COIN-OP THREAT

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**COMPUTER COIN-OP THREAT**

Software houses fear Nintendo power

Fears are growing among UK software houses that big name coin-op conversions could virtually disappear from home computers within two years – because of the growing power of Japanese console giant Nintendo.

The multi-billion-dollar toy manufacturer is believed to be looking for exclusive rights to both console and computer versions of the most popular arcade games. Then it will have full say over what matches the games appear on.

Industry bosses fear the firm will deliberately avoid releasing the games on any formats other than the Nintendo Entertainment System if other games houses hoping to enjoy major arcade games in their own homes have to buy the Nintendo console.

When tying up deals with coin-op manufacturers, Nintendo has long insisted that the games do not appear on any other console. Now, says source, the firm is trying to extend that clause to cover all personal computers.

Nintendo can afford to guarantee that companies will make millions of pounds in sales because of its massive presence in the United States and Japan. It is feared the coin-op companies will be sorely tempted to sacrifice smaller markets in favour of massive profits from Nintendo cartridge sales alone.

"If you're a coin-op manufacturer you'll have a choice between setting up the 400,000 cartridge sales in the US alone or making a few pence on each home computer version. There's millions to be made from Nintendo software," said one high ranking coin-op licensee.

However, not even Nintendo can be certain of success. Legal experts say the firm will have to be careful not to overstep American or European fair trading laws. Potentially, it will have to face legal action from hardware manufacturers that feel Nintendo's deals are blocking sales of their computers unfairly.

Britain's top software bosses were last week complaining privately to Express that they are feeling the pinch already. One prominent publisher claimed to have chased three popular licences only to be foiled by a special Nintendo deal.

The Japanese firm is not advertising its plans. A spokesman in Washington would neither confirm nor deny that Nintendo is attempting to draft in these extra clauses. He would only say: "Negotiations are all done on an individual basis."

Software houses here in the UK were using terms such as "unsavoury" and "worrying" last week. All fear the chase for coin-ops will become tighter.

But, they point out, some arcade firms will not deal with Nintendo. Sega, because of its own console interests, will not even be approached. And Tengen, Atari's sister coin-op company, is currently embroiled in a multi-million dollar lawsuit with Nintendo.

Much of the home computer trade in the UK regards this matter as too sensitive to talk about publicly. However, all are clearly aware of the power of Nintendo. Coin-op conversions have consistently been the best selling computer games, especially during the peak selling run up to Christmas. Last December the charts were dominated by Ocean's Operation Wolf licensed from coin-op producer Taito. Christmas next year could be a very different story.

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**The rise and rise of Nintendo**

Nintendo's astonishing success first in Japan and then America has rocketed it into a position where it dwarfs all other electronic game companies.

The US statistics are remarkable. Between the end of 1986 and the end of last year, the Nintendo system was bought by 24.5 million Americans – giving the company an 80 per cent share of the US home video game market. For two years running it's been the top selling 'toy' at Christmas and it's predicted that by the end of this year one in five American households will have a Nintendo.

The size of this market has meant remarkable software sales. Super Mario Bros. sold 2.1 million copies in the US, that's around thirty times more than a computer game has ever achieved in Britain. More than one million Americans subscribe to (and pay for) the magazine Nintendo Power – naturally it too is owned by Nintendo. Indeed, the console plays such a big part in the lives of American youngsters that department stores have set up special Nintendo centres where you can buy software, add-ons, sweat-shirts, numerous derivative toys – and even Nintendo breakfast cereal.

All this is despite the fact that the Nintendo's 8-bit technology is over five years old – in game-playing power the machine is roughly equivalent to an Amstrad CPC. So far, the console has failed to take off in the UK. However, Serfi, a major toy company, has recently signed a distribution deal with Nintendo and is planning a heavy marketing campaign including TV advertising. It still lags well behind its Sega rival here.

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* Nintendo: A way of life for American youngsters
* Operation Wolf: The kind of sales software bosses dream about – and fear they may never see again
* Nintendo: Runaway US console leader
* Arcade action: But bringing it home could cause problems
POWER TURNS DEAF EAR TO COPIER BAN

Blitz, the powerful copying device for the ST, has not been taken off the market despite the new Copyright law which came into affect this week.

Manufacturer Power Computing says it is preparing to carry on selling its copier despite the introduction of a law which sets out to ban such devices.

As uncovered in Express (issue 37) there are a number of loopholes which the manufacturers can slip through. Even though Blitz can be used for piracy it is also capable of perfectly legitimate applications such as backing up expensive software. Power can sell it if it does not mention its illegal capabilities.

"We've been talking to our lawyers for the past couple of weeks and decided to carry on selling Blitz," commented the firm's Ken Browning, "I don't think that part of the law covers our device," he said.

Browning claims that any legal action from a publisher which says its product has been printed using the Blitz is unlikely to be brought let alone succeed.

Other manufacturers were not so sure. Datel (Action Redbox), Eyesham Micros (Mass Duplicator) and Triloric (Expert) are all taking their gadgets off the market for fear of legal reprisals.

However, all are prepared to bring them back. Eyesham and Triloric are waiting to see how Power gets on and will begin selling their copiers again if it is found that it does not infringe.

Anti piracy body FAST has admitted that it would be difficult to bring legal action against these companies and says it will not be doing so in the near future.

* The Copyright Law is fully analysed on page 14

A pirated piracy device?

Allergies were flying around last week that a so-called "piracy device" sold by Eyesham Micros is in fact a pirated copy of a real copier program.

Power Computing markets the Blitz copying gadget and is understood to be talking to its lawyers about removing Eyesham's Mass Duplicator. Power privately feels that the Duplicator is a rip off of the extraordinary Blitz copier. Because of legal restrictions Power is refusing to talk about the matter. The firm's Ken Browning would neither confirm nor deny that talks were going on with legal people although insiders insist the company's top brass and the copier's programmers are extremely anxious.

For Eyesham, Richard Austin said that he had not yet been contacted by Power or its lawyers on the matter and categorically denied that his Duplicator is a rip off of Blitz.

The firm of the case will not be lost on those people who oppose copying devices saying they encourage piracy.

It seems extraordinary that a firm should be talking to lawyers about the protection of a product which could itself be illegal.

Turn your Z88 into a PC laptop

Fast moving Z88 owners can now use standard PC data disks on the lightweight laptop.

Ranger Computers has just launched its battery operated Rangerdisk 3.5 inch drive which allows Z88 owners to use 720K floppy's as storage medium and for exchanging files with their PC.

So massives, memos and documents can be typed on the move and then transferred to the PC in the office or at home. Also documents typed on the PC can be modified on the laptop.

The only drawback is the price. At £450 it costs more than twice as much as the Z88 itself and as much as a cheap portable PC. More on 0604 791064.

PCs go to pot!

Do you know your Strelizia Regina from your Chamaedora Elegans? And would you know a Primula Obconica if you saw one?

It's all a load of horse manure to most people but to Britain's gardeners it's the stuff hot afternoons are made of. As such a new 8,000 plant PC database has been put together detailing the most suitable plants for gardeners needs.

Plantfinder was specially written by Bristol programmer Frank Hope for the TV show Gardening Time but it should be sold at an affordable price to home users by the end of this year.

United we stand...

Closed season soccer spending is reaching fever pitch as software houses scramble to tie up the big names in football.

Small publisher Krials, after lengthy negotiations, has pulled off something of a coup with the signing of the entire Manchester United team. A game of the same name should be appearing on all major formats by the end of this year.

United are putting together a strategy in simulation affair which incorporates all major competitions. Manchester United is claimed to have more supporters worldwide than any other club.

Golden days: Can Krials come up with a winner?

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WHAT A SCORCHER

Death to the micro? No

Dirty Harry would have said that spions are like cats: everybody's got one. Nintendo has steamrollered over home computing in America. Will the same thing happen here?

If consoles were to squeeze out computer-based games to the same extent in Britain there would be a lot of marketing men and managers queuing up at the NES office. But even if the licences to the money-spinning home rip-offs convert all of Nintendo's way, a wholesale move over to consoles like that in America would be unlikely.

Britain was arguably the first country in the world to have a home computer boom, and the average home user does a lot more on his than just play games. Despite the various supposed advantages of consoles, they still make up for a small percentage of the market. Many people want to be able to use their machine to do more than play games.

While Nintendo could stimulate the console market, it will never significantly dent the bias towards micros in the British market. The domestic software business is built on sliding scales, but the buildings are not about to fall over.

Copy cats

It's a confusing week for everyone. Those copying interfaces are now illegal and can't be sold anymore. Or, or, can they?

One company is still selling them, confident that it can win legal challenges that the software houses might bring against them. The others are waiting for the result of any test case. Meanwhile people are talking about the wounding over the wording of the Copyright Act 1988 as now in force.

The wording of the Act is so vague: it doesn't even define 'program' anywhere - it has proved too weak to stop the sale of the whole works.

Aircraft safety database flies out

A remarkable new software package has been written which is designed to keep abreast of the flying hours and repair schedules of the world's new and commercial aircraft with more than 50 tons of weight. The database has been put together by Aviation Research and Support, which hopes flight authorities will make full use of it. Its updated every month and users can find out whatever data they want on any major aircraft (such as how many landings since its last full checkup). A number of versions have been developed so it will run on anything from a mainframe to a PC compatible.

SHOOT FROM THE LIP

"No, I can't comment on this on or off the record. And don't quote me on that." - A usually fearsome software industry figure who, strangely enough, turned a bit wibbly at the mere mention of the word Nintendo.

"The gruesome loading and protection procedure adopted by games vendors are a right turn off for folk who only want to destroy the universe in the privacy of their own home and couldn't care a recursive procedure for the finer points of computing and BASIC." - William Pole, the game's software and game magazine Micro-Scope.

"When other people with their own ideas newcomers, but no more, but Amstrad does it the whole bloody world collapses." - Gamers who are getting wound up about City whingers.

"Bomber - you'll finally believe your computer can fly." - Actuick's apalling slogan for its forthcoming game.
Skweek reports

Confusion surrounding the mysterious transformation of game character Skweek from a lovable cartoon character into a foul-mouthed villain began to clear up last week.

The US Gold game had been taken off the shelves at WH Smith after it was found that some copies contained foul language. Skweek communicates in language of savage speech bubbles but in some versions the evil thing was uttering four-letter words.

It was something of a mystery how such a thing could have happened but sources close to US Gold have revealed the explanation.

It seems the programmer on the Amiga version put the expletives in as a joke whilst writing the game with the intention of changing it later. However, the programmer forgot to remove the offending words and this version sliped out.

US Gold has recalled the nasty versions and cleared up Skweek's act and WH Smith is putting it back on the shelves.

Mini Office madness

Nearly half a million computer owners have bought one of the Mini Office business programs - and to advertise, the publisher Database is giving away a video recorder.

