

MASSIVE
72
PAGES

COMPUTER **EXPRESS**

BRITAIN'S BIGGEST SELLING COMPUTER WEEKLY

AMIGA

- Music update
- Scribble secrets
- Amiga animation
- BASIC tips

PC

- The 50 best models
- Pocket PCs
- Intel chip bug

ST

- DIY robotics
- New music packages
- Adventure revival

PCW

- Data recovery

SPECTRUM

- Racing special

C64

- Programming tips

**ARCHIE • BBC
QL • CPC • MSX
SPECIALIST COLUMNS**

ACORN'S SECRET

Details of the next Archimedes revealed to Express

page 2



THE RACE FOR XMAS
Express checks out No 1 game contenders **page 7**

**VIRUS
REPORT**
Latest news from virus conference
page 16

50 TOP PCs

32 PAGES PACKED WITH BRITAIN'S BEST COMPUTER BARGAINS

★ **SHOPPING
EXPRESS** ★

CONTENTS

FEATURES

- VIRUS ATTACK** 8
Report from a virus-busting conference
- IN YOUR POCKET** 10
The tiny PCs are taking the market by storm. Which should you buy?
- CHRISTMAS IS COMING** 16
The games companies are getting fat. Who will the race to the Xmas top spot?
- MAKING GAMES** 18
Shortcuts to writing your own blockbuster
- BRAIN POWER** 20
How brain-like computers could revolutionise the future
- I ROBOT** 53
Controlling a Lego robot from your micro

REGULARS

- COMMENT** 4
- LETTERS** 14
- VOUCHERS** 21
Save £10!
- BUYERS' GUIDE** 23
Which PC compatible?
- READERS' CLASSIFIED ADS** 34
- EXPRESS SALES** 39
The best bargains outside the Lesser Magellanic Cloud
- JOBS** 43
- TECH TIPS** 54
- GAMEPLAY** 66
Report on the comings and goings in the games world - releases, reviews, ranting...
- BACK PAGE** 70

YOUR MACHINE

- PC compatibles** 58
- Amstrad PCW** 59
- Acorn Archimedes** 59
- Atari ST** 60
- Commodore Amiga** 60
- Sinclair Spectrum** 62
- Amstrad CPC** 62
- BBC Micro** 63
- Commodore C64** 63
- MSX** 64
- Sinclair QL** 64

NEW COMPUTER EXPRESS EXCLUSIVE

ACORN PLANS SUPER A3000

Acorn will launch a high specification version of its successful A3000 machine next spring at a price of under £1,500, Express can reveal.

Called the A5000, it will boast speeds which even the forthcoming Amiga 3000 and Atari TT will not be able to match. Indeed, the A5000 will be able to outstrip even the speediest 386 PC making it arguably the fastest home computer.

The machine will look much the same as the BBC A3000 which was launched last May. However, its technical specification will wow those computer owners looking to move into the new generation of computers.

It will run Acorn's new ARM 3 processor which can handle speeds up to 10 times faster than the Archimedes' current microprocessor, running at upwards of 15 million instructions per second (MIPS). An Amiga runs at less than 1MIPS. The ARM 3 is currently being sold as an add on for the Archimedes 4000 range at a price of £600. However, the increasingly popular low-cost A3000 cannot be fitted with ARM 3.

That £1,500 price point is still a matter of debate within Acorn. The firm's marketing chiefs and hardware designers have yet to decide whether or not to make the entry level a 1Mb or 2Mb computer. Clearly, if the firm opts for extra memory the price will come up. However, the pressure is on to compete on price.

Ambitious Acorn is even hoping to take



• A3000: big brother on the way

on the Apple Macintosh for DTP supremacy. The firm's outline font manager will be included which increases the quality of printing output.

The Archimedes is also making a name for itself in graphics and video applications. High resolution screen monitors will also be available (although they won't be within the £1,500 price point).

Acorn is point blank refusing to comment on the matter. This is no surprise. When details of the A3000 were first

leaked to Express (Issue 20) its existence was completely denied until the official launch.

Such is the level of secrecy within Acorn that most developers have not been told about the machine. Most were aware of the A3000 but were obliged to sign non-disclosure agreements. But these legal documents don't appear to be enormously effective - Acorn has attempted to keep the news within its Cambridge headquarters. ■

Taking games seriously

The prospect of a games machine based on Archimedes technology is looming large. The Acorn management is expected to make a decision mid way through next year.

It is waiting to see how the A3000 fares among games players and games developers. Acorn has been attempting to persuade software houses to write games since the A3000 was launched and has scored something of a success. But it is yet to be convinced that an Acorn

games machine can be a success.

Olivetti - owner of Acorn - is keen for the firm to make use of its technology and gain a footing in entertainment.

However, the difficulty is offering a stripped down version of the A3000 for at least £200 lower than its current price (£699). This could be achieved by taking out a few ports at the back but it's always going to be tight.

Many suspect a deal will be struck with another

manufacturer which will market a machine based on the Archie.

Such a compromise will give Acorn some profit from the games sector without all the hard work. There is a strong argument to suggest that the Acorn name is best associated with serious pursuits.

But a strong line up of Archimedes games will convince those in favour of a RISC-based games machine to push it through. ■

Back to BASICS

A new version of BBC BASIC is being developed - but it won't be ready for months.

Version VI will be geared toward graphics and games. It will have a built in animation command as well as upgraded music capabilities. However, it won't be included in the A5000. It is expected that BBC BASIC VI - which will be used in the Archimedes range - will be able to double the speed of some games.

The last upgrade for BBC BASIC was to version V when the Archimedes was launched two years ago. BBC BASIC is the standard language in schools, and non-Acorn machines such as the RM Nimbus and the Amiga also have versions. ■

Piracy busters turn to big business

French police have raided the premises of two corporations and have seized allegedly pirated copies of leading business packages.

Telediffusion de France and Banque Paribas are alleged to have used illegal copies of Ashton-Tate,

Microsoft and Lotus software. The raid was partly set off by the Business Software Association which has been threatening a crackdown on large companies for some time.

Lawsuits have been taken out but, in an attempt to protect its reputation, TDF is reported to have

attempted to hush up the announcements of the legal action. The courts have rejected this plea.

Ashton-Tate has been leading the worldwide fight against piracy and is currently concentrating on taking advantage of recent copyright laws in Western countries as well as

pushing through legislation in other countries. France has one of the best anti piracy laws in the world giving software houses more clout.

In the UK FAST has already said that it will be turning its attention to large corporations which are failing to buy or licence their software.

Meanwhile, expect to see a run of anti-piracy ads in the press. The hard hitting campaign makes it clear that pirates will be prosecuted if caught. It's backed by the European Leisure Software Publishers Association (ELSPA), FAST and various magazine publishers.

Schneider Euro PCII: tech specs leaked

Exclusive details of Schneider's new generation of low cost PCs have been leaked to *Express*, including the upgrade to the popular Euro PC.

The German manufacturer plans to launch four new models before the end of the year - the Euro PCII, Euro XT, Euro VGA AT as well as the widely expected 386SX.

Schneider's Euro PCII is being dubbed "a logical development" from its predecessor and is identical in appearance to that £399 machine. The memory has been upgraded from 512Kb to 768Kb on the motherboard. There is also new provisions for a games card and an additional socket for an 8087 maths co-processor.

Next up the range is the XT which will "fill the gap between the Euro PCII and the 286 range" It's a conventional XT machine with 768Kb of RAM on board and a barrage of expansion ports.

The VGA AT will be 286 based and will come with a vertical CPU box. Again, this machine will be identical to its original but the addition of VGA graphics capabilities and larger hard disk make it a better option.

Finally, the top of the range 386SX is promised to be a low cost alternative for the buyer looking for power. The 1Mb machine has an expansion facility to 5Mb with VGA graphics as standard.

Schneider was last week tipping off the trade about these specifications but is refusing to be drawn on price. "I suppose someone from the trade called you as soon as they heard the news, that's just typical," offered a disgruntled spokesman. "I've no comment to make."

However, wise money is being put on some prices that will worry Amstrad. Two years ago Schneider was Amstrad's distributor in Germany but there's little love lost between the two companies now.

The ultimate in gung ho gaming:

NATO DECLARES WAR ON COMPUTERS

Three thousand senior military commanders throughout Europe will today (Thursday) begin the biggest computer simulation yet devised.

They are all taking part in a full scale European war played out on seven huge VAX 8000 mainframe computers. The NATO tacticians are pitted against a small group of officers who claim to understand Soviet military thinking. They will be the "enemy" from the safety of a computer and will kick off the conflict with some devious aggressive moves.

In all some 900,000 troops will be at the disposal of the generals who will be fighting land, sea and air battles all over the continent. But not one human is to be deployed. The VAX machines take care of everything. Every single man and weapon have been programmed into the computers.

This is the first time such a war has been fought out on computer. NATO says

it's not being done to prove how good they all are. "We don't know who will win," one commander told *The Times*. Computers are being used to test tactics because shifting armies all over Europe is getting a bit expensive.

The simulation has been planned by General John Galvin who has been working on it for two years. He will be based in the operations centre of SHAPE (Supreme Headquarters Allied Powers Europe) in Belgium throughout the eight day test. He will be linked to a line up of Generals throughout Europe who will talk to each other via television. Their orders will be fed into computers by corps commanders in Germany and Texas (reinforcement). The computer will decide who has won.

However, real war simulations aren't being displaced by the computer since real battles don't get fought out on silicon chips.



• Computer war: what is it good for?

Computer smellchecker

Microchips are being used to develop the first artificial nose capable of sniffing out wiffy grub in your fridge.

The computerised honker is being put together by scientists at Manchester University. They say the idea is to develop a sensor which will let you know when the sausages have passed their eat by date or the cheese has finally given up the ghost.

A human nose can recognise 10,000 different odours and these are all passed on to the brain. The Manchester project is using similar patterns on its project which should be ready next year.

Picture the screen

A giant computer screen measuring 10 feet by seven feet has been developed in the US.

The screen can be used as a wall size map and is accessed in exactly the same way as your monitor and can be plugged directly into most PCs.

It is hoped that railway companies will consider taking it on to experiment with analysing traffic flow in congested inner city lines but it can also be used by housing planners and emergency services managers.

An end to seriousness

American software giant Activision has decided to return to its roots as an exclusively leisure orientated publisher.

This follows a last quarter loss of \$1.9 million. The firm is putting much of the poor performance down to its serious and productivity software exploits. Two labels which concentrated on those areas, TenPoint and Presentation Tools, have been scrapped. Despite big plans for the labels they contributed only eight per cent of the company's turnover.

Activision says it will support products already launched on those labels but won't be developing any upgrades.

WIN £10,000

We have over £10,000 of software and hardware to give away in our stunning Christmas competition. Watch out for your chance to win one of hundreds of prizes, coming soon in *Express*.



COMMENT

ARC: ROUND IN CIRCLES?

If you had what was generally regarded as the best, fastest and most desirable home computer, and if you had seen a meagre software base grow quickly enough to provide a wide range of programs to tempt the buyer, but if everyone said the machine was currently just a bit too expensive to compete with the Atari STs and Commodore Amigas of the world, what would you do?

Acorn's answer would appear to be: bring out a new model, which is faster, more powerful... and much more expensive. The cheapest entry-level Archimedes is £699 + VAT - over £800. The new A5000 would be £1500.

The company would no doubt defend itself by saying it is not trying to produce cheapo games machines, but serious computer work tools. Surely though this distinction is becoming more and more blurred - possibly the only home micro that could be described as mostly serious is the Amstrad PCW, which has sold precisely because it is cheap.

The only way for the Archimedes to be seen as a genuine alternative to the PC/ST/Amiga 16-bit triptych is via a mass market. This will only happen if there is a cheap entry-level machine - such as the one reportedly under consideration, but not to be started on until deep into next year - which can bring in the sub-£500 buyers.

This is not easy, and would necessitate a lot of corner cutting - lack of expandability perhaps. But it would be worth the effort: increased sales, a larger user base, more software and the establishment of the Archimedes as the home computer to own.

Thirty games on CD for only £20

CODERS' CD REVOLUTION

Code Masters has launched a remarkable games compilation on compact disk which the firm boasts will "easily" take the coveted Christmas number one.

The 30-game compilation includes most of the Coders' budget hits of the past three years. They can be loaded from a standard CD player to your Specy, CPC or C64 in seconds.

The whole thing, which includes leads, will cost only £20 - that's 66 pence per game. Code Masters says its new development will make irritating load errors "a thing of the past". It takes about 20 seconds to load a game from CD - compare that to about five minutes from tape deck.

The firm is stressing how simple it is to link a CD player to a micro. The lead is connected to the headphone socket. However, full instructions will be included.

A spokesman boasted "We're absolutely convinced that this will go to number one. How can it fail?" The thirty games include *BMX Simulator*, *Fruit Machine*,



Street Football, *4 Soccer Sim*, *Treasure Island Dizzy* and *ATV Sim*.

However, an ST and Amiga version could a long time coming. "There are some technical difficulties which we're attempting to iron out," said the spokesman.

Rainbow Arts brought out a similar product earlier in the year for £30. While remarkable, that only boasted six games on the disk. ■

Mach goes down

Leading Archimedes add ons firm Mach Technology has ceased trading with members of the firm currently on police bail.

The firm had been selling a desirable 286 PC add on board for the Archimedes at £199. A series of double page advertising spreads in the *Beeb* press had prompted much interest in the firm. It also sold a variety of Archie hard disks.

However, Mach appears to have over-stretched itself with monies owed for the ads. It is not known how much money is owed to prospective buyers of its products.

A spokesman for Stockton-on-Tees police said: "They are on police bail. I should say a lot of people are owed money." He wouldn't comment further on the matter. Apparently, the firm's bosses are respected developers in the Archie field having worked for a variety of influential companies in the past. ■

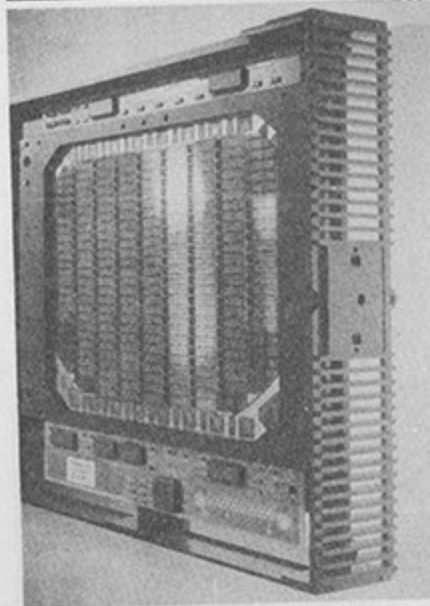
NEC takes note

Yet more notepad PCs have been launched - this time by computer giants NEC and IBM.

NEC's NotePC 98 has a 3.5-inch drive as well as a slot for an internal integrated circuit card. It's expected to go on sale for the equivalent of about £1,200 which, for NEC, is extremely cheap. That firm is responding from competitive pricing from the likes of Zenith and Toshiba. It should arrive in the UK early next year.

IBM's A4 size machine has an 8MHz 80C186 processor with a built in modem. It weighs around 4.5 pounds. IBM UK doesn't know when or if it'll show up here and prices have yet to be fixed. ■

SINCLAIR'S LATEST PROJECT



On the left is the latest device to come from Sir Clive Sinclair - the Anamartic Wafer Stack.

Sir Clive holds a 20 per cent share in Cambridge based Anamartic which has been working on stack for more than two years. And it's well worth the wait.

This is a high performance computer storage device based on wafer scale integration. It is capable of accessing data at one hundred times the speed of a normal disk drive. While a standard magnetic drive can access data in about 20 milliseconds Anamartic's creation manages it in 0.2ms.

The drive contains eight 40 megabyte storage modules each of which consist of two wafers which, between them, can handle 32,000 pages of information.

Sinclair has told Express that the chip will "completely transform computing". Anamartic's creation costs nearly £10,000. ■

Japan's 1/2p supercomputer

Japanese electronics giant Fujitsu has offered to install a multi million pound supercomputer in Hiroshima for just a half-penny.

The firm was so desperate to get the contract to computerise the city's water system that it quoted a price of one yen. The network costs 11 million yen (£55,000). However, furious competitors in the US and Japan have branded the move unfair.

As a result Fujitsu has reluctantly withdrawn its bid. A spokesman said: "It wasn't illegal, but it was against common sense."

Japanese supercomputer manufacturers have caught up with their American competitors in the technology stakes but lack large scale installment and system management experience. Companies like Fujitsu would be prepared to make a heavy loss on today's big contracts in order to gain crucial experience.

However, a £55,000 supercomputer for 1/2p is absurd. On that basis the Amiga would cost only 0.0004p... ■

EDITOR Rob Ainsley
NEWS EDITOR Colin Campbell
FEATURES EDITOR Andy Storer
PRODUCTION EDITOR Stuart Anderton
ART EDITOR Angela Neal
STAFF WRITER Maff Evans
ART ASSISTANT Paula Mabe
PRODUCTION ASST Ben Feinbaum
AD MANAGER Mark Salmon
DEPUTY AD MANAGER Adrian Taylor
AD EXECUTIVES Helen Kirkhope
Simon Moss
AD TYPESETTING Terry Turner
PUBLISHER Greg Ingham

© 1989 Future Publishing Ltd

4 QUEEN ST, BATH, BA1 1EJ
TEL: 0225 446034 • FAX: 0225 446019 Printed by Redwood Web Offset, Trowbridge, Wilts
Distributed by Comag, West Drayton, Middx
Subscription and back copy enquiries to The Old Barn, Somerton, Somerset. Tel 0458 74011

SNIPPETS ● SNIPPETS ● SNIPPETS ● SNIPPETS

Realthings is a new animation demo which will "bring your Amiga to life". It portrays moving images of insects, birds and animals instead of the usual bouncing balls. The whole thing was put together by Animation Studio Software using *Deluxe Paint III*. More from distributor DigiPro on 0703 703030...

Is your mouse all sticky and horrid? Those lovable pragmatists at Accodata have a

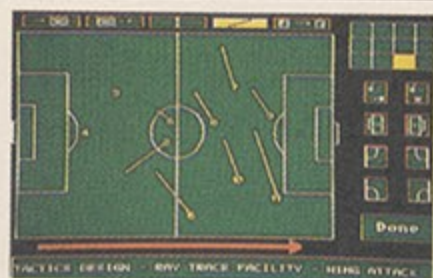
solution. The mouse cleaning kit costs £15.96 (a snip!). Ask your dealer...

Comodore has launched a new PC into its range. The PC10/40 III is a 40Mb hard disk version of its PC10. Entry level version costs £655...

Volkswriter has some new versions of its Volkswriter word processing package for the PC. It's all very compli

cated but needless to say there are loads of new features as well as bargains for upgraders. Call 0494 772442...

Free Spirit Software has a new "adult graphic adventure". It's the fourth to involve hero Brad Stallion. Pervies are promised "twisted humour" and "a sinful" time of it. No UK distributor as yet so you'll just have to call 0101 215 683 5609.



• Player Manager: kicking off soon

Playing the field

The game which surprised Britain's computer soccer freaks is back - but with even more features.

Kick Off's long awaited sequel *Player Manager* is due for release any time now and promises to feature all the furious gameplay of its predecessor along with some shrewd tactical additions.

Instead of just controlling the team the player manager has to make some pre-match decisions. It's been written by *Kick Off's* author Dino Dini and is being tipped as a sure fire winner.

It'll cost £9.95 for the ST and Amiga. For more information call publisher Anco on 0322 92513. ■

Earthquake virus hits

Tokyo's ultra sensitive Earthquake Research Unit has been struck by a computer virus - the first to be reported in Japan.

Scientists lost data to two different viruses which hit their computers in the space of a month. It made its way into the centre through an infected floppy disk. Luckily, the virus didn't affect the mainframe which does most of the earthquake detection work.

The scientists are situated in the University of Tokyo and are studying seismology of the seabed. ■

EXCLUSIVE: Cut down games console for British market

BUDGET PC ENGINE PLANNED FOR UK

A new stripped down PC Engine is to be launched in Japan early next year with UK arrival pencilled in for autumn 1990.

The low cost machine will do away with the Engine's data bus which is fitted to the back of the console. That was originally included to take care of expected peripherals such as the CD-ROM. However, such peripherals have not performed as well as expected in Japan with many users not bothering with expansions. Worldwide CD-ROM sales of 650,000 have failed to enthuse the Japanese manufacturer NEC which doesn't consider that an especially impressive figure.

It feels that by cutting out the data bus the price can be sliced by between £20 and £30 and a whole new seam of buyers can be mined. It should arrive here by next autumn at just over £100.



• The PC Engine (right, and running *Space Harrier* above). A cheaper UK version is planned

SUPERIOR GRAPHICS

Importers here in the UK will be looking to snap up potential buyers who are looking at low cost options such as the Sega. At around £150 the PC Engine is more expensive than its rivals, but its graphics are superior.

Meanwhile, standard PC Engine owners are to be offered a four-inch monitor which can be plugged straight into the data bus. This will free players from the television screen and will dispense with

old incompatibility problems with British sets. Retail prices haven't been fixed as yet, but the tiny monitor should allow the PC Engine to directly compete in the hand-held market.

• Hudson, which has a large stake in NEC's PC Engine, is rumoured to have secured the rights to a console produced by coin-op manufacturer Namco. Called the Namco 16 it incorporates 16-bit technology and could be launched against Nintendo's new Super Famicom as the PC Engine 2. Namco had been touting the

console around American and Japanese hardware manufacturers for some time before Hudson stepped in and scooped the machine. It is thought that the firm is currently reconfiguring some of the hardware.

A recent report in Japanese mag *PC Engine Fan* claimed that the PC Engine 2 will have a 32K RAM, a colour palette of 1,024 and double the capacity for sprite handling. One leading British PC Engine importer last week described that as "nonsense". ■

SPECCY ON LINE

MICRONET (c) 80030010e op

XTRA

SATURDAY

ORIGINAL XTRA! for Gilbert Factor, Waveguide >>> 21

21 Original Xtra! Music, films, TV, travel, gossip and gore every day.

22 Money Xtra Daily guide to the complex world of personal finance.

Prestel What's New 6

23 Hamster Prize games, quizzes

24 Treadmill Make new friends, chat

25 Shades Realtime multi-user game

26 Bazaar Monday-Friday small ads

27 Starnet Strategy game (CUG)

8 Browse 5 CUG? 9 Mnet

If you own a Speccy and want to log on then maybe its worth getting in touch with Micronet. Britain's number one on-line service is offering owners of the trusty machine a quarter subscription and a free modem for just £23. An especially frank spokesman offered: "The Spectrum market is a dying one and we want to address it while there's something left." ■

Monster PC chip flawed

Intel's 486 'monster' chip has been found to contain technical flaws just as major manufacturers are beginning to launch high specification 486 PCs.

It has emerged that some of the chips already shipped have problems with a variety of mathematical instructions. Calculations involving tangent, sine or cosine values are affected. Intel has moved swiftly and will this week start churning out mistake-free chips.

Compaq, which is soon to join Hewlett-Packard, Olivetti, Apricot and Tandon in the 486 race, came across the fault two weeks ago and informed Intel.

An Intel spokeswoman

commented: "The problems affect sine, cosine and tangent instructions and other error checking logic, but only when presented in a certain order."

Flaws were also detected in Intel's 386 chip but they were quickly corrected. Those companies which have already launched 486s have informed their customers of the problem.

Just as this year has seen an enormous number of new 386 PCs it is thought that the 80486 will be the standard micro-processor in top end PC-compatibles over the next two years. ■

• Right: Mathematical hitch for PC power chip 486



PCs take half computer market

MS-DOS PCs constitute nearly half of all computers owned, according to a recent survey.

The survey by Dataquest reckons 47.5 per cent of home computers with a retail value of more than \$600 are IBM compatible,

with the Amiga and ST sharing 42.4 per cent.

Dataquest has some pretty strange criteria for home personal computers. It only includes complete systems with at least one floppy drive. With this and

the price barrier such machines as the Speccy, C64 and all the games consoles are excluded.

Dataquest says only two per cent of British households have what it calls home personal computers. Atari, Commodore and

Amstrad share 70 per cent of the European market with Atari leading on 27.5 per cent, Commodore second with 23.4 per cent and troubled Amstrad down 13 per cent to 16.7 per cent. ■

Computerised cops find technology too taxing

An attempt to bring 'on the beat' police work into the computer age has been greeted with fierce resistance from seasoned coppers – but the experiment has been called "a qualified success".

The Devon and Cornwall Constabulary has been issuing some of its men with notebook computers to replace their little pads for the past 18 months. However, while rookies found the machines useful older hands thought they were difficult to get to grips with.

The police say they won't be taking on these computers but are making some recommendations for the future.

"There was a real resistance from older officers. The computers are only the size of a paperback and they didn't like the

tiny keys," offered a constabulary spokesman. "The greatest advantage is that younger officers used prompts to question people in the correct manner."

The force is to recommend that any full time scheme using handheld computers should also include modems so information can be transmitted back to the station's computer via a portable telephone. This method is already favoured in the US.

The police say it's only a matter of time before handheld computers become standard here. But they want to get it right. "The technology is moving very quickly at the moment. It's really a matter of funding. It's a qualified success in that we now have the information ready to future developments" said the spokesman. ■



• On the beat: Too soon for computers



• Bull's 286: Leading the charge

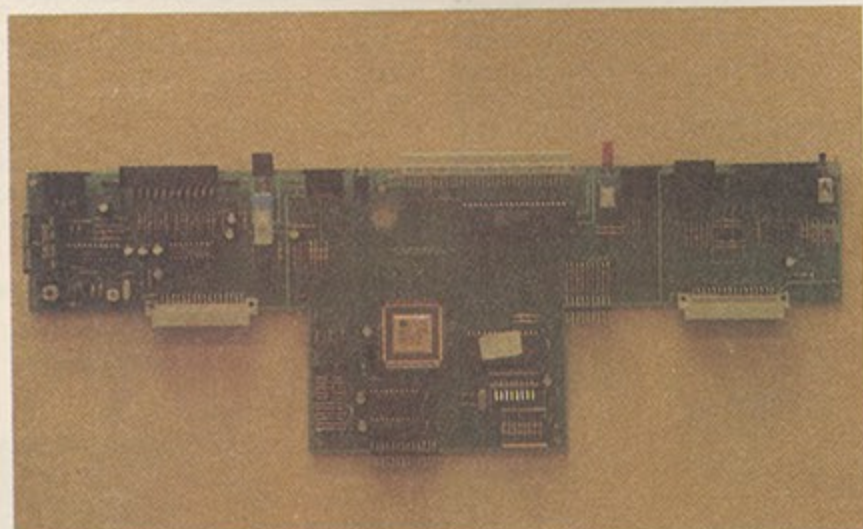
Bull charges in with 286 option

Broad-based manufacturer Bull has unveiled a new low cost 286 PC to complement its fast growing range of affordable computers.

The small footprint APW runs at eight to 10MHz and comes in two versions – single disk and 20Mb hard disk. They cost £1,255 and £1,455 respectively.

Both sport 640K of memory with a 3.5-inch floppy drive and a mono monitor.

Bull says it's looking to attract small business users and corporates who are sick of splashing out on power computers which aren't needed. ■



• Nearly ready to sell: that SAM circuitry in full

At last: SAM Coupé arrives

After months of talking and promising it seems that the SAM Coupé is actually ready to roll.

The manufacturer, MGT, is taking it easy to begin with – about 2,000 of the machines will come off the production line every week. However, it is hoped that the capacity of 20,000 per week will be reached as soon as possible.

The computer is an eight-bit Z80-based micro which is

designed to be Spectrum compatible. It has aroused a great deal of interest. The machine is easily expandable, and unusually for an eight-bit machine offers MIDI in and out ports. The sound and graphics are also said to be excellent.

The Coupé is being put together by a small army of different people. A&A Electronics in Glamorgan takes care of assembly; the

PCBs are churned out by Kamicircuits in Wiltshire, the plastic cases by Plastic Injection Mouldings in Hereford and the metalwork is all undertaken by Alar Engineering in Cardiff.

Everything starts this week but MGT says those who have ordered first will receive machines first. The entry level price is £150. The number is 0792 791100. ■

The un-scratch mix

Wouldn't you just love to listen to some of those old recordings of great jazz artists without the horrid clicks and cracks? Or maybe Queen Victoria's voice as it really sounded? Now there's a way thanks to a new computer program.

NoNoise from Sonic Solutions in California can take any recording and get rid of all unwanted noise. It does it by taking a digital copy of the original and recording the data onto a PC. That, including the clicks and cracks, is displayed on the screen.

The program will then sift through real sound and intrusions. But instead of editing the clicks out it can replace them with sound waves based on the noises immediately before and after the click.

This is undetected by the human ear since clicks only last for a fraction of a second.

London based Chop 'Em Out (01 960 8128) is currently using the system to repair old soundtracks. ■

CCCP PC

The Soviets are expected to buy more than 28 million PCs over the next 10 years.

According to market research outfit Dataquest it is the largest untapped PC market in the world. There are only 500,000 PCs there at present – nearly half of which don't come near Western standards. ■

Setting Gold's standard

US Gold is set to hit the accelerator pedal for this year's race to the Christmas number one – its front runner is Turbo OutRun.

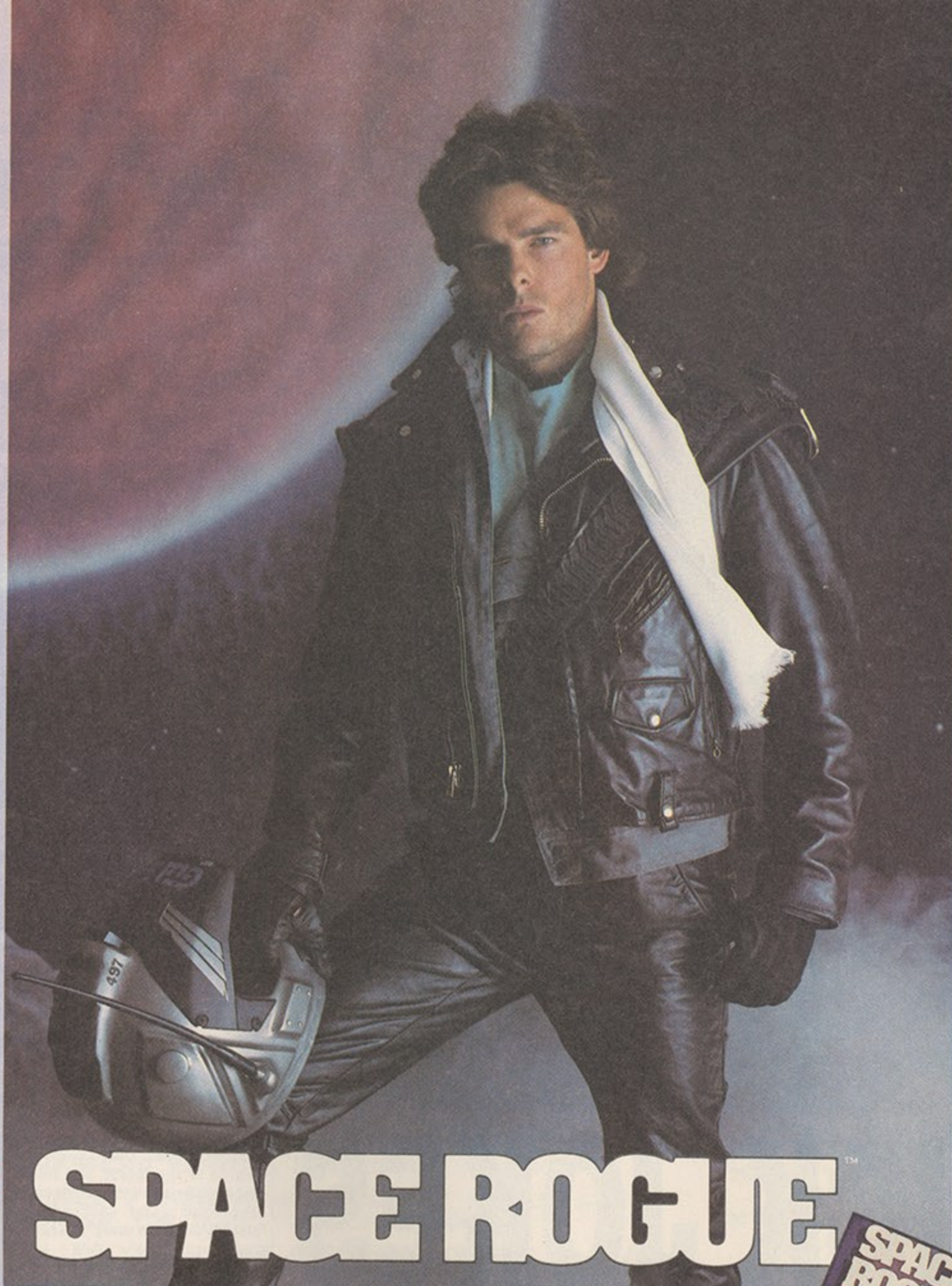
The Yuletide season's competition looks to be stiff particularly with driving games. Activision's Power Drift, Domark's Hard Drivin' and Ocean's Chase HQ are

all no1-spot contenders

Turbo OutRun's predecessor OutRun reached number one in 1987 despite a poor reception from reviewers. C64 Turbo OutRun will cost £9.99 on cassette and £14.99 on disk. The game is due to be released on all formats at the end of November. ■



• C64 OutRun: The race is on



SPACE ROGUE™



Rocket into the striking realism and spectacular visuals of **SPACE ROGUE**, the phenomenal 3D space flight simulation. You'll discover authentic flight dynamics, precision navigational aids and sophisticated weapons technology as you maneuver through turbulent ion storms and confront alien foes. You'll visit space stations and mining outposts — swapping tales with pirates, drinks with friends and goods with merchants. It's the seamless integration of space flight and role playing that makes **SPACE ROGUE** the first ORIGIN Cinematic Experience™.



IBM/COMPATIBLE VERSION



IBM/COMPATIBLE VERSION



APPLE VERSION

ORIGIN™
We create worlds™

Available for: IBM/Tandy/compatibles, Commodore C-64/128, Apple II series. Coming soon for Amiga and Macintosh.

M I N D S C A P E

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.



SICK JOKES

Viruses, imaginary and otherwise, waste a vast amount of time. Edward Wilding talked to some bored virus killers

Datacrime! Datacrime!! Arggh!!! The dead will rise from their graves, there will be wars and rumours of wars, the mothers will weep and there will be much wailing and gnashing of teeth. Well, actually, no.

In the aftermath of the dreaded Friday, October 13th or 'Virus Day' I attended the latest in a long line of computer virus conferences. This one, entitled 'Computer Virus: Combat and Cure' and organised by CW Communications was actually quite entertaining. The event was chaired by the ubiquitous Dr Alan Solomon who was ably assisted by Ross Greenberg, author of the admirable *Flu-Shot+* anti-virus package.

New things to report? Not many. These events are usually designed to help DP professionals come to terms with the 'virus threat' and tend to vary little in either content or presentation. With

on-screen demonstrations of various creepy-crawlies in action, explanations about methods of viral infection, talk of CRCers (Cyclic Redundancy Check if you didn't know), scanning programs and assorted anti-virus paraphernalia it proved adequate as an introduction to the subject. Solomon mentioned all sorts of helpful weaponry to assist in fighting the good fight citing both his 'Toolkit' and the IBM PC User Group quite often.

Ross Greenberg provided a demonstration of the dBase virus. He explained that this particular beast has not escaped into the 'wild' and is really of research interest only. Don't expect to be hit by it and thank your lucky stars that you won't be, because in addition to transposing characters to produce garbage it's also programmed to destroy the hard-disk after 90 days.

A lot of good common sense was spoken during

the day. The need for regular backups and warnings against 'clever fixes' such as changing file names, time or date (this is a ludicrous way to try to 'outwit' computer viruses guaranteed to cause interference with day-to-day operations). Most importantly, perhaps the necessity not to jump to hasty conclusions. Solomon cited the worried systems administrator who asked "Is it a virus?" "No," answered the good Doctor, "it's worse, it's a network problem which will take you vastly more time to sort out".

Some people have proposed diskless PCs as the answer to countering the virus problem. "Diskless PCs are pathetic things," said Solomon "I want to do my own backups. Network supervisors may be responsible for taking central backups but the question is - do they? Many of them are two hops ahead of the lynch mob. I want to be sure of my data."

When asked about mainframe viruses Solomon seemed to dismiss the proposition. His reasons? Mainframes are policed, inaccessible and operating systems such as MVS have built-in controls. All perfectly true but why assume that viruses or other malicious programs have to be written by outsiders? Insiders are always the most dangerous because they have access and knowledge - bent coppers exist after all. It's reasonable to say that a virus is an unlikely attack program to run against a mainframe and also there are simpler ways to cause mischief or damage in a mainframe environment.

Revelations

There were some revelations for the audience. Did you know, for instance, that a considerable number of viruses are being passed directly from their authors to the research community? Solomon calls this 'cutting out the middle-man'. As Ross Greenberg noted, this process is probably beneficial to everybody - in effect, researchers (when they're not engaged in endless in-fighting) also act rather like lightning conductors!

Macintosh viruses, which are rife, were discussed very briefly. "It's not a question of whether you're running Mac anti-virus software, but which," said Solomon who predicted the position would be much the same for IBM PC users in the near future.

There were also the obligatory horror stories; the pornographic software package which infected 200 networked computers with the Jerusalem virus in 40 minutes; the 50 stand-alone PCs which succumbed to the 1701 virus (or Cascade or Fall or whatever we choose to call it); and, of course, Disk-Killer from Ogre Software which is the latest, the most infectious and potentially the most destructive virus to have appeared so far. (According to Solomon it's already done 'its thing' in Ealing of all places).

Bringing charges

During lunch I became involved in a fairly heated debate about legal issues pertaining to computer crime. I had asserted that successfully prosecuting a virus writer would be a near impossible task under the law as it stands. Data is not regarded as property in English law and therefore is beyond the protection of the Criminal Damage Act which covers "property of a tangible nature". I was told in no uncertain terms that this was not the case and criminal damage charges could be successfully brought against a virus writer. Fortunately, Jeffrey Chapman, a barrister specialising in the law *vis à vis* computers was able to clear up the matter. Data is not property under English law. Chapman discussed the Law Commission's recommendation for a new offence of unauthorised modification of computer material. Such a law would effectively cover the range of computer crime and misuse.

The quote of the day came from Ross Greenberg; "I want to get back to real work and doing something useful." I wholeheartedly agree - the whole computer virus phenomenon is just a monumental waste of time, skills and effort, and the sooner their programmers grow up the better for all concerned●

ALL PRICES INCLUDE VAT AND DELIVERY!

LC24-10 EX STOCK!

AMIGA

NEW!

A500 BAT-PACK

INCLUDES:

BATHAN THE MOVIE
NEW ZEALAND STORY
F18 INTERCEPTOR
'D' PAINT II
WORKBENCH 1.3
KICKSTART 1.3
AMIGA BASIC
DESKTOP UTILITIES
NEW TUTORIAL PACK
TV MODULATOR

£369.00

WITH TENSTAR PACK
£399.00

3.5" DRIVES

NEW!

EPSON PRO SERIES

ST VERSION - £129.00
AMIGA VERS - £109.00

CUHANA MICRODRIVES

ST VERSION - £94.95
AMIGA VERS - £84.95

MISC

1 MEG UPGRADES - £94.95

3.5" DS-DD DISKS

10 = £7.45
50 = £32.00
100 = £62.00
200 = £120.00

ADD £6.50 FOR 100
3.5" DISK BOX

PRINTERS

STAR

LC-10 B/W -- £154.00
LC-10 II ---- £175.00
LC-10 COLOUR- £197.00
LC24-10 LQ -- £235.00
LC15 B/FEED- £309.00
LC24-15 LQ -- £385.00
FR-10 300CPS- £359.00
XB24 48P EMU- £459.00

CITIZEN

120D B/W ---- £134.00

ATARI

520 STF
POWER PACK
£347.00

520 STF
EXPLORER PACK
£269.00

1040 STF
HYPER ART PACK
WITH BORRODINO
3D STRATEGY GAME
£439.00

ST HEGA 1
BUSINESS PACK
£519.00

HEGA 1 PACK
WITH
SM124 MONITOR
£609.00

AMIGA XMAS

STARTER KIT

59.95

INCLUDES

KINDWORDS WORD-PROCESSOR
WITH 100,000 ONLINE SPELL CHECKER
470,000 WORD THESAURUS
COLOUR GRAPHICS AND PROFESSIONAL TYPEFACES
SUPPORTS LC10 COLOUR PRINTER
FUSION PAINT
AN ADVANCED FEATURE PACKED ART PACKAGE
CRAZY CARS / MINIATURE GOLF / SUPER SKI
THREE TOP QUALITY ARCADE GAMES
** ALL PACKED IN ONE PRESENTATION BOX **

FREE!! UTILITIES AND TOOLS PACK WITH EVERY ST PURCHASE
SOFTWARE BLITTER, ST DIAGNOSTICS, DISK EDITOR / CUSTOM FORMATTER,
DISK BOOT CONSTRUCTION SET, ALARM CLOCK, QUICK FORMATTER, CALCULATOR,
CUSTOM FORMAT DISK DUPLICATOR, PRINTER CUSTOMISER TOOL, DESKTOP GAMES,
ARC CONSTRUCTION SET, SYSTEM SELECTOR, 50/60 HZ SWITCHER AND SYNCHRONIZER,
SNAPSHOT DUMPER, RAM/PRINT SPOOLER, WORD-PROCESSOR AND MUCH, MUCH MORE!!

DEDUCT 2% FOR CASH, CHEQUE OR POSTAL ORDER PAYMENT

COMPUTERHOUSE UK

TEL 01-731-1276

14 ROMILY COURT, LANDRIDGE ROAD, FULHAM, LONDON SW6 4LL

EST. 1986

ACCESS

MASTER
CARD

EURO
CARD

VISA

PICK A POCKET

The world's first pocket PC, the Atari Portfolio was launched at the Which Computer? Show in February this year, and went on general sale in August. It was the industry's first attempt at a genuinely portable machine.

Though touted as MS-DOS compatible, it only really has an MS-DOS-like operating system, with data transfer being restricted to simple text files. This is done via memory cards, used on the Portfolio as storage 'disks'. An optional memory card drive plugs into your PC at home and the text files can be transferred.

The Atari - already reckoned to have sold over 15,000 in Europe, with 500,000 sales targeted by this time next year - serves not only as a sophisticated organiser but also as a useful 'notepad' which can store text, spreadsheet figures and so on entered on the move. Atari have been keen to stress that the machine is not a 'computing Walkman' but is a genuine computing tool. But it isn't really an MS-DOS machine.

Since then, however, an American company has shown off its Poqet PC. A similar size to the Portfolio, it is a genuine MS-DOS machine, capable of running any standard MS-DOS programs such as *WordPerfect*, *Lotus 1-2-3*, *dBase* etc. It can be connected to a standard PC and used as a disk drive, enabling software or data on either machine to be used directly in the other.

It's a higher spec machine than the Portfolio, offers a much bigger screen, and is clearly more versatile and powerful. But you pay for the power - £1,200 as opposed to the Portfolio's sub-£250 tag.

But will it work?

The trend towards miniaturisation of computers raises significant questions. Is a pocket computer, with its restricted keyboard and screen size, going to succeed in the same way that personal stereos have? It can be argued that neither the writer on the move (who really needs a large A4 keyboard of a laptop) nor the business user (who requires a large screen for those spreadsheets and sales demonstrations) would really benefit from too much miniaturisation, and would go for the laptop size machine - which will still go comfortably into the writing case or the briefcase - every time.

Many companies are known to be looking at pocket computers with a view to production in the 1990s. Citizen, for example, demonstrated a prototype at the French Computer Exhibition, Sicob, last April, but are reluctant to give details. It is known, though, that its Research and Development department is working on a 9 x 4 x 1-inch machine.

"Pocket computing is an extremely interesting growth market," says Citizen's Rosemary Gracki, citing the mushroom in laptop sales in the last two years. "But it's difficult to say how successful that market will be. It's just too early to tell how it'll take off".

Atari's Peter Walker is more confident. "The pocket computer straddles both the business and home market, we anticipate launching systems both above and below the Portfolio in terms of size and power," he said. "We had a lot of discussion about the screen size of the Portfolio, but never saw it as an individual product - rather as an add-on for the existing computer owner".

Will the next decade be the age of the genuinely personal computing? The two machines that will be available in 1990, the budget Portfolio and the 'serious pocket computer', the Poqet, will provide the litmus test of pocket computing. ●

Pocket PCs are already here in the shape of the Atari Portfolio. Will genuinely personal computing be the thing of the 90s? Neil Booth considers the pocket sized scene...

ATARI PORTFOLIO

£217.38+VAT • High Street computer stores

HARDWARE

- 16/8 bit 8088 CMOS processor running at just under 5MHz
- 128K RAM (expandable)
- 256K ROM holding MS-DOS 2.11 equivalent operating system and applications
- 40x8 character 240x64 pixel text-only supertwist LCD screen
- 63 key QWERTY keyboard
- 60 pin expansion board
- 1 memory card port
- 3xAA battery power supply giving '6-8 weeks regular use'
- Size 200x100x28mm (8"x4"x1")
- Weighs 450g (1lb)

PERIPHERALS

- 32K and 128K RAM or ROM memory cards £49.99 and £129.99 respectively
- Half height memory card drive for conventional PC (£69)
- Smart cable for RS232 and Centronics link



- Parallel and serial interface (£40 and £60)

ROM SOFTWARE

- Lotus 1-2-3 version 1 and 2.01 compatible spreadsheet with 127 columns by 255 rows

- Calendar and diary up to 2049
- Card index address and phone book with tone dialler
- ASCII text processor
- Memory calculator
- File transfer via smart cable

POQET PC

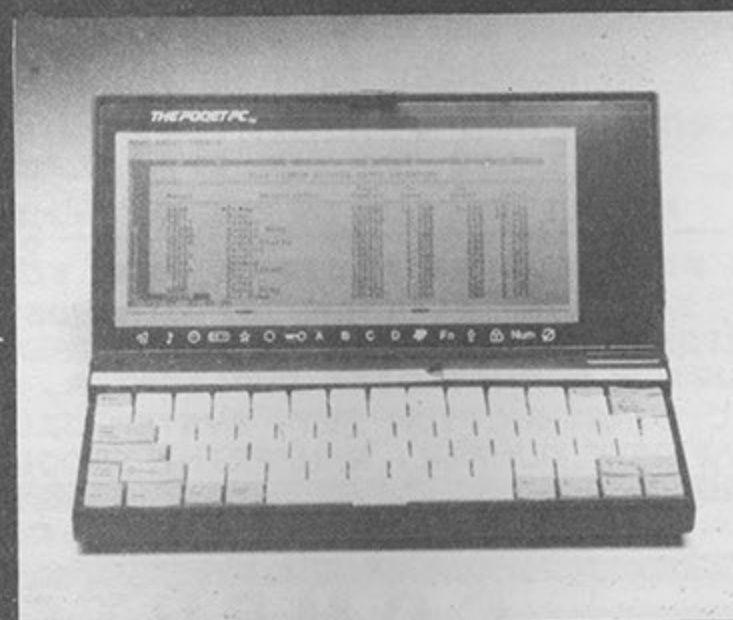
£1,200 • On sale 'end of year' • Details from Poqet on 0753 580018

HARDWARE

- 16/8 bit 80C88 CMOS processor running at between four and seven MHz
- Fully MS-DOS compatible
- 512K RAM (expandable to 640K)
- 640K ROM holding MS-DOS and applications
- 80x25 character 640x200 pixel double supertwist LCD screen
- Full QWERTY keyboard with 12 function keys
- I/O bus for peripheral expansion
- Built in RS232 port
- 2 memory card drives
- 2xAA battery power supply giving 100 hours use
- Size 220x100x28mm, (9"x4"x1")
- Weighs 450g (1lb)

PERIPHERALS/ SOFTWARE

- 64K and 512K RAM or ROM memory cards at £100 and



- £400 respectively
- Memory card programs with standard versions of Lotus 1-2-3, *WordPerfect 5.0*, *XyWrite III* etc. available at same prices as for disk versions
- Direct link available to PCs
- Poqet can be used as external drive of desktop PC with full compatibility of software and data
- PC can be used as external

- drive of Poqet PC similarly
- 3.5 inch disk drive available at £275 running for 25 hours on four AA batteries

ROM SOFTWARE

- Word processor
- Calendar
- Address book
- Four-function calculator
- Terminal emulator
- File transfer utility

Dowling COMPUTERS

HEAD OFFICE:
Unit 48
Tyne Road
Sandy, Beds, SG19 1RB
Tel: 0767 81750/60
Fax: 0767 81730



If you're serious about Computing, FORGET the rest - TRUST the BEST!

BEDFORDSHIRE

3 Harpur Centre
Lower Floor
Harpur Street
Bedford
Tel: 0234 273090

CAMBRIDGESHIRE

Cromwell Mews
5 Station Road
St. Ives
Cambs
Tel: 0480 300800

HERTFORDSHIRE

49 Railway Street
Warren Place
Hertford
Herts
Tel: 0992 554469

ALL PRICES INCLUDE VAT, DELIVERY AND A FULL 1 YEAR GUARANTEE!

THE NEW Dowling MEGA PACK

Atari 520STFM Computer featuring:

- 1 Meg Drive ● Quality Mouse Controller ● Quality Mouse Mat
- Organiser Business Software ● Hyper-Paint ● Hyper-Draw
- Borodino (war strategy game) ● £50 discount voucher
- 10 x 3 1/2" DS/DD disks

Plus £450 Super Software Pack Comprising of the following:

Arkanoid	Buggy Boy	Ikari Warriors	Return to Genesis
Beyond the Ice Palace	Chopper X	Marble Madness	Road Wars
Black Lamp	Eddie Edwards	Super Ski	Quadralien
Seconds Out	StarQuake	Thrust	Xenon
Ranarama	Summer Olympiad	Thundercats	Zynaps
Test Drive	Wizball		

ONLY £349.95

THE NEW INCREDIBLE AMIGA A500 BATMAN PACK ONLY £399.99

And for a limited period only DOWLING are giving away the 10 Star Games Pack Comprising:

AmeGas	£14.95
Insanity Fight	£24.95
Art of Chess	£24.95
Mercenary Comp	£19.95
Buggy Boy	£24.95
Terrorpods	£24.95
Thundercats	£24.95
Ikari Warriors	£24.95
Wizball	£24.95
Barbarian Ultimate Warrior	£19.95



ABSOLUTELY FREE....Value £229.50

Why Dowling Computers?

Here are just a few reasons why customers prefer us:

- ★ First and Foremost, we really CARE about our customers' needs
- ★ ALL OUR STAFF are trained to give a friendly personal service.
- ★ EMPLOYING ENGINEERS ourselves, we won't send repairs away for weeks on end!
- ★ That's why we at Dowling say "FORGET THE REST - TRUST THE BEST"

ORDERING MADE EASY



Try to call in to one of our shops for the best possible service and advice



Order by phone by calling our Head Office quoting your Access/Visa Number



Order by Post - make Cheques, Building Society Drafts or Postal Orders payable to Dowling Computers

N.B. Please add £6 for Courier Delivery

AMIGA 1/2 MEG UPGRADE

£74.95

Offer valid until 21.11.89 with this voucher only and on a one voucher per person basis

100 x 3 1/2 SONY DS/DD DISKS

£59.95

The above disks are 100% certified error free GENUINE SONY disks which is why Dowling give them a lifetime guarantee

Offer valid until 21.11.89 with this voucher only and on a one voucher per person basis.

ZIP-STICK SUPER-PRO JOYSTICK

- Single Shot
- Rapid Burst
- Megablast - continuous fire
- Fully micro-switched

RRP £16.95

£9.95

Offer valid until 21.11.89 with this voucher only and on a one voucher per person basis.

