popped in Alumina Paint *and, with a smattering of artistic talent, came up with the above.*

For his efforts Smart has been awarded the 1989 Agfa Imaging Awards for best computer generated graphics. As well as a neat £1,000 prize he's also been commissioned to produce a computer portrait of the Prime Minister. That'll be shown at the two week Agfa Computer Images Exhibition at the Victoria and Albert museum from February 12th.

"This is a breath taking example of the creativity possible within computer graphics," said Agfa's Fintan O'Toole. "We'll definitely be running the awards again."

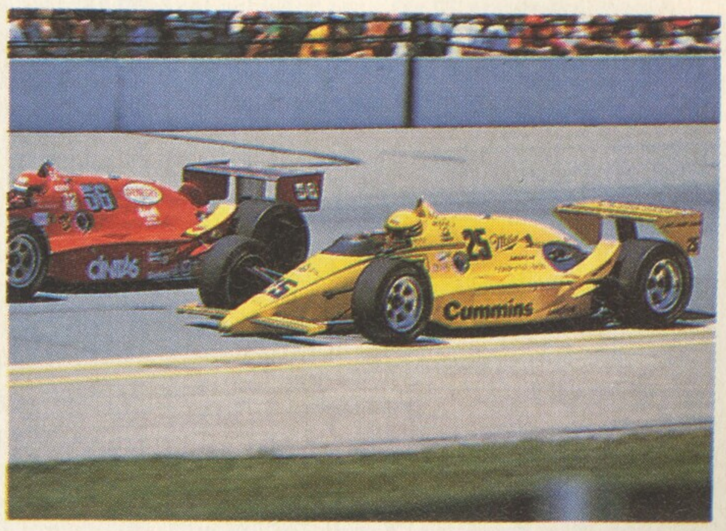
Art of the States

Electronic Arts has announced two new releases from the States for IBM PC compatibles, including a big name motor racing tie-in.

Indianapolis 500 is the only game that has ever been licensed from the famous Indy Motor Speedway. Electronic Arts claims the game captures all the feel and excitement of the classic racing event, including realistic competition and car handling. Players must compete against 32 other drivers in a full 200-lap race.

The other scheduled release is Starflight 2, to follow up on the success of the original (which is itself not due to be released on the Amiga until the end of this year). Subtitled "Trade Routes of the Cloud Nebula", the new game provides the budding space trader with over 500 new worlds to explore and 30 new alien species to to talk to, each with its own history and culture.

Both games support CGA, EGA and VGA graphics formats and should be available in January at the usual price of £24.99. ■



• Indy 500: PC game soon

Supercomputers under attack from PC explosion

MAINFRAME "DINOSAURS" COULD BECOME EXTINCT

Mainframes and supercomputers could become the dinosaurs of the computer age as personal computers continue to increase in power, experts have warned.

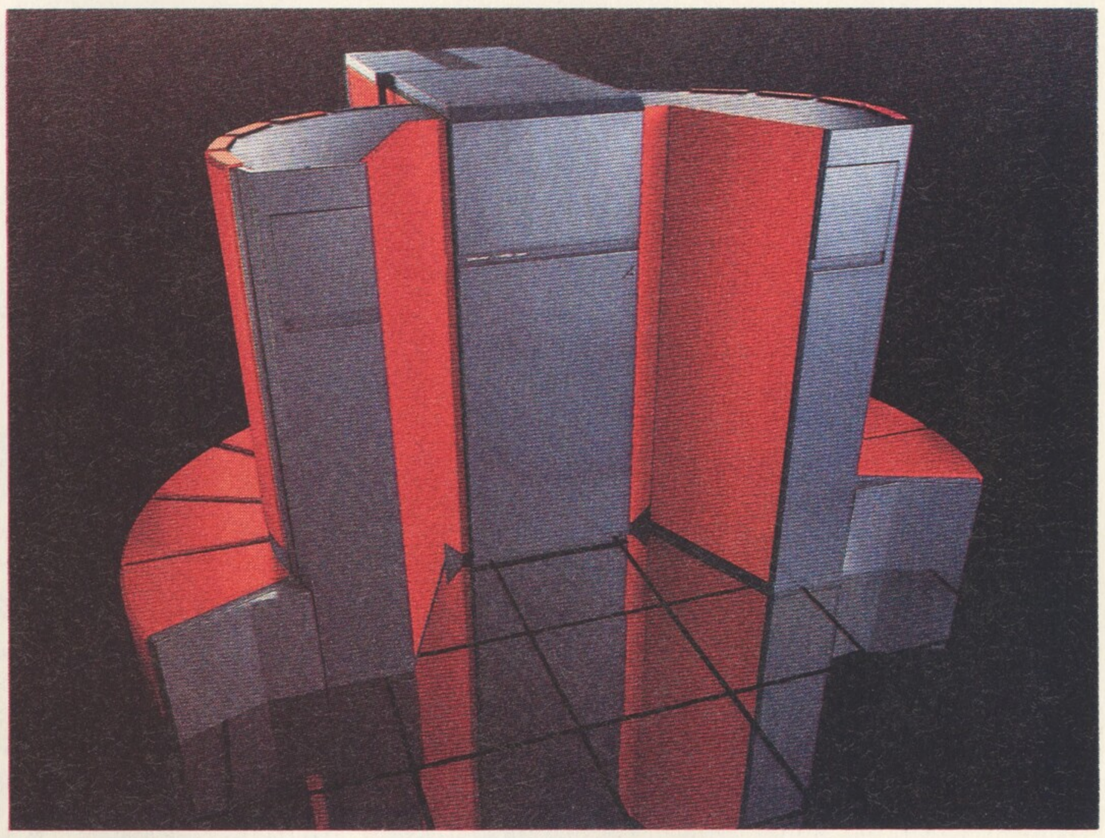
The ultra expensive machines are under threat from PCs which can rival their number crunching abilities. Experts warn that though supercomputers will always be that bit faster than personal computers they will be too expensive to compete.

Last week it emerged that personal computers are overtaking mainframes as IBM's biggest money-spinner – the first time in the company's 30 years as computer industry leader. Sales of IBM PCs last year rocketed to $11.3 billion whilst mainframes were almost static at 15.2 billion.

The *Financial Times* called it "a dramatic turn with deep implications" and likened it to Boeing announcing that future growth would be in single engine executive flyabouts rather than jetliners.

IBM's main business has always been with supercomputers and it joined the PC market with some reluctance.

IBM dominates the mainframe market. More than 70 per cent of the world's biggest computers come from the company. But its personal computer business is growing at an amazing speed.



• *Cray mainframe: personal computer attack*

Supercomputer manufacturer Cray Electronics has recently announced a sharp decrease in profits. It dipped from $15 million last year to $5.4 million before tax. The firm is currently looking closely at future plans.

At a supercomputing conference earlier this month Logica Cambridge chairman Dr Brian Oakley predicted that supercomputers would be a thing of the past within the next ten years.

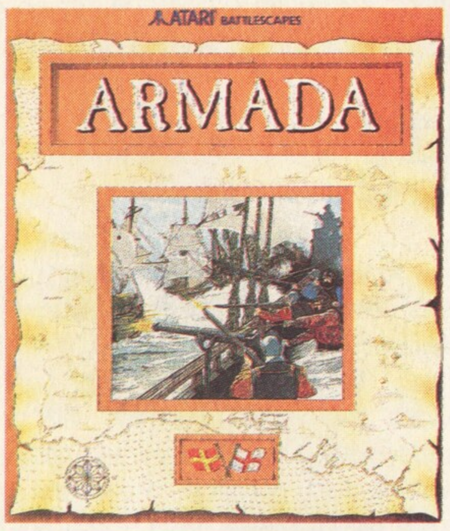
Delivering the Humphrey Davies lecture Oakley said that tomorrow's computer buyer would prefer to kit employees out with personal computers than spend millions on one mainframe.

He said that even though mainframes would always be faster, users prefer not have to compete for access time. He predicted that mainframe manufacturers such as Cray would face "formidable problems".

Supercomputers have always been extremely expensive. A $2.5 million IBM 3090 may only cost the firm $100,000 to make. The company has always looked to make margins of about 70 per cent on its larger computers.

But the arrival of the 486 chip is worrying the number crunching brigade. Olivetti's Mike McCormack last week told trade mag *PC Dealer* that "the need for mainframes only really exists in terms of huge database requirements, but they are not the best way of processing and using data."■

ALL AT SEA



• *Armada: phew, water scorcher*

Computer wargamers who are tiring of the American Civil War or Napoleonic conquests might want to get to grips with the latest in bloodthirsty strategy.

Called *Armada*, it's a recreation of the famous sea battle 401 years ago between the English and the Spaniards. During the battle our "brave boys" gave King Phil's lot a jolly good thrashing; but software publisher Arc warns that it's going to be tough winning the computer game.

It's part of the Battlescape series which also bought you the brilliant *Borodino*. Arc says the communications system in Armada is faster then *Borodino's*. It costs £29.99 on the ST, PC and Amiga.■

Fun School tops education

Database is claiming to have produced the biggest selling educational software package of all time.

It reckons 60,000 computer users have bought the simple *Fun School 2* with a claimed 40,000 ready to splash out for it before the spring. *Fun School 2* was written by teachers with a view to making computer learning fun. It actually made an appearance in the all formats games chart earlier in the year.

This week sees the Archimedes launch of the program – that'll cost £19.95. Database can be contacted on 0625 878888.

• *Fun School 2: Biggest seller*

IBM sold used computers as new

IBM has admitted that it sold used computers as new and that it certified some foreign products as being made in the US.

The wrongful claims were made in forms which were given to the US government for contracts awarded to IBM. The huge company says the cases are down to "administrative errors and not by any intent to deceive the government". The US government could bring fines against the company or could temporarily bar it from lucrative contracts.

The hitches came to light after the government began investigating the US Navy's practice of awarding all data processing equipment contracts to IBM. The firm says jealous competitors are attempting to dredge up small mistakes in order to obtain the big contracts.

The 1933 Buy America Act states that 50 per cent of all products bought by the US Government must be US made.

IBM says only 2 per cent of products sold to the government were used and has offered $1.5 million in compensation.

Giant European Comdex planned

A massive European version of the Las Vegas Comdex computer show is being planned for next spring.

Comdex Europe will be held in Paris and is being organised jointly between the Comité de Expositions (current organiser of the French Sicob show) and The Interface Group, of Comdex fame.

It will be held at the Paris Norde Villepointe Centre every April and October and will be touted as the continent's premier computing event – even bigger then the extraordinary Hanover Messe.

This follows the news that the recent US Comdex broke all records with attendances up to 117,000 and exhibitors at 1,740.

"The growth and development of the European computer industry and the progress made by the EEC looking toward 1992 were factors in the decision to bring these two great high-tech events together," said Interface's Jason Chudnofsky.

Meantime, VNU says it will be attempting to set up a new PC Show in Birmingham's NEC for the autumn. This follows two rival shows being set up by EMAP (for games) and Montbuild (for business).

Squabbles between VNU and Montbuild have yet to be resolved.

Two worried men

Two of the industry's leading figures are surely scratching their heads, furrowing their brows and generally racking their brains for good ideas.

Atari's boss Sam Tramiel last week posted a loss for the third quarter of this year (ending September 30th). And Amstrad's Alan Sugar could only watch as shares in his company dipped to an all time low of 40 pence.

Tramiel's firm sold $81.4 million worth of kit (compared to $98.8 for the same period in 1988) and lost $5.4 million. Atari made $900,000 profit for last year's third quarter. The poor performance has been put down to low profit margins on many lines.

Tramiel commented: "With the shipment of new products and less volatile DRAM chip costs in the fourth quarter, we anticipate normalisation of margins."

• *Sugar: more bad news*

• *Tramiel: still confident*

He went on to predict that the Portfolio Pocket PC and the new STE would improve financial results.

Last Thursday Alan Sugar woke up worth £10 million less than he had the day before. Four pence fell off Amstrad's share price as City analysts talked about the possibility in a downgrading of profit forecasts. Sugar, who owns 45 per cent of Amstrad, is now 'worth' about $100 million – six months ago the figure was $400 million.

But Atari and Amstrad aren't the only firms in trouble. Commodore has posted a loss of $6.5 million on sales of $165.3 million for the period July to September. This time last year Commodore made $9.6 million.■

Sparc of genius

By Jerry Glenwright

Today, most computer users are familiar with the concept of RISC technology. By using central processors with simplified instruction sets (the commands used to drive the chips) manufacturers are able to put the power of the mainframe in the box of a personal computer.

Now California-based electronics specialist Cypress Semiconductor has come up with what it believes to be the fastest RISC central processor in the world.

Based upon the popular SPARC chip used to power SUN Microsystems workstations, the new chip is capable of performing at a lightning fast 40MHz providing 29 MIPS of processing power. By comparison Acorn's RISC computer, the Archimedes, offers a measly 4 MIPS.

In order to achieve this phenomenal turn of speed the 7C601 CPU (as it is tentatively known) has, at its heart, a large windowed register file containing 136 general purpose registers. By reducing the number of load and store operations, these registers free the bus for other purposes, thus making computer operations as a whole much more efficient. The product costs $85.■

Techie feel to first Scots Micro Show

by Stuart Low

The first Scottish Micro Show, held in Livingston last week, left behind the glitz and glamour of the larger London shows to give a smaller and friendlier atmosphere.

Over half the exhibitors were from Scotland and 2,500 visitors came to see some delightful technical gadgetry for home computer owners. Another similar show has already been pencilled in for next year. Some of the highlights:

• *Scottish show: old fashioned techno fun*

● The Atari ST was strongly represented, and BBDP Electronics from Fife demonstrated a new product for the machine — a DMA splitter. This enables up to eight DMA devices to be connected to the ST at once, and any of them can be powered down without corrupting the data flow to others in the chain. This would enable two hard disks to be run simultaneously on one ST through the DMA port.

An Amiga version of the splitter is said to be 'a strong possibility' but no other details have been confirmed. The company is on 0383 881768.

● *Morse Master*, also for the ST, is a morse code trainer enabling the simulation of typical 'on air' reception conditions. The maker, Boscad, is on 0383 729584. Of interest to the growing number of radio hams, the radio simulator includes features such as frequency drift and channel interference.

● On the MIDI front, the Music Matrix was demonstrating its disk-based magazine aimed at the amateur and professional MIDI musician. More on 0592 714887.

● Miracle Systems from York demonstrated its new hard drive and interface card for the QL — at £425 it represents four times the cost of a new QL. However it speeds up access times and can load up to three 32K screens per second. Miracle's number is 0904 423986.■

Computer crime syndicate smashed

HK PIRATES SCUPPERED

A massive computer piracy syndicate has been smashed by the authorities in Hong Kong.

Fifteen arrests were made early last week – software, hardware and manuals worth millions of pounds have been seized. The crime ring is understood to have been responsible for about two thirds of all piracy in the British colony.

Many of the pirated products were destined for the UK, and anti-piracy units around the world fear that Hong Kong is becoming central to worldwide distribution of illegal computer products.

Hong Kong Customs and Excise authorities raided the syndicate's premises and confiscated nearly 110,000 counterfeit manuals and 20,000 disks with a street value of about £3 million.

Most of the material was pirated from products produced by leading American business publishers such as Ashton-Tate and Lotus. The Business Software Association, of which those two companies are leading members, plans to prosecute. It is expected that only the ring leaders will be charged.

The BSA has praised the Hong Kong government for tackling piracy but urged other countries to take similar action. BSA president Douglas Phillips commented: "Other governments, not only in Asia but in Europe and elsewhere, should follow Hong Kong's lead."■

JACKO POPS IN...

• *Moonwalker: Jackson dazzle*

Cuddly pop superstar Michael Jackson has finally arrived on home computer.

One of the world's most famous names has been turned into a computer game by US Gold – it's a silicon version of his very strange movie *Moonwalker*.

One curious part of the deal with Jackson's agents is that the star must not get killed or maimed in the game. Instead, we are told, he pops away in a burst of silvery dazzle every time a nasty thing catches up with him.

It's jolly good fun all round for ST and Amiga owners. Price is £24.99. The 8-bit versions will arrive soon.■

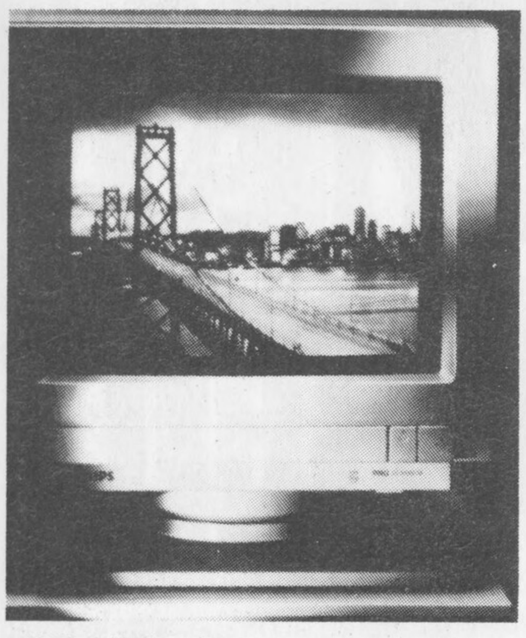
Take a Test

PC software distributor Testware is offering a catalogue of commercial PC programs in the form of evaluation copies.

You can try out the software for thirty days at which point you either pay up or pass back. But don't expect to get your hands on the *Lotus 1-2-3s* of this world. The programs available are along the lines of text editors, menu systems and screen capture utilities submitted by individuals rather than corporations.

Bold Testware reckons it's on to a winner. Budding PC programmers or hardware owners can call Testware on 0423 886415.

Picture this



• Philips: in the picture

PC owners on the lookout for a colour VGA monitor have a new option in the shape of Philips' 3CM9609, priced at £349.

Philips is confident that demand for colour VGA monitors is taking off – "particularly as suppliers are bundling VGA cards with the CPU," says Philips' marketing man Ken Firth.

The 14-inch screen has a resolution of 640x350 lines or 640x480 (60Hz), can display all colours and has backwards compatibility with all other standards. More information on 01-222 0833.■

Weighty manufacturing costs slashed

TEXAS WONDER CHIP TO CUT 386 PRICES

By Jerry Glenwright

High tech computer manufacturer Texas Instruments is about to launch a new chip set which will significantly reduce the component count of a 386-based machine.

The firm says that by cutting manufacturing costs computer companies will be able to offer cheaper 386 machines. Currently, manufacturers which want to build 386 PCs have to undergo the torturous process of designing their own logic circuits to drive the 80386 CPU — this involves anything between 30 and 60 separate components.

But now, with the help of TACT83000, the new TI chip set, the chip count can be reduced to eight. Using the new chips, an entire 386-based PC can be built on a circuit board measuring only four inches square.

Texas Instruments believes the new chips will attract a lot of interest from PC manufacturers desperately trying to cut costs in order to compete — "the HPs, NCRs and Olivettis of the world", says marketing manager Stephen Tang-Kong.

The company hopes to start shipping the chip set within the next two months.■

• (right) 386 power: efficient chips could mean price cuts

QL 'ALIVE AND WELL'

• Richardson: QL corner

The £400 Quantum Leap of 1985 that took off, stumbled along and finally fell over, is back on its feet again at a knock-down price.

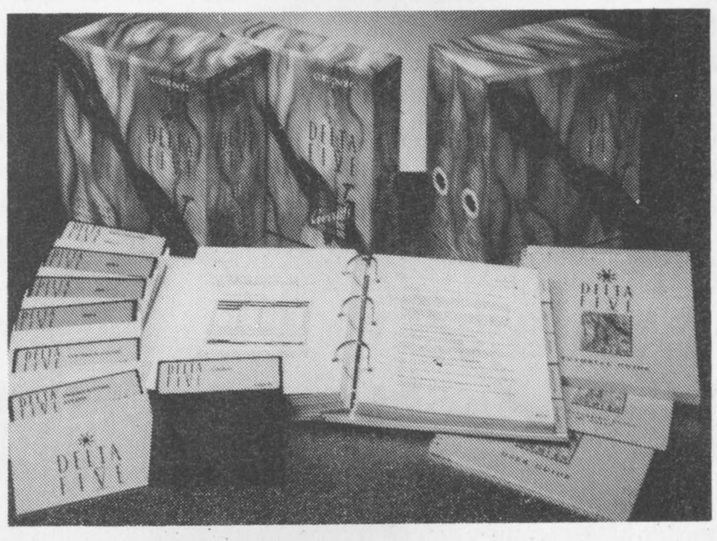
For as little as £65 you can get a 128K QL from EEC on 0753 888866. Bundled with word processor, database, spreadsheet and business graphics software from Psion, the multitasking machine also offers excellent built-in BASIC, CP/M and IBM emulators, and over 400 PD programs plus a wide range of commercially available software.

EEC's boss Bill Richardson reckons the machine's fraught history won't deter people from a good bargain.

Bravo Delta

***Delta Five Release II*, Compsoft's upgraded database management system goes on sale this week.**

The souped-up system is said to have the relational and network capabilities of *Delta Five Release I* with the widely praised, simple approach of *Delta Four*. It boasts among other things an extended relational capability for auto windowing of data from multiple files, distributed data across a network, up to 16 indexes per header record and the chance for application developers to create context sensitive help screens.

Delta Five Release II costs £595, the add-on graph package £295, and the two together £918. Details on pricing deals from Compsoft on 0483 860811.

• Delta Five: relational

Meanwhile, the firm is offering training courses to those people who really ant to get the most out of their database ■

Genius edition

Classic board game converter Leisure Genius has announced a compendium of its well worn trio *Scrabble*, *Cluedo* and *Monopoly*.

The three computer games have been selling well for some years, and interest is expected to be high among new computer owners looking for familiar fun.

The deal is open to Speccy, CPC and C64 owners for £20. A disk version is also available for the 64 and CPC – that's Scrabble and Monopoly for £20.■

Amazing Amiga optical drive

Amiga owners can take their systems to the limits of known science with the announcement of an erasable optical drive from Direct Digital Disk.

Launched at last week's Shopper Show, the 650Mb optical disk works at the speed of a hard drive. Until now, Read-only and 'Write One Read Many' drives were the state of the art in mass storage for mainframe and workstation systems, but it has only taken a year for software developers to come up with the necessary drivers to interface with 16-bit machines. Direct Digital has managed to link the Sony erasable optical drive to the Amiga as well as the PC.

Unfortunately it's going to be something of a luxury. The hardware costs £4,900 while each compact disk is £350. If you happen to have five grand and need the storage space, DDD is on 0708 754704. ■

Sage stuffs opposition

Sagesoft, supplier of PC accounting software, was voted 'Company of the Year' in the Northern Business Awards last week, which were sponsored by the *Newcastle Journal* and Tyne Tees TV.

The company impressed the jury through its product development and marketing, particularly with such products as its networking system *MainLan*, which has taken a 46 per cent share of the market.■

Christmas buyers get stuck into bargains

SPENDING SPREE AT SHOPPER SHOW

By Adam Waring

Thousands of pounds changed hands at the first Computer Shopper Show last weekend as bargain hunters tracked down the best buys for the festive season.

By Sunday afternoon the organisers were forced to lock hopeful punters out, and there were loudpseaker announcements asking those who had made their purchases to leave the building. Even on Friday, the least busy day, huge queues stretched right around Alexandra Palace.

Those who gained entrance to the show were not disappointed in their quest for bargains - the box-shifting brigade were there in force to meet the demand, and publishers attending the show were offering many products at special prices.

It was the box pushers who dominated the show, some of them selling kit at silly prices. The cautious customer who had a good look around before buying could pick up an Amiga Batman pack for under £345. On the first day of the show most of the retailers agreed that they had done tremendous trade.

The children's charity Childline was officially supported by the show's organisers. The public, pleased with their bargains and the money they had saved, gave generously, raising £1,300 on the first two days. A giant stocking hung from the scaffolding, and everyone who donated cash was invited to blow up a balloon to be put into it. It looks like going in the Guinness Book Of Records as the largest Christmas stocking ever.

At the end of the first day of the show a jubilant Mike Cowley, one of the organisers, was jubilant. "It's quite fantastic really — a terrific show," he said.

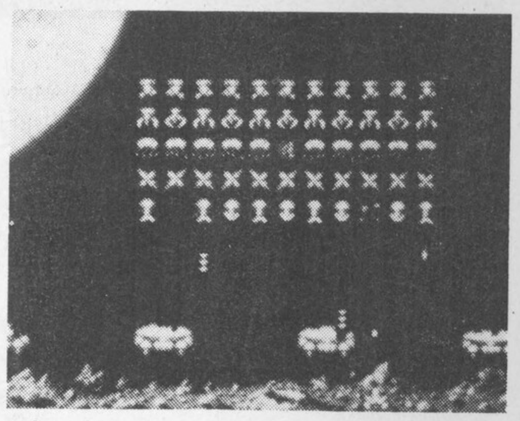
"It's obviously now the show for pre-Christmas, no matter what sector of the market people are in. Everybody is thrilled and the exhibitors seem very happy about it as well." ■

Return of the horrid Invaders

It's back! After many years, *Space Invaders* has returned for a further stint of chugging across your screen.

It's all thanks to games publisher Impressions which has bundled four 'timeless classics' together for the ST and Amiga. As well as Invaders there's also *Rockstorm*, *Megapede* and *Draxions*. It doesn't take a great deal of imagination to guess what they all resemble.

The whole thing is being called *Renaissance*, and Impressions claims buyers will be treated to all manner of 'new twists'. Price is £19.99. Call 01-384 2701.



• *Invaders: "stunning new graphics" claim*

MGT: now comes the software

Miles Gordon Technology, manufacturer of the near legendary Coupe, has been actively encouraging publishers of games, utility, educational and music software to commit themselves to working on the new Spectrum-compatible machine.

Big names such as US Gold, Activision, System 3, Codemasters, Virgin, Domark and Audiogenic are all on-line to join the ranks of producers after a recent Development Conference. The machine is due for shipping at the beginning of December.■

Back to routes

Newstar has launched a rival to NextBase's popular route planning program *Autoroute*.

Navigator Plus follows the same basic principles as its predecessor with some clever graphics. The program was devised by William Poel, one-time Amstrad software manager. At present *Navigator Plus* is available only on PC compatibles, although conversions to the 16-bits are planned. It costs £299, the same price as *Autoroute*.

As well as the graphics enhancements, the program offers a number of other improvements including more vehicle types, user definable points, and automatic costing. Contact Newstar on 0245 265017.■

Printing portability

Predominantly Amiga-based firm ASAP has launched itself into the printer market with a low cost portable machine.

The Personal Printer costs £100 and weighs about 11 ounces. Print speed is 86 characters per second, and the machine offers an 80-column width. ASAP — which developed the printer in-house – reckons it's going to sell thousands, especially to dynamic types on the move. Call 0724 280222.■

CBM SHOWS ITS STUFF

Commodore is heralding its recent Christmas Computer Show as a resounding success despite attendance figures dropping from last year's winter event.

Around 8,200 Commodore fans turned up over the three days (17th to 19th November). Last year's Commodore Show attracted over 10,000 people. However, the firm is pointing out that this is the first time it has organised the event. In previous years the show was put together by Database. "We didn't have the advantage of free advertising in Database's magazines," explained a spokesman.

Commodore had hoped to avoid the 'box-shifting' label of previous events. As such the show was split into two floors. Upstairs the 'classier' elements showed off their goodies, while the lower floor saw a large number of fivers changing hands.

Radio person and Amiga fanatic David Jensen did the honours along with Commodore's UK boss Steve Franklin.■

• *Show goes on: but it's down on last year*

Shoot from the lip...

"● We can't have Sooty killing things. He has to be passive in the game." *Alternative's Roger Hulley after picking up the big licence.*

● "Sometimes an innovative technology falls into the hands of a weak or erratic management, Commodore International's seem to be just such a management." *Feature on the Amiga manufacturer in US business mag Forbes.*

● "When it comes to the business sector Atari has a knack of clutching defeat from the jaws of victory." *Mike Dale of top end ST software house Signa.*

Amiga club

WH Smith's mail order wing has at last set up an Amiga club with hundreds of products on offer.

The Home Computer Club now covers all major micros – a PC section was started only a few weeks ago. Amiga owners who join can expect a free copy of CRL's *Virus Killer*.■

EXPRESS

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COMMENT

Why does the Department of Trade and Industry refuse to take the hacking question seriously?