This month's edition had two hundred special copies of Mini Office with the Database pack containing registration cards. Buyers should send the cards back to because there will be the 100,000th copy of the program - the purchaser will end up with a £30 Sony video recorder.

Mini Office was launched in 1984 for the Beeb at a low price (£60 for a business pack) and has since been converted to the CFC, Electronix, Speedy, C64, Amiga XL, ST and PC.

Database boasts: "It's undoubtedly the best selling small business package of all time."

MEMORY CARD STANDARD Sought by Big Names

The world's leading manufacturers of memory cards are teaming up in an attempt to establish a global standard.

Credit card sized memory storage devices are widely considered to be the future of computing. More and more products featuring card storage are coming out from Japan as well as the UK. Atari's Portfolio pocket PC as well as the forthcoming Pouget computer utilise this technology.

The consortium includes such notables as Lotus, WordStar and Toshiba. Here in the United Kingdom PIE - the developer of Atari's Portfolio - seems to support the move, even if it means the standard won't be the same as its computer.

The Japanese Electronics Industry and Development Association which includes Hitachi, Epson and Fujitsu is backing the 86 pin system which holds about 48 per cent of the world's market.

The Portfolio is a 32 pin system and there are a multitude of other designs such as the 50 pin configuration. Most members of the unnamed group accept that it will not be easy to establish a standard.

Peter Baldwin at DPI told Express: "With so many products coming out which use these cards it's important that a standard is established. Market forces will win through.

"Opening up of the portfolio? Setting the pace, but not the standard."

"The one which sells the most will become standard just as it does with any other computer item."

SNIPPETS • SNIPPETS • SNIPPETS

- Following her failure to even get MPs to debate the anti-hacking bill Emma Nicholson has says she never even intended it to become law. She claims the intention was only to get people talking about the subject.

- A new program which can handle longwinded technical documentation, diagrams and equations is now available on the public domain. It's called Tex, comes a caretaker, and is available from the South West Software Library, PO Box 362, Winchcombe, Dorset, BH21 2YD...

- Massive business software outfit Borland is back on the right tracks. After last year's financial problems the firm has now come up with sales of £33 million. Borland is responsible for the likes of Paradox (a database) and the Turbo Pascal language...

- Gremlin has upped stumps and moved back to Sheffield following the failure to bury the games firm by boss Ian Stewart. Previously, much of the company was owned by US Gold which is based in Birmingham.

- Your very good health? Mountain Breeze's new gadget

A device has come out which claims to freshen up unhealthy computer office environments. Mountain Breeze's Computer Ioniser purifies streams of negative ions (electrically charged particles) designed to combat the positive ions which build up around the monitor.

These ions are said to cause headaches, eyestrain, blurred vision and irritability. But, says Mountain Breeze, these ailments can be cured with the £30 gadget. A breath of fresh air on 0655 21155.
Philips is pitching for the PC buyers pool once again with a bargain offer on its low cost range.

The firm which says it can topple Amstrad as Britain's number one PC manufacturer is bundling a £250 price of software with its range of XT and AT PCs. Open Access II is published by SPI and features a database, spreadsheet, programming kit, word processor, communications module and various desk accessories.

The entry level price of this is £799 for the XT with 12inch monitor and 20Mb hard disk. At the top of the range is the NMS 9126 which weighs in at £1699. That's an AT with 1 MB floppy, 14 inch monitor and 20Mb hard disk.

Btw.Buyers are also being offered half price training courses as an added inducement. They get cheap places on the Open Access II course with two days costing £150. Philips is pitching its offer as the ideal opportunity for first time users of PCs to get into serious computing at moderate expense. For further info call 01 222 0833.

**H T COMPUTERS**

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**IN AT THE CHEAP END**

**Einstein a go go**

The Tunguska Einstein isn't dead.

This week sees the launch of two new games for the machine: Jumper Mania, a Motor Mania lookalike, and Snap, a 128 screen adventure. They cost £6.45 and £11.95 respectively. More from publisher Taurus on 0473 602460.

**Word Up**

Amiga word crunchers can now got hold of a stand-alone thesaurus for their machine.

Ruger from Kuma contains more than 150,000 words and phrases as well as a spelling checker. It costs £29.95. Kuma is on 07357 4353.

**Virus meet**

Virus basher Alan Solomon is organizing two more seminars on the subject of viruses. Due to be held on September 13th and November 16th at Waterstreet in Rickmansworth he hopes to look at various case studies, demonstrate known viruses and talk about the machinations of the PC which allow viruses to spread. More on 01 841 791100.

**NEW COMPUTER EXPRESS**

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wetbering under the domed roof of Olympia in London last week, the pandemic public were treated to aural assault at every step, relieved only by the beauty of the air conditioning in the demonstration rooms that larger companies had set up to display their wares - no wonder they were full.

Only one computer manufacturer had a stand in its own right. Acorn, being the first computer firm to join the Music Industry Association, had a stand housing four software houses displaying their wares on the Archimedes.

**Pandora’s box**

Pandora Technology, already established as a producer of music software, was unveiling its new sequencer, the quantity-titled “Inspiration” (sic). Aimed at both the professional and education user, the package introduces several interesting features including dynamic track allocation, full colour-coded displays and real-time tempo adjustment to four decimal places. It requires 1 megabyte of RAM as a minimum. Pandora has its own MIDI interface with four separate units that include MIDI to go out, and these are all controlled with a software package which is a matrix patchbay. At £399, though, it is hardly a steal, but you do get a year’s free membership to the Music Network, the new online community system for musicians, with access to the Pandora exclusive user conference.

Around the corner Armadillo Systems was displaying its professional-quality sampling package High Note. This is a 16-bit sampler with four times over sampling up to 176K, and the results are very convincing indeed. However, the software and hardware will set you back a bank-balance slimming £1,200, which puts it firmly in the domain of the professional or well-heeled enthusiast. Armadillo also markets a more homely version, the 8-bit A448, which comes at the more reasonable price of £135. Both of these require a hardback to accept the sample card.

As eloquent as ever, Mike Beecher was displaying the Electro Music Research range of products as only he can, entertaining the audience in the process. The Studio 24 sequencer and scoring package is now expanded to 323 tracks and can be linked to a graphics package and also synched to SMPTE code with an additional card. Two new packages, Rythm Box and Handimusic have been designed specifically for “special needs” education, and VU Music is a simplified real-time scoring package.

**The Musical Archie**

Acorn itself was showing the multiple uses of the Archimedes and generally getting used to working in a musical environment. It was interesting to notice that Archies also appeared on Roland, Casio, Kawai and Technics stands as well. In particular, Kawai is using it as a basis for a 16-instrument MIDI classroom teaching system. It is good to note that the A3000 Archie now has built-in MIDI ports.

Opposite the Acorn stand was one whole stand devoted to the new Amiga blockbusting package Music X. It is a 256-track, multitasking MIDI workstation. It has real-time graphic and data stream editing, multiple-track recording, key mapping, patch editing modules for Roland D50, Yamaha DX7 and DX100, and Casio CZ1000, MIDI filtering and software patchbay combined, and it comes with 16 samples which are all edible in another part of the same program. It looks set to put the Amiga firmly on the musical map and makes it a serious contender in the sequencing market. It is the first program that really makes full use of the multi-tasking features of the Amiga and it is certainly a giveaway at £199 plus VAT.

**Stuffed full**

In the other camps, there were two major new programs for the ST, which is far fewer than last year - is the ST market on the wane, or just saturated?

The first was the all-British Virtuoso program from Digital Music. This has had a heavy press build-up, and was receiving its first public outing. It does away with the GEM environment and therefore appears to be multi-tasking, printing and saving sequences and songs while playing them. It has about the highest note resolution at 480 clicks per quarter note, and very rapid display and scroll times. With text editing features and further features to be available soon, it should soar in to the door of the Commodore.”

The other major program for the ST was from Comus, again on the Soundsbits stand. ProScore is a 32-track sequencing and scoring package similar in design to the rest of the Comus range. It has real-time sample entry and editing, separate chord and drum tracks and will output either the whole score or individual parts to either a 9 or 24-pin dot matrix, or laser printer. It accepts MIDI files as well as files from other Comus programs, and runs on a minimum of 1MB and a mono screen. At £299 inc VAT it looks set to make a very good impression on the user-friendly market.

**Something clicked**

Sound Technology was displaying the C-Lab Notator updates for the ST, which include an increased clock resolution of 1,666 per bar and also a human feel option which picks up the tempo from your playing. An optional bolt-on will allow you to input the tempo you want manually by clicking or by playing a rhythm track to it. There are also enhanced SMPTE features on the update. More multitasking from C-Lab with its SoftLink, which is compatible not only with C-Lab’s own software but with any software that uses GEM. By using a 4MB ST it will allow you to swap from program to program whilst all are running. In some cases the programs can be made interactive, so for example a DXT programmer can use the time to alter the tone of the synth and the sequencer running in the background will remember the parameter changes.

Roland launched the first tone modules and pads specially designed for the computer musician. The CM-32L, CM-33P and CM64 are all modules with no LCD display but work with sequences rather than keyboards. Accompanying these are a Digital Fader, a Music Entry Pad and an Intelligent Arranger, all again designed with the computer in mind to make life a little simpler when creating and editing MIDI data.

All in all, it’s hot - in more ways than one - music fair.
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YOU HAVE TEN DAYS TO COMPLY...

Win a Robocop video – and a machine to play it on!

Unless you’ve been stuck in a lift for the past six months you’ll know that Robocop, the game of the film from Ocean, has been at number 1 in the games charts since Christmas.

Well, now Express is giving away a video of Robocop to the winner of our competition – and also a video player to play it on, worth over £200! (It can’t record, but it’ll play any videos through your TV as normal). Ten lucky runners-up will receive a copy of the game for their machine – it’s out just about every format.

Who said what?

Here’s what you have to do. Below are five famous cops and a saying of theirs. Unfortunately the sayings have got mixed up – you have to match the saying to the right cop. If, for example, you think that Dixon of Dock Green said “Who loves ya baby”, write A-2 and so on. We also want a tip on your favourite game.

Send your answers on a postcard to Robocop Competition, New Computer Express, 4 Queen St, Bath BA1 1EJ.

Don’t forget to tell us your name and address, and what machine you have.

A. Jack Warner as Dixon of Dock Green:
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B. Clint Eastwood as Dirty Harry:
   2. “Makakakak! Who loves ya, baby?”

C. Telly Savalas as Theo Kojak:
   3. “Elementary.”

D. Basil Rathbone as Sherlock Holmes:
   4. “Drop the gun. You have ten seconds to comply.”

E. The law enforcement machine in Robocop:
   5. “Evening all.”

Closing date for the competition is 15th August 1989 – so there’s no time to waste!

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**Next question?**

Could you tell me what computers the Express staff use? You cannot be totally unbiased, can you? Like when you said Amigas can only display 32 colours at a time? I know the TSE made you excited, but there's no need to lie, is there? Ever heard of EHB and HAN? I do not think 256 colours boots 4,065,000, odd.