STAR LC10 COLOUR PRINTER ONLY

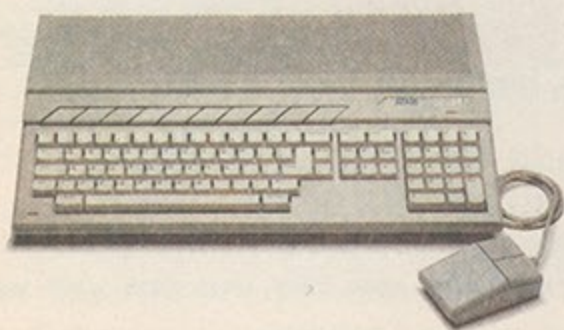
£199.95

INC VAT & DELIVERY



REMEMBER - FORGET THE REST, TRUST THE BEST

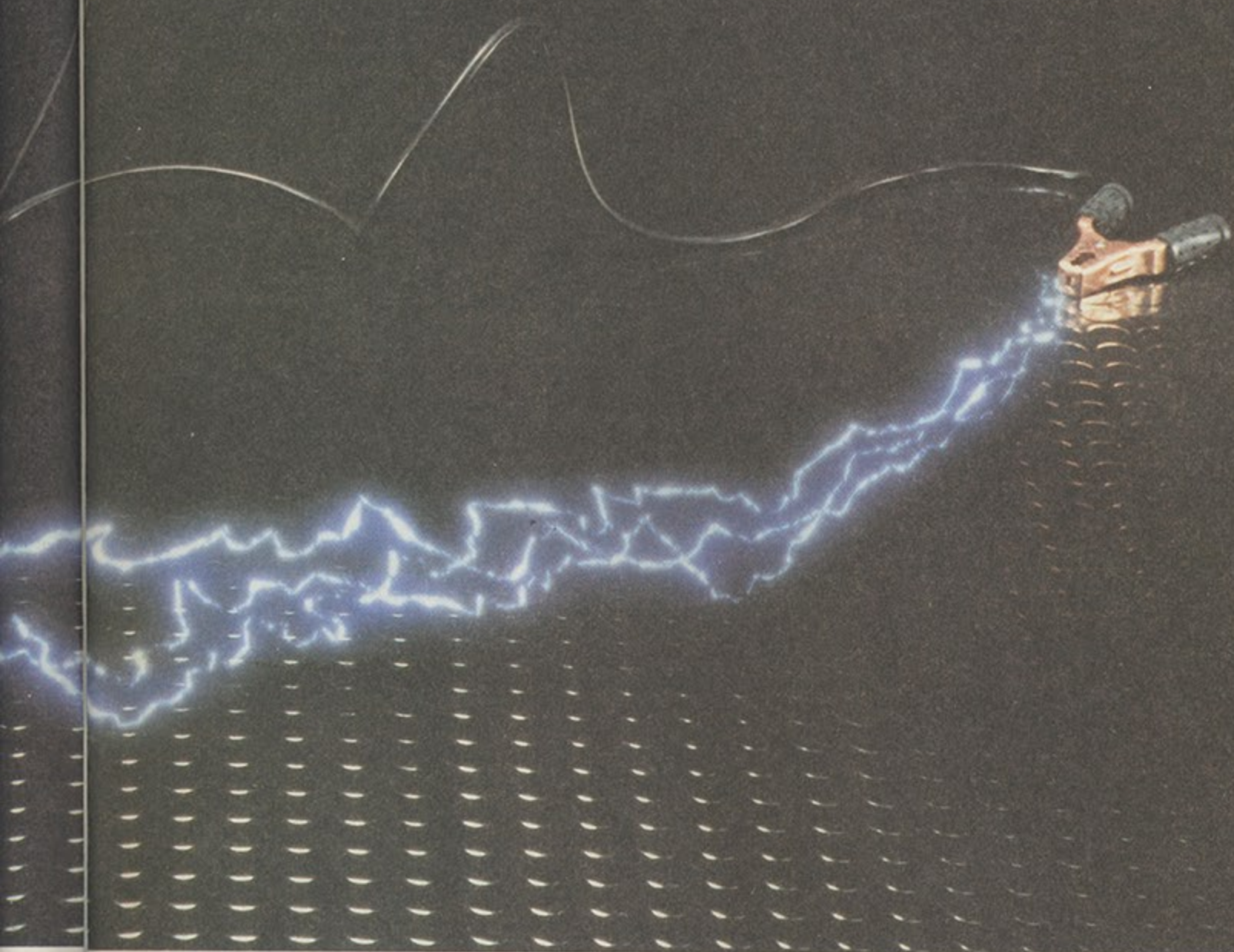
Offer valid till 21/11/89 with this voucher only and on a one voucher per person basis



There's no catch. We're giving you the Atari 520 STFM and £500 worth of great software titles for just £399.99.

The twenty-three superb titles include some of the greatest games and three excellent programs which introduce you to the BASIC programming language, computer-created music and the more

**The Atari Power Pack.
With £500 worth of software for starters.**



popular computer applications such as word processing and spreadsheets.

So take advantage of this great offer now. And be a bright spark.

For further information, just fill in the coupon.

Please send me details of this and other Atari products.

Name: _____

Address: _____

Phone No: _____

ATARI POWER PACK

EXPRESS MAIL

Dear Reader

Another collection of comment, controversy, compliments... and Rob Ainsley's replies. Have you got something to say? Make your voice heard in computing's liveliest letters page! Send your contributions to: **Express Mail, 4 Queen Street, Bath, Avon BA1 1EJ**
PS. Sorry, but we just don't have the time to give personal replies, whether you include an sae or not. We're too busy putting Express together!

THE SHOW MUST GO ON

I feel that I must offer a contrary view of the PCW show to that expressed by your correspondent DGW Griffith (issue 49). My attitude and approach are entirely different to his and I imagine many of your readers. I had a 'wish-list' of items to see, and I needed up-to-date prices on scanners, multi-sync monitors and printers. Hewlett Packard's stand was superb. Elsewhere, I found the Cameron colour scanner for the Amiga - renewed various acquaintances - and even met Commodore's latest batch of seekers after niche markets - it's in the art and design department boys!

And why be derisive about "bargain stalls"? Videk's, Monor Court Supplies and First Media all provided plenty of intriguing and well priced temptations. Even the Leisure Hall - for a confirmed anti-gamer - offered plenty of stimulation for all the senses, and a glimpse into another sphere of computing. Good for all of us I'd say!

Even the coffee was good at PCW, so will I be there next year? Send me the usual complimentary ticket and keep the business/professional days and the answer has got to be yes!

Stuart Langford, Sacriston, Durham

FINE WORDS

I am not a hacker but I do receive copied

games and other software from my contacts and have about £1300 worth of copied software. I would like to know what I would get as a punishment if I were caught pirating software and handing copies to other people. Would I get a fine and my equipment confiscated or would I get a short prison sentence?
Steve

• *I think that as a casual user you'd probably get away with a hefty fine - certainly more than the value of the software you'd copied. I doubt you'd actually be sent to prison unless you'd been openly selling loads of copies for profit (and if I was a cynic I'd say it depends on whether or not you speak with an Irish accent).*

SAM HOPE

I recently wrote off to MGT about info on the SAM, having seen your wonderfully interesting article about it, asking them to send me a few details.

Sure enough I receive a letter - stating that "the information you require...is unavailable at the present time...". You wah? They launch the machine and the PR material isn't ready?! What the heck do they think they are playing at?

This is something rather different from the old Sinclair idea - I seem to remember it as the other way around. You're supposed to launch all the material,

...SNIPPETS...

On every letters page in computer magazines, there is a letter complaining about the price of software. Doesn't it make sense to check software etc before buying the computer? If they are so fed up with paying out £25-£30 a time, why not sell the computer and give the whole thing up?
Gary Capstick, Poole, Dorset

• *I think there are people who will whinge about anything. If it wasn't the price of software, it would*

be something else.

Why not run a section where people can send in short (1000-2000 word) stories related to computing? For example, someone against piracy could write a tale about software pirates getting caught. Or Amiga owners could write about the antics of particularly thick ST owners (and vice versa).
Rafael Jay, Bath, Avon

• *I'm afraid we have a strict agreement with Bella, Cosmopolitan, She,*

Woman's Realm et al. They don't review games, and we don't print crappy short stories.

Why can't you see the stamp on the logo at the top of the letters page? It could be misleading if your potential readers in other countries are able to obtain black stamps.
N Goodson, Gt Yarmouth, Norfolk

• *The stamp is a penny black, but the postal service to Bath is so slow ...*

praise the machine's characteristics, claim you've seen it up and running, then go home and design it. OK, great I say, to anyone who stops that idea. But please please please don't go to the other extreme!

Geoff Winkless, Kirby Muxloe, Leicester

• *We're waiting with breath equally bated for our review copy. Incidentally, did you see the search in the Observer for Britain's Most Successful Young Businessman? The winning candidate - who will, I'm sure, be a self-made millionaire many times over - wins a SAM Coupé.*

DEMO MARCHES ON

When supplying shops, mail order companies, etc, the software companies should supply demo versions of their games. These demos, some of which are already supplied to magazines, would ideally be priced as cheaply as possible, say enough to cover the price of the tape/disk plus a small copying fee. Anyone thus interested in a game could buy the demo version and try it out before splashing out any more cash. I would say a reasonable price for a demo tape to be £1 to £1.50 and a disk to be £2 to £2.50. Also we would need to rely on the software company to provide a decent demo, not a sit-back-and-watch demo and not a demo of an unfinished game. It may not eradicate piracy but if as you and the software companies say, and they are trying to give us consumers the best deal then it may just be one way of showing it.

Wayne B Haywood, Stourbridge, West Midlands

• *An interesting thought. A few demos are available virtually for free (on the cover disks of such excellent magazines as ST Format and Amiga Format, £2.95 from all good newsagents) though the number is small. I suspect the costs of distribution would be so high as to make even demos cost a fiver or so apiece.*

VIRUS VIEWPOINT

I am delighted that New Computer Express has exposed the calumnies of that 'newspaper' (say no more!!) regarding the spread of 'viruses' and the myths that have been current about hacking.

The trouble is that so many publicity seeking people run to the press with stories of their 'achievements' in breaking into sensitive systems - as they must 'in the name of security!' and too much has been said of the insignificant nasty minority that is represented everywhere on documentary and magazine that break in to leave messages and boast about it later. It is they who provide the likes of Emma Nicholson MP with the pretext to make an outlaw of anyone with a halfway decent computer and a modem. Maybe she doesn't like graffiti on loo walls but she can't ban pencils and pens.

I was worried by your reply to J Barret, Northampton: please compare like with like. Piracy is not a single copy given to a friend but running off a lot of copies for sale especially if you claim that you wrote the program in the first place!

John Johnson, Chelmsford, Essex

• *Point taken about hackers, but as for piracy, don't be ridiculous. Piracy is making any illegal copy. Whether it's one copy or twenty million, it's still wrong. It's just that no software house is going to bother taking legal action against someone who's made one copy - they'll be more concerned with nailing the underground*

duplication factories.

DON'T CALL ME

I note that Express in seeking to establish a reader to reader helpline, intends to instruct readers replying to ads not to call at unsociable hours when using telephones. Unfortunately this very well intentioned instruction will be ignored.

As I find it more convenient to receive replies by letter I always specify in my adverts that I only want postal replies and no phone callers. This unfortunately does not work, and I actually had a telephone call at half past midnight.

I have a procedure for dealing with these people who disregard my no-phone call request. Firstly I ask for their name and number (telling them just in case we get cut off etc). I then tell them I am not prepared to deal with them, as they cannot respect instructions in the advert. Or alternatively I tell them that there is a £20.00 fee for inconveniencing me on the phone. This solves the problem.

Charles Trager, Glasgow

• *You heard what he said. Don't call people who don't want to be disturbed - not everyone is in the mood to guide you through Batman - The Movie at midnight, you know.*

RALLYING POINT

I was interested too see your article in issue 49 about the Plymouth Brethren. I enclose an article from our local newspaper concerning the same issue.

Historical fact: Hitler did not 'win' the Nuremberg rallies, as you suggest. They were prime examples of indoctrinating propaganda, like the Tory Party conference.

Jeremy Benson, Bedford

• *The business of Hitler 'winning' the Nuremberg rallies was what we in the trade call 'a joke'. If you want more examples of one-line historical 'jokes', try watching Blackadder on Thursday nights on BBC1, which consists of little else.*

Thanks for the snippet though - if anyone else finds any mention of computer-related things in their local rags, we'd be glad to receive them.

THOSE BEEB, BEEB GAMES

I am pleased you actually mentioned the Beeb in your top 60 games. Your choices were good ones (except Beeb Elite is published by Acornsoft, part of Superior, and Repton 3 is the one you should be looking out for) but may I also recommend Imogen from Micro power, the most addictive game I have seen on any micro (also on Play it Again Sam 5), and PIAS 2, quite old now but a superb compilation, from Superior.

Jeremy Benson, Bedford

APPALLING CHOICE

I was appalled at your choice of BBC micro games in issue 51. Both the ones you chose were many years old, and didn't come anywhere near pushing the Beeb to its limit. My choice would have been:

1. Exile (Superior) - The ultimate arcade adventure.
 2. Firetrack (Superior) - Amazing shoot-'em-up.
 3. Ultra Intelligent Machine (The Fourth Dimension 0742 700661) - This Elite-style game takes everything that made its predecessor so playable and improves on it.
- Rafael Jay, Bath, Avon

DRIVEN TO DISTRACTION

With regards to the demise of Mr Harper's disc drive while loading *F-16 Combat Pilot* (Express 50) I must insist that in no way can *F-16 Combat Pilot* be held responsible. The protection used on this title is a proprietary system, endorsed by Commodore Technical Department, and is used on several other commercial titles from other publishers. The Amiga version of *F-16 Combat Pilot* was subject to exhaustive testing prior to release of the product, with verification at the technical division of Commodore on every hardware configuration of the Amiga, including versions not even yet released!

It is an unfortunate coincidence that Mr Harper's drive should fail while loading *F-16* but I suspect that it would have happened regardless of which title he chose.

There is nothing particularly "heavy" about the protection used on *F-16 Combat Pilot* and it certainly does not destroy machines as Mr Harper suggests. I understand his frustration - I have been subject to the same problems over the years having published software for many different computers.

Dave Marshall, Digital Integration, Camberley, Surrey

A MYSTERY TO ME

I am completely mystified as to how Digital Integration could put on to the market a game which made me howl with rage and irritation. DI has consistently turned out excellent games and I have bought them all for the last five years.

Despite the assurances of DI on the subject I cannot believe that the constantly repeated nerve-racking noise emanating from the drive indicated no harm to it. I conclude by congratulating your magazine on being the only one to award this game with an appropriate review percentage. Now I view the reviews of other magazines warily.

Robert Lamb, East Yorkshire

PEDANTS' POINT

(strictly, not a point but a subset of 2-space)

I shudder to think how many Tolkien pedants are going to take you to task for alleging on p62 (Express 50) that Arnor is a character in *The Lord of the Rings*. You should be grateful that I'm too merciful and kind to point out that Arnor is in fact a place (specifically a 'lost realm') in *Lord of the Rings*.

It was Thomas J Watson of IBM who said, "I think there is a world market for about five computers". This can be confirmed by a glance into *Facts and Fallacies: A book of definitive mistakes and misguided predictions* by Chris Morgan and David Langford (Webb & Bower 1981; "Brilliant" - Mrs Langford).
David Langford, Reading, Berks

• Several Tolkien scholars have reprimanded me for my lack of Middle Earth knowledge. Sorry, but I never read *Lord of the Rings* - I read enough fantasy and fiction in other magazines' games reviews.

It's a little known fact that when he said there was a world market of five, Thomas Watson was absolutely right - he was talking about the PC200.

DISAPPOINTMENTS IN PROGRAMMING, PART 2

It is unfortunate that the disaffected freelance programmer is not reaping the financial benefits from his work (Express 51) but he has only himself to blame. Being a freelancer he should negotiate a fixed contract with the software company. The company do not have him as an employee and so do not incur the costs that a normal employee would. Surprisingly many companies take advantage of such an obvious fact and pay pitifully low sums to the programming teams.

The freelance programmers/artists are the ones who should dictate the terms to the software companies because they are providing them with their business.

If you are thinking of becoming a programmer within the industry then you had better be bloody good! There is no point in being able to program average games which get average reviews and so average sales. If you're not up to scratch you'll probably end up making average games which have low sales and getting almost nothing for it.

I agree though that ultimately the industry is not really worth entering as a career, unless you're a sales exec or a PR person, because it is open to exploitation.

The industry is not paved with fame and fortune. There are no Porsches as company cars. Come to think of it there is no such thing as company cars. The pay is low compared to the real computing industry, but that's up to you.

Advice: Don't join a development company on a freelance basis. Only accept if they take you on full time.

Never ever accept a contract from a development company. These people are parasites, between you and the publisher. Go straight to the publisher with your finished product.

Only go to the top software houses. If they turn you down, then you need to do better until they accept your product.

A programmer

If I were to write a letter



• The dream of a wealthy programmer, pursued by many, achieved by few

that reflected the past three years of my career working in the computer industry (as a freelance graphic artist and programmer), it would probably read something very similar to the letter in issue 51 entitled "Disappointments in Programming".

Time and time again I, and a great number of my friends and colleagues have fallen victims to the con artists that run this industry.

It's all very well saying that contracts should have been sorted out etc but when you need the money to pay the bills, and the contract still hasn't arrived, you're forced into a verbal agreement in the hope that this time the company will be trustworthy. Once you have been caught it tends to become a vicious circle with most companies not paying moneys owed unless you agree to take on further work.

The work I have done has received acclaim in all the popular computing magazines so it's not as if my work is substandard or in anyway justifies non-payment.

In one instance it took a company almost twice as long to pay up than it did for me to actually produce a game for them. At least I did get paid up which makes a pleasant change.

A freelance musician friend of mine is still waiting for payment after

doing the music for a game on the Commodore 64 nearly two years ago. I think you could safely say he won't see the money for that. This is so typical of probably 99% of the British home computer games industry. Thankfully, I am no longer involved.

As I am waiting for outstanding payments for several thousand pounds I, as does the programmer in issue 51, feel that it would be unwise to include my name or address.

Another hard working exploited British programmer

Isn't it about time there was a bit less whining from the development community and more action? I am fed up with programmers, artists, musicians and game designers (collectively 'authors') complaining about the raw deal they get - they often do get raw deals, but in the eight years we've had a games industry what have the authors ever done about it?

It is no good expecting the publishers to change their ways because they won't. It's the big guy versus the small guy - and you know who's going to win.

We set up the Society of Software Authors (SSA) because we recognised that there does need to be change - the SSA is a col-

lection of people with similar interests sharing knowledge (including business skills) and protecting our interests as a group. We want to ensure that the relationship between publishers and authors is fair and professional, and that the authors' interests are protected long term. We're putting together a 'standard' set of contracts, we're tackling the problems of getting royalties paid accurately, business advice to help dealings with publishers, fact sheets on subjects such as copyright, anti-piracy campaigns etc. All this takes time, commitment and money.

Most authors we speak to say "Great idea. We've needed something like this for years". Yet many authors won't put their money where their mouth is and actually do something about their problems, and join!

For more details about the SSA and to take part in the survey, please send a stamped, addressed envelope to us at 6 Callow Croft, Burbage, Wilts SN8 3TB.

Jon Dean (Chairman), Society of Software Authors, Wilts

• Well, I can't add very much more to that, but it does sound that a lot of programmers simply never get paid for their work. We've had many letters from programmers, and none from software houses. I wonder why...

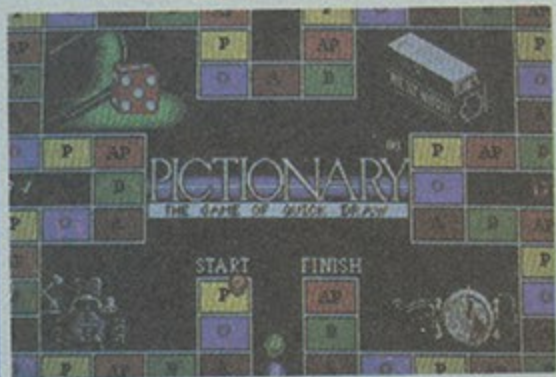
WHO'S

XMAS 1989 GAMES

PICTIONARY - Domark (12-1)

Just like Trivial Pursuit, this is one of those games that gets bought for people because it's "educational, fun and the whole family can play so you won't be stuck in your room on your own all Christmas". Educational I'm not too sure about, but the whole family can play, and it is fun if there are a few of you playing. The fact is, the game's main chances come from Auntie Maude going into W H Smith's and seeing this as a good clean game that "Johnny can play on that computer thingumajog that his mum's got him."

Pictionary should be available on Amiga, ST, PC and C64 any time around now.



PLAYER MANAGER - Anco (9-1)

After the runaway success of Kick Off, Anco has decided to capitalise on the software fans obvious love of the great sport of soccer. "Ere we go, 'ere we go, 'ere we go!" Sorry. That won't happen again. Player Manager is an in-depth game involving the running of a football team of your very own. If the standard of Kick Off is anything to go by, then this release should be a cracker of a manager game. The best of the genre perhaps? Who can tell. And if it fails, Anco still has the Kick Off expansion disk to back it up.

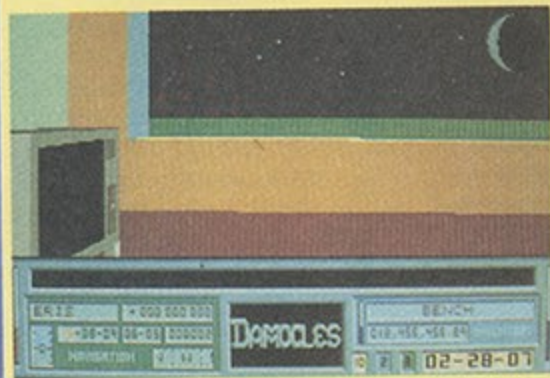
Prospective 16-bit Kenny Dalglishes can "get stuck in" in November for £19.95, with other versions soon.

Player Information		Skills	
Name	R.B. Edwards	Passing	107
Position	Defender	Shooting	69
Age	31	Tackling	159
Height	176 cm	Keeping	0
Weight	88 Kg	History	
Pace	106	This Season	
Agility	109	Goals	0
Stamina	85	Assists	5
Resilience	184	Goals	5
Aggression	41	Assists	10
Done		1st	2nd
		3rd	4th
		0	0
		10	5
		0	0

DAMOCLES - Novagen (12-1)

Well this would certainly get to number one in the "Epic wait for a game to be released" charts, as previews of this were being seen years ago. But now it is definitely, certainly, no question about it ready for release... almost. Damocles is the real follow up to Mercenary - The Second City was just an expansion of the original - with enhanced filled-in graphics, story line and equipment for you to get your teeth into. Despite being waited for for some time now, those initially excited may by now have lost interest.

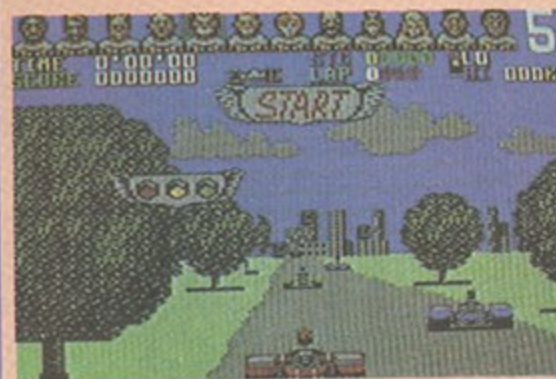
Paul Woakes' 3D extravaganza should be available on ST and Amiga for £24.95 in November.



POWER DRIFT - Activision (5-1)

Already favourably reviewed on the C64 in last week's Gameplay, Power Drift is a racing game with all sorts of cartoon-like atmosphere to it. Despite some odd glitches in the graphics, the game is immense fun to play and should hold its own against other games of the type this Christmas. Whether it will beat the likes of Hard Drivin' remains to be seen, but with Amiga, Spectrum and Amstrad versions on the way it certainly isn't beyond the realms of possibility that this will top the charts.

Budding buggysts can experience Power Drift in their own homes around late November.



GHOSTBUSTERS II - Activision (9-1)

AAAARGH! Another film license! The cinematic version of Ghostbusters II is due to hit the screens on the first of December, so Activision's timing couldn't really have come at a better time to capitalise on the success of the film. A playable demo of the game can be found on the December issue of Amiga Format - due on sale November 9th (plug, plug). From this small taster, you may be able to decide whether you think it should be Christmas number one. It can't have too much chance against stuff like Batman.

The release of Amiga Ghostbusters II should coincide with the film hitting the big screen.



CHASE HQ - Ocean (3-1)

Yet another 3D driving game, this time from Ocean. Licensed from the coin-op, Chase HQ places you in control of a super-duper cop pursuit car chasing nasty type criminals around crowded highways. Your car is really hard so you have to smash the villains off the road then leap out and arrest them. Even though there are a number of driving games around this Christmas, Chase HQ has to be one of the top contenders for the top slot. Big company, big license...wait and see.

Chase HQ should be available on all major formats early next month.



TOOBIN' - Domark (16-1)

Once more to the Domark stable for yet another arcade conversion. Toobin' is a game featuring a race between two friends down a river riding tyre inner tubes. All manner of obstacles are along the trip, including fishermen and crocodiles, which can be disposed of with a carefully flung beer can. The arcade version of Toobin' was great fun, and the 16 bit versions look to be coming along very nicely thank you. I personally would like to see this do well at Christmas, as it's a good fun game.

Rubber fans will be able to play Toobin' on the ST very soon, with other versions following later.



MANCHESTER UNITED - Krisalis (30-1)

The third of this Christmas' footy games and the second team license. This time the other reds get a look in, with Manchester United fans being catered for. It's all very well releasing an individual game for each team, but the question is how will the market stand up to this many football releases? Oh all right, I'm just sulking because there isn't an Everton game (any software houses listening out there?).

The Amiga version of Manchester United should be available by the time you read this, with the ST version due later this month. All other formats (including Konix and MSX) are to follow in the near future.



'LL BE No 1?

Software houses are limbering up their hopefuls in preparation for the big rush to capture that elusive goal...Number One in the Christmas charts. Maff Evans has a look at the up and coming releases and susses out the odds...

HARD DRIVIN' - Domark (4-1)

Probably one of the biggest licenses this year, *Hard Drivin'* is a solid 3D driving game featuring such devilish challenges as an open bridge and a terrifying loop the loop - not to mention dashed difficult gameplay. The arcade version found many fans with its superb sound and super-fast, super-smooth, filled-in vector graphics and Domark is hoping to please the coin-op fans. Early versions do indeed look promising - many of the original elements are there, including the smooth, solid 3D and that loop!

Hard Drivin' will be out on Amiga, ST, C64, CPC and Spectrum on November 22nd.



MOONWALKER - US Gold (5-1)

It looks like "Attack of the Genre Zombies" around here - here comes yet another film license. The film itself was pretty strange, what with good old Wacko Jacko turning into a rabbit (that happens in the game too), filling gangsters with lead (Michael Jackson committing acts of violence?!) and whizzing around as a robot. The game looks rather nice and some fun to boot, but the question is that will the success of the game match up to the success of Michael's hit album?

US Gold's musical game should hit the shops on sixteen bit soon.



TURBO OTRUN - US Gold (4-1)

Another driving game to add to the fray. We've seen parts of the C64 version (as being written by Probe Software) and it's looking rather good. A lot of people around these parts think that it's in with a chance of topping the charts, putting the odds quite even. True it is "just another driving game" but it has the well oiled promotion machine that is US Gold behind it. (Witness the Ferrari Testarossa on its stand at the recent PC Show.) As good a reason as any not to rule it out!

The C64 version of *Turbo Outrun* should be available soon, with 16-bit versions to follow.



UNTOUCHABLES - Ocean (6-1)

Not content with trying to reach the top with one film license, Ocean is having a crack with their interpretation of the stupendous Brian DePalma film. Computer users can now take the part of Kevin Costner taking the part of Elliot Ness trying to catch Robert DeNiro taking the part of Al Capone (Confused? You will be after....sorry wrong plot). The game features several different styles of play to portray different sections of the film. But you still can't get Sean Connery on a computer can you? Now there's a challenge!

Untouchables should be out late November on ST, C64, Spectrum and Amiga.



LIVERPOOL - Grandslam (35-1)

Another attempt to cash in on the nation's favourite sport, this time with a license to produce a game aimed at a more specific fan. For all those computer-owning reds fans not content with just watching their team's classic moment's on video, the game allows Liverpool followers to put themselves in the shoes of their glorious player-manager (Kenny Dalglish, you bozo). The Liverpool videos do quite well, but any game will have to go some to overpower Anco's tip for the top - *Player-Manager*.

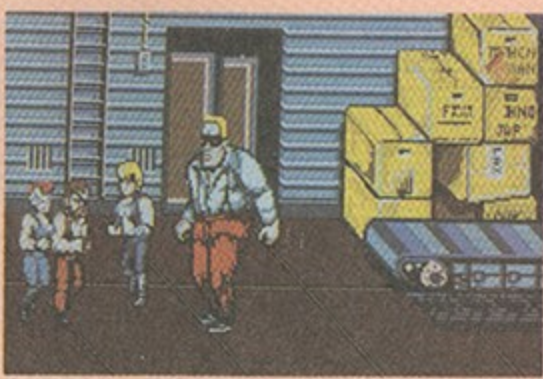
C64, PC and ST owning Liverpool fans should be able to get stuck in later this month.



DOUBLE DRAGON 2 - Melbourne (15-1)

Not quite capturing the Christmas spirit of peace and goodwill, this sequel to the successful two-player thump and smash arcade game should prove popular with Kung-Fu fans everywhere. Taking place after the rescue of the fair maiden in the original *Double Dragon*, the sequel has you chasing the Shadow Boss once more after he brutally guns down your girlfriend. The conversions of the original game weren't too well received by the press, but managed to do quite well with the public.

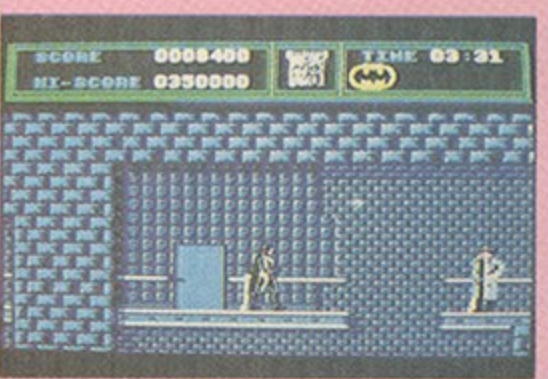
Double Dragon 2 should be available on all formats in early November.



BATMAN - Ocean (5-2 fav)

Despite having been around for quite a while now, *Batman* is still looking strong in the software sales department and it appears that it could hold on to its top spot over the Christmas period, particularly with people buying new machines. Well, let's face it, it's a big license...we're talking STONKINGLY huge license! What's more it's a darned good game to boot. Ocean occupied the number one slot last year with *Robocop* - can it do it again this year? Most people seem to think so.

Batman is available on all formats now, except for PC.



HOW GOOD A PROGRAMMER DO I HAVE TO BE?

You don't need to be a Bitmap Brother to write a game, especially with all the game creators now on most home micros. These let non-programmers build their own game but there are restrictions on the type of game. It's important to realise your limitations in game design. If, from the outset, you can't make your game run fast enough, then forget it, go for a strategy game where speed isn't as essential.

If you can handle it, you can't beat taking lessons in C or Assembler but screen shifting can give even seasoned programmers a lot of headaches.

WHAT SOFTWARE CAN I BUY?

Depends on what you want to do. Software like *SEUCK* and *Talespin* doesn't require any programming knowledge, just a good imagination but you can only write shoot-'em-ups or adventures. Then there is *STAC*, *STOS* and the soon-to-be-released, *AMOS* where you learn a simple programming language geared towards game creation. The results from these are far more inspired.

If you're intent on programming then there are hordes of BASIC, C and Assembler programs available. Providing you can compile into machine code you'll be able to write a game.

HOW DO I DESIGN THE SPRITES, GRAPHICS AND BACKDROPS?

Even graphics used in game creators can be designed within an art package. *Talespin* has its own editor but you're better off sticking to an art program. *SEUCK* is the only one which won't let you import graphics.

Degas Elite on the ST and *Photon Paint II* on the Amiga (both from Electronic Arts) are the undisputed leaders for game graphics. They provide some essentials including detailed close-ups letting you edit each pixel, and the opportunity to create your own fill patterns. Extras like airbrushing vastly improve your graphics and should always be sought.

HOW DO I PROGRAM THE SOUNDS?

You can't 'program' the sound as such. It's possible to create your own music using dedicated sound chips but you need to have a good idea how music is constructed. For ordinary effects such as engine noise and explosions, this is no problem but when you want speech or music then you're stuck. Here, it's a good idea to invest in a sound sampling package. These let you grab sounds directly from cassette or microphone and use them within your game. Sudden screaming and a good beat introduces lots of life.

HOW MUCH WILL IT COST TO CREATE MY OWN GAMES?

This depends on the machine. With an ST or Amiga, you need to purchase your game creator, usually no more than £30, a decent graphics package for around £40 and a sound sampler for the same amount. If you want to turn to programming then you need to get fistfuls of manuals.

There's one vital expense that's been missed here and that's the machine. Okay, you've got your game running on an ST, but what if you want to convert it to run on an Amiga? Machines aren't cheap.

WHAT'S THE BEST MACHINE TO WRITE GAMES ON?

There's a lot of dosh in the 16-bit market, particularly if you're converting across several machines. This needn't be as horrendous as you'd expect. The best method is to find identical software on different formats, such as GFA BASIC, available on the ST and Amiga. Here, you can write your game on one machine and port it across to the other with only a few changes necessary.

If you're writing in C code or 68000 then you can port code between ST, Amiga and PC with only screen-related routines requiring alteration.

WRITING YOUR OWN GAMES

'Ya see guv, I got this idea, right? I'm gonna write meself a game an' make loadsa dosh. Got that?' Mark Higham shows you how it's done.



• *STAC*, the ST Adventure Creator, is a program designed to help you write your own adventures. you define the 'world', add pictures, describe potential events, set traps and so on and the program does the rest

I'VE WRITTEN MY GAME AND I WANT TO SELL IT - WHAT THEN?

Either you can decide to market your game yourself or you can take it to a software house and hope they'll market it for you. Unless you've got vast amounts of money then resort to the second method even if profit margins seem less enticing. Look for a software house that produces similar games. For example, if you've written another *Dungeon Master*, send it to Mirrorsoft, it knows how to market this type of game. Either you'll hear it doesn't want it, or it'll ask you to make changes. Most companies can spot potential in a game even if it has appalling graphics.

HOW MUCH DOES IT COST TO GET MY GAME DUPLICATED, PRODUCE THE MANUAL AND PACKAGING?

Costs depend on quantity. If you want less than a 100 copies you can do duplication yourself and pick up video or CD cases for little more than 50p each. If you want the game professionally copied, go to a disk copiers who'll charge between 50p and 65p per disk. Add an extra 2p to this for labels. 1000 labels can be copied for around £40. Depending on the quality and size of the manual, you can photocopy it or take it to a local copiers where they'll reproduce it for around £35 for 1000 A4 copies.

HOW DO I GET THE GAME REVIEWED IN THE MAGAZINES?

You can send the game to magazines and hope they'll like it. To make sure of coverage telephone the magazine to let them know it's coming and then check the reviewer hasn't lost it in a corner two weeks later. Don't worry if it's not packaged. Even the US Golds and Mirrorsofts of this world send most of their reviewable products out without packaging.

If you really want to make sure your game gets in then a two-week holiday in America for all the journalists would ensure some big coverage.

HOW MUCH DOES IT COST TO ADVERTISE?

Advertising rates depend on the magazine, the space you want and the amount of colour. Adverts can be black and white, spot colour or full colour. Most game adverts are in full colour. Spot colour is when monochrome adverts have selected areas recoloured with one or two extra colours.

At £300 for a quarter page, monochrome is the cheapest. Full colour is typically £600 for a quarter page and £1000 for a full page. Those double-page adverts you see for games like *Ghostbusters* can cost around £2000 each.

HOW MUCH MONEY WILL I BE ABLE TO MAKE?

Surprisingly, there's not as much dosh in programming as you might think. Unless you have a major hit on the scale of *Populous*, you're unlikely to make enough to cover the insurance of a Porsche, let alone the car itself. With conversions of a reasonable game, you can be looking at making around £5000 as long as you can get it into WH Smith's and Boots.

This is why it's inadvisable to market it yourself. Do this and unless you have the dosh to splash out on enormous amounts of colour advertising, you're unlikely to sell many more than ten copies.

HAS ANYONE MADE A REAL SUCCESS OF MARKETING THEIR GAME?

Games that have been written using a game creator have rarely made it far although a handful have been released. Mandarin is bringing out *Games Galore* - a set of four *STOS* games and there's another one following soon after. Microdeal has also released *The Grail Quest*, written using their *Talespin* adventure creator.

Writing your own from scratch is where the money is and there are a host of games that are testament to this - *Bloodwych*, *Wicked* and *Stormtrooper* were all written this way.

ARE THERE ANY CLUBS WHERE I CAN MEET PEOPLE WHO MIGHT BE INTERESTED IN CO-WRITING A GAME?

There aren't any clubs where you can meet other programmers but there are ways to share common interests. One of the most productive is to join a user club and you'll receive a regular newsletter and other benefits. There are *STOS*, *STAC* and GFA user clubs which all cater for programmers. If you want to build up a wider audience then turn to bulletin boards for comfort. A number are run by programmers - even the Bitmap Brothers have one - and this is a good way to build up contacts and solve problems. ●

THOMSON MONITORS



Top quality 14" RGB Monitors. Ideal for ATARI ST & AMIGA, but can be used with any micro that supports RGB. Built-in Mono sound. Front Panel Controls. SCART Input. 0.38 Dot. Medium resolution.

OUR PRICE £179.95
Plus £7.05 Postage

STAR PRINTERS

STAR NL10

120 cps. 30 cps in NLQ. Friction & Tractor Feed. Bi-directional. 10" Carriage. Epson Compatible. Choice of either Serial or Commodore 64/128 interface.

OUR PRICE £149.95
Plus £6.05 Postage

STAR SR10

200 cps. 40 cps in NLQ. Friction & Tractor Feed. Bi-directional. 10" Carriage. Epson & IBM Compatible. Centronics interface.

OUR PRICE £169.95
Plus £6.05 Postage

SEIKOSHA GP100A

50 cps. Tractor Feed. Up to A4 size paper. Centronics interface. Ideal for listings, letters etc. Perfect first-time printer.

OUR PRICE £89.95
Plus £5.05 Postage

UK HOME COMPUTERS

COMMODORE C64's

Commodore C64 Computer complete with power supply, manual, leads & data cassette recorder.

OUR PRICE £109.95
Plus £4.05 Postage

COMMODORE 5 OCTAVE MUSIC SYSTEM

This package, for the Commodore 64 or 128 consists of a full-size keyboard, sound interface and software. This is really tremendous value at only £59.95 plus £3.05 Postage.

MICROSOFT WINDOWS

Version 2.00. 5.25" disks plus comprehensive manual. Probably the most useful single package for the IBM PC & Compatibles. PLUS FREE, Microsoft's PAGEVIEW, A WINDOWS utility. Normal price for the 2 packages is around £98.00

OUR PRICE £29.95
Post FREE

Q.L. MODEM

Made by TANDATA and originally sold at over £200.00. The package consists of 3 modules including an AUTO-DIAL feature. Send NOW for the full technical specifications before this bargain is sold out.

OUR PRICE £39.95
Plus £4.05 Postage

JUKI 2200 DAISYWHEEL

This offer is unique. The JUKI 2200 is a portable (Mains) Daisywheel typewriter & a 10 cps letter quality centronics printer. It has bi-directional print and the wheels are interchangeable. Ideal for use by all the family.

OUR PRICE £109.95
Plus £5.05 Postage

CITIZEN LSP 100 PRINTER

The latest offering from Citizen. 174 cps, 40 cps in NLQ. Friction & Tractor feed. Epson Compatible. Centronics Interface. Front Panel Controls.

Normal Price £249.95
OUR PRICE £149.95
Plus £5.05 Postage

SINCLAIR Q.L.

Fast 68008 CPU. 128k RAM. Twin Fast-Access microdrives. Complete with all cables, PSU, manual & software. (Wordprocessor, Database, Spreadsheet & Graphics)

OUR PRICE £99.95 (JS ROM £119.95)
Plus £4.05 Postage

AMSTRAD CPC 464 With Colour Monitor.....£199.95 plus £7.05

VISA/ACCESS orders welcome. Prices subject to change without notice. All transactions are subject to our standard conditions of sale, available upon request. Personal callers welcome by appointment. All prices include VAT. Cheques/Postal orders with order.

UK HOME COMPUTERS
82 Churchward Avenue, Swindon,
Wilts. SN2 1NH Telephone: (0793) 695034

ATARI ST ★ ATARI ST ★ ATARI ST ★ ATARI ST ★ ATARI
A brilliant offer for readers of New Computer Express!

Devpac ST 2

FROM HISOFT ONLY £44.95

Devpac ST Version 2 is widely regarded as the most powerful assembly language development system for the Atari ST. It incorporates a debugger, stand-alone assembler and a fast linker

IT INCLUDES:

- **GenST** Assembler is a high-performance, full-featured, two-pass Motorola standard macro assembler at up to 75,000 lines per minute. It has multiple modules and sections, repeat loops and macro calls that maybe nested as deeply as memory allows.
- **MonST** Debugger is an advanced symbolic monitor, debugger and disassembler. Now in addition it can offer Multiple window display, full expression evaluator, up to 22 significant characters in symbols, viewing of source files and conditional breakpoints.
- **Example Files** of a wide variety including a full GEM type windowing application and an example desk accessory.

The package comes complete with an extensive ring-bound manual plus notes on the various operating system levels and debugging strategies.

Order now by phone from the NCE mail order service or send the coupon to our FREEPOST address.

HOTLINE NUMBER 0458 74011

DevpacST 2

version 2

Complete Assembler/Debugger System
for the Atari ST Computers



Yes, I would like to order a copy of Devpac ST 2

Name _____

Address _____

Tel No _____

I would like to pay by Access Visa Cheque PO

Please debit my credit card

No. _____

Expiry Date _____

Tel. No. _____

Send & make cheques payable to Future Publishing, FREEPOST, The Old Barn, SOMERTON, Somerset. TA11 7BR

1 989 can be rightly said to be the year in which neural networks came of age - it's seen the number of neural network research and development projects increased dramatically to the point where practical applications are being field tested, and in some cases, deployed. There are 10,000 neural networks in the US alone - with at least 50 neural products available on the open market. IBM, AT&T, Hitachi, Fujitsu, NEC, Sony - all the world's leading hi-tech companies are working on the next step forward in machine intelligence.

Heralded as a revolutionary technology, combining with recent hardware advances in parallel and optical processing to form the sixth generation of computing, neural nets are primarily seen as providing the software solution to the problems of machine vision and robot control. But their applications extend into any areas for which no known algorithm or set formula exists - areas which by their very nature are full of pitfalls in logic - speech recognition, stock market prediction, handwriting analysis - areas for which knowledge can only be a product of learning through experience. So how do you go about building a neural network and why all the fuss?

We ain't so smart

Adaptive Systems Engineering is what a neural net is all about - a series of techniques by which computers can be trained to recognise patterns in apparently chaotic or random situations. Humans are quite good at this kind of thing - to differing degrees of course - but any human specialism is merely a product of learning by example. After all, even the human quality said to most mark us apart from other forms of intelligence, intuition, only results from learning by mistakes - even the wildest guess is based on some form of experience. Of course, conventional computers were only ever built to assist us in rather mundane tasks - functions which the human brain, running at only 0.1 MHz in computing terms, would take an eternity to do. The fact that they're now seen fit to be given new responsibilities is testament to how well they've served us so far. For if there's one thing you can rely on a computer for, it's the ability to remember. Aside from negative external effects and human mistakes it'll never forget anything it's told. So if you combine massive memory with structured learning you have a machine that is able to recognise, interpret and act upon disparate, unconnected data right? Well, in theory...

Learning to forget

Although the brain does run comparatively slowly, its immense power is derived from the fact that there are 3,000 billion synapses connecting its neurons - each one performing a single operation. Like the brain, neural networks are made up of large numbers of individual processing elements or 'neurons' interconnected by data paths or 'synapses'. A neuron is simply a device which provides a single output value from one or more inputs - but the value of that output depends on the strength of the input and the 'weight' each input is given. Weighting is set by a developer or managing expert system and in the first instance is simply a means of training a network to recognise an input.

Theorists believe that our synapses strengthen

SILICON BRAINS

Puzzled by all those references to brain-like chips? Andy Storer dons a white coat and performs some silicon surgery on the neural networks



or weaken according to the frequency of use, and that this is the physical method of learning and forgetting. Just like a child, a neurocomputer, can't be programmed - it must be trained. As such it must be repeatedly subjected to examples of material to be learned and given positive or negative feedback according to what it is meant to achieve. The weighting factors are adjusted so that the neurons 'remember' to respond automatically in a given way to specific information input. Since a weighting can be either positive or negative, enabling input values to inhibit as well as encourage a response, a neurocomputer can be taught to forget as well as learn.

By their very nature, neural networks don't process information centrally in a CPU - they use dis-

tributed processing in which tasks are distributed within the entire network. Although the majority of systems in use are software simulations running on conventional computers, companies like AT&T, Siemens and Hitachi are developing neural chips. Hitachi is rumoured to have prototyped a wafer-scale chip containing 576 neurons. A computer with even the remotest human faculties is some way off though - the our brains have over a 100 billion neurons inside each of them. ●

In two weeks time Express will be assessing neurocomputing advances around the world and looking in more detail at the practicalities of neuro-programming.

ALARMINGLY SMART ROBOTS

Neural technology is principally geared towards industrial applications like factory automation - robot vision being the prime objective. Once artificial vision is cracked, neurocomputers will be able to learn merely by watching humans perform tasks - the implications of this are anyone's guess. Indeed, as with most technological advances, the military's well in there - the U.S.'s Defence Advanced Research Projects Agency is spending \$33 million on a research programme to produce 'smart weapons'.

TOP TEN NEURAL APPLICATIONS

Since they're modelled on the human brain, it follows that neural networks excel in areas where humans out-perform computers. These break down to three main areas - pattern recognition, associative memory (the ability to deal with 'fuzzy data') and adaptive learning. The main applications are therefore:

- Pattern recognition

- Speech interpretation
- Financial systems
- Predictive modelling
- Object identification
- Handwriting analysis
- Image compression
- Risk analysis
- Commodity stock trading
- Expert systems

and in this country the principal players are:

- Plessey

- British Aerospace
- Philips
- Henley Centre for Economic Forecasting
- British Telecom
- Royal Signals and Radar

If you're interested in learning more about neurocomputing the main British universities engaged in research are: Edinburgh, London, York and Stirling.

BEST

- Bargains
- Advice
- Prices
- Offers
- Jobs

SHOPPING

EXPRESS

The *weekly* computer market place for people *serious* about buying

• THIS WEEK'S BUYERS' GUIDE

50 TOP PCs

- Your guide to the best IBM compatibles
- 50 desktop PCs surveyed

JOB SHOPPING?

Check out our recruitment section inside

ALSO INSIDE

- **Take** advantage of our latest mail order offers.
- **Benefit** from our reliable buyers' guides. No waffle, just facts.
- **Gain** more than £10 off mail order prices by using Express vouchers.
- **Score** on the free reader adverts. Sell your products for *absolutely no charge!*

Save your cash,
save your time

SAVE MONEY

Use these
Express Vouchers
with the ads
inside ►

Full details overleaf

EXPRESS
VOUCHER

50p

EXPRESS
VOUCHER

£3

EXPRESS
VOUCHER

£1

EXPRESS
VOUCHER

£6

£399!

12MHz XT

- ★ 640Kb RAM (Expandable to 1Mb)
- ★ 12MHz CPU switchable to 4.77
- ★ 102 Key Keyboard
- ★ 360 Kb 5 1/4" Floppy Drive
- ★ 2 Parallel Ports
- ★ 2 Serial Ports
- ★ Real Time Clock/Calendar
- ★ 5/6 Free Expansion Slots
- ★ Hercules Graphics Card & High Res Mono Monitor
- ★ MS-DOS vers. 4.01 & GW-Basic
- ★ Microsoft Windows
- ★ Full Set of Manuals & Documentation

Rated
5 stars
by N.C.E.
Issue 43

Single Drive Complete System Mono.....£399
 40Mb 30Ms Complete System MONO.....£599
 14" EGA Colour Monitor add.....£226
 720Kb 3 1/2" Floppy.....£65

£749!

16MHz AT

- ★ 1Mb RAM
- ★ 16MHz CPU switchable to 6
- ★ 102 Key Keyboard
- ★ 1.2Mb 5 1/4" FLOPPY DRIVE
- ★ 1 Parallel Port
- ★ 2 Serial Ports
- ★ Real Time Clock/Calendar
- ★ 5 Free Expansion Slots
- ★ Mono/CGA/EGA Card Included
- ★ High Res Mono Monitor
- ★ MS-DOS vers. 4.01 & GW-BASIC
- ★ Genuine Microsoft Mouse & Microsoft Window
- ★ Full Set of Manuals & Documentation
- ★ 1 YEAR ON SITE MAINTENANCE (Base Unit)

RATED
4 STARS
BY N.C.E.
ISSUE 43

Single Drive Complete System Mono.....£749
 45Mb 25Ms Complete System MONO.....£1025
 14" EGA Colour Monitor add.....£200
 1.44 Mb 3 1/2" Floppy Drive add.....£85

DOLAN ELECTRONICS LTD

DANFFORDDGAR HOUSE,
 CARMARTHEN, DYFED
 SA32 7DU

**SALES: 0267 84538****FAX: 0267 84617**

All Prices ex. VAT & Delivery
 C.W.O., C.O.D. AVAILABLE
 (Specification Subject to change)



EXPRESS VOUCHERS - How the scheme works

● The Express voucher scheme is a unique way of enabling you to save money when you buy goods by mail order.

● It offers you a discount of up to 5% off the prices printed in many advertisements in this magazine - and remember, many of these

prices are already much lower than in the shops.

● The vouchers are not limited to specific items - you can save on any purchase from one of the participating advertisers.

● Most of our advertisers are

taking part in this scheme - just look for this sign.

● Remember. By using this scheme you will almost always be able to buy goods cheaper from New Computer Express than anywhere else.

£1 voucher. Valid for orders above £20

This voucher may be used as £1.00 part payment on any order totalling over £20 from a participating advertiser in New Computer Express. You simply fill in the details below and send it off with your order.

NAME _____

ADDRESS _____

TEL. _____

ITEM PURCHASED _____

One voucher per order only. Voucher and order must reach the advertiser before 9am Monday Nov 21st

50p voucher. Valid for orders over £10

This voucher may be used as 50p part payment on any order totalling over £10 from a participating advertiser in New Computer Express. You simply fill in the details below and send it off with your order.

NAME _____

ADDRESS _____

TEL. _____

ITEM PURCHASED _____

One voucher per order only. Voucher and order must reach the advertiser before 9am Monday Nov 21st

£6 voucher. Valid for orders over £120

This voucher may be used as £6.00 part payment on any order totalling over £120 from a participating advertiser in New Computer Express. You simply fill in the details below and send it off with your order.

NAME _____

ADDRESS _____

TEL. _____

ITEM PURCHASED _____

One voucher per order only. Voucher and order must reach advertiser before 9am Monday Nov 21st

£3 voucher. Valid for orders over £60

This voucher may be used as £3.00 part payment on any order totalling over £60 from a participating advertiser in New Computer Express. You simply fill in the details below and send it off with your order.

NAME _____

ADDRESS _____

TEL. _____

ITEM PURCHASED _____

One voucher per order only. Voucher and order must reach the advertiser before 9am Monday Nov 21st

THE FIVE SIMPLE RULES

1. Express vouchers can be used to obtain discounts on purchases of goods advertised in this issue of *New Computer Express*, provided that they are bought directly from an advertiser taking part in the scheme. The vouchers are valid only for those advertisements which say "We accept Express vouchers".

2. Each voucher entitles you to a discount at the voucher's face value, provided that your overall order level is higher than the figure indicated on the back of the voucher.

3. To use a voucher, simply enclose it with your discounted payment when you order. You may use only one voucher in any one order.

4. The order including the voucher must be received by the advertiser before the closing date printed on the voucher.

5. You must fill in the details on the voucher.

THE SHOPPING EXPRESS

BUYERS' GUIDE TO

50 TOP PCs

Looking for a PC? Let Express help you make the right choice. Here's a definitive list of the top 50 PCs on the market with the vital details on each.

Each PC is listed alphabetically, with the manufacturer's phone number and the recommended retail price. It is often possible to get a better deal than this, especially by mail order - check out the advertisements in this issue.

Below the price is the technical specification of that computer; which microprocessor it has, how much memory, what kind of graphics display it uses, which disk drive, what input and output ports it's supplied with and any extras the manufacturer throws in.

POWER RATING

We've worked out a power rating for each machine. Does it pack the punch you need? Anything under 50 is fine for most uses - word processing, running a club or small business, playing the odd game - while if you're after power computing you'll need a machine round the 100 mark. It's only a rough guide, of course, and only has a meaning relative to the other ratings. Check the tech specs to see if it'll do the specific things you need.