Amazingly, it remains completely legal to sneak into somebody else's computer system and have a good look at what's on offer. Snoops can rest assured that, in the eyes of the law, they have done nothing wrong

The Department of Trade and Industry has allowed the hackers to continue their intrusive games without so much as a squeak of resistance. The department's Secretary of State, Nicholas Ridley, was handed an ideal opportunity to stop this insidious activity. Why did he fail to take the simple course which common sense, and much of the computer world demands?

Despite her excesses, Emma Nicholson has been most enterprising in her campaign to outlaw hacking. It's a subject which she latched on to early, and she has pushed it into the public eye with some skill. Predictably enough her private member's bill was shelved in order to study the full implications of hacking. Given that the Law Commission was only weeks away from publishing its report, the House's decision was a wise one.

Even though she knew her bill had no chance, it had served at least to make the country more conscious of the problem. The broadsheets are now running stories about hacking every week. Even the tabloids have approached the subject with a surprising degree of intelligence.

It was the Law Commission's report which Ridley should have heeded. It was written in as plain English as a legal report can be and managed to avoid technical waffle. The Commission knew that even today computing is still a difficult subject for many people to get their teeth into, and did its level best to help them understand.

So it cannot be the case that Ridley ignored the report because it was over-technical or difficult to comprehend.

It is also absurd to suggest that Ridley subscribes to the foolish idea that hackers serve us well by exposing cracks in our computer systems' defences. We pay good hackers to look into vital computer systems and find the flaws. We don't need independent gangs of high-tech private detectives roaming around our networks at will.

Ridley's decision is based on the theory that an anti-hacking bill is not worth the Government's time. The DTI does not feel that hackers present a real danger to the community.

Talk of support for a private member's bill is vacuous. With a packed legislative programme ahead, it will have little chance of success. Hacking should not have been a peripheral problem – it should have been very much on the agenda.

Despite the DTI's lethargy on this subject, many in the Government feel that this activity has been tolerated for long enough, and Scotland Yard estimates that 90 per cent of hackers will give up the day it all becomes illegal.

Nobody relishes the thought of some stranger leafing through private documents at will — least of all, one would imagine, a Government Secretary of State.

Speculation that hacking will eventually cause a calamity and even loss of life is not so far-fetched, and sooner or later Mr Ridley will surely come to regret his short-sighted decision.

HIRE PRICE TO PAY

There can be few of us who have not forked out good money for a product which has come highly recommended, taken it home, and found that it's complete rubbish.

Good news then that Virgin/Mastertronic is offering Sega owners the chance to hire out games through RCA video outlets. Here's an opportunity to get to grips with a game and really find out if it is worth the £25 asking price.

The trouble with computing is the reliance on product reviews, and while most games reviewers know their stuff, some of them are surprisingly stupid. There are times when it's wise to review the reviews before parting with any cash.

It's always going to be touch and go, though, and once in a while you'll listen to the wrong recommendation.

This plan to give buyers a trial run with new games for just a couple of quid is surely destined to succeed. What a pity that the activities of games pirates mean that computer owners can't be trusted with a similar opportunity.

HP SAUCE

Computer manufacturers have been known to make a great deal of money, but the latest figures from Hewlett-Packard suggest that things have gone too far.

In a press release last Thursday the firm claimed to have reached a pretty staggering sales figure of ... wait for it ... $11,899 billion. This figure is almost exactly three times larger than the Gross National Product of the United States of America.

A 'computer error', no doubt...

Colin Campbell

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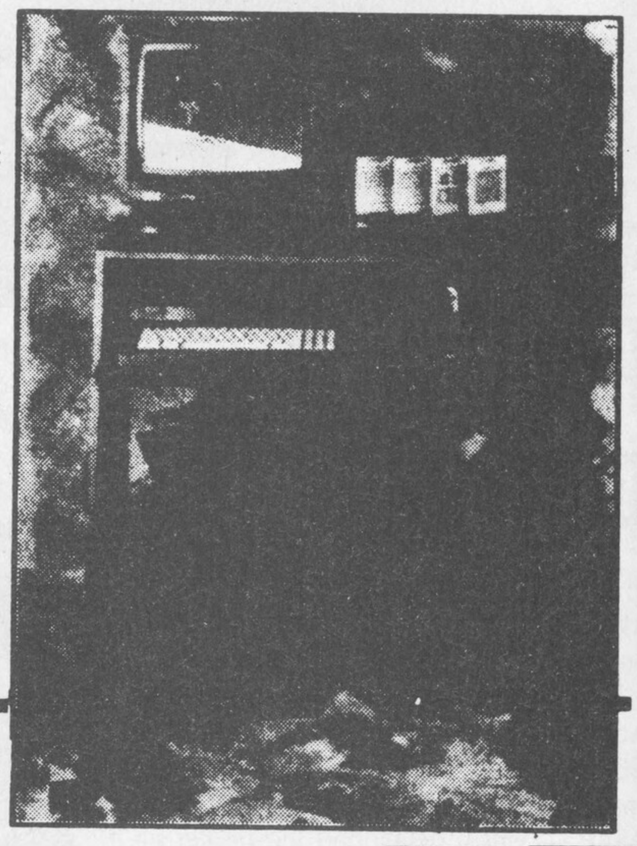

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BEST EVER COMMODORE SHOW? (PART 2)

Since Commodore announced that it would be taking over the administration of the Commodore Show, many expected great things. Then came the news that Commodore had managed to tempt big names such as Ocean and Electronic Arts to the show. Was this to be the ultimate Commodore Show? Was it hell!

Past Commodore shows traditionally consisted of rows of box shifters trying to sell you everything from a roll of disk labels to an 8 Mb RAM expansion. Indeed, with such variety in evidence, Commodore Shows have always been a paradise for bargain hunters, and this latest show was no exception. Try to find new products, however, and there was nothing but disappointment!

Even the presence of the big games software houses such as Ocean, Electronic Arts, Domark and MirrorSoft, made no difference to the tedium of it all. Of all the games producers present, only EA and Domark were actually showing new products (Domark's *Hard Drivin'* did look rather impressive, though!). By the looks on the faces of those manning (personing?) the stands, most seemed to have been wishing that they'd never bothered turning up in the first place – by 2.30 in the afternoon, the show was practically devoid of punters!

Commodore certainly seems to view the Amiga's use in the music industry as all important: going by the obvious emphasis to MIDI and music on the stand. In fact, half of the entire stand was devoted entirely to Music-X linked to a host of MIDI devices (including my current dream keyboard, the Korg M1!). On the hardware front, Commodore didn't even show an A2500UX!).

Those who kept their eyes open might have been lucky enough to catch a sneak preview of both the Enhanced Chip Set (ECS) and Kickstart/Workbench 1.4 running on the Bytes and Pieces stand (just don't tell Commodore will you!). From what was shown, you can be sure that 1.4 is going on to totally revolutionize your Amiga when it finally arrives!

Hi-Tension showed a new realtime video digitiser that looks set to give JCL's SuperPic a run for its money. For video fanatics, the company also showed a new broadcast quality genlock. On the software front, the company were promoting its *Small Business Manager* package as well as previewing *The Tipster*, a race forecasting program which the company hope to sell for as little as £20. The program allows you to build up a database of race horses and race venues and then attempts to forecast the outcome of any race. Gamblers are sure to love the program!

Sadly, many of the Commodore show regulars that we've come to know and love were absent. There were no signs of HiSoft, George Thomson Services or even those lovable lot from Seventeen Bit Software (although to be entirely truthful, young Martyn popped in for a few jars on the Friday!).

LLAMASOFT COOL OUT

Will wonders never cease? After the recent news that Llamasoft are to release an Amiga version of the *Trip-A-Tron* light synthesiser, the company have also announced their intention to produce versions of its games software for the Amiga.

When I spoke to Jeff Minter at the Commodore show (which was one of the few highlights), Jeff informed me of the company's intentions to expand into the Amiga games market. While Jeff admitted that he wouldn't personally be programming anything on the Amiga himself (*Trip-A-Tron* was in fact written out of house by Andy Fowler of Video Images), Yak would be commissioning programmers to carry out the conversion work on future products. Hopefully, Jeff may decide to produce Amiga versions of such Llamasoft classics as *Metagalactic Llamas Battle at the Edge of Time* (I kid you not!), *Psychedelia* (a much underrated masterpiece), *Andes Attack and Revenge Of The Mutant Camels*.

ROUND UP

I you have any views on any issues raised within AmigaBLIT, then why not share your comments with the world by putting pen to paper and sending them into AmigaBLIT. Similarly, if you have any great tips or cheats for the latest Amiga games, then I'd also love to hear from you (every one printed gets a mystery game – they've got to be original though, matey!).

Send your tips to:
JASON HOLBORN, AMIGABLIT, 4 QUEEN STREET, BATH BA1 1EJ.

Jason Holborn

BOOK NEWS

Assembly language programmers everywhere will be pleased, nay, overjoyed to hear the news that Abacus are soon to release a follow up to their immensely successful *Amiga Systems Programmers Guide*.

At this point we only know that the book is to be called *Advanced Amiga System Programmers Guide* and will no doubt contain more of the kind information that has made the original so indispensible to those of us into torturing ourselves with assembly language programming.

On the subject of books, look out for a brand new release of the bible of Amiga programming, *The Hardware Reference Manual*, which is due for release soon(ish). I'll be first in the queue for this one!

FOOTBALL CRAZY!

The program that every Amiga gamer has been awaiting for has finally arrived. Yes folks, Anco's *Kick Off* expansion disk, *Extra Time*, is finally available for the very reasonable price of £9.95.

***Extra Time* enhances the original *Kick Off* (note that you do need to own the original) to include several new options to allow more precise control over both the playing conditions and actual play. For starters, *Extra Time* now automatically selects the type of playing surface from four different types – Wet, Soggy, Hard and Artificial Turf. These surfaces have a marked effect on the speed, travel and the bounce of the ball. These conditions will also effect the pace and stamina of the players.**

***Extra Time* also adds the unpredictability of cross winds that can range from a refreshing gentle breeze right up to a gale force. If the winds are on your side, it is even possible for your goalie to score a goal by kicking the ball straight down the pitch!**

To make the game more of an accurate simulation of the skills of football, *Extra Time* adds four new tactics: blitz, lockout, criss cross and falcon (football experts will hopefully know what these are!). Once you have control of the ball, you can directly aim the power of the shot and direction. Even the goalie gets a look in as *Extra Time* adds nine types of goal kick.

For dedicated *Kick Off* fans everywhere.

PLAYING TIP

OUT RUN

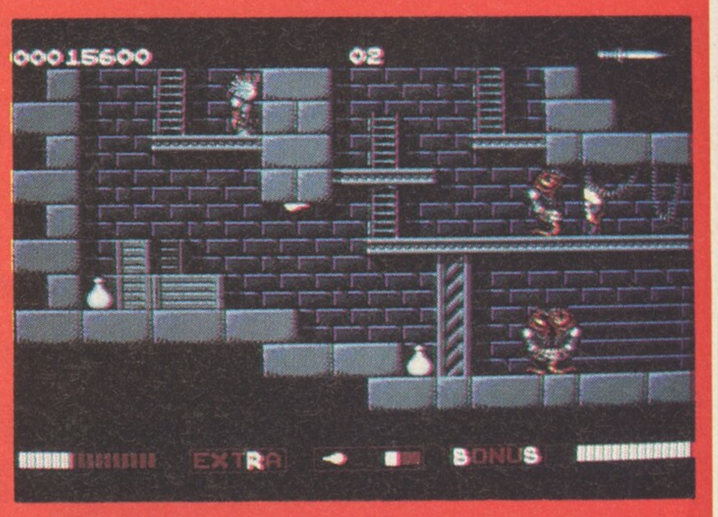
Anyone having trouble getting to the checkpoints before the timer runs out? The just follow this simple set of instructions...

Start the game and reach a high speed, then enter the phrase RED BARCHETTA (including spaces). The cheat mode will now be activated. If you now want an extra ten seconds, simply press T. To begin the level again press B, or press S to skip to the next level.

Amar Patel, Wapping, London.

★ Blitzer...SWITCHBLADE

Gremlin / £19.99



Imagine a time far off in the future. Technology has long since passed the stage of "Household Device" and entered the realms of religion.

For 10,000 years the Cyberworld of Thraxx has been ruled by the Bladeknights, under the power of the Fireblade. An evil renegade knight named Havok has awakened from suspended animation and smashed the Fireblade into 16 pieces, thus relieving the Bladeknights of their power. All the Knights were destroyed – except one...

One Bladeknight, Hiro, managed to escape and has set off on a quest to retrieve the pieces of the sword and restore order to the land.

***Switchblade* places you in control of Hiro on his quest. The game takes place for the most part in a series of underground caverns, which are revealed in gradual sections as Hiro progresses from room to room.**

Finding your way around the caverns may seem difficult enough, but also to hinder you are all manner of cybernetic guards and creatures under Havok's influence. You must take out these guards by use of Hiro's fighting talents. Different moves are accessed by way of a power bar at the bottom of the screen. Below 1/3 power makes Hiro punch, 1/3 to 2/3 provides a high kick and full power gives a powerful leg sweep. Other weapons such as flames and bullets can be picked up on the way to deal with particularly nasty enemies.

The graphics and sound of Switchblade are first rate, exuding a wonderful Japanese cartoon-like atmosphere. From the snapshot opening sequence to the cute sprites, everything is superbly designed. Not that Switchblade's pleasure is purely superficial, beneath the slick exterior lies a compulsive and challenging arcade adventure which should have search and fight fans glued to their joysticks for many a long winter evening. But remember to stop long enough to say Merry Christmas to the rest of the family!

E IS FOR EXPECTED

The launch at the Las Vegas Comdex computer show of the Atari 520E – a limited memory version of the much vaunted (and disappointing) 1040STE – was reported in last week's *NCE*. Over in the States they're complaining about Europe receiving stocks of new Atari machines before they do, though I don't recall seeing too many STEs around in the shops here.

This latest move confirms what had been long suspected: Atari wants to lift the lower end machines up at least a notch. Given the STE's indifferent reception on the part of programmers, however, one may wonder why all the blithering bother.

Certainly the opinion of people such as Jez San (of *Starglider II* and *Afterburner* fame) is that hardware scrolling, for example – one of the features of the STE – is unnecessary and is unlikely to be used much. And what's the point of having eight times more colours (4096 instead of 512) if one can't display even a single additional colour on the screen?

Is it likely you'll be saying, "Well stone me if that colour isn't from a palette of 4096. Ooh whee blimey that just made all the difference to Xenon II"? Of course not: no-one except George Cole ever says "stone me."

But perhaps we shouldn't be too critical. After all, the bottom line is that Atari, out of the goodness of its wallet, is offering more for the same price. And that can't be bad.

EDSOFT SHOCK HORROR

It's one of those press releases, folks. "Parents who doubted whether it was worth spending £400 on a computer," it promises, "will now be able to buy an ST in the knowledge that, whatever age their children, there will be a comprehensive set of programs to help them with their school work."

It's the great unrealized promise of our time, that. All over the country parents are trying to convince themselves that shelling out four hundred big ones on a box of chips is The Right Answer and A Good Thing; and, all over the country children are trying to convince their parents that it really will help them to go to the top of the class and avoid becoming abject failures (or proven computer journalists).

DON'T DESPAIR

But today, *Express* is delighted to reveal, that LCL has released what is claimed to be the first ever complete GCSE course for the ST. Called *Micro Maths*, and consisting of 24 programs and two books, it's a sequel to *Primary Maths Course*, which is suitable for non-computerphobic 3-12 year olds. (Three year olds? Talk about starting 'em young! But, heh, the younger the better!)

The senior version takes users through from secondary school entrance level to GCSE. Then, in a few weeks time comes *Mega Maths*, a step-by-step A-level course, making the range complete. "Virtually every Maths lesson a child ever has at school," claims a spokesperson, "has now been put onto the ST."

Micro Maths costs £24, and is available direct from LCL on 0491 579345.

PLAYING TIP

AFTER BURNER

Here are a series of cheats to to gain you extra bonuses during Activision's arcade conversion:

Type THUNDERBLADE and then press the following keys;

G – More missiles
T – Less missiles
< – Previous Stage
> – Next stage
N – Extra lives

GFA 3 COMPILER TO THE RESCUE

If you were one of the many who bought and relished GFA Basic 3 you'll be relieved to know that, at last, the updated Compiler is available. Why? Well, to compile and run your program you hitherto have had to convert it to GFA2 format and use that version's Compiler. Tedious.

Some very welcome changes have been made: besides faster execution and smaller programs, that old straitjacketed dialogue box has made way for a natty set of dropdown menus; you can also link in C code, and compile to Desktop accessories.

GFA3 Compiler costs £29.95: speak to the chaps on 0734 794941.

SAVE £75!

Some time ago there was rather a neat program for the ST called *Aegis Animator.* Jolly good it was, too, except for the wallet-mugging price: £79.95. Now author Jim Kent has recovered the rights to the program and is selling the very same item for the knockdown sum of £3 (p&p included).

Jim's offering *Aegis Animator* as shareware, with the suggested contribution "a smile" (oh *purlease* – pass the sick bag!). The newly rechristened *Ani-ST,* runs on a colour monitor in low resolution only, is available from PD libraries. Now you will be sure to enclose a sickly grin with your order, won't you?

SAM SURPRISE

Forgive me for mentioning Miles Gordon's newly launched £150 eight-bit machine the SAM Coupé. If you read the computer press you'll be heartily sick of the damn thing by now. But what you may not already have heard is that it can actually read ST disks. Since, like the ST, the SAM uses the 1772 chip disk controller, you can save an ST screen on disk, bung it in the SAM and run a little utility that adapts it to the SAM screen. (It can also read disks from the Amiga, whatever that is.)

THOSE *TILT* AWARDS, NOT IN FULL

French magazine *Tilt* annually awards what are somwhat predictably called the French Oscars. This year there are some rather high highlights. So, without further ado – the envelope, please – and this year's winners are:.

1. Best strategy game: *Populous* (Electronic Arts, and quite right too)
2. Best graphics utility: *Deluxe Paint III* (EA again: ditto)
3. Best simulation: *M1 Tank Platoon* (Microprose)
4. Best flight simulation: *Falcon* (Mirrorsoft)
5. Best English language adventure: *Indiana Jones and the Last Crusade* (Lucasfilms)
6. Best sports sim: *Great Courts* (Ubisoft) and *Kick Off* (Anco – though the ST version isn't that hot)
7. Best shoot-em-up: *Silkworm* (Virgin – I didn't rate it)
8. Most original game: *Sim City* (Infogrames – arriving on the ST very shortly)
9. Best action game: *Skweek* (Loriciels – action?!)
10. Er... that's it.

Steve Carey

SON OF PROTEXT

Known until now for its rather spiffing word processor *Protext,* Arnor has been beavering away for yonks on that "difficult" second release. Now that new program, a *Protext* lookalike database, is here.

Called *Prodata,* it has the feel that will be instantly recognisable to anyone who's ever used the curiously anti-*GEM Protext.* For whilst Protext dispenses with drop down-menus and effortless mouse control of cut and paste operations, the result is a word processor that shifts at the speed of light. So *Prodata* is bound to be one of the fastest databases you'll come across on the ST. At £79.95 – £55 until the end of the month – it's not an impulse purchase (but then, who ever bought a database on impulse?). What it does have going for it is an unusually flexible layout and options enabling you to customise your database in any way you wish.

Those charming, suave, sophisticated Arnor blokes *(shome mishtake shurely – ed)* can be roused from their afternoon nap on 0733 68909.

STunner...TOWER OF BABEL

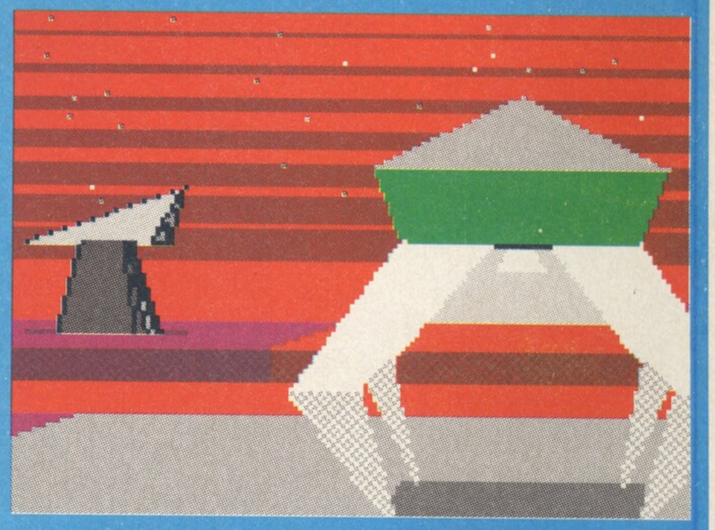
Good strategy games don't come along too often, but when one does, it's always amongst a blaze of publicity. Indeed, the people at Microprose see *Tower of Babel* reaching lofty heights of fame, which is hardly surprising since the game has been in development for the last two years.

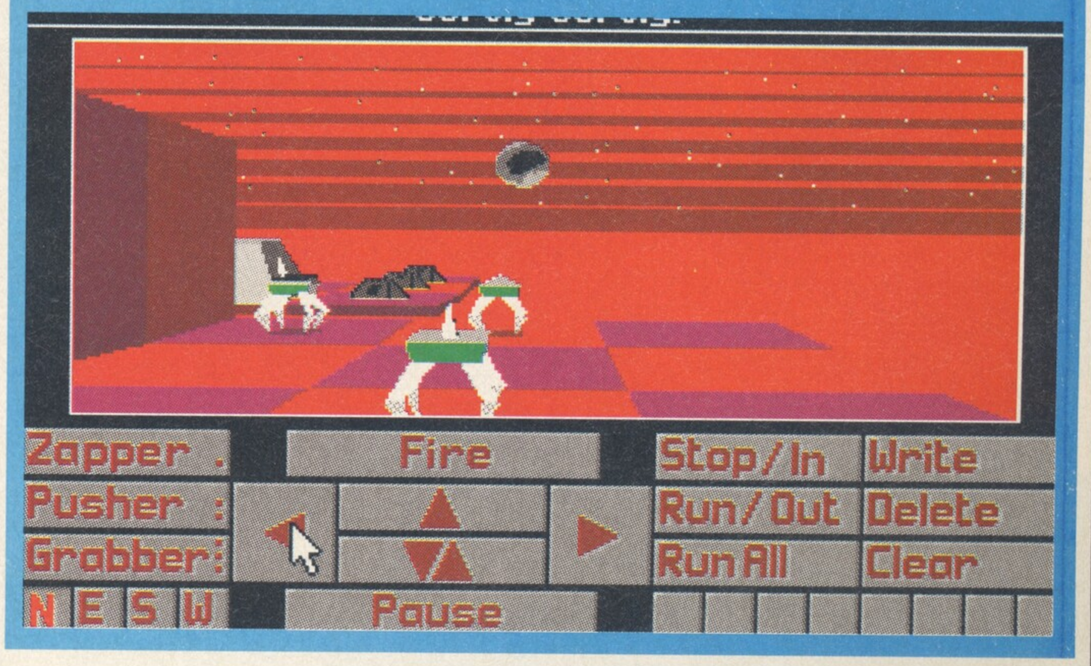
***Tower of Babel* is a 3D filled environment, and the object is to rid levels of green pyramids (klondikes, to the expert), using three robots – zapper, pusher and grabber. You direct these robots across squares at each level by using the mouse to push buttons on a control panel.**

Since your path to the klondikes is invariably pulsating with bricks, bullet-firing landmarks and even elevators, how you use zapper, pusher and grabber determines whether you will succeed or not.

The zapper will zap obstacles out of your path, the pusher will push blocks forward and the grabber is used to pick up the klondikes. Sounds easy? You'll love it the moment you see the 3D animated obstacles. This is no game of chance, however – it's pure logic – which makes it one of the best strategy games on the ST.

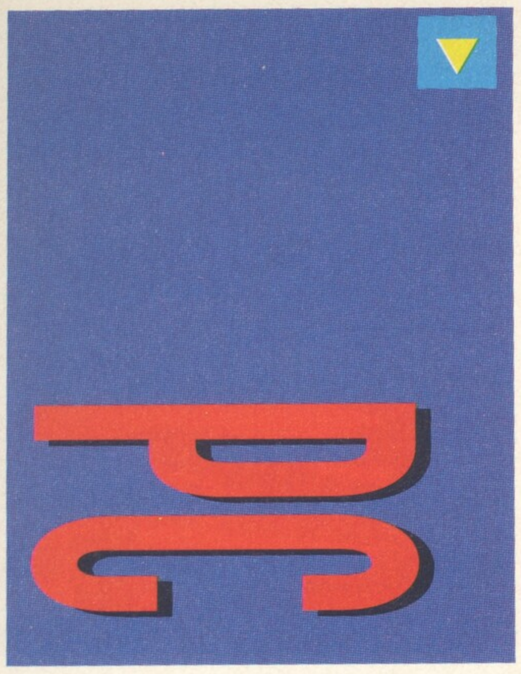
***Tower of Babel* will be released in December, priced £24.95.**





YOUR FORMAT

MACHINE SPECIFIC COLUMN



DON'T BUY FRESH, UPGRADE!

There are a lot of people with more than one PC these days. This doesn't necessarily mean they are all rich executive types with a 386 at the office and a Compaq portable to take home with them each night. Often it's people who have upgraded and found that the second-hand price of their old machine means it's not worth trying to sell it.

Slow PC or XTs can still have their uses, however. For example, you can equip the older machine with dissimilar drives to aid in file copying. Or you can use it for a second opinion on new software. If it won't work on the Super-Wizzo 33MHz 486 with electric bread slicer and rotisserie, it's useful to know that a boggo-standard 4.77MHz CGA IBM-Pah! 8088 won't run it either. Just the job for complaining to the software house/dealer. Best of all, when finances permit, you can often upgrade an old crate (if it isn't an Amstrad), by fitting a replacement mother-board. They're getting cheaper and cheaper.

For example, Datamation (0753 696499) have a 1Mb, 12MHz AT mother-board with a Landmark speed of 15.9 for £299 plus VAT. An extra £100 buys you a 1Mb 20MHz 286 which whistles along with a Landmark of 32.7. You may need a new hard drive controller and possibly a beefier power supply as well, but it still works out a lot cheaper than buying a machine afresh. Mention where you read this offer and the good folks at Datamation will even swap the board out for you, as long as you can take the machine to them. To crown it all, they may offer part-exchange on your old PC or XT board.

In fact, even if you aren't thinking of keeping your existing machine, it's worth looking at how much it would cost to replace its guts rather than replacing the whole PC.

LINES OF MAGNETISM

If you have two PC's you no doubt need to transfer files between them. If each has a common drive type, you can do this by disk, but in many cases its easier to do it through a cable. If you choose the serial link approach, you'll be after a piece of software along the lines of *LapLink* or *FastLynx*. The problem here is the £100 or so you'll have to pay.

Enter *Magnet*, a comms utility which will transfer files at up to 115Kbaud, but for £10. This bargain consisits of two disks, one each in 3.5–inch and 5.25–inch formats, and the manual on disk. No lead is supplied, but a null modem lead can be had for around £15, so the whole setup need cost no more than £25.

Magnet works extremely well, too. Once you've sorted out the comms port you are going to use on each machine and once you configure the transfer rate, set one end to host mode and the other to control; with this set–up you can then send or receive files or chat from one screen to the other.

If you would like to pick up a copy of this month's PC bargain, contact Media Magnetics at 18 Burfield Road, Halesowen, West Midlands B63 2XA.

A WEIGHT OF SMALL THINGS

Most floppy disk users never need to worry about the filename capacity of MS-DOS. If you happen to be filling a disk with very short files, though - like a collection of poems - you may hit the 112 file limit. In this case MS-DOS refuses to save any more files, even though there may be several hundred kilobytes available on the disk.