J E Rowland, Amiga, PET and IBM owner, Broadford Bridge, West Sussex

**The bill**

I know that it may be impossible for legal reasons to print the names of firms that have outstanding debts with your magazine, but would it be possible to list the names occasionally of mail order firms that pay their accounts on time? It would certainly help your readers who are undecided about mail order buying and maybe it would assist the future of Express and its competitive price by encouraging firms to settle accounts on time.

Keith Reader, Chorley, Lancs

**Radiators from space**

I was worried by your recent article on the dangers of computer monitors; could you please tell me do monitors emit radiation when they are turned on? I wish to know this as my computer workstation is situated in my bedroom, thus meaning I am close to it for about twelve hours a day.

M Pinder, Preston

**Call the vet**

I am very concerned as to how you vet the business people that advertise in your magazine. The advertiser to which I refer is Computer Stationery (UK). I shall not forward a cheque for £19.90 for 10 disks. I have never received them. I have phoned three times but I am unable to contact the people concerned.

A young lady answered the phone and said she would pass a message on. On each occasion I have left my phone number but have never had a reply. The person answering the phone told me that this firm only has an office there and collects the mail in the morning and is not seen the rest of the day. Is there anything you can do to assist me in obtaining either the disks I ordered or a refund of my money? According to my bank statement the cheque was cashed on the 12th of June.

D G Barrardine, Cardfit, South Wales

**Cheap and nasty**

It was with great interest that I read the letter entitled "The great FD recall" in issue 37 of Express. The big difference between the companies that charge £3.00 and the "companies" that charge £1.50 is often the quality of service.

A while back I found a PO supplier (who shall remain nameless) who offered a small range of disks for £1.75 each. I ordered a few. After several days I received all but one of the disks—the one missing had been corrupted and would be sent to me at a later date. The disk labels were hand-written, scruffy, and were coming off—and kept getting stuck in my drive. The disks worked fine, but it didn't really matter.

About a month later I received the missing disk—in a plain envelope, no protection whatsoever, and no label! It wasn't for the fact that I got a receipt with the disk I wouldn't have known what it was.

That's not all! The disk itself had obvi...
More Top Tens!

Another roundup of your most hated things about computing...

**WATCHBITCHES?**

Here are the ten things I hate most about computing:
1. Tiny sprites in games
2. Rubber-keyed Spectrums
3. Cassettes and associated loading difficulties
4. People who aren't interested in computers
5. People who can't talk about anything else
6. Games that are too hard (Demons on the Amiga)
7. Boring games (Terropods)
8. Oversensitive games (Glad Start on the Amiga - clip a haskell at 5mph and see what happens)
9. "Watchdogs" who complain about sex and violence in computer games then go home to beat their kids then force them to watch "Cannibal Holocaust". I won't name her, she knows who she is.
10. Not enough sex and violence in games

---

**BLACK PRINTS**

1. Printers that don't let you use the top two inches of single-sheet paper (like this one)
2. Lack of after sales service for Amstrad CPC users (e.g. no reprint of firmware manual)
3. Express competitions I never win
4. Computer companies that let you order software months before completion
5. Spectrums
6. Battery-powered acoustic modems
7. 7.9 minute + VAT + phone bills comes networks (i.e. Prestel/Micronet)

---

**PCW SHOW**

1. People who waste a perfectly good computer, playing games on it instead of really using it.
2. People who buy a game and spend God knows how long sorting out ways to cheat because it's too difficult for them to win.
3. People who mooch that games are too expensive. Do what I do if something is too dear. Don't buy it.
4. Comparing one computer with another. My PCW9512 may not be fast but it does what I want it to do easily and with no hassle for me. If someone else wants one which does something different, OK I can't care less.
5. People who slag LocoScript. Remember the old saying, "Never look a gift horse in the mouth."
6. Firms who don't bother to reply, ever, just by saying "Sorry there's a holiday when you have enclosed a stamped addressed envelope.
7. Instruction book writers, who seem to assume that I have a PhD in computers.
9. The "Syntax Error" message I get, which really tells me what I have done wrong. (Say what you like LocoScript is kindly).
10. Computer magazines who only allow one chapter of a piece for PCW in their Formal pages.

---

**HYPER SPRINGS**

My nomination for the Piggy book of New Computer Express'scoverage to date of Micro Design 2 (category: the greatest amount of pre-launch hype) that an untested PCW program has been received in any computer magazine.

As they say in the lager ads, Micro Design is good, but it's not that good.

---

**COMMMIES AREN'T ALL BAD**

I was surprised to read of Alan Smith's delayed repair of his Commodore machine (Express 37).

My experience dealing with the company on a direct basis was that my machine was turned around within a four week period. I must admit it was mainly thanks to their Service Manager, who chased the repair firm into action. He was not only polite and understanding, but kept his promises.

Although my machine was a PCW and not an Amiga, I honestly feel a phone call to the Commodore Service Manager would be an action likely to result in an urgent response, and even see your machine returned within three days.

---

Possibly the person Neil Barnes is talking about is point 9, or possibly not, reading the Visi annual, or maybe something else.
ARGH! ANOTHER GUINEA PIG LETTER...

In response to your item concerning the employment of a guinea pig to write a regular column in your magnificent magazine, I would like to apply for the job. I am in actual fact a guinea pig and play lots of games on an Atari 520STFM.

I purchased a copy of Caron Command and rushed home to play it. Unfortunately, I could not load it, so back to the shop I went. While examining the assistant's shelf, I found a box that contained an Atari 520STFM, which I loaded and ran perfectly. I told him to try it again at home and if it still didn't load then to bring my computer in and he would check it out for me.

Needless to say it didn't load so I took the cassette and computer back to the shop. The computer was checked and found to be in A1 condition (apart from the odd sunflower seed here and there), when he went to load the cassette tape into the disk drive he burst out laughing. "You're a guinea pig, aren't you?" he asked. "Yes", I replied rather sheepishly, as a crowd had started to gather around us by this time. "How did you know? What gave it away?" "Simple", he said, tickling me behind the ear. "Only a guinea pig doesn't know..."

Spectrum files won't load in an Atari. I am married to a lovely guinea pig of a wife and we have eighteen little guinea piglets... oops! Better make that twenty-one, or twenty-four, twenty-seven, whoops, prolific little breeders aren't we? George G Pig, Palace

Well, the gestation period of a guinea pig is sixty days of course, and they are perhaps not quite so prolific as they are generally supposed to be. But I'm not sure how a guinea pig can be shepherded.

Express needs you!

We want to send you our poke, cheats, hints, tips and high scores on the best games around at the moment. Send them to us at Gameplay, New Computer Express, 4 Queen Street, Bath BA1 1EJ.

* Carrier Command is just too confusing for guinea pigs, says George G Pig

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**CARRYAGE UNLESS STATED OTHERWISE.** £6.99 FOR NEXT DAY DELIVERY. THIS PRICE LIST IS CANCELS PREVIOUS LISTING. E&OE. 1/8/89
The Copyright Act is now in force, and affects everyone who ever copies a disk. Have you read it yet? Steve Carey reveals that Things May Never Be The Same Again...

The Copyrights, Designs and Patents Act 1988 comes into force on the 1st August. But few of those likely to be affected - programmers, pirates and producers of copy-protection hunting devices - have read it. Fewer even begin to understand it, and no-one is quite sure exactly what it means.

The Act concerns anyone who uses a joystick or a keyboard and focuses on software duplication and copy-protection. Penalties for breach of copyright range from forfeiture through heavy fines to a gaol sentence of up to two years. So it is important that you know what the Act says, and whether you can expect Bob Hay and the other boys from the Federation Against Software Theft to come charging up your garden path.

The dramatic impact of these apparently draconian measures is weakened, however, by the fact that such penalties are likely to be enforceable only against commercial pirates: precedent suggests that buying a copyright-infringing article for personal use is not a criminal offence (but may still lead to civil prosecution).

Getting your back-up

The rights and wrongs of copying software is the most hotly debated issue of computing in the 1980s and the impending 90s. Surely if you spend a considerable sum of money on a computer program you are legally entitled to make a back-up in case anything goes wrong? Well, no.

Of course you're unlikely to find yourself in the dock just for taking the eminently sensible precaution of backing-up. But the fact remains...
you have no absolute legal right, even under the new Act, to do so.

And if, having tried of a favourite game you sell it secondhand but keep a copy “just in case,” then it is you who are breaking the law. Sell the program and you sell the licence to use it or to possess a copy. You have been warned.

For software users, two sections are of prime importance. The first is concerned with the sale or possession of anything that enables infringing copies to be made:

24. — (1) "Copyright in a work is infringed by a person who, without the licence of the copyright owner—

(a) makes,

(b) imports into the United Kingdom,

(c) possesses in the course of a business, or

(d) sells or lets for hire, or offers or exposes for sale or hire,

an article specifically designed or adapted for making copies of that work, knowing or having reason to believe that it is to be used to make infringing copies."

The second section is 296 (be careful: you may well rue yourself trying to untangle the syntax):

296. — (1) "This section applies where copies of a copyrighted work are issued to the public, by way or with the licence of the copyright owner, in an electronic form which is copy-protected.

(2) The person issuing the copies to the public has the same rights against a person who, knowing or having reason to believe that it will be used to make infringing copies—

(a) makes, imports, sells or lets for hire, offers or exposes for sale or hire, or advertises for sale or hire, any device or means specifically designed or adapted to circumvent the form of copy-protection employed, or

(b) publishes information intended to enable or assist persons to circumvent that form of copy-protection as a copyright owner has in respect of an infringement of copyright."

In other words, if you sell anything specifically for breaking copyright protection you can be sued by the owner of the computer program. This, it has been argued, might apply to hardware such as Blitz for the ST and Amiga or the Multifarc for the CPC or ZX, or software such as Copy II PC or The Monitor.

Meaning what, specifically?

What is not yet known is what view the courts will take of claims that a device or software utility is “specifically designed for making infringing copies.”

After all, very few such devices cannot be used for copying non-program software, and many have other purposes that would seem to put them in the clear.

In the absence of a test case no one can be sure what interpretation the courts will take of this necessarily complex legislation. The Act has been given a less than ecstatic greeting by those such as FAST’s Bob Hay whose job it is to chase pirates.

It will not be until a test case has been brought that we will know for sure whether the Act has teeth.

### Exhibit A: The weapons used

The controversial copying devices at the centre of the row over the Copyright Law are small cartridges which plug into the back of your micro. At any point while running a program you can press a button on the device and ‘freeze’ the program, enabling you to examine the memory and, most importantly, allowing you to save the contents of the memory out to tape or disk – thus allowing you to make a backup copy of even the most rigorously copy-protected software. Makers of the devices constantly update their products to combat the latest copy protection techniques.