For the curious, here's how we worked out the power ratings. 386: 30 points, 286: 20 points, V20/40: 15 points, 86: 10 points, 88: 5 points, serial ports 2 points each, parallel ports 2 points each, expansion slots 2 points each, 2.5Mb: 25 points, 2Mb: 20 points, 1Mb: 10 points, 640: 8 points, 512: 5 points, hard drive: 15 points, 3.5: 10 points, 5.25: 5 points, VGA: 20 points, EGA: 10 points, CGA: 5 points.

DESIRABILITY RATING

There's also a desirability rating out of 100 - although the power rating is the most important, this indicates essentially 'how good' the machine is. This takes into account intangibles such as build quality and appearance as well as the perceived 'slickness' of the machine. Anything with single figures you'd be happy to get for Christmas but wouldn't walk down the road to buy. 30s and 40s would be worth a trip out of town to get. Anything over 90 and you'd sell your house and all its contents to buy one.

VALUE FOR MONEY

Finally there is the value for money rating. Measured out of five, the star rating indicates just how much computer you get for your pound.

● AMSTRAD PC1640

£499 • 0277 228888 • 8086 CPU (4.77/8MHz) • 640K RAM • EGA • 1 parallel port • 1 serial port • 3 expansion slots • 5.25 floppy • GEM, mouse and bundled software
Bottom of the - usable - range Amstrad PC. Plastic case of flimsy construction containing only three expansion slots and supporting a poor quality monitor which also houses the power supply (making it next to impossible to upgrade a mono system to colour). The package includes a GEM graphic operating system as well as MS-DOS and a mouse. Enjoys the somewhat ambiguous distinction of being cheap.

Power: 43
Desirability: 15

VALUE FOR MONEY: ★★★

● AMSTRAD PC2286

£999 • 0277 228888 • 80286 CPU • 1Mb RAM • VGA • 1 parallel port • 1 serial port • 5 expansion slots • 40 Mb hard drive • mouse and bundled software

The Amstrad stab at high tech. Good quality VGA display let down by plastic machine with enormous footprint and slow hard drive. The machine is at least supplied with a reasonable - if not generous - supply of expansion slots.

Power: 79
Desirability: 50

VALUE FOR MONEY: ★★★

● APRICOT XEN-S PC

£1495 • 021 456 1234 • 386SX CPU • 1Mb RAM • VGA • 1 parallel port • 2 serial ports •

3 expansion slots • 30Mb hard drive

Well-known for attempts at providing powerful computers, the XEN-S PC is Apricot's mid-range 386 machine. Reasonable construction, moderate keyboard but expensive.

Power: 87
Desirability: 60

VALUE FOR MONEY: ★★

● ARC PT88-1

£810 • 01 684 1948 • 8088 CPU • 640K RAM • CGA • 1 parallel port • 2 serial ports • 4 expansion slots • 5.25 floppy • paper white monitor

Arc's bottom of range computer. A well made machine which, although expensive, comes with 4 expansion slots and a paper white monitor.

Power: 37
Desirability: 20

VALUE FOR MONEY: ★★

● ARC PT 88-2

£1140 • 01 684 1948 • 8088 CPU • 640K RAM • CGA • 1 parallel port • 2 serial ports • 4 expansion slots • 20Mb hard drive • paper white monitor

One of a large range of PC compatibles from ARC, the PT88-2 is a well made computer which suffers from being a little expensive.

Power: 47
Desirability: 30

VALUE FOR MONEY: ★★

● ARC T304

£3650 • 01 684 1948 • 80386 CPU • 2Mb RAM • VGA • 1 parallel port • 2 serial ports • 8 expansion slots • 40Mb hard drive (and twin floppies) • paper white monitor

Starter computer for Arc's top the range machines, the T304 with 386 central processor, 40Mb hard drive and paper white monitor is an excellent machine.

Power: 107
Desirability: 85

VALUE FOR MONEY: ★★★★★

● ATARI PC3

£949.99 • 01 309 7770 • 8088 CPU • 640K RAM • EGA • 1 parallel port • 1 serial port • 4 expansion slots • 30Mb hard drive • mouse

Atari's foray into the PC compatible market opens with the PC3. Cheap, well made useable machine which commands consideration from anyone searching for a first PC with hard drive on a limited budget.

Power: 50
Desirability: 45

VALUE FOR MONEY: ★★★

● ATARI PC5

£2799.99 • 01 309 7770 • 80386 CPU • 2Mb RAM • VGA • 1 parallel port • 1 serial port • 5 expansion slots • 60Mb hard drive (with high performance controller card) • 1.2Mb floppy

The last word in PC power from Atari, the PC5 is aimed fairly and squarely at the 'power user'. Superior specifications and a very reasonable price ensures its success in the high-end market place.



DATAPLEX

10 Petersfield Avenue, Slough,
Berkshire SL2 5DN
Tel: 0753 35557
All prices excluding
VAT and delivery



AMIGA HARDWARE

Amiga 500 Complete £279
Amiga 500 + TV modulator £289
Amiga 500 + Batman Pack & 10 Star Pack, Photon Paint £352.00

NEW BATMAN PACK £317

New from Amiga

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.

AMIGA ACCESSORIES

Amiga A501 RAM pack.....£99
Amiga joystick£8
TV Modulator.....£19
Phillips CM8833 colour monitor.....£199
Phillips BM7502 12" green monitor.....£79
Phillips BM7522 12" amber monitor.....£89
Amiga To Philips cable.....£8

AMIGA DRIVE

1 Meg 3.5" external.....£68
1 Meg 3.5" internal£63
1 Meg 5.25" external.....£99

ATARI COMPUTERS

520 STFM Explorer Pack.....£229
520 STFM Power Pack£309
1040 STFM Professional Pack£379
SM124 mono monitor£99
CS1224 colour monitor£229

ATARI DRIVES

1 Meg 3.5 external£80
1 Meg 5.25 external£99
1 Meg 3.5 internal£63

STAR PRINTERS

Star LC10 mono.....£135
Star LC10 colour.....£168
Star 2410£225
Star LC15 9 Pin 136 column.....£264
Star LC2415 24 Pin£328

EPSON

Epson LX400£145
Epson LQ550.....£255

Many More Epsom In Stock. Please call for prices.

PANASONIC

Unbeatable Prices!

Panasonic 1081£125
KXP 1124£239
KXP 1180£144

CITIZEN PRINTERS

Citizen 120D.....£115
Citizen 180E.....£127
Swift 24£255
Colour upgrade for Swift.....£42

MANNESMAN TALLY

Mannesman MT 81 Dot Matrix.....£110
Mannesman Sheetfeeder.....£62
Mannesman Serial Interface£49

REPAIRS FOR AMIGA AND ATARI

Power: 99
Desirability: 75

VALUE FOR MONEY: ****

BROTHER BC10

£780 • 061 330 6531 • 8088 CPU • 640K RAM • CGA • 1 parallel port • 1 serial port • 4 expansion slots • 20Mb hard drive
Better known for quality printers, Brother's BC10 PC is an attempt to conquer the compatible market. Reasonable specifications and quality construction coupled with aggressive pricing gives the machine a head start in the market-place.

Power: 45
Desirability: 38

VALUE FOR MONEY: ***

COMMODORE PC10

£549 • 0628 770088 • 8088 CPU • 640K RAM • CGA • 1 parallel port • 1 serial port • 3 expansion slots • 5.25 floppy
Entry level PC compatible from home computer manufacturer Commodore. Well made, good keyboard but a little expensive.

Power: 33
Desirability: 20

VALUE FOR MONEY: ****

COMMODORE PC 60-80

£2999 • 0628 770088 • 80386 CPU • 2.5Mb RAM • VGA • 2 parallel ports • 2 serial ports • 8 expansion slots • 80Mb hard drive
Power computing for the people! The PC60-80 is one of the most powerful of the affordable 386 machines on the market. The computer is thoughtfully designed, well made and at this price, sports unbelievable potential.

Power: 114
Desirability: 95

VALUE FOR MONEY: ****

COMPAQ DESKPRO 286

£1495 • 01 332 3000 • 80286 CPU • 640K RAM • VGA • 1 parallel port • 1 serial port • 7 expansion slots • 20Mb hard drive • 1.2Mb floppy
Renowned for quality, powerful - if expensive - computers, the DeskPro 286 carries on the tradition of Compaq.

Power: 66
Desirability: 55

VALUE FOR MONEY: ***

COMPAQ DESKPRO 386

£2195 • 01 332 3000 • 80386 CPU (20MHz) • 1Mb RAM • VGA • 1 parallel port • 1 serial port • 7 expansion slots • 20Mb hard drive • 1.2Mb floppy
Compaq's top of the range power computer. Highly desirable machine featuring a 20MHz 386 central processor, clean construction, good keyboard etc.

Power: 83
Desirability: 80

VALUE FOR MONEY: ***

DELL SYSTEM 325

£5699 • 0800 414535 • 80386 CPU • 1Mb RAM • VGA • 1 parallel port • 2 serial ports • no expansion slots • 320Mb hard drive
Dell is generally regarded as being the power computer manufacturer and the System 325 machine does nothing to dispel the fact. Powerful and with an enormous disk drive. A desire for power and bulging coffers are the necessary qualifications for this machine.

Power: 81
Desirability: 90

VALUE FOR MONEY: ****

DOLAN XT

£599 • 026784 538 • 8088 CPU • 640K • Hercules • 2 serial ports • 2 parallel ports • 8 expansion slots • 40Mb hard drive • bundled software
Cheap entry-level XT from Dolan. Very good value for money, with a paper white monitor and fast hard drive. Recommended.

Power: 60
Desirability: 60

VALUE FOR MONEY: ****

DOLAN AT

£1025 • 026784 538 • 80286 CPU • 1Mb RAM • EGA • 2 serial ports • 1 parallel port • 5 expansion slots • 45Mb hard drive • mouse, bundled software
Top of range Dolan AT which includes a fast hard drive, Microsoft mouse and Windows in the low price.

Power: 65
Desirability: 70

VALUE FOR MONEY: ****

ELONEX PC 88-C

£695 • 01 965 3225 • V20 • 640K RAM • CGA • 1 parallel port • 1 serial port • 2 expansion slots • 20Mb hard drive • GEM, mouse
Budget computer manufacturer. The PC 88-C is Elonex's entry level machine. Sporting a fast V20 processor and 20Mb hard drive for a miniscule 700 quid the machine deserves a place at the top of any budget PC shopping list. Well made and reliable.

Power: 51
Desirability: 40

VALUE FOR MONEY: ****

ELONEX PC286S-120

£1495 • 01 965 3225 • 80286 CPU (12MHz) • 640K RAM • CGA • 1 parallel port • 2 serial ports • 3 expansion slots • 40Mb hard drive • GEM, mouse
Mid-range Elonex compatible featuring 40Mb hard drive and a small footprint.

Power: 58
Desirability: 40

VALUE FOR MONEY: ****

ELONEX PC 382S-200

£3095 • 01 965 3225 • 80386 CPU • 1Mb RAM • VGA • 1 parallel port • 2 serial ports • 3 expansion slots • 320Mb hard drive • GEM, mouse
The top of range Elonex computer sporting a 320Mb hard drive and VGA graphics adaptor at an affordable price.

NEW COMPUTERS FOR OLD!

IS YOUR XT PAST IT?

Want a fast AT but can't afford one? The best answer is to fit a new motherboard....most XTs and XT clones can be upgraded easily with our 12MHz turbo AT board. In most cases it just replaces your old XT board, and you keep all your existing disk drives, controllers and display. We supply full instructions and will even give you £10 back if you return your old (but working) XT board! The AT turbo motherboard is a high quality board, with full manual and legal BIOS. It can hold up to 4Mbytes of RAM with EMS capability. We can also supply a similar board which also has a floppy controller, 2 serial ports and a parallel port all on the board!

VGA UPGRADE? Our VGA controller drives mono, CGA, EGA, VGA and Multisync monitors and supports MDA, Hercules, CGA, EGA and VGA modes too! It even detects the bus size and selects 8 or 16 bit operation! Just to help you, we will give you a fiver for your old Hercules or CGA board, and a tenner for your old EGA board!

AT Turbo motherboard	£172.00
AT Turbo motherboard with 512k RAM	£270.00
AT Turbo motherboard with 1Mbyte RAM	£370.00
AT All-in-one motherboard	£183.00
AT All-in-one motherboard with 512k RAM	£283.00
AT All-in-one motherboard with 1M RAM	£383.00
VGA/EGA/CGA/Hercules controller	£137.00
XT Turbo 12MHz motherboard, Ok, v20	£62.10
Serial 3 button mouse	£34.50
RS232 interface for XT	£16.10
NEW BOOK! "PC-DIY" How to build your own PC	£7.95

ACCESS or AMERICAN EXPRESS welcome by post or phone. Callers by appointment please. VAT INCLUDED. Please add £1 for post and packing. Catalogue free. No minimum order charge.

BLACKMORE ELECTRONICS LTD.
FREEPOST, Blandford Forum
Dorset DT11 7BR

Office address: 4 The Plocks, Blandford

0258 451347 (24 hr answerphone)

Power: 87
Desirability: 75

VALUE FOR MONEY: ***

● EPSON PCE HD

£1199 • 0442 61144 • 8088 CPU • 640K • CGA • 1 parallel port • 1 serial port • 3 expansion slots • 20Mb hard drive
Epson provided the industry standard for 9-pin printers and control codes but is not going to set any standards with the PCe. Expensive and underpowered - it's a dodo.

Power: 33
Desirability: 0

VALUE FOR MONEY: No stars

● EPSON AX FD

£1599 • 0442 61144 • 80286 CPU • 640K • CGA • 1 parallel port • 1 serial port • 7 expansion slots • 5.25 floppy
Mid-range Epson 286-based PC. Incredibly overpriced.

Power: 51
Desirability: 2

VALUE FOR MONEY: *

● EPSON AX80 HD

£2499 (excl. monitor) • 0442 61144 • 80286 CPU • 640K • CGA • 1 parallel port • 1 serial port • 6 expansion slots • 80Mb hard drive
Ridiculously overpriced top of range computer from Epson. Price does not include a monitor (!).

Power: 64
Desirability: 0

VALUE FOR MONEY: *

● IBM PS/2 30

£1298 • 01 747 0747 • 8086 CPU • 640K RAM • EGA • 1 parallel port • 1 serial port • 3 expansion slots • 3.5 floppy
IBM's starter machine. Very well made, reliable and with the backing of Big Blue. Not cheap, but then the best always costs a little more, right?

Power: 48
Desirability: 75

VALUE FOR MONEY: **

● IBM PS/2 50

£2389 • 01 747 0747 • 80286 CPU • 1MB RAM • VGA • 1 parallel port • 1 serial port • 3 expansion slots • 20Mb hard drive
From the company that started it all, the mid-range computer. All the superlatives associated with the model 30 and 10 times the desirability.

Power: 65
Desirability: 95

VALUE FOR MONEY: **

● IBM PS/2 80

£4407 (from) • 01 747 0747 • 80386 CPU • 2MB RAM • VGA • 1 parallel port • 1 serial port • 7 expansion slots • 44-314Mb hard drive • 1.2 Mb floppy • floor standing
The computer from the computer company.

Power: 103
Desirability: 100

VALUE FOR MONEY: **

● NEC POWERMATE 1

£1395 • 01 993 8111 • 80286 CPU • 640K RAM • VGA • 1 serial • 1 parallel • 6 expansion slots • 20Mb hard drive
NEC's entry level computer. Fast but expensive.

Power: 59
Desirability: 50

VALUE FOR MONEY: ***

● NEC POWERMATE 386 20

£5895 (excl. monitor) • 01 993 8111 • 80386 CPU • 2Mb RAM • VGA 2 serial ports • 1 parallel port • 8 expansion slots • 300Mb hard drive
Top of range NEC 386-based machine. Vast power but an expensive buy.

Power: 95
Desirability: 65

VALUE FOR MONEY: **

● NESS AT-286 S

£1195 • 01 806 1072 • 80286 CPU • 512K RAM • CGA • 2 parallel ports • 1 serial port • 5 expansion slots • 20Mb hard drive
Mid-range PC compatible notable only for its non-conformist specifications!

Power: 61
Desirability: 30

VALUE FOR MONEY: **

● OPUS PCIII SF TURBO

£549 • 0733 765080 • 8088 CPU • 256K RAM • CGA • 1 parallel port • 1 serial port • 7 expansion slots • 5.25 floppy
The UK's second largest PC compatible manufacturer (Amstrad being the first) Opus have a fine reputation for quality machines. The PCIII is ideal for use as a LAN terminal.

Power: 34
Desirability: 30

VALUE FOR MONEY: *

● OPUS PCIV TURBO

£995 • 0733 765080 • 80C88 CPU • 768K RAM • CGA • 1 parallel port • 1 serial port • 2 expansion slots • 20Mb hard drive
Mid-range Opus machine which is reasonably priced but lacking in expansion options.

Power: 41
Desirability: 40

VALUE FOR MONEY: **

● OPUS PCVI TURBO

£1295 (from) • 0733 765080 • 80286 CPU • 1Mb RAM • VGA • 1 parallel port • 1 serial port • 5 expansion slots • 60Mb hard drive • mouse port
Top of range computer from Opus featuring good specifications and a reasonable price.

Power: 79
Desirability: 65

VALUE FOR MONEY: **

● PHILIPS NMS 9115

£799 • 01 689 2166 • 8088 CPU • 640K RAM • EGA • 1 parallel port • 1 serial port • 4 expansion slots • 20Mb hard drive
Philips is a company with a deservedly

CTC SYSTEMS



UNIT A35
Red Scar Industrial Estate,
Longridge Road, Ribbleson,
Preston, PR2 5NA

COMPUTER / VIDEO / HI-FI REPAIR CENTRE

ALL NEW COMPUTER REPAIR CENTRE
OUR FULLY TRAINED ENGINEERS ARE ON SITE
FROM 9.30am to 5.00pm MONDAY TO FRIDAY EACH WEEK
TO DEAL WITH ALL REPAIRS & ENQUIRIES.

We can arrange for same day courier pick up of any machine.
For details ring through before 11.00am.

Courier prices start at £12.90 or £30 for next day return pick up.

ATARI ST

All repairs of Atari computers and peripherals undertaken.
Prices start with minimum charge of £25 inc. VAT.

Cumana internal 1 megabyte Disk Drives
FITTED.....£84.99
KIT.....£59.99

1 Megabyte upgrades from: £110 fitted.
A to B bootswitches fitted: £22.99

COMMODORE AMIGA

All repairs of Commodore Amiga computers and peripherals undertaken.
Prices start with minimum charge of £30 inc. VAT.

Cumana internal 1 megabyte Disc Drives
FITTED.....£86.99
KIT.....£62.99

Upgrades on Amigas ring for details.

All repairs of 8 bit computers are undertaken ie. Amstrad, Spectrum, C16, C64, Atari 800 etc.

Prices start with minimum charge of £15 inc. VAT.

OPENING SOON ALL NEW TV/VIDEO AND SATELLITE EQUIPMENT REPAIR CENTRE.

ALL REPAIRS AND MODIFICATIONS ARE GUARANTEED FOR 3 MONTHS AFTER DATE OF REPAIR.

PRESTON (0772) 793652 24 HR HOTLINE

ATARI ST and AMIGA

Sixteen Bit Superdeals from the Sixteen Bit Specialists !

CUSTOMERS PLEASE NOTE! When comparing prices remember ours include fast delivery by courier.

NEW !! **520 STFM Power Pack** **£359.00** **Now includes Hyperpack**
Inc. VAT and Next Day Delivery

Power Pack includes:

- ★ 520 STFM 512K Keyboard with Built-in 1 Megabyte disk drive and TV Modulator
- ★ Over £550 worth of games software, including OutRun, Gauntlet 2, R-Type, Space Harrier, Super HangOn and 16 more Top Games
- ★ Organiser Business Software including WORDPROCESSOR, SPREADSHEET and DATABASE.
- ★ First BASIC and First Music Utility Software
- ★ FREE JOYSTICK AND FREE MOUSE MAT WORTH £4.95
- ★ All leads, manuals PLUS MOUSE and free mains plug!

REMEMBER! Many ST's do not come with BASIC - ours come with ST BASIC REV D by Metacomco.

520STFM Explorer Pack **£279.00** **Now includes Hyperpack**

- ★ Explorer Pack Includes 520STFM 512K Keyboard with built-in 1 Megabyte Disk Drive and TV Modulator
- ★ 1 FREE Game, ST Tutorial and METACOMCO Basic worth £25.00
- ★ All Leads, Manuals PLUS MOUSE and FREE Mains Plug! ★ Free mouse mat worth £4.95

1040STFM Super Pack **£439.00**

- ★ Includes 1 megabyte keyboard PLUS £450 worth of software. Comprising 21 games and Organiser Business Software. Also includes Metacomco BASIC, Mouse Pad, all Leads, Manuals and Mouse.

1040STFM Business Pack **£439.00**

Business Pack includes:

- ★ Atari 1040STFM Keyboard with 1 meg memory and 1 meg built-in disk drive plus TV modulator.
- ★ £385 worth of Business Software including MICROSOFT WRITE word processor (£150), SUPERBASE PERSONAL Database (£60) and VIP PROFESSIONAL Lotus 123 Spreadsheet clone (£150). Metacomco Basic (£25.00)
- ★ All leads, manuals and mouse.

MEGA 1 BUSINESS PACK **£529.00**

Features:

- ★ Separate Keyboard and System Unit
- ★ All the Software included with 1040 STFM Business Pack.
- ★ Blitter chip installed for faster graphics

Inc SM124 Mono Monitor..... £628.00

ACCESSORIES

Quickshot II Turbo Joystick.....£9.95	Branded Memorex 3.5" DS DD Disks
Competition Pro 5000 Joystick.....£13.95	Box of 10.....£13.95
Competition Pro with Autofire.....£14.95	Memorex Disk Box
Konix Speedking Joystick.....£11.95	For 40 3.5" Disks.....£8.95
Red Mouse Mat with Amiga logo.....£5.95	Amiga 1/2 Meg Expansion.....£119.95
Plain blue Mouse Mat.....£4.95	Control Centre Atari or Amiga.....£39.95
Contriver Amiga and ST Mouse with FREE Holder and Mouse Pad £20.95	

PRINTERS

Star LC24-10 24 pin incl. lead ST/Amiga.....£259.00	
Star LC10 including interface lead for ST/Amiga.....£169.00	
Star LC10 colour including interface lead for ST/Amiga.....£219.00	
Citizen 120D including interface lead for ST/Amiga.....£159.00	
SEIKOSHA 80 COLUMN PRINTERS - AMAZING PRICES	
Seikosha 9 pin NLQ including interface lead for ST/Amiga.....£139.00	
Seikosha 24 pin LQ including interface lead for ST/Amiga.....£239.00	

Amiga A500 BAT Games Pack **£399.00** **NEW!**
Inc VAT and Next Day Delivery

BAT Games Pack includes:

- ★ Amiga A500 512K Keyboard with Built-in 1 Megabyte disk drive.
- ★ Free TV modulator worth £24.99 allowing you to use the Amiga with a normal TV.
- ★ DELUXE PAINT II and PHOTON PAINT Graphic Packages WORTH over £100!
- ★ FREE, only-just-released BATMAN - THE MOVIE games software.
- ★ NEW ZEALAND STORY arcade games software.
- ★ F16 - INTERCEPTOR - amazing 3D flight simulator software.
- ★ A further £230 worth of Games Software, including BUGGY BOY, MERCENARY, BARBARIAN, WIZBALL & six more games.
- ★ FREE MOUSE MAT worth £4.95
- ★ Amiga BASIC, Amiga EXTRAS 1.3, Workbench 1.3 PLUS the Amiga Step by Step Tutorial.
- ★ All leads, manuals PLUS MOUSE and mains plug!

Amiga A500 Business & Games Pack **£479.00** **NEW!**

- ★ Includes Amiga A500 and TV modulator PLUS BATMAN: THE MOVIE, F18 INTERCEPTOR, NEW ZEALAND STORY and in addition a comprehensive suite of business programs including: KIND WORDS II, Word Processor (featuring Spellchecker and Thesaurus), HOME ACCOUNTS by Digita International and SUPERBASE PERSONAL database software.

AMIGA 1 MEG BAT GAME PACK **£529.00** **NEW!**

1 Meg Bat Games Pack includes:

- ★ Fitted 1 Megabyte Memory Expansion + Real Time Clock Card
- ★ Everything listed for the A500 Bat Game Pack
- ★ DRAGON'S LAIR 1 MEG MEGAGAME!

EXTERNAL DISK DRIVES

Atari SF314 1 Megabyte.....£139.00
Amiga A1010 1 Megabyte.....£109.00
Cumana 1 Megabyte Atari or Amiga.....£99.95
NEC 1 Megabyte Atari or Amiga.....£89.95
Atari Megafile 30 Hard Disk.....£449.00
New! Commodore A590 20 meg hard disk.....£369.00
A590 Hard Disk + Memory Upgrade installed.....Phone

MONITORS

Commodore Amiga A1084 Stereo colour Monitor inc lead.....£249.00
Atari SC1224 Colour Monitor inc lead.....£259.00
Atari SM124 Mono Monitor including lead.....£104.00
Philips CM8833 stereo colour monitor inc. lead for ST or Amiga.....£239.00



CREDIT CARD ORDERLINE ☎ 0908 378008 (Mon - Sat 9am - 6pm)
 To order either call the orderline above with your Credit Card details OR make a cheque or P.O. payable to Digicom Computer Services and send it with your order to the address below. Callers are also most welcome at the address below



DIGICOM



Unit 36, Wharfside, Fenny Stratford, MILTON KEYNES MK2 2AZ
 All prices include VAT and delivery by courier



**MENTION
TECHNICAL SERVICES**

**THE NEW SEGA MEGADRIVE!
ONLY £199.95 with FREE Game**

(Alex Kidd).

NOTE: This machine is Pal Composite so ALL WORK WITH PAL AND RGB. (Scart, Amstrad etc).

NOTE: Unlike other Companies' inferior imports this machine does not overload the data bus so all future peripherals will work (Ask about leads hanging from other machines!!)

INCLUDES: 1 Year Guarantee, Full UK Instructions, will also run ALL future Sega Cartridges.

This is the only Machine which currently runs the American (Genesis) range of software and any future releases. It also works with the NEW "Personal Arcade Plus" Machine!

0436 78827

Enquiries: For Full List of Hardware/ Software, send a Large SAE to:

**MENTION, PO BOX 18
Helensburgh,
Dunbartonshire.**

Trade PC Engines from
Active Sales and Marketing.
Tel: 01 384 2701
Fax: 01 371 0839



SENSATIONAL SCOOP PURCHASE

We have purchased the entire stocks of AMSTRADS super stylish Computer desks.

These modern stylish desks are in dark grey finish, and are self assembly. They can be assembled with a screwdriver in less than 10 minutes, and are extremely strong and practical. Normal price is £39.99 but we are offering these at the incredible low price of £9.99 + P.P. YES - only £9.99 for this superb computer desk.

To be sure of your order, and avoiding disappointments rush the order form below with your remittance. Sorry no C.O.D.

**CREDIT CARD
HOT-LINE**



021-568 6464

ENQUIRIES: 021-568 6400 FAX: 021-588 6003. Anglo European Marketing (Mail order Div) 61-66 Owen Road Ind. Est. Willenhall, West Midlands.

**SAME DAY DESPATCH
BY POST**

To: ANGLO EUROPEAN MARKETING (MAIL ORDER DIV)
61-66 OWEN ROAD INC EST WILLENHALL, WEST MIDS.

TEL: 021 568 6464 FAX: 021-568 6003 G.Eng 021-568 6400
PLEASE RUSH ME.....AMSTRAD COMPUTER DESK(1)
AT £9.99 + £4.00 P.P. I ENCLOSE CHEQUE/P.O Or charge my Access/Visa

Expiry Date: _____

Name: _____

Signature: _____

Address: _____

Post Code: _____

Tel No: _____

CASH CALLERS WELCOME

good reputation in the consumer electronics market place for good quality, reliable and well made equipment. The NMS 9115 is the mid-range PC compatible from the company, offering decent specifications and a moderate price, the machine is worth more than a cursory glance.

Power: 50
Desirability: 45

VALUE FOR MONEY: ***

● PHILIPS PC FAX 2

£1049 • 01 689 2166 • 8088 CPU • 640K RAM • DGA • 1 parallel port • 1 serial port • 4 expansion slots • 20Mb hard drive • internal FAX card

The Philips PC Fax-2 offers the unusual add-on of a FAX card included in the price. An ideal computer for those concerned with communication as well as computing.

Power: 50
Desirability: 60

VALUE FOR MONEY: *

● RSC 386T 20

£2229 (from) • 0923 243301 • 80386 CPU • 2Mb RAM • EGA • 1 parallel port • 2 serial ports • 8 expansion slots • 40-122Mb hard drive

Top of the range 386 computer from relative newcomer RSC. Thoughtful design and quality construction guarantee the machine a share of the market.

Power: 97
Desirability: 75

VALUE FOR MONEY: ***

● SAMSUNG SPC 3000/2

£699 • 01 391 0168 • 8088 CPU • 640K RAM • CGA • 1 parallel port • 1 serial port • 7 expansion slots • 5.25 floppy

Entry-level PC compatible from Korean computer manufacturer Samsung. The SPC3000 offers a good range of expansion options, quality construction and reliability.

Power: 41
Desirability: 50

VALUE FOR MONEY: **

● SAMSUNG MFC 6000/2

£1499 • 01 391 0168 • 0168 • 80286 CPU • 1MB RAM • EGA • 1 parallel port • 1 serial port • 6 expansion slots • 20Mb hard drive • 1.2Mb floppy

Samsung's attempt at attracting the power user, the MFC6000 computer is powerful and like all Samsung computers, well made and reliable.

Power: 45
Desirability: 47

VALUE FOR MONEY: ***

● SCHNEIDER EURO PC

£458.85 • 0604 766572 • 8088 CPU • 512K RAM • CGA • 1 parallel port • 1 serial port • 1 expansion slot • 3.5 floppy • bundled software

Entry-level PC compatible which breaks with the traditional '3 box' style of PC design and instead, includes mother-

board and drive in the keyboard (similar to Atari ST and Commodore Amiga) - fine but where do you put expansion cards? There is one expansion port at the rear of the computer the use of which entails having your add-on hanging free at the exposed rear. Definitely for those with severely limited budgets (for another £50 you can have the Amstrad PC1640).

Power: 31
Desirability: 5

VALUE FOR MONEY: no stars

● SCHNEIDER TOWER AT

£799 (from) • 0604 766572 • 80286 CPU • 512K • EGA • 1 serial port • 1 parallel port • 5 expansion slots • 20Mb hard drive bundled software

The exact opposite of Schneider's other computer the Euro PC, the Tower AT is aimed at the power user with money to burn. The machine, however, offers reasonable specifications at a very moderate price and as such deserves your attention.

Power: 50
Desirability: 45

VALUE FOR MONEY: ***

● TANDON PCX20

£1045 • 0572 46800 • 80C88 CPU • 640K RAM • CGA • 1 parallel port • 1 serial port • 5 expansion slots • 20Mb hard drive

Tandon is a computer manufacturer responsible for a large range of PC and AT compatibles. The PCX 20 is an entry level computer which is robust and fully featured - worthy of close examination for those looking for a first PC.

Power: 47
Desirability: 50

VALUE FOR MONEY: ***

● TANDON PAC286 1.2 PLUS

£1688 • 0572 46800 • 80286 CPU • 1 Mb RAM DISPLAY 1 parallel port • 1 serial port • 3 expansion slots • 20 Mb hard drive • 1.2Mb floppy

Mid-range 286-based AT compatible from Tandon featuring a high density floppy drive as standard. It is a little expensive.

Power: 65
Desirability: 55

VALUE FOR MONEY: **

● TANDON 382/20 110

£3399 • 0572 46800 • 80386 CPU • 1 Mb RAM • VGA • 1 parallel port • 1 serial port • 5 expansion slots • 110 Mb hard drive • Microsoft windows

Top of range Tandon 386 featuring large capacity 110 megabyte hard drive, robust construction and reliability. This machine has everything you could ask of a PC compatible machine and has a price to match.

Power: 79
Desirability: 65

VALUE FOR MONEY: ***

● TANDY 1000SL

£695 (from) • 0922 710000 • 8086 CPU • 384K RAM • CGA • 1 parallel port • 1 serial port • 5 expansion slots • 20Mb hard drive
Tandy (AKA Radio Shack in the States) is a company with a large amount of experience in the electronics industry. Tandy has numerous outlets around the country and the person-power to cope with warranty repairs etc. Consequently Tandy PC compatibles are a suprisingly good buy if a little expensive. The 1000SL is an unusual looking entry level computer which suffers from a small RAM to large price ratio.

Power: 44
Desirability: 20

VALUE FOR MONEY: ***

● TANDY 5000MC

£4995 • 0922 710000 • 80386 CPU • 2Mb RAM • EGA • 1 parallel port • 1 serial port • 10 expansion slots • 40Mb hard drive • bundled software
Fully-featured 386 computer from Tandy. A high quality of construction and plenty of expansion possibilities ensure the 5000MC a rosy future.

Power: 99
Desirability: 75

VALUE FOR MONEY: **

● VICTOR VPC11C

£1099 (from) • 0494 461600 • 8086 CPU •

640K RAM • CGA • 1 parallel port • 1 serial port • 3 expansion slots • 30-60Mb hard drive

No frills PC compatible from relative new-comer Victor. The machine is well made, has a super keyboard and crisp display. A little expensive at £1100.

Power: 48
Desirability: 35

VALUE FOR MONEY: ***

● VICTOR V286S

£2499 • 0494 461600 • 80286 CPU • 1Mb hard drive • CGA • 1 parallel port • 1 serial port • 8 expansion slots • 40-130Mb hard drive

The V286S is the mid-range machine of the six machines currently marketed by Victor. This machine is rather expensive, but of stout and reliable construction.

Power: 70
Desirability: 60

VALUE FOR MONEY: **

● VICTOR V386S

£3999 • 0494 461600 • 80386 CPU • 2Mb RAM • 1 parallel port • 1 serial port • 8 expansion slots • 130Mb hard drive

Top of range 386-based computer from Victor. Expensive.

Power: 95
Desirability: 70

VALUE FOR MONEY: ****

● VIGLEN VIG1

£789 • 01 843 9903 • V20 CPU • 640K RAM • CGA • 1 parallel port • 1 serial port • 5 expansion slots • 30Mb hard drive

The VIG 1 is an imaginatively titled entry-level computer from Viglen. Fully-featured and cheap, the machine deserves a second look.

Power: 57

Desirability: 50

VALUE FOR MONEY: **

● VIGLEN VIG1 PLUS

£1189 • 01 843 9903 • 80286 CPU • 640K RAM • VGA • 1 parallel port • 1 serial port • 5 expansion slots • 30Mb hard drive

Mid-range 286 machine from Viglen

labouring under the unfortunate name of VIG1 (sounds rather like a Gerry and Sylvia Anderson creation) which nonetheless is an excellent and cheap computer worthy of your attention.

Power: 77

Desirability: 70

VALUE FOR MONEY: ***

● ZENITH EASY PC

£499 • 06286 68588 • V40 CPU • 512K RAM • CGA • 1 parallel port • 1 serial port • no expansion slots • 3.5 floppy

Vaunted as an entry level PC, but it doesn't cut the mustard..

Power: 29
Desirability: 5

VALUE FOR MONEY: no stars.

IN NEXT WEEK'S SHOPPING EXPRESS
50 BEST WORD PROCESSORS

DISKS

3" CF2	Per 5.....£10.22
	Per 10.....£19.52
3.5" DS/135tpi	Per 10.....£11.26
	Per 25.....£19.52
5.25" DS/96tpi	Per 10.....£5.61
	Per 25.....£12.56

DISK STORAGE - TOUGH LOCKABLE

Box for 3"	Holds 30.....£8.48
Box for 3.5"	Holds 30.....£8.48
Box for 5.25"	Holds 100.....£9.96

RIBBON REFRESH

The unique fabric ribbon restorer 160ml can
£7.78 + VAT

RIBBONS FOR ALL MAKES OF PRINTERS
If yours is not listed - give us a call

	1 off	2 off	5 off
	£	£	£
Amstrad DMP 2000	F 3.44	6.48	14.74
Amstrad DMP 4000	F 5.17	9.52	19.96
Amstrad 3000	F 3.44	6.48	14.74
Amstrad 8256/8512 Std. Life	F 3.44	6.48	14.74
Amstrad 8256/8512 LongLife	F 4.30	7.78	17.35
Amstrad 8256/8512 F Colours:			
Red, Blue, Green, Brown	F 4.30	7.78	17.35
Amstrad 8256/8512	MS 3.44	6.48	14.74
Amstrad 9512 Std. Life	F 3.44	6.48	14.74
Amstrad 9512 LongLife	F 4.30	7.78	17.35
Amstrad 9512 Fbr Colours:			
Red, Blue, Green, Brown	F 4.30	7.78	17.35
Amstrad 9512	MS 3.44	6.48	14.74
Brother AX10, AX15	F 3.65	6.95	16.42
Brother HR15/25/35	F 3.57	6.78	16.06
Brother HR15/25/35	MS 4.03	7.66	18.13
Citizen 120D	F 3.44	6.48	14.74
Citizen Premier 35	MS 2.43	4.62	10.94
Citizen Premier 35	F 2.99	5.69	13.45
Citizen MSP10	F 4.14	7.87	18.63
Commodore MPS801	F 3.34	6.35	15.03
Diablo Hytype II	F 2.99	5.69	13.45
Diablo Hytype II	MS 2.43	4.62	10.94
Epson FX1000, 105	F 4.30	7.78	17.35
Epson MX/RX/FX100	F 4.30	7.78	17.35
Epson MX/RX, FX800, FX85 FX80	F 3.44	6.48	14.74
Epson LX80/LX86	F 2.47	4.70	11.11
Epson LQ1500	F 4.22	8.03	18.99
Epson LQ800	F 4.14	7.87	18.63
Epson LQ1000	F 4.38	8.32	19.71
Epson EX800/1000	F 5.17	9.52	19.96
Epson LQ2500	F 4.73	8.99	21.28
Hewlett Packard Deskjet Cartridge	12.80	24.30	59.96
Qume 1v Sprint 7/9	F 4.30	7.78	17.35
Qume 1v Sprint 7/9	MS 3.44	6.48	14.74
Seikosha FP800 LongLife	F 4.30	7.78	17.35
Star Radix 15	F 5.47	10.40	24.61
Star SD15	F 5.68	10.79	25.56
Star NX15	F 5.71	10.85	25.69
Star LC10	F 4.30	7.78	17.35
Star LC2410	F 3.50	6.65	15.75
Star NB15	F 6.37	12.10	28.66
Star NL10	F 5.11	9.70	22.99
Star SD10	F 4.81	9.15	21.64
Star NC10	F 4.30	7.78	17.35

MS = Multistrike, F = Fabric

Dunning COMPUTER SERVICES

Dept NCE, 32 Granville Road, Bournemouth, Dorset. BH5 2AH



(0202) 431762

All prices include Carriage - just add V.A.T. @ 15%. Enquiries welcome on our Help Line. Cheques/P.O.'s with order please. Or phone Credit Card Hotline

PRINTER STANDS

UNIVERSAL TO FIT ANY PRINTER	£7.78
WIRE STAND TO FIT ALL 80 COL	£9.60

MONITOR SCREEN FILTERS

12" Mono	£11.85
14" Mono	£12.95
12" Colour	£14.35
14" Colour	£15.65

CONTINUOUS STATIONERY

	Forms/Box	Price/Box
		£
11 x 9.5		
1 Part 60GSM (M)	2000	13.88
1 Part 70GSM (M)	P 2000	15.68
1 Part 80GSM (M)	P 2000	17.40
1 Part 85GSM (M)	P 1000	11.76
2 Part NCR	P 1000	18.60
3 Part NCR	P 700	21.79
4 Part NCR	P 500	21.60
2 Part NCR TINT	1000	22.84
11.66 x 9.25 (A4)		
1 Part 60GSM (M)	P 2000	17.32
1 Part 70GSM (M)	P 2000	17.92
1 Part 80GSM (M)	P 2000	20.48
1 Part 85GSM (M)	P 1000	12.76
2 Part NCR 80/57	P 1000	29.20
11 x 14.5		
1 Part 60GSM	2000	17.76
1 Part 70GSM	2000	19.56
2 Part OTC	1000	20.03
2 Part NCR	1000	23.60

* = Plain or Music Ruled P = Plain only (M) = Micro perfs all edges
TINT = Coloured Paper 2 Part - White/Pink 3 Part - White/Yellow/Pink 4 Part - White/Yellow/Green/Pink

DRIVE CLEANERS

For 3" Head	£3.43
For 3 1/2" Head	£2.90
For 5 1/4" Head	£2.56

MOUSE PADS

Quality A4 Size Soft Pad	£4.30
--------------------------	-------

COMPUTER LABELS

	Top Quality Avery Brand FREE Tape Dispenser/Cutter worth £4.99 + VAT with every 10000 labels!		
	2000	5000	10000
	£	£	£
1 ACROSS			
2 3/4 x 15/16	6.96	14.48	25.52
2 3/4 x 1 7/16	8.48	18.04	32.13
3 1/2 x 15/16	7.39	15.52	27.43
3 1/2 x 1 7/16	9.52	21.70	36.83
3 1/2 x 1 15/16	12.96	28.57	51.78
4 x 15/16	7.78	16.61	29.52
4 x 1 7/16	9.96	21.43	38.52
4 x 1 15/16	13.09	28.83	52.13
2 ACROSS			
2 3/4 x 15/16	6.39	13.17	23.04
2 3/4 x 1 7/16	7.61	15.96	28.30
3 1/2 x 15/16	7.13	14.87	26.17
3 1/2 x 1 7/16	9.52	21.70	36.83
3 1/2 x 1 15/16	12.96	28.57	51.78
4 x 15/16	8.04	17.00	30.22
4 x 1 7/16	9.96	21.43	38.52
4 x 1 15/16	12.78	28.09	51.26
3 ACROSS			
2 3/4 x 15/16	6.23	12.85	22.32
2 3/4 x 1 7/16	7.51	15.76	27.80
3 1/2 x 15/16	6.36	15.90	28.10
3 1/2 x 1 7/16	8.48	18.04	32.13
3 1/2 x 1 15/16	11.46	24.63	44.52
4 x 15/16	7.13	14.87	26.17
4 x 1 7/16	9.66	20.83	37.52
4 x 1 15/16	12.68	27.89	50.76

Evesham Micros

WE ACCEPT EXPRESS VOUCHERS

CAMBRIDGE SHOP NOW OPEN!
5 Glisson Road, Cambridge
Tel: (0223) 323898

All prices include VAT and Delivery

ATARI

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

520 STFM POWER PACK

Amazing value, all-new special ST package from Atari! Includes 520STFM with 1Mb drive, joystick, mouse, user guide, 5 disks of public domain software, plus an incredible selection of chart-topping software with a total RRP of over £500! Software included is:

- | | | | |
|---------------|-------------|-------------|-------------|
| R-Type | Pacmania | Out Run | Nebulus |
| Afterburner | Starfighter | Bombuzal | Starjumper |
| Double Dragon | Super Huey | Xenon | First Music |
| Super Hangon | Eliminator | Gauntlet II | First Basic |
| Space Harrier | Predator | Black Lamp | Organiser |
| Overlander | Bombjack | Starry | |

All for only £349.00
Inc VAT & delivery

520 STFM SUPER PACK

Fantastic value! Includes 520 STFM with 1Mb drive, software with a total RRP of over £620, joystick, mouse, User Guide and 5 disks of Public Domain Software. Software includes:

- | | | |
|-------------------|-------------|------------|
| Marble Madness | Test Drive | Chopper X |
| Beyond Ice Palace | Buggy Boy | Ranarama |
| Thundercats | Quadrailen | Starquake |
| Summer Olympiad | Xenon | Genesis |
| Arkanoid II | Wizball | Black Lamp |
| Eddie Edwards Ski | Seconds Out | Thrust |
| Ikar Wars | Zynaps | Organiser |

only £319.00
Inc VAT & delivery

- 520 STFM with 1Mb internal drive fitted £269.00
- 1040 STFM latest model, with built-in TV modulator £399.00
- 1040 STFM Super Pack: includes 21 software titles and games joystick as supplied with above '520 STFM SUPER PACK' offer £429.00
- 1040 STFM Hyper Pack, including 'Hyper Paint', 'Hyper Draw', 'First BASIC', 'Organiser' plus £50 Atari Software Offer Voucher £429.00
- Mega ST1 with monochrome monitor £599.00
- MEG ST2 with monochrome monitor £849.00
- SM124 monochrome monitor £119.00 bought with ST £110.00
- SC1224 colour monitor £279.00
- Philips CM8832 14" colour monitor c/w ST cable £219.00
- ITT CP3228 16.5" TV/Monitor with remote control & ST cable £229.00

AMIGA ACCESSORIES

- Amiga 500 Low Cost RAM/Clock expansion unit; ultra-quiet design £79.00
- External 5.25" 40/80 track switchable floppy drive £114.95
- Midi Interface by Omega Projects, including 30" serial connector £29.95
- Contriver Hi-Res replacement mouse, with mouse mat and pocket £22.95
- Vortex 'System 2000' 40Mb hard disk, with interface & software £529.00
- ITT CP3228 16.5" TV/Monitor with full remote control and SCART cable £229.00
- Philips CM8833 stereo sound version of above, + video/audio inputs, c/w cable .. £229.00
- Amiga 500 dust cover £4.95

DOUBLE TAKE!
PYE 15" FST TV/MONITOR
(MODEL 2325)

Superb quality, stylish medium resolution FST colour TV/monitor to suit the Amiga or Atari ST. Features teletext, full infra-red remote, SCART connector, Video/Audio inputs and headphone output, 40 tuner presets, ext. aerial connector and a loop aerial. Supplied with cable (please state computer type when ordering).

ALL THIS FOR JUST £269.00
Includes VAT and computer connection lead

Amiga & ST 3.5" Drives

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

Fully compatible, high quality 3.5" external drives for the ST and Amiga
Amiga version only £74.95
Atari ST version only £79.95
Prices include VAT & delivery

Western Digital Filecards

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

21MB...£225.00 32MB...£239.00 40MB...£289.00

3.5" disks

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

5.25" disks

25...£9.95 in 50 cap box £18.95
in 100 cap box £20.95
Fully guaranteed double sided media

Amstrad PC1512/1640/2086

We offer a wide choice of Amstrad PCs with many upgrade options. For the hard disk option, check our 'Evesham Upgraded Models'. Only the best will do - so we normally upgrade by means of a Western Digital Filecard, which includes XTree & SpeedRead software; however on single drive 1512/1640 models we can offer internal installations at the same price (leaving more expansion room but no upgrade opportunity for a 2nd floppy drive). Prices in lighter type exclude VAT.
Free with 1512 models... Ability and 4 US Gold Games

	SD	DD	AMS H.D.	SD 21MEG	DD 21MEG	SD 32MEG	DD 32MEG
MONO 1512	384.35 442.00	477.39 549.00	N/A N/A	580.00 667.00	673.04 774.00	592.17 681.00	685.22 788.00
COLOUR 1512	494.78 569.00	555.85 639.00	N/A N/A	690.43 794.00	751.30 864.00	702.81 808.00	783.48 878.00
MONO 1640	474.78 546.00	555.85 639.00	738.26 849.00	670.43 771.00	751.30 864.00	682.61 785.00	783.48 878.00
CGA 1640	581.74 669.00	651.30 749.00	825.22 949.00	777.39 894.00	846.96 974.00	789.57 908.00	859.13 988.00
EGA (EOD) 1640	677.39 779.00	738.26 849.00	938.26 1079.00	873.04 1004.00	933.91 1074.00	885.22 1018.00	946.09 1089.00
2086 MONO	584.35 649.00	633.91 729.00	813.04 935.00	760.00 874.00	829.57 954.00	772.17 888.00	841.74 968.00
2086 CD	656.52 755.00	726.09 835.00	903.48 1039.00	852.17 980.00	921.74 1060.00	864.35 994.00	933.91 1074.00
2086 12" HRCD	746.96 859.00	813.04 935.00	995.85 1145.00	942.61 1084.00	1008.70 1160.00	954.78 1098.00	1020.87 1174.00
2086 14" HRCD	833.91 959.00	903.48 1039.00	1086.09 1249.00	1029.57 1184.00	1099.13 1264.00	1033.04 1198.00	1111.30 1278.00

12 MONTHS ON-SITE MAINTENANCE NOW SUPPLIED WITH ALL MODELS OF PC1512, 1640 AND 2086 FREE OF CHARGE!

upgrades / accessories

- 1512 memory upgrade to 640K £39.95
- Maths Co-processor 8087-2 £129.00
- NEC V30 (8086 replacement) £24.95
- Cipher CT1525 tape streamer £319.00
- Amstrad Modem Card V21/23 £99.00
- Communicate Fax Card SR £199.00
- Enhancer 101 replacement keyboard ... £74.95
- 3.5" drive (720K) for SD models £79.95
- PC2000 series compatible 5.25" (360K) external drive £84.95
- Genius GM6000 Mouse package £34.95
- Konix PC Joystick & Controller Card £28.95

Amstrad PPCs

Low prices on all portable PCs - especially twin drive models prices in brackets are excluding VAT

- PPC512S (£373.04) £429.00
- PPC512D (£433.91) £499.00
- PPC640S (£477.39) £549.00
- PPC640D (£546.96) £629.00

Low price External 3.5" floppy drive (720K), suits any Amstrad PC 1512 1640 inc. DD and HD models, uses no expansion slots £99.95

Central Point Software

For all your PC disk management requirements

PC Tools Deluxe Ver.5.5...Other utilities may claim to 'do it all' but only PC Tools Deluxe is the complete disk utility package, providing a fast hard disk backup, the best undelete available, 100% safe formatting of floppy and hard disks, unformat, reliable disk caching, compress facility, in fact everything required to manage & protect your data at a sensible price.....£59.95

PRINTERS

All prices include VAT, delivery and cable



We use and recommend Star printers since they do offer an unbeatable combination of features, print quality, reliability and value. Get it right with a Star at our special, all in, prices. We can provide on-site maintenance contracts for only £5.75 extra.

- Star LC24-10 feature-packed multifold 24 pin printer, amazing low price ... £239.00
- Star LC10 best-selling 144/36cps printer, 4 NLQ fonts, inc.2 extra ribbons free .. £169.00
- Star LC10 7-colour version of above printer, inc.2 extra black ribbons £215.00
- Star LC15 wide carriage version of LC10 £329.00
- Star LC24-15 wide carriage version of LC24-10 £409.00
- Star FR-10 new Professional 9pin 300/76 cps, 31K buffer, 16 NLQ fonts, EE-PROM configuration memory and 12 months on-site maintenance £399.00
- Star FR-15 9pin as FR10, wide carriage version £499.00
- Star XB24-10 Professional 24pin: 27K buffer, 4 SLQ & 25 LQ fonts with EE-PROM configuration memory and 12 months on-site maintenance £499.00
- Star XB24-15 wide carriage version of XB24-10, with 41K buffer £649.00
- NEC P2200 budget 24pin, great value 168/56 cps £279.00
- Olivetti DM100S Super 9pin 200/30 cps, inc.12 months on-site maintenance ... £129.95
- Hewlett-Packard 'Deskjet' inkjet printer 240/120 cps £749.00
- Amstrad DMP3160/3250DI good value 10" 9pin £169.00
- Panasonic KXP1081 reliable budget 10" printer 120/24 cps £169.00
- Panasonic KXP1180 super new 9pin with over 3400 typestyles, 11" carriage £199.00
- Panasonic KXP1124 good quality 11" multifont 24pin printer £299.00
- Epson LX800 popular 10" 180/25 cps £179.00
- Epson LQ550 (was LQ500) good 24pin printer 150/50 cps £319.00
- Citizen 120D good value 10" 120 cps £139.00
- Mannesmann Tally MT-81 130/24 cps £149.00

HOW TO ORDER

All prices VAT/delivery inclusive
Express courier delivery £5.00 extra
Send cheque, P.O. or ACCESS/VISA details
Phone with ACCESS/VISA details
Govt., educ. & PLC official orders welcome
All goods subject to availability E.&O.E.
Open to callers 6 days, 9.30-5.30
Fax: 0386 765354

Evesham Micros Ltd

63 Bridge Street
Evesham
Worcs WR11 4SF
Tel: 0386 765500

Also at: 1762 Pershore Rd., Cotteridge, Birmingham, B30 3BH Tel: 021 458 4564

SHOPPING EXPRESS READER ADS

There are great bargains to be had in our reader ads section, but remember to check before you buy - Express cannot be held responsible for the quality of the goods on offer!