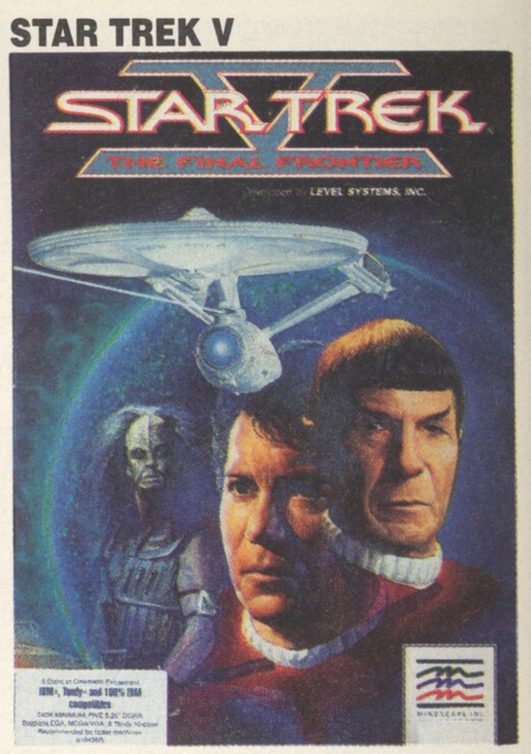
The obvious solution is to create a sub-directory or two, each of which can store another 112 files. Trouble is, DOS treats a sub-directory entry as a kind of file-name, and since the root directory is full it won't allow entries even for sub-directories. The solution is to delete a file or two (copying them to another disk if necessary first) and then to create the sub-directory. Moving some of the files to the sub-directory will then release further space at the top level. This way, the complete works of Emily Dickinson can be held comfortably on a 720K disk.

MANAGER MOUSE

Mice are unobtrusive, tame little things, particularly if attached to the back of your PC by a serial lead. They just sit quietly on their mouse mats waiting to be of service, with not a care in their little bright buttons. Trust some clever American, then, to disturb the natural order of things.

Numonics, of Montgomeryville, PA, have introduced the Manager Mouse, a PC mouse-compatible three-button rodent which can also be made to emulate a Microsoft mouse. It has no ball, but a couple of little wheels underneath which serve the same purpose. Most importantly, though, it has no tail. Instead a lead comes from the serial port and ends abruptly in a rectangular box. In this box is an infra-red transducer, and this links with a similar device inside the mouse - you may move the mouse entirely unencumbered. No tail is total freedom - my hype not theirs.

STAR TREK V



• From Mindscape on 0444 86545 is the latest in the Star Trek series - in EGA & VGA!

The problem, of course, comes from the fact that both ends of the link need power, and this can't be taken directly from the serial port. Instead, one of those integral plug/power supplies sticks in your three-pin socket and powers the rectangular box end. The mouse is powered by rechargeable cells which give it up to three hours continuous use. You have to remember to plug it in every few nights, so it can charge itself up again.

All in all a solution to something, which in my book at least, is no problem. And such a cumbersome solution as to convince me that my own little Microsoft beasty has a lot going for it.

WHATEVER NEXT

How many times have you been caught by the slogan 'Join our Book/Record/Cassette/Tiny, Hand-Made, Miniature Model of the Twentieth Century's Great Totalitarian Dictators Club and get the first three items for 5p'? Just the once, eh? O.K., well anyway you might be interested to know that American Type Foundries (ATF) are using a similar technique to sell PostScript fonts.

Does this strike you as odd? It did me, too, but sure enough their flyer goes on to say 'Join the ATF-Type-Club ™: Four typefaces for $136. Compare this to the regular price of $195. Each month, a selected new type package is available at a special introductory discount - usually 20% off'.

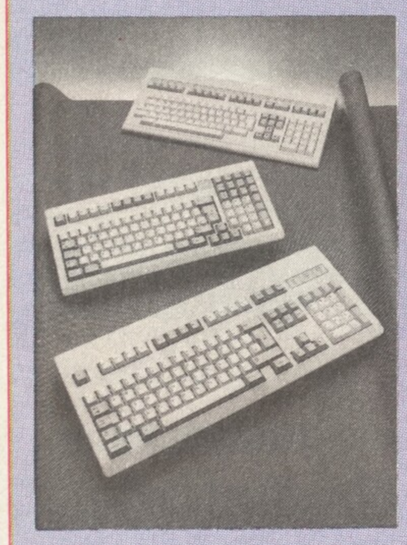
Actually the fonts themselves look very good, with ATF's own 'hints' (adjustments to the design of type to satisfy the eye at small point sizes). It doesn't say which faces ATF has access to, but you can investigate for yourself by writing to Kingsley/ATF Type Corporation, Software Division, 2559-2 E.Broadway, Tucson, Arizona 85716.

CONVERSION

The *Word for Word* document conversion program, which allows you to convert files from one word processor format to another, now supports more types of document, including those from Framework III and Manuscript. It costs £99.99 from Mindscape on 044 486545.

Simon Williams

PC PEEKETTES



KEYBOARDS

A weak point of many PC clones (most notoriously the Amstrads) is an appalling keyboard. If you want to stop 'punching rubber bands' try calling Access Keyboards. They also do various specialised keyboards for off-the-wall applications. Access is on 0734 663333.

PRINTERS

Logitek is selling the Canon LBP4 laser printer for £1195 plus VAT. Phone Logitek on 0257 426644.

Warranty is always a thorny subjects with comput ers, so it is interesting to see that Microsales is offering 12 months on-site warranty with every dot matrix printer it sells. Reach Microsales: 0282 416677.

If you've got five PCs, you may be interested in the EQZ laser II, which allows five machines to share a single H-P Laserjet. Auric International on: 0734 772734.

LANGUAGES (FOREIGN)

Topware's Euro-series of teach-yourself European language diskettes is now complete with the launch of The Secretary. This contains vocabulary in English, French, German, Italian and Spanish of the sort likely to be useful to a secretary/PA. Just the job for 1992, and available from 01-228 0242.

MONITORS

Taxan has launched a 14-inch monochrome low-radiation monitor using FST

(Flatter Squarer Tube) technology. It supports the VGA (Video Graphics Array) standard with 16 shades of grey and costs £249 from (0344) 867646.

RAW POWER

IBM has brought out a Wizard card (it sez 'ere) for its Microchannel-based PS/2s. It uses the Intel i860 microprocessor to provide simply oodles of Megaflops and MIPS and things. For genuine speed-freaks only.

3L Limited has Tbug, a window-based interactive debugger for transputers in MS-DOS PCs. £220 from 0506 415959.

HARLEY-DAVIDSON: THE ROAD TO STURGIS

It's Harley heaven as you straddle your 1340c.c. Hog and scream through the box. You're off to the biggest bikers rally yet in Sturgis, South Dakota - if you can make it in time.

Speeding tickets, blow outs and plain dumb decisions could leave you eating dirt instead of burning rubber. There are five games with varying difficulty levels. The graphics are great and the sounds will outrage even the friendliest neighbour.

So climb on, max out and cruise the open road for the ride of your life.

Available for Amiga, Atari ST, IBM, Tandy and compatibles.

MINDSCAPE INTERNATIONAL

MINDSCAPE

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

SPECTRUM

THE GAME TRAIN IS IN

Spectrum adventure fanatics must be in a state of deep depression after the recent announcement that Level 9 has just written its last ever eight–bit title. But, fear not brave adventurers, because I've just been playing an excellent game which, while not quite up to Level 9's standards, should certainly fill that gaping hole in your life.

Polearn from newcomers Sheol Software is a good old fashioned text and graphics adventure for 128k/+2 machines with a decidedly spooky atmosphere. You're put in control of a Psychic Detective called Marcus Thornton, who, following the death of his fiance, has decided to take a holiday in Cornwall, where, as you might have guessed, unexplained supernatural occurences are only a move away.

Ghost stories aren't the easiest thing to do on a computer, but there's a genuinely chilling atmosphere in parts of *Polearn* thanks to some well written lightish purple prose and grainey black and white picces.

Unusually for an indie product the game's professionally packaged and accompanied by an excellent little instruction book: all in all, well worth the £7.95 price of admission. A version for 128K/+2s is available from Sheol Software, Central Works, Peartree Lane, Dudley, West Midlands. DY2 OQU. 48k and +3 Polearns are also planned and you'd do well to send an s.a.e. to the above adress if you're interested.

BARGAINS

Regular readers should know that every so often I get nostalgic spasms and froth over various classics that have just been reborn on one of the cheapo labels. Well, here I go again. Your collection will be incomplete, your life meaningless and your pocket abnormally full of dosh if you don't buy at least one of the following bargains.

The Great Escape (£2.99 hit Squad) Surely one of the best arcade adventures of all time that's thankfully not based on the film of the same name. It's set in a German prisoner of war camp with escape being the obvious but pretty complicated plan. Just about everything you'd expect to find in any respectable prison camp has been thrown in including underground tunnels, disguises, guard dogs and searchlights and when it comes to tension and suspense you son't find a, um, tenser or more suspenseful game on any computer, in my opinion anyway. The same programming team went onto program the highly regarded *When Time Stood Still* afterwards but personally I prefer this. Strike up a close friendship with it!

ONE HEWSON POKE

Please receive, with my blessing, a few more hacks for pacifying some classic Hewson games.

```
5    REM Impossaball poke
      (time+lives)
10   CLEAR 25599: LET t=0
20   FOR f=65437 TO 65479: READ a
30   POKE f,a: LET t=t+
     (f-65427)*a
40   NEXT f: READ a: IF t<>a
      THEN PRINT
      'DATA ERROR!!' : STOP
50   FOR f=65480 To leg: READ a
60   IF a=999 THEN
      RANDOMIZE USR 65437
70   PRINT f,a: NEXT f
80   DATA 221,33,0,252,17
90   DATA 0,3,62,255,55
100  DATA 205,86,5,48,241
110  DATA 33,0,252,17,255
120  DATA 251,1,19,0,237
130  DATA 176, 62, 201, 50,18
140  DATA 252, 205, 255, 251, 33,
150  DATA 200, 255, 34,127, 254
160  DATA 195, 58, 254, 184, 112
170  DATA 175, 50, 74, 147
180  DATA 175, 50, 255, 160
```

Ping Pong (Hit Squad £2.99) is another elderly Ocean game that's been given new life thanks to their Hit Squad label. *Ping Pong's* the conversion of a slightly bizarre coin op based on the thrill packed spectacle of table tennis. Incredibly fast and with a very groovy soundtrack this one'll surprise you with it's addictiveness.

Renegade (Hit Squad £2.99) – is a bit violent this one, but good fun with it as you shatter the parenthood plans of countless unsavory types. About the only better beat em up for the Speccy is it's older brother Target Renegade.

MAGS

The deluge of fanzines I used to receive has now dwindled, wained and done other things described by similar depressing adjectives to just a few regular mags. This is a pity because the best indie publications, just like *Express*, can offer huge quantities of enthusiasm and low quantities of hype for a very reasonable price. So if you edit or read a fanzine that covers the Speccy in some way, boost your circulation (and photocopier bills) into double figures by sending me your latest issue forthwith for generous plugging.

In fact, bundle all mail to me: Robin Alway, at Spex, *New Computer Express*, 4 Queen Street, Bath BA11EJ.

Robin Alway

ANOTHER HEWSON POKE

```
5    REM Cybernoid poke
10   CLEAR 25999: LOAD "" CODE
20   FOR n=23392 TO leg: READ a
30   IF a>255 THEN GO TO 50
40   POKE n,a: NEXT n
50   POKE 64531, 249: RANDOMIZE USR 64512
60   POKE 65149, 91: RANDOMIZE USR 65082
70   DATA 175,50,72,134,175,50,235,153,62,195,
      50,165,153,195,96,109,999
```

PCW

TIME FLIES

The PCW is now four years old and has sold something like 1.5 million units throughout the world – nearly a million in the UK alone. Just thought you'd like to know.

PLAY IT RIGHT

I have a letter from Joyce McAllister who is writing a BBC Radio play on her PCW but is having trouble getting the indents right. If she types a paragraph like this:

SMITH: You realise, of course, that there's no escape?

...with a [RETURN] after the 'that' and a tab before the 'there's', then she gets into trouble if she edits the top line, with this sort of thing happening:

SMITH: You realise, of course, Mr Bond, that
there's no escape?

Surely there's a way round this, but it's not mentioned in the manual, she says.

Well, yes there is, and it's definitely mentioned in the manual! (Look in the index under 'indent tabs' or 'hanging tabs'). Instead of a normal tab after the 'SMITH:' put an indent tab. This is just [ALT][TAB] and shows on screen as an arrow with a flat bottom.

Now you can type the rest of the speech and it'll automatically restrict itself to the indented margins, without you having to type [RETURN]s and [TAB]s. And, if you subsequently edit the first line, the rest re-aligns and reformats nicely too:

SMITH: You realise, of course, Mr Bond, that there's no escape?

Hope this answers your question, Ms McAllister, and good luck with the play.

PHRASING IT RIGHT

A tip for the above situation is to make phrases of all your character's names with the indent tab at the end. Type SMITH: followed by [AL][TAB]. Then press [COPY] and move back with the cursor keys until the whole of the name is highlighted. Then press [COPY] and press a letter to store the phrase under, such as S. From now on, pressing [PASTE]] followed by S will insert the word SMITH: plus that alt tab. You carry on typing with the content of the speech and it'll automatically format itself. Good feature this.

NO COMPETITION

Looking through the prizes on offer in the *Express* competition (last week, this week and next) I can see very little for us PCW owners! Granted, I wouldn't be desperate to win a copy of BMX *Ninja Five-a-Side Alien Simulator*, even if it did run on the PCW. But it would have been nice to have a few more 'hard' prizes – a couple more modems maybe, a PC perhaps, a Psion laptop for the heck of it, or possibly, dare I say it, a laserjet printer...

Basil Pigg

MSX

SOFTWARE

Let's start this weeks column with news of yet more software for the MSX, this time imported from Japan, and available on cartridge.

The first is called the FM Pana Amusement Cartridge from Pana Soft, and is for the MSX 1 computer. This device is, I believe, a cartridge that allows you to compose music and sounds on your computer, save your compositions, and then replay them at your leisure. Until I can obtain a copy of this software, it's quality and usefullness will remain a mystery. I do know, however, that it has been available in Japan for quite a while, so could be a little dated, although it is obviously still available over there.

The second title from the same source, is a game called *Hydlide 111*, from T & E Soft, and is (obviously) the third game in the Hydlide series. Now, the first of the Hydlide series was an arcade adventure, and this was presented in a pseudo 3D manner. *Hydlide 111* I have not seen, but it was released on a 1 mega Rom cartridge, and was, I am informed, quite well written.

Hydlide 111 must be in much the same vein as the first games in the series, so if you like arcade adventures, and are looking for quality, this game may fit the bill.

I hope that I will soon have both these pieces of software for review shortly, so if you want to know more about them, you are going to have to keep on buying *Express*, aren't you? For more info on these titles and other MSX products Phone MPT Computers on 01 458 3310.

COMPILE WITH STYLE

I read in the computer press recently that Code Masters plan to release a compilation of games on a CD. Now this may be hot news in the UK but it is old hat for us MSX users. We have had CD based games on our format for over a year, (my Disc is copyright 1988), but no mention was made of its release in the British computer press. Maybe everyone simply takes for granted that MSX is always first with novel ideas in computing (eg built in digitisers, and computers that have FM sound generators and Midi as standards). Once again where MSX goes, others follow.

THE DOC IS IN

A few weeks ago, an MSX user wrote in, asking for help with *Robocop*, as he could not get further than the fourth stage of the game, the identykit part.

Sure enough help is at hand, in the form of an MSX user by the name of Tim Turner from Garforth, Leeds. The secret is, to look carefully at the lips, as two of the top lips are very similar. Change your top lip for the other top lip, and you should complete this section.

Tim also mentions another useful tip for stage 6 of this game. When you are fighting ED209, dodge the bullets by ducking until they pass; and on level 9, shoot at Dick Jones' legs. I hope these tips help MSXers with this game, and thanks to Tim for writing in, even though he forgot to put the fiver in the envelope.

Keith Neal

BBC

HISTORY IN THE MAKING

When do you think the last development of the venerable BBC took place: 1986, when the Master 128 was launched? or would you say that it all ended with the B+? Well, both guesses would be wrong, I'm afraid. Indeed, I am currently in possession of a document that details all the newest and latest enhancements of the BBC operating system.

No doubt you are totally mystified by this possibility for advancement in the world of the BBC; so, I had better come clean and admit I'm actually talking about *165host*, which runs on the Archimedes. The latest version of this BBC emulator provides support for Sideways RAM, faster screen access, better keyboard support and full sound chip emulation amongst other things. One unusual feature is that software developers can now write 6502 code ROM images which make use of RISC OS SWIs. This raises the intriguing possibility of dual purpose software, although I'm not quite sure what application it could have. More importantly though, it shows that Acorn has realised it cannot just ignore the vast hardware and software base of the BBC already installed. Primary schools for example are just not in a position to throw away their BBCs.

LITTLE JACK SPRAT

Games reviewers are fond of peppering text with such gems as "But on level 17 the monsters are twice as nasty" This implies they have played the game all the way through, gaining a thorough ground knowledge of it. Usually, however, the cheat mode or supplied password comes in very handy indeed!

My normal practice is to hand over the software and let someone play it, then edit the comments that result. In the case of *Sprat*, though, I have done without any such help. I must, therefore, comment on this game, as in my opinion it merits the attention.

You play a sunglass wearing character called Sprat who literally bounces around a multi-level dungeon. The main novelty lies in the way of controlling Sprat; you must squidge him to temper the amount of bounce, but doing this is not easy, particularly as some of the movements require not a small portion of dexterity. Although this sounds similar to some other games (*Helter Skelter* etc) do not be deceived!

As is usual in games of this kind, in *Sprat* you must collect objects such as keys to complete the game. Fortunately there is a practice mode, which also gives you a good look around. Well, there you have it (as Barry Norman would say).

ADVANCEMENT FOR EDUCATORS

My tip for this week was prompted by a panic stricken phone call from a teacher running a course on *Advanced Folio*. It seems copy was sent up without the copy-protected key disk. If you have such software I suggest you contact the publisher and beg, borrow or steal at least two additional copies. Then, at least you won't be in trouble when the inevitable disaster happens.

Andrew Brown

CPC

SIREN'S HACK-EM-UP

Siren Software's Hackit, briefly mentioned last time, is a small, plain box which plugs into your CPC via a ribbon cable, à la Multiface. Like the Multiface, it freezes programs mid-application, and lets you do all sorts of things with the code in RAM.

Hackit does work rather differently than Multiface, however. Instead of freezing entire gobs of memory and letting you cart them about willy–nilly, Siren's gadget lets you examine and edit machine code. It's far more of a true hacking tool than Multiface, as Hackit lends itself to code editing and patching. For this reason, it's especially useful to programmers who want to work out why their latest epic has crashed (yet again).

Hackit naturally raises all the old issues about piracy and, especially with such a 'controversial' name, promises to fuel up the old debates about copying devices once more. The fact is, though, that Hackit lets you fiddle about with code quite happily on a line-by-line level, but it wouldn't be especially useful to a pirate trying to crack a game's copy protection. The reason is that anyone who knew that much about machine-code could crack protection via plenty of other, less cumbersome, means.

Hackit is, instead, an excellent tool for programmers – both professional and amateur. Price? £34.99. You can find out more from Siren Software at 84-86 Princess Street, Manchester M1 6NG (061 228 1831).

WARNING SIREN

As we discovered in the last section, the Hackit may be a bona fide programming gadget, but it also lets naughty coders poke about with commercial software. It could even, conceivably, be used to dismantle commercial copy-protection. Which is where Bob Hay of FAST comes in...

"From what you tell me, the device is not dedicated to copying software and so is unlikely to breach current legislation."

Ah, but what if it was used to break copy protection?

"Distributing pirated software is illegal, and offenders will be prosecuted."

But what if it's just a case of someone making a few copies for his or her friends?

"That too is illegal."

There you have it. The Hackit ain't illegal, but pirating games is. Note well.

A NEW LEAF

Page Publisher has been re-released by SD Microsystems. The program has been repackaged and is being touted as "affordable DTP for 128K Amstrad CPCs". It's an icon-driven package for either 6128 or expanded 464, and handles both text and graphics.

The Program might not trouble the likes of *Stop Press* too much, but at £24.95 complete with full manual, it costs substantially less. And SD is offering a special price at the moment. If you buy before the end of January 1990, you get *Page Publisher* for £19.95. Phone: 0462 675106.

DOUBLE TROUBLE

That long-awaited arcade mauler *Double Dragon* has at last made it onto the CPC! Trouble is, it's on compilation.

"How bizarre!" I hear you grumble. It certainly is, especially since the coin-op was such a classic, and the game was in the offing for well over a year – long enough to set the pulses of many a CPC owner a-flutter as they pondered all the serious development work that was presumably going into it during that time.

Alas the reality is a different thing entirely. It looks OK: it's just the speed – or lack of it. Your athletic toughs leap into the air performing all sorts of ninja-esque fighting moves – but apparently in zero-G. Kicks and leaps are performed with all the vigour of a three-toed sloth on valium. Ah well.

DOWN THE WASTEGATE

Also bursting on the scene just in time for Christmas is *Turbo Out Run*. Is it the turgid plod that the original was, or has US Gold turned out a masterpiece?

Guess. Well, OK, it's a lot better than the original *Out Run*, but then so was having four impacted wisdom teeth taken out via the nose...

Seriously, though, the game looks really quite good, and plays pretty well too. Unfortunately, it's nowhere near as good as any number of racing games now available on the CPC. Get *Power Drift* instead, or *WEC Le Mans*, or *Continental Circus*, or...

DOWN THE TOOBS...

...or not, as it happens. You see Domark's *Tengen* conversion *'Toobin* is actually very good indeed. Surprising considering that (a) it's a Spectrum port and (b) that it features the highly unlikely activity of floating down a river in an old inner tube.

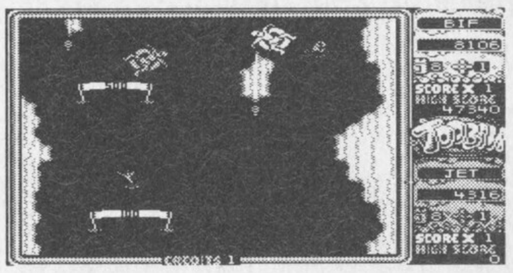
Your task is simply to negotiate the various obstacles in your way – such as sticks,
rocks, irate fishermen and kamikaze penguins – while collecting points by sliding through the gates sprinkled along your route.

You move about by paddling with your hands, collecting coke cans to lob at obstacles and making good enough progress to keep clear of an extremely voracious alligator lurking in the background to pick up stragglers.

The control method takes a bit of getting used to because you have to rotate left or right and then push backwards or forwards to move. It's actually much better played on the keyboard, since joystick control has you spinning out of control most of the time.

If anything, *Toobin'* might be a little too easy to complete, but then it's so much fun that it's worth going back to even then. Highly recommended.

Rod Lawton



•Two-player 'Toobin

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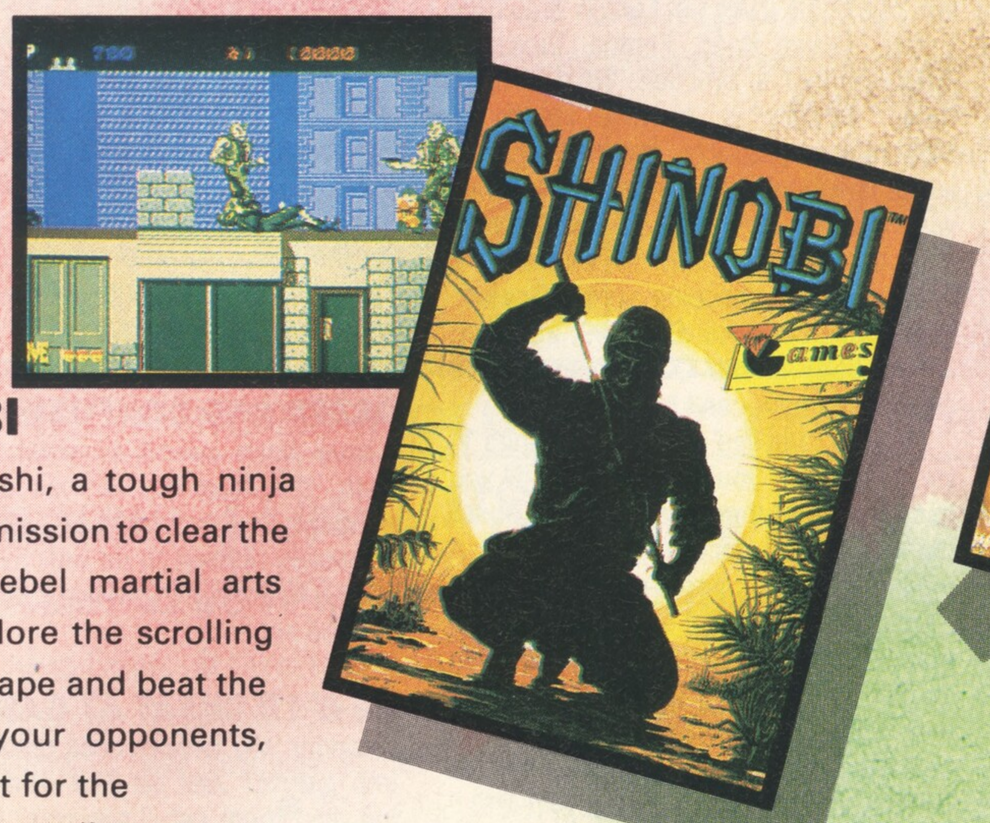

SHINOBI

You're masashi, a tough ninja warrior on a mission to clear the town from rebel martial arts fanatics. Explore the scrolling urban landscape and beat the hell out of your opponents, but watch out for the end-of-level guardians.

SILKWORM

It's not true! Even after months of negotiation with the Ruskies and despite a mass exodus out of Afghanistan, we're still under threat. There's no one left to press the Nuke button so the battle has switched to copters and plane. Non-stop shoot-'em-up arcade action.

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Compete in formula one races in Brazil, America, France, Monaco, Germany, Spain and Japan. Race hard, but watch out for other cars. Colliding can be fatal. And do visit the pits for fuel and repairs.

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QL

QL EMULATOR FOR AMIGA

After trying out the QL Emulator on a few simple SuperBASIC programs, I thought I'd give it something meaty, so I loaded Quill. Whilst it appeared to take longer to load the program than on a genuine QL, Quill also appeared to be very much faster in operation. This new-found speed was most noticeable when doing things like block moves of text within a large document.

I mentioned the emulator to Freddy Vachha of Digital Precision, and he was very interested in seeing how it behaved with the DP DOS emulator, CONQUEROR. Phil Borman of QUANTA will be comparing it with the Atari emulator. I'll let you know their conclusions.

GROWLING GRIZZLY

I've had a word with Colin Adams, the Growling Grizzly BBS SysOp. The BBS uses the QBOX software package (developed by Jan Bredenbeek, in Holland), running on an Atari Mega ST with the QL emulator.

Because the hard disk drivers for the emulator are not yet available, the files are held on a large RAM disk. The modern used is the Astracom AC 1000T.

I asked Colin about the strange name he uses for his system. Apparently, his nickname at school was "Grizzly Adams", who we all recognize as the barrel – chested hero from the tv series.

MINIX

I'm very sorry about this, but it appears that the grapevine on which I heard about MINIX being available for the QL was suffering from blight, and my sources were incorrect.

MINIX is in fact available for the Atari ST, which can also emulate the QL, but that is the only connection between MINIX and the QL. Porting MINIX to the QL would probably be quite difficult, because of the limited amount of memory.

QLAF 8

I've just received Issue 8 of Richard Alexander's *QL Adventurers' Forum*. As usual, it is a good read, with reviews of *The Fugitive, 3D-Wanderer, 3D-Slime* and *Startrek*.

I recall seeing *Wanderer* with its true 3D graphics - you wear spectacles with red and green lenses - ages ago (it's now available on the ST) but *3D Slime* is quite new. Unlike *Wanderer*, *3D Slime* doesn't have real 3D, however. An interesting feature of *Slime*, though, is a mock spreadsheet which is displayed when you press F5.

Back to the magazine: there are also several pages of hints, tips and maps for various adventures, a comms column, and PD News, wherein it is mentioned that CGH Services, who publish QLAF, has just received 10 disks of PD software from France.

You may contact CGH at Cwm Gwen Hall, Pencader, Dyfed, Cymru, SA39 9HA.