The net effect of this is that with a backup device such as this you can make copy-able copies of any piece of software for your machine. While most devices only allow you to run your backups made in this way with the device attached to the machine – thus preventing the distribution of pirate copies on a large scale – some of the newer devices don’t need to be present when copies are run, making them ideal for pirates.

It isn’t clear whether or not the Copyright Act, which came into force on August 1st, makes the sale of these illegal if they are advertised as devices for making backups. Advertising them as copying devices would be illegal. It would take a test case to decide.

Some of the devices which have been on sale recently are:

- Blitz (ST, from Power Computing; Expert (C64, from Trilologic); Multifarc (CPC and ST, from Romantic Robot);
- Mass Duplicator (ST, Evesham Micros).

As you read this it is expected that only Blitz will be on sale. The other manufacturers are playing safe.

### The “bitter” victims of piracy

"Starglider II, despite the rave reviews and everything, barely broke even because of piracy."

"Hardcore pirates are always going to pirate and you can’t stop them.

"But the people who get games from pirates, who might have bought a game and don’t – it’s a shame, because they don’t get the full enjoyment of a game, the manuals and books that go with it, because they don’t know how to play them. They pirate it and then they don’t buy it."

"The programme which put the most work into a project get the least return. We really need those sales to make money."

— Jez San (programmer, Starglider II)

"I am furious! It’s a dreadful, dreadful shame the Act is so loosely worded and easy to get round…"

— Jez San (programmer, Starglider II)

"How do I feel about someone like Ken Browning? I feel very bitter. There are legitimate secondary uses for these devices.

"But at the same time there’s no doubt they are used for making illegal copies."

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How do I feel about someone like Ken Browning? I feel very bitter. There are legitimate secondary uses for these devices.

But at the same time there’s no doubt they are used for making illegal copies.

When I launch a title, I know in 24 hours it’ll be widely available on bulletin boards, it’s going to be cracked and there are going to be copies circulating around. For every copy I sell, there could be five, ten, I don’t know how many circulating. I’m not suggesting my sales would multiply by five or whatever, but even if they increased by 20 per cent, then that’s a damn good plus point in the right direction…"

—if people say Power’s Blitz is going to make legitimate back-up copies, they must be living in cloud-cuckoo land. It’s absolutely crazy: they’re bound to be used to break copy protection.

“I don’t know how much I ought to say. I can assure you something is going to be done, and soon.”

— Dave Marshall (Digital Integration)

### A FAST reaction to the Act

"Many people thought the Act would automatically outlaw every single copying device but lots of devices that allow copying have other purposes, and they’re not outlawed. It’s where devices are specifically designed to make infringing copies, they are certainly ones that the lawyers will be looking at.

“If we find pirates we have visited are using copying devices, then that will be evidence that will be given in the case."

“The Act is not something that is going to overturn put every copying device out of business, simply because there are people in the industry who use them in the course of their work, quite legally. As long as that’s the case, there’s absolutely no way they can be banned.”

— Bob Hay (Federation Against Software Theft)

FAST man says Bob Hay warns that “if we find any pirates we have visited are using copying devices, then that will be evidence.”

— FAST man
Whether it’s due to accidental erasure or deliberate fraud, it’s worth protecting your data against the unforeseen. But then again, just because you’re paranoid doesn’t mean it won’t happen to you. Andy Storer surveys the scene and tracks down a PC product designed to help you rest assured.

PC Guard & Computer Security

PC Guard is a software-based security package providing a shell under which all DOS applications run for a memory overhead of only 38K. The package is set up around providing differential access to three levels of user. An overall systems administrator, nominally the company boss, is required to initialise the system with a key password and ID, after which any number of day-to-day administrators are chosen and allocated access. The key password is then safely locked away to be used only in emergencies. The day-to-day administrators then decide who to allocate normal access to and which systems they can be once logged on. For example, some users will only be allowed to read, open, search and execute certain programs – the deletion and creation of which they are not permitted.

Pirate radio

Because TVs, computer screens, sockets and cables all emit radiation, making them in effect miniatures of radio sets, it’s possible to use equipment costing only a few hundred pounds to pick up the signals up to two miles away. Although in daylight hours there’s usually sufficient background electronic noise to mask such transmissions, it’s the evenings that are the peak times for electronic eavesdropping. Moreover, unforeseen coincidences like the proximity of fire alarm cables to VDU’s may ensure signals are broadcast all over a building, and beyond. It’s easy to get carried away with the threat of eavesdropping. The leading equipment for the suppression of electronic signals given off by electrical devices is Tempest; built to NATO approved standards and administered by GCHQ. Tempest gear ranges from metal-shielded surrounding VDU’s to full-blown “shelters” – at up to £100,000 a go – looking like bank vaults the size of small mobile homes, with three nested enclosures using walls several inches thick. A simpler means of scrambling electronic emissions is by using magnets – ironically the same device bound to corrupt every single bit of code you have stored on any memory space other than optical. Eavesdropping can be minimised though by banning overtime and by making sure there’s always more than one VDU in use at all times (thereby emitting overlapping signals).

Meanwhile, tuning into computer screens is no more illegal than tuning into radio stations.
of files being denied. Indeed, the system may be configured so that whole areas of hard disks are invisible to unprivileged users, as PC Guard completely takes over all access to DOS.

**Closing doors**

If you came to a computer running PC Guard and decided to try and use it as you would any other PC, you'd be confronted by many kinds of protection. You are asked for a User ID, a password and an optional project ID - each of which can be changed as often as the administrator wishes. Security parameters can be set so that three incorrect attempts to log-on are met with a complete system shutdown. In addition, you may then be asked for passwords to allow you to run specific applications or load or view specific data files.

Boot protection may have also been installed which may allow you to load that floppy full of hacking utilities but deny you access to the hard disk. All you're left with is a single floppy drive machine - very useful for testing suspect software that may contain viruses - as there's no way you can access the hard disk. Even Norton's latest Utility tools will miserably fail to make any impression on DOS under the PC Guard shell. But if, by some remarkably lucky code, you managed to gain access to a file, you'd find it encrypted with an algorithm even a DEC mainframe running for years couldn't crack. You get the message? If you don't need to know, it doesn't want to know!

In any case, by this time all your input commands will have been logged and encrypted to a database. In this way an administrator can call up recorded sessions showing all the times when directory changes, attempted copying and deletions, and password violations were perpetrated and by whom. Such logs can be extracted as ASCII files to be analysed by DECshell or Lotus 1-2-3.

Encryption can go as far as encrypting the entire contents of the hard disk if you wish - the system tracks, boot record, everything. But once done you have no way to unprotect it unless you have the original key password; otherwise even Computer Security can't get back into the system.

**Express verdict**

PC Guard is very easy to set up and maintain and provides a fully comprehensive selection of measures designed to safeguard your system from both accidental and deliberate incursions. At £200+VAT you might think it a tad pricey, but then it's an insurance policy that could save you thousands in the long run.

**What's at risk?**

In the days of hand-written records, fraud was typified by falsification of suppliers' invoices and expense claims, cash theft, account manipulation, stock theft and the removal and copying of confidential information. Although these old opportunities still remain, new methods have emerged with the arrival of digital record systems. Data can now be read by remote terminals as networks using public telecommunications are vulnerable to hackers able to alter, steal and vandalise systems. Details of a new product range, a strategic plan and sensitive financial information can all be copied to a couple of disks.
If you run a business on only a single computer, there are a number of precautions you should take to minimize accidental or deliberate corruption of your data — without spending a cent.

Regular backing-up of software is the easiest means of ensuring safe keep — along with checks of boot sector, operating system and background Command functions. Problems may also originate through careless handling of floppy, print-outs and passwords.

Also watch out for any unauthorized software finding its way onto your system — a cheap virus infected pirate copy may work out to be extremely expensive.

However, if these sensitive suggestions still don't give you peace of mind, two other products on the market might just provide the answer...

Cracking the hacker

Conservative estimates of the cost of hacking in the UK float around the £4000 mark. As any computer connected to the phone line is at risk, devices which operate as a gate between the modem and phone line are the key to secure calls. One such device is Com-Lock from Cream Communications on 0208 7282577.

Anti-hacking systems usually rely on an access code which can be cracked by trial and error. Alternatively, the hacker's skill may enable him to circumvent the access code altogether. Com-Lock works by requiring the computer-caller to enter an 8 digit code into his telephone — only after the correct code is recognised will dialled contact be enabled. Up to 99 attempts are possible before the system shuts down completely — but as there are 4 billion possible code combinations, the chances off a hacker getting through Com-Lock to a computer are negligible to say the least. But after only 10 incorrect attempts, Com-Lock goes into offensive mode, giving the hacker the impression his attempts are going undetected, whereas in reality his doomed attempts are being logged and notified to police and telephone tracing authorities. As such, Com-Lock may supply something approaching complete peace of mind... at a price: £950.

Personal Access

A cheap and neat little security board for the PC is Personal Access from Trend Dataspect on 0286 30611. This half-size plug-in board costs £99.95 and provides simple password security. PA disables access to the DOS prompt until the valid password for the PC is entered. A utility program also provides a password history of all unauthorised access attempts.

It's easy to underestimate how interesting your data is to someone else — but if it's the sort of stuff that would be stored in a locked filing cabinet, you'd better start thinking about getting yourself some computer security!
## COMMODORE

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<td>Blood Money (A)</td>
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UBISOFT (CO): Originally a software distribution company, this French firm now produces games. Famous for housing its programming team in a historic chateau in Brittany.

UNIX (OS): Easy-to-use operating system developed by Ken Thompson, Dennis Ritchie and others at Bell Laboratories. Unix is taught in most computer courses and is available for all computer systems from mainframes to micros. A cut-down version for the IBM is available, under the name Max. Every procedure is treated as a separate file. The current version of Unix takes up many hundreds of K. It has many high-level utility programs and is capable of running a number of jobs at once. Some of its applications include office automation, network control and robotics.

ULTIMA (CO): Very popular role-playing game created by "Lord British," Originally created on the Apple II, this series has become progressively more sophisticated. Latest incarnation is Ultima V.


VAX (CO): A designation for large, minicomputer systems made by DEC (Digital Equipment Corporation), one of the chief manufacturers in the world of computer hardware.

VDU (T): Visual Display Unit. The term is generally used to describe computer monitors and terminals as a whole.

VERMINATOR (T): Possibly the definitive piece of vapourware. A Rainbird project that was "near completion" in January 1986, but has still yet to appear. See vapourware.

VIDEO DIGITISER (T): Software which converts video images into a form which can be understood and manipulated by computers.

VIDEO DISC (T): Optical storage medium primarily used in interactive applications like education, training and information services. Best known from the school's Domesday project and more recently Virgin's North Pole Expedition package. Each 12" disc can store up to 250Mb of moving pictures, still frames, text and audio.