BULLETIN BOARD

SAS BBS (0742) 325232 V21/22/23/22BIS, 8N1, 24hrs. Online games, files, E-Mail, X-Net. We need local info. Providers Now! Call us today. All welcome. No fees! FNET Node #1022.

GNOMES, Toadstools, chat, help and telesoftware. All this and much (much) more on the Gnome at Home BBS, 01-888-8894. V23, 24hrs. UData. Be there or be square!!!

PUBLIC House BBS - Call 0222 221168. The Cardiff Bulletin Board for the Amiga. Many files on H.D. open 7pm to 9am weekdays and 24 hours w/ends. Bauds to 2400.

WEST Coast BBS Tel: 0752 670784 Speeds 300/300 12/75 8.N.I. Times 19.00 - 06.00 hrs daily. (P.C. Einstein CP/M + others under development) All welcome, why not call tonight?

BB USERS, SYSOPS. I am in the process of setting my own BB up and want contacts. Write to Gary, The Cottage, Church Road, Fundenhall, Norwich, Norfolk NR16 1EJ.

THE one to call, free for all. Bath BBS online 24 hours. Call now all speeds to 2400 Bath BBS 0225 835841. The Best (ST Board) in the West. M. Burrige, 43

Midford Road, Combe Down, Bath BA2 5RW.

PHONE one of the best BBS's in the west! IBM PC, Atari ST, and UCSD P-system supported, Pecan BBS - Bristol (0272) 248076, 24 hrs, V21, V22 and V22BIS.

PHANTOM viewdata BBS - 24 hrs. Tel: 0226 340425. Over one thousand pages on line - call today.

PC Forum Wildcat BBS. Tel: 0322 335348, World Wide Echo Mail, files, live games, also now read mail offline with QMX! Baud rates V21 V22 V23 BIS V23, call Tony today!

OLEF1 Your On-Line Electronic friend. A 24 hour BBS. It's FREE and all callers are welcome. Phone 01-882-9808.

CALL the brilliant Phantom Viewdata on (0226) 340425, V23v, 24 hours.

THE Loft BBS 0442 230461 Atari ST and IBM Downloads. Call now - Sysop Martin Carter.

WANTED: Bulletin Board software for the Amiga 500, basic set up, good money paid. If interested write to me at 18a Wyeveerne Road, Cathays, Cardiff, CF2 4BH. P.D. Software also.

USER GROUPS

LIVE IN SOUTH WALES? Interested in forming an Amiga Users Club? Then Phone Public House BBS on 0222 221168. For on-line info and files. weekdays, eve's and 24 hours w/ends.

COMPUTER TEACHER wants to help students making machine specific enquiries contact user groups please send your group details and address to Flute, 14 Grove Avenue, Little Waidingfield, Sudbury, Suffolk, CO10 0SX.

C64 disk contacts wanted. So please contact Les at 30 Gilmonby Road, Park End, Middlesborough, Cleveland, TS3 0AD. Or Tel: 0642 226256.

C64 tape user contacts wanted. So please contact Alan at 16 Marrick Road, Park End, Middlesborough, Cleveland, TS3 7RX.

SINCLAIR QL contacts wanted to exchange ideas, hints, tips etc. Write to Brad Grace, 76 The Willows, Clumber Street, Newcastle-upon-Tyne, NE4 7EY.

AMIGA contacts wanted: Write to Danny, 5 Becks North, Beverley, North Humberside HU17 0PR. Send disk or letter, 100% reply posted next day. Also Amiga cheats disk for sale £2 each.

COMPUTER Student Contacts Wanted. Write to A. M. Drewett, 37 Longdon Ave, Aylesbury, Bucks HP21 9UW.

AMIGA owners in Nottinghamshire! Please mail details to help create a local user network. S.A.E appreciated. Replies guaranteed. Be patient! Mansfield A500, 4 Poplar Street, Mansfield Woodhouse, Mansfield, Notts NG19 9LB.

INTERESTED in joining a Kick Off League in London? With trophies for winners? Contact Ray at 30 Windsor Crescent, Wembley Park, Middlesex, HA9 9AW or ring 01 904 0555 between 6pm-11pm.

64 (Tape) not disk - users club about to start up - going global soon. Trade, Demos, comps: For details S.A.E. to: D. Mason, EThorpe Hotel, Gerrards Cross, Bucks, SL9 8HY.

IS there a Clipper/DBase 3+ User Group in London? I will be grateful for any details. Guy Ellis, 23 Sussex St., Pimlico, London, SW1V 4RR.

ISLE OF WIGHT PC User Group. Anybody wishing to join should contact I.O.W. 0983 614277/614649 and ask for Sean.

BOURNEMOUTH and POOLE Atari User Group. Support for 8 Bit and ST. Monthly meetings. Membership £8.00. Quarterly Newsletter 8i16, £3.80 four issues. Details write to: 248 Wimborne Road, Oakdale, Poole, Dorset.

PCW Users Interested in P.D. send S.A.E. to: PCW-File, 18 Sunbrow, Haslemere, Surrey GU27 2QP. The PCW-File is on Boog BBS 0252 626233, 24hrs, V21/V23. No Fees.

IF You want to spread your groups in Asia. Send your latest + your demos to: Tariq, P.O. Box 3581 Safat, 13036, Kuwait. 100% reply, Amiga Only. Also will swap spot.

AMIGA Contacts wanted. Write to Simon, 30 Diamond St., Saltburn, Cleveland, TS12 1EB or Call (0287) 24167.

SPECTRUM Owners Join Indug, the World's largest Spectrum Users Group. Monthly Magazine, Discounts, Support + much more. Send A5 S.A.E. for full details to INDUG, 34 Bourton Road, Gloucester, GL4 0LE.

LAMER? Want to swap software, tips, demos and form a Lamers against Lamers Society? Then contact, Faisal Patel, 73 Track Road, Batley, W. Yorks, WF17 7AB.

THE Computer Information Club. A Club for PCW, PC, CPC, Spec+ and Atari, producing a Newsletter with hints, tips and discover soft-

CASPELL COMPUTER ☎ 0202 666155 [24 hr]

RIBBONS

Amstrad DMP 2/3000 series	2482	A
Amstrad DMP 4000	2426	E
Amstrad PCW8256 (L/Life)	*2741	D
Amstrad PCW9512	*2746	B
Brother HR15/25/40	*2696	B
Canon PW1080A	2223	D
Centronics GLP	2412	D
Citizen 120D/180E/LSP10	2488	B
Citizen MSP-40/50	2477	D
Commodore MPS801	2236	D
Epson FX/LX-80	2273	B
Epson LX/GX-80	2454	B
Epson LQ-500	2477	D
Epson RX-80	2273	B
Epson EX-800	2774	D
Epson Full Width	2320	D
Juki 6100 Daisywheel M/S	2563	B
NEC Pinwriter P1/P2	2254	D
NEC P2200	2844	D
NEC P6+/P7+	2870	E
Panasonic KXP-1081/1180	2228	D
Seikosha GP100	2317	B
Seikosha SL80 (L/Life)	*2741	D
Seikosha 500/550	2236	D
Shirwa CP80/MT80	*2698	D
Tatung/Commodore CP80	*2698	D
Star LC10	2861	B
Star LC24-10	2868	B
Star NL10	2761	D

Many others - please enquire!

* = Avail. in Fabric Nylon or M/Strike Film.

Please choose!

(Fabrics offer longer life and may be used with Ribbon Refresh!)

PRICE STRUCTURE

	1 off	2 off	5 off
A	£2.95	£5.75	£12.95
B	£3.95	£7.45	£16.95
C	£4.45	£7.95	£18.45
D	£4.95	£8.95	£19.95
E	£5.95	£10.95	£24.95

Prices include VAT & post

WE ALSO HAVE DISKS

and a Technical Library of 1500 BOOKS!

Please enquire!

FREE SUPPLIES CATALOGUE

24-page FULL BOOKLIST 50p (Only with goods)



PAPER

All prices per 1000 sheets incl. VAT

* P&P £2.50 any quantity

11/9.5 60gsm Listing	£6.45
11/9.5 70gsm Microperf	£7.95
11/9.5 85gsm Letter Qual	£9.95
A4 size 70gsm Microperf	£9.70
A4 size 85gsm Letter Qual	£10.95
11/9.5 2 part NCR	£19.40
A5 size Letter Quality paper, Upright (Portrait) Orientation, Microperf all edges for letter-writing	£13.90

Address Labels 3.5/1.5, 1- or 2- across £3.75 per 1000 (+£2.50 P&P)

At last - a unique new ink spray that restores ribbons in seconds

SAVE £££s ON RIBBONS

- Quick & Convenient.
- Restores & Re-inks faded ribbons in seconds!
- Refreshed ribbon lubricates print head for smoother running & enhanced printer life.
- Use on any fabric ribbon... again and again!
- Pays for itself the first two times you use it.



ONLY £8.95 inc VAT & post

Cheques/POs (no stamp needed) CASPELL COMPUTER SERVICES Dept NCE FREEPOST, Poole Dorset BH15 1BR Tel: 0202 666155 or 0202 35650 (24-hr) TRADE ENQUIRES & LOCAL AUTHORITY ORDERS WELCOMED Account enquires: 43 Emerson Rd., Poole Dorset BH15 1QS



AMIGA SUPERMARKET

EXTERNAL AMIGA DRIVE
 * 3.5" 880K FORMATTED
 * ON/OFF SWITCH
 * THROUGH PORT
 * SLIMLINE STEEL CASE
 FOR A500/1000/2000...£79.99

MODEMS — FREE CABLE
 DEMON MODEM + FREE A500 CABLE...£102.99
 DESIGNER MODEM + FREE A500 CABLE...£113.85
 PACE LINNET MODEM + FREE A500 CABLE...£174.99

MONO & STEREO DIGITISERS
 The best sounding (sample rates upto 70KHz), lowest priced (ready built & tested) AMIGA sound digitisers on the market AND compatible with a big range of sampler Software eg. AUDIOMASTER I & II, PERFECT SOUND, SONIX, FUTURE SOUND & others. Complete with audio input lead for connection to personal stereos, radios, keyboards etc.
FREE 'SOUND WORKSHOP' DISK
 A500/2000 MONO DIGITISER £27.99
 A500/2000 STEREO DIGITISER £37.99

MINIAMP 2 STEREO SPEAKER SYSTEM
 The AMIGA has the best stereo sound around — hear it through our MINIAMP 2 stereo speaker system. Two neat self contained, speakers & built-in stereo amplifier + handy remote volume control. Powered for the AMIGA (mains power pack optional). Complete with all leads — just plug-in & switch on.
 MINIAMP 2 FOR A500/2000...£19.99
 MINIAMP 2 FOR A1000...£19.99
 OPTIONAL MAINS POWER UNIT £5.99

MIDI INTERFACES — FREE MIDI LEAD
 Connect any Midi instrument to your A500 or 2000 with our low cost MIDI INTERFACES. Compatible with all AMIGA MIDI SOFTWARE. Just plug-in — no extra software, batteries or power supplies needed.
 MIDI 1 has IN THRU & OUT sockets. MIDI 2 has IN THRU & OUT sockets + two unique separately switchable out or thru sockets for added versatility with additional Midi instruments & sound expanders.
 MIDI 1 + FREE LEAD...£29.99
 MIDI 2 + FREE LEAD...£34.99
 EXTRA MIDI LEAD 5m...£4.99

TRILOGIC TV & MONITOR LEADS
 AL1 — AMIGA TO SCART TV OR MONITORS...£10.99
 AL2 — AMIGA TO FERGUSON 7/8PIN DIN...£10.99
 AL4 — AMIGA TO HITACHI 7 PIN DIN...£10.99
 AL6 — AMIGA TO AMSTRAD CPC COLOUR...£9.99
 ALL1 — AMIGA TO MULTISYNC MONITOR...£9.99
MANY OTHER TYPES AVAILABLE. LONGER LEADS TO ORDER £4.99 EXTRA ANY LENGTH

MONITOR SHARERS
 Want to use two computers (or 1 computer, 1 VCR) with one TV or monitor? NO MORE lead swapping if you connect our MONITOR SHARER switch. Your existing leads plug-in to Sharer, & lead from Sharer connects to TV or Monitor. Push button changeover switch can be used at anytime.
 FOR SCART TVs & MONITORS...£15.99

MOUSE JOYSTICK SWITCH — NEW IMPROVED MODEL
 A must for AMIGAS & STs — no more groping round the back, wearing out the mouse port or risking damage by not powering down before unplugging. With our Mouse/Joystick switch connect both & just push a button anytime to select which ever is needed — even when powered up.
 MOUSE JOYSTICK SWITCH...£12.99

PORT SHARER
 Our neat PORT SHARER switch has TWO Amiga compatible 25w female 'D' sockets for printers, & audio/video digitisers. Push-button changeover switch. Amiga cable included. **FREE CABLE** FOR A500/2000 & STs etc...£20.99

MINIAMP 4 STEREO SPEAKER SYSTEM
 Offers more power & louder speakers, with mains pack included. Separate 4 watt per channel amplifier, speakers / headphone socket + 4" dia twin cone heavy duty speakers.
ALSO FOR USE WITH ST, ARCHIMEDES, SPECTRUM + & SATELLITE TV RECEIVERS ETC.
 FOR A500/1000 /2000...£34.99
 PLEASE ENQUIRE FOR OTHER APPLICATIONS.

MINIAMP 5 STEREO SPEAKER SYSTEM
 The ultimate 3 way MINI HIFI BOOKSHELF SPEAKERS in solid alloy enclosure. Separate 5 watt per channel amplifier, speakers / headphone socket + Mains power unit & connecting lead.
ALSO FOR USE WITH ST, ARCHIMEDES & SATELLITE TV RECEIVERS ETC.
 FOR A500/1000 /2000...£69.99
 (SPEAKERS ALONE SOLD ELSEWHERE FOR £59.99)
 PLEASE ENQUIRE FOR OTHER APPLICATIONS.

DISK DRIVES

TELE RECEIVERS

LOW PRICES! FAST SERVICE!

GOOD RANGE OF AMIGA SOFTWARE STOCKED AT DISCOUNT PRICES — DETAILS IN OUR FREE CATALOGUE.

HOW TO ORDER

- To use this ad as an order form — tick the box next to the items you wish to order, add any carriage charges (see below), fill in coupon, send in the whole page with payment or quote Access or Visa number & expiry date. A new copy of the ad + our catalogue will be sent with your order.
 - Or write out your order + name & address on a separate sheet if you wish.
- 1) Orders under £15.00 — please add 75p
 2) Orders over £15.00 post free
 3) Optional express delivery — add £1.99 for small orders, or £5.00 for carrier delivery on computers, monitors, disk drives, printers. * FREE CARRIER DELIVERY ON ORDERS OVER £500 *
 4) Export orders despatched daily — add £1.99 extra for surface mail or £3.99 for airmail.

DUST COVERS — DON'T LEAVE IT EXPOSED!
 A500...£5.49
 A2000 — 2 COVERS...£9.99
 3.5" EXTERNAL DRIVE £24.99
 CM8833/8852 MONITOR £6.99
 1084/S MONITOR...£6.99
 CITIZEN 120D...£5.99
 STAR LC10/LC10 COLOUR £5.99
 Flame retardant antistatic PVC

SAVE £1 BUY A DISK BOX PLUS ANY PACK OF DISKS AND DEDUCT £1

DISK BOXES
 3.5" 40/50 DISK BOX £8.49
 3.5" 80 DISK BOX...£9.99
 3.5" 100 DISK BOX £11.99
 Lockable, smoked lid, antistatic

SONY DISKS
 10 for...£12.99
 25 for...£28.49
 50 for...£55.99
 100 for £99.99
 3.5" Ds/dd guaranteed plus FREE labels.

A500 RAM EXPANSION
 * 512K RAM
 * ON/OFF SWITCH FOR A500.
ONLY £89.99

ALL PRICES INC VAT

TV/MONITOR OFFERS.
 BRAND NEW TELEFUNKEN PORTABLE TV/MONITOR.
 • 14" SCREEN
 • FULL REMOTE CONTROL
 • SCART SOCKET
 • FREE LEAD - AMIGA or ST
 • HEADPHONE SOCKET
BARGAIN PRICE - ONLY £229.99
 inc vat, lead & delivery. Carrier delivery £5.00 extra. Hurry limited stocks. 15 & 17" FST models also available - phone for price.

COMPUTERS, PRINTERS, MONITORS
 ALL PRICES INCLUDE VAT & DELIVERY
 AMIGA A500 BATMAN PACK...£389.99
 C64 XMAS PACK...£144.99
 OC118N D/DRIVE FOR C64...£118.99
 CITIZEN 120D PRINTER...£138.99
 STAR LC10 PRINTER...£169.99
 STAR LC10 COLOUR...£214.99
 STAR LC24-10 24 PIN...£295.99
 STAR NX15 (WIDE CARRIAGE)...£329.99
 PANASONIC KX-P1081...£169.99
 PANASONIC KX-P1180...£194.99
 PANASONIC KX-P1124 24 PIN...£315.99
 PHILIPS CM8833 14" STEREO COLOUR MONITOR, FREE LEAD...£219.99
 ALL PRINTERS & MONITORS SUPPLIED WITH LEAD — PLEASE STATE COMPUTER * FREE CARRIER DELIVERY ON ORDERS OVER £500 *

PRINTER & MODEM LEADS
 AMP1 — A500 PARALLEL PRINTER CABLE 1.5m...£6.99
 AMP2 — A500 PARALLEL PRINTER CABLE 3.0m...£9.99
 NM1 — A500 — A500 NUL MODEM CABLE 1.5m...£7.99
 NM2 — A500 — A1000 NUL MODEM CABLE 1.5m...£7.99
 ML1 — DEMON & DESIGNER A500 MODEM LEAD...£9.99
 A1000 types also stocked.

USEFUL ODDS & ENDS
 REPLACEMENT MOUSE — FOR AMIGA, ST, AND C64...£29.99
 MOUSE MAT - A4, NON SLIP, RED OR BLUE...£4.99
 EXTERNAL DRIVE SWITCH FOR DF1 — NO EXPOSED PARTS...£8.99
 4 JOYSTICK ADAPTOR FOR 4 PLAYER GAMES...£8.99
 MODULATOR SPLITTER — CONNECT RGB LEAD & MODULATOR...£15.99
 MODULATOR EXTENSION LEAD APPROX 6" LONG...£8.99

OTHER PERIPHERALS
 MINIGEN — GENLOCK FOR A500...£109.99
 VORTEX 40 MB AUTOBOOT HARD DRIVE...£529.99
 COMMODORE A590 20Mb H/DRIVE...£389.99
 DIGIVIEW GOLD COLOUR VIDEO DIGITISER...£139.95
 B/W VIDEO CAMERA — HIGH QUALITY BY HITACHI...£239.99

NAME.....
 ADDRESS.....
 TEL. NO.....

EXPRESS DELIVERY £1.99 or £5.00
 EXPORT DELIVERY £1.99 or £3.99
 GOODS TOTAL £.....
 CARRIAGE TOTAL £.....
 TOTAL ENCLOSED £.....

CARD No.
 EXPIRY DATE
 SIGNED
 Address given above must be cardholders address.



PROMPT DESPATCH
FREE CATALOGUE
CALLERS WELCOME

TRILOGIC (Dept NCE)
 Unit 1
 253 New Works Road
 Bradford BD12 0QP



Fax 0274 600150

FAST MAIL ORDER — PROMPT DESPATCH. TELEPHONE ORDERS: 0274 691115 5 LINES

ENQUIRIES
 0274 678062



ware. Contact The Editor, 345 Western Way, Letchworth, Herts.

AMIGA Contacts wanted to start FREE beginners club in the south to swap games, cheats, tips etc. Please contact David after school on 0425 279835.

GWYNEDD, N. WALES. ST User Group. I want to get in touch with all local ST Users to form a new group. Contact S. Rammerling, Clogwyn Plas Gwyn, Pwllheli, Gwynedd, N. Wales, LLS 36UA.

AMIGA users group. Every Thursday night in South East London. All welcome, beginners, male or female, also wanted. Programmer to help with club. Contact: Alan, 01 708 0146.

SHARP users. Sharp users club, any model. The only one left for full support. Andrew Ferguson, 11 Harcourt Close, Henley-on-Thames, Oxon, RG9 1UZ. (0491) 514850 evenings please.

AMIGA contacts wanted: Write to Danny, 5 Becks North, Beverley, North Humberside HU17 OPR. Send disk or letter, 100% reply posted next day. Also Amiga cheats disk for sale £2 each.

COMPUTER Student Contacts Wanted. Write to A. M. Drewett, 37 Longdon Ave, Aylesbury, Bucks HP21 9UW.

AMIGA owners in Nottinghamshire! Please mail details to help create a local user network. S.A.E appreciated. Replies guaranteed. Be patient! Mansfield A500, 4 Poplar Street, Mansfield Woodhouse, Mansfield, Notts NG19 9LB.

INTERESTED in joining a Kick Off League in London? With trophies for winners? Contact Ray at 30 Windsor Crescent, Wembley Park, Middlesex, HA9 9AW or ring 01 904 0555 between 6pm-11pm.

64 (Tape) not disk - users club about to start up - going global soon. Trade, Demos, comps: For details S.A.E. to: D. Mason, Etorpe Hotel, Gerrards Cross, Bucks, SL9 8HY.

IS there a Clipper/DBase 3+ User Group in London? I will be grateful for any details. Guy Ellis, 23 Sussex St., Pimlico, London, SW1V 4RR.

ISLE OF WIGHT PC User Group. Anybody wishing to join should contact I.O.W. 0983 614277/614649 and ask for Sean.

BOURNEMOUTH and **POOLE** Atari User Group. Support for 8 Bit and ST. Monthly meetings. Membership £8.00. Quarterly Newsletter 8i16, £3.80 four issues. Details write to: 248 Wimborne Road, Oakdale, Poole, Dorset.

PCW Users Interested in P.D. send S.A.E. to: PCW-File, 18 Sunbrow, Haslemere, Surrey GU27 2QP. The PCW-File is on Boog BBS 0252 626233, 24hrs, V21/V23. No Fees.

IF You want to spread your groups in Asia. Send your latest + your demos to: Tariq, P.O. Box 3581 Safat, 13036, Kuwait. 100% reply, Amiga Only. Also will swap spot.

AMIGA Contacts wanted. Write to Simon, 30 Diamond St., Saltburn, Cleveland, TS12

1EB or Call (0287) 24167.

SPECTRUM Owners Join Indug, the World's largest Spectrum Users Group. Monthly Magazine, Discounts, Support + much more. Send A5 S.A.E. for full details to INDUG, 34 Bourton Road, Gloucester, GL4 0LE.

LAMER? Want to swap software, tips, demos and form a Lamers against Lamers Society? Then contact, Faisal Patel, 73 Track Road, Batley, W. Yorks, WF17 7AB.

THE Computer Information Club. A Club for PCW, PC, CPC, Spec+ and Atari, producing a Newsletter with hints, tips and discover software. Contact The Editor, 345 Western Way, Letchworth, Herts.

AMIGA Contacts wanted to start FREE beginners club in the south to swap games, cheats, tips etc. Please contact David after school on 0425 279835.

GWYNEDD, N. WALES. ST User Group. I want to get in touch with all local ST Users to form a new group. Contact S. Rammerling, Clogwyn Plas Gwyn, Pwllheli, Gwynedd, N. Wales, LLS 36UA.

● **HELP WANTED**

PROGRAMMER Wanted to develop with Atari ST Medieval game. Send demo or phone (0244) 821484, Justin, 14 Hawthorne Ave, Connahs Quay, Deeside, Clwyd, CH5 4TF, Serious programmers only, no fakes!

HELP wanted: does anyone know how to crack a Nimbus Net Work? Well write to: Chris 73 Hill-

brook Rd, London SW17 85F.

CAN anyone help with the Atari ST Bards Tale? In return I can help with other tips. Write to "Revendale" Hatshill Farm Close, Bickleigh PL6 7AH. (075 539600).

ANY info on TRS-80 level II computer and expansion interface 1140 for programming manuals? Mr V Smyth, 3 Fleming Drive, Newark, Notts NG24 2BA. Tel 702196

PCW 8256 recent disabled building worker need programs. Any help Loco tips programs. G McGuire, 54 Standard Road, Enfield, Middx. EN5 6DP. Tel: 0992 717199.

AMIGA contacts wanted in Ireland. The Cork region especially. Must be fast and reliable, write to Finbarr, 21 Loretto park, Friars Walk, Cork 4, Ireland. Overseas and all beginners welcome.

BASIC, Cheap Accounts and Invoicing Program wanted for IBM XT PC (MS-DOS) with 40Mb Hard Disk. Must produce printed invoices for home use only. Tel: J.B. (0394) 270151 x270 9am. to 5pm.

ST owner looking for STOS users who are interested. (Am only a beginner) contact Adrian on 0222 567596. Down with Amigas, Hi to Robert H., Ben and Mum, Dad and Emma.

WANTED: Maps of Bloodwych. I'm willing to pay for good maps, so give me a call on 01 876 5497 after 8pm. Ask for Eric.

DOES anyone know of an ST User Group in or about the Portsmouth area? Please contact Steve on Southsea 811321.

If you own one of the following micros...

**AMSTRAD - ATARI - AMIGA - BBC - ORIC
MSX - DRAGON - COMMODORE - 8-BIT
SPECTRUM - ARCHIMEDES EINSTEIN
ANY IBM COMPATIBLE**

THEN YOU NEED TO COME TO

**THE SCOTTISH
MICRO SHOW!!**

The Forum, Almondvale West, Livingston

Just off the M8 Edinburgh to Glasgow motorway.
Easy to find - Easy to park

SATURDAY, NOVEMBER 18, 10am - 5pm

★ **SPECIAL OFFERS FOR THE SHOW ONLY** ★

JUST IN TIME FOR CHRISTMAS!

For example: An 8-Bit computer complete with 3" built-in disk drive and colour monitor and much more...
ONLY £275 complete.

Organised by B&H Computers, Bank Top, Southwram, Halifax.
Tel: (0422) 330408. Traders wanting stands please call.



RAMSOFT

FORMERLY 16 BIT SOFTWARE

UNIT 1 DRAKE HOUSE
160 DRAKE STREET
ROCHDALE
LANCS OL16 1PX
TEL: 0706 43519



*** A500 BAT PACK ***



A500, TV Modulator, Joystick, Deluxe Paint II.
Interceptor. New Zealand Story, and Batman - The Movie

***** £369.00 *****

A500 BAT PACK +

This Pack as above
Plus Ten Star Pack.

1: Amegas, 2: Art of Chess, 3: Barbarian, 4: Buggy Boy,
5: Ikari Warriors 6: Insanity Flight, 7: Mercenary Comp,
8: Terrorpods, 9: Thundercats, 10: Wizball.

R.S. PRICE! £389.00

COMMODORE 1084S £249.00

PHILIPS CM 8833! £224.00

All Monitors Include Leads!

BASIC PACK

As Above Minus Bat Pack. Only a Few left at this price £339.00

MONITOR PACK
Buy any Pack & we will offer a Philips CM8833 for only £210.00 inc. lead.

Rom Upgrade
Upgrade your 1.2 Kickstart
New 1.3 Roms now available.
£29.00

PRINTERS

STAR LC 10 MONO £158.00

STAR LC 10 COL. £199.00

PRINTER RIBBONS
ALL MAKES AVAILABLE, LOW PRICE
EG; STAR LC-10 MONO £4.49.

ALL OUR PRINTER PRICES ARE INCLUSIVE OF LEADS

Q.tec 1 MEG 3.5" EXT. DRIVE, Low Power, Throughport, Slimline, Only £79.95

BULK 3.5" DISKS X10 + LABELS. ONLY! £7.99 - 100 CAP DISK BOX £9.00

JOYSTICKS... KONIX NAVIGATOR £12.95...QUICKSHOT II TURBO £9.99

**ACCESS
VISA
&
STYLE
WELCOME**

Please note, all our prices include VAT & Courier Delivery. All items despatched within 24 hrs, dependant on availability & cheque clearance, prices subject to change without prior notice at any time. E & OE.

Always

Reasonable

Reliable

And

No Fuss

COMPUTERS

AMIGA A500

Includes TV Modulator, mouse.
10 Star Pack + Photon Paint
RRP £339.00
OFFER PRICE.....£375.00

AMIGA A500 BATMAN PACK

Includes Batman The Movie,
New Zealand Story, F18
Interceptor, Deluxe Paint II, TV
Modulator
RRP £399.00
OFFER PRICE.....£375.00

A500 CLASS OF THE 90's PACK

Complete Educational Package
Extensive software, too much to list
Total Value - £1002.00
RRP £573.00

Our Price £516.00 inc VAT

Special Educational Discount available

Please ring for details

ATARI

ATARI 520 STFM POWER PACK

Inc. Hyperpaint, Hyperdraw and
Borodino

Includes 20 games, music
software, business organizer,
Hi-Soft basic
RRP £399.00

OFFER PRICE.....£360.00

ATARI 520 STFM EXPLORER PACK

Inc. Hyperpaint, Hyperdraw
and Borodino.
RRP £299.00

OFFER PRICE.....£275.00

COMMODORE C64 LIGHT FANTASTIC PACK

Includes Light gun, 3D glasses
and 9 quality software titles
£149.00

SPECTRUM SPECTRUM +2 PACK

Includes Light gun, 6 games
and joystick
£149.00

AMSTRAD PCW PCW 9512

+ Daisywheel printer
Plus Free Auto Sheet Feeder
RRP £573.00

OFFER PRICE.....£516.00



MONITORS

PHILIPS CM8833

Colour Med-res
RRP £299.00
OFFER PRICE.....£225.00
Includes lead ST/Amiga
Please state which

ATARI SM124

Mono hi-res
RRP £149.00
OFFER PRICE.....£99.00

DISK DRIVES

AMIGA

1Meg 3.5" Slimline
daisychainable, disable switch
OFFER PRICE.....£74.95

ATARI ST

1 Meg 3.5" Slimline
Joystick Powered
OFFER PRICE.....£69.95
OFFER PRICE with PSU£79.95

UPGRADES

A501

1/2 Meg upgrade with clock card
RRP £149.99
OFFER PRICE.....£129.00
1/2 Meg without clock.....£79.95
1/2 Meg with clock.....£89.95

PRINTERS

CITIZEN SWIFT 24 PIN DMP

Draft 192, LQ60, Friction/
tractor feed
RRP £441.00
OFFER PRICE.....£299.00
Price includes Amiga ST/PC lead, 2
year warranty

STAR LC10 9 PIN DMP

Including Lead
£169.00

STAR LC10 COLOUR PRINTER

Including Lead
£210.00

- Credit card 24 hour facility
- Credit cards not debited until goods despatched
- Offered subject to availability and price change
- Same day despatch on stock items
- Amstrad authorized business dealer
- Ring for price lists
- Large selection of games on most formats
- Large selection of business software IBM/PC compatibles

IBM/PC COMPATIBLE

AMSTRAD PC PC 1512

SD MONO.....£442
DD MONO.....£549
SD COLOUR.....£569
DD COLOUR.....£639

PC 2086

(Includes Lotus Symphony)

SD MONO.....£649
DD MONO.....£729
HD MONO.....£935
SD COLOUR.....£755
DD COLOUR.....£835
HD COLOUR.....£1,039

12" HI-RES COLOUR

SD £859 - DD £935 - HD £1,145

14" HI-RES COLOUR

SD £959 - DD £1,039 - HD £1,249

AMSTRAD PORTABLES

PPC 512.....D.....£429
PPC 512.....DD.....£499
PPC 1640.....D.....£549
PPC 1640.....DD.....£629

FREE Portable telephone with Amstrad Portables

COMMODORE PC

PC10

SD MONO.....£568
DD MONO.....£620
SD COLOUR.....£723
DD COLOUR.....£775
SD EGA COLOUR.....£878
DD EGA COLOUR.....£930

PC10 FRAMEWORK MOUSE & MPS 1230 PRINTER

MONO.....£982
COLOUR.....£1189
EGA COLOUR.....£1344
PC10-40 HD FRAMEWORK MOUSE
& MPS 1230 PRINTER

Mono.....£1189
Colour.....£1344
EGA Colour.....£1499

PC20 HD

MONO.....£826
COLOUR.....£982
EGA COLOUR.....£1137

PC30 HD WINDOWS & MOUSE

MONO.....£1240
COLOUR.....£1396
EGA COLOUR.....£1499

PC40 HD (VGA)

MONO.....£1650
COLOUR.....£1850

PC40 HD (VGA) TAPE STREAMER

MONO.....£1965
COLOUR.....£2195

Prices include 12 months on site maintenance

ATARI PC

PC3

DD EGA MONO.....£620

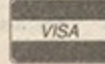
PC3 HD

30 Meg HD EGA MONO.....£826

PC4 HD

60 Meg HD EGA MONO.....£1445

60 Meg HD VGA Colour.....£1650



ARRAN

ARRAN

ARRAN

ARRAN

STATE
MAKE AND
MODEL OF
COMPUTER

Mail Order Send Cheques/PO to:
ARRAN COMPUTERS

17A LOWER HILLGATE, STOCKPORT
SK1 1JQ
TELEPHONE 061 480 3975

PRICES INC. VAT
P&P FREE UK ONLY
OVERSEAS ADD £3.00
NEXT DAY COURIER ADD £5.00

COMPUTER AUCTIONS

PRESENTED BY

B & T ENTERPRISES

Northolmes School - 18th November
Viewing from 9.30 am. Auction commences 11.30 am
CALL FOR FURTHER DETAILS
Phone 0403 791018

COMPUTER REPAIRS

Fixed Price Repairs For:
ACORN, AMIGA's, AMSTRAD, ATARI, COMMODORE,
SPECTRUM's, ST's and QL's.

Includes - Delivery, Parts, Labour, Full Service
V.A.T., 90 Day Warranty and 5 Day Turnround
(Subject to Parts Availability) Collection can be arranged.

Some faults and customer damage may incur a surcharge
All our Engineers are fully experienced in 8 & 16 Bit Technology
We also repair Business Computers, Monitors, Printers and
Computer Terminals etc.

Low Cost Maintenance Contracts Available.
Educational & Dealer Discounts Given.

Phone for details of our fully inclusive ST memory & drive upgrades

SHIELD COMPUTER SERVICES LTD
50 FLIXTON ROAD, URMSTON,
MANCHESTER M31 3AB

Telephone: 061 747 3185
Fax: 061 747 0515

MAKE YOUR MICRO EARN !

Yes making money with your micro becomes incidental when you know how. Your micro is, if only you knew it, a gold mine. The size and make is irrelevant. Make the initial effort **NOW** by starting your own

HOME BASED BUSINESS

This may be the most important move you will ever make!

REMEMBER: You'll never get rich by digging someone else's "ditch". Anyone in the country including YOU, can become very rich in a relatively short period of time just by doing a few basic things! It's more rewarding than playing games. The benefits are many and varied. Full or part time. For **FREE** details send S.A.E. to:

**HOME BASED BUSINESS**

31 PILTON PLACE (NCE 12)
KING AND QUEEN STREET
WALWORTH, LONDON SE17 1DR

**ALL COMPUTER HARDWARE AND
SOFTWARE WANTED FOR CASH
OR EXCHANGE**

NOTHING REFUSED!!

01 727 0424

Magnetic North

Amiga A500 includes Workbench 1.3, Mouse, Manuals etc.
ONLY £339.00 + VAT

ATARI 520
£265.00

Public Domain for ST, Amiga and IBM
£2.99 each

Price includes VAT and next day delivery

46 Cookson Street

Blackpool
FY1 3ED

Tel: (0253) 22637

Callers welcome by appointment



COMPUTER REPAIRS

Specialists in Home and Business Computers, all makes repaired.
ATARI, AMSTRAD, COMMODORE, SPECTRUM, SINCLAIR etc.
Atari Approved Service Centre.

We also repair Printers, Monitors, Disk Drives etc.
FREE estimates, all work fully guaranteed.

A.M.C., UNIT 4, WESTON ROAD INDUSTRIAL ESTATE,
STRATFORD-UPON-AVON, WARKS, CV37 0AH
0789 292269

SOUTHEAST KENT SOFTWARE

78, Southfleet Road, Orpington, Kent. BR6 9SW.
0689 50204

Amiga 500 + FREE T.V. Modulator£350.00
Atari 520 STFM Superpack£360.00

30% OFF ATARI/AMIGA GAMES

Vigilante£11.50
The Last Crusade£13.95
Licence to Kill£13.95

Business Software for Amstrad PCW,
Atari & Amiga

SEGA SOFTWARE 10% OFF RETAIL PRICES

Vigilante£22.00
California Games£22.00
Outrun 3D£22.00
Altered Beast£22.00

Joystick 20% off Retail Prices

Cheque or P.O. payable to:
J Ferguson


**Dungeon Mail Order
Dungeon Packs**


NEOPHYTE PACK	JOURNEYMAN PACK	ARCH MASTER PACK
Dungeon Master Dungeon Editor Secrets of the Dungeon 2 Disk Save games £34.99	Dungeon Master Secrets of the Dungeon Wand'ring Disk £29.99	Chaos Strikes Back Secrets of the Dungeon 3 blank disks for saving £24.99

28, Watergate Lane, Wollton, Liverpool, L25 8QJ

Microware Computer Services Est 1987. P.O. Box 2, Skegness, Lincs, PE25 2QL
Tel: 0754 610217

**Batpack Amiga 500 TV modulator, Batman The Movie,
DPaint II, Interceptor, New Zealand Story - £389.00**

Archimedes 3000 1Mb RAM Super Computer£699.00	Atari 520 STFM power pack£359.00
Atari 1040 STFM professional pk£449.00	Atari mega ST professional pk£529.00
Amiga Powerdrive 3 1/2 inch on/off Thr port£79.00	Cumana 5 1/4 inch Amiga drive£129.00
Amiga A500 512K RAM pk + clock£119.00	A590 20Mb hard disk 2 Mb RAM OK£379.00
Star LC10 printer£179.00	Star LC10 colour version£229.00

All products are UK spec., not unreliable imports
Phone for products not listed. Prices fully inclusive.

COMPUTER REPAIRS

ATARI ST, COMMODORE AMIGA,
Estimates given free of charge if required.

ATARI upgrade to 1 meg.....£95 Memory fitted
ATARI upgrade to 1 meg.....£95 Disc Drive fitted
ATARI Drive Reverse Make External Drive "A" Internal "B"
ATARI Mouse/Joy extension leads.....£7.50

AMIGA loading problems cured
Damaged unwanted computers bought for cash
Coffee removed from keyboard?

Please send computer to address shown below with history of
fault and power supply, leads, etc.

FUTURE ELECTRICAL & INSTRUMENT SERVICES
10 WEBER ROAD

MERSEYSIDE, L33 7SW

TELEPHONE: 051 548 6940 or 0695 25881 (evenings)

YOU SAW THIS SPACE!

So Do 24,637 other prospective
buyers every week!

To find out how this space could work for you,
CALL HELEN KIRKHOPE
on (0225) 446034

NOVA PRESENTS - FOR THE AMIGA

NOVA PD CLUB The spirit of Amiga P.D. Fish, TBAG, AGATron, Amicus and Nova collections ALL popular Amiga P.D. collections ONLY £2 per disk!!! Catalogue disk £1.50 - Updated FREE OF CHARGE Discount Hardware, Software. Disks from 67p each	★ NOVA DISK MAGAZINE - ISSUE 3 ★ Three disks+ FREE Nova PD Club catalogue - £6. ★ News, Reviews, Articles, Programs Plus Lots More ★ INCLUDES PLANS FOR A COMPLETE SOUND SAMPLER. ★ Programs Text and Art compressed by up to 65% ★ Please make all Cheques/PO's payable to NOVA.
--	--

Nova (NCE), 4 Octavian House, Dashwood Road, Banbury, Oxon. Tel: 0295 259682

★ DYNAMIC OFFER ★

**Amiga 500
512k MEMORY EXPANSION**

★ on/off switch ★ high quality ★ installed in seconds ★ fast efficient service

ONLY £69!

Please send your cheque (+£1 p&p) to:

**SPEED COMPUTERS LTD, 41 Weymde, Byfleet, Weybridge, Surrey, KT14 7DQ
Tel: 09323 52277**

Atari 8 Bit Disk New Releases From B.Ware Software - B. Bytes

Zoltan Escape...£5.99 A-Zone...£5.99 Darg...£5.99 B.Base 1...£12.95
Escaper...£5.99 Five Dice...£5.99 Cybor-Stien...£5.99

Please note - Cassette versions will be available on request

Atari ST New Releases From B.Ware Software - B. Bytes

Penguin...£19.99 Billy Bounce...£4.99 Super Card...£24.95 Jump Jack...£4.99

Over 100 Atari 8 Bit Programmes in Stock + Books and Accessories

B.Ware Software/B.Bytes, 19 Southfield Rd, Hinckley, Leics LE10 1UA
Tel: 0455 613377

Visa, Access, AM Express.
Price lists available. Please ring or write.
State computer. Open 9-6 Mon to Sat.

MID SUTHERLAND DATA

65, Burgage Drive, Rosshire, IU19 1DW
NOW DEALERS FOR STAR PRINTER RANGE

LC-10 Colour...£212.00
LC-10 Black...£166.50
LC-24 Black...£256.50

ALL PRICES ARE FULLY INCLUSIVE
Call 0862 3728 NOW!

RJ COMPUTERS

AMIGA 500 BATMAN PACK £369
(FREE S/W and Holiday offer)
ATARI 520STFM POWER PACK £359
EXPLORER PACK £269

PRINTERS
STAR LC10 £165 (Including Cable)
LC10 Colour £235 (Inc. Cable)

AMIGA RAM EXPANSION FROM £85.00
ST MEMORY UPGRADES FROM £85.00

WIDE RANGE OF PRODUCTS AVAILABLE AT COMPETITIVE PRICES, SOME OF WHICH ARE LISTED ON THIS AD.

**30 WESTBOURNE ROAD,
DOWNEND, BRISTOL.**
TEL: (0272) 566369



DISK DRIVES

AMIGA External £72.50
(Through port and disable switch)
ATARI ST External £79.99
(with disable switch)
ALL HIGH QUALITY DRIVES

DISKS AND BOXES
ALL DISKS 100% ERROR FREE
3 1/2" 90p each
5 1/4" 45p each
3" £2.40 each.

BOXES

3 1/2" BOX (Holds 80) £6.50
5 1/4" BOX (Holds 50) £4.99

**ELECTRIC PD
MAIL ORDER**

Write or phone for your FREE price list quoting the name of your computer

	Comm. 64	Amst.	Spec.	Amiga.	ST.
Pacmania.....	£6.95	£6.65	£6.65	£13.95	£13.65
Thunderbirds.....	£6.95	£6.95	£6.95	£17.50	£16.50
Robocop.....	£6.95	£6.95	£6.95	£16.40	£13.65
Spitting Image.....	£6.95	£6.95	£6.95	£14.50	£13.95
Operation Wolf.....	£6.95	£6.95	£6.65	£16.50	£13.65

Prices include VAT and UK Postage & Packaging. Europe - add 70p per game. Outside Europe add £1 per game.
Cheques and P.O.'s to:

ELECTRIC P.D.
7 Park Road, Haltwhistle,
Northumberland, NE49 9AR
Tel: (0434) 321942

WANTED FOR CASH

IBM COMPATIBLE COMPUTERS & EQUIPMENT
JOB LOT BUYER OF HARDWARE & SOFTWARE

SPECIAL OFFER

EASYWRITER 2 WORDPROCESSOR
ONLY £45.00

FOR YOUR BEST POSSIBLE DEAL CALL

EXPRESS COMPUTERS
(0604) 35519 OR FAX 35540

DAVID OR CHRIS
(DEPT NCE)

★ EXPERT POOLS PREDICTOR
(ATARI ST)**

As seen on a certain monthly magazine disk, latest version is V1.5, V2 coming soon.

Don't miss out!

Register as a user now!
only £10

**B. Campbell, 3 Teasel Walk,
Morecambe, Lancs LA3 3QQ**

16/32 P.D.

**PUBLIC DOMAIN
FOR THE ATARI ST**

Large Selection
Prices start from £1.00

Send A4 SAE with 25p stamp for catalogue or £1.25 for catalogue DISK with extra goodies to:

**35 Northcote Road, Strood
Kent ME2 2DH
Tel. 0634 710 788**

SuperMaths

Specially written for Amstrad PC's, PC's and compatibles. User friendly, enjoyable package: multiplication (including tables), division, addition and subtraction - 4 levels of difficulty - ages 5 upwards. Scores shown, success rewarded. PRACTICE and TEST (timed). WORKSHEET produces worksheets on printer with choice of styles, with separate answers.

Can provide hours of fun improving numeracy

Price (inc VAT/P&P) £18.95 (PC) and £14.95 (PCW). Cheques to Abacus Software, Dept NCE, 11 Woodcote Drive, Orpington, Kent BR6 8DB
Proprietor: JD Charlton

**T.C.
COMPUTERS**

12a Barnards Way, Charlton Heights
Wantage, Oxon OX12 7EB

★ NEW AMIGA PACKS ★

Amiga A500 Pack 1...£349
Amiga A500 Pack 2...£379
Amiga A500 Pack 3...£439
Amiga A500 Pack 4...£449
Amiga A500 Pack 5...£489
Amiga A500 Pack 6...£579
Amiga A500 Pack 7...£599
Amiga A500 Pack 8...£669
Amiga A500 Pack 9...£648
Amiga A500 Pack 10...£749
Commodore C64 Hollywood Pack...£140
Commodore C64 Entertainment Pack...£179
Atari 520 ST-FM New Power Pack...£349
Atari 1040ST-FM Ultimate Pack...£469
Sinclair +2 incl. Games & Joystick...£129
Sinclair +3 incl. Games & Joystick...£179
PRINTERS from £149. DISK DRIVES from £80

Commodore PC-10 III SD Mono...£570
Commodore PC-10 III SD CGA Colour...£710
Commodore PC-10 III SD EGA Colour...£890
Commodore PC-20 III SD 20Mb HC Mono...£825
Commodore PC-20 III SD 20Mb EGA Colour...£1199
Commodore PC-30 III SD 20Mb HD EGA Colour...£1449
Atari PC-3 SD Mono...£610
Atari PC-3 DD Mono...£660
Atari PC-3 DD CGA Colour...£760
Atari PC-3 DD EGA Colour...£899
Packard Bell PB 500 SD Mono...£635
Packard Bell PB 500 SD CGA Colour...£740
Packard Bell PB 500 SD EGA Colour...£760
Packard Bell PB 500 DD CGA Colour...£820
Packard Bell PB 500 SD 20Mb HD EGA Colour...£1079
Commodore PCs incl. FREE 12 month on-site warranty and 102 keyboard.
Packard Bell PCs incl. FREE software and 12 month on-site warranty.
Atari PCs incl. FREE software and mouse.
SOFTWARE at up to 30% OFF.
**OXFORDSHIRE'S PREMIER
COMMODORE DEALER**
WANTAGE 02357 - 60177 E+OE
ALL PRICES INCLUSIVE OF VAT

GO TO T.C COMPUTERS

WANTED: C64 owners who are interested in programming in M/C. Hints and tips appreciated. Phone Julian on 557121 after 5.30pm or write: 32 Hassell Drive, Easton, Bristol, BS2 0AJ.

ARE there any games for the Atari ST similar to the Repton Series on the BBC? Phone Mike: (0778) 422103.

WILL someone make an .IMG or .D00 or .PI3 file from a 1933 photo please. If so ring (0271) 860738 and I will pay costs and send disk and photo.

WANTED 64 Tape Computing March 1985 issue which included a game called League Soccer. If you have a copy please ring 0634 578958 after 6.30pm ask for Neil.

WANTED URGENTLY for 'Enigma' tape zine: 128k Spectrum music. Send files on tape to: Jon Rose 14 Lion Road, Nyetimber, Bognor Regis, West Sussex PO21 3JZ (SAE for return).

DOES anyone know how to drive an intigrex colour-jet on the Amiga? If you do please write: Jim Blacker, 17 Belle Vue Terrace, Lancaster LA1 4TY.

AMIGA contacts: swap, buy Amiga books, swap hints and tips on m/c and C. 100% reply. Tim, 20 Cliffe Vale Place, Stoke-on-Trent, ST4 7AN.

I need your views on piracy for 'O' grade project. Any replies will be greatly appreciated. Stuart White, 6 Queens Crescent, New Stevenson, Motherwell, Strath, Scotland, ML1 4JA. Thanks.

HELP hacking deflektor tape to disk. Also Op. Wolf and Renegade on Amstrad CPC 464 + Ram pack. Write: 6 Frank Street, Gt. Horton, Bradford.

WANTED Amstrad CPC6128 user's instruction manual. A. Cresswell, 69 Long Mynd Road, Northfield, Birmingham, B31 1HJ. Tel: 021 476 1542.

HELP needed for Amiga versions of Mercenary 1 + 2, Insanity Fight, Speedball, Populous and Terrorpods. Send to D. Sergeant, 11 Kingsley Close, London N2.

WANTED Boulderdash 3 for C64 on cassette, also does anyone know how to get the Missions on Elite C64 version. Contact Peter, 42 Brightfield Road, Lee Green, London, SE12 8QF.

AMIGA contacts wanted. Tel: (0272) 837252 ask for Simon, no lamers. Greets to Nex, Lance, Sub-zro, Hybrid Cyborg, Jolly Roger, Del, Speedy, Dennis, Jer, Youl, Leigh. Next Day delivery 100%.

AMIGA contacts wanted. The best for demos etc. Hi to Quarley, lads. No lamers, no beginners. 100% Tel: 0272 836696 phone after 6pm and ask for Richard.

WOULD like to hear from any Amiga A500 owners in Cornwall. Contact Chris on 0872 40225. Evenings & weekends.

MIRACOM WS3000. V22. Model one Modem manual wanted to buy or borrow. Literature would be treated with respect. Phone Merseyside 051 677 0396.

HAS any one got (for MSX) full instructions for Knights Knease m/c programme? E.J. Bowman, 5 The Street, Ovington, Thetford, Norfolk, IP25 6RX. 0953 881630.

WANTED: New Atari user seeks help, 3D Graphics and Fractals, 100% answer, no pirates. R. Frost, 35, Glencoe Road, Sheffield, S2.

AMIGA grafix artist needs coder etc. to make demos. Send disks of your stuff to: 68 Shefford Road, Meppershall, Shefford, Beds. Greets to: Jazz (the Rebel?) of Magnetic Fields???

HELP wanted: does anyone know where I can get the configuration program for a 10M ASB peripherals hard disc drive for Amstrad PCW? Tel: 0304 362671.

● MINI-TIPS

ELIMINATOR on the Atari ST: level codes - Amoeba Bloop Cheeki Doinok Enigma Flipme Geegee Handel Icicle Jammin Kikong Lapdog. Courtesy of Peter Hilton, Lancing, Sussex.

● GOODS WANTED

PASCAL wanted for Amiga A500. Good price paid. Tel: Rochdale (0706) 39924 evenings.

WANTED Cyrus II chess prog for the Spectrum 48K by Alligator Software. B. Whitby, 16 Mansfield Road, Kingsley, Warrington, Cheshire, (0928) 88942.

WANTED urgently. Cheap Sega software and hardware. Write with details to M. S. Lane, 28 Stapleton Road, Formby, Merseyside, L37 2YN. Especially after a cheap R-Type and fantasy games ie. J's Hurry.

MATTEL Intellivision console wanted, some games also required. Vectrex games also wanted. And who can give me info on "Sam Coupe"? Tel: Alx on 0205 84319 mornings only. Not Sundays.

WANTED Amiga Starray or Datastorm. Swap for 2 of following: Major Motion, Fire & Forget, Bionic Commando, Zynaps. Send game and choice of games to: J. Webb, 13 Newtown Road, Highbridge, Somerset, TA9 3HX.

AMIGA 1/2 Meg expansion board wanted suitable for A500. Phone 0909 482844.

CALC plus or Micro calc or similar spreadsheet for Plus 4. Will pay pst and good price. Tel: 09952 4219 after 2pm.

AMIGA S.D.I. by Cinemaware, boxed original wanted, good price paid, Tel: 0202 691306.

MODEM for Amiga with leads and software. Please make it cheap as I am disabled. 0536 203410, Sammy. Hi to all Celtic fans, Good luck Scotland - 15th Nov.