John Torofex

C64

THE SIMPLE THINGS IN LIFE

We all know Datel Electronics, don't we? We don't? DE lives at Fenton Industrial Estate, Govan Road, Fenton, Stoke-on-Trent, without a zip-code. What it does have, though, is a vast range of C64–related products, the catalogue of which is enough to make any C64 owner wish that his bank account was a great deal healthier and able to withstand a vast computer shopping spree. Oceanic 118N Disk Drive for £129.99, including a free copy of the OCP *Advanced Art Studio* package, can't be bad.

DE also supplies the simple things in life, things that you'd never use until you had them, and then find you can't possible live without once you'v got them. A mouse mat is a good example (saves ruining the desk top) and, incredibly, a mouse holder. If you buy *Art Studio* on its own (for £34.99) you get a free mat and holder. This year it was filofaxes, next year, believe me, it will be mouse holders.

WHAT THEY DON'T TELL YOU

Have you been seduced by advertisements for colour printers for the c64, like the Star LC10 Colour printer? It costs round about £210, plus or minus ten pounds in either direction, depending on who you buy it from. But beware! There are naughty foreign–type impersonators around, pretending to be British Star printers. A UK Star has a three pin plug moulded onto the cable attaching it to the printer; foreign ones do not, so be wary. What none of the adverts tell you is: having bought the thing, how on earth do you connect it to the computer? Interface cable? What interface cable? I got a colour printer minus connecting cable, and was told (by the shop, no reflection on Star) that it was my faullt because I didn't ask for one. Check before you buy!

DAZED AND CONFUSED

I have been asked to point out that *Myth*, the Magnetic Scrolls adventure available only from Official Secrets, has absolutely nothing to do with System 3's *Myth – History in the Making*. Consider it pointed out.

AS IF I'D CHEAT AT GAMES

I wonder why people build cheat modes into games? Just so that other people can find them out, I suppose. I remember goat–ting my way along *Revenge of the Mutant Camels* aeons ago, when the programmer behind *Danger Freak* was a mere babe in arms, or around 13 years old anyway. Hence typing 170470 when that game asks you for the date will take you into cheat mode. Programmers, like policemen – they get younger and younger every day.

Pete Gerrard

ATARI

POKE YOUR MACHINE

Mr Rob Davidson, who describes himself as 'the proud owner of an Atari 65XE computer', has acummulated a large collection of pokes, and he has decided to share them with the other readers of this infamous column.

Here, then are Rob's pokes for your delight and delectation:

```
Poke 731,x turn off keyboard click
poke 731,0 return keyboard click
poke 621,255 disable the keyboard
  (reset enables it again)
poke 752,x turn off the cursor
poke 752,0 turn on the cursor
poke 755,0 normal inverse characters
poke 755,1 blank inverse characters
poke 755,2 normal characters
poke 755,3 solid inverse characters
poke 755,6 turn text upside down (!)
```

SHOWTIME

Wil you all be trekking off to the Computer Shopper Show I wonder? I'll be going and anything Atari eight–bit will be duly reported (why do I get the horrible-feeling there won't be a single thing when I get there?).

STILL TRYING

I'm still trying to get ahold of the desk top publishing programs to do with the Atarifor review in the coloumn. If anyone has the programs I mean, or knows of a supplier, let me know. See you next time.

Edmund Blake.

ARCHIMEDES

GOING ALL FLOPPY

When I bought my 310, I had high hopes of fitting it up with a hard disk, which really brings the fast disk access on the machine into play. As things have happened, though, my money has been diverted to other things: specifically, an Atari ST on which I've been offered a good amount of work.

That being the case, the logical alternative was to add a second floppy, and since I have a substantial collection of BBC software, it makes sense to fit an 80 track 5.25–inch floppy. This can still take a full 800K of data as a Format E drive, can read DFS disks with the aid of a convertor such as that from CJE and can double-step to read MS-DOS 40 track disks.

BUT WITH EXTRA EFFORT

The Carrot is a frugal fellow (some might call him tight) and he decided he could undercut the £110 or so asked for a custom made external 5.25–inch. He managed to pick up a tape streamer box, complete with appropriate power supply, for £30. Combine this with a used 40-80 track drive (another £50) and the whole system should have been up and running for £30 under the odds.

The drive, however, turned out to be covered in gunk (I suspect dried coffee with two sugars, but it may very well have been Italian hot chocolate), especially the head slides, and the cables to the drive had been been badly crimped. Several of the data lines were not making connection, hence old Archie kept complaining 'Drive empty' every time I wanted him to read it.

Eventually, using another lead and with the aid of a good and dedicated Archie user, I managed to get the thing running on a 410. Bringing the drive back to base and shifting a few more links – there seem to be dozens on this NEC drive – finally got the whole shabang formatting, reading and writing format E disks.

Now all that remains is to transfer the software and see how many of the games run under the BBC emulator.

THE AWAITED MORAL

The moral of all this is not to be a skinflint, but to fork out for the commercial product in the first place. It's a lot cheaper in the time department, and, as for agro – well, enough said.

GAME OVER

Transferring games onto the Arch is not as easy as many would have you believe. Even assuming you can move them across, the chances of getting them to run are fairly slim in my, admittedly partial, estimation. In fact, once you're into the 65Host any number of CH.s, *RUNs and *EXECS produce only a modicum of success. A & F's *Chuckie Egg* seems to be the best so far, and even that only allows the default keys while running painfully slowly.

Has anyone any tips - does anyone want to take his BBC games with him to help out?

OS BASICS

Perhaps the Carrot is old fashioned, (some might call him a fuddy-duddy) but he still believes that there are basic functions which any operating system should perform. Even if that operating system is a WIMP, it should be able to list an ASCII file and adjust the system clock, for instance. Neither of these facilities is directly available from the Archie Desktop, however, and if you're running from floppies you have to reload the Alarm utility to change the date or time.

ALARM BELLS

For the record, you can change date and time by running the alarm utility and and selecting Set Time from its menu once it's on the menu bar. This calls up a separate sub-utility which allows you to set date and time.

Once set, the Archie's CMOS RAM is updated. The quickest way to type a file is by pressing [F12] to call up the CLI and typing TYPE <filename>. You can slow the scrolling speed by pressing [Ctrl] and stop it all together with [Shift] [Ctrl].

Bertrum Carrot

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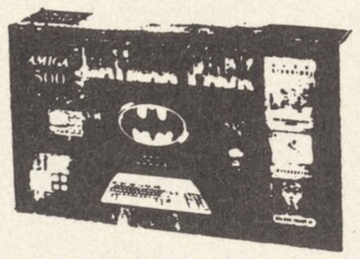

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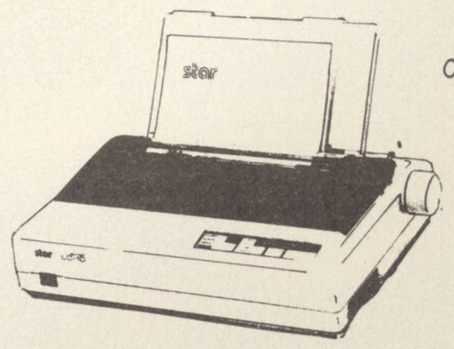

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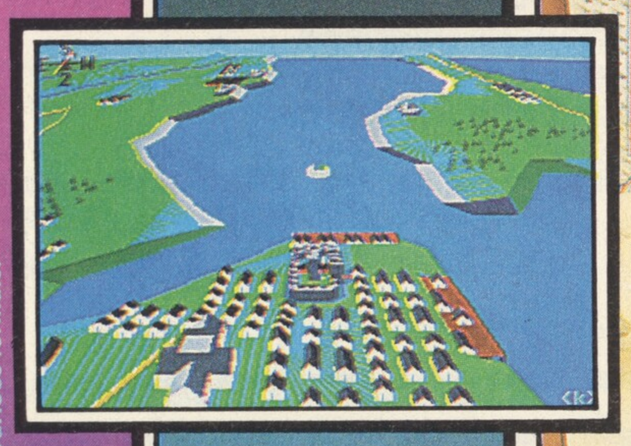
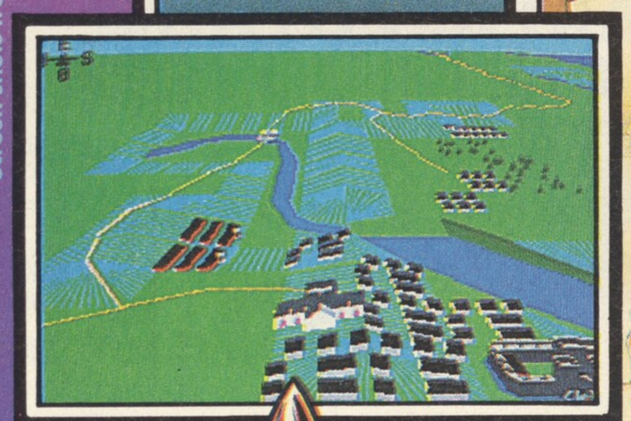
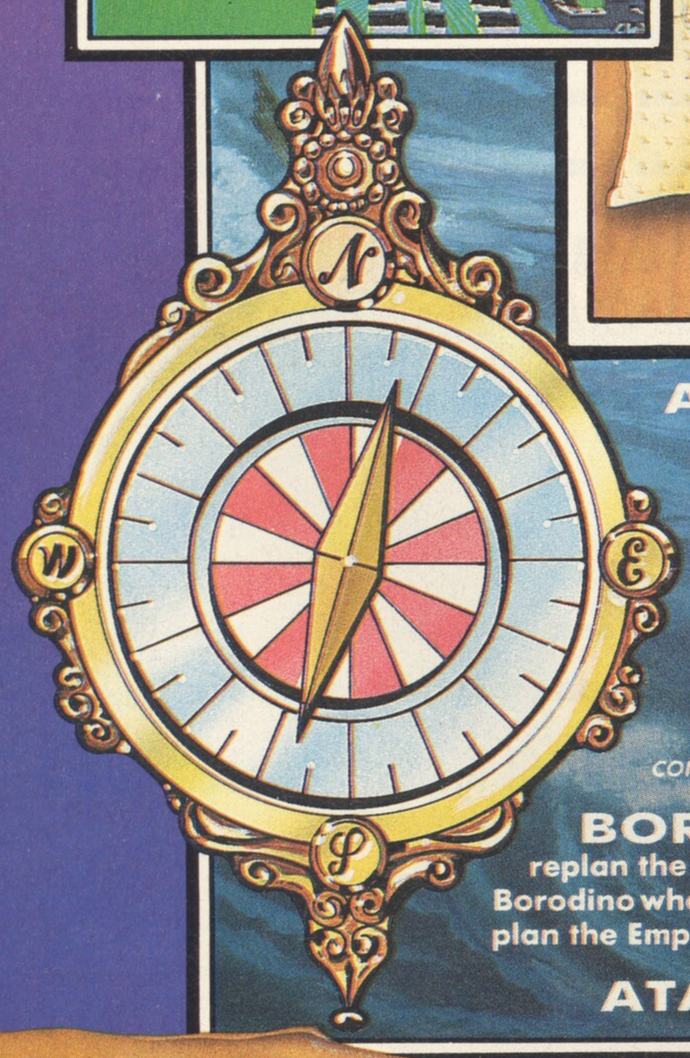




Screen shots from various formats.



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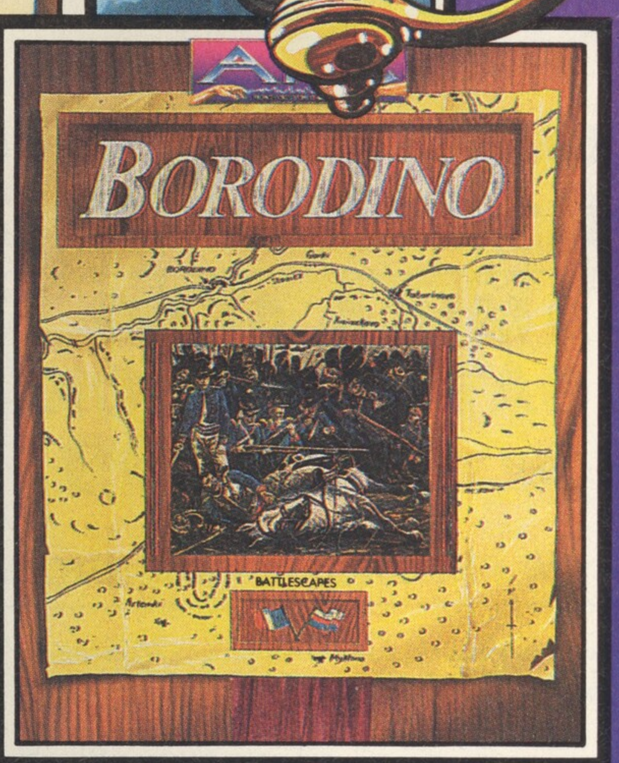

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THE SHOPPING EXPRESS GUIDE TO MUSIC: SAMPLERS, SEQUENCERS AND INTERFACES

Computers can be of great help to musicians. As well as making noises from their own loudspeakers, musicians can sample sounds and replay them, or control a synthesiser via a MIDI connection.

The borders between music and software are becoming more blurred with each passing year, as music companies invest in both hard and software companies. The industries are working hand-in-hand to produce an ever wider range of products. Indeed, the choice is baffling and growing larger month by month To some extent, of course, the choice of software and its possibilities are marked out by the computer that you choose to run it on. Now *Express* gives you a comparison of the major computers, followed by a comprehensive run down of the best software available across the board.

COMPUTERS

● ATARI ST SERIES

▲ Built-in MIDI ports
▲ No compatibility problems
▲ Large software base
▲ Not expensive

▼ Some programs require hi-res screen
▼ GEM environment can be slow
▼ Internal sound chip not very good

● COMMODORE AMIGA SERIES

▲ No MIDI compatibility problems
▲ Excellent internal sound chip
▲ Stereo output
▲ Multi tasking

▼ MIDI interface not included
▼ Software base not so large yet

● PC

▲ Large software base

▼ MIDI compatibility problems
▼ Poor internal sound chip
▼ interfaces relatively expensive

● ARCHIMEDES

▲ Excellent internal sound chip
▲ very fast processor
▲ Multi-tasking
▲ New models have built-in MIDI interface

▼ Small software base

SEQUENCERS

Perhaps the most widely available type of software. MIDI sequencers come in all shapes and sizes from the Public Domain to the bespoke facilities. The usual mark of excellence is ease of use coupled with hosts of labour-saving musically intelligent routines. Hopefully it will also be able to save in MIDI file format so that work on one sequencer can be transferred to another without tears.

● CREATOR

FOR Atari ST series
FROM C-Lab (Sound Technology): 0462 480000
PRICE £285

Becoming the most used of sequencers it has excellent editing and arranging features. Although not cheap, if you are serious about music then this is the one to go for. Hardware expansion to control up to 64 instruments independently

▲ Excellent facilities
▲ MIDI file compatibility
▲ Will also adapt to video sync
▲ Good editing

▼ Handbook can be difficult
▼ Expensive if you are not serious

● TRACK 24

FOR Atari ST series and Amiga
FROM Comus/Soundbits: 021 733 2063
PRICE £75

Well priced budget sequencer with more features than you would expect, rivalling software twice it's price. Compatible with more up-market sequencers and scoring packages.

▲ Cheap
▲ Good sequencing facilities including Mixdown
▲ MIDI File

▼ Editing is peculiar

● STEINBERG PRO 24

FOR Atari ST series and Amiga
FROM Evenlode: 099 389 8484
PRICE £285

The Steinberg Pro 24 has been the industry standard for many years. The soon-to-be-available Amiga version should prove interesting, if all the rumours are true. They are pushing their new program 'Cubase' at present but one should not neglect this easy to use and very popular program. Make sure you get at least version 3 though.

▲ Easy to use
▲ Established program
▲ Easy editing

▼ Price

● VIRTUOSO

FOR Atari ST series
FROM The Digital Muse: Audio Software: 01 586 3445
PRICE £225

A new all British program having it's first outing this year. Initial reactions are very good and the program has, indeed, many things in its favour. It has all the features that are available on much more expensive packages and, yet, the Virtuoso still remains quite easy and friendly to use.

▲ Very fast - thanks to re-writing of screen management
▲ Very accurate
▲ Can perform disk operations whilst still running
▲ Many excellent features

▼ New and therefore untested in the general market
▼ Price

● K.C.S. 1.6

FOR Atari ST Amiga, Mac and PC
FROM Dr T: 01 258 3454
PRICE £199

Dr. T programs, are nearly all made to run in a Multi Program Environment, which means that you can work on several of them simultaneously. KCS runs on 48 tracks, has loads of features and is the most popular sequencer from the range. It can also be upgraded with add-on programs to enhance editing features. What is more the KCS can be enhanced as far as music printing goes as well.

▲ KCS is a very well established program
▲ Upgrades and works with other software
▲ MIDI file

▼ Editing not easy

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● M.R.S.

FOR Atari ST, Amiga,
FROM Dr T: 01 258 3454
PRICE £59

The MRS is a low cost eight track sequencer that provides a decent introduction for the beginner. It has a few quirks in its operation, like defining song length from the length of track one. Generally, however, this has quite generous facilities. Indeed, the Amiga version will support the internal voices.

▲ Easy to use
▲ Low cost
▲ Can be upgraded to KCS
▲ Well documented

▼ Has a very laborious editing facility, that slows it down
▼ Has a few peculiarities

● SUPER CONDUCTOR

FOR Atari ST
FROM Microdeal: 0726 68020

This is a very popular little sequencer that will control the ST sound chip. It has been extremely well thought out, especially in the song arrange section. Can also cope with the fine details of MIDI including systems exclusive editing.

▲ Suitable for beginner
▲ Easy arrange section
▲ Well documented
▲ Controls internal sound chip
▲ Good if you want to control MIDI via data

▼ Editing not too easy
▼ Quantize limited

● WADDINGTON SEQUENCER

FOR Atari ST
FROM Public Domain
PRICE about £2

Canadian 64 track sequencer. Although limited in facilities like quantize and editing it is nevertheless a real bargain.

▲ Costs next to nothing
▲ Excellent introduction to MIDI
▲ Easy to use

▼ Limited facilities
▼ Can crash on occasions

● EZ TRACK PLUS

FOR Atari ST
FROM Syndromic Music: 01 444 9126
PRICE £49.95

This is a reasonable sequencer that is fairly easy to use. It is compatible with other Hybrid Arts programs that also boast a multi program environment. Limited on quantizing but not bad for the money. Editing in data only but good for organising songs.

▲ Good price
▲ Easy to use
▲ Compatible with Hybrid Arts EZ Score

▼ Unfortunately, limited on editing and quantizing

● STUDIO 24 MK 1

FOR Archimedes
FROM EMR: 0702 335747
PRICE £99

The cheapest sensible sequencer for the Archimedes. Cuts a few corners here and there but is not a bad sequencer with average editing facilities.

▲ Best for the Archimedes in this price range
▲ Can be upgraded to more powerful Mk2
▲ Very fast

▼ Poor documentation
▼ Editing of data non-graphic

SYNTHESISER VOICING SOFTWARE

One of the great boons of MIDI, especially with the complex multi-timbral synths/tone modules that are on the market. You are able to see the set-up on-screen instead of labouring over a LCD, which allows you to create sounds easily. Additionally, many programs have automatic voice generation to help with creating new sounds.

● CZ ANDROID

FOR Atari ST
FROM Syndromic Music: 01 444 9126
PRICE: £75

The most useful program to get if you have any of the Casio CZ series synths. On their own they are pigs to program and the preset sounds are rancid; use this and your CZ will never sound the same.

▲ Easy to use
▲ Excellent graphics
▲ Good library facilities

▼ Can't really think of any!

● 3D PROGRAMMER

FOR Atari ST
FROM Soundbits: 021 733 2063

This is a smart piece of software that not only covers the Roland D110 but also covers the keyboard versions D10 and D20.

▲ Easy to use
▲ Configures a very difficult instrument

▼ Roland's version of D110 may not work with it (or any other software for that matter!)

● X-ALYSER

FOR Atari ST
FROM C Lab (Sound Technology): 0462 480000
PRICE £175

Very intelligent voicing program for the DX7 synth. It has a built in conversion to MIDI sample dump in order that the sound might be replayed from the sampler directly.

▲ Very easy to use

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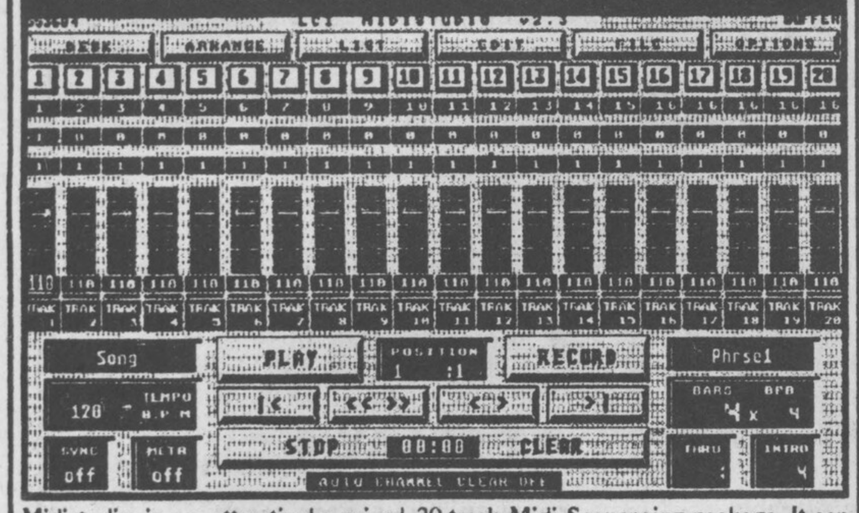
Phone us for best prices. We will try to match any price.

Midistudio Low Price £49.99



Midistudio is an attractively priced 20 track Midi Sequencing package. It can record up to 682 bars per phrase(pattern) on up to 100 phrases. Any phrase can be placed on any track. Tracks can be soloed and muted and tracks and phrases can be named. Program numbers can be displayed in a variety of ways including 0-127, 1-128, in banks from a11-b88 or a01-b64. The desk features sliders to set relative volumes on each track and you can even do a mix on the fly. Midistudio also has a clock to display the length of the last playback. Midistudio has step time note edit functions including copy, split, merge, append, and transpose, velocity editing(including a humanize function), full controller editing and quantizing. *****Demo disk £3.99*****

Midistudio Master 30 + new features £129.99

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Limited offer ex-demo £349.99

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Demonstration disk (low res) £3.99 (£2.00 redeemable)

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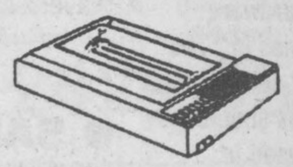

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Atari SLM804 Laser with 90 days on site warranty	£1099.99

All printers are quality products for the UK , not cheap imports.
* All these printers carry a 12 months on site warranty and come complete with cable. On site warranty UK Mainland only.

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Ladbroke's 1Mb (ST)	£74.99
Cumana internal 1Mb (ST kit/fitted)	£74.99
Please note, ST's case needs cutting to accomodate the above internal drive.	
A/B boot switch (fitted)(ST)	£24.99
Cumana 1Mb slim , disable switch, through port(Amiga)	£74.99
Ladbroke's 1Mb, disable switch, through port(Amiga)	£69.99

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		Mouse Mats from	£ 5.99
		ST clock cartridge	£24.95
Hawk scanner	£1249.99	Amiga Modulator	£19.99

All monitors come with scart to ST/Amiga.

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Vortex 40Mb(ST & Amiga)	£499.99
Megafile 30 (ST)	£474.99
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Supra 30Mb (ST)	£474.99
Third Coast 65 Mb (ST)	£599.99
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We are offering a range of high quality ST hard drives at ridiculously low prices. All have the following specification. Full metal case-same size/colour as Mega ST, 60 watt PSU, room for second mechanism. The low power controller is full SCSI and allows up to 8 drives on one controller. The software includes Autopark, Autoboot from any partition, partition size up to 1 Gigabyte, any number of partitions, 100% AHDI 3.2 compatible driver, write protect any partition.

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* Please check configuration before ordering. Our Atari trained engineers can repair all hardware, including Amigas, in minimum time at competetive prices. Fitting prices quoted for machines not previously tampered with. All upgrades and repairs carry our 3 months parts and labour guarantee.

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1040 STFM	PRO 12 Pack	£439.99
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Includes A500, mouse, mouse mat, joystick, modulator, Tenstar pack, Batman, Interceptor, New Zealand story, Deluxe Paint II.

The Power Pack consists of Organiser software, First BASIC, First Music, and games consisting of Afterburner, R-Type, Gauntlet II, Super Hangon, Space harrier, Overlander, Super huey, Starglider, Eliminator, Nebulus, Pacmania, Predator, Bombjack, Bombuzal, Xenon, Double Dragon, Blacklamp, Outrun, Stargoose, Starray.

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DTP Mega 2 Pack £1765
This pack consists of Mega 2, external 3.5"drive, SLM804 Laser printer, mono monitor, Professional software pack and 90 days on site maintenance (Mainland UK only). Phone for Mega 4 packs.

Atari Portfolio (pocket pc) £225
This amazing hand held computer is MS-DOS compatible and has resident software including address book, text editor, diary and a Lotus 123 file compatible spread-sheet. 128K free RAM, 256k ROM.

Atari PC 4 (80286) £1349
The PC 4 has an 80286 processor running at 8 or 12 MHz, 1 Mb of RAM, 60 Mb hard drive, 5 AT and 1 XT expansion slots. For mono (Amber) monitor add £100. Phone for VGA.

Atari PC 5 (80386) £2069
The PC 5 has a 16MHz 80386 processor, math co-processor socket, 64K cache memory, 2 Mb RAM, 60 Mb hard disk with high performance controller, 4 AT and 1 XT slots. Phone for VGA.

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Includes: TV modulator, 3.5" Disk Drive with Amiga DOS Kickstart, Workbench and the very first software also includes Batman The Movie game, F18 Inceptor, Paint 2, New Zealand Story, + Free mouse mat.

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REPAIRS FOR AMIGA AND ATARI

- ▲ Good library facilities
- ▲ Sample dump
- ▲ Use of graphics

- ▼ Price is on the hefty side

● SYNTH LIBRARIES VARIOUS

FOR Amiga, ST
FROM Public Domain
PRICE £2.95 approx.

It is worth noting that there are various Public Domain programs that will voice the most popular synths; e.g. DX7, CZ series, as a cheap cheerful introduction - they could well be your best bet.

- ▲ Price
- ▲ Usually have a set of new voices for your synth
- ▲ Sometimes have random voice generation

- ▼ Sometimes fail for no apparent reason
- ▼ Editing not always available
- ▼ Editing is nearly always numeric and not easy to understand

SAMPLERS

Samplers is another growth area for computers. In fact, the Public Domain market is full of samplers of all sorts, from well worn rock numbers to Thunderbirds! However to actually digitise sound you will need hardware and this is where the expense comes in. The main points to remember are that editing needs to be clear and easy, sounds should be able to be filed away to be re-used in other utilities and MIDI support is certainly a must for the serious user.

● FUTURESOUND 500

FOR Amiga
FROM HB Marketing: 0895 444433
PRICE £89.95

Very clean and clear sampling with good editing facilities.

- ▲ Easy to use
- ▲ High quality sound

- ▼ No MIDI
- ▼ Cost

● A.M.A.S.

FOR Amiga
FROM Microdeal: 0726 68020
PRICE £75

Quality sampling plus MIDI interface.

- ▲ Clean samples
- ▲ Comes with MIDI interface
- ▲ Well organised program

- ▼ None, unless you think it is too expensive

● PRO SOUND DESIGNER

FOR Amiga
FROM Eidersoft: 0234 273000
PRICE £75

If you get the 'Gold' version, you will get a far superior program. MIDI is included but the interface is extra.

- ▲ Clean sounding samples
- ▲ Has many on-screen features

- ▼ MIDI interface is extra

● I.S. DIGITISER

FOR Atari ST
FROM Innovated Software: 0903 213614
PRICE £69

A sampling package with the options of buying extra software for MIDI and/or clever wave form displays.