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Part 16 of the definitive Express guide to computing

**Viglen (CO):** Low cost PC manufacturer. The first company to ship a PC with built-in read/write optical disk drive.

**Virus (G):** A game which began life as Zarch, and was originally commissioned to demonstrate the formidable abilities of Acorn's Archimedes. The game proved so impressive that 16-bit versions were produced under the name Virus for the ST and Amiga. A PC version has just been released.

**Virus (T):** Destructive program designed to be "spread" from computer to computer, destroying data or having other unwanted effects as it goes. It propagates by copying itself surreptitiously from disk to memory and thence to other disks and after it has made enough copies of itself it then does something such as wipe the data or blank the screen.

**VLSI (T):** Abbreviation for Very Large Scale Integration. Applied to silicon chips which contain hundreds of thousands of components. Most home computer chips employ VLSI.

**Watford Electronics (CO):** Huge mail-order and retail concern in the PC and Acorn markets. Started out shipping electronic components from a bedroom in Watford. Now boasts its own respected "Aries" PC range.

**Wibbly Wobbly (T):** Fast food chain which particularly popular in London. Also sold sandwiches, cakes and other snacks.

**Wild Card (T):** Suffix used to denote a series of file types or similar documents when arranging directories. For example, a series consists of files that could be typed with one command by typing "copy * .TXT" (where a "*" character is the "wildcard").

**Window (T):** Rectangular area of the computer display used to display certain messages or information. The Atari ST, Commodore Amiga and Apple Macintosh use a windowing system, which is considered easier to understand - as opposed to the traditional command line display used by most EBCDIC and PC-compatible systems.

**Wires (T):** A method of connecting a computer to a network, allowing data to be transmitted between different machines.

**Write Once Read Many (T):** Optical data storage system used by major financial institutions or health authorities. Useful for storing large quantities of information which can then be accessed when necessary. New technology, it seems certain to become obsolete by current advances in read/write optical disk technology.

**Worm (T):** A virus-like program that mainly affects networks, spreading its way through data files and altering or destroying them.

**Write-Protect (T):** A system whereby floppy disks can be protected from accidental erasure or overwriting. A small tab on the disk can be set to prevent the computer's drive from writing any information to the disk, without affecting its ability to read from the disk. Typical applications would be where a disk contains software only, or where the disk contains data which is seldom updated but regularly accessed.

**WYSIWYG (T):** What You See Is What You Get. Term used to describe the ability of certain word processing and desktop publishing packages to display on screen an accurate representation of the final output. A WYSIWYG word processor will display its text exactly as it will appear in print.

---

**Key:** C = computer, CO = company, DB = database, DP = desktop publishing, G = game, GC = game genre, GI = graphics, IS = integrated software, L = languages, OS = operating system, P = personalities, SS = spreadsheets, T = tech spec, WP = word processor

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E-FIT and Compunet are two packages being tested by Britain's 43 police authorities for use in crime identification. Whilst E-FIT takes off where the old "Photorit" left off, Compunet is largely designed to replace artists' impressions. Both use sophisticated screen manipulation and paint package features, both enable the police to build up a convincing "type-likeness" of unknown offenders. But both use fundamentally different databases.

Fitting the Bill
Since 1972, the Photorit system has been at the forefront of identifying suspects. Photorit comprises a catalogue of component facial features from actual photographs. Each part of a face is numbered and a witness is able to pursue this stock of features and build up a composite face who's parts are then placed in a plate glass grid for press releases.

Photorit has all but replaced Identikit which, along with artists' impressions, used to form the backbone of identification techniques. Identikit is a similar part-by-part system but based on photostrip drawings on acetate sheets which are overlaid to produce a composite image.

In psychological terms, both systems are lowly flawed. Research shows that presenting a witness with pages of disembodied features adversely affects their memory of the offender's face. In addition, both Identikit and Photorit produce disjointed "jigsaw" images of faces where the lines dividing feature areas are almost as prominent as the features themselves.

Photorit is more realistic in that it is based on photographic images, but it relies on an indelible fixed database. It typically supplies a total of around 1,000 component facial parts: 288 foreheads, 177 pairs of ears, 104 different mouths, 60 chins and so on. However, one could say Photorit fits the bill for the Bill. Despite its inadequacies, it still delivers a maximum of 9, 001, 979 possible face compositions. 1 billion? That's nothing. With E-FIT you're talking 2 million billion!

It's a fit-up
The Electronic Facial Identification Technique, or E-FIT, in a hardware/software system which cost the Home Office £100,000 to develop over ten years. In April 1988, 10 Research, the supplier of E-FIT's graphics boards, was contracted to complete and market the system. The current database of features, collected by video camera from volunteers and broken down into nine com-

Logging the memory
Deriving an accurate picture from a mental image is beset with difficulty: since in most cases a witness may have been under extreme stress at the point of observation. Memory is a fragile thing and easily destroyed, so police methodology is based around letting the witness do the talking and avoiding auto-suggestion. An interview will begin with an identification officer listening and taking notes for a long while before a recognition system is brought to bear. The process may take up to four hours - any longer is known to be counter-productive. Typically the job takes two hours.

But, interestingly, photo-realism is a quality police authorities don't necessarily require. An image printed in a newspaper or shown on TV can't be too realistic or else members of the public won't phone in with as many possible suspects. The point is that the police are after resemblance not realism. If you see an incredibly realistic photo of a suspect you might think it can't be the person you suspect because he doesn't look exactly like the face in the photo! Realism can be counter-productive. E-FIT is probably about as close to that edge as is useful for intelligence purposes.
Even if you suspected your own mother of being a mass murderer, you’d have a hard job describing her exact features to the police without the aid of photos.

Andy Storer, who has difficulty recognising his own face in a mirror, takes a look at two new systems designed to fit the face to the felon...

Identikit

This Compusketch image took 90 minutes to produce and a great deal of fiddling between operator and ‘witness’. Another couple of hours would have produced an even more life-like resemblance of its subject.

Sex attack

hunt gets hi-tech club

Compusketch produces a full-face image which may then be treated to its constituent painting program, PC Paintbrush.

At this point the image may be edited, drawing on a range of on-board feature components which can be eased into position or switched at will. Once the image begins to resemble the victim, the operator can incorporate paint facilities - touching up areas of the face for greater precision. Although, on portables, the resultant image is in mono, Compusketch is in fact a colour system enabling painting to include alterations to skin tone changes, for example. The entire process of making a good type likeness will take on average something like 90 minutes of interaction between operator and witness. Again, images can be faxed, modulated or output to video.

Sketchy memories

The other electronic identification system under police field-evaluation is Kodak's Compusketch. Although forces like West Yorkshire are already using the portable package and showing its images on YTV's Crime Stoppers programme - and Humberside has 4 on order - West Midlands is still pondering a purchase.

Compusketch operates in an IBM Windows environment and is designed to run on portable PCs. As such, the system is ideally suited to interviewing witnesses out in the field or in the comfort of their own homes. An operator works through a whole host of questions about the features of a suspect, which are offered as multiple choice questions beginning with the generalities of face shape and hair and moving to the specifics of noses and chins. After each area has been covered, the system backtracks through inputs and repeats any subjects that haven't been quantified. The process is supplemented with a catalogue of examples to overcome the difficulty and inadequacies of language.

Once data has been satisfactorily processed,
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INDY ACTION

Indy action

Keep an eye out for US Gold's new Indiana Jones game – the action version. US Gold isn't exactly renowned for producing very good games in the 8-bit market, but The Last Crusade is an exception.

I was surprised by the size of the sprites and the game has some good scrolling. It is a platform game split into four levels – one of which is set inside the flying boat. What you're wandering around here dealing with German soldiers, the screen display bounces up and down, shifting to one side, giving a good impression of motion.

The game is surprisingly closely linked to the film and the film is brilliant. It's one of the best platform games I've seen.

It's much more of a test of your joystick skills than something like Thunderbirds and seems to indicate that US Gold might finally be trying to serve the 16-bit scene sensibly.

Kim Harragh

SOFT GAME

Off into hyperspace

Soft image and Atari have joined together to create a new business package called HyperCart. The software is aimed at people interested in creating their own ST into a presentation workshop.

HyperCart allows you to create all sorts of 3D graphics such as charts, graphs and pictures. Atari showed me it in action and it's an impressive brute. The first thing that hit me was the way that pictures can be manipulated quickly, even allowing you to rotate charts and alter perspective angles. To a limited extent you can create animation sequences to illustrate a point.

Best of all, the program isn't just a slideshow of pictures created in other graphics packages instead there's a wide range of options so it can even be used as a training tool.

Being a business package, HyperCart weighs in at a rather hefty £130.00 for the Commodore 64 and a massive manual and an exhaustive number of features. Soft image can be contacted on 01-409 0139.

3 and taken 2.6%. If this is operated in GFA's early computer it gives a result of 2.7%. When the GFA 3 version was compiled execution time was just 0.78s.

A loop involving movement of areas of the screen took 21.7% when compiled using GFA's early compiler and 21.2% using the new one. The results show that GFA 3 doesn't lend enormous speed to everything but on the whole most instructions benefit. Since GFA 3 permits access to a vast number of OAM and VROM it really does look like a powerful programming tool.

The compiler is £29.95 which includes a 60-page manual exploring all the compiler options. GFA is at 0374 290451.

3D makes a bid for success in the Zeppelin
PC UPDATE

Switched off
If you share your printer with other PCs, either through a network or via an electronic printer switch, you may have encountered problems in printing through the GM's 'Walkabout' application. When the application is asked to print a file, it first checks you have a printer switched on and on-line. If you are using an electronic switch which polls several incoming data lines, it may be picking a line other than the one GEM's checking.

MUXing about
If you're an avid reader of this column (perhaps I should say you drink some beer), you'll remember I made brief mention of the MUX card, which can be used to add an extra drive to an existing two-disk PC. This is harder than you might think, as DOS often refuses to recognise more than two floppy drives, even if it does, it will only consider certain types of drive as valid.

The MUX card gets round this problem by multiplexing the extra drive and fooling DOS into believing that it's not dealing with one of the two 'legitimate' drives. All the work is done transparently, so, with the card in situ, you can run an extra drive internally or externally and refer to it by your chosen logical drive letter. For my system, the second floppy drive was added as drive B. A second MUX card and jumper cable was added to the floppy controller. This extra drive is taken from another multi-pin connector on the MUX card. The card is controlled by a drive driver which you load from your CONFIG.SYS file and Bob's your uncle.

The software can auto-detect a number of different 3.5" formats, including Apple/HP and Atari ST; you could serve a double purpose for transferring data. The MUX card and five software are available from Datamation Services for £42.70. Ring them on 0181-263356.

Just what the DR ordered
Over recent months there's been a lot of computer press about DR DOS. Digital Research's answer to MS-DOS 4.0 is said to have full compatibility with the Microsoft product and a much more friendly user interface. It's also being bundled with several PC clones currently on the market.