WANTED C64, CBM Disc Drive + Printer in Stoke-on-Trent area, money waiting. Tel: (0782) 526532 and ask for Dave.

WANTED for Atari 1040STF. Easy Draw + SuperCharger with/without 24 pin driver. Tel: 0242 528500. Ask for Fred.

ST games to swap: Falcon, F-16 Combat Pilot, Starglider 2, Conflict Europe and many more. Populous especially wanted. Phone Richard on (0252) 22411 Now!

EXCHANGE an Amiga ST Disk Drive for an Amiga Hand Scanner. The Drive won't read IBM disks. G. Keenan, 61 Glenfinnan Road, Glasgow, G80 8JG. (Ideal for back ups).

WANTED printer for Commodore 64 with paper etc. Also word processor software for same computer. Phone 01 770 7483 after 6.30pm.

WANTED A3 Pen Plotter. Good condition HP 7470 Emulation. 6 or 8 pens. Also Amstrad PCW8256 S/P Interface. Write Berry, 122 Whirlowdale Road, Sheffield, S7

2NJ. Phone 0742 360010.

SILENT Service wanted for ST. Can swap Elite etc. Original only or pay cash. Mike Knight, 6 Cranark Close, Chorley New Road, Bolton, Lancs.

WANTED Device known as 'MicroPulse ROM Box' for BBC model B micro. NOT repeat NOT sideways ROM board. Have Cumana Touch Pad to sell. Ring Tony Buxton (0298) 26800.

CPC 6128 Manual wanted. Tel: 0686 624765 after 6pm.

WANTED for Atari ST: any version of "First Word Plus", above V3.14. Write to Keith; 7 Pool Road, Leicester, LE3 9GH or Tel: 0533 823089, after 7pm.

WANTED Amiga A500, Colour Monitor, extra drive, upgrade plus load of software. Will pay up to £400 cash. Please tel: 0782 835291 anytime.

TAS-SIGN the sign writer for CPC6128. Unwanted gift, hardly used. £10 for quick sale. Original package and user manual. Telephone: 0389 52680 24 hrs.

WANTED Hewlett Packard calculator, any model with manuals. Also accessories if available. Please call 0836 649950 12 noon - 9pm anyday.

● PERSONAL

ANY Archimedes owners in NW Lancs with interests in Art, Digitising, Life, the Universe and everything. Please ring or write to: Phillip, 6 Back Church Street, Barrow Ford, Nelson, Lancs. 602836.

ATARI ST contact wanted. 100% reply. Write to: Zac, 101 Beeches Road, Great Barr, Birmingham, B42 2HL. Also midi contact wanted to exchange ideas etc. Pump up the jam!

AMIGA and 64 contacts wanted. Also any help with 6502 assembly language. Send your stuff to Darren Ditchburn, 26 Lister Avenue, Dunston, Tyne & Wear, NE11 9ER. No time wasters please.

BATH BBS. The only "Atari" based multi line Bulletin Board in the U.K. Call 0225 835841 - 840060 Atari Downloads - online multi-user games etc. The best in the west.

ATARI ST contacts wanted. Serious users only, interested in midi, CAD, DTP etc. Please write to Paul Stevenson, 142 Davenry Road, Rochdale, Lancs. OL11 2JE.

WANTED: Amiga contacts, write to: Nick, 20 Fairway, Princes Risborough, Bucks, HP17 9DH or ring 08444 2859. Also some PC Engine games for sale.

ST contacts wanted in the South Wales area to swap tips, hints, games etc. Contact Gary Tippetts, 74 Fonmon Park Road, Rhoose, Barry, South Glamorgan. 100% Reply. Tel: 0446 711392.

ZAC would like to hear of anyone who writes music via midi (Atari ST). Please contact me at 101 Beeches Road, Great Barr, Birmingham, B42 2HL.

● SERVICES

SPECTRUM Amstrad Programmers! Professional Programmer offers services to help you write your latest blockbuster

Music/FX/Code. Contact "Scatz", 82 Seagrave Road, Baldoyle, Dublin 13, Ireland. Reasonable rates.

● ANNOUNCEMENTS

ATARI ST Software for sale. 6 games £55 or separate for £10-£15 each. Games include Op. Wolf, Buffalo Bill's R.G., Running Man, R-Type, Power Drome and Nigel M. Grand Prix. Phone Keith (0442) 67855.

● HUMOUR

WHAT'S the difference between a Boeing 747 and an Amiga? Amigas don't crash quite as often! By Richard - the really really cool ST owner. Long live the ST!

● HELP OFFERED

"DUNGEON Master", any problem, any level. Completed 7 times! ST/Amiga. Will assist any way I can. Please phone (most evenings 7-10pm) (Weekends) Mike: 0743 249094. (Also SSI's - "Rings of Zilfin" and "Sword of Sodan").

● OTHER

CPC users. Come on, if you want to swap and share multiface pokes, you have to write to me asap - Carl Surry, 37 Fairfield Way, Barnet, Herts, EN5 2BQ.

AMIGA contacts wanted, immediate reply, all welcome to swap games, demos and especially graphics utilities. Write or phone today to Dipesh, 83 Sunningdale Road, Luton. (0582 425312).

● FOR SALE

SEGA in excellent condition with 27 games eg. Altered Beast, Rastan, Vigilante, Rampage, Time Soldiers, R-Type, with control pads and Konix joystick sell for £200 phone (0254) 53195 After 6pm.

GLP D/Matrix S/P Printer Tractor C/Roll units. Best offer secures. Buyer collects, pays car. Also Spectrum Kempstone 1/Face B.O.S. TEL George 0322 69897.

AMSTRAD CPC 464 with Green Monitors. Perfect condition, boxed, with manual, books, games, Mini Office 2, (seldom used), Guaranteed, £130 inc. postage/insurance. Stuart Miller, 53 Albert Street, Edinburgh.

AMSTRAD CPC6128 with Colour Monitor, Joystick, Speech ROM, Tape Recorder, Dust Covers, Blank Discs, Discs Box, Manuals and Software £230. Ring Andy for details 04022 23092.

OKI Micro Line 192 Printer for sale good condition, fast quality printer with multi Fonts cost £395 quick sale £150. Ideal for small business and word processing. Phone 01 788 3708.

CBM64 for sale, joysticks hardly used for £160, Sega Master System with 2 games control pads for £65 Together £220 or will swap for Amiga A500 phone 0633 894 673 after 5pm.

C64 original disk Super Star Ice Hockey with instructions by Mindscape only £4.50. Jack Diamond, 18 Walker Road, Ayr, Ayrshire, Scotland. KA8 9LB.

AMIGA 500+ External Drive + Modulator, + 2 joysticks, 160+ disks of software, disk boxes, mags, mouse mat, boxed as new, mint condition, valued at £3500+, offers £390 +. Tel: 0273 502281, 6pm - 10pm.

Ladbroke Computing



International
"The Country's Leading 16 Bit Specialist"

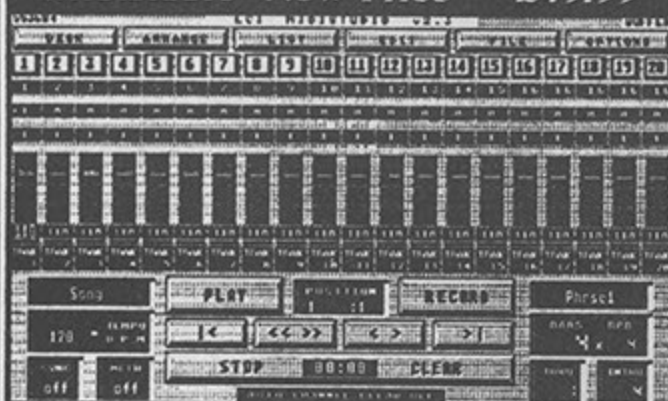


33 Ormskirk Road, Preston, PR1 2QP.
Open Mon. - Sat. 9:30 am to 5:00 pm
Dealer enquiries welcome.

You Can't Afford to Shop Elsewhere All Prices Inc. VAT

This company has given years of full support to computer users from their premises at 33 Ormskirk Road Preston. Now from their Mail Order premises they can offer this "second to none" service to users countrywide. All Software/Hardware is ex-stock and fully tested prior to purchase to ensure that returned goods are now a thing of the past. All hardware is supported by our on site engineers so that quick turn around on all repairs is guaranteed. There are no hidden extras WYSIWYG. ALL PRICES INCLUDE VAT AND DELIVERY on orders over £100 (Mainland UK) next day delivery +£5. All prices are correct at time of going to press and are subject to change without prior notice. Phone for latest prices, information advice we are always happy to help.

Midistudio New 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

A4 Flat bed Scanner £499.99

Ladbroke Computing's A4 Flat bed scanners, scan at 200 dpi. The mechanism includes a thermal printer which can be used in conjunction with the scanner to photo copy documents or as a stand alone printer. The scanner comes complete with scanning software which incorporates graphics editing software for touching up of scanned images. The software is available for the ST or Amiga. Ideal for DTP. Probably the most cost effective piece of office equipment you could own.

Limited offer ex-demo £349.99

Software 20% Discount

At Least 20% discount off all 16 bit games software.

E.G.	RRP	Our Price
	£19.99	£15.99
	£24.99	£19.99
	£19.99	£6.99
	£24.99	£9.99

Free delivery (Mainland UK only) on orders over £40, for orders under £40 add £2.50. Send SAE for catalogue

Phone for best prices

New Low Price Quality Scanning



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

The IMG Scanner can provide high quality graphics digitising for a tenth of the cost of other digitisers. This simple unit plugs into the cartridge port of the ST and accepts scanned information via optical cables which fix easily to the head of any Epson compatible printer. Images can be saved in raw data, Degas, Neo and IMG formats. Best results are achieved with photo copies. The Software supports scanning resolutions of 75,150,216,300,360 and 1000 dots per inch horizontally. An example disk is available which contains a slide show of low resolution images scanned with this product. The cost of this disk is £3.99, £2.00 of which is redeemable on purchase of a scanner.

Scan at up to 1000 DPI for Only £59.99

Low Price Printers

Star LC 10	£ 169.99 *
Star LC 10 Colour	£ 219.99 *
Star LC 24/10	£ 259.99 *
Epson LQ500	£ 319.99 *
Citizen 120D	£ 139.99 *
SLM 804 Laser	£1099.99 includes 90 days on site warranty

* All these printers carry a 12 months on site warranty and come complete with cable. On site warranty UK Mainland only.

Professional Printers

Star Laser printer 8, 1 Megabyte RAM as standard upgradeable to 2 Mb, 8 resident fonts, HP, IBM, Diablo, Epson emulation, 8 pages per minute, 300 dpi.	£1599.99
Star FR-10 9 pin	£ 399.99
Star FR-15 15" 9 pin	£ 514.99
Star XB-24/10 24 pin	£514.99 colour £ 554.99
Star XB-24/15 15" 24 pin	£699.99 colour £ 739.99

These Star printers have 12 months on site warranty (UK Mainland)

Hard drives

Vortex 40MB (ST & Amiga)	£499.99
Megafile 30 (ST)	£474.99
Megafile 60 (ST)	£599.99
Supra 30MB (ST)	£474.99
Third Coast 65 MB (ST)	£599.99
(Amiga)	£659.99

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/color 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.

40HD 42 Mb formatted, 11Ms average access time, 64K on board cache memory.	£549.99
50HD 48 Mb formatted, 30Ms.	£499.99
85HD 83 Mb formatted, 28Ms.	£699.99
180HD 180 Mb formatted, 20Ms.	£1299.99

Disk drives

Cumana slim 1Mg Drive (ST)	£89.99
Cumana internal 1Mg Drive (ST)	
(kit or fitted)	£74.99

Please note ST's case needs cutting for above internal drives.

Cumana 1Mg slim Drive, dis. switch, through port (Amiga)	£74.99
A/B boot switch (fitted) (ST)	£24.99

Monitors & Peripherals

SM 124 Mono	£119.99	PRO 5000 joystick	£8.99
SC 1224 Colour	£269.99	Dcom autofire joystick	£9.99
Phillips 8833 Colour	£249.99	Traker ball (ST-Amiga)	£24.99
Phillips 15" FST Remote,		Amiga Modulator	£24.99
Scart input, Tv with 40		Mouse/joystick extension	£5.99
tuner presets.	£234.99	ST clock cartridge	£24.95
Other TV's	phone	Hawk scanner	£1250

All monitors come with scart to ST/Amiga.

Repair Centre & Upgrades

Our Atari trained engineers can repair all hardware, inc Amigas, in minimum time at competitive prices.

UPGRADES EX-STOCK

1 Mg STM (fitted) (ST)	£ 94.99 *	Board + 1 Mg upgrade (fitted) (ST)	£129.99
1 Mg STFM (kit) (ST)	£ 69.99 *	Board + 2.5 Mg upgrade (fitted) (ST)	£299.99
STFM upgrade fitting service	£ 25	Board + 4 Mg upgrade (fitted) (ST)	£499.99
STFM Blitter chip upgrade (kit) (ST)	£ 39.99 *	STFM Blitter chip upgrade (fitted) (ST)	£ 49.99 *
512 K RAM Extension board (Amiga)	£ 19.99	RAM Extension populated (Amiga)	£ 89.99
RAM Extension board+clock (Amiga)	£ 29.99	RAM Extension+clock populated (Amiga)	£ 99.99

* Please check machine configuration before ordering. Fitting prices quoted for machines not previously tampered with. Due to the complexity of the installation we must install and upgrade the ST board for you. All upgrades and repairs carry our 3 months parts and labour guarantee.

SGSnet Networking for the ST

- Network up to 32 ST's
- Up to 500 ft between ST's
- Uses Midi Ports
- Supports up to 12 Hard disk or RAM disk partitions if present.
- Network permissions - node computers may be restricted from selected operations, such as file deletion, modification.
- Full data correction
- File locking
- Works in 512K

SGSnet Starter kit £149.95
SGSnet add-on-kit £99.95

Computer Systems

Amiga Batman Pack	£379.99
520 STFM Explorer Pack	£279.99
520 STFM Power Pack	£349.99
1040 STFM Power Pack	£459.99
1040 STFM Business Pack	£449.99
Mega ST 1+Mono Mon.	£599.99
Mega ST 2+Mono Mon.	£899.99
Mega ST 4+Mono Mon.	£1199.99

The Power Pack software consists of Organiser software, First BASIC, First Music, and twenty top quality games.

The 1040 STFM Business Pack and the Mega ST's all come complete with the Professional software pack consisting of Microsoft Write wordprocessor, VIP Professional spreadsheet, Superbase Personal database and Metacomco BASIC language.

Low Price Quality Disks

All our disks are top quality Sony, Maxcell or Kao products, not cheap imports. All disks carry an unconditional lifetime guarantee. Please add 60p postage and packing for each pack of ten disks.

Quantity	Unbranded		Sony Branded
	3.5" D/S	Boxed	Boxed
10	£8.99	£9.99	£10.99
100	£79.99	£82.99	£99

Disk Boxes & Dustcovers

20 3.5" disk box	£4.99	Computer dustcover	£3.99
50 3.5" disk box	£6.99	Monitor dustcover	£4.99
80/100 3.5" disk box	£9.99	Printer dustcover	£7.99
3.5" disk care kit	£3.99	Hard disk cover	£4.99
Others	phone	Disk drive cover	£2.99

Computer Systems

DTP Packs
This pack consists of Mega 21 or 4, external 3.5" drive or 30 Mb hard drive, SLM804 Laser printer, mono monitor, software, 90 days on site maintenance (Mainland UK only).

Atari Portfolio (pocket pc) £224.99
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 spreadsheet. 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.



(0772)203166 Fax 561071

Ladbroke Computing International is a trading name of Walton Marketing Limited.

To assist us in processing your order please quote this code:

SST/4

RARE, collectable, one Newbrain 32k computer, complete PSU's, leads, manual, software £50. One Aquarius, 16+16K computer, PSU, software manual, complete £50. + VIC20/ZX81 parts, ST books, various software. 0743 249194.

ATARI XF551 D/S 360K disk drive new, under warranty, boxed, little used, immaculate, with 3x boxes disks, manuals, cost (total) £190. Sell £95. (only five months old) Phone 0743 249094.

AMSTRAD CPC464, colour monitor, games and software worth over £700. mags, joystick, inst. book, perfect condition. Bargain £240. Phone Luton 0582 410228 after 5pm.

AMIGA 500 1.3 rom 1.meg + clock. 1081 monitor + stand. Canon 1080A printer. All as new £650. Basingstoke 781408.

SEGA master system includes five top games and two control pads. All for £125. Tel: 0245 329600

AMIGA 500, external drive, CM8833 monitor, WP, database and spreadsheet software, plus games. excellent condition £500 the lot. No split. Phone Ian (0427) 880364.

FOR Seikosha GP-50S, 2 ribbons and 3 rolls of 5" paper. Brand new. Never been used due to printer breaking down. A tanner the lot. Phone Gary on (0604) 863191.

AMSTRAD CPC 464, monitor, over £300 worth of software, drum machine and kits all worth over £600, will sell the lot for £160. Tel: 0245 329600.

LEAD GUITAR: 'Axe' and fender amp complete cost £200 but sell for £100 ono. Need money for an ST or swap for broken or dead ST all VGC. Tel Loughborough 267926.

SEGA games in excellent condition for sale. Cartridges: Outrun, Rambo 3, Soccer, Rocky, Tennis, Great Football, Wrestling, Volleyball, Marksman Shooting, Hang-On/Astro W. Each game £8 - £15 inc. P&P. Phone Jonathan 0592 200889.

YAMAHA PSS 470 Keyboard 21 voices, 12 rhythms, digital synth, custom drummer 49 keys, stereo sound auto bass £80 also Casio DK1 sampling, keyboard. £35 phone 041 551 0320 evenings.

1541 DISK DRIVE 25 games util. disks plus disk mags. and 40 blank disks and Action Replay cart. £130 phone 041 551 0320 evenings after 7.

SANYO Colour Video Camera, 200m Macro Focus Elect. Viewfinder. £200. Also ORIC 48k 33 Games joystick interface. Books £50 phone 041 551 0320 evenings after 7.

COMMODORE 64, printer, 5 1/4" disk drive, tape deck, cartridges sound sampler, extensive software collection on disk and tape manuals, books, and mags all for £400 ono. Contact Wayne 0484 657239.

COMMODORE 64/128 computer plus 1541 disk drive and, data recorder. Software & cartridges with box and manuals £190 ono 0689 50752.

ATARI 520STFM, 2 yrs old excellent condition over £600 worth of games, all original, plus multiface and joystick. Only £350 ono. Phone Swindon (0793) 881198.

ATARI 520 STFM with 1 meg drive plus

software for sale inc. Elite and Dungeon Master £350 or nearest offer. Call Phil on 051 339 7630 after 7pm.

PRINTER. DMP 2000 Dot Matrix. Epson Compatible with additional buffer chip. £85 plus postage. Fred Ball. 292 Bispham Road, Bispham, Blackpool FY2 0H2. Tel 0253 593530.

SPECTRUM +3 computer with control joystick and multiface 3 unit, games included. VGC £195 ono. Tel Swindon (0793) 826386.

OLIVETTI PC1 still under guarantee. With Lotus 1-2-3, Word Perfect 5, Wordstar, etc £550 or exch Amstrad PCW512. Twickenham, Alex Anderson 01 892 1336.

AMIGA A500 512k memory expansion board with clock as per A501. Brand new £80 ono. Tel Nigel 0923 777056.

APRICOT XI 10mb and single floppy with spreadsheet, Basic, w/p and diary. All manuals available. Will demonstrate. £325. 0378 73555.

BBC MASTER plus double sided disc drive and discs £300. Electron plus tapes £50. Buyer to collect. Phone 01 444 0709 after 8pm (Muswell Hill).

QL. Trump Card. Twin Nec. discs. Modem, books, lots of software. Green monitor and more. Offer. Tel 0495 790716 ask for Martin.

BBC B 2 disk drives, 40 TR + dual 80 Z80 second processor + software, modem Wordwise, DiscDoc ROM, replay ROM, ROM/RAM board, loads of software £450. Tel: John after 8 pm: 0522 693836.

AMSTRAD CPC 464 with green monitor (new condition, boxed), many games, Mini Office 2, books. Complete package, £130 inc.

postage/insurance. Genuine bargain. Contact: Stuart Miller, 53 Albert St, Edinburgh.

BBC B computer, complete with tape machine, manuals, joystick and tapes. The lot £250, perfect working order and condition, bargain. Contact: Miss King, 22 Geranium Walk, Colchester, Essex. Tel: 8971013.

SHARP IQ, the ultimate personal organiser, as new £140 o.n.o. Tel: 0993 843729, (Oxfordshire).

ST Flight Simulator II, as new £15. Also WANTED, Protext Filer and Office. Would swap Filer and Office for Flight Simulator II. Tel: 0734 6979 095.

SPECTRUM +3 disk drive computer complete with software. 18 months old, ideal first machine, £130 o.n.o. Tel: 0634 361465.

ST software, Populous, Battletech, Middle Earth, Bloodwych, Sleeping Gods, Demons Winter, Chrono Quest, Battle Chess, £9.00 each (plus more titles), Half Meg internal £20. Multiface ST V2-0 £25. Tel: 01-876 5407 after 8 pm.

ST software: dB Man £39, Haba Writer + Habaspell £24, Psion Chess, Scrabble De Luxe and Elite £8 each, Artscribe and Mdisk + £4 each. Tel: Bristol 741421, evenings.

ST monochrome monitor £60, Stand £5, Mouse £12, Microstuffer Clock Card £12, Computer Concepts back pack cartridge £12. Tel: Bristol 741421, evenings.

AMSTRAD CPC 464 with joystick, games (needs monitor or modulator) £80, Computer Express mags (issues 11 - 30) £7, Amiga Flight Sim. II £12, Daley Thompson £7. Tel: 01-648 8317.

C64 good condition, C2N cassette 1541 disk

JOHN RUSSELL & CO
VALUERS & AUCTIONEERS

FORTHCOMING AUCTIONS

of computer hardware & electronic equipment

Saturday 11th November 1989

Canons Leisure Centre, Madeira Road, Mitcham, Surrey

1200 lots of microcomputers & peripherals inc:

IBM & Compatible systems - IBM P/S 2 30,50,60 & 80 systems, Compaq 286 & 386, Deskpro & portable systems, Apple Mac Plus & SE systems, Laserwriters & other laser printers

Future Sale Date:

Saturday 25th November 1989

Dacorum College, The Marlowes, Hemel Hempstead, Herts

Saturday 9th December 1989

Southgate Technical College, High Street, London N14

Viewing & Testing 9.00am / Sales Start 10.30am

For further details and catalogue please contact:

01-681 5413

Selsdon House, 34 Selsdon Rd, South Croydon, Surrey CR2 6PB

**SPECIALISING IN COMPUTER HARDWARE
& COMMERCIAL EQUIPMENT**

BEST PRICES!



COMMODORE IBM PC COMPATIBLES

ALL COMMODORE PC COMPATIBLES SUPPLIED BY US COME WITH 1 YEARS ON SITE WARRANTY FREE OF CHARGE which means you can buy mail order without the worry of having to send a whole PC system back to us in the event of a fault. In the unlikely event of this happening, you are just a phone call away from an engineer who will visit the site wherever your PC is in the UK.

PC10 III Single Drive Mono XT £514.99
PC10 III Single Drive Colour XT £654.99
PC10 III Single Drive EGA XT £789.99

PC10 III Dual Drive Mono XT £574.99
PC10 III Dual Drive Colour XT £714.99
PC10 III Dual Drive EGA XT £859.99

PC10 III Dual Drive Mono XT with Framework II, Mouse & MPS1230 Printer £849.99

PC10 III Dual Drive Colour XT with Framework II, Mouse & MPS1230 Printer £1029.99

PC10 III Dual Drive EGA XT with Framework II, Mouse & MPS1230 Printer £1159.99

PC10/40 III Mono XT with Framework II, Mouse & MPS1230 Printer £1029.99

PC10/40 III Colour XT with Framework II, Mouse & MPS1230 Printer £1159.99

PC10/40 III EGA XT with Framework II, Mouse & MPS1230 Printer £1294.99

PC20 III 20Mb Hard Disk Mono XT £729.99
PC20 III 20Mb Hard Disk Colour XT £859.99
PC20 III 20Mb Hard Disk EGA XT £999.99

PC30 III 20Mb Hard Disk Mono 286AT with Mouse & Windows £1074.99

PC30 III 20Mb Hard Disk Colour 286AT with Mouse & Windows £1199.99

PC30 III 20Mb Hard Disk EGA 286AT with Mouse & Windows £1489.99

PC40 III 40Mb Hard Disk VGA Mono 286AT £1479.99
PC40 III 40Mb Hard Disk VGA Colour 286AT £1672.99

PC40 III 40Mb Hard Disk VGA Mono 286AT with 40Mb Tape Streamer £1779.99
PC40 III 40Mb Hard Disk VGA Colour 286AT with 40Mb Tape Streamer £1999.99

ALL COMMODORE PC PRICES INCLUDE DELIVERY BUT EXCLUDE VAT - PLEASE PHONE US FOR FURTHER DETAILS ON THESE SUPERB MACHINES - (0903) 700714

Amiga



AMIGA SOFTWARE

Altered Beast £16.95
Chambers of Chaolin £15.95
Damecles £15.95
Power Drift £16.95
Paul Gascoign £15.95
Strider £16.95
Kenny Dalglish £12.95
P 47 £15.95
Fighting Soccer £16.95

ATARI SM124

SM124 HIGH RESOLUTION MONOCHROME MONITOR FOR USE WITH ALL ATARI ST COMPUTERS - only

£99.99 Recommended Retail Price £149.99
INC VAT + DELIVERY

Star

All Star prices include VAT, parallel lead, delivery and 12 Months On Site Warranty

Star LC10 Mono £182.95
Star LC10 II Mono £209.95
Star LC10 Colour £229.95
Star LC15 Mono £349.95
Star LC24/10 259.95
Star LC24/15 £429.95
Star FR10 £384.95
Star FR15 £499.95
Colour Upgrade FR Range £34.95
Star XB24/10 £499.95
Star XB24/15 £659.95
Colour Upgrade XB Range £34.95

EPSON

All Epson prices include VAT, parallel lead, delivery and 12 Months On Site Warranty

Epson LX400 £189.95
Epson FX850 £399.95
Epson FX1050 £514.95
Epson EX800 £539.95
Epson EX1000 £699.95
Epson LQ500 £344.95
Epson LQ850 £564.95
Epson LQ1050 £699.95
Epson LQ2550 £1099.95

PHILIPS

All Philips prices include VAT & delivery.

PHILIPS 8833 - 14" med res, RGB/RGBI composite and audio inputs. Stereo and green text mode. FOR USE WITH ALL ST/AMIGA INCLUDES LEAD £219.95

PHILIPS 9043 - 14" med res colour. IBM CGA/EGA compatible. TTL 640x350 pixels. £259.95

PHILIPS 9053 - 14" high res colour. IBM CGA/EGA compatible. 640x350 pixels, dark glass anti-glare. Green/Amber text mode. Tilt/swivel stand. £299.95

PHILIPS 9809 - 14" high res colour VGA monitor. RGB analog. 0.29mm dot pitch. 640x480 pixels with stand. £399.95

ATARI MEGAFILE 30

30 Megabyte hard disk drive for all Atari ST computers. Mega styled case. DMA thru port. Includes VAT and delivery.

£429.95

THE ATARI PORTFOLIO

A full-featured personal computer in the palm of your hand.

- * MS-DOS Compatible
- * LOTUS 1-2-3 spreadsheet
- * Full text editor
- * Address book/phone dialing
- * Appointments diary
- * 128K Ram

A pocket sized PC at a pocket sized price....

And you used to say your Filofax was a godsend....

Atari Portfolio £229.95
Smart Parallel Interface £42.95
32K Memory Card £59.95
64K Memory Card £99.95
128K Memory Card £124.95



MANNESMANN TALLY

MANNESMANN TALLY MT81 PRINTER

- * 9 Pin Dot Matrix
- * Parallel Centronics I/face
- * 155 cps high speed
- * 130 cps draft
- * 26 cps NLQ
- * Epson/IBM compatible
- * Tractor feed
- * Single sheet feeder
- * Paper Parking
- * Includes cable
- * 1 Year On Site Warranty



£129.95
INC VAT AND DELIVERY

BLANK DISKS

All of our blank 3.5" disks are guaranteed double sided, double density & are all supplied with labels.

KAO 3.5" bulk disks

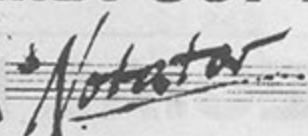
Quantity x 10 £6.85
Quantity x 20 £12.99
Quantity x 30 £18.99
Quantity x 50 £29.99
Quantity x 100 £56.99
Quantity x 200 £108.99
Quantity x 500 £264.99
Quantity x 1000 £529.99

All of our blank 5.25" disks are guaranteed double sided, double density & are all supplied with labels.

5.25" bulk disks :

Quantity x 10 £3.28
Quantity x 20 £6.34
Quantity x 30 £9.38
Quantity x 50 £14.95
Quantity x 100 £27.95
Quantity x 200 £53.95
Quantity x 500 £129.95
Quantity x 1000 £254.95

ST MIDI SOFTWARE



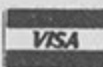
C-Lab Creator £219.95 (RRP£299.00)
C-Lab Notator £359.95 (RRP£499.00)
C-Lab Unitor/Notator £639.95 (RRP£834.95)
Steinberg Cubase £349.95 (RRP£500.00)
Steinberg Pro 24 Ver11 £214.95 (RRP£300.00)
Hybrid Arts EZ Track Plus £49.95 (RRP£59.95)
Dr.T KCS 1.7MPE £159.95 (RRP£199.95)
all other top packages available.

BEST PRICES

(DEPT NCE), UNIT A, GRAFTON PLACE, WORTHING, WEST SUSSEX. BN11 1QX



(0903) 700714



YOU CAN PLACE YOUR ORDER 24 HOURS A DAY

All prices include VAT and delivery unless otherwise stated. Goods despatched same day whenever possible. All prices are subject to change without notice. BEST PRICES only supply original equipment and not grey imports. All of our equipment is fully guaranteed. We stock all types of computer hardware and software - give us a call for our BEST PRICES. Mail order only, callers and collections only by prior arrangement with us. Thank You.

drive, modem, final cartridge, all cables, manuals, tapes, disks, £150. Tel: 061 962 2808.

AMSTRAD 6125 computer, green screen, TV modulator, mouse, games, disk, tape etc, still boxed and guaranteed. Worth over £800, only £500. Tel: 0920 467982.

AMSTRAD PPC 640D, dual drives, 2400 modem, as new £475. Also Philips CM8833 monitor again as new £150. Tel: John 0225 769945.

SEIKOSHA GP250X printer for sale, used once only, excellent condition but listing quality only, inc parallel cable, £100 o.n.o. Offers to Julian. 236 Glynswood, Chard, Somerset, TA20 1BG.

QUICK sale! PC Engine (PAL) and five games, £155. Also Sega, light phaser and nine games, £65. Will post. Phone Cardiff (0222) 487794 and ask for Ahmed. P.S hurry up!!!

AMIGA A500, as new with joystick, stereo speakers, £200, top software and Philips colour monitor, £430. Tel: 0630 57129 or sell Amiga only £320.

ATARI ST520FM, 1 Meg drive, board upgrade, lots of software, joysticks, prosound sampler, worth £800, bargain, £380, mint condition. Tel: 0778 341306, after 6.00 pm.

SEGA Master system for sale, incl. 9 top games, such as After Burner, Space Harrier etc. Still in box with 2 joypads, a bargain at £100. Tel: 0707 57646 and ask for Nick.

ALPHACOM 32 printer, one spare roll of paper, £25. Shrewsbury (0743) 59356 after 6 pm please.

SPECTRUM 128, printer, cassette recorder, RAM music machine, £300 software. Joystick interface, books, £150. No offers. Won't split. Tel: 0603 400921.

JUKI 6200 high quality daisy wheel printer, very good condition with lead, plus parallel interface. New ribbon, £185 o.n.o. Tel: Andy after 5pm 051 526 6708.

BBC B with DFS, Wordwise WP, disk drive, data recorder, all manuals, tapes, disks, many games, £295 o.n.o. Commodore 4040 5.25 floppy disk drive, hardly used, £135 o.n.o. Tel: 051 526 6000.

AMSTRAD CPC 464, colour monitor, 200+ games worth over £400, joystick, manuals, will accept £200. Tel: 01 594 4468.

ATARI 520ST, 1 Meg memory, dual 1 Meg drives, SM125 monitor MCC Pascal 2, GFA, Basic books, games, blank disks, mags, mouse mat, dust cover etc. Tel: Steve (daytime) 0932 884457 (Weybridge).

ZX SPECTRUM PC games, case, tape recorder, joystick and users book. all excellent condition, £200 o.n.o. Tel: David Brown 01 723 0352, day or night.

PROGRAMMABLE Logic Controller for sale 10 I/O unit D100 P.L.C + Programmer Liquid Crystal display screen for ladder circuits. Also IBM PC/XT/AT software program for the P.L.C. All for £250 o.n.o. Tel: 061 6330824.

BBC B 32K solidisk, sideways RAM 40/80T D.D. Discs Eprom Blower and eraser, various books 140H 16K and 70H 8K Eproms - 16 programmed, offers Tel: 0422 844122, evenings.

ARCHIMEDES A440 plus fast 40Mb hard disk. Under warranty only £1950. Nec Multi-sync II £400. Computer concepts scan junior £110. ROM Podule £50. The lot, only £2200. Tel: 0532 842780.

AMIGA 500, 200 disks plus lots of books and magazines. Includes joystick, mouse and modulator. V.G.C £370 for the lot. Tel: 0533 775505. Ask for Steve.

AMSTRAD 464 colour monitor for perfect display £300 worth of software, joystick and manual worth £700 + sell for £365 o.n.o. Phone Carl (0952) 592407 after 5 pm.

SPECTRUM +3, as new, including multiface 3, 40+ games, and brand new Cheetah joystick - £195 o.n.o. Also complete set of 4 volumes - input mags - £35. Tel: (0527) 70407 (after 6) or (0543) 250505 (day).

ACORN Electron, disk drive, Plus One expansion unit, loads of extras, send for more details. S M Stocks, 56 Park St, Birdholme, Chesterfield, 540 24D.

SEGA Master system, nine games, light gun and Speed King joystick. Worth over £300, will sell for £160 o.n.o. Tel: 01 866 6855, after 4 pm and ask for Daniel.

STAR LC10 printer, under guarantee, £100. Tel: Lynn 01 440 0095, after 6 pm.

SPECTRUM +2 joystick, manuals, over £150 software amplifier plus 80 mags (Your Sinclair, Crash etc) £180 o.n.o. Buyer collects. Tel: Cambs (0223) 424182.

AMSTRAD CPC 6218 with colour monitor, joystick, games disk, also includes Micro File, Database and Microword Word Processor, £250 o.n.o. Tel: Paul on 0272 612631.

CASIO HT3000 full size synth, fully programmable midi-RAM card facility cover - price £190, no offers. Tel: 061 865 2597 for more info.

PCW 8512. V.G.C. Locoscript 2, DTP, Tomahawk Sim., HHGG, Joystick Interface, Disks, Spare Ribbons, Books and Mags. Genuine reason for sale. No split, no offers. £390. Chester (0244) 544637. Pete.

SINCLAIR QL (JS) ROM in v.g.c. Plus manuals £60. Pascal compiler, Metacomco

plus manuals in v.g.c. £40. Phone 0709 850496.

C16 games pack for sale over 70 of the best games ever, the cost £30. May also swap for Amiga games. Call Nick (0689) 48380 after school hrs.

SEGA M-S for sale £50 o.n.o. with two games and Konix joystick, good condition and boxed. Also Sega games at under half price for sale. Call Nick (0689) 48380 after school hrs.

SWAP Atari 1040-ST/FM, SM125 Hi-res monitor, masses of good software, (and possibly Star LC-10 Printer), all mint condition, for IBM compatible laptop. Phone Terry: Runcorn (0928) 718655.

AMSTRAD CPC mono, printer and bags of software incl. SC5 Rodos also modem for Comms worth £1000+ sell for £475 o.n.o. Call Sumeet after 7pm on 01 794 2767.

DMP 3250 Amstrad printer never used, still in box. DMP 3100 ideal 2nd printer £50. Tel: 0460 20380.

CBM 64, Disk Drive, two Data Recorders, Modem, Plus Cartridges, Freeze Machine and quick disk+, Simons Basic, Mouse, Joystick, Software and more. £210 buyer collects. Phone Alan after 7pm. 0703 766949.

STAR NL10 Printer, as new. Complete with CBM64 Interface and lead, plus parallel interface. £105. Phone Alan after 7pm. 0703 766949.



HSV COMPUTER SERVICES LIMITED

Dept NCE, 23, Hampstead House, Town Centre, Basingstoke, RG21 1LG

SPECIAL DISK PRICES

QUANTITY (Price each)	25	50	100	250	500
5 1/4"	DS/DD 48 TPI	.27	.25	.23	.21
	DS/QD 96 TPI	.29	.27	.25	.23
	DS/HD 1.6 MB	.59	.57	.55	.53
3 1/2"	DS/DD 135 TPI	.69	.63	.61	.59
	DS/HD 2.0 MB	2.19	2.09	1.99	1.89

FULLY GUARANTEED, COMPLETE WITH LABELS OR ENVELOPES, LABELS AND TABS.

LOCKABLE DISK BOXES (5 1/4 or 3 1/2)

50 CAPACITY £5.95 100 CAPACITY..... £7.95

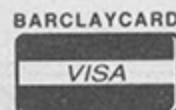
All prices are inclusive of VAT and Carriage.

Credit Card Hotline

(0256) 463507

Faxline

(0256) 841018



Orders under £8 in value carry a small order charge of £2

Laserink

35% AUTUMN OFFER

LASERINK ARE NOW OFFERING A MINIMUM OF 35% DISCOUNT ON ALL THE FOLLOWING PRINTER RANGES:

	RRP	LASERINK SELLING PRICE
STAR eg LC10	£199	£129
CITIZEN eg 180E	£179	£116
OLIVETTI eg DM105S colour	£249	£160
EPSON eg LQ1050	£849	£545
HEWLETT eg Deskjet		
PACKARD Plus	£795	£515

ALSO AVAILABLE AT SIMILAR DISCOUNTS BROTHER, RICOH, CANON, AND MANY MORE LASER PRINTERS AVAILABLE EX-STOCK INCLUDE:

	RRP	LASERINK SELLING PRICE
NEW HPLASERJET II P	£1299	£845
HPLASER JET II	£1999	£1265
HPLASERJET IID	£2999	£1979
OLIVETTIPG208	£1950	£1250
STAR LASER PRINTER "8"	£1989	£1245
BROTHER HL8E LASER	£1995	£1350
EPSON GQ 5000	£1699	£1099 NEW

CALL NOW AND SAVE ££££'s ON MOST PRINTERS AND CONSUMABLES

LASERINK THE FAST AND FRIENDLY COMPUTER AND PRINTER PEOPLE



0708 730259



**180a RUSH GREEN ROAD
ROMFORD, ESSEX RM7 0JU**

ALL PRICES QUOTED EXCLUDE VAT AND DELIVERY

ULTIMATE COMPUTERS

If you think you've tried the best... Try the ULTIMATE

Authorised Computer Dealers for AKHTER, AMSTRAD, EPSON, COMMODORE, HYUNDAI, OPUS, SHARP, MITAC, SCHNEIDER, All Products listed below carry a minimum 12 months return to base manufactures warranty. Please call for Optional ON-SITE-MAINTENANCE

The Largest Selection of Computers by Mail Order in the UK

AKHTER

MODEL	MON	COL	EGA
PC1000 -8088 512K S/D	499	799	
PC2000 -8088 640K HD20	799	1079	
PC100 -8088 640K S/D	499	799	
PC100 -8088 640K HD30	759	1025	
MINI-S 640K S/D	479	779	
MINI-D 640K D/D	499	799	
MINI-H 640K HD20	899	1199	
AT286-10 640K S/D	799	1099	
AT286-10 640K HD30	1099	1359	
AT286-16 1MB S/D VGA		1399	
AT286-16 1MB HD40 VGA		1759	
AT386-16 1MB S/D	1199		
AT386-16 1MB HD40	1549		
AT386-20 4MB S/D VGA		2229	
AT386-20 4MB HD40 VGA		2559	
AT386-20 4MB HD80 VGA		2999	

SCHNEIDER

MODEL	MON	COL	EGA
EURO PC	379	521	
EURO AT 512K S/D	759	949	
EURO AT 512K D/D 854	1091		
EURO AT 1MB S/D	854	949	1091
EURO AT 1MB D/D	949	1044	1139
EURO AT 512K H/D	1091	1234	
EURO AT 1MB H/D	1186	1329	1424
Schneider Accessories			
3.5" External Drive			113
5.25" External Drive			113
20Mb external Hard Disk			299
40Mb External Hard Disk			399
Monitor Stand			14
All Schneider PC's & AT's include Microsoft Works, Dos & Manuals + 12 Months on-site-warranty			

COMMODORE

MODEL	MON	COL	EGA
PC/XT COMPATIBLE			
PC10-S/D 640K	494	629	784
PC10-D/D 640K	539	674	809
PC20-H/D 640K	719	872	989
PC30 -HD 640K	841	946	1017
AT80286 COMPATIBLE - VGA'S			
PC40 -S/D 1MB	1053	1256	
PC40 -40MB 1MB	1378	1540	
PC40 + TAPE	1580	1783	
Call for special Commodore Bundles			

PORTABLES

MAKE	MODEL	PRICE
AMSTRAD	PPC512S	376
AMSTRAD	PPC512D	487
AMSTRAD	PPC640S	465
AMSTRAD	PPC640D	576
SHARP	4602	863
SHARP	4841	1483
SHARP	5541	2330
SHARP	7221	1899
SUPERSPORT	D/D	999
SUPERSPORT 286	20MB	2307
SUPERSPORT286	40MB	2741
TURBOSPORT 386	40MB	3607
HITACHI HL400	286 20MB	CALL
HITACHI HL500	386 40MB	CALL
AKHTER 286	3200 20MB	1954
SCHNEIDER	PC7640	1418

AMSTRAD

MODEL	MON	COL	EGA
PCW8256	324		
PCW8512	413		
PCW9512	443		
PC1512SD	376	456	
PC1512DD	456	536	
PC1640SD	471	560	648
PC1640DD	535	624	713
PC1640HD	713	802	891
PC2086SD	555	644	733
PC2086DD	622	711	800
PC2086HD	800	888	977
PC2286DD	999	977	1066
PC2286HD	1066	1155	1244
PC2386HD	1777	1866	1955

HYUNDAI

MODEL	MON	COL	EGA
Super-16 -840K 9.77Mhz Metal Casing			
SUPER-16S/D	499	599	699
SUPER-16D/D	599	699	799
SUPER-16 30MB	699	799	899
Super 286 features 640K Ram 12Mhz			
SUPER 286 S/D	849	949	1049
SUPER 286 D/D	949	1049	1149
SUPER 286 20MB	1199	1299	1399
SUPER 286 30MB	1249	1349	1449
SUPER 286 40MB	1299	1399	1499
SUPER 286 80MB	CALL	CALL	CALL
NOTICE Hyundai comes highly recommended			

OPUS

MODEL	MON	COL	EGA	VGA
PC III 1MB DD	698	978	1105	
PC III 1MB HD30	887	1221	1472	
PC IV 1MB HD20	1065		1421	
PC V 1MB HD30	1221	1500	1661	
PC V 4MB HD40	2221		2665	
PC VI 1MB HD40	1550		1821	
PC VI 1MB HD80	1687		1965	
PC7 1MB HD70	2666		2855	
PC7 2MB HD70	2888		3277	
PC7 4MB HD70	3222		3611	
MSDOS	65			

Corporate / Education Discounts available on request

MITAC

MODEL	MON	COL	EGA
MITAC 88 512K	586		
MITAC 88 20MBHD	780		1102
MITAC 1000L PS/2	730	830	VGA'S
MITAC 1000L PS/2	963	1163	VGA'S
MITAC 286SL HD20	1030	1209	1332
MITAC 286SL HD42	1163	1342	1465
MITAC 286V HD42	1463	1663	VGA'S
MITAC 286V HD102	1930	2130	VGA'S
MITAC 286VEHD42	1596	1796	VGA'S
MITAC 286VEHD102	2063	2263	VGA'S
MITAC 386 HD42	2330	2568	VGA'S
MITAC 386 HD102	2796	3130	VGA'S

All MITAC Systems come complete with 12 Months on-site-warranty

PHILIPS

MODEL	MON	COL	EGA
Videowriter 150	258		
Videowriter 4260	345		
Videowriter 4460	432		
8088-2x3.5"	555	644	727
8088-20MB HD	727	833	933
80286 20MB DD	1425	1552	1720
80286 DD	860	1283	1467
80286 20MB SD	1342	1467	1635
80286 2x3.5" + FAX	764		
As Above + Printer	899		

BUILD YOUR OWN

PRODUCT	PRICE
Chassis	From 49
Power Supplies	From 59
Motherboards	From 99
256-15 Drams	From 4.50
Video Controllers	From 39
Disk Controllers	From 49
I/O Controllers	From 29
Mono Monitors	From 59
Colour Monitors	From 169
Ega Monitors	From 230
84 Key Keyboards	From 49
102 Key Keyboards	From 55
5.25" Floppy Drive 360k	From 39
5.25" Floppy Drive 1.2Mb	From 49
3.5" Floppy Drive 720k	From 59
3.5" Floppy Drive 1.44Mb	From 69

AMIGA

MODEL	PRICE
AMIGA 500 + 10 Star pack	318
AMIGA 500 + 500 Air Miles	388
AMIGA 500 + ram + pack	434
AMIGA 500 + Colour Mon	533
AMIGA 2000 + K/B + Pack	922
AMIGA 2000 + Col Mon + Pack	1144
AMIGA A501 512K Upgrade	94
AMIGA A520 Modulator	20

Call for Amiga & Atari Latest Software

ATARI

MODEL	PRICE
ATARI 520ST-FM + exp-pack	240
ATARI 520ST-FM + super pack	309
ATARI 520ST-FM + mono + ex-pk	317
ATARI 520ST-FM + mono + sp-pk	366
ATARI 1040ST-FM + super pack	386
ATARI 1040ST-FM + pro pack	386
ATARI 1040ST-FM + mono + sup	463
ATARI 1040ST-FM + mono + pro	463
ATARI Mega ST 1MB + pro pack	456
ATARI Mega ST 2MB + pro pack	722
ATARI Mega ST 4MB + pro pack	989
5" 500K Floppy	130
3.5" 1Mb Floppy	173
20Mb Hard Disk	521
12" High Res Mono Monitor	77
14" Med Res Colour Monitor	172

BIT'S & PIECES

Model	PRICE
Popular Modems	
Amstrad V21-V22-V22bis-V23	125
Akhter V21-V22-V22bis-V23	119
Printer Buffers & T Switches	
Acco -In line 64K Buffer Par	95
Acco -In Line 128K Buffer Par	145
Upgrade 64K serial	140
Upgrade 256K serial	256
MP Parallel T Switch	30
MP Serial T Switch	32
MP Parallel 4-way T Switch	45
MP Serial 4-way T Switch	49
PC Compatible Mice	
Logitech serial mouse + software	73
Logitech Bus mouse + software	73
Summouse + Gem collection	159

NETWORKS

We Specialise in Network Solutions:-
For example a four user system for the busy accounts office with economy in mind:-

PRODUCT	QTY	PRICE
Super-16 S/D Mono	4	1996
30Mb Hardcard	1	269
Ethernet Adapter 10Mhz	4	548
PC/MS-Net Software	1	141
Cables & Connectors	3	45
Sub Total		2999
Carriage		40
VAT		455.85
Grand Total		3494.85
Novell NE-1000 Compatible	137	
3 Meter RG-58 Cable-BNC	15	

POPULAR SOFTWARE

Aldus Pagemaker V3	472
Xerox Ventura V2	574
dB Publisher	283
Framework III	338
Borland Quattro	126
Paradox 3	376
Cardbox Plus V4	253
Delta 5	383
Supercalc 5	240
Dataease V4	443
GEM Full Range. Please Call	
Foxbase Plus V2.01	252
Smart System V3.1	361
Sage Accountant	98
Sage Accountant Plus	165
Sage Financial Controller	265
Sage Payroll	98

POPULAR SOFTWARE

dBase IV	350
Lotus 123 V2.01	276
Symphony V2.0	399
Freelance Prof V3	268
Wordstar Plus V5.0	205
Wordstar 2000 V3	261
Word Perfect V5.0	271
Excel V2.1	274
Windows V2.03	52
Windows 286 V2.1	52
Windows 386 V2.1	104
Wordcraft V4.0	294
Wordcraft Nova	172
Wordcraft Elite V4	565
Clipper	327
Multiplan V4.00	104
Works V1	101

ULTIMATE PERIPHERALS

If you think you've tried the best... Try the ULTIMATE

Thousands of stock items, please call if what you want is not advertised. Free technical support on most products. Please ring if you have any Questions. All Products listed below carry a minimum 12 months return to base manufactures warranty. Please call for Optional ON-SITE-MAINTENANCE

The Largest Selection of Peripherals by Mail Order in the UK

9 PIN 80 COLUMN

MODEL	SPEED	PRICE
STAR LC10	144/36	122
STAR LC10-Colour	144/36	172
STAR FR10	300/76	306
CITIZEN 120D	130/25	110
CITIZEN 180E	175/30	138
CITIZEN MSP40	240/50	249
CITIZEN MSP50	300/60	299
MT 81	120/25	100
ACL 135	135/27	119
ACL 480	480/55	299
KXP 1081	144/28	122
KXP 1180	192/38	177
HYUNDAI-910	216/37	128
EPSON FX850	200/40	299
EPSON EX800	300/50	439
MP AR40	190/32	111

9 PIN 132 COLUMN

MODEL	SPEED	PRICE
STAR LC15	180/40	266
STAR NX15	120/30	265
STAR FR15	300/76	399
CITIZEN MSP 45	240/50	399
CITIZEN MSP55	300/60	499
HYUNDAI-920	216/37	199
KXP 1592	216/45	276
KXP 1595	288/61	381
EPSON FX1050	264/54	425
EPSON EX1000	250/50	588
EPSON DX5000	533/80	1207
AMS DMP4000	200/50	257
ACL 700	480/55	399
OLIVETTI DM292	240/40	351
OLIVETTI PR24L	240/40	510
BROTHER 1709	240/50	356

24 PIN 80 COLUMN

MODEL	SPEED	PRICE
STAR LC24-10	170/57	199
STAR XB24-10	240/80	399
CITIZEN HOP 40	200/66	399
AMS LQ3500	160/60	188
EPSON LQ500	150/50	283
EPSON LQ850	220/73	467
HYUNDAI-1810	240/100	229
MP240	200/67	254
KXP1124	192/63	265
OLIVETTI DM250	240/80	432

24 PIN 132 COLUMN

MAKE	SPEED	PRICE
STAR XB24-15	240/80	526
CITIZEN HOP45	200/66	489
JUKI 7100	288/96	432
JUKI 7200	324/108	1082
EPSON LQ1050	264/88	603
EPSON LQ2550	400/133	923
EPSON TLQ4800	300/83	1563
BROTHER 1224	162/54	263
BROTHER 1724	216/60	499
HYUNDAI-1820	240/100	299
MP 241Q	200/67	277
MP2401Q	240/67	365
KXP1540	240/80	443
OLIVETTI DM250L	180/60	493
OLIVETTI DM600	330/82	815
AMS LQ5000	288/98	299

2 metre IBM Parallel Printer Cable 6.00 each

DAISYWHEELS

MODEL	SPEED	PRICE
JUKI 6200	30	265
JUKI 6300 (P)	40	398
JUKI 6300 (S)	40	485
JUKI 6500	60	598
QUME SPRINT 11/ 40		718
QUME SPRINT 11/ 55		637
QUME SPRINT 11/ 90		1150
BROTHER HR20	22	378
BROTHER HR40	40	717
BROTHER TWINWRITER		717

For sheetfeeders, Tractors, Ribbons and Acoustic Hoods for the above Daisywheels printers, Please call

INK & BUBBLE JETS

MODEL	SPEED	PRICE
CANON BJ-130	220	546
CANON PJ-1080A	7 Colour	343
EPSON SQ2500	450	958
HP DESKJET	220	457
HP DESKJET +	240	564
SIEMENS PT88I	240	332
SIEMENS PT88E	240	332
SIEMENS PT89I	200	384
SIEMENS PT89E	200	384
SIEMENS PT90I	480	1018
SHARP JX-720	Colour	730
MT911	220	530
OLIVETTI TH760	Thermal	532

CALL for consumables:- large stocks

SX-LASER PRINTERS

MODEL	PRICE
CANON LBP8 II	1258
CANON LBP8 IIT	Dual Bin 1786
CANON LBP8 IIR	Duplex 1958
HP LASERJET II	1299
HP LASERJET II	Duplex 1998
STAR LASER 8	1MB Ram 1277
STAR LASER 8 II	Dual BIN 1725
BROTHER HL-8	1399
BROTHER HL-8D	Dual Bin 2162
BROTHER HL-8QS	Postscript 2884
QMS PS810	Postscript 2899
OLIVETTI PG303	Postscript 2833
OLIVETTI PG208	HP Compat 1213
SIEMENS PT10	HP Compat 1299
Toner Cartridges for above	65

MORE LASERS

MODEL	PRICE
CITIZEN 106	6PPM 930
CITIZEN 110	10PPM 1083
CITIZEN 112	12PPM 1186
EPSON GQ3500	6PPM 1136
EPSON GQ5000	6PPM 1207
MT905	6PPM 930
MT910	10PPM 1996
MT910GL	10PPM 2298
MT910EM	10PPM 2685
MT910DP	10PPM 2663
SHARP JX-9300	6PPM 1063
PANASONIC P4450	11PPM 1330
QUME LASER10	10PPM 1963
QUME SCRIPT 10	10PPM 3382
QUME CRYSTAL WP	6PPM 684

RIBBONS DISKETTES CABLES DUST COVERS MUFFLERS TAPE STREAMERS CONSUMABLES

SCANNERS & FAX

MODEL	COST
SCANNERS	
CANON IX12	374
CANON IX12F	752
CANON INTERFACE	113
LOGITECH HANDSCAN	150
PANASONIC FLATBED	899
HOWTEK COLOUR VARIOUS	CALL
FACSIMILE	
CANON FAX80 18sec TX speed	599
CANON FAX80 + on-site-maint	659
CANON FAX120 15sec TX speed	866
CANON FAX120 + on-site-maint	921
PANASONIC UF130 17sec	660
PANASONIC UF140 17 sec	834
For PC Fax cards	CALL

MONITORS

MODEL	SPEC	PRICE
PHILIPS MONO MONITORS		
BM7502	12" green	83
BM7513	12" green	78
7913	12" FST Grn	82
7923	12" FST Amb	83
7BM713	14" FST Grn	89
7BM723	14" FST Amb	83
7BM749 PS/2	14" FST Wht	107
PHILIPS COLOUR MONITORS		
CM8833	14" 600 Dot	172
CM8852	14" 700 Dot	188
CM9053 EGA	14" 850 Dot	276
CM9073 EGA	14" 850 Dot	318
9CM082 VGA-PS/2	14" 640 Dot	399
CM8875 VGA	14" 640 Dot	CALL
CM9043 EGA	14" 640 Dot	237

CAD CORNER

MODEL	PRICE
PLOTTERS	
Hitachi 873-A4/A3	400mm/sec 530
Hitachi 881-A4/A3	400mm/sec 416
Hitachi 874 A1/A4	400mm/sec 1998
DIGITIZERS	
Hitachi from 11"x12" to 44"x60"	CALL
Full range of pens, paper, stylus, cursors	
MONITORS	
Hitachi CM1688A1 16"	1199
Hitachi CM1688A3 16"	1299
Hitachi HI-Scan 20"	1724
Hitachi CM2088A3 20"	1783
Hitachi CM2088(4) 20"	1862
Hitachi CM2088(D) 20"	2021

DISK DRIVES

MODEL	COST
PLUG-IN AND GO...HARDCARDS	
CODIMEX 20MB	249
MINISCRIBE 20MB	259
JAVELIN 20MB	203
CODIMEX 30MB	269
MINISCRIBE 30MB	289
JAVELIN 30MB	230
SEAGATE 30MB	269
CODIMEX 40MB	299
MINISCRIBE 40MB	289
3.5" FLOPPY 720K	79
3.5" FLOPPY 1.44MB	99
LARGE CAPACITY HARD DISK DRIVES	
Please call for drives ranging from:-	
BOMB to 1Giga also CD-ROM's etc	
Massive Discounts	

ULTIMATE

**BUSINESS
MACHINES
LIMITED**

**5 Water Street
Earby, Colne
Lancashire BB8 6QP**

**SALES HOTLINE (0282) 843001
VISA... (8 LINES) 24 Hrs... ACCESS**

TERMS:

All prices exclude V.A.T. & Carriage
Strict cash with order only
Visa, Access, PO or Cheques accepted
Official orders accepted from Government, Education
and substantial PLC's

DELIVERY UK MAINLAND

PRODUCT	NEXT DAY	4 DAYS
HARDWARE	15.00 + VAT	10.00 + VAT
SOFTWARE	10.00 + VAT	8.00 + VAT
CONSUMABLES	5.00 POST & PACKING + VAT	

YOUR ONE STOP SHOP

MORE SOFTWARE THAN YOU CAN HANDLE!
MORE HARDWARE THAN YOU CAN USE!