- ▲ Very high sampling rate
- ▲ Good filters
- ▲ Program can be expanded

- ▼ MIDI not in original program
- ▼ Could be costly

● REPLAY 4

FOR Atari ST
FROM Microdeal: 0726 68020
PRICE £59.95

One of the first sampling packages not in it's fourth version. Earlier versions available on Public Domain as sample players only. MIDI well looked after.

- ▲ Editing very easy
- ▲ Samples sound very clean
- ▲ Tried and tested program

- ▼ The ST is not the best sample player.

● SAMPLER

FOR Archimedes
FROM EMR: 0702 335747
PRICE £126.50

Has all the funtions for sampling plus the of the computer to make them very clean 8 bit samples.

- ▲ Fast
- ▲ Many good features
- ▲ Very smooth samples

- ▼ Price

MULTIPLE PURPOSE PROGRAMS

The 'all talking, all singing, and all dancing' section. These are programs that cross over from having just one dedicated function. In the case of Music-X you have a complete music studio under one roof. The rest are mainly for fun (but what's wrong with fun anyway?) although some serious work can be done on them.

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FROM Activision: 0734 311666
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Has wave form editing, MIDI in and out and output. But, the versions differ in sound quality.

▲ Comprehensive program
▲ Price

▼ Uses traditional sequence notation

SYNTHESISERS

As mentioned earlier, at the beginning of this piece, the quality of sound does depend on the computer at your disposal. In truth, only the Archimedes and the Amiga are serious contenders for real sound synthesis at present, although Atari is attempting to fix this with the STE. Future computers will doubtless go even further down the road to having a synthesiser tucked under the housing. As a mark of just how far this is going, PC owners can actually now buy synthesizer cards from the likes of Roland. Indeed, it would not be unwarranted to expect a large growth in this field soon, moving away from just replaying sample files towards a more active music synthesis with your computer, and of course, with your ear.

● SOUND GENERATOR

FOR Atari ST
FROM Public Domain
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● SONIX

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FROM EMR: 0702 335747
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▲ Sounds can be filed for use in other programs
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▼ Only works on samples sound, not synthesis from scratch

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Panasonic KXP-1081/1180	2228	D
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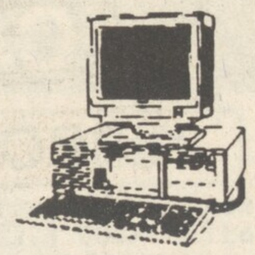

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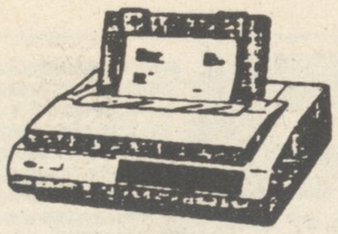

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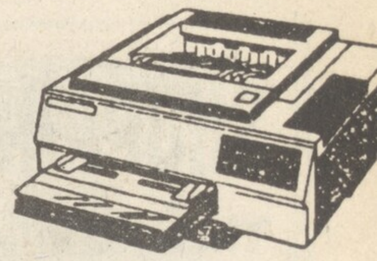

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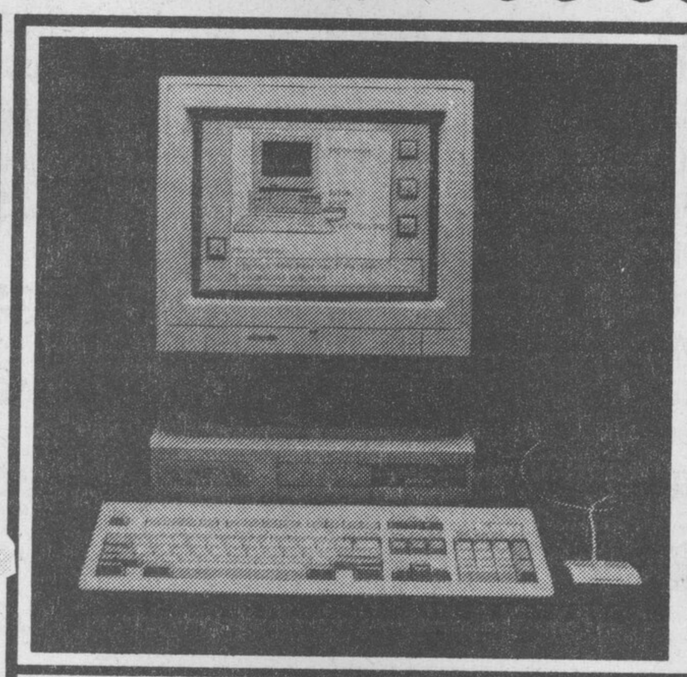

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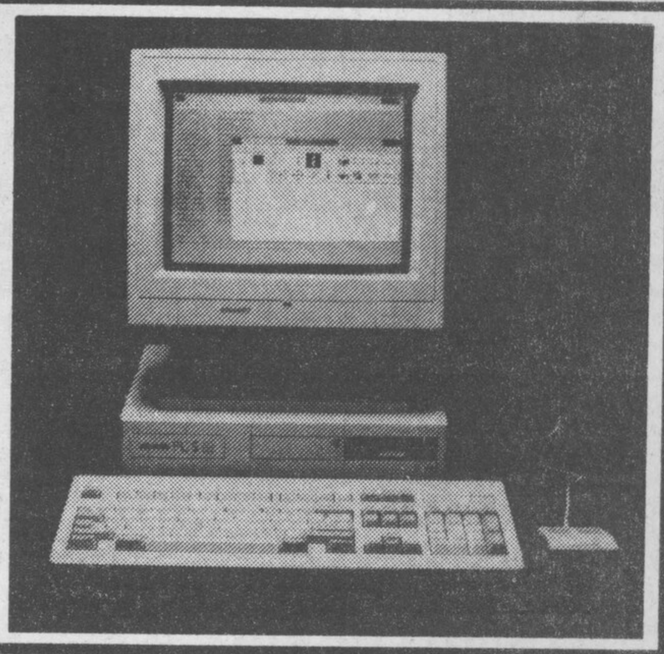

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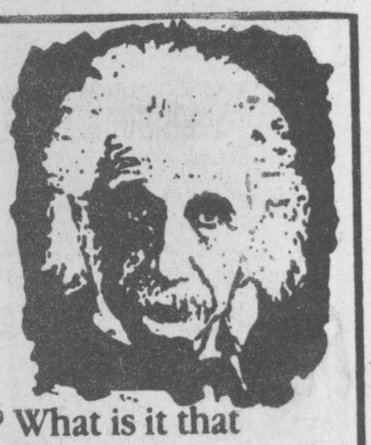

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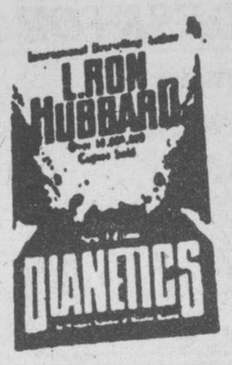

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ATARI ST hard disk 20Mb Autobooting wanted. Swap for Star LC10 printer or buy or cash. Ring (0273) 737217 or 737218 and ask for Steve in Room 221.

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C64 ROM disassembly book. Tell me how much you want. Andy, 35 Old Abbey Road, North Berwick, East Lothian EH39 4BP. Phone 0620 2283. Thanks for reading all you happy people.

BUBBLE Bobble wanted for Atari ST or Spectrum. Telephone Paul, daytime 0522 513838 ext 124. Or evenings, 0522 687884.

PRINTER plus leads, suit Psion organiser. Also Atari VCs cartridges. Will consider all items? Please state prices wanted/full details: sorry no callers. Charles Trager, 7 Grantley Street, Glasgow G41 3PT.

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AMIGA A500. 1/2 meg expansion CTE two metre hand held transciever offered in exchange for Amiga £50 offered for 1/2 meg expansion. 0332 760353.

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MAPS of games 3 and 4 of Amstrad CPC version of Thunderbirds also tips for game 4. Carl Surry, 37 Fairfield Way, Barnet, Herts.

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ORIGINAL Atari ST software will pay £25 for First Word Plus. Also will pay £25 for Wordup. Phone 01 459 7483 after 6pm.

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SILVERSOFT Linkword French for 48K Spectrum - also other languages in this series. Mr Biddell, 22 Bramber, Belgrave, Tamworth, Staffs B77 2LL phone 0827 289214.

AMIGA contacts wanted to write to Damon, 10 Sycamore Court, Foxleys, Hellys, Gwent.

BUBBLE Bobble for ST. Will swap for Phobia or Outrun on ST or will pay £5. Tel 091 2622031 anytime.

BBC Education programs suitable for eight year old child, or the name and address where they may be obtained. Tel 0733 42042.

BUBBLE Bobble wanted for Amiga, can anyone help? Contact Jason, 24 Craigleith Hill Avenue, Edinburgh EH4 2JA. Hi to Aly Wood (Judge Wierdo).

RAM and ROM for Z88. Phone 041 427 0614 after 6pm (Scotland).

ST music software wanted would like sampler I's or similar also ST contacts, any age or level of experience. Happy Xmas, contact Wayne, 19 Cardwell Street, Northwood, Stoke on Trent, Staffs ST1 6PL.

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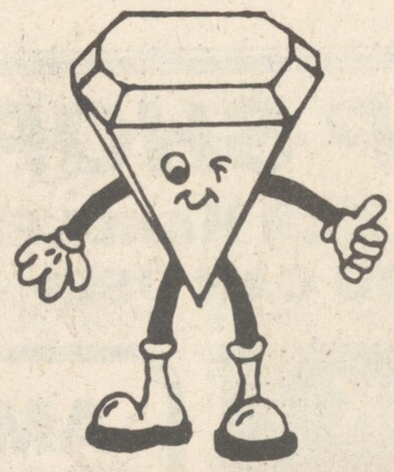

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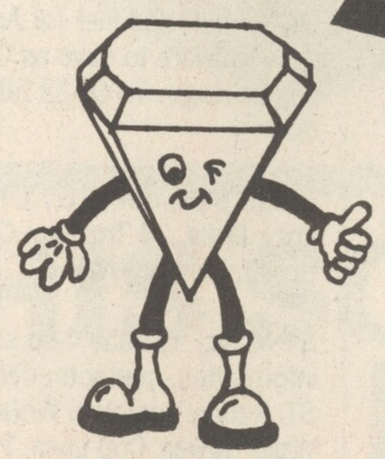

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MSX learner with Toshiba HX10 plus printer wants to know where software and accessories can be obtained cheaply, (not games). T J Foley, 11 Farm Road, Castle Park, Caerphilly, Mid Glamorgan.

C64 GAMES tapes wanted (esp) Rockman Shoot em ups, kits also any device that gives lists on machine coded games. Please write to Drew Maxted, 22 Birch Gardens, Sandbach, Cheshire CW11 0HB.

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HELP offered to anyone who has bought an Atari ST. W Hansford, 87 Fitzworth Avenue, Turlin Moor, Poole, Dorset BH16 5AZ.

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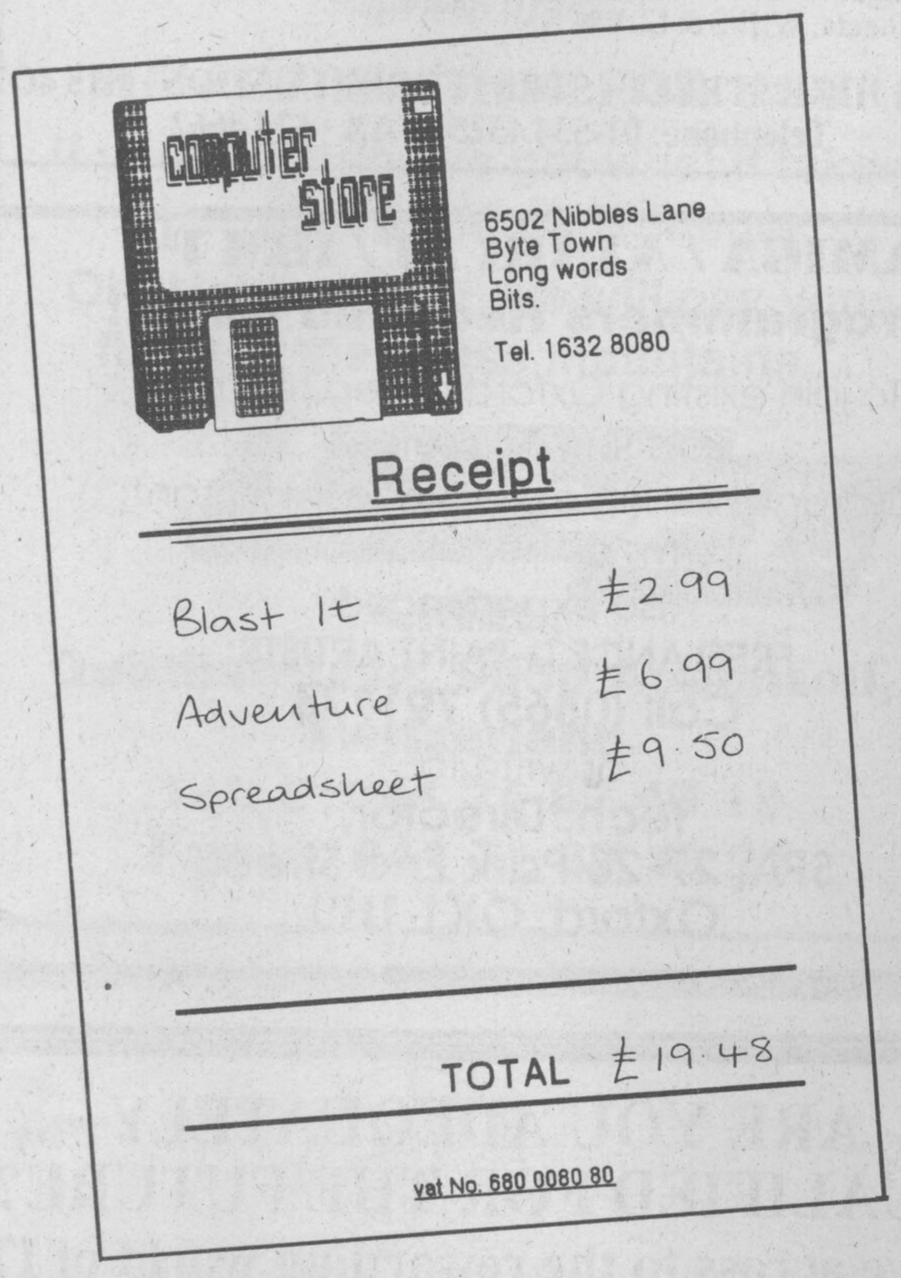

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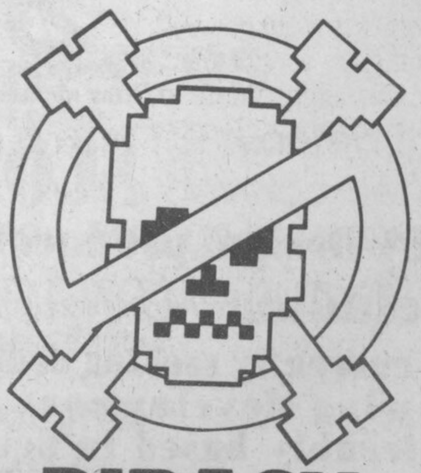

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WILL help any Amiga owners - even new ones, on the CLI or Shell. Ring 0709 862075 after 6pm (Or weekends) and ask for Tim.

DO you have an Amstrad? Do you have problems? I can help, drop me a line. 464 or 6128. Mike Lyons, 21 Ashmore Street, Tyldesley M29 8WW.

AMIGA beginners! Scared of viruses? counfounded by CLI? Database, spreadsheet, wordpro problems? Write to Tom, 5 Marld Crescent, Bolton BL1 5TH. Some game cheats available.

HELP! Stuck on Deja Vu 2 and Personal Nightmare? Any tips welcome (100% reply) Neil Mansell, 53 St Marks Road, Canvey Island, Essex SS8 9NJ.

JUST crashed your radio-controlled car into a brick wall? If so, call Simon on (0530) 412415. I've all sorts of spares at really low prices.

PCW8256 help including M/code, CP/M, Mallard and Locoscript. TIP - Find PIP difficult to use??? Use Locoscript instead!!1 Write to Nick Cheesman, 24 Cargate Avenue, Aldershot, Hants GU11 3EW.

AMIGOS! Do not buy a sound sampler! Send me a tape (with the sound effects) + SAE instead, and I will do it for you FREE! Anders Bjerin, 39 Sydney Road, Richmond, Surrey TW9 1UB.**AMIGA** users! Stuck with CLI? Peeved with Workbench? Don't panic!! Send SAE with problem to: Gordon Reenan, 61 Glenfinnian Road, Glasgow G20 8J6 (no callers please) 57 users helped already.

•PEN PALS

WANTED fellow QL users to exchange info/software. My interests high level programming and game playing. Write C Sully, Mardon Hall, Steatham Drive, Exeter EX4 4QW.

WANTED Spectrum (48K) contacts. Write C Sully, Mardon Hall, Steatham Drive, Exeter EX4 4QW.

AMIGA contacts wanted. DOC Midnight of Faze II needs contacts. Write to Craig 39 Stanhope Road, Salford, Manchester M6 7HY.

PC Engine contacts to swap games, I have 15 games. Also Megadrive contacts as well phone Bill 0527 65025.

ST contacts wanted 100% reply guaranteed. If interested contact Daniel, at 1 The Cottages, Pyford Rough, Woking, Surrey GU22 8TZ. Write soon!!

AMIGA contacts wanted who are really interested in Art, Music, Animation or any other stuff, involving programming. Reply guaranteed 100% write to Zulf, 100 Walnut Street, Blackburn, Lancs BBS 6NU.

DESPERATELY Wanted: contact with the International Enterprise User group (address and phone number) R L Thomas, 31 Bibury Road, White City, Gloucester GL4 9TT.

AMIGA contacts wanted to swap demos, utilities and some games. I have a good range of utilities and other software. More details contact Frankie, BFD, (0274) 637987, 64 Wood Lane, Swainhouse, Bradford.

AMIGA contacts wanted/send lists to Darrie Tighe, 5 Herchiston Place, Edinburgh EH10 4NP.

ST contacts wanted for a mad computer fan, I'm into PD demos, STOS, games and CD's. Write to Rob, 7 Powis Grove, Kenilworth, Warks CV8 2NN.

ST user wants ST contacts to swap games, 100% replies. Write to: Chi-Ho Lam, 16 Courthouse Gardens, West Finchley, London N3 1PX.

MSX 11yr old user would like to hear from others interested in MSX as a pen pal. Write to Darren Jackson, Redwood, Ghyll Road, Crowborough, East Sussex TN6 1SU.

BIRMINGHAM Amiga Contacts wanted. Other Areas also welcome. Must be reliable. Write to AXX, 38 Westacre Gardens, Yardley, Birmingham B33 8RE.

AMIGA contacts wanted 100% reply . Andy, 11 Bilbrook Road, Bilbrook, nr. Wolverhampton WV8 1EU. Tel 09074 3622.

AMSTRAD CPC 464 tape owner wants to join PD Club, Fanzine or user group. Also wants games magazines etc. Contact Mark Watson on (0924) 451793 after 6pm please.

ST contacts with LSC and Medway menus to swap and wanted Platoon to buy or swap contact Bryan, 8 East Drive, Garston, Watford, Herts WD2 68H. PS love the mag.

AMIGA contacts wanted 100% reply (sameday). Send discs and lists to: Mawny, 62 Gainsborough Avenue, Burnely, Lancs, BB11 2PD. Also coders wanted to join our crew. Hi to, all in Pendle UK.

AMIGA contacts wanted to swap demos, demos, hints etc. Promise fast reply. Please contact Colin Mac, 9 Playhouse Court, Bath Road, Cheltenham Glos, GL53 7HJ.

AMIGA coders wanted. Apprentice coder wants to contact other similar users to swap source tips and info. Ring 0752 262959 between 7pm and 9pm ask for Mike.

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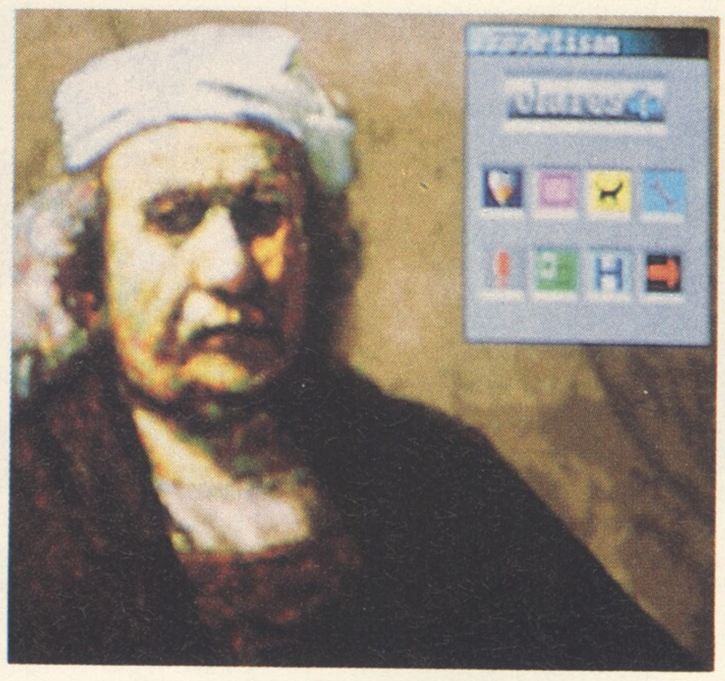


• Rembrandt would have loved the Archimedes! Just think, no paint on your shirt, just nice clean pixels!

• Pro Artisan gives you the rare pleasure of defacing national treasures without being thrown in jail!

ART FOR ARC'S SAKE

Jason Holborn looks at the new uncrowned king of Archie art packages, Clares' Pro Artisan...

Even with the recent release of Acorn's 'cheap' Archimedes, the A3000, the machine has still failed to achieve the kind of mass market success of its nearest rivals, the ST and Amiga. However, one area that the Archimedes is starting to make its name known is that of the computer graphics industry.

The combination of state of the art graphics hardware, blisteringly fast processor and a fine selection of software has made the Archimedes a strong contender against the other big graphics machine, the Commodore Amiga. Each machine has one package that can be credited for launching the machine to success. For the Amiga, that package was Electronic Arts' Deluxe Paint and with the Archimedes, many see Clares' Pro Artisan system in the same light.

While there are other Archimedes paint systems available (Minerva's Atelier springs to mind), Pro Artisan is without doubt the king of them all. The program runs in the Archimedes mode 15, which gives access to 256 colours on screen at one time. While this may not seem too great achievement to those of us used to the Amiga's HAM (Hold And Modify) mode, the marvellous thing about Archie mode 15 is that every pixel is intirely independent of those around it, which is definitely not the case with Amiga HAM.

HIGHLIGHTS	DRAWBACKS
■ 256 colours on screen!!	■ Awkward user interface
■ Full onscreen help	■ Lacks fine control over basic operations
■ Powerful object drawing	■ Rather pricey
■ Extensive fill options	
■ Very fast operation	

USER INTERFACE

After booting up the program from the system disk using the usual <Shift> + <Break> technique, the first thing that greets you is a blank screen containing a single small window. This window is the system's main menu which is used to gain access to all the various functions and tools available. The operation of Pro Artisan is completely mouse driven, therefore gaining a basic understanding of the Pro Artisan user interface is all important.

Pro Artisan uses a hierarchical menu system with each type of operation grouped together in sub menus. For example, you find all object drawing tools grouped together in one menu, sprite manipulation tools in another and disk operations in another. After getting used to the laborious task of moving down through the menu tree to access your required tool, you find your way around quickly.

DRAWING TOOLS

Most of the everyday tools you'd expect to find within a paint package live together in the draw menu that can be directly accessed from the main menu. As well as the usual freehand draw, flood, dithered fill, zoom and airbrush etc, the draw menu also includes an intriguing 'magic brush' option. Magic Brush is a best described as a combination of Deluxe Paint's 'Stencil' and 'Tint' options, which allows any objects drawn in one range of colours to be changed to another without effecting nearby pixels of a different colour.

Fans of the dithered fill will be pleased with Pro Artisan. Any plain of a continous colour can be dither filled using a large selection of preset colour ranges. Pro Artisan supports horizontal, vertical and circular dithered fills as well as supporting limited pattern fills.

Accompanying the Draw menu is the Banding menu that contains tools for producing both filled and outlined shapes such as rectangles, circles etc. Surprisingly, Bezier curves are also supported, which can be a great asset when producing complex curved objects. Although the program includes extensive dithered and patterned fill options, filled shapes may only be drawn in a single colour, therefore making you skip back to the draw menu to manual dither fill the object yourself.

SPRITE MANIPULATION

Using the functions available within Pro Artisan's Sprite menu, any area of the screen may be grabbed, temporarily stored and then used as a brush. Areas may be grabbed either as a simple rectange, or by drawing a parameter around the area to be grabbed by plotting points with the mouse. Once a sprite has been grabbed, it is automatically stored in a sprite buffer. Any sprite within the buffer may be quickly retrieved again and again until you finally decide to free up some memory by deleting it.

Once you've selected the sprite to be used, the mouse pointer changes to the shape of the selected sprite. From here, the sprite can be simply pasted down, used as a brush, scaled to a required size or used to produce a single colour mask.

DOCUMENTATION

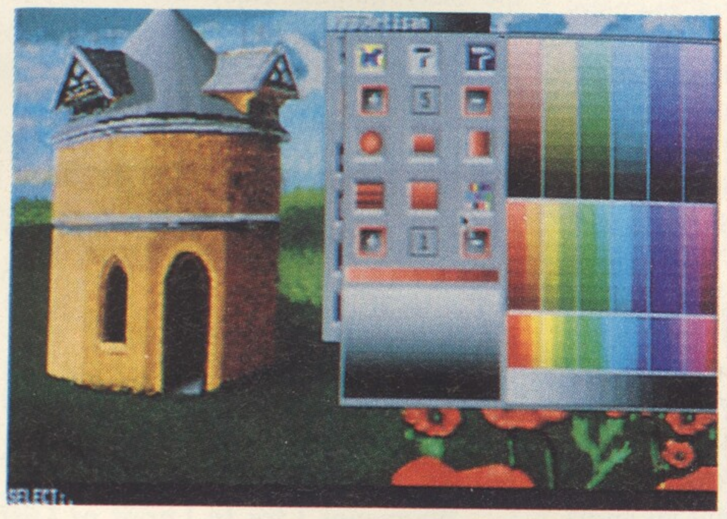
The Pro Artisan manual is a rather nice 114 page affair that even includes an index. It takes you though the basics of the Pro Artisan user interface, provides a detailed explanation of all the painting tools available and even includes 23 separate tutorials (or exercises as the manual prefers to call them). To help you get to grips with the system, Pro Artisan includes a wealth of example art to tinker with.

CONCLUSION

Pro Artisan is indeed a powerful paint system that more than lives up to expectations. Unfortunately, the system isn't as immediately usable as a program such as Deluxe Paint 3 on the Amiga, due mainly to the system's rather quirky user interface.

One of the most annoying aspects of this user interface is that the onscreen menus have been designed to disappear every time the mouse pointer moves off of them – it would have been nice to have had the option to lock certain menus so that they could only be closed by clicking on a window close gadget. As it is, the only way of getting the menu back is to double click the centre mouse button. If this occured only occasionally, this wouldn't be too much of a problem, but the menus have an annoying tendency to disappear quite frequently. Thankfully, rumour has it that Pro Artisan 2 (when it arrives) will fix this with the implementation of 'sticky' windows.

While many of the operations are undoubtedly powerful, you cannot stop feeling that you don't have total control over them, which does tend to limit their usefulness somewhat. However, if you're prepared to put in the time (and you'll need plenty of it) learning the intricacies, you'll soon get used to its quirky ways and start producing some tremendous results ■



Just look at all those colours. The Pro Artisan palette gives you access to the Archie's full 4096 colours.

The brush menu allows you to alter the fill type, colour range and how the fill is to behave.