El dominio del DOS Plus

* The Spanish version of the blockbusting best-seller, Mastering DOS Plus. Went down a bomb in Barcelona.

Simon Williams

I have no practical knowledge of DR DOS (perhaps Digital would like to oblige) but hope it's a good deal more compatible than MS-DOS. The situation is, of course, more complex with Atari, where the 8-bit ST is the most prominent and popular model. Many users have invested in high-quality third-party disk controllers, so it behoves MS-DOS to provide support for these devices.

Diverse drivers
One problem often underestimated is the difficulty of getting software to communicate with your printer. There are a number of solutions, ranging from the simple to the complex. One of the most popular is the 'printer driver', which translates commands into a format your printer can understand.

When it comes to the more exotic printers, particularly those that can produce custom output, you'll find things are quite different. Drivers become much more crucial

with these printers, as the printer's special features cannot be turned off if your software doesn't know about them.

In an effort to make sure this doesn't happen with Epson printers, the company has embarked on an extensive exercise to write its own drivers for the top 20 software packages in the country, and to make them available to other manufacturers, and possibly in the public domain. This is intended to ensure that Epson printers at least will be compatible with most of the major applications -- a very laudable effort.

On the subject of Epson, it's worth mentioning that current mid-range 24-pin printer, the LQ-800, is a very fine device, with all the features of the 850, but a redesigned casing which improves the ergonomics considerably. Each of the top covers hinges up and can be locked in the open position, much like a car bonnet. They can also be all removed in the normal way. When hinged up, they provide additional access to the working parts of the printer.

Unlike previous Epson printers, the LQ-800 uses a twin ink ribbon -- a small improvement. If you want to print in colour on the machine, all that's required is to change the ribbon to a single-colour one, and use the appropriate driver.

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---

**NO COMMERCE EXPRESS**

**NEW COMPUTER EXPRESS • 5 AUGUST 1989 • 29**

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Thankyougoonight!

Ladies and gentlemen, please meet and greet all the way from a farmstead in Waverton, Wirr'shire on the Code Masters label, Rock Star Are My Hamster!

It's been a long time coming, but at last the American version - programming by Colin Jones - is with us. The Darlings have been toying, I've thought. In attempting such a "human" role, they resist every game for experience has shown that such efforts abnormally bring on terminal embarrassment at best, and at worst induce an expression to form rapidly on the player's face if his entire machine had suddenly been reduced to molten plastic by a 500 volt mains surge.

Rock Star, it must be said, is a good cut above such travesties. For one thing the estimable ubiquitous and highly literate Mel Croucher has been drafted in to write much of the characterization and "plot" - so it's at the very least the spelling is OK. And secondly, the subject is well chosen, for there has never in history been a more egocentric, greedy and predatory yet unrelenting and unattainable bunch of individuals than those in the rock business. So get that adrenalising going and psyche yourself up for the arrival of 'Tina Turnoff, Michael Grump, Meathead and Thunderhawk (whoo whopwhopwhop)!

You can guess the format already, no doubt: 50 grand and a band, make it big. Too or practice? Risk a panicky stunt or record a record?

One minor complaint: no credit! How in CMU's name would McClain or Zett ever get away with it if there wasn't been a string of people lining up to throw money at them? Yet in Rock Star you go overbudget that's it, goodnight I love you all you've been a great audience see you next year.

Rock Star is a tenner for two cassette, £15 for the disk version, and is available now.

---

**More Exolon News**

Carl Surry has joined the Xolos Management (and no, I haven't forgotten you, I'm aware that you're all out for our Pandemonia competition!) writes about the Exolon pole featured in Express a couple of issues ago. "It would have been easier to have attacked the chest rather than the pole," he says, "especially because of all the people don't have the original release but have it as featured on Whenever's Smash Hits. So here in the UK it is: seven years 20/00/00, then reward them as you wish. Now you have infinite lives, ammunition, and grenades." Cheery Carl: you have, I'm sure, earned the (iliary) unmarking of your Exolon fan.

And while we're on the subject of classics, Philip Saunders of Choyou in Survey writes to offer a pole for Code Masters' recent Powerboat Simulator. Hold down 2, X, C and spacebar while playing, then press Escpe, 1 and 2 (while still holding down X, C, and G).

**Enter the cowboys**

Demark's Teenage arcade conversion of Xolos' goes infinite lives courtesy of Manchester purchaser Mike Wongs. Simply enter the following: type RUN and the Enter key (not Return). Then load up the game and away you go, doing your best cowboy-after-a-week on a horse impression. Rock dis way.

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**NO COMMERCE EXPRESS**

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Circuit training
Is yours still the only household in your street
without a Spectrum circuit diagram, despite
the many possible sources suggested in this
column?
I've received some bumf on a program
which could be for you. Electrodraw by
SRD (there's a "very versatile program for draw-
ing, editing, storing and printing circuit
diagrams". Features include user-
definable symbols as well as magnify and box drawing facilities.
Sample diagrams seem to suggest the kipper's fairly
accurate, and all real circuit drawings will want a
copy. An SAE will get you more details, and if you've
convinced prices are £17.50
for the cassette version and £19.50 for microdrive. SRD is at
20 Ashville Road, Leytonstone, London E11 1TD.

BASICALLY GOOD
MGT has just dropped some more Specs from
information in my letter box which I feel
obliged to share. It concerns the machine's
BASIC, which has been written by Dr Andy
Wright, the author of the highly acclaimed
Beta BASIC, an extended BASIC package
that still enjoys a healthy level of popularity
and its own user group.

SAM BASIC should be even more popular amongst users, as it seems like a powerful
implementation that will have no trouble capitalizing on the Speccy's graphics and sound
capabilities.
As well as simple improvements to beloved
Sinclair BASIC, code can now draw off
screen etc. lots of brand new commands
have been included in the language.
Two impressive newcomers are RECORD
which saves a series of graphic commands,
and SLIDE, which replaces the very speedily
the astonishment of onlookers. There's also
FILL, PALETTE (which handles the

Coup's wider range of colour), much
enhanced SCROLL (moves entire screen in
any of four directions, HOLL (like SCROLL
but picture wraps around) and GRAB (stores screen area).
Of course all this will run at a speed which
makes your Speecy (no knock for an 8-bit)
look as fast as continental drift. With
a built-in language that seems this good I'm
confident that the Coup will continue the
Speccy's tradition as a BASIC tutor and
amateur programmer machine.

MGT also seems keen to continue its stick
ering work in the field of Spectrum paraphernalia.
Latest product is an external 100 KB drive
for the Plus 3. More news when I have it.

Hot compilation
With every custom of choosing our
compilation seems to be occurring software boxes like
in the summer as well as the more traditional
Christmas season.
Even as we speak, the shelves of your local
software emporium are probably straining under the weight of their glossy cardboard
boxes.
Also likely to be straining is your brain in
deciding which one to buy. My own personal
choice is Hewlett's Hewsoft pods, which
includes some of the best Speccy games seen in
the past few years. Nebula, Impassable,
Netherworld, Barataria, Harpy, and
Firebird. The word on the pick is surprisingly
the latest can be released. Netherworld,
although it's still by no means a turkey
Perhaps the most appealing aspect of this
compilation - as opposed to the other 65
about the current - is that it's totally devoid
of demo-editions, celebrity endorsements or film licenses, and the
bugs of playability rather than digitised
pictures of Jim Bowen or whoever.
There's a good mix of different game types,
et, with cut-out and 2D graphics, complex
arcade adventure Firebird and brilliant
unclassifiables such as Nebula and Impassable.
If you haven't already got more than half an
under this box, purchases are strongly recommended. Sell the guinea pigs if necessary!

Robin Alway
Contributions

If you have any wisedom cheats for games, send them into Sector 64 along with any comments or tips or even listings. Write to Sector 64, New Computer Express, 4 Queen Street, Bath BA1 1EJ.

Quiz time

Send us your answers to the question below.

1. If you expanded RAM to 64K, could you load 64 games on?
2. Did the 64 ever make computer games?
3. How many bits does the C64 run at?
4. Is the 1541 disk drive needed to be fast or slow?

Send answers to the normal address, and don’t forget to specify disk or tape.

New releases

Here are a few new releases you can be getting tuned into:

- Hostage, from Grannin
- Phoenix, the mega multi-player game from BB Gold
- Red Heat, which brings Anne back to the 64 once more (he’s become quite a sprite)
- And of course Grandstand, with the wonderlul Thunderbirds

Ian Mic

ARCHIMEDES

LORE

Out of the crowd

The BBC Aicken User Show at Alexandra Palace was very well attended. Several hours after the Press preview I was all geared up to right about the "wide open spaces" between the stands' halls, but it was getting very difficult to move.

Some of the most interesting things, not covered by my mate Simon Williams in his show report, included new products from Electronic Music Research (0702) 257847.

The company's music software/hardware sets out to do for the Archimedes what it has already done for many other home micros, and includes synthesizer, MIDI interfaces and samplers for the machine. As often happens

The shows must go on

Despite all the unqualified stock the Beeb gets from just TV offering on computers, it's determined to try again and there is a number of new series scheduled for the Autumn - no firm dates yet.

The first of the DTP shows is due for a new run, as is The Electric Avenue. A new edition of The Software Show is also on the cards and a documentary, called Imaging, will look at the variety of home uses of micros.

BERTRAM CARROT

Colour it up

This week's listing comes from Nigel Myers, who has contributed to Sector 64 before. Nigel's listing is a TV colour routine similar to a horizontal TV test bar.

Line 140 contains the TV colour bar and it will flicker if you change the bars.

Line 130 contains the TV colour bar, and if that has a program changer.

After the BASIC loader has finished, the machine can program now, and it is ready to do any time you want when the BASIC program is not there by typing SYS 49512.

1 REM TV COLOR BARS
2 REM BY NIGEL MYERS
3 REM FOR: SECTOR 64
4 REM PROCEDURE 49512 49512
5 END

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NEW COMPUTER EXPRESS • 5 AUGUST 1989 • 31
Bug standard

After using Mini Office Professional Plus, the upgrade to Max Office with spell checker and thesaurus, I can say ... it's very disappointing. There are several bugs, the database won't load ASCII files, the spell checker won't load. Let's say 8 files, the graphics and crossword utilities don't pop up to OVM when you try to stop.

The thing is that it isn't the bugs, which will eventually be worked out, but the time it takes to use the two new utilities.

While editing a document, you press [E] to spell check, select, you think. But no, a message comes up telling you to save the document and exit to the main menu. You can't spell check a document from inside Mini Office.

So you save, exit and spell check. The spell checker takes ages -- five or six times longer than Locolisp or Protext -- and to look up suggested replacements of doubtful words takes, on average, a whole minute. Then the damn thing insists on saving the spell corrected document on the program disk it insists you put in the A: drive, or else the thesaurus it insists you put in the B drive.