Software

SUPERSTORE

20 MEG A590 Hard Drive

with space for 2mb extra RAM to turn your AMIGA into a 3 Meg machine. Essential for advanced graphics etc.

£399.99 *OR £15 MONTHLY

A590
Complete with 2mb extra
Ram fitted

ONLY **£699.99** *OR £27 MONTHLY

A500 0.5 mb UPGRADE
ONLY **£79.99**
WITH CLOCK **£89.99**

Extra RAM per 1/2Mb
£79.99

WE STOCK MOST
DATEL
PRODUCTS

AMIGA 3.5" 2nd DRIVE ONLY

- DISABLE SWITCH
- THROUGH PORT
- SLIM SIZE
- LOW POWER CONSUMPTION
- HIGHLY RELIABLE
- EXCELLENT R/W PERFORMANCE

£79.99

ST 2nd DRIVES
ALSO AVAILABLE
PLEASE ASK FOR DETAILS

AMIGA A500 BATMAN PACK

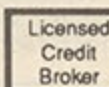
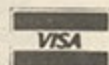
ALMOST HALF PRICE



	R.R.P.
A500.....	£399.99
TV MODULATOR.....	24.99
BATMAN (THE MOVIE).....	24.99
NEWZEALAND STORY.....	24.99
DELUXE PAINT II.....	49.99
INTERCEPTOR.....	29.99
TEN STARPACK.....	229.50
TOTAL R.R.P.	£784.44
LESS DISCOUNT.....	£384.45
OUR PRICE.....	£399.99

*OR £15 MONTHLY

WE STOCK
SEGA,
ATARI, C16,
MSX, BBC/
ELECTRON,
etc.



*(subject to status) Written details on request.

OCEANIC DISK DRIVE

DISK DRIVE C64 COMPATIBLE
Smart, slim, reliable.

FREE SOFTWARE

Activision Music Studio, Word Processor, Database
Communications Program.

ONLY **£129.99**



1 YEAR ON-SITE
MAINTENANCE
ONLY £10 EXTRA
ON ANY PRINTER

1 MEG AMIGA PACK:-
as above plus half meg upgrade,
mouse, mat, mouse holder, dust
cover and 10 disks

OUR PRICE
ONLY £499.99
*OR £19 MONTHLY

**MAIL
ORDER:-
Carriage
at Cost
ORDER HOTLINE
(MON to FRI)
(0782) 202269**

**ADVICE HOTLINE (0782) 268620
for FAST & FRIENDLY SERVICE**

PRINTERS

STAR LC10

Acclaimed "Best Buy" budget printer.
Now massively under-priced at just

£169.99 *OR £8 MONTHLY

STAR LC10 Colour

The perfect printer for every Amiga.
Colour output from all the better art
packages - or just slot in a black ribbon
for word processing. Cheap to run
too. Very affordable

£229.99 *OR £9 MONTHLY

STAR LC24 - 10

24 Pin quality at a price you can afford.
8 Fonts, 3 print variations, paper park-
ing, 170 CPS draft, 57 CPS LQ

£259.99 *OR £10 MONTHLY

FREE Cable with every Printer

STOKE-ON-TRENT

11 Market Square Arcade,
Hanley Stoke-on-Trent
Manager: Wayne Tel:
0782 268620 Open 6 Days

SHEFFIELD

6 Waingate, Sheffield
Manager: Tony
Tel: 0742 721906
Open 6 days

ST HELENS

27 Baldwin Street,
St Helens
Manager: Adrian
Tel: 0744 27941
Closed Thursday

STOCKPORT

6 Mealhouse Brow,
(Off Little Underbank),
Stockport Manager: Ray
Tel: 061 480 2693
Closed Thursday

ATARI 520 STFM. Leads, mouse mat, Konix joystick, demos, mags. Bring your own disks for test. £300. Write to: Monty, 30 Eccleston Square Mews, Victoria, London, SW1V 1QN. Good condition.

FOR sale, Spectrum 48K with software, printer, lightpen, 3 months guarantee £65. Also +2 with multiface software over £180 of games and joystick £130. Tel: 0946 861662.

ATARI STM. 1 meg memory, 1 meg drive, discovery happy cartridge, 100+ discs, mouse, all manuals £500. Contact Alan on 0932 524552 after six and at weekends.

CBM 64 cassette deck, joystick, dust cover £350. Original software 30 mags, Action Replay mk4 prof, all worth £600, sell at bargain price £210 o.n.o. Serious offers only. Tel: 040924 375.

ELECTRON + 1 + 3 view, viewdata, green screen monitor, some discs and tapes and books, £130. Phone (Dundee) 0382 521454.

SPECTRUM 128k, b/w TV, joystick, I/F Multiface, I/F 1, microdrive, over £150 of software inc. Thunderblade etc. Worth over £400. Will sell for £200 o.n.o. Tel: James on (0823) 432961.

AMSTRAD CPC6128 (Colour monitor, disc drive, 128k) with tape deck, multiface II+, joystick, about £150 games and over £60 accessories. Worth £700+, under 1 yr old. £450 o.n.o. Phone (0793) 693068.

AMSTRAD PCW 8512 with printer as new, just a year old. Mini office package,

basic handbook, £300. Call Tony on D/Time 01 526 1237. Evenings 01 594 6237.

ATARI STFM 1/2 Meg drive with original games and disks boxed £200, can deliver free Scotland. Tel 0250 5108.

FOR sale Elite, Leisure Suit Larry, Capt. Blood, Gunship, Scrabble, Trivial Pursuit, Shanghai, Space Quest 3, HitchHiker's Guide, all genuine games for ST. Phone Bath 333789.

LOADS of crash, YS, SU etc. Approx 200 various 1984 - 1989. Swap for Amstrad mags etc or W.H.Y? Also require cheap Speccy or Electron, have Boss DR110 GWO. Bob: Brighton 597450.

C64, Datasette, lots of games and magazines. Mouse and Art Package. (Manchester) 061 865 5186 ask for Nean (buyer collects) £135 o.n.o.

ATARI 520STFM with manuals, mouse, dustcover, joystick, some software. Epson LX-86 NLQ printer, tractor feed, large box micro-perf. paper. All boxed, excellent condition. £280 o.n.o. Contact Chris 091 386 2577 after 7pm.

AMIGA, AMIGA, AMIGA, AMIGA, for sale, Digi-view, Pro-Video+, PhotoLab, Fantavision, Stand, Effects, Animator, De Luxe Video, Photon Paint, all boxed originals, mint, clubs? Good price for the lot. Tel: 0946 810080.

ATARI Mega 2, 30 meg hard disc, mono monitor DTP, WP, music and games software. £1100, call Tony: 01 690 7106.

C64 disc drive, printer, datasette, Easy Script Word Pro, over 100 games, also intro to basic one for £300. Phone 0700 3597 after 6pm.

PRINTER Microline Oki 33A 9pin Dot Matrix with serial and parallel ports and serial lead, suit IBM or CPM computer sell £130 o.n.o. Phone: 0883 717946 after 6pm.

AMSTRAD CPC 6128 colour monitor disc drive, multiface 2+. Over £1000 of original software, tape player and leads upgrading, £250. Phone 0883 717946 after 6pm.

AMSTRAD PCW9512 £375 save £200 as new condition. Phone Williams, New Radnor 605.

ZX Spectrum, boxed complete, with tape deck, joystick, joystick interface and over £280 worth of games and utils. Bargain price, all for just £70 o.n.o. Phone Farnborough (0252) 547911.

APRICOT F1 MSDOS 3.2 Super Calc Writer Planner, Activity Tutor, 720k disk drive, mono monitor, all manuals etc. Ring Phil: Doncaster 0302 532384. £175.

SINCLAIR Spectrum 48k with self-made, full-size, full-travel, keyboard + four game cassettes £50, Reading (0734) 500483.

AMSTRAD PCW 8512, Locoscript 2, Supercalc 2, Cardbox, Chibase, v.g.c. printer, various other software discs etc. Reason for sale, upgrading to P.C. £300. Tel: 04024 77194 after 8pm.

AMSTRAD PC2086 VGA mono 32Mb hardcard external 5" drive, all manuals, loads of software plus Panasonic KP1081 printer £900 o.n.o. owner returning to Australia after study, everything as new, boxed. Tel: 0602 229499.

SPECTRUM 128k +2 with Multiface 128, £280 of software incl. Op. Wolf, Robocop, Gunship, Driller etc. and 37 Speccy mags worth £450 altogether, sell for £250. Phone I.O.W. 88 34 87.

AMSTRAD PC1512 DDCM colour monitor, keyboard, twin disc drive, mouse, printer, plus software. Full instructions, boxed as new, ideal xmas present £875.00 o.n.o. Tel: 0274 729241 after 6pm.

CBM 64C, disk drive, music keyboard, fast load cartridge, midi interface and software, speech synth., 140 disks incl. 350+ games. Worth £1000+ any offer considered. Phone Mark, Brighton. (0273) 557113.

A PC1512 mono monitor for sale only £50 inc. delivery. Phone Phil on 0279 600427 (Day) or 0378 822171 (Eve.)

BARGAIN of the year! Bernoulli box, removable hard disk with 2 drives, 2 cartridges & manuals for only £100! New cost more than £1000! For PC owners. 021 4492997.

C128 (inbuilt D.Drive) with joystick, Freeze Frame, tape recorder, loads of original software and more, worth about £700. For only £270 o.n.o. Please ring 0734 815759. (Basingstoke area, will deliver).

WESTONING LTD

3 1/2 DISKS					
	25	50	100	200	400
880K	£17	£31	£55	£105	£205
2Mb	£32	£60	£118	-	-

5 1/4 DISKS				
	25	50	100	200
DS/DD	£8	£12	£22	£40
DS/HD	£14	£25	£48	£90

DISKS CERTIFIED 100% ERROR FREE

DISK BOXES			
3.5"		5.25"	
Capacity		Capacity	
10	£2.50	10	£2.50
50	£3.75	50	£3.75
100	£6.50	70	£5.25
		110	£6.75

Add £2 P&P if not ordered with disks.

ACCESSORIES	
Mouse Mat	£2.99
Ribbon Refresh	£6.50
1000 Disk Labels	£10.00
Cheetah 125 Joystick	£5.50

AMIGA	
A500 Modulator & Mouse	£346
A500 Batman Pack	£349
A500 Air Miles Pack	£405
512K RAM Pack	£75
3 1/2 External Drive	£86
20Mb Hard Disk	£346
40 Mb Hard Disk	£480
A1084 Colour Monitor	£260

Add £6 for next day delivery

ATARI	
Ultimate Pack	£420
Ultimate & Mono Monitor	£504
Power Pack	£336
Portfolio	£210
Explorer Pack	£250
720k Disk Drive	£82

Add £6 for Next Day Delivery

ALL UK STOCK!

SAME DAY DESPATCH NO QUIBBLE GUARANTEE

Prices include VAT & Carriage

Department NCE, 12 Sanderson Road, Westoning, Bedford, MK45 5JY. Tel: (0836) 775060 or (0525) 718668

C & M MICROS

HOME & BUSINESS COMPUTER SUPPLIES

DON'T BUY DISKS OFFERING ANYTHING LESS!

FREE lifetime guarantee GOLD CARD. We are so confident with the unbelievable quality of all our disks that we give a lifetime guarantee GOLD CARD with each purchase of disks. Keep the card in a safe place so that lifetime guarantee support is only a phone call away if you should ever need it.

LIFETIME REPLACEMENT GUARANTEE, 100% ERROR FREE. COMPLETE WITH MULTI-COLOUR LABELS, TABS (5 1/4") AND PROTECTIVE SLEEVES.

3 1/2" unbranded disks manufactured by SONY
5 1/4" unbranded disks manufactured by SENTINEL

	10	25	50	100	150	200	300	500
Bulk Disks								
3 1/2" DS/DD (135)	£7.50	£18	£34	£66	£96	£124	£180	£290
5 1/4" DS/QD (96)	£3.50	£8	£15	£28	£41	£52	£76	£125
3" DS (Maxell)	£23	£57	£112	£219	£327	Phone for prices		

BRANDED DISKS MANUFACTURED BY THE SONY CORPORATION OF JAPAN

Sony Brand	1+	3+	5+	10+
3 1/2" DS/DD (135) Boxes	£12.00	£11.50	£11.00	£10.50
5 1/4" DS/QD (96) of 10	£12.00	£11.50	£11.00	£10.50

STRONG DISK BOXES. LOCKABLE WITH 2 KEYS,

DIVIDERS & RECESSED HANDLE. Add £1 P&P if not ordered with disks.				
3 1/2"	40 Capacity	£4.50	80 Capacity	£6.50
5 1/4"	60 Capacity	£4.50	100 Capacity	£6.50

★ Special Offers★ Latest COLOURS™ disk packs. 10 Coloured 3 1/2" disks (2 of red, orange, yellow, green, fog-white) in a clear fronted flip-top case. Only £9.50

MX1 - A500 1/2 Meg Memory expansion. 1 year guarantee	£79.95
MX2 - Same as MX1 but with battery backed time and date	£89.95
Amiga sys programmers guide	£31.30
Amiga C for beginners	£17.55
Atari ST machine language	£18.00
Atari ST BASIC to C	£14.20

ALL PRICES INCLUDE VAT. P&P FREE (UK ONLY). Orders below £15 in value carry a handling charge of £1. Please phone or write for a FREE price list.

C & M MICROS, 25 MIDDLEFIELD ROAD, BESSACARR, DONCASTER, S. YORKS. DN4 7EB
CARDNET CREDIT CARD HOTLINE (0302) 539955



Computer Support Southeast England

£18,000 per Annum + Car

Large distributor based Southeast England searching for PC Specialists with an IBM background. Good broad base of PC skills and inter-personal skills. Many other technical and sales positions available now.

Please contact: Paul Dunne
Daytime: 01 839 2319
Evenings and Weekends: 01 398 0942
or send your C.V. to:
Specialist Technology Recruitment
94 Jermyn Street, London, SW1Y 6JL.

BB66766T COMPUTERS COMPANY

We are looking for a Tec. Manager with the following abilities:

Bilingual hardware & software computer applications, character generations, display and coding.

Knowledge of accountancy, bilingual applications market and marketing methods.

Fluent in English, German, Italian, Persian, basic of Turkish and Arabic alphabet.

5 yrs computing and marketing experience. Please telephone : 01-700 0262 or send C.V. to:

BBT Computers
3188 Holloway Road
London N7 6NJ

Ambitious Sales & Marketing Manager

Responsible for handling the Company's own in-house computer and office products. Some travelling overseas will be involved. Salary depending on age and experience. Company Car available.

Two Ambitious Sales People Required

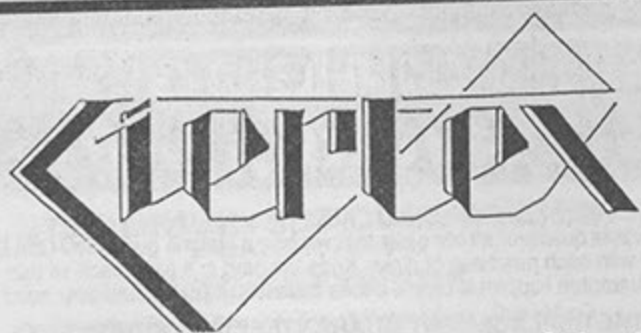
Start December

For established Computer Company in Merseyside area. Must have a sound working knowledge of Computer Accessories and current business software. Experience on P.C. machines essential. Excellent Salary + Car, all the benefits you would expect from a young but established company.

One Experienced Telesales Executive

to manage established customer base. Knowledge of Computer Products and marketplace essential. Excellent salary plus commission. Start immediately.

Contact: **Brian Glover 051 639 7900**
for an appointment, or write to:
4 Hillam Road, Wallasey Village,
Wirral, Merseyside, L45 8LE.



TIERTEX Ltd
10A Barlow Moor Road,
Didsbury,
Manchester M20 0TR

Due to major expansion, one of the U.K.'s most experienced development houses requires the following individuals to complement its current in-house team.

★ **PROGRAMMERS** ★

&

★ **GRAPHIC ARTISTS** ★

The above positions are full time and based at our new Manchester offices. Remuneration is dependant on experience and a comprehensive bonus scheme will also be included.

The successful applicants would be working on the creme of Coin-Op conversions and exciting original projects for Europe's top software publishers.

If you think your work measures up to our past projects like Thunder Blade, Last Duel and 720, please send examples of your work together with a C.V. to the above address.

Alternatively, phone Andrew Ingram on 061 446 2251 to discuss these opportunities further, all applications will be dealt with in the strictest confidence.



PALACE SOFTWARE

EXPERIENCED 16 BIT GAMES PROGRAMMER

Palace Software, a division of the Palace film and video organisation, is searching for an exceptional 16 Bit programmer to join our in-house programming team.

You will be working from our central London offices on exciting and innovative projects with some of the best games designers, artists and musicians in the business.

You must have a good knowledge of 68000 assembly language and C as well as a proven track record of published work.

We are looking for a highly motivated and committed individual with a disciplined approach to work.

If you have the right experience and feel you could work well in a team environment call

**Patricia Mitchell on
01 278 5037**

**or Simon Birrell on
01 278 0751**

or drop us a line at

**Palace Software, The Old Forge,
7 Caledonian Road, London, N1.**

WJS DESIGN

Creators of BAAL and BLOOD MONEY (ST)

Are seeking an experienced 68000 programmer to work **in house** on original projects for the Atari ST and Commodore Amiga computers.

Based in **Leeds**, we specialise in only the highest quality 16 bit software. We provide excellent technical back-up and a 386PC. PDS development system to work on.

If you think you fit the bill, could code a mega-game with your eyes shut, are friendly, non-smoker and all round a pleasant kind of chappy (or chapess), then telephone in the first instance for a chat. Ask to speak to:-

**Wayne Smithson
WJS Design
Park Mill House
Stanningley Road
Leeds LS12 3LR.**

Tel: 0532 636554 Fax: 0532 636634

CAPITAL COMPUTER

PC SUPPORT TECHNICIAN

£14.5K - £18K+ B.B.s

Excellent opportunity for a Junior Support Technician to move into the exciting world of international banking. Working as part of a professional in-house support team, the successful applicant will have the chance to get involved in many aspects of support including networking trouble-shooting and user training you should have good knowledge of databases, spreadsheets, W.P.S & L.A.N.S.

ANALYST PROGRAMMER

£15k - £19.5k

Our client a large insurance organisation requires an experienced P.C Programmer with a substantial financial background. Technical ability will include 2 years D-Base 111 +/-Clipper development and ideally a good knowledge of assembler and 'C'. Excellent career prospects are offered for an enthusiast and self-motivated individual.

399-401 HIGH STREET · STRATFORD · LONDON · E15 4OZ
TELEPHONE · 01 534 4525 · FAX · 534 4662 ·

Chess Computer Appointments Ltd

Search, Selection and Advertising Consultants
Princes House, 36-40 Jermyn Street, London SW1Y 6DN
Telephone: 01-439 6141
Fax: 01-287 6701

ANALYST PROGRAMMER (Experienced and Graduate)

International Bank

£12-18k + Bank Benefits

Programming experience in Clipper, 'C' or dBase or simply a structured computing background eg. Computer Studies graduate, will qualify you for a desirable career move into the dealing rooms of this major institution. Involves much analysis and user liaison with the promise of increased responsibilities for capable individuals.

TRAINERS AND SENIOR TUTORS (Management Prospects)

Salary according to ability

This household name in office services is currently running a recruitment drive for word processor and software tutors. If you have experience in Wordcraft, Wordstar, Wordperfect, Multimate, Samna, Lotus, Symphony, dBase, Smart, any dtp package, UNIX or any popular 'off the shelf' package and are interested in furthering your training career with a structured, professional organisation - call us now!

TECHNICAL SOFTWARE SUPPORT

£10-14k + Car

Micro computer manufacturer requires PC support specialists with 6 months+ experience. Probably from an end user or dealership background, you will have a good knowledge of a variety of 'off the shelf' packages eg. dBase, Lotus, Multimate, Pegasus etc. to provide support to dealers, distributors and VAR's.

PROGRAMMERS

We are looking for talented people to join our successful team in **SWITZERLAND!**

A good knowledge of machine code in either Z80, 6502, 8086, or 68000 is required.

WE ARE WAITING FOR YOU!

If you think you've got what it takes then contact Mark Grimmer.

Oh! Not to forget, we will pay your flight to the Swiss mountains....

LINEL,

**Guetlistrasse, 9050 Appenzell,
Switzerland.**

Tel: 01041 71 87 49 19

Fax: 01041 71 87 49 21

ATARI 8-bit APX programs extended 71470RTH + Data management system, basic reference manual, assembler/editor manual, analog compendium £15 the lot or may split. Phone: 051 648 4926.

SPECTRUM Alphacom printer £20. Currah Speech £10. Tandy PC4 Pocket Computer £35. Cassette Interface £10. Various Spectrum game tapes 50p - £3. Phone: Dennis on 04612 2081.

ROLAND JX3P and PG200 programmer. Both in excellent condition £330 o.n.o. Casio C22305 excellent condition £110 o.n.o. Both synths midi. Tel: 0524 841106 after 8.30pm. Ask for Mark.

INTERFACE for CBM64 to Citizen 120D Printer half price at only £25! Complete with Din lead (Serial only). Call Chris on (0274) 582716 evenings.

BBC Master 128, Twin Opus 40/80T drives, large colour monitor and some software £450. Tel: Rob Warrington (0925) 726903.

BBC Computer model B with dual double sided double density disk drives. Real Time Clock and monitor stand. £300, tel: 0737 241491.

ST for sale. Latest software incl. R.V.F., 3D Pool, Indy Adventure, Falcon etc. Sell for £180 or swap for colour monitor. Bargain Ring Now 0602 754991.

CBM 64, 1541 disc drive, £300+ software, Freeze Machine, £175 only. Spectrum (128 (+2)) in Saga keyboard. Over

£100 original software £90 only. Call Brian 0224 790498.

SEGA Master system (one joystick) with 5 games inc. OutRun, WonderBoy, Great Golf and Astro Warrior. Still in box with manual, excellent condition. £90 o.n.o. Tel: (0698) 832550.

AMSTRAD PCW8256 computer, keyboard, printer, monitor, manual book plus Mini Office integrated software. £260, Tel: 0634 45542.

BBC Model B immaculate condition, complete with disk drive, tape drive, Epson FX80 printer, firmware & software (+ accessories). £300 o.n.o. eves Natalie 01 888 3820.

520 STFM 1/2 meg int. + 1 meg ext, mouse, joystick, extension, Pan. 1081 printer, few games/Flexidump etc. £290. May trade video camera/W.H.Y? Cash, either way no splits. 01 648 2385.

ATARI 65XE with XC12 data recorder, joystick, p.s.u., leads, manual, loads of software. £50 for quick sale. As new, boxed. Buyer collects or pays P&P. Tel: 0372 721715 after 6pm.

CBM 64, printer, tape player, joystick, spare ribbon, paper, over £250 games, art, music, utilities, Simon's basic manual, reference guide, 30 hr basic. Excellent condition. Bargain £180 o.n.o. Tel: 051 645 9325.

MASTERFILE PC ver. 3, 3 1/2" disc, superb database, £38 o.n.o. Tel: 0742

363026.

IBM AT 286 compat. 1.2 Mb Floppy, 1Mb RAM, 40Mb hard, AT keyboard, monitor, DOS 3.2, Basic, very good condition. No time wasters please. Price £950 Tel: 01 361 4916.

SINCLAIR ZX printer paper, 10 rolls £5. 0625 872135.

HEY! Only £250 for Atari 520 STFM + 10 games, joystick, mouse, manuals etc. everything boxed and in excellent condition. Phone Joe (0402) 32777, Ireland.

VGA 20" colour monitor. Linear RGB input. Good condition, £300 o.n.o. Tel: 063876 8118.

SPECTRUM +2 complete hardly used, only 4 months old - unwanted gift. £60 worth of games + 100 game starter pack. Offers 0727 42549.

48K Spectrum+ computer, Opus Discovery Drive, 2 Joysticks, Printer lead, Multi-face and over £200 worth of software as new, all for £135. Phone Colin 061 682 2479 after 6pm.

COMPAQ plus 10Mb 640K £400, colour monitor £50 LQP £200, Case 400/213 Modem £50. Also Paradox, Symphony, S/Calc, Datamaster diskettes will sell all the above £850. Hatfield 0707 268794.

CBM 128, 1541 disk drive, books, lots of software, data cassette £150. Tel: 0268 550721.

ATARI 1050 disk drive boxed as new £85. Also Touch Tablet boxed with Atari artist cartridge £25. Call Grahame before 9pm on Cov. 0203 311670. Atarians don't miss these bargains.

ATARI 520STFM computer, SM124 monitor 3.5" and 5 1/4" drives, 1 meg RAM PCditto, Publishing Partner, DataManager, Swiftcalc Wordwriter, joystick covers, mags, books, etc. Bargain £395. Tel: 0905 779290 for details.

ARCHIMEDES A310 fitted with Risc-os, Four slot backplane and fan, Acorn 20Mb hard disc and external disc drive interface, orig. boxes. £950. May be able to deliver. Tel: 0780 54537.

SPECTRUM+3, 12 games, disks, joystick, leads, £120.00. 150 assorted magazines, Your Computer etc. will split. 31 x ZX Computing magazines, £25.00. 1-52 "input" £25.00. S.A.E. Mr. Taylor, 32 Ashford Road, Bournemouth, Dorset, BH5 6QD.

BBC Computer model B with dual double sided double density disk drives. Real Time Clock and monitor stand. £300, tel: 0737 241491.

ST for sale. Latest software incl. R.V.F., 3D Pool, Indy Adventure, Falcon etc. Sell for £180 or swap for colour monitor. Bargain Ring Now 0602 754991.

INTERFACE for CBM64 to Citizen 120D Printer half price at only £25! Complete with Din lead (Serial only). Call Chris on (0274) 582716 evenings.

SPECTRUM TAPE TO DRIVE
Transpack I - for all drive systems. Includes CUS and other software and sample transfers. Not for the novice...£12.00. For the difficult programs information books 1, 2 or 3 - 180 + Transfers per book with Transpack...£2.50 each. Send S.A.E. for lists.

SPECTRUM TAPE TO TAPE
TUC - copies most tapes. Measures loading speed, copies exactly blocks even over 51K + much more...£8.50

M/DRIVE OWNERS - MICROMATES
It pays for itself!...£11.99. Format (approx 104K), Clone, Sector Editor, Rename, Reconditions & Repairs, Multi-erase, Cat Copies tape to drive (not games) & Reverse, Drive to drive on Cartridge.

PLUS - 3 MATE
For Spectrum +3. Plus 3 mate has 5 disk programme inc. full Cat. Disk Repair/Verify, Unerase, Sector Editor, Multiple Erase + File Copier, Disk info, Boot Prog., etc. Includes Clone whole disk copier (inc. protected disks) On Disk...£12.99.

Spectrum Cold Compressor£4.50
M/Drive Cartridge (Min. 4)£1.75 each
+3 Discs (Min. 4)£2.30 each

AMSTRAD/SPECTRUM VERSION Z80 TOOL KIT 2
Inc. Single Step - helps you understand/Debug M/Code, Assembler, + programme to do the reverse - M/Code to Source. Disassembler, Hex to Dec, Tool Kit, Loader Mode, etc.
Spectrum.....£8.99 Amstrad CPC Version.....£9.99

Send S.A.E. for details. Post Free in U.K. - Add £1.00 Europe - £2.00 rest. State your system when ordering. e.g. Spectrum +2 and Microdrive. Money back guarantee on software. Prop. L. Evans

LERM, Dept NCE 2, 11 Beaconsfield Close, Whitley Bay, Tyne and Wear, ME25 9UW, Telephone: 091 253 3615. Send S.A.E. for details

Shekhana Computers

- Sony disks 3.5" DSDD box of 10.....£9.99 JVC 5.25" high density DSHD X 10.....£10.99
- JVC disks 3.5" DSDD box of 10.....£9.99 Maxell 5.25" high density DSHD X 10.....£10.99
- JVC high density 3.5" DSHD X 10.....£24.99 Unbranded 5.25" DSDD box of 10.....£4.99
- Sony unbranded bulk 3.5" DSDD X 10.....£7.99 Maxell 3" CF2 box of 10.....£24.99
- JVC 5.25" DSDD X box of 10.....£6.99

All disks are genuine and guaranteed by us.
Cheque/P.O payable to SCS (E), 655 Green Lanes, London N8 0QY.
Access and Visa cards accepted. Ring 01-348 2907, 01-340 8565.
Fax your order to - 01-889 9413. Please add 50p P+P per box of 10 disks.

LINC-SOFT SOFTWARE

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

THE PRICES SHOWN BELOW ARE FOR ATARI ST & AMIGA DISKS

TITLE	AMIGA	ST	TITLE	AMIGA	ST
Double Dragon	£14.99	£14.99	APB	£14.99	£14.99
Lombard RAC Rally	£18.71	£18.71	Cyberoid II	£14.99	£14.99
Premiere Collection	£22.49	£22.49	Dragon Ninja	£18.74	£14.99
Road Blasters	£14.99	£14.99	Operation Wolf	£18.71	£14.96
Running Man	£18.71	£18.71	Robocop	£18.74	£14.99
Silkworm	£14.99	£14.99	Red Heat	£18.74	£14.99
Thunderbirds	£18.71	£18.71	New Zealand Story	£18.74	£14.99
Vigilante	£14.99	£14.99	Strider	£18.74	£14.99
Shinobi	£14.99	£14.99	Batman - (Movie)	£18.74	£14.99
Xenon II	£18.74	£18.74	Star Wars Trilogy	£18.74	£18.74
Barbarian II	£14.99	£14.99	Nebulus	£14.99	£14.99
Space Harrier	£18.74	£14.99	Gemini Wing	£14.99	£14.99
HKM	£14.99	£14.99	Mr Hell	£18.74	£18.74
Captain Blood	£18.71	£14.96	Garfield II	£18.74	£14.99
Indy - The Last Crusade	£14.99	£18.74	Action Amiga Vol II	£22.49	£14.99
Action ST Vol II	£22.49	£22.49	The Story So Far II	£14.99	£14.99

HARDWARE

Commodore 64 Light Fantastic Pack	£150.00
Commodore Amiga Bat Pack	£365.00
1 Meg Amiga 500 Bat Pack + Dragons Lair	£495.00
Atari 520STFM Explorer Pack	£270.00
Atari 520STFM Power Pack	£355.00
Philips CM8833 Colour Monitor	£260.00
Cumana 3.5" External Disk Drive	£95.00
3.5" DS/DD Bulk Disks-Pack of 10	£9.50
3.5" DS/DD Kodak Disks - Pack of 10	£13.50

Most titles are available in other formats for most popular computers. Mail Order only. Telephone or write for a price list for your computer. Cheques or Postal Orders should be made payable to: Linc-Soft Software

XENON TECHNOLOGY

HAND HELD GAMES

Donkey Kong	Multi Screen	£22.45	Soccer	£6.25
Snoopy Tennis	Wide Screen	£17.95	Volcano	£6.25
Super Mario Bros	Wide Screen	£17.95	Space Fighter	£8.95
Plane & Tank		£6.25	Donkey Kong Junior	Wide Screen
Jet Fighter		£8.95	Space Warrior	£8.95
Gold Cliff	Multi Screen	£22.45	Donkey Kong II	Multi Screen
Climber	Wide Screen	£17.95	Mario Bros	Multi Screen
Highway		£6.25	Safe Buster	Multi Screen
Air Combat		£6.25	Pinball	£6.25
Balloon Flight	Wide Screen	£17.95	Bomb Sweeper	Multi Screen
				£22.45

COMMODORE AMIGA SOFTWARE

The Untouchables (Ocean)	£16.45
Cabal (Ocean)	£14.95
Stryx (Psychapse)	£12.75
Swords of Twilight (Electronic Arts)	£16.45
Dynamic Debugger (Image Works)	£16.45
Interphase (Image Works)	£16.45
Operation Thunderbolt (Ocean)	£16.45
The Lost Patrol (Ocean)	£15.75
Ooze (Dragonware)	£16.45
Fiendish Freddie's Big Top 'o Fun (Mindscape)	£16.45
Beach Volley (Psygnosis)	£15.75
Populous: Promised Lands (Electronic Arts)	£6.45
Gemini Wing (Virgin)	£12.75
Future Wars (Delphine/Palace)	£15.75
Power Drift (Activision)	£16.45
Xenon II Megablast (Image Works)	£15.45
Batman: The Movie (Ocean)	£15.75
Shadow of the Beast (Psygnosis)	£21.95
It Came From The Desert (Image Works)	£19.45
Blade Warrior (Image Works)	£16.45

ATARI ST SOFTWARE

Falcon Mission Disk Volume 1 (Mirrorsoft)	£13.45
Cabal (Ocean)	£13.45
Stryx (Psychapse)	£13.45
Hound of Shadow (Electronic Arts)	£16.45
Dynamic Debugger (Image Works)	£16.45
Interphase (Image Works)	£16.45
Stunt Car (Micro Style)	£16.45
The Lost Patrol (Ocean)	£13.45
Ooze (Dragonware)	£16.45
Fiendish Freddie's Big Top 'o Fun (Mindscape)	£16.45
Beach Volley (Psygnosis)	£13.45
Populous: Promised Lands (Electronic Arts)	£6.45
Gemini Wing (Virgin)	£13.45
Ferrari Formula 1 (Electronic Arts)	£15.85
Gunship Editor (Xenon Technology)	£4.95
Chaos Strikes Back (FTL)	£12.99
Xenon II Megablast (Image Works)	£15.45
Batman: The Movie (Ocean)	£13.45
Elite Editor (Xenon Technology)	£9.95
Blade Warrior (Image Works)	£16.45

COMMODORE 64 SOFTWARE

	Disk	Tape
Blood Money (Psygnosis)	£8.45	£6.45
Ballistix (Psychapse)	£8.45	£6.45
Laser Squad (Blade)	£9.45	£6.45
Beach Volley (Ocean)	£9.45	£6.45
Dragon Spirit (Domark)	£8.45	£6.45
Mr Heli (Firebird)	£9.45	£6.45
Carrier Command (Rainbird)	£9.45	£6.45
Quarterback (Virgin)	£9.45	£6.45
Stunt Car (Micro Style)	£13.45	£9.45
Super Quintet (Infogrames)	£9.45	£6.45
Super Wonder Boy (Activision)	£9.45	£6.45
Eye of Horus (Logotron)	£9.45	£6.45
Rainbow Island (Firebird)	£9.45	£6.45
Operation Neptune (Infogrames)	£9.45	£6.45
Weird Dreams (Rainbird)	£9.45	£6.45
Batman: The Movie (Ocean)	£9.45	£6.35
Shinobi (Virgin)	£9.45	£6.45
Dynamite Dux (Activision)	£9.45	£6.45
Bloodwych (Image Works)	£8.45	£6.45
Cabal (Ocean)	£9.45	£6.35

SPECTRUM SOFTWARE

	Disk	Tape
Chase HQ (Ocean)	£9.45	£6.45
Operation Thunderbolt (Ocean)	£9.45	£6.35
Laser Squad (Blade)	£9.45	£6.45
Beach Volley (Ocean)	£9.45	£6.45
Dragon Spirit (Domark)	£8.45	£6.45
Mr. Heli (Firebird)	£9.45	£6.45
Xenophobe (Micro Style)	£9.45	£6.45
Quarterback (Virgin)	£9.45	£6.45
Altered Beast (Activision)	£9.45	£6.45
Super Quintet (Infogrames)	£9.45	£6.45
Purple Saturn Day (Exxos)	£9.45	£6.45
Chuck Yeager's Advanced Flight Sim (E/A)	£9.45	£6.45
Rainbow Island (Firebird)	£9.45	£6.45
Risk (Leisure Genius)	£9.45	£6.45
Passing Shot (Image Works)	£8.45	£6.45
Batman: The Movie (Ocean)	£9.45	£6.35
Shinobi (Virgin)	£9.45	£6.45
Dynamite Dux (Activision)	£9.45	£6.45
Bloodwych (Image Works)	£8.45	£6.45
Cabal (Ocean)	£9.45	£6.35

AMSTRAD CPC SOFTWARE

	Disk	Tape		Disk	Tape
Ghostbusters II (Activision)	£9.45	£6.45	Ballistix (Psychapse)	£9.45	£6.45
Shinobi (Virgin)	£9.45	£6.45	Eye of Horus (Logotron)	£9.45	£6.45
Dynamite Dux (Activision)	£9.45	£6.45	Rainbow Island (Firebird)	£9.45	£6.45
Power Drift (Activision)	£9.45	£6.45	Operation Neptune (Infogrames)	£9.45	£6.45
Cabal (Ocean)	£9.45	£6.45	Weird Dreams	£9.45	£6.45
Batman: The Movie (Ocean)	£8.45	£6.45	Mr. Heli (Firebird)	£9.45	£6.45
Chase HQ (Ocean)	£8.45	£6.45	Carrier Command (Rainbird)	£9.45	£6.45
Laser Squad (Blade)	£9.45	£6.45	Quarterback (Virgin)	£9.45	£6.45
Beach Volley (Ocean)	£9.45	£6.45	Bangkok Knights (Activision)	£9.45	£6.45
Altered Beast (Activision)	£8.45	£6.45	Super Quintet (Infogrames)	£9.45	£6.45

XENON TECHNOLOGY

Dept NCE 1B, 71 Wadham Road,
North End, Portsmouth,
Hampshire, PO2 9ED.



(0705) 670878

All products are dispatched within 24 hours (subject to availability) by FIRST CLASS post. All new titles are despatched when released. All prices shown are fully inclusive of VAT, Postage, Packaging and a full guarantee (please add £1.10 per item overseas). Please make Cheques or Postal Orders payable to "Xenon Technology".



SPECIAL OFFERS!! Any less and we'll be giving them away. "And why not?" I hear you ask. Because we're not as stupid as the competition looks!!

>	xenon	(zen', zen'on) a zero-valent element (Xe: atomic number 54), a heavy gas present in the atmosphere in proportion of 1:17 x 10E7 by volume.
>	technology	(tek 'n-o-lo'ji) the practice of any or all of the applied science that have practical value and/or industrial use: technical method(s) in a particular field of industry.
>	xenon technology	(zen'on tek'n-o-l-o'ji) the best definition.

To order simply write on a piece of paper, your name, postal address a telephone number (if possible, only used if absolutely necessary), and the software title (with the machine model). Then pop in your payment (either a cheque or a postal order) and then pop it in the post (not forgetting of course our name on the front of the envelope and a stamp.)

VAT Registration Number: 543 9020 57

Proprietor: Steve Lowe

Note: Xenon Technology is Mail Order ONLY.

ROBOKIT

ST • £99 • Silica Shop • 01-309 1111

Robokit was first announced 18 months ago. Six months later the first prototypes were put on show but since then we've not heard a squeak – until now.

Robokit in itself is not a robot – it's just a cartridge that plugs into the ST, providing a user port similar to that found on the BBC micro. You can connect various devices and detectors to this cartridge and then use software to control them. You'll need about three brains to create a robot with no brains but that's is where the fun starts.

Construction worker

The manual supplied with the cartridge gives five models to build and explanations of these stretch across 40 pages. You can assemble a mini-arm, plotter, card reader, maxi-arm and a lift-operator.

Besides details on how to construct the models, there is also a lot of information on wiring the motors and sensors to the Robokit interface and here the manual really comes into its own. Detailed explanations are provided on everything you need to know to link the robot to your ST.

Once you've constructed the robot, the first thing you should do is load the software and import a backdrop. This will be an image of the robot you're using. These serve no useful purpose except illustrating the way the robot should move once you add motion icons.

The five robots in the manual have their own backdrops but they can only be seen at their best on a high-resolution monitor. If you try and view them in other modes you only see half an image. A scaling routine has been added to the backdrop designer so you can rescale any models you draw yourself but those provided cannot be rescaled. If you create your own robot you'll need to design the backdrop from scratch. This can be done using *Degas Elite*, *Neochrome* or *GEM Paint* and then importing the file into the backdrop designer. Here, all colour is stripped from the image and it's stored as a black model against a white backdrop.

Captain's log

To actually start seeing some movement, the first step is to position a variety of icons over the backdrop. Hands, arrows and other essentials such as a light bulbs and speakers are provided as icons. These should be positioned wherever movement is likely to occur. For example, you would place up and down arrowed icons next to the lift operator. None of these icons mean anything until you assign control power to them and then they can be given any meaning you want. There are 20 icons which cover most situations but since you can't create your own they can occasionally seem limiting.

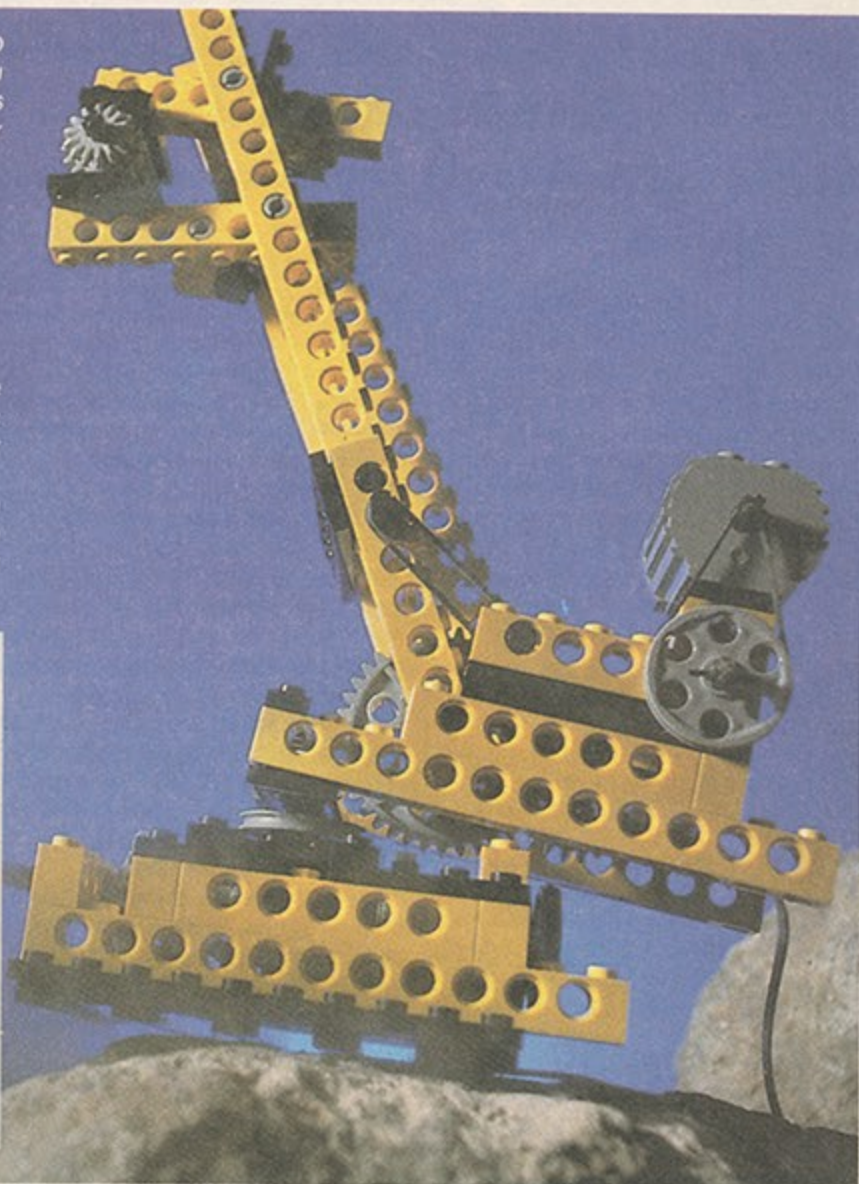
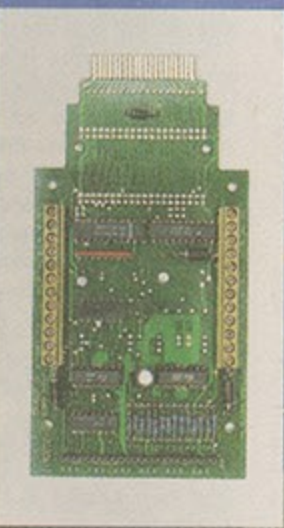
Adding commands to the icons is where the fun starts. You can set them up so that they'll initialise a motor, make motors rotate or stop movement altogether. You can control eight motors or other switched output devices such as LEDs. Eight buffered inputs are provided and two of

ARM WRESTLING

PRL has been controlling industrial robots for years. Now it's turned its attention to the ST. Mark Higham finds out what fun you can have with a Robokit cartridge and handfuls of Lego

• (Main pic) At £140, the Lego Technic Control set lets you build fantastic robot models and control them from your keyboard

• (Inset) The Robokit cartridge is enclosed in a clear plastic shell. Strips down each side let you connect wires to the cartridge. Alternatively, you can use standard ribbon cable which connects to the pins at one end



these have special circuitry allowing you to interface Lego to 'Encoders'.

One of the most useful sides to Robokit is the ability to access the board from your own software. Several examples of how you can do this are provided using both C and Basic code. This means Robokit doesn't necessarily need to be used to design robots, but can monitor burglar sensors or activate lighting or other devices.

To assign a control function you must allocate a motor number and an output port to the icon. Now, by double-clicking on icons, the robot will

burst into life – hopefully. With the more complex robots like the card reader, the manual lists possible problems which can arise.

Looking for fun

Input watching is one nifty feature. This enables Robokit to watch for certain events and respond when they become true. For example, with the mini-arm, micro-switches are installed so that as the robot rotates it tells you exactly where it's located. The system can be programmed to watch for this event every five seconds in parallel with anything else. Once you've programmed the software to watch the robot it will continue to do so until instructed otherwise. You can program a reply to this function so the robot responds when the situation becomes true.

The educational possibilities with something like Robokit are enormous. It can teach children the logic principles behind robotics even though it can't perform any worthwhile task itself. However, what's important is its versatility. Controlling Lego is never going to be a major achievement but there's no reason why extra relays can't be attached so that any situation can be watched and actions taken. Robokit lets your ST communicate with the outside world and there's no end to the possibilities with something like this. ●

THE FAMOUS FIVE

The five projects which come with Robokit are far from easy but they do an excellent job of illustrating the basic techniques behind everyday objects. The mini-arm is one of the easiest models to build. One motor revolves the arm on its base while the second operates the gripper. Two home-made microswitches detect the position of the mini-arm.

Microswitches are exploited

even further with the lift operator. Here, one motor is used to control a moving platform which stops at seven 'floors'.

The card reader is an interesting one. Here, you can build a robot to read a card with punched holes in it. Depending on the position of the holes, the card reader gives out different values, detected by the software.

There's even a crude drum

plotter tossed in as well. This model rotates a drum backwards and forwards and a pen is moved on and off the paper surface to make a drawing.

Finally, there's the maxi-arm. Three motors provide versatile movement around two axes and operate a gripper. This is steady enough to move the pieces on a chess board, provided they're not too large. Chess software is extra.

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! Express address

I would like to know the address of Computer Express in Manchester. If you can give this to me, I will be getting an Amiga. And also, can you tell me why they stopped advertising in your magazine, because every time I buy *New Computer Express* I look for their advert, but they not there.

Lee Steven Derring, Macclesfield, Cheshire.

Contact Computer Express at 85 Washway Road, Sale, Manchester M33 1TQ. Tel: 061 962 0780. Tel you why the company stopped advertising? No.

HELP! Doctor dilemma

I use an Atari 1Mb ST computer and have a Triangle dual 3.5/5.25-inch second drive connected to it. With this set-up I've tried to use a copy of *PC Ditto*, which I wanted to use to read IBM programs. I have only recently realised that a copy of MS-DOS is needed in order to make it work, as this is not generally spoken about when *PC Ditto* is written about in various magazines.