TECH TIPS

Personal computer problems? Express's Agony column has the answer. Write in strictest confidence to Uncle Techtip. The best tips win a freebie – so don't forget to tell us your address and machine

HELP! Video

Now a question, if I may. Is it possible to take the composite video output from the Scart, feed it to the computer and with a suitable software patch load teletext data? I could then print or save any data, and would always have the correct time and date. Is anyone working on suitable hardware and software to do this? It ought to be cheaper than a dedicated teletext tuner.
Reverend Brian Elliot, Whitfield, Dover.

Thanks for the tips, Rev. I see no reason why you can't download the raw teletext binary data, but as it's encoded you might not be able to do very much with it. Try, then let us know the outcome. I'm afraid I don't know of anyone who is working to achieve and market the same effect, other than, perhaps, the suppliers of certified teletext adaptors. Frankly, it has the air of illegality about it: don't you think?

HELP! Sound Board

Taking into account the vast lack of sound quality on the PC and the recent reviews of two sound boards designed for use with that machine, I am slightly confused. What does twelve channel sound mean? Is it good? Which of the two sound adaptor boards (*Express* 47 and 51) would you recommend? Do you know of any games that are to be released that will utilise either of these (apart from *Budokan* and *Populous*)?
Robert Szasz, New Southgate, London

Twelve channel sound means – as its description implies – that the board provides fabby sound over six channels in stereo. You can take it as read that that is good quality sound.

Having listened to the Game Blaster board in full voice at the PC show, I think DLL, the company responsible for the product, would get its name on my cheque. Call DLL on 0983 864674.

I'm afraid, however, that like so many other useful and quality peripherals marketed for computers with shortcomings, these sound adaptor boards will probably be under-supported and will eventually fall by the wayside. There are no games other than the two you mention, which support the Game Blaster. If you're working at a software house and reading this, and you plan to incorporate support in your games, call me and I'll pass on the good news...

Bug of the Week

***Tetris* – the titillating wall building game – works fine on the PCW, but the programming leaves a bit to be desired! Problems start if you accidentally hit the [EXIT] key while entering your name in the high score table.**

[EXIT]X, or [EXIT]Y and some random figures for example, tear the screen up into bits when you try to play the next game.

I suppose this might be a good way of stopping someone playing *Tetris* and persuading them to do something less antisocial, so maybe it does have a use after all!
Emma Cooper, Harrow, Middlesex

As sender of this week's prize bug Emma Cooper gets games freebies for her PCW. Rally up folks: keep sending those bugs in – ones published win free software worth anything up to £50, and probably other goodies too. What are you waiting for?

Codus escaptus: Lives in high score tables and feeds on escape codes

As sender of this week's prize bug Emma Cooper gets a few games freebies for her PCW. Come on folks, keep sending those bugs in – ones published win free software worth anything up to £50, and probably other good-

HELP! BuSTed blues

My Atari ST has broken down and I need to get it fixed. The problem is I don't know where I can or how much it will cost. When I turn the machine on, it just stays dead. I have changed the plug and also the fuse on the transformer board inside, but to no avail.
Monty, London.

From your letter, I think we can safely assume that the ST is well and truly broken. Obviously the next step is to get it along to a repair specialist. In your case this isn't going to be very difficult. Indeed, London is stuffed to the very gills with repair specialists clamouring for your cash.

One of the best repair specialists is Cavendish Distributors LTD based in Tottenham Court Road. Contact the company directly (01 323 1399) for a quote.

HELP! Racal

I have been given a Racal-Milgo ALD (Asynchronous Line Adaptor for the uninitiated – Uncle Techtip) but I do not have any documentation for it. Could you please publish my address and telephone number so that somebody can sell me an operations manual or a photocopy of it? I would also like to have some help to find the appropriate pin specifications for the Racal-Milgo RS232 port, so that I can connect it to a PC compatible.
Jerome Rimmel, Guernsey.

Address duly published.

If the Racal-Milgo has a standard RS232 port (and I'm by no means sure that it does) the following will be the pinouts: 1 protective ground, 2 transmit data, 3 receive data, 4 request to send, 5 clear to send, 6 data set ready, 7 signal ground, 8 carrier detect, 9 – 11 not used, 12 – 25 forget them, they're unimportant for normal serial signal transfer with the ***exception of*** 20 data terminal ready and 21 signal detect.

Basically, you're interested in pins 2, 3 and 7. Pins 2 and 3 should be cross connected to pins 2 and 3 of any computer you attach the device to and pin 7 shuld be connected to pin 7 of the computer.

Sit back and be patient. The Tectippers are a kindly lot, and sooner or later someone will come up with the desired handbook.

HELP! Hard Luck

I have been offered a 60Mb hard drive for an IBM PC at £30 to £50. Not bad, eh? However, I own an Atari STFM. Can I link this to the drive? I probably would have to buy an interface, but which one? And how much? Who from? This is an opportunity of a life time and so I wish to take advantage of it.
Carl Seed, Stubbington, Hants.

Actually Carl, the drive is entirely useless but I'm willing to offer £5 just to take it off your hands (and if you believe that, then you ought to be reading a certain other weekly computer publication with the word 'Popular' in its title).

Yes, you can connect the drive, so do buy it preferably at the former rather than the latter price. And yes, you do need an interface. Third Coast Technology sells one of the best, with varying prices depending upon the configuration.

Call Third Coast on 0257 424442, the people there will be very happy to help.

HELP! Disk Delusion

I have just upgraded my Atrai ST's old internal half megabyte drive with a second hand Cumana one megabyte device. My problem is that certain disks will not load at all, mainly commercial software, and some only work after about five attempts.

I have formatted a disk, double sided and that worked fine, giving me 726016 bytes (is this normal?). Please help me.
Jason Pritchard, Belper, Derbyshire

I don't think there's anything wrong with your drive. The problem appears to be with the software itself. In order to provide copy protection, many of the software houses rely on undocumented features of the floppy drive, such as its ability to format two tracks more than the documented 80.

The extra tracks are used to hold proection information and are accessed when a game is booted. The problems begin when you use a drive which cannot access the extra two tracks (which is perfectly reasonable), and thus the protection code cannot be checked and the game fails to load.

Fortunately, this scurrilous manufacturer's practice has just about ceased, but you may not be able to use some of the older games. Enjoy the drive and swap the games that won't work, for better software that will.

HELP! Fed Twice

I am currently doing a part-time A level course for which I have to print out a large project. I own an Epson FX1000 printer that I have connected to a Sinclair Spectrum +3 computer, but there is a very strange problem which is annoying me!

Whenever I try to Lprint or Llist there appears a line of characters

between each line which makes the printout look untidy (as if the printer was doing two line feeds).

The printer works fine in self test mode and when copy is used the self test mode is excellent.

I thought this might be control codes sent from the +3 but each time I Llist or Lprint the same program the lines are in a different place. Surely if it were due to control codes in the program the lines would be consistent?

It is a difficlt problem to explain, and maybe the sample listings of a small BASIC program will help you to understand what I mean. The printer seems to be of excellent quality and I would like to use it for letters, CVs etc.

Derek Progitt, Trent Vale, Stoke-on-Trent.

After having examined the sample printout you enclosed with the letter I can relieve your mind by telling you that the simple flicking of a 'hard' line feed dipswitch in the FX1000 wll cure all ills.

All that's happening is that the computer is producing a line feed and the printer is adding one too. The location of the dipswitches will be in the printer's manual and you may need a screwdriver or pen in order to access and change them.

TIP It's Magic!

I saw a recent edition of *Express Mail* in which there was a recommendation of the Pye TV monitor sold by Evesham Micros. I have one of these very good monitors and use it with my Atari ST. It really is quite as good as a dedicated monitor.

May I make two suggestions? Put 200 Ohms resistors in each of the red, green and blue lines to get a better colour balance, and connect the Atari ST monitor output pin 8 (12V pull-up) to pin 8 on the Scart plug via a 100 ohm resistor. This is the status input designed so that a video recorder can control the TV.

Now for the magic. Fed up with the telly? Switch on the Atari ST, the telly becomes a monitor, and the program display shows an (E). Switching is now completely automatic!

HELP! Commodore BBC

I own an Amiga 500 and have been told that it is possible to run BBC Micro educational programs on it via an emulator. Does this simply mean that after loading the emulator material into the A500, one then loads the BBC programs (on 3.5 inch disk of course) and all will be well?

J. Windsor, Newport, Gwent.

If only life (and computing) were that simple.

BBC software isn't available in 3.5 inch format. The BBC micro makes use of 5.25 inch drives for storage and all software is shipped on 5.25 inch disks.

In order to use the BBCs software you have to port it to (i.e. move it to) your Amiga using a serial transfer cable and suitable file transfer software. This may sound incredibly difficult, but in fact, even if it *is* a little messy, it can be achieved quite easily and here's how to do it:

You need two 25-way D-type serial connectors, a length of 5–way cable and a soldering iron. The connectors can be purchased from any electronics supplier or you can buy mail-order from Maplin (a renowned electronics supplier with branches around the country). Call Maplin on 01 748 0926. The connectors should cost about 75p each. Maplin will also be able to supply you with the necessary cable.

Using the cable and a soldering iron, attach the connectors in the following manner: pin 2 to pin 3, pin 3 to pin 2 and pins 7 of each cable together. You now have a serial lead.

File transfer software is best obtained from the public domain collections (a collection of software which can be exchanged free) held by PD libraries. For the Amiga call George Thompson Services on 0770 82234, GT holds numerous PD programs, and for two or three pounds will be able to satisfy your needs.

Acorn should be able help with BBC PD or you might try looking through one of the BBC specific magazines for a PD supplier. Call Acorn on 0223 245200.

Fire up the transfer software on each machine and move the programs you wish to use from the BBC to the Amiga, saving them to Amiga disks as you go. You now have the Beeb software in Amiga format and can run it using the BBC emulator.

TIP Take Hart

Will Robert Hart of Roehampton please stand up? I had a letter from you last week Robert, you were having problems with your Amstrad CPC. I can happily report that I have here on my desk, the necessary spare keys and manual but what I don't have is your address! If you'd like to write to me again, I'll pop the bits into the post and you'll be up and running once again. Thanks to Amstrad customer services.

HELP! Unknown Printer

I have a Gakken GPR2000 daisy wheel printer (oh no, I just *know* what's coming – Unc), which after much good service has given up the ghost by chewing up and spitting out one of the Nylon gear wheels that drive the platen.

My local friendly neighbourhood repair shop has never heard of the make and cannot find a source of spares anywhere. Must I now reluctantly throw it away for the sake of a few 'pennorth of nylon gear wheel or can you advise me where to find same?

Richard Baynes, Peterborough, Cambs.

Ah, yes, the world–famous Gakken series. An astounding machine, moderately popular in the very earliest part of the decade (particularly the GK2200 series), it and all its brothers fell into a gigonormous pit of obscurity a few years ago, and have not been heard from since.

Quite honestly, your only hope is to cross fingers and wait for some kind Techtipper who owns one of these machines and who will let you have it for a small sum for spares.

HELP! Upgrade

I operate a Commodore 64C with a 1541 single disk drive, a Star LC10C printer and a Ferguson TX television with RGB. I use these for home word processing and strategy wargaming. I am considering an upgrade to an Amiga and would appreciate your advice in regards the following:

1. Should I purchase the 1 megabyte version of the Amiga or upgrade later? Is there any difference in the two?

2. Will I require an expensive conversion for my LC10 to run on an Amiga, as I believe the connections are different on the Commodore 64?

3. I would like to be able to dump my wargame screen maps to hard copy through my printer which will save me hours of work. Can this be done, and if so, which program do you recommend?

C. W. Harrison, Ripon, Yorks.

1. If you can afford it, go for the larger memory Amiga. This will allow you to process much larger word processing documents and to store much more strategy war game data. Everything is that little bit quicker if you can store more data in memory rather than having to make disk accesses for it. Apart from the memory, of course, there is no difference between the two.

2. Have a look in Techtips *Express 55*. In that column, a funky techtipper by the name of J. Vickers offered to help anyone with the process of converting a LC10C '64' printers for use with computers equipped with a parallel port.

3. If you're about to wake up the savings pig with a large hammer in order to buy the Amiga, funds are probably going to be a little thin. Consequently, the best course of action to obtain a screen dump utility is to button-hole one of the many public domain libraries.

It appears that screen dump utlities are amongst the first bits of code that new programmers produce and the PD scene's cup runneth over with them.

One of the better libraries is that run by George Thompson of Scotland. For a couple of quid, Geo. will be happy to supply you with a disk containing the utility (and probably many more besides). For more information: G. Thompson on 0770 82234.

HELP! Clicking disk

I have recently bought an Amiga 500 and have found that unless a floppy disk is inserted in the drive, the machine makes a clicking sound every 2 1/2 seconds or so, from the vicinity of the drive. I tried another Amiga computer at the dealer where I bought the one I own, and it behaved in the same way, so I assumed it was some quirk of the model and there was nothing wrong (since it appears to be OK apart from this).

But I have seen machines which don't click and now I think the disk drive may have been damaged during shipment, since, in particular, there was no protecting card inserted in the drive, as the manual said there should be.

Do you know what the problem is? Can I correct it myself or should I take it back to the dealers (even though I get the impression that the whole stock will be the same)? What do you suggest, Uncle TechTip, sir, for I am desparate?

The grass is always greener on the other side of the fence, right?

Because the machine was shipped without the protective card in the drive slot, doesn't mean that the device is now damaged. If it works perfectly, don't worry about the clicking.

Many computers send intermittent pulses to their drives which make the busy light flash for no reason or the mechanism click.

Sit back, enjoy your computer safe in the knowledge that it will provide years of sterling service (well a month or two anyway, considering it's an Amiga) and stop looking at what happens with other computers.

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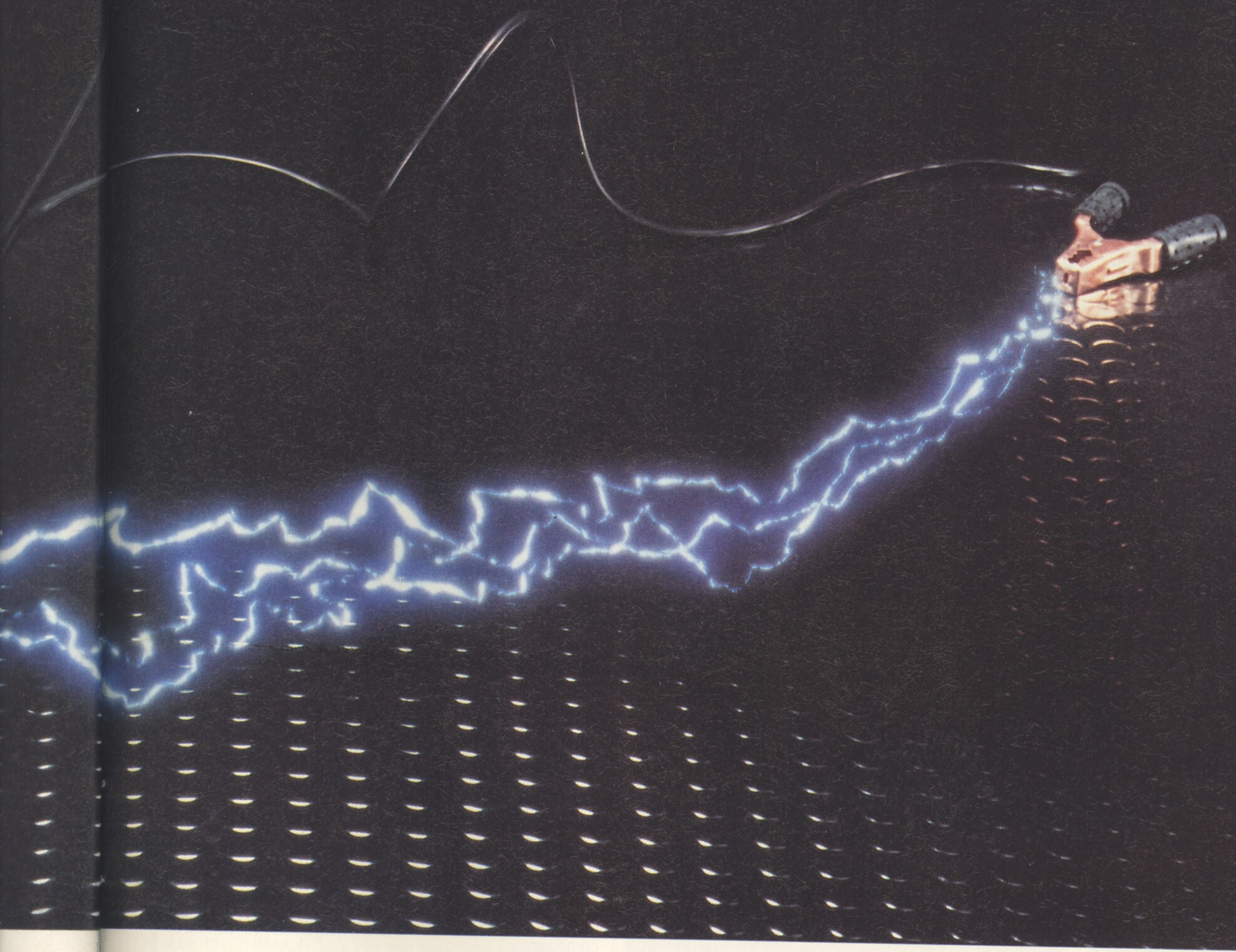

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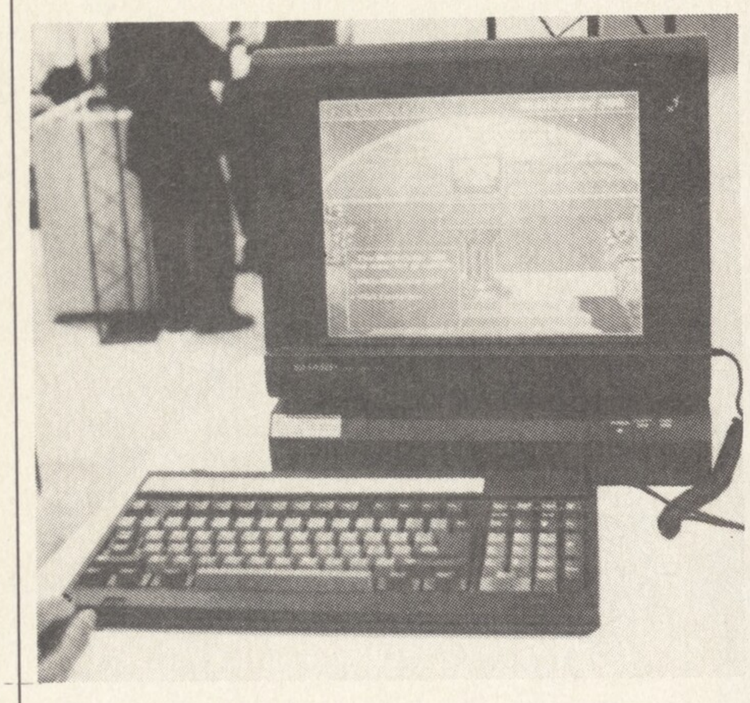
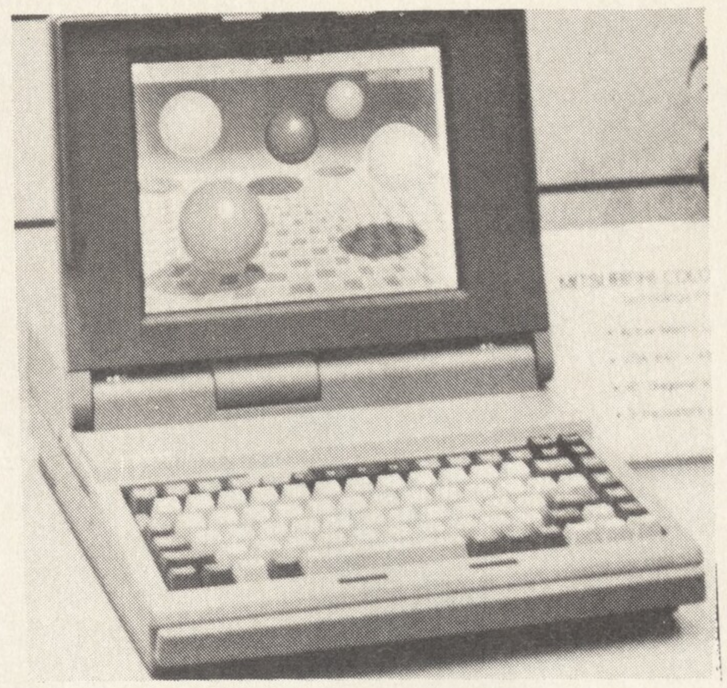


• *There were plenty of machines reflecting the trend towards portables. Sharp's was different - it had a colour screen*

• *Canon's navigator: fax, PC, printer, modem and phone all in one package. It even has a touch-screen*



• *Another colour LCD portable impressed the crowds. This one courtesy of Mitsubishi*

SHOWING OFF

Ian Burley looks back at all the highlights from the biggest computer show this year: Comdex in Las Vegas

Tiny PCs, vibrant colour LCD displays, super-fast 486 workstations, MCA vs EISA – everyone was talking about these things twelve months ago but this year it was all reality at Comdex Fall, Las Vegas, in the Nevada Desert.

Comdex is a huge trade show, the largest in the States, with 1,740 companies exhibiting and around 117,000 visitors over its five days. Las Vegans I met felt a touch miffed that, as ordinary members of the public, they weren't encouraged to visit the show. Las Vegas is a small city of just over 500,000 – Comdex trade-only visitors swell this by almost a quarter.

Why hold the year's most important computer show in a small, glittering if rather vulgar casino infested town hundreds of miles away from anywhere of importance? Quite simply, Las Vegas has some of the best convention and exhibition facilities near (an hour's flight) to the all-important Silicon Valley in neighbouring California.

The scale of Comdex is vast – the show guide alone is two inches thick. The whole affair is scattered over around a dozen venues and occupies several nearby hotels, including the famous Caesar's palace. Given the size of everything, it was odd to see familiar companies with relatively minute stands dwarfed by it all. Commodore was a prime example. At shows like PCS in September here in the UK, Commodore and rivals Atari vie to have the largest and most extravagant stands. At Comdex, Commodore was reduced to occupying one half of an exit lobby from the main Hilton Hotel exhibition site. Atari's larger stand was but a shadow of the PCS effort and situated somewhere in the somewhat remote West Hall.

Surprisingly for those of us on this side of the water, neither Commodore or Atari are genuinely big in the US, though there are signs that both are pushing hard to reclaim their massive successes of the early eighties. Commodore has announced a spectacular multi-million dollar Christmas Amiga advertising campaign in the US and Atari is expecting great things of the new much-hyped and much-criticised STE, which replaces the existing 520 and 1040 STs in the New Year.

A surprise débutant was a 520STE after most had expected the 1040 to replace the existing 520STFM as the entry-level STE. Commodore unveiled its 68030 Amiga 2000 coprocessor board, clocked at 25MHz – which should give fans of Atari's 16MHz TT 68030 workstation something think about, though for a really special and brand-new Amiga chipset based 68030 Unix workstation you'll have to wait until well into next year, according to Commodore's Systems Marketing Manager Paul Calkin.

For now Commodore has stuck the 68030 card into a beefed up 2000 and called it a 2500/30. A new SCSI hard disk controller card for the 2000 – used in the 2500/30 – was announced along with a seven way multiple serial port card. Welcome Amiga 2000 price cuts were also unveiled.

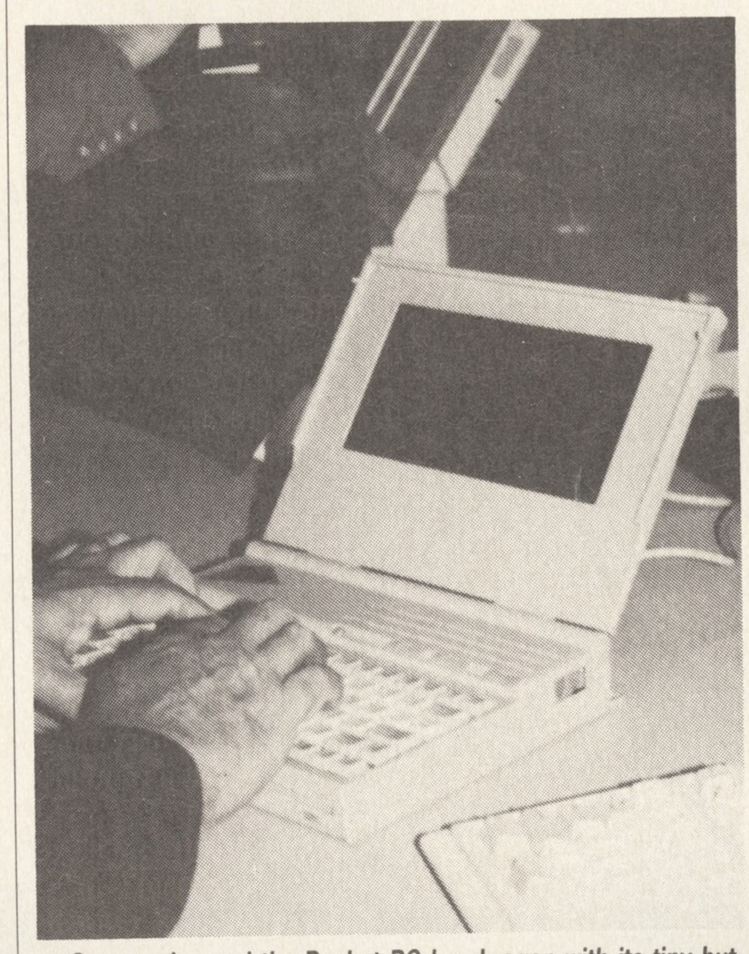
Commodore showed that it has a thinking ahead cap with announcement of the creation of a multimedia technology department so that you'll eventually be able to connect CD-ROMs, videos, and all sorts computerised electronic goodies to your Amiga. Multimedia is expected to be a multi-million dollar market within five years.

Little pocket and so-called notebook PCs were everywhere, Poqet and Atari with its Portfolio PC had a straight fight with their incredible calculator sized pocket PCs, the former showing potential, and a considerable need for further development, while the Portfolio is already a hot retailer at a fifth of the proposed Poqet PC price.

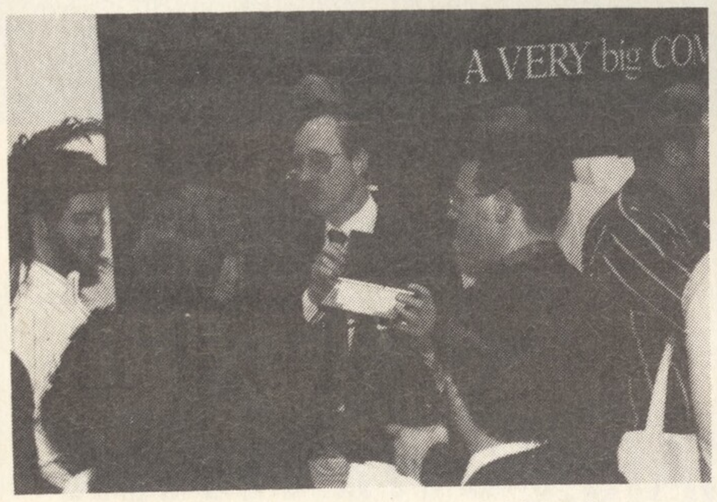
Even the bigger portables were dropping jaws with stunning new flat panel colour LCD displays. It's not difficult tosee that the era of the cathode ray tube (CRT) display is rapidly fading away. Hitachi is already offering its superb thin film technology (TFT) active matrix colour LCD screen to independent developers and Toshiba showed a prototype stand alone colour LCD monitor. Meanwhile, Toshiba ventured to suggest that portables are destined to inherit the domain currently claimed by today's desktop computers.

If there's one thing you can credit the Yanks with, it's their sense of humour (sorry, humor). Comdex saw the advent of floppy disk condoms, a joke accessory to protect your disks from computer viruses. How about Computer Critters – cuddly toy parts; arms, legs and a head which you stick to your computers monitor. Hey, that's cute...