The thesaurus is reasonable -- except that all the words are spell the American way and it takes so long to call it up and use it (you can't use it from inside a Mini Office document, of course) that you'd be better off with a book.

I hate putting software down, but really this is a case of dreadful program design. A spell checker that doesn't work from inside the program it compiles in useless; a thesaurus that similarly can't be used while you're actually writing is a waste of time.

Max Office is a very good package, exceptional value for money and well recommended to any club secretary, small business person or just someone who wants to organize their household affairs. You can pick it up for £18 from some mail order houses. But the upgrade, with a standard price of £49.95, is just a waste of money. Buy the old version and get a good fast and reliable spell checker like Protext or Locolisp, get a thesaurus from your local paperback shop and spend the difference on a drink or two.

Prize booty

To put a comment in a PROFILE/SUB file, preface your line with a semi-colon, and CVNM will ignore it, for example:

*Turn disk over and continue

Basil Pigg

Minerva

Stuart McKnight (of Astraform fame), with some other people, is developing a new version of QDD, renamed as the Minerva, to be supplied as a couple of EPS0Ms or a small circuit board.

Minerva will have all of the existing bugs removed as possible, and full access to the second screen -- useful for animation. The various graphics and mathematics routines will be enhanced, and it is hoped that it will be possible to run multiple copies of SuperBASIC allowing multi-tasking of BASSIC programs. I seem to remember Sue Clark promising this when the QL was launched.

If it appears to be the case, Minerva is based on a disassembled of the existing firmware, it could be jumped on very heavily by Amstrad, as it might be considered to

Astracom modem

There should soon be a 2400/2400 modem, based for the Astracom modem, popular with many QL users. Keith Web, Astracom designer, has located a suitable CMOS 822/2226s modem chip. The expansion firmware will also be modified to cater for the upgrade, and to eradicate one or two minor bugs.

John Tomess

Listing to the printer

New users who would like a print-out of their SuperBASIC programs sometimes get puzzled when they find that LIST doesn't work, and the manual isn't much help. The correct invocation is:

**PLG**

**LSIT R3, file.bat**

**CNC**

assuming that you have the printer connected to serial. These commands should be entered in direct mode, of course. You might have to set the baud rate first.

Wafer-scale integration

In a recent issue of another magazine was an ad for a couple of items, with Amstrad -- the associate and formerly synonymous Sir Clive Sinclair's company -- working on one of his pet projects, wafer-on-card integration. This waive-put-up has a connection with the QL. I recall seeing a photograph of Sir Clive holding a wafer attached to a QL expansion connector. This was presumably intended to be a Scroyle 512k memory expansion unit, or perhaps a solid-state disc. John Tomess

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Branching out
Is software for the Archimedes really more advanced than that for the Beeb? Does RISC/O make all the difference? Is it worth the cost to upgrade — and so on? In an effort to answer these questions, I have done some comparative tests on equivalent software for both machines.

Ancestry and Kinship are both genealogy programs, the former from Minerva for the Ac, and the latter as already commented on in this column from 80Kbyte for the Master128. Both are similar in operation — not surprising as they are in fact by the same author, David Crow. Both use alternative tree and card views, and allow various printout options. Kinship uses standard menus for all operations, whereas Ancestry allows you to

click with the mouse on radio-type buttons. A sophisticated print option for the entire family tree exists, and here Ancestry takes the lead with several different options. Output is one reason for preferring Ancestry, and another is a report generator similar to the ones found in database programs. It does also spooling to disk, which means you can export to word processors and DTP programs. However, you also lose the equivalent of the File Exchange utilities, which is a disappointment.

Ancestry can output a picture as part of the database, but the way it makes it look and handles it is poor. There is also no way of accessing the rich variety of facilities available under RISC/O, so unless your needs are extensive go for the Master version.

Stock-in-filler
Stock Pack from Topology is designed to be part of a GBS course, presumably business studies. It's a simulation that combines aspects of a sales ledger with stock control. The program is well designed in mode 7, with good on-line help and clear menus. The one query I would raise is inaccuracy in nature. Do children gain anything from this kind of simulation, given that the methods used are bound to be out of date by the time they could make use of the knowledge?

Hard facts
If you use database programs regularly, you will be aware of the need for regular back-ups. However, you may not be aware that even the best backup system has one flaw: Electronic media can never be completely reliable, so for ultimate security you should also have a hard copy on paper. Use condensed print and one line per record for maximum economy.

Andrew Brown

End of the line
At last! I've received my copy of the Ekman Softwear Club magazine. As it's about five months late, the news that it will be the last edition to be published occurs as no surprise.

The reason given is that there were too few MSX users in the UK to make the magazine worthwhile. However, the magazine covered titles across all the MSX formats, including Ekman titles for the Nintendo console too. So who could have attracted members who used the so-called "major" 8-bit computers.

Ocean's swell
Ocean has really done a crackers job converting its latest games to the MSX — including Raricon. This game is a realistic, horizontal shoot 'em up, with your character fighting his way to the end of the screen. Here he has to rescue a hostage, before you can proceed to the final level. Each stage has something to keep you interested — it isn't all just mindless violence.

Graphics are good and the sound effects and music are also well done. In Rambo III you view Rambo from above, and must rescue his colonel from the Commies. This game should hold your interest for some time, and work well for both games, and well done to Ocean.

Andrew Brown

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36 • NEW COMPUTER EXPRESS • 5 AUGUST 1989
Problems with your computer? Express's Agony column has the answer. Write in strictest confidence to Uncle Techtip.

Best tips win a freebie - so don't forget to tell us your address and machine.

HELP!
Making connections
I bought a CPC464 with colour monitor several years ago and have used it almost every day since. But after much deliberation would like to use graphics packages and the ST offers better resolution, more colours etc.

My question is, is there any way that I can connect my Amstrad colour monitor to my ST? If so, would it be possible to display all the colours available on the ST?

Atari 8-bit computers and STs are intended for the monitor monitor will I have to disconnect the Amstrad display and use a different monitor or is there some way around this problem? All help greatly appreciated.

William Carstairs, Bognor Regis, West Sussex.

• Oh no, not the old Amstrad monitor to ST chestnut. Yes, you can connect the Amstradcolour monitor to the Atari ST and here’s how to do it. First, purchase a standard Atari monitor lead (available from several of the mail order suppliers who advertise in Express). You must also buy two D4111 d3odes from Maplin, a 300 ohm resistor and an Amstrad six-pin DIN plug. Snap off the Atari DIN plug, bare the wires and solder one of the diodes in line on pins 9 and 12 (horizontal and vertical sync respectively), then join the wires from the two pins together. Solder a resistor to each of the wires from pins 6, 7 and 10 (red, green and blue). Connect the Amstrad DIN plug to the lead using the following configuration:
  - Atari pin 7 to Amstrad pin 1
  - Atari pin 5 to Amstrad pin 2
  - Atari pin 10 to Amstrad pin 3
  - Atari pins 9 and 12 (joined) to Amstrad pin 4
  - Atari pin 13 to Amstrad pin 5

The lead is now complete and will allow your ST to make full use of the Amstrad monitor. All colours will be displayed.

As far as the problem of the ST's different resolutions requiring different monitors is concerned, there’s a little utility in the public domain which takes the ST into 1541's 640x400 pixels format.

HELP!
Programmer's choice
After owning an Amiga for two years and playing games I have decided that it might be nice to learn some programming. I have decided to plunge straight into machine code as I believe that if it is much better for writing games as it is faster and more compact. Could you recommend an assembler package and a good book that is easily understood by a complete novice to programming?

Andrew Petal, Kingston, Devon

• Although machine code is indeed faster and more compact, some of the latest compiled versions of the BASIC language, particularly those intended for games writing, are very fast and compact when compared to the BASSCs bundled with the home computers of yesterday. Mandarin software is about to launch AMCS for the Amiga, which is a replacement BASIC for the machine, providing everything necessary including the speed for writing good quality arcade and other games. Anyway, you need an assembler, huh? You could do a lot worse than taking a look at the Metacomo Macro Assembler from - not surprisingly - Metacomo. The package costs around £70. Contact Metacomo on 0572 428781. As a book for your try and get a copy of The Amiga Programmer's System Guide from Abacus. It costs £22.95 and is available from good book stores.

HELP!
Printer problems
I wonder if you could tell me where I could obtain a printer manual for the Oki Microline 192 and the Fujitsu SP3200 letter quality printer. You see, I obtained these printers at auction. I wish to sell them but I need the manuals, any help you could give me would be much appreciated.

Robert Hart, Wimbledon, London

• Printer manuals, huh? You could try contacting the manufacturers directly which, for a small fee, may be able to provide the necessary documentation. Fujitsu can be called on 01 573 4444 and Oki on 01 742 2001. Alternatively, if the technicians can help with spare/old manuals, send them in and I'll pass them on and reward with some computer chips.

The Oki Microline printer. Have you got a manual?

HELP!
File facts
I own a Commodore 64 with Easy Script word processor, which to up to now I have been using for writing letters and documents whilst at home. At work I use MS Word on a PC.

I have just bought an Amstrad 1512 with a double drive, a Star LC-10 colour printer and MS-Word itself. I have approximately twenty disks of Easy Script files which I would dearly love to convert to MS-Word files for further work on my new PC at home.

Could you please tell me if it is possible to convert Easy Script files on the Commodore 64 to MS-Word files on the PC, and what hardware/software I need to do this?

Adrian Webberly, Crawley, East Sussex.

• Oh no, not the old upgrade/what to do with old software and files chestnut. I don't have access to the Easy Script manual so I'm afraid my advice may be a little off the mark. The first thing to do is to determine whether or not your word processor can save files in ASCII format. If this is possible, convert your files to standard ASCII and re-save them.

Fomicaeus pseudosubs
This species, the only one of its genus found in central Europe, is remarkable in that its central nervous system is able to control only four out of its six legs at any one time

slowly and try to land so that Daley's bum is as close to the line as possible. If done correctly, the official will stay still for a while, in the meantime the distance recorder will increase very quickly.

High jump: When the bar is at 2.25 metres or more, why jump over it when you can dive under it? Run up to the bar as normal and when you're as close to it as possible tap the fire button quickly and then immediately hold the button down.

1500 metres: Don't start running until 500 seconds have elapsed. Start Daley running until he is only a metre or so from the finish then stop. Wait until the clock reaches 999 seconds - after which it resets to 000 - then move Daley over the line for a time even Ben 'acid' Johnson couldn't match!

Lindsay Samaranera, Harrow, Middx

• Well done, Lindsay. You've set won yourself a sub. If any other techie wants one then get writing...

BUG(S) OF THE WEEK
I am very interested in trying to win a subscription to my favourite magazine so I've sent a few bugs/lips. Firstly Kick Off on the Amiga:

1. If a team's two main strikers have both been sent off and that team has to kick off again, no-one from that team restarts the match. This means that the ball is just left on the spot for the opposing team to take.