So, in my ignorance, I saw advertised DR-DOS and after reading that it is better than MS-DOS 4.0, I bought it on the understanding that if I were not satisfied, I could return it within 30 days of purchase and have my money returned.

I followed all the instructions as per *PC Ditto* and the first drive B: and tried to load DR-DOS. The 5.25 inch disk rotated through probably the first sector and then refused to rotate any further! In other words, it refused to load.

I have asked user groups, Triangle and also Digital Research who's responsible for DR-DOS, also the *PC Ditto* help line and I cannot find any answers. Please could you help or find somebody who can?

I must find an answer before my time is up so to speak, or I would have wasted my money.

J. C. Ingate, Bexleyheath, Kent.

So you saw DR-DOS advertised with the guarantee that you could return it within 30 days if not satisfied? Why don't you return it from whence it came? DR-DOS is Digital Research's enhanced version of MS-DOS, but it is not fully compatible

with MicroSoft's original, having some problems with networks and so on. I think it's unlikely that you'll get it to work with *PC Ditto*, which needs true MS-DOS to run.

TIP Fingering disks

I recently came across a floppy disk problem on my Amstrad 1640 even with disks formatted on other machines, and although I'm not sure what causes it I've found a simple solution.

It's an odd problem. You can be using a floppy or put it in another machine when it goes 'off' and you get disk messages such as bad sector, FAT error etc., and neither *PC Tools* or the Norton Utilities can make anything of it. Giving sector not found or similar messages and suggesting that the disk is faulty.

The solution is easy. All you do is to (very carefully) hold the floppy by a corner so as to squeeze the magnetic media. Insert two fingers of the other hand carefully into the hub ring and separate them to grip the disk hub. Rotate the disk slightly, put it back into the drive and get a directory listing (type DIR). If this doesn't work, try it again, but it worked first time for me on both occasions when I experienced the problem.

Once cured, it doesn't appear to happen again - a quick quarter or half turn seems to fix it without any problems.

By the way, does anyone know where I can get a decent COBOL lan-

guage for my PC? I've written to several PD libraries with no joy except for Utah COBOL at £40 and Microsoft at £500 which I can't afford. I'm doing an HNC at evening classes and need to practise at home.

G. W. P. Mason, Bainsford, Falkirk.

Strange but true, disk turning with the fingers does seem to cure many ills. Buy the Utah COBOL it's a comprehensive implementation of the language at - in PC terms - a reasonable price.

HELP! TV teach-in

Evesham Micros sell a TV/monitor for £269 (model number 2325). It would serve all my needs as I have a young family and a second TV would be great. The question is, how good is the monitor side of it? Your remarks would be appreciated.

C. D. Thompson, Prenton, Birkenhead.

The monitor is a reasonably priced, well specified device that will work fine with your Atari ST and will keep crying kids happy by becoming a TV when necessary. Evesham is a good company with a solid reputation. Buy the monitor and enjoy it. (Was that OK, Mr. Evesham?)

HELP! Citizen Thornton

I am considering purchasing the Citizen 120D printer and the *Kind Words* package for my Amiga and would be pleased if you could answer the following questions. Please don't laugh, I'm a newcomer (*Uncle Techtip* laugh at a poor unfortunate novice? As if I would - *Uncle TT*).

1. Would I use the Epson FX-80 driver for the Citizen? If not, which driver should I use?
2. What other printer settings in would I need to change?
3. How would *Kind Words* support my Citizen?
4. Can I plug the printer straight in or do I need more leads?
5. Which port does the printer use?

Craig Thornton, Nettleham, Lincoln.

1. Yes. The Citizen is an Epson compatible printer which will work quite happily with an FX-80 driver. Almost all of the popular word processing and graphics packages support Epson printer control codes, so you shouldn't experience any problems.

2. None (hopefully). Just fire up your software with the Epson driver selected and you're rocking.

3. See 1. and 2. above.

4. You'll need to obtain a standard parallel Centronics printer lead to attach the printer to the computer. These are avail-

TIP WAITing around

Replying to the letter from P. R. Holland in *Express* 49, he can get his PCW to pause between commands in a submit file. Sub files can be nested under CP/M Plus, so if he creates several sub files (JOB1.SUB, JOB2.SUB etc) he can use them all in a master sub file.

To pause between job*.sub files, he needs a simple pause program. Transfer MAC.COM and HEXCOM.COM onto a working disk and use a text editor (or *LocoScript*, saving the file as an ASCII file) to type in the listing below.

Save it as WAIT.ASM. Then from the CP/M A>



prompt type MAC WAIT!HEXCOM WAIT, and lo and behold he should have a program on his disk called WAIT.COM. All that needs to be done now is a suitable MASTER.SUB file. This can be achieved easily:

```
submit job1
wait
submit job2
wait [and so on...]
```

Dick Greener, Leyton, London.

```
;WAIT.ASM
start
org 100h
mvi c,9h
lxi d,message$
call 005h
mvi c,1
call 005h
ret
message$
db 1bh,41h,'Press a key after you
have changed the disks$'
end
```

• The listing to pause between sub files on a PCW

able from every computer supplier in the known Universe and cost about £12. Although I could recommend one of the advertisers from Express, it'd be a whole lot quicker if you simply popped along to your local computer store and bought one.

5. The Citizen 120D uses the parallel printer port built in as standard to your computer. If you have difficulties locating the port, consult the manual (but don't worry, the cable won't fit any other socket).

TIP Superbase slip-ups

Your bug of the week in Express issue 50 concerning Superbase Professional's DML language being bugged to hell is inaccurate and alarmist. I have no connection with the makers of Superbase but use it 24 hours a day in my business. I cannot allow Mr McCall's letter to go unchallenged.

Selecting Superbase info does indeed produce the busy bee symbol but the way round is to press CTRL-C or select the stop icon and then you can continue with no problems.

The five menus problem has been resolved in the latest version. I make extensive use of this program and have found the whole package to be excellent, and the minor bugs that do exist can be programmed around.

There is a problem with Superbase which I find annoying which relates to the use of relational forms such as invoices which have multiple fields. If you create a new record, save it then get called away to answer the telephone or something, when you return, if you can't remember whether you saved or not and save again the document will be saved twice - there are no warning boxes. So for example an invoice for widget 1 at £12 and widget 2 at £11.75 total £23.75 becomes four items, 2 of each widget at a total of £47.50, which of course is a serious problem. There are ways around this too but none of them are simple or 100% effective. Fortunately, this problem only occurs when a record is first created and not with an edit of a previously saved record.

Richard Choroszewski, London SW12

HELP! Beebulator

I am considering buying an Amiga A500 because of the wide variety of uses it seems to be able to fulfill and because of the new LOGO which Commodore have produced. However, I have been using a BBC previously and have a large amount of software. Is there any way in which I can use these on the Amiga? What will the BBC emulator available for the Amiga let me do?

Geoff J. Thurnhill, Kidderminster, Worcester.

The BBC emulator will allow you to run well-behaved programs written in BBC BASIC on your Commodore Amiga. This means that you will have access to a large range of educational software, what you won't be able to do is to run games, and 'business' software written in machine code. So all those games such as Elite that you just couldn't face life without will have to be purchased anew in the Commodore format. ●

TIP Aboard the Arc

Here are some assorted tips for users of the Acorn Archimedes range (including the new A3000).

First, some screen scrolling tips. When reading long text files such as the readme files provided on some applications disks, there are several ways to stop the text flashing past your eyes too fast (this also holds true for long BASIC listings) these are:

1. Scroll lock. When the light on the scroll lock key is on, this prevents the screen from scrolling upwards. Scroll lock is a toggle key, so to turn it on you press it once and to turn it off, press it again. The only disadvantage with scroll lock is that you have to be pretty quick turning it on and off, otherwise text will disappear off the top of the screen before you can read it.

2. Ctrl. Holding down the [ctrl] key will slow the scrolling down considerably, and although it's still a little too fast to read it all, at least text can be scanned for particular words/headings.

3. Ctrl and shift. If the [shift] key is pressed with the [ctrl] key, scrolling is frozen until either key is released. It is a good idea to use [ctrl] and [ctrl]/[shift] together, i.e. holding down [ctrl] with one finger all the time while reading the text file and tapping [shift] when necessary.

4. Paged mode. This is activated by pressing [ctrl] and N, and turned off with [ctrl] and O. When paged mode is activated, scrolling is halted after every screenful. To move to the next screenful, tap the [shift] key quickly. If you hold it down too long, then too much will go by.

My next set of tips concerns the use of windows. You probably know that by using the !configure program supplied on one of the RISC OS applications disks you can alter the window's configuration so that they are either updated in real time on the screen when you move the, resize them etc., or so that the new position is shown by a dotted line until you release the mouse button, as on other WIMP environment systems such as the Apple Mac. What isn't such common knowledge is that the windows configuration can be altered without going through !configure. Here's how. Look at the list below, which shows the various options:

- Continuous window movement (1)
- Continuous win-

dow resizing (2)

Continuous horizontal scroll (4)

Continuous vertical scroll (8)

Error box beep off (16)

Choose your required options from the above list, then add up the numbers in brackets for the options you have chosen e.g. continuous window movement, resizing, horizontal and vertical scroll is 1+2+4+8=15. Make sure you're in BASIC (or if you are in desktop, press F12 to open a shell CLI) and type *configure wimpflags n, where n is the number you obtained by adding together the option numbers. Hope these tips save many hours searching through reference manuals.

Joel Grounds, Llanfairfechan, Wales



• Tips to make life easier on an Arc

HELP! Cartoon capers

Some sound advice would be welcome. At present I earn a meagre living producing drawings on an Amiga 2000 and CAD package. However my qualifications include art and I am thinking of setting up by myself. I already have some contacts for whom I produce advertisements, leaflets etc., and I hope that a computer and some suitable software will enable me to produce faster, more professional results. So here are some questions.

1. Is there enough RAM on a standard Amiga 500 to produce fairly complex graphic and text outputs?

2. Which DTP/graphics software would be best suited?

3. Would the absence of a hard disk be a real problem? Could a second disk drive suffice?

4. Am I overestimating the Amiga A500? (I cannot afford the A2000).

Steve Merrigan, Ellesmere Park, Eccles.

1. Yes. Although as a general rule the more RAM you have at your disposal then the easier will be your computing endeavours (Gosh! Sounded almost serious that time kids - Uncle TT), the 512K of RAM contained within the silicon coffers of Commodore's baby is quite enough for the purposes you have in mind.

2. The Commodore Amiga, probably more than any other 'home' micro on the market, has an enormous quantity of quality graphic software available at a range of prices and with varying features. One of the better packages is Photon Paint II from Electronic Arts (0753 46465). Its splendid graphic-ish

features mean that anything you want to do can be easily achieved using this program.

3. Hard disks are jolly useful devices which - along with mountains of RAM - make computing just that little bit easier. However, you can manage without one and the simple (and cheap addition) of a second floppy will go a long way towards easing the pain of being hard drive-less. Evesham Micros sell an excellent second floppy drive for around £75 (I say around because they're continually lowering their prices). Contact Evesham on 0386 765500.

4. No. The Commodore Amiga is a powerful, quality machine which with its specialised graphics hardware, is ideal for the likes of you (artists and designers, that is). Buy an A500.

And thanks for the cartoon you sent in (below). I nearly laughed.

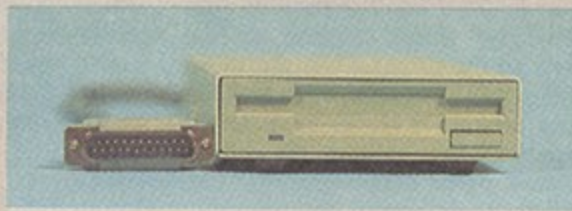


A selection of special deals only available from F

FLOPPY DISK DRIVES

3.5" 880K POWER DRIVE PC880 ONLY £69.95
INCREDIBLE!

New from Power House Break throughs in design and construction coupled with a brand new 3.5" drive unit from Epson - world leaders in peripheral technology - comes the PC880 manufactured in the UK at a price that smashes those of our competitors. Each drive is fully guaranteed for 12 months and comes complete with instructions, through port and isolating switch.



FREE!
Disk Box with 10DS
Diskettes with every
Power Drive

Order
HOTLINE
0800 581 742
Free Call

PRINTERS
We are the
Star
Specialists

WE ARE OFFICIAL



Star LC10	£155
Star LC10 Colour	£199
Star LC 24-10	£299
Star XB 24-10	£499
Star XB-24-15	£649

Star +Pack
extra ribbon +
1000 sheets of
microperf paper
and Amiga cable £16

Microperf Paper
1000 sheets £12
inc post

HP Paintjet
Colour £899
HP Desk Jet + £699
(We stock HP consumables!)

HP Laserjet 2
Compatible £1699
Qume LCS Crystal
Laser (LCD) £2899

(Postscript compatible ideal for
Pro Page)



5.25" IBM™ FORMAT COMPATIBLE DRIVE

(RRP £139)

This fully switchable
5.25" 40/80 track drive
can be used to read and
write PC formats as well
as normal Amiga for-
mats.



A500 HARD DISKS

TRIANGLE TURBO 46MB HARD DISK £499 (RRP £549)

Based on GVP technology this top of the range autobooting (1.3 KS) hard disk comes with lightning fast 28ms SCSI drive, with built in PSU and fan all in a matching cream case. Easy install software and manual are provided.



These drives also
include an option to
install 2MB of inexpen-
sive 1x1MB fast ram to
increase the Amiga's
memory.

Optional 2MB ram expansion £229

**COMMODORE A590 20MB HARD DISK
£379 (RRP £399)**

Matching autobooting (1.3KS) Amiga 20MB
60ms XT drive with the ability to expand the
Amiga's memory internally using 4*256 drams in
512k (4), 1MB(8) and 2MB steps(16)

Optional 4*256 drams for above £18 each

Call us
now for a price
on an
A500 system!

All prices
inc. VAT & Delivery
Overnite Delivery
£7.50

A500 MEMORY & VIDEO

**512k Expansion with clock
£79!!!**

1.5MB Spirit board populated 512K
£249

1.5MB Spirit board unpopulated £189

Minigen Genlock £99 (rrp £115)

Processor Acelerator £139

Super Pic £429

CHIPS & THINGS

A590 compatible 256*
4 drams£12.95! each
Turbo 3 compatible
1mbit drams£12.95! each
256K * 1 drams suitable for A500 memory
expansion or spirit board£3.75! each

DISKETTES!!! NEW LOWER PRICES!

All disks are lifetime guaranteed & fully
certified DS
Bulk DS Disks 50£35!
Bulk DS Disks 100£69!
50 Disk Box£9.95
100 Disk Box£14.95

AX
Disk Magazine
Bi-monthly
£12.95

3 disks full of Amiga
goodies in this highly
professional disk
based magazine
Fantastic demos,
clipart and PD goodies.



**To subscribe now, phone
0234 273000 for details**

A500 1MB MEGA PACK

AVAILABLE FROM NOW UNTIL CHRISTMAS WHILE STOCKS LAST £499!!!

A500 Batman Pack (Amiga 1.3 500 with Batman, F18 etc) complete with 512K expansion ram, TV Modulator, PC880K second disk drive, Mega games pack, mouse mat, 15 disks plus box and a joystick

Monitor CM8833 Stereo with system£199

Star LC 10 Colour Printer with System£199

+ 10% off our already incredible software prices if purchased with Mega Pack!

* certain lines excluded

MSXTRA

Another mouse is loose

AbbeySoft of Spalding has available a two button MSX mouse, manufactured to a high standard in IBM coloured plastic, and actually made in Taiwan. The MSX mouse is an ideal replacement device, but it is also supplied with a short-listing to type in, thus giving the purchaser scope for experimentation. Priced at £29.95, the mouse can be purchased from Abbey Soft, Abbey Passage, Spalding, Lincs. Tel 0775 711714.

More news is good news

The NCL software library has MSX titles available for hire, at reasonable rates. And an increase in library membership would speed up an updating of the MSX section, so the more the merrier. The NCL will also be producing a Bi-monthly news letter to which subscribers might very well be able to contribute. The annual subscription fee is £5.00 per year, and for more information on either activity, send a Stamped Addressed Envelope to NCL, PO Box 34, Wantage, Oxon, OX12 7QP.

On the road

One show of interest to the eight-bit MSX user will be held in Tamworth, on the 26th

November. Although the show is for a wide range of eight-bit computers, MSX devotees will not be surprised to learn that the organiser, Adrian Betts, is an MSX owner. If you would like to know more details about the show, send a stamped addressed envelope to Adrian at 8 Healey, Lakeside, Tamworth, Staffs B77 2RF.

Sailing away

Does Ocean plan to release *New Zealand Story* on the MSX format? As far as I know, this title will be converted in the near future, but a release date has yet to be finalised. We wait with anticipation.

Games

Nightdare of Chelston, Torquay, 0803 60614, now have the MSX 2 games *Contra* and *King Kong 2* in stock, priced at £26 and £22 respectively. I am also informed that they are always trying to obtain more software on Rom from Japan, so keep watching this space for news of games to come; and possibly good news on the hardware front. Both *Contra* and *King Kong 2* are games well worth a look - see this column in issues past.

Keith Neal

TINY TALK

A little mouse at AbbeySoft also tells me that sales of MSX software far and away exceed expectations, outstripping all bar Spectrum, while at the same time equalling sales of Commodore 64. Mousy says: not bad for a dead format.

SECTOR 64 SECTOR

Don't give up the ghost

Level 9's latest text/graphics game adventure, *Scapegoat* has been released at a cost of £14.95 on tape or disk. You play the part of Alan Chance, killed while investigating a drug smuggling ring, and as a ghost, you have three nights to bring the gang to justice. But there are some very tricky puzzles, and watch out for bright lights and the wonderful ghost of Joe Danby!

A fanzine at bedtime

If you're in the mood, you could write off for a couple of computer fanzines. 'Adventure Probe' has been going for donkey's years, with Mandy Rodrigues as the editor: she lives at 67 Lloyd Street, Llandudno, Gwynedd LL30 2YP. People who already know this fanzine please note that this is a new address as of 1st October. 'Adventure Probe' costs £1.50 an issue, and it is full of hints and tips for solving adventures, reviews of new games, readers' letters, how to write adventures, etcetera. Then there's 'Spellbreaker', a babe in arms at eight months old. Again at £1.50 (new price from October issue), 'Spellbreaker' hails from Mike Brailsford, who lives at 19 Napier Place, Glenrothes, Fife KY6 1DX. 'Spellbreaker' is more into maps and full solutions, getting you started and finished, new

releases news, with plenty of general and sometimes specific 64 information.

What's in a name

After reading last week's column you may be thinking "how did he manage to read the original telex about the VIC 20?" As an ex-Commodore employee, I shall tell you. The faithful Debbie was the telephonist then, and I was talking to her when the fateful telex came through. I was also attempting to keep out of the way of our Managing Director, one Kit Spencer. You see, we'd just printed thousands of leaflets about the VIC 20, in full colour, which was expensive. I'd read through all the wording prior to printing, and it seemed okay to me. When they were delivered the huge headline on the front page had got one letter M too many in the word "TOMORROW". The MD was mad...

Pete Gerrard

ON LOCATION

Some people moan that 64 BASIC doesn't have a LOCATE command, as in LOCATE X,Y:PRINT "I'M HERE". This really is no problem. At the start of your programs, define two string variables thus: FOR I=0 TO 39:CRS=CRS+CHR\$(29):NEXT:FOR I=0 TO 24:CDS=CDS+CHR\$(17):NEXT. Then, you could use X=25:Y=12:GOSUB 500:PRINT "I'M HERE", where line 500 reads 500 PRINT LEFT\$(CDS,Y);LEFT\$(CRS,X);:RETURN. The solution, once you know it, is nothing short of easy, Peasy.

WAREHOUSE CLEARANCE

ZENITH

DESKTOP PC

ONLY
£299.00 + VAT

The EAZY PC is designed for people who want a powerful, affordable personal computer that is extremely easy to use. Whether you are running a business, doing school or college work, office work at home, or just playing games. The EAZY PC runs all of today's top PC Compatible software. The package consists of:

- * 512K RAM
- * 84 Key Low-Profile Keyboard. (Audible click on each keypress.)
- * Base Unit that measures only 11" x 14"
- * Powerful NEC V40 processor (8088-compatible 16 bit micro-processor 7.16 MHz)
- * Attached 14" High-Resolution Page white monitor (640 x 400 Chars, 640 x 200 graphics.) with separate brightness/contrast.
- * MS-DOS, MS-DOS Manager, & GW Basic Software
- * 2 x 3 1/2" High capacity disk drives (720k formatted)
- * Built-in Parallel Printer Port & Mouse Port (Microsoft compat.)
- * Perfect for wordprocessing, accounts, spreadsheets, databases etc.

ORIGINAL SELLING PRICE £599.00 plus VAT
OUR TOTAL PRICE £354.00 inc Overnight Carrier



EPSON LASER

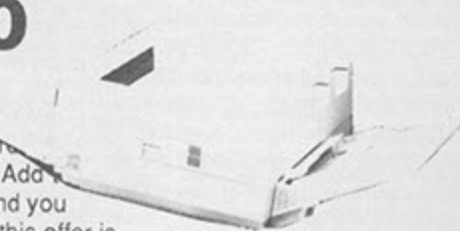
GQ 3500
ONLY
£650.00
+ VAT

At last, a laser printer that is affordable for the home or small office use. Add to this price the name of EPSON and you can see what tremendous value this offer is.

The EPSON GQ3500 is a quality laser printer with 640k RAM (expandable to 4 megabytes), standard parallel interface, & 7 built-in fonts. Paper delivery can be either face-up or face-down. We have also included in this package, absolutely free of charge, 2 additional Font Cards, and an HP Emulation Card. (Valued at approximately £150.00)

You would normally expect to pay £1100 - £1200 plus VAT for this Laser Printer, but our fully inclusive price of just £759.00 includes VAT & Overnight Carrier.

* 12 months on-site warranty available with this item.



VISA/ACCESS orders welcome. Prices subject to change without notice. All transactions are subject to our standard conditions of sale, available upon request. Personal callers welcome by appointment. All prices include VAT. Cheques/Postal orders with order.

UK HOME COMPUTERS

82 Churchward Avenue, Swindon,
Wilts. SN2 1NH



Telephone: (0793) 695034





Holiday race-away

Boy and girl racers who want a driving game to keep them sane over Chrimbo have got a huge selection to choose from with many software houses desperately hoping for an *Outrun*-like success to maintain solvency. Here's a rundown of the more promising, turbo charged, twin cam, furry dice jiggling driving games that should be out for the Specky before the twenty-fifth day of December, if not sooner.

Hard driving - Domark

This gobbled coins in the arcade on account of its realism. The Specky version is fitted out with filled 3D graphics and looks as similar to the original as it could on our machine. The speed of the demo version shown at the recent PC show was a little less impressive but it still demands a place in your affections.

Power Drift - Activision

Another seemingly impossible conversion from a state of the art arcade cabinet. Again, latest demos suggest a worthy conversion with the undulating raised tracks of the original successfully incorporated.

Chase HQ - Ocean

Definitely the one I'd like most from Santa, this game goes for the car chase theme with you putting pedal to metal in the cause of Justice. The idea is to catch up with the bad-die and then persuade him to pull over by ramming his plush sports car. With Ocean's faultless Spectrum programming of late, my hopes are stratospheric.

Happy get together

The International Computer Society is a non-profit making club with a very humanitarian and worthwhile aim - "to bring people together to help them build friendships, and through this an understanding of each other." Makes you feel warm inside doesn't it? The organisation runs a pen friend service and the society founder, George St Clair-Gunn, hopes to provide computer related special offers and possibly a magazine. Mainly though, it furnishes the opportunity to establish contact with like-minded individuals. This society opens its doors to anybody (non-Spectrum owners included) for a covering charge of £2. Join by sending that amount to 18 Bentick Street, Belfast, BT15 1 LZ, Northern Ireland - or forward a SAE for further details.

Better notes

Last issue I conveyed the heart-rending story of one man and his +3's sound fault. That man was Ted Kirk, and luckily he also owns a fully functional +2, which meant he was able to program an excellent piece of educational music software called *Play What I Play*. This

is a fairly simple package which provides aural pitch practice for musicians up to Grade 5 standard. It's available for all incarnations of the Specky on tape, microdrive and +3 disc; I recommend that all novice musicians send the obligatory SAE for more details: Ted Kirk, 33 Humber Crescent, Sutton Leach, St Helens, Merseyside, WA9 4HD. I hope this copy falls into the hands of someone who can make use of it. (Does anyone know Kylie's address?)

End notes

Mucho apologies all around for printing the wrong address of Capri Marketing a few months back.

I'm reliably informed they reside at The Computer Cavern, 9 Dean Street, Morlow, Buckinghamshire, S17 3AA. This is the address you should send SAEs to if you want details of their excellent range of Wafadrive products.

Robin Alway

MR GENEROUS

Vincent Haworth of Manchester gets my nomination for the Mr Generous of 1989 award by heaving a huge collection of Multiface pokes through my letter box. They span a large selection of games and should allow you to finish any titles you didn't have sufficient quantities of time or skill to complete first time around.

GAME	POKE	EFFECT			
Arkanoid 2	40420.X	X = speed	Part 4	37824.0	Lives
Barbarian 2	40519.0	Energy	Part 5a	37818.0	Lives
Dan Dare	23974,168	Energy	Part 5b	37979.0	Lives
Dan Dare 2	23450,212	Lives	Flying Shark		
Dragon Ninja	38918.0	Lives		54462,201	
Double Dragon				54379,3	Bombs
Part 1	37693.0	Lives	G&G	33352,201	Lives
Part 2	37815.0	Lives	G'n Beret	42076.0	Lives
Part 3a	37813.0	Lives	Garfield	33595.0	No hunger
Part 3b	37794.0	Lives	H.A.T.E.	53246,14	Lives

As well as another helping of eternal gratitude, Vincent will also be getting a free piece of Spectrum software.



Amigas at the movies

Spotting an Amiga on the television is pretty tame stuff these days, what with programmes such as 'Ghost Train', 'Miami Vice' and 'The Chart Show' featuring the Amiga heavily. Playing 'Spot The Amiga', however, isn't as easy when you look towards the silver screen.

One film to look out for is 'The Rachel Papers' that not only includes an Amiga, but much of the plot is built around the machine. The teenage hero of the film, Charles, uses his Amiga 500 to help him win over the girl of his dreams, a young American named Rachel. Using a combination of various pieces of software, Charles builds up a database on Rachel, and uses it to eventually get his girl. The film should be on general release soon.

Join the QL

The number we gave for the QL emulator from UGA Software in Holland was wrong - apologies to the lady in Utrecht. The emulator is available for £3 from Softville, Unit 5, Stratfield Park, Electra Avenue, Waterlooville, Hants. PO7 7XN.

Naughty but nice

AmigaBASIC programmers hoping to use special keys within their programs will have no doubt already found that the AmigaBASIC INKEYS function won't do the job. The way around this problem is to bypass AmigaBASIC altogether and use the hardware registers instead.

The particular hardware register we are interested in is the CIAA serial data register that looks after keyboard input (located at Hex \$BFEC01). To read any key depression, all you would do is to use the following Ami

gaBASIC program line - A = PEEKW(&H00BFEC01). Reading the variable 'A' will return the keycode for the key that was depressed when the line was executed. Here's a quick list of the keycodes for some of the more commonly used keys.

Value	Key Equivalent
63	Left Shift
61	Right Shift
117	Escape
57	Control
59	Caps On
58	Caps Off
65	Help

It is worth noting that this register actually reads two values when a key is depressed. The first is produced when a key is depressed, and when the key is released, a second value is produced. This can be quite handy when using special keys within games software. Anyway, experimentation is always the best bet to get the most from anything.

Amiga music update

Users of Intelligent Music's M algorithmic composer will be pleased to hear that the company has produced an update, in the shape of M version 1.1.

In addition to fixing several bugs in the original, the new version also includes enhancements to build further upon an already powerful composition system. M version 1.1 includes continuous time base denominator values from 1 to 48, the ability to preview synth timbres using a keyboard short-cut and several enhancements to the user interface to make M much easier to use. M version 1.1 is available from the UK distributors, MCMXCIX on 01 258 3454.

Look out for a flood of new releases from the American music company, Dr.T. Among the new products soon to be released is X-OR, a system exclusive data manager, Tiger, KCS 1.7 and several new patch editors, including an editor for the newly released Emu Proteus module. Once again, Dr.T software is available from MCMXCIX on 01 258 3454.

Details are finally starting to emerge concerning the Amiga version of Steinberg's acclaimed Pro-24 MIDI sequencer system, now renamed (in typical Steinberg fashion) Amiga 2400. Below is a run down of 2400's features.

24 Available Tracks - Not quite up to Music-X's 250 tracks, but many professionals have been getting along with Pro-24 rather nicely thank you.

8 Record SubTracks - 24 can record up to eight instruments simultaneously.

384 ppqn Resolution - Undoubtedly the highest resolution offered by any Amiga sequencer. This is much improved over the ST version that only offered 96 ppqn resolution.

Grid/Key Editor - Provides quick and easy editing of any sequence using a Music X-like bar editor.

MIDI Event Editor - Edit events such as Aftertouch, pitch bend and controllers using graphic event editors.

Volume Mixer - Change volume for any channel in realtime using the on-screen graphic controllers.

Powerful Remix options - Possible remix of last 127 recorded versions.

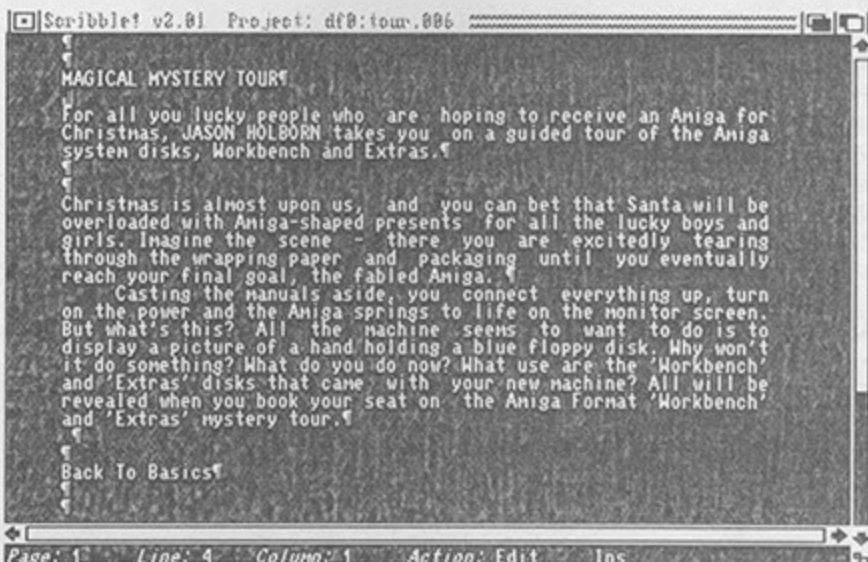
Secrets of Scribble!

There are two subjects that provoke the most confusion amongst Amiga owners - connecting a printer and once that is done, getting the damned thing to actually work. Of course, matters are made worse when the producers of word processors print incorrect information in their manuals.

Those Scribble! users among you who have been trying to use the unique Scribble! 'dot' commands will have already found out that the examples printed in the manual don't actually work. The manual states that the format for the dot command is .#1/0=%27[6w where .#1/0 defines the dot command number and %27[6w is the actual escape code to be sent to the printer (%27 being the ascii code for escape). According to the manual, the code is then used by surrounding the text to be effected using 'ALT+g1' and then 'ALT+g2' (where g2 is the code to turn off code 1).

The format of the command should actually be .#1=%27[6w (note the absence of /0) and the code is then invoked using 'RIGHT AMIGA+g1' and turn off with 'RIGHT AMIGA+g2'.

Jason Holborn



• Get the most from Scribble! with the 'Secrets Of Scribble!' tip above

520ST-FM SUPER PACK



**1Mb DISK DRIVE
£450 OF SOFTWARE**

ARCADE GAMES

Arkanoid II	Imagine	£19.95
Beyond The Ice Palace	Elite	£19.95
Black Lamp	Firebird	£19.95
Buggy Boy	Elite	£19.95
Chopper X	Mastertronic	£9.99
Ikari Warriors	Elite	£14.95
Marble Madness	Electronic Arts	£24.95
Quadrail	Logotron	£19.95
Ranarama	Hewson Consultants	£19.95
Return To Genesis	Firebird	£19.95
Roadwars	Melbourne House	£19.95
Starquake	Mandarin	£19.95
Test Drive	Electronic Arts	£24.95
Thrust	Firebird	£9.95
Thundercats	Elite	£19.95
Wizball	Ocean	£19.95
Xenon	Melbourne House	£19.95
Zynaps	Hewson Consultants	£19.95

SPORTS SIMULATIONS

Eddie Edwards Super Ski	Elite	£19.95
Seconds Out	Tynesoft	£19.95
Summer Olympiad '88	Tynesoft	£19.95

PRODUCTIVITY SOFTWARE

Organiser	Triangle Publishing	£49.95
-----------	---------------------	--------

JOYSTICK

Atari CX40 Joystick	Atari Corp	£4.99
---------------------	------------	-------

FREE ATARI BUNDLE VALUE: £458.97

£399

INCLUDING VAT

With SM124 mono monitor: £498 INC VAT

With SC1224 colour monitor: £698 INC VAT

1040ST-FM PROFESSIONAL PACK

NOW WITH TV MODULATOR

For the serious home user and the small business, we are pleased to announce a new package based around the 1040ST-FM. The 1040ST-FM has 1Mbyte RAM and a 1Mbyte built-in disk drive. In addition, the 1040ST-FM now comes with a TV modulator built-in. (The previously available 1040ST-F was designed for use with a monitor only and did not come with a modulator.) This modulator allows the 1040ST-F to be plugged directly into any domestic TV set, and comes complete with a lead to allow you to do so. The new 'Professional Pack' from Silica includes the new 1040ST-FM with modulator plus four high quality software packages including a spreadsheet, database, word processor and programming language. This 'Professional Pack' software will enable you to get straight down to business with your new computer. In addition to this software (worth £384.84), if you buy the Professional Pack from Silica Shop, you will also receive the Silica ST Starter Kit (worth over £200). Free Of Charge. Return the coupon for further information.



£499

INCLUDING VAT

With SM124 mono monitor: £598 INC VAT

With SC1224 colour monitor: £798 INC VAT

ATARI 1040ST-FM	(Computer)	£499.99
VIP PROFESSIONAL	(Spreadsheet)	£149.95
MICROSOFT WRITE	(Word Processor)	£149.95
SUPERBASE PERSONAL	(Database)	£59.95
BASIC DISK & MANUAL	(Language)	£24.98

NORMAL RRP: £884.82

LESS DISCOUNT: -£385.82

PROFESSIONAL PACK PRICE: £499.00

2Mb & 4Mb MEGA ST

The MEGA ST computers are styled as a lightweight keyboard with a separate CPU, connected by a coiled telephone style cable. There are two versions of the MEGA ST, one with 2Mbytes of RAM and the other with 4Mbytes. Each version has a 1Mbyte double sided disk drive built-in to the CPU unit. The MEGA ST's do not come with modulator built-in and must therefore be used with a monitor. With every MEGA ST purchased, we will add the 'Professional Pack' software (worth £384.83) detailed above, plus the Silica ST Starter Kit (worth over £200) both Free Of Charge. Return the coupon for further details.

2Mb MEGA ST

£899 INC VAT

+ mono monitor = £998
+ colour monitor = £1198

4Mb MEGA ST

£1199 INC VAT

+ mono monitor = £1298
+ colour monitor = £1498



DTP PageStream £149 +VAT = £171.35

Desktop Publishing (DTP) is one of the fastest growing applications for personal computers. We are pleased to announce a powerful low cost package for the Atari ST called PageStream. PageStream costs only £149 (+VAT=£171.35) and, because it works with an Atari 1040ST and a Seiko SP-180A printer, you can be up and running with a complete system for less than £1000. Some of the features of PageStream are listed to the right. If you would like further information on this program, complete and return the coupon below, ticking the 'DTP' box in the corner.

- TEXT-FLOW AROUND GRAPHICS
- ROTATION OF TEXT & GRAPHICS
- SLANT OR TWIST ANY OBJECT
- POSTSCRIPT COMPATIBLE
- TAG FUNCTION
- AUTO/MANUAL KERNING & HYPHENATION
- GROUPING OF OBJECTS

DO YOU OWN AN ATARI ST?

If you already own an Atari ST computer and would like to be registered on our mailing list as an ST user, let us know. We will be pleased to send you copies of our price lists and newsletters FREE OF CHARGE as they become available. Complete the coupon and return it to our Sidcup branch and begin experiencing a specialist ST service that is second to none.

SILICA SHOP:

SIDCUP (& Mail Order) 1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX OPEN: MON-SAT 9am - 5.30pm LATE NIGHT: FRIDAY 9am - 7pm	01-309 1111
LONDON 52 Tottenham Court Road, London, W1P 0BA OPEN: MON-SAT 9.30am - 6.00pm LATE NIGHT: NONE	01-580 4000
LONDON Selfridges (1st floor), Oxford Street, London, W1A 1AB OPEN: MON-SAT 9am - 6.00pm LATE NIGHT: THURSDAY 9am - 8pm	01-629 1234 ext 3914



ST COMPUTERS

The range of Atari ST computers offers something for everyone. From the games enthusiast who wants the challenge of the very best in arcade action, to the businessman who wants to make financial forecasts or faultless presentations. The ST offers high quality graphics, sound and speed for the gamer, whilst providing a fast, user friendly and affordable solution to business. The ST is now firmly established in the home environment and boasts a wealth of users in education, local government, television, and a variety of different businesses. Software for the range stretches to cover applications as diverse as ENTERTAINMENT, ACCOUNTS, ART, COMMUNICATIONS, COMPUTER AIDED DESIGN, DATABASES, DESKTOP PUBLISHING, EDUCATION, MUSIC, PROGRAMMING, SPREADSHEETS, WORD PROCESSING and more. For a full list of the software available, as well as details of the ST range, complete and return the coupon below.

All prices correct at the time of going to press. EAOE

520ST-FM EXPLORER PACK WITH BUILT-IN 1Mb DISK DRIVE



The value for money offered by the Atari ST range is reflected in the Explorer Pack featuring the 520ST-FM computer with 512K RAM. The 520ST-FM computer now comes with a built-in 1 Mb double sided disk drive as well as a free mouse controller and a built-in TV modulator. The new 520ST-FM Explorer Pack includes the 520ST-FM computer, the arcade game Ranarama, a tutorial program and some useful desktop accessories. In addition, if you buy the Explorer Pack from Silica, we will give you the Silica ST Starter Kit worth over £200, FREE OF CHARGE. Return the coupon for details of our Starter Kit and of the full ST range.

£260

ONLY **£2** PER WEEK
RETURN COUPON FOR DETAILS

+VAT = **£299**

+ SM124 mono monitor: £398 INC VAT

+ SC1224 colour monitor: £598 INC VAT

WHY SILICA SHOP?

Before you decide when to buy your new Atari ST computer, we suggest you consider very carefully WHERE you buy it. There are MANY companies who can offer you a computer, a few peripherals and the top ten selling titles. There are FEWER companies who can offer a wide range of products for your computer and expert advice and help when you need it. There is ONLY ONE company who can provide the largest range of Atari ST related products in the UK, a full time Atari ST specialist technical helpline and in-depth after sales support, including free newsletters and brochures delivered to your door for as long as you require after you purchase your computer. That one company is Silica Shop. We have been established in the home computer field for ten years with an annual turnover in excess of £8 million and can now claim to meet our customers requirements with an accuracy and understanding which is second to none. But don't just take our word for it. Complete and return the coupon below for our latest literature and begin to experience the Silica Shop specialist Atari service.

- SILICA STARTER KIT:** Worth over £200, FREE with every Atari ST computer bought from Silica.
- PROFESSIONAL PACK:** Free business software with 1040ST-FM and MEGA ST's bought from Silica.
- DEDICATED SERVICING:** 7 full-time Atari trained staff with years of experience on Atari servicing.
- THE FULL STOCK RANGE:** All of your Atari requirements from one place.
- AFTER SALES SUPPORT:** The staff at Silica are dedicated to help you get the best from your ST.
- FREE CATALOGUES:** Mailed direct to your home as soon as we print them, featuring offers as well as all of the new releases.
- FREE OVERNIGHT DELIVERY:** On all hardware orders shipped within the UK mainland.
- PRICE MATCH PROMISE:** We will match competitors on a 'same product same price' basis.
- FREE TECHNICAL HELPLINE:** Full time team of Atari technical experts always at your service.

FREE SILICA STARTER KIT WORTH OVER £200

WITH EVERY ST - RETURN COUPON FOR DETAILS
ALL PRICES QUOTED INCLUDE FREE UK DELIVERY

To: Silica Shop Ltd, Dept NCE 1189 _1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX
PLEASE SEND FREE LITERATURE ON THE ATARI ST

Mr/Mrs/Ms: _____ Initials: _____ Surname: _____

Address: _____

Postcode: _____ Dept NCE 1189

Do you already own a computer
If so, which one do you own? _____

DTP

LANCASTER

A black and white photograph of a Lancaster bomber aircraft in flight, viewed from a low angle. The aircraft is positioned in the upper half of the frame, flying over a body of water. The sky is clear and light-colored. The overall tone of the image is historical and dramatic.

Actual Screenshots

£19.95 AMIGA, ATARI ST

CRL Group PLC, 7D King's Yard, Carpenter Road, London E15 2HD
For more information call 01-985 2391.



At the European microfair

A contingent of QUANTA members attended the European Microfair (no connection with the UK Microfairs) held in Brussels on 21 October. A great success, the fair hosted displays from all the neighbouring countries.

ABC Elektronik of West Germany showed its new hard disk system for the QL that I mentioned a few issues ago. A couple of what appeared to be prototype systems were working, with a few minor problems (like a heat-sink shorting out the power supply), but, generally, the systems exhibited speed at par with a Rebel Electronics system, which was also on show. All in all, the ABC interface looked a bit untidy, but this will presumably be sorted out when the unit goes on sale.

The Dutch public domain QL emulator for the Amiga mentioned by Jason Holborn in a recent Amiga Blit column was also on demonstration. Pixels are a different shape

from those on the QL, so graphics look a bit strange, and some pixels are lost from the side of the display. The emulator takes the machine over completely, so you can't multi-task Amiga programs and QL programs. The emulation appeared to be about the same speed as that for the Atari ST. Also, the telephone number Jason gave was wrong, the correct number is 010 31 3404 52987.

Notes

The QL was originally intended to use an operating system developed by GST, a highly-regarded Cambridge software house. For several reasons, such as a requirement to provide a "built-in" BASIC interpreter, a decision was made to drop the GST operating system, and adopt an operating system developed by QL designer Tony Tebby - QDOS, as it came to be known. By the way, it was originally called DomesDOS, as it killed 99% of all known bugs!

The original operating system was subsequently marketed by GST called 68K/OS. 68K/OS came on a couple of EPROMs, mounted on a small PCB that plugged into the QL expansion port. One also got a couple of Microdrive cartridges with an assembler. Unfortunately no-one was interested in developing software to run under 68K/OS, and the product was dropped.

John Torofex



The Econet interface

So you are thinking of networking? Then you must network of course. On the BBC, networking means plugging in an Econet interface. And the price is a paltry 40 quid.

This may seem a frivolous expense, but comparing an Econet interface with a PC network, which costs around £500 per station, makes Econet very cost effective even for small networks. Large networks are also catered for with level 2 & 3 versions giving proper fileserver support and added power.

Advantages

Econet interface propelled networks can be mixed Model Bs, Master series and Archimedes machines. There is another advantage: software can be bought with an 'Econet licence' allowing substantial savings on multiple purchases, further enabling software loading across the system as and when required.

Now I'm not going to pretend that I know

everything about Econet, because you might. And if you do, or if you have anything to say about Econet even if you don't know everything about it, then please write to me c/o Future Publishing with your observations on the Econet scene. I can't promise to pay, but you will be rewarded with your name in print at least.

Andrew Brown

GOOD NEWS FOR ACORN USERS

For all those who have already bought an Archimedes, the good news is twofold: Acorn has updated its RISC OS programmer's reference manual and its C compiler has reached version three. The bad news is the substantial cost: £50 plus the covers of your old manuals will get you four volumes plus an index, saving you £29. Release 3 of the C compiler costs £70, or £50 if you already have release two plus £5.20 postage and packing. Professional software developers will have to pay up, but my advice to the rest of you is wait and see what alternatives come out.



Holy playability, Batman!

It's here at last - and Ocean's game of the film looks set to be a Christmas blockbuster. Now for a certain Mavis Pugh living in a converted pig pen in Outer Mongolia who hasn't seen the original, the film revolves around the plans of the Joker (Jack Nicholson) for getting his revenge on Batman (Michael Keaton) for shoving him into a vat of boiling gunge during a punch-up at the Axis Chemical works. This chemical cocktail leaves the Joker looking ever so slightly pasty-faced, and with a permanent leering grin ghastly enough to earn him £50K as a breakfast TV presenter.

The game goes down the Robocop route in letting you 'play the film' in a series of five different scenes pulled from the cinema release.

Level one has you lobbing Batarangs at

hordes of baddies in the Axis Chemical Works as you carve a path to your confrontation with gangland boss Jack Napier (soon to be the Joker). Level two changes pace as you drive the Batmobile through the streets of Gotham City escaping The Joker's hoodlums. Level three has you fiddling away in the Batcave with your chemistry set, trying to isolate the components of the Joker's poisoned cosmetics. Level four plunks you in the seat of the Batwing, where you have to swoosh between the skyscrapers shooting up the Joker's balloons (ouch!). Level five is the grand finale. After more bad-guy bashing, you make your way to the top of Gotham Cathedral where the Joker waits to give you a hiding. Polish him off, and it's game over - but at least you've got the satisfaction of having saved Gotham City from a terrible fate.

Batman features constant action, lots of baddies, lots of moves and - above all - the game is very playable. It captures the spirit of the film surprisingly well, and even though it's multiloaded on tape, making it a bit of a pain, the game is big enough to make up for this deficiency. Sprites are excellent - especially Batty himself - and the graphics as a whole are well-drawn and colourful.

Remember how long Robocop stayed at the top of the games charts? Well, it could be



• A baddie stalks the catwalks of the Axis Chemical Works, little knowing he's about to get a Batarang in the back of the neck...

GOLDMARK SYSTEMS **NIRVANA** v1.1 GOLDMARK SYSTEMS
The Ultimate Disc Management Suite
© Goldmark 1989
51 Conet Road, Watfield, Hertfordshire, AL10 8SY
Not to be used to infringe Copyright Laws
Insert SOURCE disc into Drive A then press any key (ESC to exit)

• Nirvana, complete with instruction not to be naughty and copy any games

that Ocean is about to do it again...

Word-eating time

Software house Artronic has backtracked admirably after saying earlier this year that it wasn't going to sell eight-bit games any more. Coming out in time for Christmas will be *CPC Challenge*, a compilation of such previously full-price wonders as *Big Screen Hero*, *Sabian Island*, *Solar Warrior* and *Bubble Trouble* (ah yes, I know them all well of course).

CPC Challenge will cost £8.99 on cassette and £14.99 on disk, and should be available by the end of November.

Programmers' heaven

Nirvana is apparently the final release from the cycle of reincarnation. It is attained by the extinction of all individual desires and preoccupations, culminating in absolute blessedness if you're a Buddhist or absorption into Brahman if you're a Hindu. If you're just a CPC owner looking for a decent disk management suite, however, Nirvana, from Goldmark Systems, might be the next best thing.

Nirvana has been around for a little while, but the latest revamped version also comes with some new bolt-on utilities. Amongst the features on offer remains the ability to back up some commercially-protected software, but in the light of recent controversy, this is now mentioned almost as an unfortunate side-effect of the program's powerful disk-managing facilities. You can also format, erase and rename disks.

Other goodies include individual and bulk

file transfer, sector and directory editing programs and an archiver. The archiver is perhaps the most interesting of the lot, allowing you to transfer entire disks-worth of data onto cassette. Admittedly, backing up a whole disk takes about a quarter of an hour, but it does let you store oodles of data really cheaply, freeing up those valuable floppies for more important things.

Nirvana costs £15 on disk and £26 on ROM. Goldmark Systems can be contacted on 0707 271529.

Rod Lawton

AH SO!

Reader's of Express's sister mag AA who haven't yet shurikened their way to the end of the level on the October covertape Shinobi demo should type in this poke immediately. It gives you infinite lives and a six-minute time limit - and if you can't flatten the Ring of Five now, then you deserve to be stripped of your green pyjamas...

```
10 OPENOUT "d":MEMORY &A98
20 FOR n=&BE80 TO &BE94
30 READ a$:a=VAL("&"&a$)
40 POKE n,a:NEXT
50 LOAD"":CALL &BE80
60 DATA 21,89,be,22,ed,0a
70 DATA c3,99,0a,af,32,66
80 DATA 0f,3e,85,32,9d,10
90 DATA c3,00,0d,1
```


PC UPDATE

Reader INPUT

Who remembers the little programming competition run in this column in issue 45? There will be at least five readers who will, since they were the ones who sent in entries. The task was to write a replacement for BASIC's standard INPUT statement, which would provide better control of text and number input from the user of a program.

All the entries were of a high standard. They varied from J. Baker's fairly simple section of code written in GW BASIC, to David Millington's complex, fully structured Quick BASIC sequence, intended as a new library routine. In assessing them, I looked for elegance in the code, combined with routines that satisfied the set conditions. Most entries had little problem with providing cursor control within the field and in offering insert and overwrite modes. The GW BASIC entry flicked the cursor from the end to the start of the field rather than stopping it dead when it reached the right-hand end. It also had a few nasty spaghetti GOTOs which made the flow hard to follow.

David Millington's modules performed thorough checking to allow only valid floating point numbers into a numeric field, but was inordinately long for what it did. This routine, like several of the others, failed to comply with condition 3, and let the cursor out of the right-hand end of the field.

The eventual winner, Howard Glynn, combined a good level of control with straightforward program logic and proper cursor control. He receives a copy of *The Duel* for his efforts. Well done, Howard.

In the listing on the right indentation has been removed to save space, as has the box sub-routine, which draws the field on the screen. A tilde (~) is used to represent a line continuation.

Where there's a Will...

A couple of weeks ago I complained that NewStar's DOS enhancer had an annoying habit of deleting text files on full disks rather than saving them. Bill Poel, NewStar's MD has faxed me a reply which details a workaround and wonders why I was keeping no backup. I plead guilty as charged, claim pressure of work and pass swiftly on to another subject after the following.

One of the alias examples supplied with TopDOS provides an alternative edit command which automatically makes a backup file when you call the editor. NewStar are also contemplating an upgrade, which may 'apply the brakes automatically before you drive over the cliff'.

Publisher Tutor

The *Timeworks DTP Tutor*, mentioned in this column before, turns out to be produced by ReelTime, a well-known supplier of cassette-based tutorials. The pack consists of two, double-sided cassettes and a disk containing example text files used to build up a sample page. A photocopy of the page is also included to show you what it should look like when you've finished.