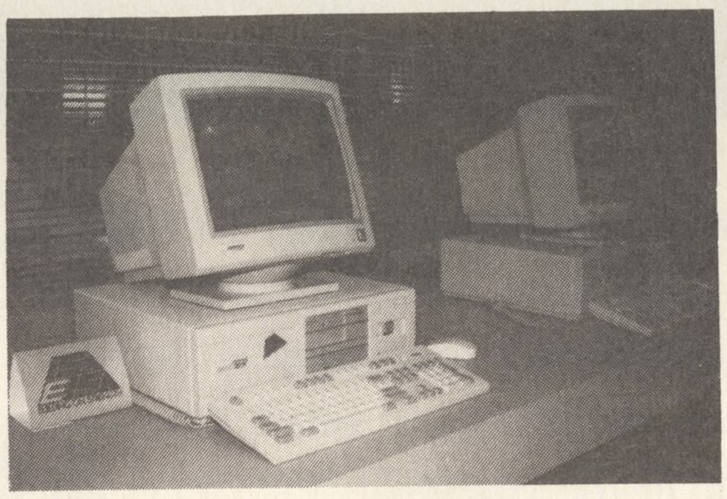
Finally, Panasonic just had to have a one-armed bandit on its stand. Get a product demo on the stand and you earn a token which you can then spend on the machine to try your luck for a glittering array of prizes. This was, after all, Las Vegas...■



• *Compaq jumped the Pocket PC bandwagon with its tiny but high-power Notebook PC*



• *Poquet's PC - a rival to Atari's Portfolio? Five times more powerful – and five times the price*



• *The speed freaks had plenty to get excited about. Compaq's 486 EISA PCs were stunningly fast*

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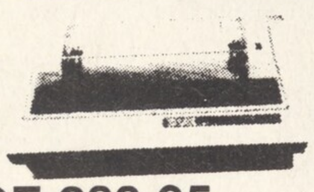

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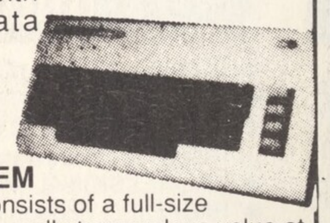

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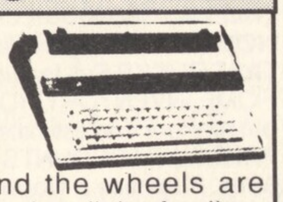

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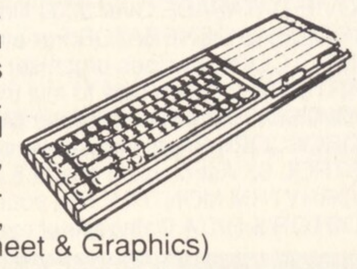

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DTP ☐

• *The Psion MC400 is a genuine laptop – the size of this page – but the full size keyboard makes it a delight to use*

• *Unlike most portable computers, is really is light enough to carry around with you*

PSIONS OF THE TIMES

After the runaway success of its Organiser, Psion is hoping to take another sector of the mobile computing market with its revolutionary MC400 , which goes on sale this week. How does it look against the rest in the current laptop boom? Neil Booth takes a look...

Everyone's falling over themselves at the moment to bring out truly portable computers. One solution to the problems posed by wanting to compute on the move has been adopted by Atari and Poqet, who are marketing pocket PCs. But the laptop format – the size of an A4 page such as the one you are reading – is seen by many as the best compromise between portability on the one hand and normal size keyboard and screen on the other.

Psion has been known up till now for its Organisers – the size of a large calculator or one-piece telephone, and the electronic equivalent of a Filofax. But two and a half years ago the company looked carefully at trends in computing and found through extensive market research that the computer people wanted to use in the 1990s was to be lightweight, genuinely portable, work for ages on batteries and yet not compromise on screen and keyboard size.

It's come up with the MC range. While 'laptop' is the most convenient label to give them, Psion insists the machines are much more than that, and genuinely address the problems of 'mobile computing'. This week the MC400 – a machine bristling with new technology – will be available in the shops, with the smaller-screen MC200 out in the New Year and the PC compatible MC600 out in March-April 1990.

New Computer Express had a thorough hands-on test of the MC400. We ask: is this the machine that will set new computing trends in 1990s?

DIFFERENT KETTLE OF FISH

The Psion MC laptop was conceived as a different machine to the Organiser, and not an evolutionary form of it. This is a shame, as otherwise it would invite comparisons with mammals evolving from fish, and birds from lizards. It really is a very different animal to its hand-held predecessor.

It looks like today's standard laptops – the now familiar clamshell design. It's the size of a very thick magazine and opens out to reveal a large screen occupying one half and a full size keyboard occupying the other. Switch the machine on and you see a window on screen containing various icons representing the different built-in programs the MC runs – diary software, text processor, alarm, database applications and so on.

Run one of the applications and a new window opens up on screen in front of whatever's there; your database showing details of your customers, perhaps, or the text processor to take a few notes in. When you open the Psion everything is there, instantly open, as you left it, and when you close it, the unit automatically switches off. It also switches off after a bit if you leave it open to conserve battery power.

You can have up to 24 windows open on screen at once, and the one for the application you're currently using is brought to the front when you work on it. All the windows are multi-tasking, which means that if you set one to do a time-consuming operation – a complex recalculation in the spreadsheet, for example, that might take a minute or two – then you can bring the text processor window to the front and write a letter while the spreadsheet quietly works away in the background.

The windows can be resized or shaped to any dimensions you like and moved around at will. All this will be familiar to anyone who's used a windows system – but the means of doing it may not.

HARD CHEESE

The MC400 doesn't have a mouse. Psion believed that a mouse was impractical for the table tops of 125s and knees, and have put the first startling innovation in: a touch pad. You put your finger on a small rectangular panel, and the cursor appears on screen. Move your finger around the panel, say from the bottom left of the panel to the centre, and the cursor moves from the bottom left to the centre of the screen in parallel. Press, and it's as if you'd clicked the mouse button. Most operations in fact require a further keypress – to open an application, for example, you click on it with the touch pad and then press ENTER.

The touch pad is a nice idea but it only just works. The cursor is flickery and precise movement is difficult. You have to perfect an odd technique of rolling your finger to fine-tune the position of the cursor – to align it over a confirmation box, perhaps. It's all rather like that fiddly digital choreography involved in unsticking sellotape from your fingers when you've nothing to stick it onto. You come away wishing Psion had gone with a trackerball; but, at least, it works, and is no doubt better once you get used to it.

The supplied software is pretty much as you'd expect. The diary function lets you metaphorically pencil in appointments on any day in the future and will not let you insert things if you're booked to do something else in that time. You can specify times or just general things to remember for the day (i.e.specify a slot for two hours from 11am when you're seeing someone, or just put a heading to the day reminding you that it's your partner's birthday). It can display three months at a time with a desk-diary type layout showing the day"s or week's appointments.

The database is essentially a card index name-address-and-phone-number storage system but can be stretched to use for invoices, memos, price lists and so on. Each record can hold up to the equivalent of two A4 sheets of info. It seems fast enough on small lists though how it would hold up to very large databases is another matter.

You can set up to eight alarms and set a bewildering

OUT SOON: THE RUN-DOWN FOR THE NEXT MCs...

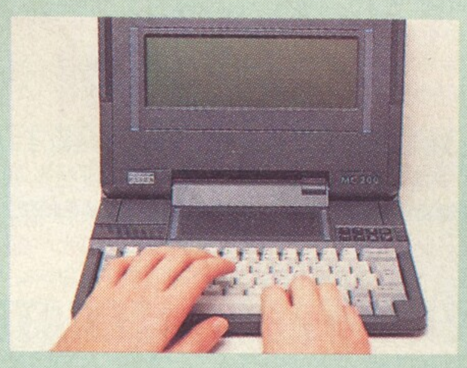
MC200 • As for MC400 except:

Price	£545 (+VAT=£626.75)
Screen	640x200 supertwist LCD blue/white
Internal memory	128K RAM
Battery life	Claimed 75 hours

MC600

Price £1495 (+VAT=£1719.25)

Size	49x314x227mm (1.9x12.4x8.9") – the size of this page
Weight	1.9kg (3.4lb)
Processor	16 bit CMOS Static Intel 80C86
Operating System	MS-DOS 3.2



• *The MC200 is basically an MC400 with a half-size screen*

Clock speed	7.68 or 4.77MHz
Keyboard	Full size QWERTY, no function keys, keypad integrated into QWERTY keys; no touch pad
Sound	Speaker only
Memory	256K flash EPROM 768K RAM 1Mb internal RAM disk
Drives	4 solid state
Screen	640x200 CGA Retardation Film LCD monochrome
Built-in software	Laplink
Sockets	external disk drive; external monitor; 12V power
Batteries	8 AA giving a claimed 30 hours continuous use
Disks and expansions	As for MC200 and MC400 except voice processor not available, and Comms

variety of options such as repeating the alarm at the same time every day or each week or each month at the same time, skipping weekends, and no doubt compensating for jet-lag as well. Once it goes off, the alarm must be recognised before you can use the machine.

TEXTING TIME

The text processor is really a bare-bones affair. You have a handful of styles to set your text in, can set the margins, do find and replace and block moves, but that's about it. You can't mark out an individual word it bold or change layouts in a document, and any editing change to a paragraph means you have to reformat it manually. It's clearly intended not as a word processor – i.e. not a means of preparing documents – but as a text processor – i.e. a tool to prepare simple text which you then pipe across to your micro at home or in the office to polish up and eventually print out. This loses all the formatting and style changes, so perhaps it's quite enough for practical purposes. You can always put the style or layout changes in as codes – <ital> for italics for example – to suit the word processor on your micro. Psion is talking about a proper word processing program on ROM but it wouldn't be available till well into 1990 and depends on demand. A shame, really, as the laptop format is ideal for word processing on the move.

The calculator is standard and the terminal emulator does no more and no less than terminal emulators should, viz. allow communication with micros and mainframes to allow you to transfer your files to and fro.

The machine has been designed to minimise the sort of built-in obsolescence that computers have suffered from over the past decade. The built-in software comes on Flash EPROM, meaning that new versions of the operating 'system' can be blown onto the existing EPROM for an upgrade charge. Your machine is, in theory, never out of date.

Data storage is done via solid state disks. These are bookmatch-size modules that slot into a space either side of the MC400. The machine takes up to four at a time and they're available in sizes up to 512K (Psion is hoping to bring out 1Mb ones next year, 2Mb ones in 1991, and eventually 8Mb ones, giving you up to 32Mb storage space!). They're not cheap, but score heavily over conventional RAM packs (such as those used in the Cambridge Z88) as they are backed up by a watch battery, and so retain data when they're removed. EPROM disks are also available for rather less, but with these you can't erase individual files, only the whole disk at a time.

Add-on software will come in the form of EPROMs, and Psion is aiming to have a spreadsheet/accounts package, and a word processor, out in 1990.

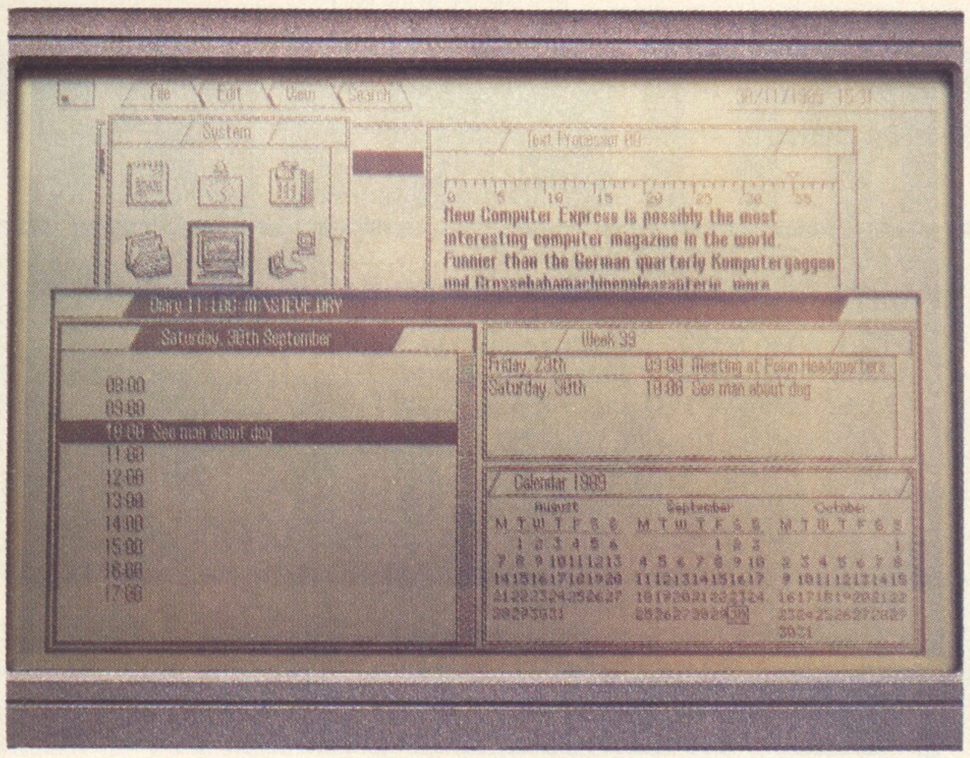
TRANSFER MARKET

Data transfer to a PC (or other micro) is done in two ways. Either you connect the two machines serially and port across the data – obviously limited to simple ASCII data and text files – or you buy the solid state disk drive for your PC and use the solid state cards in that directly. For the MC600 PC compatible, out next year, there will be a Laplink available that lets you access the Psion from the PC as if it were an external disk drive, and vice versa, thus enabling you to load up a spreadsheet from the laptop on the PC, edit it, and save it back to the laptop, for example.

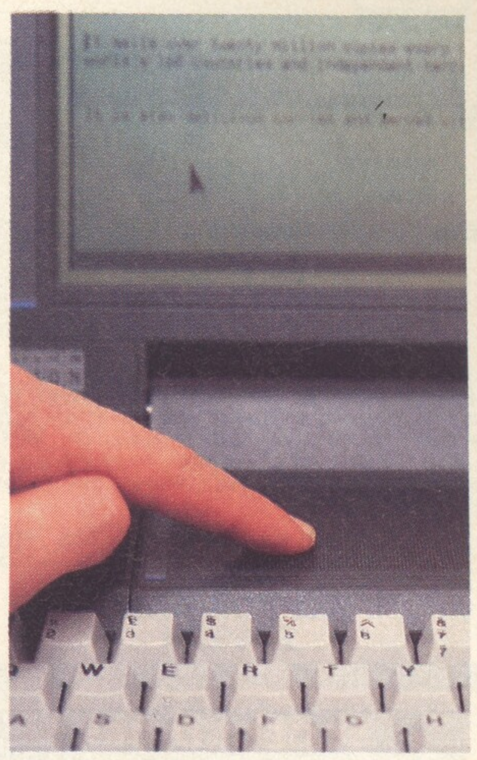
Expandability is another major feature of the machine. The two slots at the back house a serial/parallel interface and an empty space, into which can be plugged a variety of optional gizmos. A Quad modem should be available soon, enabling you to download that text you've prepared to your company's mailbox, or access a bulletin board.

Perhaps the most intriguing and innovative aspect of the MC400 is the optional voice processor. This module plugs into the expansion slot at the back and lets you record and play back sound directly on the Psion. It's all stored on disk and compressed – 8 minutes of speech take up just 64K.

The uses for this are almost limitless and it spells an interesting first step along the road to speech compatibility on micros. For example, you can record a meeting or interview, and then on the train home, play it back and type the transcript or comments into the text processor at the same time (or have someone do it for you). You can link it up with the alarm so that instead of just getting a beep at 3.15, you get your own voice telling you to go to the bank before it closes. You can also control the pitch or speed independently, making the speech play back at normal rate but basso profundo or sopranino – or, to suit the speed of your secretary perhaps, make it play at normal pitch but faster than Patrick Moore on crack, or slower than, er, someone who speaks very slowly.



• *The screen on the MC400 is excellent quality, readable from a wide range of angles. The windows system is similar to those used on Macs or PCs.*



• *The touch pad replaces the mouse – and takes some getting used to*

The quality of the recording is not brilliant. It's a little metallic and mechanical sounding, and sounds rather like the speaker has emphysema, sponge teeth and lives in a wind tunnel; however, it's perfectly intelligible and is quite adequate for note taking and interviewing. An external microphone or speakers can be attached.

In the mid to long term, Psion hopes to move into areas like bar code reading, paging and fax, and the MC series will be well equipped to tackle these.

THE VERDICT

The machine itself is a delight to use and an impressive piece of kit. The innovations must be a taste of what computing is going to be like in the 1990s. The screen is excellent and offers high definition with very good legibility from a wide range of viewing angles. The keyboard is very good too – bouncy and springy and positive. Even for long spells of typing it's still pleasant on the fingers, and it's a shame the text processor is so spartan and doesn't take advantage of the word processing potential.

The add-ons and innovative features are generally good. The voice processor adds an interesting and potentially very useful extra dimension to the machine – it'll be interesting to see how this takes off. The touch pad is a nice idea that just about works – but only just. It's a little frustrating and rather hit-and-miss until you get used to it. The built-in software is fine and the multitasking windows are clear and intuitive to use, though screen update can be just that bit slow.

Overall it's a very good machine and as a top-end organiser it's a winner. The only unanswered questions are in the area of more serious software. Beyond organising your days, writing brief notes and using it as a hi-tech computerised dictation machine-cum-note taker, there isn't yet the power software around to make it a genuine mobile computer. If and when it comes out – and that spreadsheet and word processing software can't come out too soon – it'll have an excellent machine, with a super screen and keyboard, to take advantage of ■

• *There are two slots at the back, one on either side, to plug in peripherals*

• *The battery pack takes 8 standard batteries. A NiCad pack is also available*

• *The 'disk' drive takes solid state disks – battery backed to conserve data*

TECH- SPEC: MC 400

All prices exclude VAT	
Price	£845 (+VAT=£971.75)
Size	49x314x227mm (1.9x12.4x8.9") the size of this page
Weight	1.9kg (3.4lb)
Processor	16 bit CMOS Static Intel 80C86
Clock speed	7.68 MHz
Keyboard	Full size QWERTY, no function keys, keypad integrated into QWERTY keys
Interface	Touch pad 'mouse'
Sound	Microphone and speaker
Operating System	
Graphic/windows	multitasking
Memory	256K flash EPROM 256K RAM
Drives	4 solid state
Screen	640x400 Retardation Film LCD monochrome
Built-in software	Text processor, Personal Database, Diary, Calcula tor, Alarms, Terminal emulator
Sockets	Fast serial link; external mic/speaker; 12V power
Disks	Flash EPROM 128K (£69.99) 256K (£115) 512K (£195) RAM 64K (£59) 128K (£99) ROM 2Mb
Batteries	8 AA giving a claimed 60 hours continuous use
Expansion	Two ports; serial/\parallel interface; optional Quad modem; optional RS232/BCR/MCR (£89); optional voice processor (£99).
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THE FUTURE IS FEMALE

"I don't know if things have changed," my great grandfather said to me some years back. "But in all my nearly fifty years working for Lloyd's Bank, we never had computers working there, let alone women." Is it still true? Ben Feinbaum talked to women working in the computer world...

Computing has always been called a male preserve. But the world of women's achievement has made room for computers, and it shouldn't be surprising that many of the top positions in the industry, on all sides – from technical to marketing and management – are held by females.

For some women success in working with computers and in computing–related industry has been as natural as writing or following the desire to become a programmer. Indeed, from a woman's perspective, computing has become very much a thing of the 1980s and beyond.

COMPUTERS AND TECHNOLOGY

After taking a degree in Maths and after four years working at Zilog, a company devoted to the development and manufacture of silicon chips, Dr Pamela Gray had gained enough knowledge of computer technology and the computer industry to strike out on her own.

Indeed, from her observations in the late seventies Dr Gray had identified a tendency in the industry for manufacturers and developers to pursue market–orientated interests rather than applying technology to solve real world problems. She established Sphinx Ltd, a software house, to supply software and training to people who needed it.

"I'm not really into computing in one sense, because I'm more interested in solving problems than in the technology," she said. Among other projects, she has delivered to farmers the means to update and improve agricultural production in underdeveloped countries.

Dr Gray, a one time nominee for the Veuve Clicquot Businesswoman of theYear Award, sold Sphinx Ltd. in April of this year. She is, however, about to launch Marosi, an information and consultancy service, that will focus on how can people in all kinds of different situations can use microcomputer technology to solve their problems.

She believes that women often find software sales rewarding, as delivering the right program to where it is needed requires an able-mindedness. "Women are better than men at listening to what the problem is and finding solutions, while still maintaining growth potential," she said.

DOCUMENTATION

As a Senior Technical Writer at Locomotive Software in Dorking, Jean Gilmour documents the company's vast range of products. "Initially I was the only technical writer here. Now, though, I'm Senior Writer and do tend to have my oar in just about everything, if I no longer do the writing single–handedly," she said.

Jean does admit to being something of a perfectionist when it comes to writing and laying out pages, but she doesn't apologize for this proclivity. "You need to be fussy. It's a pain in the neck, it requires a certain amount of effort, but there's no getting away from the fact that the results are better if you are a perfectionist."

Indeed, Jean does not consider herself to be in any way unusual. "If you're a scientific person – and female – well, a number of us go into writing. I don't see myself as rare in that sense."

In fact, Jean has never had any difficulty finding a job in computing–related industry. "And once into a job, I've experienced no obvious difficullty in progressing. You must bear in mind, however, that everything I've done has involved working quite closely with a small group of people, so there's a slightly different perspective there to progressing my way up a large company ladder."

PROGRAMMING MANAGEMENT

Chris Adams, Project Manager at Pergamon Press in Oxford, manages programming tasks that are necessary to keep the wide range of computer systems on target at this totally automated (and massive) publisher.

In order to assign programming tasks to the various senior and system's programmers, Chris must prioritize, and therefore understand each of the work requests that comes in from users located in Marketing, Sales and Editorial. But she began her career as a programmer.

"I paid for my own course, and then got a job on completion, eventually leaving that post to have a family," she said. Re–integration posed no problem for her. "Upon returning to work, I took a non-programming position at Pergamon, and then after a year a post as a Trainee Programmer opened up."

Indeed Chris said she enjoys, perhaps most of all, the problem-solving aspect of working with computers and with programming tasks in particular. "I guess you've got to have a bit of a bug for it."

SYSTEMS ANALYSIS

Fiona Faulkner works as a Systems Analyst at MOD Ensleigh in Bath. "I certainly didn't wake up one morning when I was ten years old with a burning desire to be a systems' analyst," she said.

As a representative of the Royal Navy Supply and Transport Service, that in turn supplies the Navy with absolutely anything it might require, however, Fiona travels to a site to work out exactly what computer system is necessary to make the task to be performed easier, and preferably more cost effective as well.

Fiona had been working in the MOD for nine years, mostly in an administrative capacity, when she was asked to take part in a study concerning the future of computer-based supply systems; thus she became involved in a work area she had not previously considered. Then in 1984 she turned her attention to becoming a programmer – mostly in Cobol and Quickbuild.

But Fiona enjoys the personal contact that her present job brings, although there is a downside as well: project–users continually changing the groundrules mid–assignment are her main bugbear. "Chasing moving targets can be very frustrating. But, on the other hand, it's really rewarding when you know that you are working towards a positive goal – especially when the people you are helping are enthusiastic about the coming changes."

AUTOMATION SERVICES

Armed with secretarial training and a background in sales and marketing, Angie Thomas first encountered computers at the workplace indirectly, as a tele-sales operator nine years ago when she worked for Hy-Tech Microsystems. She moved rapidly on to another position at Oxford Regional Health Authority, where she developed training skills.

"I came to Pergamon Press as a WP Trainer," she said. Now she is in charge of ten support workers (all of whom are women). Indeed, as Assistant General Manager of office automation and word processing services, she believes that clerical support work is often under–rated.

"Many people think that word processing is glorified typing," she said. "But, quite honestly, to run this office well you need skilled staff – all of whom must be highly trained in desk top publishing and lay–out."

In fact, as her department is called upon to produce presentable material from an astounding variety of copy, coordinating, organizing and budgeting time and resources takes considerable flair. "I do feel that it's a lot of responsibility," she said. "And I enjoy it – some of the time."

It doesn't seem to worry her that the office is comprised entirely of women. "I have only ever had two applications from men – neither of which were suitable," she said. One wanted too much money, and the other was just not up to the standard.

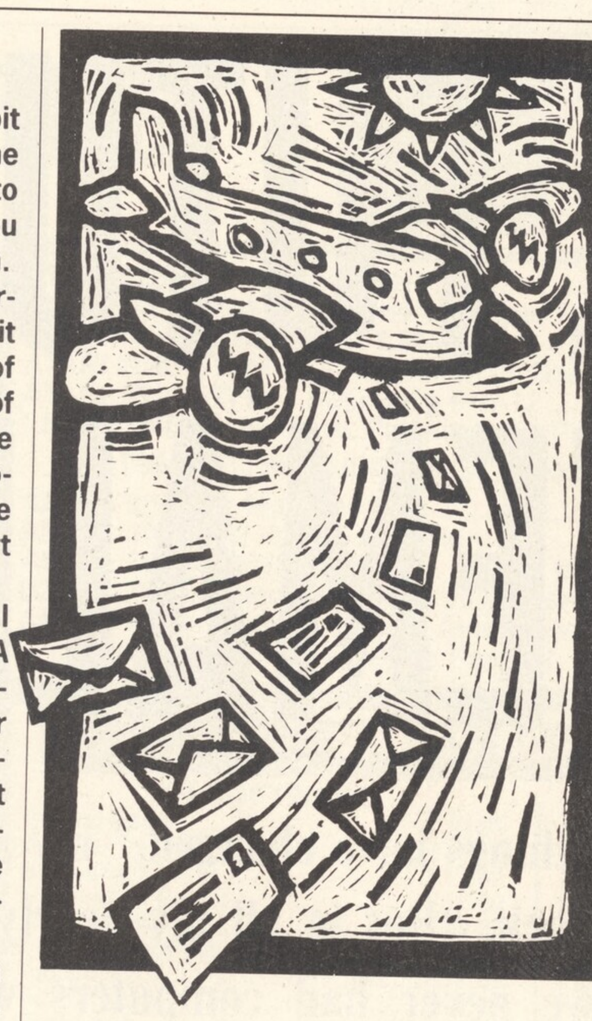
THE LAST WORD

My great–grandfather was a somewhat philosophical man, but he also liked to play his ukulele. One cold, clear, crisp Autumn evening he decided to reminisce by playing a few songs from his hey-day – the 1930's.

I do not remember much of what he performed, but one chorus from one tune has stayed with me:

"Some people say that men are
leading the women today.
But I say women are smarter
in every way.

That's right – the women are smarter
That's right – the women are smarter
That's right – the women are smarter
The women are smarter
That's right: That's right." ■



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Run rabbit run

Remember when Roger Rabbit came out on the Amiga? Great game – but it takes about six minutes to load, and when a game finishes you have to power off and re-load again.

Well – I claim to be the first person in Britain to own Roger Rabbit version 2. It loads in a maximum of just over 3 minutes (a minimum of about 90 seconds if you press the Space Bar to cut out all the introductory screen!) Also when you've finished a game you can restart straight away.

How did I get hold of this? I posted my warranty card to the USA which came with the original version. A few months later a letter came telling me about this new version and here's the punchline - it cost me the equivalent of £5 including postage and I didn't even have to send any disks back! That's customer service.

This must surely stand out as a benefit to everyone who buys original software and gets sick of pirates who save pounds. With a pirate copy you would get no warranty card!
Craig Thornton, Lincoln

As backup and support is always cited by the manufacturers as one good reason (OK, two) for buying a genuine copy and registering, it's nice to see a company that actually provides some even on a game.

Access denied

I am writing this letter to you for several reasons. I have to use a wheelchair, and cannot go out very much. So the computer, which in my case is an Amiga, has become a lifeline to the outside world.

I want to try desk-top publishing, so I went to the Computer Shop in the shopping precinct at Great Yarmouth to ask them for help in purchasing the computer and a printer. They were able to help to the extent of delivering the equipment personally, and setting it up for me at no extra charge. Consequentially I experienced some difficulty with the computer that meant it needed a service. Because I cannot carry anything, they collected the equipment, solved the problem, and then brought it back for me. The manager of the shop did this in his own time, and took every care to make sure that the problem was solved. I needed help more than once, and each time I have been treated with the greatest kindness.