The tutorial itself assumes no prior knowledge, is clear and pitched at your own pace (you simply turn the tape off whenever you need a break). The approach is tutorial, without being condescending, and the information is accurate and well integrated.

```
SUB NceEdit STATIC
FOR i% = 1 TO num% 'Draw boxes
text$(i%) = text$(i%) +
~SPACE$(length$(i%) -
~LEN(text$(i%)))
CALL Box(text$(i%), x%(i%), y%(i%),
~-1, 7, 1, 1)
NEXT
i% = 1: j% = 1:
null$ = CHR$(0): ins% = 1
DO
CALL Box(text$(i%), x%(i%), y%(i%),
~j%, 14, 14, ins%)
key$ = "":
WHILE key$ = "": key$ = INKEY$:
WEND
IF LEFT$(key$, 1) = null$ OR key$ =
~CHR$(13) THEN
CALL Box(text$(i%), x%(i%), y%(i%),
~j%, 7, 1, ins%)
END IF
SELECT CASE key$
CASE null$ + CHR$(71) 'Home
j% = 1
CASE null$ + CHR$(72) 'Up
i% = i% - 1
CASE null$ + CHR$(75) 'Left
j% = j% - 1
CASE null$ + CHR$(77) 'Right
j% = j% + 1
CASE null$ + CHR$(79) 'End
j% = LEN(text$(i%)) + 1
CASE null$ + CHR$(80) 'Down
i% = i% + 1
CASE null$ + CHR$(82) 'Insert
ins% = 1 - ins%
CASE null$ + CHR$(83) 'Delete
text$(i%) = LEFT$(text$(i%), j% -
~1) + MID$(text$(i%), j% + 1) + " "
CASE null$ + CHR$(15), CHR$(9),
~null$ + CHR$(73), null$ + CHR$(81)
~'Other Ctrl
CASE CHR$(8) 'Backspace
IF j% > 1 THEN
text$(i%) = LEFT$(text$(i%), j% -
~2) + MID$(text$(i%), j%) + " "
j% = j% - 1
END IF
CASE CHR$(13) 'Return
i% = i% + 1: j% = 1
CASE CHR$(27) 'Esc(Quit)
EXIT DO
CASE ELSE 'Other characters
IF alpha$(i%) = 0 AND
~INSTR("0123456789.-", key$) = 0
~THEN key$ = " "
IF ins% = 0 AND j% <= length$(i%)
~THEN
MID$(text$(i%), j%) = key$
ELSEIF j% <= length$(i%) THEN
text$(i%) = MID$(text$(i%), 1,
~length$(i%) - 1)
text$(i%) = LEFT$(text$(i%), j% -
~1) + key$ + MID$(text$(i%), j%)
END IF
j% = j% + 1
END SELECT
IF i% > num% THEN i% = 1 'Move back
IF i% < 1 THEN i% = num% 'in bounds
IF j% < 1 THEN j% = 1 'if necessary
IF j% > length$(i%) THEN j% =
~length$(i%)
LOOP
FOR i% = 1 TO num% 'Remove spaces
text$(i%) = RTRIM$(text$(i%))
NEXT
END SUB
```

D notice

How many other PC users have noticed that whenever you try and plug a parallel or serial lead into the back of your machine the 'D' shaped plug is invariably the wrong way round to connect? You can rarely see the orientation of the socket at the back of the machine and there no standard seems to apply.

Simon Williams

ARCHIMEDIS LORE

Printer switches

As I may have said before, I have a PC as well as my Archie, and a laser printer to take the output (I need it all for work, honest). What could be more sensible, then, than to connect both machines through a switch box to the same printer. It saves fiddling around with cables each time I want to print. It was disappointing to find, therefore, that the Archie refused to recognise the printer when connected via the switch box.

The switch box is an electronic unit which automatically scans its four inputs to see if any of them is sending data. Each input is checked roughly twice a second, but this is obviously too slow for the Archie. On contacting Acorn I discovered it is a known problem, and happens with a wide variety of electronic switches. Acorn's technical department is investigating and would like to hear from anybody with a switch box which is playing up in this way. I'll pass any results on as I hear them.

More games

It was good to read of the interest being taken in the Archie by the big-name games suppliers. This is partly due to the release of the A3000 and bodes well for the future. It was some months before the BBC Micro started to attract the attention of games software houses, but once the ball started to roll most new titles came out in Beeb format.



How about ME

Dave Smith has been making money for a long time for the cancer charity BACUP by recovering data for people whose company data or thesis or whatever has gone west with that 'address mark missing'.

Now Dave Axford, who has been behind the PCW File and BOOG bulletin board, is doing something along the same lines. Dave suffers from Myalgic Encephalomyelitis - ME, or 'yuppie flu' as it's sometimes derisively called. In fact it's an extremely debilitating condition, sapping your strength and energy to the point where you just can't do anything (I'm assured that no-one in the Express office has ME, though you wouldn't be able to tell!).

Dave A will recover data from your corrupted disks for a donation to the ME Association. Phone him on 0428 56438, or Dave Smith on 089 283 5974.

Ever bin had?

Talking about data recovery, a sober reminder from Jeremy of London (too embarrassed to reveal his full name) over storing backups. Jeremy, a student, kept backups of his English thesis of course, but all together on the top of his desk. One evening after a session working in the Wheatshaf, he decided to clear up his desk, and chucked a pile of waste paper into the dustbin. Come

To move a game from ST or Amiga to the Arch takes rather more effort than to move from one of those machines to the other, because they both use the same central processor. It would make life a lot easier if someone came up with a 68000 emulator for the Archie. Now there's an idea.

Bertrum Carrott

PD DISKS

I've just received a set of three 3.5-inch disks from DVS Public Domain. Offered at £5 the lot (no expense spared in this column), they represent good value for money. There's a wide selection of programs on the disk, most in BASIC, but with some machine code. There's the full interactive version of the wire-frame city, for instance, and several demos, some from Clares.

The games are of the Battleships and NIM variety, but are well presented and fun for a while. There's also a set of 167 full-screen flags of the world and some nice sprites. The graphics quickies are described as 'not worth running', but show off the speed and versatility of BASIC V well. All in all a worthwhile four pints worth. If you prefer programs to pints, send a fiver to DVS Public Domain, 10 Ravenhurst Drive, Great Barr, Birmingham B43 7RS. If you all send money, they may be able to afford a sorely-needed spell checker!

While on about PD, please send details and samples of any other libraries to me at NCE. I'll mention you.

the morning, the dustbin is empty, but his three backup discs...

'I've got a fairly recent printout,' Jeremy says, 'but now I've got to type in about 55,000 words all over again. If only I'd kept one backup somewhere else, I wouldn't be spending every evening typing instead of going down the Wheatshaf.' Which must at least be saving him a few quid; just as well with the new student loans coming in...

Reel thing

Reeltime is an 'audio disk training package' for the PCW - i.e. a training course based on a cassette tape as well as a software disk. If you find manuals just don't quite explain things enough, Reeltime is now out in a new version. Reeltime 2 costs £29.95.

Invoice of reason

Cornix software has released a new invoicing package called *Cornix Invoicing*. It is supposed to 'stand alone' not meaning it always ends up drinking by itself at parties but that it can be used regardless of the accounts program you use.

It contains a database to hold customer details, stock items and prices. Blanket discount and settlement discount and reports are handled.

It costs £59.95 including VAT and Cornix is on 0462 422232.

Tip for the top

A tip for *LocoScript 2* users. [EXTRA]M produces a nice big blob - just right for a 'modern' feel to separate an address, as in Ron Smith ● 45 High St ● Bristol in your letterhead. In *Loco 1* the nearest you can get is (+SR)(+B).(SR)(-B), i.e. a superscript bold full stop.

David Welham

★ **You'll find TONS of bargains** ★
at the Computer Shopper Show
... PLUS £1 million of special offers!



For three days in November, the Great Hall at Alexandra Palace, will be transformed into the venue for the world's largest pre-Christmas shopping spree for you, the computer user.

The Computer Shopper Show embraces ALL popular machine formats including Acorn, Amstrad, Atari, Commodore, Spectrum and IBM PC compatibles – with each major sector of the market creating its own show within a show.

Everything you'll ever need for leisure or business computing will be found under one roof – with experts to help you make the right choice. That's the Computer Shopper experience!

With up to 250 exhibitors serving every major make and model, the competition for your business will never have been greater. And this, in turn, will convert the Computer Shopper Show into a bonanza for buyers, the ultimate place to buy those computer Christmas presents.

A survey of the exhibitors has already shown that visitors can expect to find up to £1 million of special show offers waiting to be taken away.

Here then is the computer version of Aladdin's Cave for bargain hunters. You'll need to be a strongman to carry away all the booty!

**Alexandra Palace,
 Wood Green, London N22**

**Friday to Sunday,
 November 24 to 26, 1989**

**10am-6pm Friday and Saturday
 10am-4pm Sunday**

**Bring this
 coupon to
 the show**



Valid for up to 4 people

... and SAVE 50p per person off the normal admission price of £4 (adults) and £3 (children)

**COMPUTER
 SHOPPER
 SHOW**

10am-6pm Friday, November 24
 10am-6pm Saturday, November 25
 10am-4pm Sunday, November 26

The Great Hall, Alexandra Palace,
 Wood Green, London N22

A844

**There's so much more
 at Computer Shopper!**

- ★ All the fun of the circus is heading for the show. See Bully the Baby Elephant, a robotic Father Christmas, a record breaking strongman, clowns, a crazy stiltwalker – it's the perfect day out for the whole family.
- ★ Even waiting to get in won't be the same. For some of London's best known street buskers will be on hand to entertain you.
- ★ Try your luck with free competitions for fabulous prizes.
- ★ Incorporates events such as the Amstrad Computer Show, the Atari Computer Show, the Electron & BBC Micro User Show...
- ★ It's so easy to get there. On-site parking for hundreds of cars. Excellent public transport network with courtesy coach link to the local British Rail station.

Sponsored by **COMPUTER SHOPPER**

Organised by **DATABASE EXHIBITIONS**

STREET TALK

BY MAFF EVANS

HAVE you ever had the feeling that companies are becoming reliant on arcade names to keep them going? Looking at the round-up of games vying for the number one slot, six are arcade conversions and a further seven are name licenses. That leaves just two original game concepts out of the lot (and one of those is football!).

Occasionally, it would be nice to have a few more original games to inject some much needed vitality into the software industry, after all look what happened when *Tetris* appeared on the scene. It makes a change for a home game to be licensed to the arcades! Another point - as arcade games appearing quickly in the home only gives computer junkies less reason to venture outside the house and do such difficult things as talking to people.

I've decided to strike a blow for the SPOCG (Society for the Protection of Original Computer Games - all cheques for the charity made payable to M Evans. Thank you). No arcade conversions reviewed this week, only original titles (well *Pictionary* is a bit iffy, but it's still not an arcade game).

Maybe people will start thinking beyond the "save my ten pence from the slot" principle if they actually know of an alternative!

WELL, as hinted at in previous issues of *Express*, the news that the Konix System will miss the Christmas deadline is official. The makers hope to have the machine out by Christmas, but that isn't really a realistic outlook, what with no ads booked (whereas some companies like Nintendo have already had ads screened) and a relatively high price set for a console, Konix will have to push very hard indeed to recover from the slump. Some companies are still planning to provide games for the machine, such as *Krisalis* with *Manchester United* and *Logotron* with *StarRay*. My hopes are with Konix and I hope the machine lives up to expectations!

TAME THE GAME

● BATMAN (AMIGA)

A few people have rung up to say that the *Batman* cheat printed last week doesn't work. Well I can assure you all that it does. Maybe the tip wasn't quite clear...what you do is type JAM on the title screen. The screen will go upside down indicating that the cheat has been activated, so when you start you will have infinite lives. Also pressing <f-10> makes you advance to the next level. If you're still having trouble then try putting the Caps Lock on and pressing M a few more times - that might do the trick.

● SPHERICAL (ST)

Here is a list of all 10 passwords to the game's higher levels:

RADAGAST
YARMAK
ORCSLAYER

HIT LIST TOP 5 GAMES

Just when you thought it was safe to go back in your local software shop, *Express* comes up with some more recommended games to prise you away from your well earned dosh!

1. ROCK 'N' ROLL

Rainbow Arts / Amiga
Blimey! The caped crusader has been knocked off his perch! Well this game has been played more than *Batman* recently, so to the top of the list it goes!

2. BATMAN

Ocean / Amiga, ST, C64, CPC, Spectrum
Not number one, but still hanging in there. The pride of Gotham City's video game is still an essential purchase.

3. KICK OFF

Anco / Amiga, ST, C64
Despite Playback calls to the contrary, this game is not worse than *Speedball*. It's fast, it's fun - it's great!

4. POWER DRIFT

Activision / Amiga, ST, CPC, C64, Spectrum
I know it's not out yet, but when it is check it out (that a good enough plug, Activision?).

5. POPULOUS

Electronic Arts / Amiga, ST, PC
There still isn't a game which gives you as much power to wield. After all, they don't come more powerful than a divine being!

SKYFIRE
MIRGAL
GHANIMA
GLIEP
MOURNBLADE
JADAWIN
GUMBACHACHMAL.

Here are a few additional tips to playing the game...

When the game screen first appears (on any level), pause the game and find the ball and any traps. Build a diagonal path to the left and the right and trap the ball with a block on either side. Then fill in any holes that the ball can fall into and get stuck.

Peter Bullock, Blackely, Manchester

● STRIDER (SPECTRUM)

At the beginning of the game, hit the Z0 keys and H to hold. Now press <shift 1> and you should be taken through the level.

Darren Jackson, Crowborough, East Sussex.

● LOMBARD RAC RALLY (ST/AMIGA)

There wasn't quite enough room to include all the questions and answers

last week, so we've split them in two. Here are questions 21 to 38.

21. A BMW homologated group A car in kit form. What was it? - A: M3.

22. How many times has the Mini won the Rally? - A: Once.

23. In what year was the Rally cancelled due to foot and mouth disease? - B: 1967.

24. What is the RAC Motorsports year-book known as? - A: The Blue Book.

25. The Japanese Supra 3.0i had which problem in the 1987 Safari Rally? - A: Overheat.

26. How many marshals are involved in the running of a rally? - C: 15,000.

27. Who was the 1987 Soviet Union national champion? - C: Ilmar Rossier.

28. The Nissan 200sx made its first European Rally Appearance in...? A: Greece.

29. What is the Targa system? - B: A route timing system.

30. Who won the 7th Marlborough Rally of Argentina? - C: Mickey Balsion.

31. Are two way radios allowed between crews and service crews? - A: Yes.

32. What was the maximum number of starters allowed in the 1988 Rally? - B: 180.

FIRST PEEK...FIRST PEEK...

HARD DRIVIN'

If you haven't heard anything about this game then you must have had your head in the sand for the past six months. *Hard Drivin'* is a solid 3D driving game, featuring super-smooth movement, innovative control and hazardous obstacles in your way. The basic aim of the game is very simple - to get to the checkpoints before the clock

runs out. This would be easy if you just had to drive along a road for a while, but there are things impeding your progress, such as a level crossing (with train), vans, cars, open bridges and a hair-raising loop. Here are the graphics from the Atari ST version, which from what we've seen looks to be coming along very nicely thank you. I reckon that Domark may have a bit of a successful game on its hands this Christmas. Well I'll be looking forward to it at least - after all, it costs less to play than 50p a go like in the arcades!



ARE YOU A CHEAT

If you've managed to hack your way into a game and come up with a useful hint, cheat or tip, then why not get yourself into print? You never know, you might even win yourself a bonus piece of software - that is if you send stuff in that's better than everyone else's!

A lot of people com-

plain that the tips don't work. Well I can assure you that we test as many as possible, and if a few duff ones slip through the net then we try and sort it out if we possibly can. So don't hassle us, please!

I'm still waiting for some weird and wonderful "hidden section" hacks, as they

brighten up a poor reviewer's life. If you can help out then bung it in an envelope and send it to...

Tame the Game
4 Queen Street
Bath BA1 1EJ

Or if you're feeling lazy then stick it on the answer tape as listed in the Playback section.

GAME

33. What is the alternative route defining system known as? - C: The Tulip Card.
34. What is the engine size of the Ford RS Cosworth? - B: 1993 cc.
35. What is the RAC MSA speed limit on the roads in road rallies? - A: 30 mph.
36. Which manufacturer won the 1987 RAC Rally? - B: Lancia.
37. Who was the first driver to participate in 100 WCR events? - A: Hannu Mikkola.
38. Lancia won the Monte Carlo rally with Aureia in...? - B: 1954. Gaz Capstick, Poole Dorset.

● **RICK DANGEROUS (AMIGA)**

When you start the game, get past the rolling ball. Now as you are walking along, press the HELP key. Remember, you must be walking along. The cheat mode will now be activated, signified by a small, red, flashing blip in the corner of the screen.

Steve, Chipping Sodbury

● **TITAN (SPECTRUM)**

Here are the passwords to this weird game...

1. j4jmk
2. hbhch
3. 4492li
4. oseol
5. 2401to

Darren Jackson, Crowborough

● **RICK DANGEROUS (CPC)**

Why should all the hints for this brilliant platform game be for 16 bit users? No reason at all, so here's a listing for infinite "stuff" on the eight bit Amstrad machine...

```

1 RICK DANGEROUS - DISK
10 FOR N=&BE80
20 READ A$:A=VAL("&" + A$)
30 POKE N,A:C=C+A:NEXT
40 IF C<>3183 THEN 220
50 FOR N=0 TO 2:READ A$
60 PRINT"INF ";A$;"
(Y/N)";
70 INPUT A$
80 IF A$=Y THEN 100
90 POKE &BE96+N*3,&21
100 NEXT
110 PRINT"INSERT RICK..."
120 CALL &BB18:MODE 1
130 CALL &BB80
140 DATA 21,00,01,11,00,00
150 DATA 0E,41,DF,A2,BE,21
160 DATA 94,BE,22,25,01,C3
170 DATA 00,01,3E,A7,32,C3
180 DATA 88,32,35,9F,32,90
190 DATA 9F,C3,50,50,3C,C0
200 DATA 07,LIVES,BULLETS
210 DATA BOMBS
220 PRINT"ERROR..."
    
```

This program gives you the choice of three items: infinite lives, infinite bullets and infinite bombs. Just pick the combination you want when the prompts appear.

John Penn, Canterbury, Kent

A nice little listing there, but cheats never prosper so I'm not sending you anything! Only joking! A piece of Amstrad software is on its way to you.

ROCK AND ROLL



Rainbow Arts • £19.99 • Amiga version reviewed

One of the most addictive types of games is puzzle games - simply due to the fact that you won't rest until you've solved "just that next little bit". However, three weeks later when you still haven't solved it and you've torn all your hair out and all the furniture's been smashed in frustration...

Rainbow Arts' latest game is one of those. You must roll a ball around a sequence of seven maze-like "continents", each with its own individual style and atmosphere - not to mention its own set of traps and devious puzzles! The puzzles come in the form of twisting pathways to be negotiated, locked doors to be opened, secret routes to be discovered and flummoxing obstacles to be overcome. The traps come in the form of such nasty items as acid pools and crevices, which fall away into a bottomless chasm (yow!)

There are many ways to overcome obstacles, and many items to be used. For example, picking up money allows you to buy things like tools to build a new pathway, coloured keys open correspondingly coloured doors and shields can be used to smash through flimsy barriers and break free.

You must use all you can to help you on your quest - but be warned...it's not easy!

GRAPHICS AND SOUND • As you'd expect from Rainbow Arts, the audiovisual content of *Rock 'n' Roll* is



first class. The scenery is nicely drawn and colourful, the sprites are solid and effective and the presentation is the normal over-the-top enjoyable stuff. With a name like *Rock 'n' Roll*, the sound should be well implemented -

and indeed it is. From the quirky tune to the boing and splat in-game effects, everything is well done. A lesson to all you xenophobes - Germans are good programmers!

OTHER VERSIONS • *Rock 'n' Roll* should hit the streets on all versions at about the same time. I haven't seen any other incarnations, but if they're anywhere near as playable as the Amiga version, then no self-respecting computer owner should pass it up.

VERDICT • *Rock 'n' Roll* is great fun. I have always been under the impression that games are supposed to be fun and Rainbow Arts have hit the nail on the head. Everything about the game is so jolly that you wonder why you yell in anguish as you trickle off the edge of the same platform to die for the third time running. I must say that I haven't had as much of a giggle playing a computer game since *Dynamite Dux* in the arcades. I would tell you more, but I can't stop playing! Have a look at *Rock 'n' Roll* for yourself as soon as you can. It's a great little number (Like 66. Only Joking, haw haw!).

OTHER VERSIONS

Amiga	£19.99dk	
ST	£19.99dk	
C64	£9.99cs	£14.99dk
CPC	£9.99cs	£14.99dk
Spec	£8.99cs	£14.99dk

All versions due out November 21st



MINI REVIEWS...MINI REVIEWS...

HYPERFORCE

Prism • £14.99 • Amiga version reviewed



Mirrorsoft's *Tetris* proved that puzzle games can be very successful if they're done properly, and often coupling puzzles with arcade action proves a worthwhile effort, as the product pleases a lot of people. Unfortunately *Hyperforce* doesn't fit into either of these categories. The puzzles are mundane, the arcade action repetitive and frustrating and the game is severely lacking in the presentation department.

You control a droid called Cazoomie, the idea of the game being to collect rectangular pods before they are rubbed out by lines that bounce around the

screen. These lines also throw Cazoomie off course quite severely, so shooting a stream of bullets at the lines to hold them back comes in rather useful.

If you manage to get out of this section of the game, then you enter one of a series of puzzle games, which feature anything from a shifting maze to Simon-style "follow the lights" game. Intersperse these sections with a series of weak "cartoons" and you get something which is overpriced and out of date. The only glimmer of hope I get is to think that I'm the last person to ever have to play it.

PICTIONARY

★★★

Domark • £19.99 • ST version reviewed • Also available on C64, Amiga, Spectrum and CPC

Somehow it doesn't quite seem right, all this putting board games on computer stuff. What will happen to the family atmosphere? Well I suppose that it's better than Joey sitting in his bedroom spraying bullets at hoards of marauding commandos in the latest death-dealing arcade conversion. Anyway, I digress...

Pictionary is based on the board game where players have to draw doodles to portray a person, object or other word. Other players have to guess these words to continue around the board and win. Simple eh? Well not really. How would you draw the word "fast"? Domark's conversion includes all the features of the board game, with some additions. The most obvious of these is a simple set of drawing tools to produce the

doodles. These are easy enough to use, but it does become a little frantic when you've hardly any time to draw the word for your team!

Pictionary is rather an enjoyable game when there are a few people playing and the computer version is rather well programmed and presented. But I'm afraid I belong to that luddite breed that prefers to play this sort of game with a real dice around a table with friends. Still, computer junkies may find it enjoyable.



SUPER SCRAMBLE SIMULATOR

★★★★

Gremlin • £19.95 • ST version reviewed

Several years ago, Mastertronic released *Kikstart*, a game where you rode a scramble bike over a series of obstacles before the time limit ran out. It was an instant success, due to the simple gameplay and cheap price. Well the spirit of *Kikstart* lives on today...

Gremlin's scrambling game features the same style of rough-riding gameplay, with several enhancements (keep up with the new technology after all!), such as a steerable bike, extra landscape features and three gears. What sort of landscape features? Well there are skips, water pools, tree stumps, trucks and Volkswagens to name but a few.

The graphics in *Super Scramble Simulator* are first rate, all the sprites and obstacles are clearly drawn and nicely detailed, with some pretty smooth scrolling to boot. AAANNDD...the sound is actually good! It makes a change to see programmers writing good tunes on the ST, instead of trying to emulate other tunes with a few bleeps and crunches.

Anyway, enough of these frivolous, superficial extremities, what

of the gameplay? It's very good indeed. There is no way that you can blame the machine for your own stupid mistakes, like flying off the logs sideways or crashing off the back of a Mack truck. Each track has its own distinctive style and requisite techniques, and with 15 of them, you'll be riding off on your bike for a while to come.



"You're always cracking down on all the crackers. Well I enjoy it. Me and all my mates - we get the games in, we crack them, we pack them, we put them on a disk and there's lads out there who enjoy it. They get lots of fun out of what we do."
BIRDY.

Well they would wouldn't they. After all they get the games cheap. Piracy isn't excusable no matter who enjoys it.

"When are you going to publish Amiga Essentials?"

Where were you? It was last issue!

"Did you know that *Ballistix* is out on the BBC? It's really brilliant. And I'd just like to say

Play back

Your views on the latest software -
call 0225 444439

that I think all ST and Amiga owners are fascists!"
GARY ASHWELL, Kempston, Bedford.

Ooh, being a bit fascist yourself, aren't you?

"Don't play *Stunt Car Racer* just before you're about to have your driving lesson. I tried it and I nearly wrote off my instructor's car."
MICHAEL AUBER, West Drayton, Middlesex.

Remind me never to accept a lift from you!

"There is absolutely no justification at all for writing computer viruses and virus writers should be punished as much as possible."
JOEL GROUNDS, Llanfairfechan, North Wales

Very good point.

"I would seriously recommend people to buy *Laser*

Squad, especially if they've played *Rebel Star* in the past. It has got to be the best strategy game on the ST."
PETER ROE, Macclesfield.

"Hello everybody! It's me as well! HAHAAHAHAHA! I think *Shadow of the Beast* is better than anything on the Sega Master System. Okay? Thank you very much! Bye Bye!"

This was left on the tape by someone with an extremely manic voice. Now you have some idea of the things we have to put up with. If you're not certifiably insane and have something poignant to say on the state of the software industry, then call up and leave a message on 0225 444439.

ONE-LINERS

• Talk about getting in early! You may have seen last week in the *Express* news pages about an up-and-coming video game which attracted a lot of attention at the recent Annual Amusement Machine Show in Tokyo. The game is Atari's *S.T.U.N. Runner* - a solid 3D blast set in the 21st century, featuring a billion dollar racing vehicle which can travel in excess of 900 mph. New game, yes? Well Domark has already secured the rights to produce the home computer conversions. A bit quick off the mark you might think - and you'd be right! No information apart from a vague release date of "late next year" is available, but we'll keep you posted.

• After hitting the dizzy heights of *Game of the Month* in last week's *Express*, Activision has announced that *Power Drift* will not only be available on C64 and Amiga, but will also appear on non-Commodore machines such as ST, CPC and Spectrum. I've had a look at the CPC version and it's just as playable as the C64 version. Still haven't seen the 16-bit incarnations yet (big sulk), but I'm informed by a reliable source that it is good. Here ends the "Power Drift Game of the Week annex".

• Seeing as we're on the subject of mentioning previous reviews, I thought I'd point out that I've just received *Stunt Car Racer* on the ST. After not being too complimentary about the C64 version, I thought that I'd redeem myself by stating that the ST version is quite superb. The game doesn't suffer any of the pitfalls of the Commodore version (ie dodgy perspective and lack of realism) and is loaded with playability. Trying to qualify from the bottom league even takes some doing! The game is available now on ST, Amiga and PC for £24.99 and on C64 and Spectrum cassettes for £9.99 and disks for £14.99.

• Apology time now. It seems that somehow Psygnosis PR and a news-hungry journalist got their wires in an awful twist at the PC Show. *Express* reported that there were no new Psygnosis games due for release, but in fact it was just that on the day in question that there were no games to look at. It seems that the company had a plethora of new games to show, including *Infestation*, but after the humble hack had made his notes and dashed off to the nearest word processor. News of new releases will hit these pages as we get it. Aha! Speak of the devil! *Ballistix* has just made its way into the office on PC, and we shall be having a look at it in the near future.



TREBLE



COMPUTING



★ NEW ★ POWER PACK PLUS ATARI 520 STFM 1 MEG DRIVE

FIRST BASIC, ORGANISER, FIRST MUSIC, XENON, DOUBLE DRAGON, NEBULUS, ELIMINATOR, OUT-RUN, GAUNTLET II, SUPER HUEY, AFTERBURNER, R-TYPE, PREDATOR, SUPER HANG-ON, BLACK LAMP, STARGLIDER, SPACE HARRIER, BOMB JACK, OVERLANDER, PACMANIA, STAR GOOSE, STAR RAY, BOMBUZAL.

+ JOYSTICK + 80 CAP. DISK BOX
+ 10 x 3 1/2" DS/DD DISKS
+ MOUSE MAT

**ALL FOR ONLY
£369.99**

ATARI 520 STFM 1 Meg Drive	£269.99
ATARI 520 STFM 1 Meg Drive + Super Pack	£349.99
* NEW* ATARI 520 STFM 1 Meg Drive + Power Pack	£349.99
ATARI 1040 STFM + Professional or Games Pack	£439.99
ATARI 1040 STFM + Steinberg Pro-12	£439.99
* NEW * MEGA 1 ST Inc. Professional Pack	£519.99

ADD £99.99 TO INCLUDE SM124 MONO MONITOR WITH ANY OF ABOVE

AMIGA 500 Inc. Modulator	£359.99
AMIGA 500 + 1/2 RAM Expansion	£489.99
AMIGA 500 + 1084S Med. Res. Colour Monitor	£589.99
B2000 + XT Bridgeboard + A2040 20 Mb Hard Drive + 1084S Monitor	£1499.00
AMIGA Art & Animation Pack Amiga 500 + 1/2 Meg Expansion + Deluxe Paint III	£549.99



NEW ★ SPECIAL PACK

AMIGA 500 INC MODULATOR
WORKBENCH 1.3 AND MANUALS
11 GAMES
80 CAPACITY DISK BOX
20 x 3 1/2" DISKS
MOUSE MAT
DUST COVER

**ALL FOR ONLY
£389.99**

ACCESSORIES

Amiga A501 RAM Upgrade	£129.99
Workbench 1.3	£13.50
Joystick/Mouse Extension	£5.50
Disk Drive Cleaner (3.5 or 5.25)	£4.95
Mouse Mat (Soft)	£4.50
ST or Amiga Dust Cover	£6.50
Amiga to Scart Lead (Not Sony)	£9.95
ST to Scart Lead	£9.95
Quickshot II Joystick	£8.50
DCOMJoystick (Fully Microswitched)	£9.95
Competition Pro 5000 (Black)	£11.50
Competition Pro 5000 (Clear)	£12.50
50 x 3.5" Disk Labels	£1.20
80 Capacity 3.5" Disk Box	£6.50
Monitor Covers From	£6.95
Konix Speedking	£10.50
Konix Navigator	£12.25

GAMES SOFTWARE

ST SOFTWARE

TV Sports	£16.50
Oil Imperium	£16.50
Paperboy	£13.50
Fast Lane	£13.50
Stunt Car Racer	£16.50
Batman the Movie	£16.50
The Games Summer Ed.	£16.50
Laser Squad	£13.50
Falcon	£16.50
Falcon Mission Disk	£13.50
Centerfold Squares	£13.50
Continental Circus	£16.50
Emperor of the Mines	£16.50
Ferrari Formula 1	Phone
Gridiron	Phone
KnightForce	Phone
North & South	£16.50
Paul Gascoigne Super Soccer	Phone
Fighting Soccer	£13.50
Stunt Car Racer	£16.50
Super League Soccer	£16.50
Indy & Last Crusade Adv.	£16.50
Dragon Spirit	£13.50
Eye of Horus	£16.50
Iron Trackers	£13.50
Altered Beasts	£13.50
Action Fighter	£16.50
RVF Honda	£16.50
Hate	£13.50
Shinobi	£13.50

AMIGA SOFTWARE

Centerfold Squares	£13.50
Batman the Movie	£16.50
Continental Circus	Phone
Laser Squad	£13.50
Shadow of the Beast	£26.99
Xenon II	£16.50
Altered Beast	£16.50
Gretzky Hockey	£16.50
Shinobi	£13.50
Falcon	£16.50
Falcon Mission Disk	£13.50
Swords of Twilight	£16.50
Shufflepack Cafe	£13.50
Stunt Car Racer	£16.50
Paul Gascoigne Super Soccer	Phone
North & South	£16.50
Never Mind	Phone
KnightForce	Phone
Gridiron	Phone
Fighting Soccer	£13.50
Emperor of the Mines	£16.50
The Games Summer Ed.	£16.50
Demon's Tomb	Phone
Fast Lane	£13.50
Eye of Horus	£16.50
Beach Volley Ball	£16.50
Chessmaster 2150	£16.50
Paperboy	£13.50
Indy Arcade	£16.50

MONITORS

ATARI SM 124	£109.99
ATARI SC 1224	£264.99
COMMODORE 1084S	£259.99
PHILIPS 8833	£229.99

DRIVES

CUMANA 1 MEG 3.5" for ST	£89.99
CUMANA 1 MEG 3.5" for Amiga	£89.99
NEC 3.5" for ST	£94.99
NEC 3.5" for AMIGA	£84.99
PCML 5.25" for ST	£134.99
CUMANA 5.25" for AMIGA	£134.99

PRINTERS

STAR LC10 inc Cable +2 ribbons	£175.00
STAR LC10 colour inc Cable	£215.00
CITIZEN 120/D inc Cable	£139.99
EPSON LX800	£189.99
STAR LC 24/10 inc Cable	£269.99

HARD DRIVES

THIRD COAST, ATARI, SUPRA AND
COMMODORE A590, VORTEX AVAILABLE. PLEASE
CALL FOR

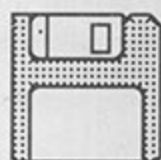
*** BEST PRICES ***

MUSIC AND SOUND

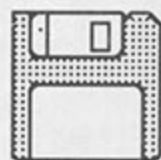
ST	
Steinberg Pro-24	£249.95
C-Lab Creator	£239.99
C-Lab Notator	£359.99
EZ Track Plus	£49.95
Edit Track	£199.99
Super Conductor	£39.99
Pro Sound Designer	£49.99
ST Replay 4	£64.99

AMIGA	
Aegis Sonix V.2	£49.95
Aegis AudioMaster II	£59.95
Amas	£77.99
Future Sound	£79.95
Pro Sound Designer Gold	£74.99
Eidersoft Midi Interface	£24.95
Datel Midi Interface	£34.95
Music X Out Now!	£189.99
Dr T's KCS	£159.99
Dr T's Midi Recording Studio	£52.95
Deluxe Music	£59.95

DISKS



**TOP QUALITY
3 1/2" DS/DD
GUARANTEED
BULK DISKS**



NEW PRICES

10	£7.50
25	£16.90
50	£32.25
100	£62.50
200	£123.00

INCLUDING LABELS. Add £5.50 for 80 Capacity Disk Box when ordering disks
or £4.50 when ordering 50 or more Disks

ART & ANIMATION

ST	
Degas Elite	£19.95
Cyber Paint 2	£54.95
Cyber Studio CAD 3D	£69.95
Spectrum 512	£44.95
Quantum Paint Pro	£32.95

AMIGA	
Lights, Camera, Action	£47.95
Zoetrope	£79.95
Aegis Videoscape 3D	£109.99
Comic Setter	£44.99
Mini-Gen (Genlock)	£99.99
Moviesetter	£56.99
Deluxe Paint III	£59.95
Photon Paint II	£69.99

ATARI PORTFOLIO POCKET PC

NEW

Pocket sized PC with 128K internal RAM. 256K ROM containing
B105 operating system and full applications suite. 200 mm x 105 mm x 29 mm
casing opens to reveal 40 col x 8 lines LCD screen and 63 keys with buried numeric keypad.
Built in applications include:

Lotus 1-2-3 File Compatible Spreadsheet Spreadsheet with 127 Col x 255 ROM worksheet.
Calculations by natural order read and writes Lotus version 1 and 2.01 files. 123-like commands
supported such as range move, copy, titles, column and ROM insert/delete.

Diary Comprehensive calendar and diary. "Wake-up" alarms even when switched off. Repeat
entries daily, weekly or yearly. fast entry and movement of appointments.

Address and Phone Book Card index system. Automatic finding and dialling of any numbers V.A
DTMF tone dialer. Entries sorted on entry and can be selected into
different categories.

Calculator Multiple display formats and memories. Factorial, power and root functions.
Calculations can be reviewed and edited.

Editor Comprehensive and easy to use text editor. Optional word wrap at any column width.
String search or replace.

Other Features Compatible with MS-DOS 2.11. Select screen
between 40*8 and 80*25 mode. RAM expandable to 640K -
internal RAM disk configurable from 8K.2 way file transfer with a PC
and printing using the parallel port auto switch off screen contrast control.

£249.99

All prices include VAT. Please send Cheques/PO made payable to:-

**TREBLE H COMPUTING
DEPT NCE, CROMER HOUSE,
CAXTON WAY, STEVENAGE,
HERTS. SG1 2DF**

**★ CREDIT CARD HOTLINE: 0438 361738 ★
FAX: 0438 361738**

Callers welcome Monday - Friday 10.00am - 6.00pm.

If you do send cash please send it Registered.

All Goods are sent First Class/Registered. Please add £3.00 for outside U.K.

Large Orders ie. Amigas, ST, Monitors etc are always sent by courier.

Please add £6.00, if you require Next Day Courier Delivery on other items.

All prices are correct at time of going to Press, and are subject to change without prior notice

EXPRESS LISTINGS

The listings page with a difference. Can you spot it?

Ten computers that hit trouble

10 Amstrad PC200

An already underpowered and not under-priced machine, distribution foul-ups put it on sale last Christmas at some stores without manuals, screens, or software

20 Amstrad PC2000

Manufacturing holdups meant the sale was delayed, costing Amstrad £10m. Problems with the hard disks on some models were put right earlier this year when Amstrad recalled the lot, costing them another £7m.

30 Atari Portfolio

Examples of early versions of the Pocket PC launched this August had a habit of giving a 'divide by zero' error at random, necessitating a hard reset and consequent loss of all data in the memory

40 Amstrad CPC664

Fine when it was released in May 1985, except that Amstrad launched the CPC6128 in August, complete with disk drives and bigger memory, killing the 664 instantly

50 Atari STE

Atari are threatening to recall developers' models of the would-be Amiga beater because they have criticised the machine openly to the press as 'too little, too late'

60 Amstrad PCW

German models were imported for a short while to cope with massive demand in autumn 1988. Unfortunately the expansion slots at the back were non-standard, making it impossible to use mice, RS232 ports or printers.

70 MSX

A runaway success in Japan in 1983, the format designed as a new worldwide standard failed in Britain the next year

due to overpriced machines, bad marketing and fierce competition, and were sold off at giveaway prices

80 Commodore Amiga

Corner-cutting Commodore scrapped work on the original operating system during development and got an off-the-shelf OS, which even with upgrades and new versions still causes random crashes and countless bugs

90 Sinclair QL

Launch impressed everyone in January 1984: 32-bit architecture, colour display, networking, multitasking... unfortunately the machine wasn't ready for production. First few models had a BASIC dongle stuck on the side and loads of bugs; its reputation never recovered

100 Acorn BBC Micro

This machine flopped in the US in 1984, seen as overpriced and short on memory; after being trounced in the sales by Spectrum and C64 that Christmas, Acorn was bailed out by Olivetti which bought 49 and then a further 30 per cent of the company

Ten foreign language versions of the word 'computer'

10 ordinateur

The French see the computer as a cold, unromantic sort of electronic organiser

20 ordenador

Say it right and even the word for computer in Spanish sounds like 'I love you'

30 dator

The pragmatic Swedes get the prize for the shortest translation

40 Rechner

German astonishingly resists the temptation to concoct a 35-letter compound

50 cyfrifydd

Don't try to pronounce this one. - especially if you have a holiday cottage in Wales

60 diànzijisuànǐ

No wonder China lags behind - by the time you've written out the characters for this, your system needs upgrading

70 pocitac

Though as the state-of-the-art home micros in Czechoslovakia are the Speccy and the Amstrad PCW, maybe it doesn't apply

80 kompyutaa

Who says the Japanese just copy the West?

90 elektronovitchispitelyamashina

And in Russia the queue to get one is even longer than the name

100 (none)

The Albanian word is irrelevant because nobody there has one and anyway our dictionary goes straight from 'compulsory' to 'comrade'

Ten things your older relatives say when you tell them you have a computer

10 I'm totally computer illiterate, me

20 Computers, well, what will they think of next?

30 I expect we'll all just be numbers one day

40 We had to chant our times tables at school

50 Computers, well, that's where the money is, isn't it?

60 I expect you get your technical mind from your father

70 Computers, well, that's where it's all going these days, isn't it?

80 It's all about logic, isn't it

90 Computers, well, everybody's got one nowadays, haven't they?

100 Did you know that on Level 5 of Xenon 2 the prices are half the normal amount, and stage 1 gives two power ups, large energy and homing missiles? (rare)

Ten famous names 'corrected' by the spell checker in PCW LocoScript

10 Nice Lagoon

Nigel Lawson, ex-Chancellor of the Exchequer, and the place he wanted to go when arguing with Mrs Thatcher

20 Neap Kinsfolk

Neil Kinnock, potentially the first atheist Prime Minister, and his scanty relations

30 Japan Domain

Jason Donovan, voted Most Fanciable Male last week in the Smash Hits poll, seems about to conquer the Orient too

40 Dinar Spender

Princess Di revealing her profligate ways

50 Bores Yetis

Boris Yeltsin, controversial reformist, and the effect of his speeches

60 Pail Gargoyle

Paul Gascoigne's face may not be a picture, but with footwork like that, who cares?

70 Anchored Reds

Actress Angharad Rees playing snooker

80 Wolfing Amateur

Wolfgang Amadeus (Mozart) was just a greedy hobbyist

90 Booby Robin

England Soccer Manager is a useless birdbrain, according to LocoSpell

100 Dr Halve Crapped

Legendary murderer Dr Harvey Crippen, the first man to be copped by telegraph

NEXT WEEK ■ NEXT WEEK ■ NEXT WEEK

On sale Thursday November 16th

Don't miss it!

WORD PROCESSING

A complete and comprehensive guide to setting up and running your own word processing system

LOOK TO THE STARS

Your machine can plot the cosmos and keep track of inter-planetary motions: find out how the program works

PLUS...

- Mac User show report
- dBase add-ons

WITH...

Letters, tech tips, features, reviews, brilliant bargains, juicy jobs, vouchers, and hard-hitting humour

AND ALSO...

The very latest in news and comment on today's computing scene. Every week in New ComputerExpress

Only
58p!

COMING SOON...

More than £10,000 of top quality kit: software, hardware, games Watch this space.

FREE! TENSTAR PACK WORTH OVER £229!



FREE! - AMEGAS - by Players



FREE! - INSANITY FIGHT - by Microdeal



FREE! - ART OF CHESS - by SPA



FREE! - MERCENARY COMP - by Novagen



FREE! - BARBARIAN, ULT WARRIOR - by Palace



FREE! - TERRORPODS - by Psygnosis



FREE! - BUGGY BOY - by Elite



FREE! - THUNDERCATS - by Elite



FREE! - IKARI WARRIORS - by Elite



FREE! - WIZBALL - by Ocean

Commodore AMIGA



ONLY £3.34 PER WEEK
RETURN COUPON FOR DETAILS

£346.95

+VAT = £399
INCLUDES FREE UK DELIVERY

The Amiga 500 is one of a new breed of technologically advanced computers, which are now emerging as the new standard for home computing, based around the new Motorola 68000 chip. The A500 has 512K RAM and a 1Mbyte double sided disk drive built-in. It can be connected directly to a wide range of monitors, or to a domestic TV set through a TV modulator. Designed with the user in mind, the A500 features a user friendly WIMP environment and comes supplied with a free mouse. And, when you buy your Amiga from Silica Shop, the UK's No1 Amiga specialists, you will experience an after sales service that is second to none, including a technical support helpline and free newsletters and price lists. Return the coupon below for our current information pack, which will give details of the Silica service and the very latest Silica Amiga offers. £&OE

WHY SILICA SHOP?

Before you decide when to buy your new Commodore Amiga computer, we suggest you consider very carefully WHERE you buy it. There are MANY companies who can offer you a computer, a few peripherals and the top ten selling titles. There are FEWER companies who can offer a wide range of products for your computer as well as expert advice and help when you need it. There is ONLY ONE company who can provide the largest range of Amiga related products in the UK, a full time Amiga specialist technical helpline and in-depth after sales support, including free newsletters and brochures delivered to your door for as long as you require after you purchase your computer. That one company is Silica Shop. We have been established in the home computer field for ten years and can now claim to meet our customers requirements with an accuracy and understanding which is second to none. Here are just some of the things we can offer you:

THE FULL STOCK RANGE: The largest range of Amiga related peripherals, accessories, books and software in the UK.

AFTER SALES SUPPORT: The staff at Silica Shop are dedicated to help you to get the best from your Amiga.

FREE NEWSLETTERS: Mailed direct to your home as soon as we print them, featuring offers and latest releases.

FREE OVERNIGHT DELIVERY: On all hardware orders shipped to Silica Shop customers within the UK mainland.

PRICE MATCH PROMISE: We will normally match our competitors offers on a 'same product same price' basis.

FREE TECHNICAL HELPLINE: Full time team of Amiga technical experts to help you with your technical queries.

But don't just take our word for it. Complete and return the coupon below for our latest Amiga literature and begin to experience the Silica Shop specialist Amiga service.

PHOTON PAINT PACK

A500 Computer	£399.99
TV Modulator	£24.99
Photon Paint	£69.95
TenStar Pack	£229.50
TOTAL RRP:	£724.43
LESS DISCOUNT:	£325.43
PACK PRICE INC VAT:	£399

1084S MONITOR PACK

A500 Computer	£399.99
1084S Colour Monitor	£299.99
Photon Paint	£69.95
TenStar Pack	£229.50
TOTAL RRP:	£999.43
LESS DISCOUNT:	£350.43
PACK PRICE INC VAT:	£649

FREE FROM SILICA

When you buy the Amiga 500 from Silica Shop, you will not only get a high power, value for money computer, we will also give you some spectacular free gifts. First of all, we are now including a TV modulator with every A500 stand alone keyboard, so you can plug your Amiga straight into your TV at home (the modulator is not included with the A500+A1084S pack as it is not required for use with monitors). Secondly, we have added a free copy of Photon Paint, an advanced graphics package with an RRP of £69.95. Last (and by no means least!), so that you can be up and running straight away, we are giving away the sensational TENSTAR GAMES PACK with every A500 purchased at Silica Shop. This pack features ten top Amiga titles which have a combined RRP of nearly £230! Return the coupon for details.

FREE TENSTAR PACK

Amegas	£14.95
Art Of Chess	£24.95
Barbarian, Ult Warrior	£19.95
Buggy Boy	£24.95
Ikari Warriors	£24.95
Insanity Fight	£24.95
Mercenary Comp	£19.95
Terrorpods	£24.95
Thundercats	£24.95
Wizball	£24.95
TOTAL RRP:	£229.50 INC VAT

DO YOU OWN AN AMIGA?

If you already own an Amiga computer and would like to be registered on our mailing list as an Amiga user, let us know. We will be pleased to send you copies of our price lists and newsletters FREE OF CHARGE as they become available. Complete the coupon and return it to our Sidcup branch and begin experiencing a specialist Amiga service that is second to none.

SILICA SHOP:

SIDCUP (& Mail Order)	01-309 1111
1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX	
OPEN: MON-SAT 9am - 5.30pm	LATE NIGHT: FRIDAY 9am - 7pm
LONDON	01-580 4000
52 Tottenham Court Road, London, W1P 0BA	
OPEN: MON-SAT 9.30am - 6.00pm	LATE NIGHT: NONE
LONDON	01-629 1234 ext 3914
Selfridges (1st floor), Oxford Street, London, W1A 1AB	
OPEN: MON-SAT 9am - 6.00pm	LATE NIGHT: THURSDAY 9am - 8pm

To: Silica Shop Ltd, Dept NCE 1189 1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX
PLEASE SEND ME FREE LITERATURE ON THE AMIGA

Mr/Mrs/Ms: Initials: Surname:

Address:

Postcode: Dept NCE 1189

Do you already own a computer
If so, which one do you own?

DATTEL ELECTRONICS

FULL
720K
CAPACITY



3.5" 1 MEG INTERNAL 2nd DRIVE FOR AMSTRAD 1512/1640 SD

- Easy to fit 3.5" 1 meg unformatted drive unit.
- Give your 1512/1640 a high capacity 720K drive for less than the price of Amstrad's 5.25" unit. No soldering or knowledge required.
- Now you can exchange data with portable Amstrad PC's or indeed any other 3.5" MSDOS machine.
- Easy to fit, comes complete with mounting tray/facia - takes about 10 minutes.
- Comes with install disk and utilities.
- Please state whether unit is required to fit on Right or Left Hand Side

ONLY £89.99

COMPLETE

NOW WITH
STYLUS OPTION



GENIUS TABLET

- Top quality graphics tablet complete with graphics software, including Menu Maker & Dr Halo III packages (see Genius Mouse ad for full details of software).
- Data rate up to 19200 baud (switch selectable) RS232 or TTL outputs.
- Compatible with most leading CAD and Graphics packages, including: AUTOCAD, TURBOCAD, GENERIC CAD, FASTCAD, VERSACAD, ORCAD, EASYCAD, GEM, AUTOSKETCH, SYMPHONY, ETC. ETC.
- Comes complete with template for AUTOCAD.
- Operates in MM Serial (SUMMAGRA PHICS) mode or Microsoft or PC Mouse Emulation.
- Superbly styled complete with Puck and Flip Stand.

ONLY £299.99

Genius Tablet now has an optional Stylus available for extra flexibility.

ONLY £29.99

REMEMBER
ALL OUR PRICES INCLUDE
V.A.T. & CARRIAGE



3.5" INTERNAL DRIVE FOR IBM/CLONES

- Simply fits into position for 5.25" drive - complete with mounting tray/facia.
- Full 720K formatted capacity.
- Top quality drive mechanism.
- Comes with install disk.

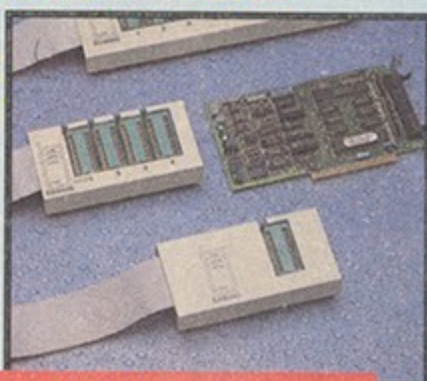
ONLY £89.99

MEMORY UPGRADE FOR AMSTRAD 1512



- Complete kit to upgrade your 1512 to a full 640K!
- 18 Fastram Chips - plus full instructions.
- Easily fitted in minutes.

ONLY £39.99



EPROM PROGRAMMER

- New design unit to program even latest devices.
- Full menu drive option including:
- Device type - 2716 to 271024
- Voltage 12.5, 21.5V
- Normal, Quick Pulse, NGS MOS, User Algorithms.
- Copes with both 27 & 87 series.
- Full Verify, Check, Read, Write, Blank Check, Modify, etc.

ONLY £109.99

4 GANG UNIT

- Same features but allows 4 chips to be programmed together.

ONLY £139.99

QS-113 DELUXE JOYSTICK/INTERFACE

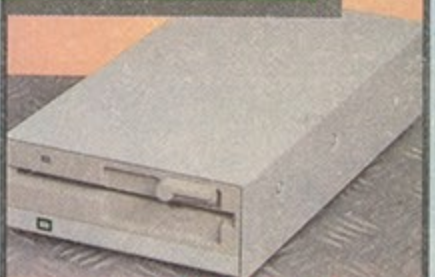


- Smooth tracking control sticks (can be set in either auto-centering mode or free-floating mode).
- X & Y-axis trim control switches.
- Auto-fire ON/OFF switch with positive response fire buttons.
- Contoured base with suction cups.
- IBM PC/XT/AT compatible half-size expansion card.
- Two 15-way D-type game ports and on-line selectable clock speed with 3-position speed selector.

ONLY £29.99 COMPLETE

JOYSTICK & INTERFACE
EXTRA JOYSTICKS AVAILABLE AT
£17.99

FOR AMSTRAD
2000 SERIES



EXTERNAL 5.25" DRIVE

- High quality 360K (formatted) drive unit for all 2086 models.
- Plugs directly into external drive socket. Acts as drive B.
- Takes power directly from Amstrad.
- Attractive case in computer colours.
- Ready to go.

PRICE £99.99 COMPLETE



EXTERNAL 3.5" 1 MEG DISK DRIVE

- Now you can add a full 1 Meg (720K formatted) drive externally to your PC XT & compatibles.
- Acts as drive B - can be switched in or out to replace internal B drive for maximum flexibility.
- Very easy to install - top quality mechanism.

ONLY £99.99

COMPLETE

3.5" SECOND DRIVE FOR PPC'S

- Top quality drive mechanism with beige facia.
- Direct plug in unit with full 720k capacity.

Please state model type.

ONLY £79.99



REPLACEMENT MOUSE 1512/1640

- High quality direct replacement for mouse on 1512/1640 models.
- Teflon glides for smoother movement.
- Rubber coated ball for minimum slip.
- Optical system counting - 500/mm.

Special Offer - FREE Mouse Mat + Mouse House (worth £7.99).

ONLY £29.99 COMPLETE

ALL ORDERS NORMALLY DESPATCHED WITHIN 48 HRS

HOW TO ORDER ...

BY PHONE

0782 744707
24hr Credit Card Line

BY POST

Send cheques/POs made payable to "Datel Electronics"

FAX

0782 744292

UK ORDERS POST FREE
EUROPE ADD £1
OVERSEAS ADD £3

PRICES AND SPECIFICATIONS CORRECT AT TIME OF PRESS AND SUBJECT TO CHANGE WITHOUT NOTICE

CALLERS WELCOME - Please reserve goods by telephone prior to visit.

DATTEL ELECTRONICS

DATTEL ELECTRONICS LTD., FENTON INDUSTRIAL ESTATE
GOVAN ROAD, FENTON, STOKE-ON-TRENT, ENGLAND.

SALES ONLY
0782 744707

TECHNICAL ONLY
0782 744324