So that I can say thank you to Mr Kevin Whitbread who runs the shop, and who has been responsible for the kindness shown me.

The computer is a wonderful machine. I cannot go out but it has allowed me to fly. I have piloted a submarine. I had a go at ending the cold war through Balance of Power. I can play golf. There was once a time when I played the flute. Now I cannot, but I have Deluxe Music Construction Kit. I have a keyboard which is nearly paid for through a club-book. When I can afford to I hope to buy a midi interface. Then I will be able to listen to music via the keyboard. This will be some compensation for not being able to play an instrument.

I have an American pen friend. Writing to him was becoming impossible using a pen. It is lovely to be able to use the computer. At the moment I only have the text editor to use, but I am saving up for Publishers Choice. My social worker has told me that the social services would like me to do some work for them when I get the software, so they will be my first customer. I will not charge anything for this as I only want to do it as a hobby, but at the same time I want to help others.

If you become disabled, you have to accept help from others, without being able to do much in return. I hope that I can use the computer as a way of saying thank you to a lot of kind people. If there are any disabled people who are thinking about getting a computer, and they read this, I would like to say, go ahead. It is the ideal hobby.

I love simulations and have seen your review of Sim City. I would like to design a place where disabled people are allowed to be a part of the community, and not be denied a normal life because there is not transport and no access and no proper ramps or crossing points. Does Sim City allow you to plan anything like this?

Thank you for producing such a good read. It is one that I look forward to every week. It helps me to feel as though I am part of the community when I read the letter page. Also, thanks for the Tech Tip Uncle. I read this just for the remarks Uncle Tech Tip makes. If he is going, I for one will miss his sense of humour.
Paul Frosdick, Bradwell, Norfolk

He's still doing Tech Tips for the moment so you can continue to enjoy his, er, sense of humour.

Thanks for your perspectives, Paul. While I guess things are improving, it must be sickening to face difficulties of access to do things most of us take for granted: going out for a meal with friends, nipping down the pub, or popping into the library. Not much micros can do about that, but if they can help out with a few of the things you mentioned, then it's nice to know that they can be less trivial things than some people would have you believe.

Inside story

Hi guys, after reading about all this 5 years imprisonment for Hackers, all I can say is "Cor blimey!". Five years is way, way to steep, I'm in the old blue brick doing two and a half years for almost killing a guy and I'm told that I may get five years if I indulge in a bit of hacking!

Get a grip Emma Nicholson, what you need to think of is the people who commit this petty crime who are not big guys with tattoos and scars like me. These hackers might have families depending on them, they are the ones (the family) who will suffer when Joe Bloggs is doing a five stretch, believe me, I know all about it!!

People who drink and drive get 'points' on there licences and banned from driving. Why not confiscate equipment for, say 6, 12, 18 months and a ban on using computers with modems and access to networks?

Five years will damage a person's life, ruin a career and hurt families. This is much too severe. That stupid cow shouting her mouth off, it's like a Monty Python sketch! She wants to spend a while in one of these places. Your average bespectacled, spotty hacker wouldn't last five minutes and if he did he'd come out knowing how to rob cars, burgle houses etc.

The maximum in my eyes would be 18 months, and only then for starting full global warfare. Have you any idea of the mental pressure you can be under from being isolated from the outside world? I'm missing my Amiga so much I might crack up any day now and I've only done 14 months! Ha Ha. Anyway, my point is: five years is too steep, these places are no joke.

PS We have a course here run by Cambridge, maybe you'd like to find our what we get up to with our BBC Masters and Archimedes 310s? The psychology of the inmate, ha ha.

By the way, I'm 21 and I repent!
Carl Holland, No. 681, HM Prison, Rugby, Warwicks

It certainly seems stupid that in a time when our jails are already overcrowded that some people want to put more people inside. Putting a hacker inside, as you say, is probably going to turn the hacker into a criminal – or a nervous wreck. Maybe it's just that some people want revenge?

It's going to be difficult to stop people using a modem as you don't need a licence or anything as you do to drive a car. I think the most practical way of deterring and punishing hacking is huge fines; if someone has the computer expertise to hack, they can put it to use in a job to pay off their fine.

Anyway, as the writer of this week's prize letter, we're sending you a piece of software for the Archie. It's Breakout. (Only joking – it's something else!)

Suspicious letter

As head of Atari UK, it has come to my attention that the Atari repairs division has been overwhelmed by the returns of ST machines, the faults of which, could in the majority of cases have been easily avoided.

So in the light of this I would like to appeal to your ST readership to follow some worthwhile tips, to aid the long life of their machines. My thanks to our chief maintenance engineer Neville Oddball for supplying this information.

1. Would ST users please refrain from using their machines as electric toasters since many returns have been caused by English muffins becoming jammed in disc eject mechanisms. If in any doubt would users please refer to the man-

ual supplied as regards the maximum size of bread applicable.
2. The Atari ST is not for use as a draught excluder and Atari UK will not be held responsible for loss, damage or fatality arising from such use.
3. (i) Atari UK would like to make it quite clear that the Atari VCS games system is not compatible with any ST even though the visual and audio capabilities of the two machines appear to be the same.
(ii) The ST cannot be used as a memory expansion for the aforementioned console.
(iii) Due to the technical inferiority of the machine, Atari have no plans to release VCS cartridges for the ST

My profound apologies to ST users who were expecting their own copies of *Battlezone* and *Smurfs*.
Robert Gleadow, Atari UK Ltd

Well, this is only a letter from someone pretending to be Bob Gleadow, Head of Atari UK, of course. For a start, it was typewritten, and I'm sure Atari wouldn't get involved with outdated and low-performance technology. Good heavens no. No sirree. Perish the thought.

Dragon on and on

I would urge all those who still have Dragons stuffed into cupboards etc. to get them out again. Your STs and Amigas are not the only ones with wimps and mice, you forget that the Dragon is also capable of running C, Pascal, Forth, OS9, Flex as well as Microsoft BASIC. (I have seen a Dragon with 128K running a hard disk system). It also has some software compatibility with COCO machines, even the BBC. Don't forget that some of the programmers on Atari and Commodore machines cut their teeth on Dragons and are probably still using them as second machines. So don't knock us down. Apart from the financial investment my C64 does what I require without any fuss or bother and I have as yet to run out of memory, changing to another machine is only a 'status' and the 'in thing'. The Dragon still lives on and on.
Frank Fisher, Gillingham, Kent

As computer users we all like to look at and read about the hi-spec micros like the Archimedes, STs, Amigas etc, but the realities of life – which involve mortgages and new shoes for the kids and gas bills – mean most of us are happy to keep using machines we have without feeling the need to upgrade just to follow trends. And if it does the job, why not? I still have an old Ricoh laptop I bought four years ago which is in use every day. It's just the right depth to prop up the dodgy leg on our bed.

Pedant's point

(strictly not a point but a two-dimensional area)
Your Shopping *Express* Guide to 50 Top PCs now admits that the Amstrad PC1640 is an EGA machine, but still complains of a 'poor quality monitor'. This is simply untrue. This computer is supplied with one of three different monitors. The EGA colour monitor (ECD) is excellent and has been rated as such in many reviews. The monochrome or CGA colour monitors are probably poor choices because they do not make full use of the machine's built in graphics hardware, but there is nothing wrong with the quality. I still think your reviewer has the PC1640 confused with the PC1512.

Why continue the complaint about the Amstrad having 'only' three expansion slots? You list two IBM models that have only three slots without whingeing on about it, commenting instead, 'the best always costs a little more'. In fact IBM's PS/2 Model 30 offers the same spec as the PC1640 at double the price. Commodore's PC10 has only 3 slots, and also a CGA display and 8088 CPU, but you give it a higher desirability rating than the Amstrad even though it has a lower power rating and costs more. Besides these, you list five other computers having only 3 slots without any complaint. Why pick on Amstrad?
Iolo Davidson, Tetbury, Gloucestershire

We asked you last time if you wanted to do the PC Buyer's Guide but we never heard back from you.

Why pick on Amstrad? Simple. When it comes to being pleasant, helpful and considerate in The Industry, Amstrad is roughly on a par with the Third Reich. Anyway, it's fun.

Disk usting

I sent my Dungeon Master disk to Mirrorsoft to be upgraded. They cashed my cheque for £3 on September 7th! Over two months later I still have not received a new disk.
Richard Jennings, Edmonton, London

Right, MIrrorsoft, I'm going to count to ten, and if you haven't returned his disk by the end, we're doing a feature on Nasty Companies Whose Games You Shouldn't Buy. One, two, three, four...

Type casting

Congratulations! Yours is the first computer mag I can remember stressing that keyboard literacy is as important as computer literacy.

What is the point of using fast, modern technology if one's keyboard skills are still in the horse-and-buggy stage? I have always marvelled at the numbers of people using computers who find no difficulty mastering complex programming languages, advanced software etc., but who cannot be bothered learning how to train the same fingers to hit the same keys.

Why – laziness? A sneaking feeling that keyboard skills are best left to females? Even computer journalists can still be seen pecking away like short-sighted hens instead of being in full-fingered flight.

I feel really smug about this as it was 1955 when I first leaned to touch-type. Gloat! Gloat!
Neil Foster, Merseyside

1955? My goodness, you learn quickly. It's only ten past eight now.

Now that our kids are apparently to learn typing skills at primary school, perhaps we might see a shift away from the stereotype of the female as secretary. I hope so.

Thanking you

I'd just like to say thanks to everyone who sent me articles on Fractals and the Mandelbrot set. Sorry I couldn't reply to everyone.
J Melia, Telford, Shropshire

Well done to all involved.

Bouquet shop

Usually when I write to you it's to moan about something, so just for a change I'd like to report on some good service I received.

Electronic Arts' Interceptor has long been a favorite of mine, but I recently lost the cardboard "computer" used to decipher on-screen protection codes (the only protection, incidentally, on this otherwise backup-able game. So how come EA aren't bankrupt yet...?).

I rang Electronic Arts to see if I could get a replacement. All I had to do was provide proof of purchase and they sent me a free duplicate the next day, so I'm airborne again for the price of a stamp. It may well be quite a routine service in the software industry for all I know, but I was pleased anyway.
Stephen Mercer, Shaftesbury, Dorset

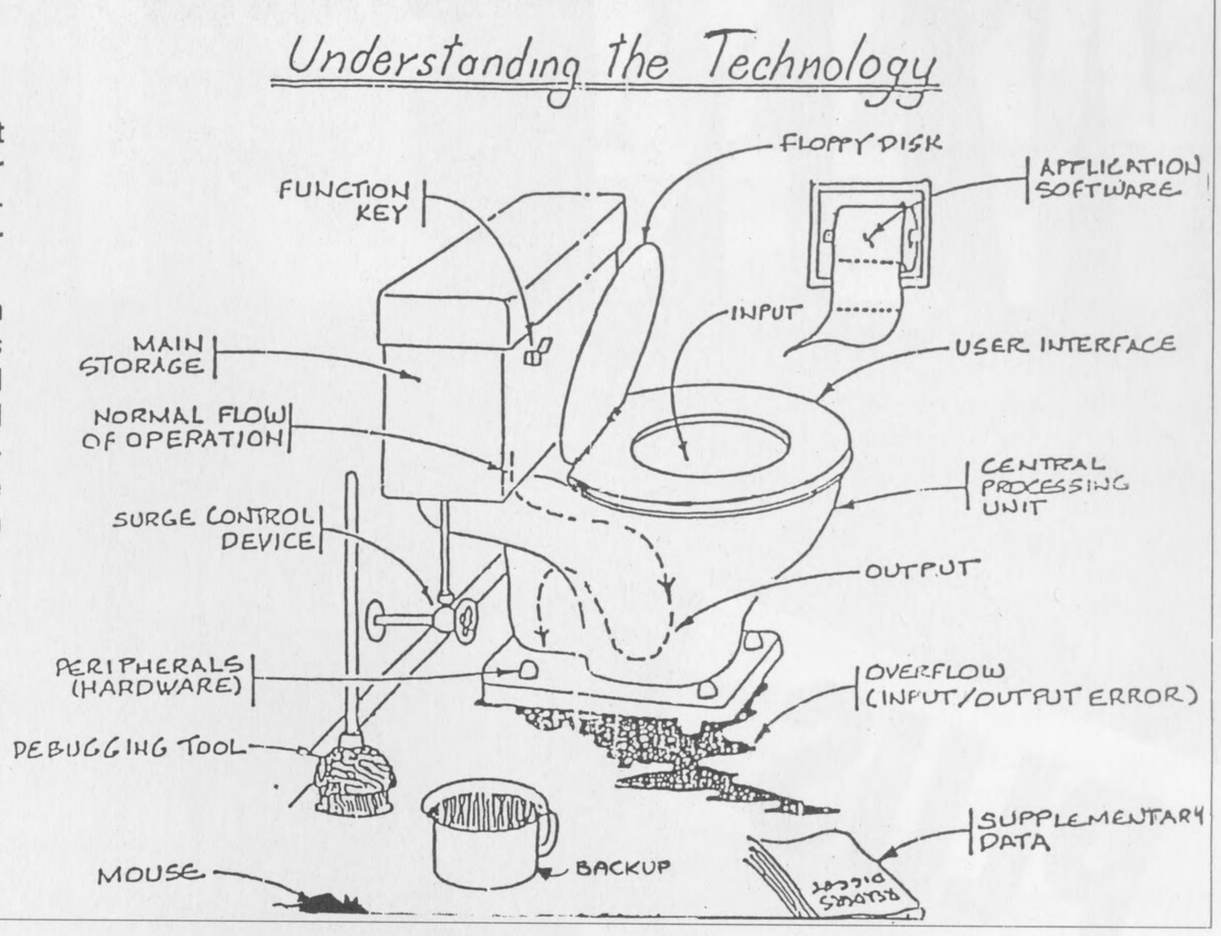
Well done EA. Take this tennis racket for your services.

Bog standard

I thought this sums up what most of these "my computer is better than your computer" lot think about other computers.

I read the letter from Vincent Marsters (*Express* 37, July 22) about how bad it is to wait to get his issue. I only got that issue on October 30; I suppose there are some drawbacks to living in the best part of the world.
James Stonell, Logancity, Australia

Thanks for sending it, James. I just hope it takes so long for things to reach you that you haven't got the cricket scores from this summer's test series in England yet.



Public inquiry

Why haven't you got a PD section in your mag? How come you never print any of the letters I've sent you?

Looking at issue 53, I think the idea of the Codemasters placing games on CD, then linking up your CD to your computer with the appropriate leads, is a wonderful idea. The leads can be sold separately, at say £10 each, and the CD will not be so highly priced. I only hope the Amiga will be able to have this great chance, as nearly everyone has some sort of CD, whether it's on their personal stereos or their hi-fis!
Neil Mansell, Essex

We're considering a PD section so if enough people write in (hint, hint) who knows what might happen? I haven't got a CD. But then I haven't got a CPC either.

Offer you can refuse

I am sick of hearing from crackers telling me that what they do is OK. The facts are a game is released and next day I can get hold of a pirate copy = We lose sales.

They can go on and on about the price of software and games being rubbish till they are blue in the face, but they are just common thieves.

How about this for a suggestion. If all you crackers out there promise not to distribute a game until four weeks after its release, I will shut up and go away. We will make more money so we can write better games and bring down the price, you can still provide your "service", and everybody will be happy.

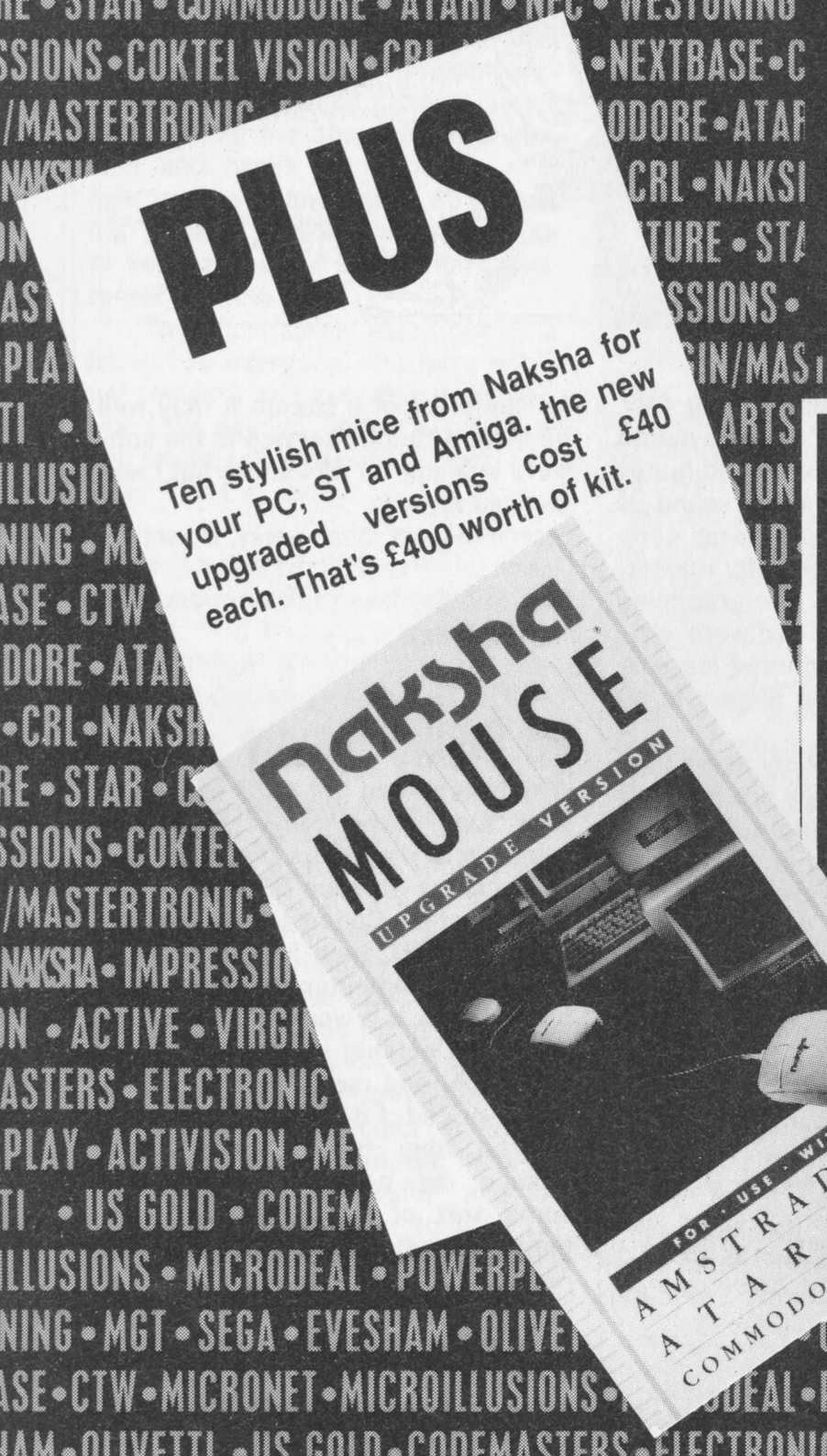
How about it guys?
A Programmer

But four weeks is twenty-eight days. Can they count that far?

WIN £12000!

Last week was the first part of our Express Christmas competition – in which you can win prizes to the value of £12,000!

To enter the competition you must have the official entry form that came with last week's Express. Then we gave you questions 1-10; this week there are questions 11-20. The final ten questions will be next week.



QUESTIONS

11. Microdeal is giving away Quartet, its amazing music package for the ST. Which US musician produced the first LP with synthesisers, *Switched on Bach*, in 1968?
A Michael Jackson
B Elvis Presley
C Walter (now Wendy) Carlos

12. Evesham Micros is providing an Olivetti PC1. What famous historical event happened at Evesham?
A The Battle of Hastings
B The Fire of London
C Nothing very famous actually

13. Star's printer, the LC-10, is up for grabs. Which of the following is not a type of star but a BBC TV comedy series?
A White dwarf
B Red giant
C Red dwarf

14. Microillusions' Music X and Photon Paint can be yours. Which of the following areas of land 'seen', named and put on the maps by 20th century explorers in fact turned out to be a mirage?
A Milton Keynes
B Stevenage
C Crocker Land, in the Arctic

15. Asterix is on offer from French outfit Coktel Vision. Which French team wrote the original comic strip series?
A Soufflé and Éclair
B Croissant and Escargot
C Goscinny and Uderzo

16. There are fifty Powerplay joysticks to be won too. Which of the following programs would NOT use a joystick?
A A flight simulator
B A shoot-'em-up
C A spreadsheet

17. Twenty copies of the Activision games Dynamite Dux and Altered Beast are up for grabs too. Alfred Nobel, inventor of dynamite, is famous for what other thing?
A The class system
B The silent telephone
C The prizes awarded for contributions to Peace, Literature etc.

18. CRL is giving 30 virus killers. Which of the following is NOT spread by a virus?
A The common cold
B Hepatitis
C A hangover

19. There are also four Faery Tale games. Where would you expect to find a fairy at Christmas time?
A At the bottom of the garden
B Under your pillow
C On top of the Christmas tree

20. You can win ten copies of Autoroute – the route planning package from Next Base. If you drive right to the end of the A9 in Scotland, where would you be?
A A long way from a toilet
B Lost
C John O'Groats

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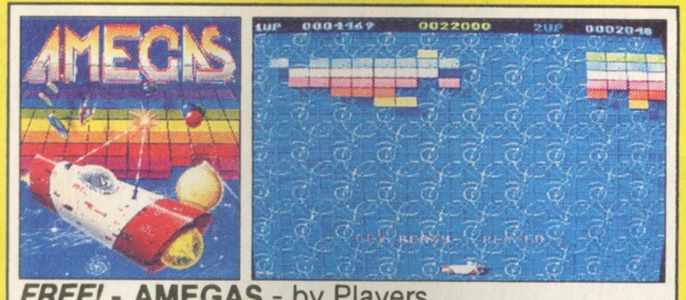

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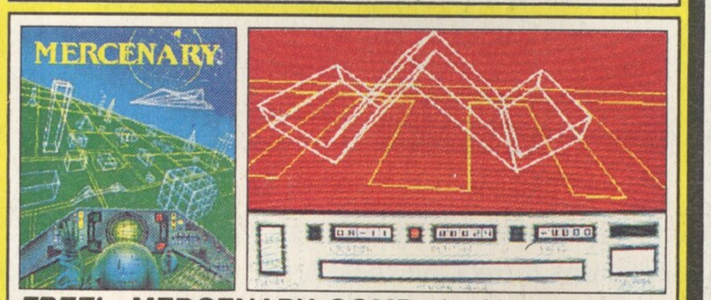

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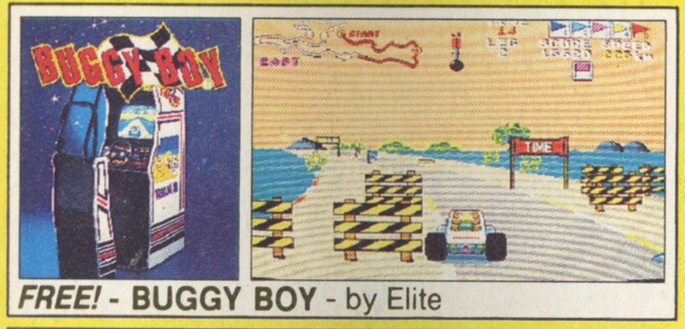

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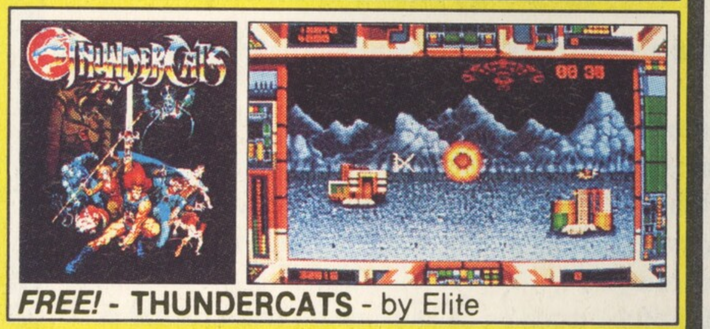

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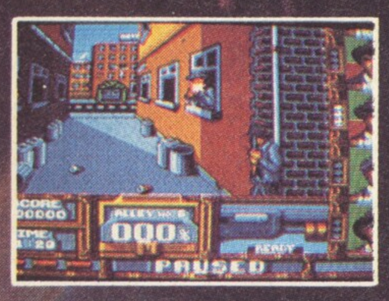

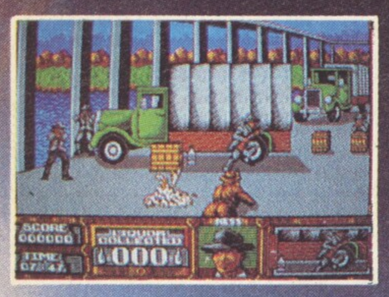

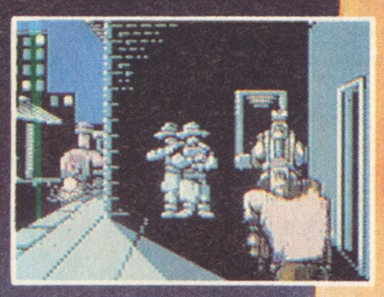

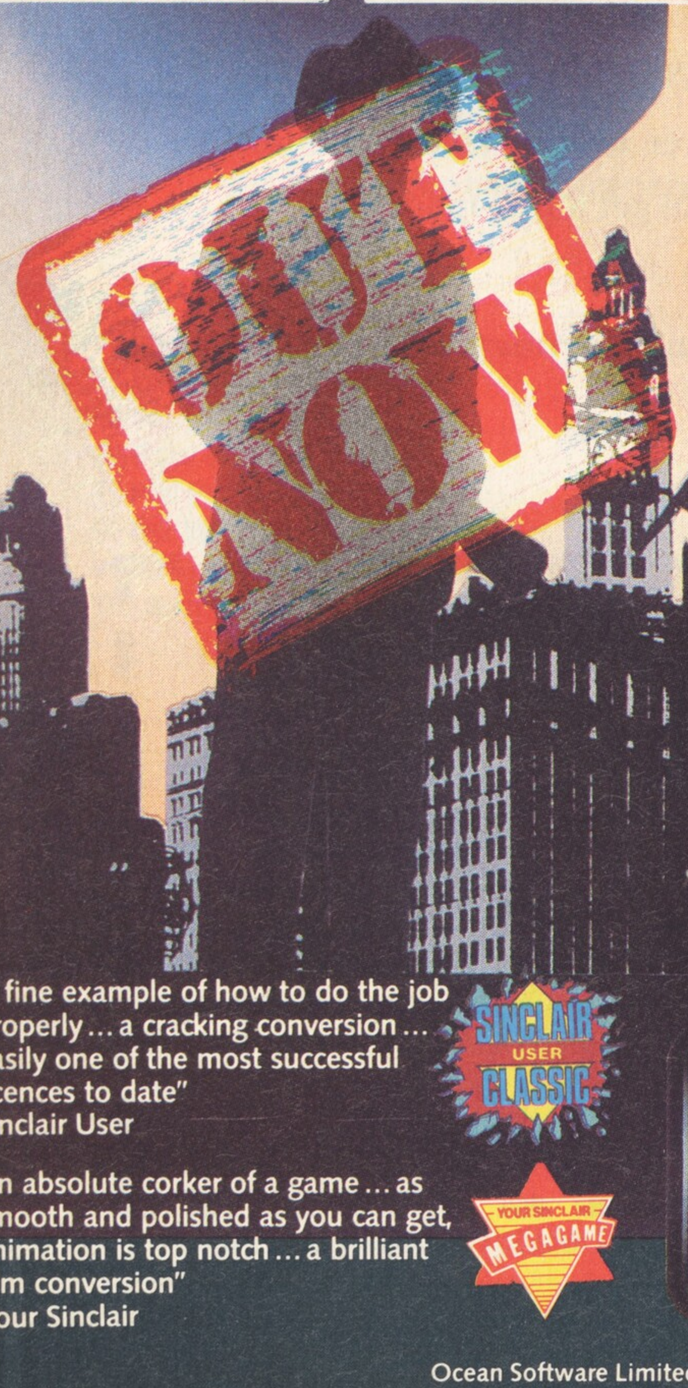

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