2. If a penalty is awarded just before the end of the half/match, the clock won't stop and so the referee may blow 'time' before the penalty can be taken. Therefore a good tip (if the referee hasn't been booked by many players) is to foul an opposing player if he is in your penalty area and there isn't much time left.

I used to own a rubber-keyed Spectrum and the re-release of Daley Thompson's Decathlon. Here are some bugs/lips associated with that:

Long jump: Run up to the line

NEW COMPUTER EXPRESS • 5 August 1989 • 37
connection. Connect the Amstrad and the Commodore 64 together and use communications software running on both machines to transmit the files. Software of this type is widely available in the public domain for both computers. Once you've managed to transfer the files and saved them to DOS disk, it should be a simple matter of loading the documents into MS Word and working on them as you would with other programs before you can actually transfer the files.

I'm afraid, but there you are, the home computers of yesteryear are severely limited (even the comparatively good ones).

**TIP**

**STep by STep**

As the center of an upgraded Atari 520ST FM which has recently fitted the NEC double sided drive, I am vouch for Power Computing's statement to Greg Harris (Express 27) that the hardest job is taking the case off the machine.

The easiest way to remove the excess plastic from the leads fitted to the machine is by use of either a Stanley knife or a small file.

The socket fitted to my ST has seventeen holes just as the new and old drives both have seventeen pins so I can only assume that Mr. Harris has some sort of rogue drive fitted to his ST, probably fitted during one of the drive slot-ups experienced by Atari.

If Mr. Harris has not yet taken his machine to a repair centre to have the drive fitted yet, then he might like to order a back copy of Computer Shopper (September 1988) where on pages 78 and 79 of ST corner, Mark Evans gives step by step instructions on fitting new double sided drives to the ST.

P Bridge, Cheadle, Stock-on-Forest

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**HELP!**

**Last chance**

I used to own an Amiga A500. Could you tell me if I upgraded the processor from the 58000 to a 68010 or a 68020 or if I expanded the memory from 1/2 meg to 1 or 2 megs which games appear to run faster? For example, would your Ferrari (don't you mean my Fiat 500) - Unc. appear to speed along faster in Out Run?

S Maudabocs, Garston, Watford

A faster processor would increase the speed of software, increased memory capacity in most cases would not.

Installing a faster processor would be a waste of time, and quite honestly, in theory your Ferrari would go quicker but in practice you're better off buying a faster machine.

The best answer is just to buy a faster moving game...

---

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Do you already own a computer? If so, which one do you own?
"Street Talk"

By Rik Haynes

Welcome to our redesigned games section. As you can see, gameplay now offers far more than just reviews and previews. We see it as a complete guide to all aspects of gaming with one unique advantage: it comes out every week. So for tips, news, reviews, previews and comment that's really up to date, you'd be a fool to look anywhere else. But enough hype, let's get to business.

Amiga Indy Jones out next week, but will it whip up a storm?

The dominant release over the next few weeks will be US Gold's much-hyped Amiga Indy Jones. Last Crusade Action Game, out next Monday on Spectrum, CPC, C64, ST, Amiga (£3.99 cassette, £19.99 disk and £19.99 16-bit). It wasn't impressed with the pre-production versions of the game, and like the film, it will probably be overshadowed by all the media hype surrounding the new Batman movie/game. However, I'll reserve my final judgment on Indy Action till I've played the finished game - let's just hope it's better than the awful Indiana Jones Temple of Doom game released a couple of years ago.

Good news for Star Wars fans as Domark is releasing its original Star Wars games on a compilation pack called The Star Wars Trilogy - early next month on Spectrum, C64.

The best budget game to pick up this week is the re-released Rescue on Fractalus from Mastertronic on Spectrum, C64 and CPC (£2.99 cassette only). Written by innovative US outfit Lucasfilm Games, Fractalus was the first game to incorporate fractal graphics, and includes a brilliant and very startling in-game sequence. It's just a pity Lucasfilm never did ST and Amiga versions.

Apart from the disclaimer adverts from manufacturer NEC, it's been quiet on the PC Engine scene of late... but this state of play looks set to change, as some very tasty games are soon to go online from the cyberstate Japan, including Afterbomber, Altered Beast, Darius, Operation Wolf, Out Run, P-Type (R-Type II), Shinobi and Thunderblade. More details as soon as I've played 'em.

I was disappointed to see infographics' new budget label Pocketsoft will be releasing ST games on double-sided disks - thus making them incompatible with early versions of the ST. Smart move, infographics!

Code masters has released its first BBC game this week with Fruit Machine Simulator, which is also available for Atari 8-bit disks (£2.99 cassette only).

Computer boom. Populous fans can now enjoy a new feature in the Populous Promised Land Data-Disk thanks to a new Bit-Plains landscape with X83 and Crazy Computer settlements and lands made out of computer print-out paper.

Lucky Sega Console gamers will be able to play the excellent Galaxy Force II shoot-em-up next month,... owners of "lesser" machines will have to wait till Christmas.

Audio software's Hubble release, Lorne Wolf, has been delayed till late September because of "development hassles".

Footie experts can rig pre-season boredom with Challenge Software's Treble Champions football strategy game on Spectrum, C64 and CPC (£5.99 cassette, £13.95 CPC disk). The ST and Amiga versions will be out in October.

After a state of almost eighteen months, Predator is finally going to make its way onto the Amiga this month.

Emily Hughes football sim is due out on ST and Amiga (£19.99) in October...

...and the trivia game, Emily Hughes Arcade Quiz, should be out on ST and Amiga next month, with Spectrum, C64 and CPC versions following in November (no prices as yet).

First Peek

An exclusive early look at the new 16-bit version of Ace. The classic 8-bit, flight-sim-shoot-'em-up from Artronics is finally going to make it onto the ST and Amiga this Christmas. Apart from audio-visual improvements to its Spectrum, C64 and CPC predecessors, 16-bit Ace includes the new European Stealth Fighter and a Falkland island campaign, and should take off for £20.

Mini-Review

Tempest

Atari ST • £14.99 disk • No other versions planned.

The original Tempest coin-op was one of the most impressive and addictive arcade games of '82, with fast vector visuals and insidious gameplay. The ST version of '89 lacks all the charm of its illustrious parent. The graphics are spartan, the audio is pathetic and the great in-game sequences from the coin-op have disappeared completely. The only thing going for it is price - but £15 is starting to become the norm for ST games now anyway. A great opportunity totally missed.

Play back

Your views on the latest software - call 0225 444439

"Kick Off from Anti is the greatest bit of programming since Chairman 4's The Tube on a Friday evening."
Mike Barratt, Sheffield

"Flickery sprites, full of bugs and uncontrollable. I wouldn't waste my time on Kick Off."
Roland Tov, Weymouth

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One-liners

- Cossacks has released its first BBC game this week with Fruit Machine Simulator, which is also available for Atari 8-bit disks (£2.99 cassette only).

- The classic 8-bit, flight-sim-shoot-'em-up from Artronics is finally going to make it onto the ST and Amiga this Christmas. Apart from audio-visual improvements to its Spectrum, C64 and CPC predecessors, 16-bit Ace includes the new European Stealth Fighter and a Falkland island campaign, and should take off for £20.

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CHEATING AT SILKWORM

Great tips on the classic from Virgin Games by DAN MARCHANT of Random Access – and he should know cos RA programmed the game.

AMIGA VERSIONS • Amazingly, there are TWO versions of this great little horizontally-scrolling shoot-em-up being sold on the Amiga! The only difference between them is that they have different cheat modes, because one idiotic computer magazine printed the cheat before Silkworm was even released.

Version 1: Hold down the HELP key and keep it pressed while pressing fire on the joystick to start the game. You now have infinite lives and can move through the levels by pressing the numeric keys 1 to 0 and the minus key.

Version 2: If you have the latest version, then attempting the above will result in a message saying ‘Congratulations you have found the cheat mode... unfortunately it’s been ZIPPPED’. If this happens, go to the control selection screen and type ‘SCRAP 28’. You now have the same cheat mode as Version 1.

ST VERSION • The ST version has a ‘cheese’ mode instead of a cheat mode. Press ‘C’ when the high score table is displayed and you will get to meet Fat Mouse. To enter cheese mode, start the game and type ‘GONZODOM’. You will get the ‘cheese mode activated’ message. Just start playing again and you can increase the number of credits you have by pressing ‘C’. In addition, check what has happened to the on-screen text and watch out when the badies start dropping the grey bouncing bombs... •

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EVERYBODY who gets a tip, cheat, poke or bug published wins a prize! So what are you waiting for?

P.S. We’re also interested in high score claims on these titles – and we’ll print the highest, provided you also give us THREE TIPS on how you achieved the score! Write to the address above.

Forget the sains level, feel the quality. These are, in our opinion, the best titles of the last two months.

1. KICK OFF
Anco – ST, Amiga

2. POPULOUS
Electronic Arts – ST, Amiga
Original in both gameplay and visuals. An arcade strategy game in which you control the development of a world. Another contender for Game of the Year.

3. SILKWORM
Virgin Games – Spectrum, C64, CPC, ST, Amiga
Brilliantly horizontally-scrolling shoot-em-up with immense playability and quality audio-visuals.

Virgin Games is back with a vengeance.

4. NEW ZEALAND STORY
Ocean – Spectrum, C64, CPC, ST, Amiga
Really cute and cuddly. Accurate and playable conversion of one of the hottest coin-ops around at the moment. Ocean does it again!

5. CARRIER COMMAND
Rainbird – Spectrum, ST, Amiga
It’s been a long wait, but Carrier Command has finally arrived on the Spectrum. A great balance between strategy, simulation and arcade action.

WHAT A CHOICE!

The software development company responsible for the Amiga version of The New Zealand Story. Choice Software, has been in the software biz for about five years. In that time, it has written games like Riddle (CPC/Ocean), Plato (Spectrum, CPC, ST), Amiga/Ocean), Summer Games (Spectrum, CPC, US Gold), Fatal Assault (Spectrum/US Gold) and Delphi (Olympic Challenge ST, Amiga/Ocean).

Choice started work on The New Zealand Story back in February, but had to wait from a video tape of the coinop for six weeks because Ocean couldn’t get hold of an arcadie machine due to its immense popularity.

Amiga NZ has written using Handel’s Doppele Amszner on the ST, and then ported access to the Amiga. The hardest part to write in the game were the sprite and sound handling routines.

When we called Choice, it was just putting the finishing touches to the Spectrum version of NZ, which is reported to be looking good. Read Gameplay next week to see whether we agree.

THE NEW ZEALAND STORY

From: Ocean • Reviewed: Amiga Version

GAME OF THE WEEK

Question: How can Ocean top the run away success of Robocorp? Answer: Easy, by converting the hottest coin-op in the arcades at the moment...

GAMEPLAY • The New Zealand Story is a Tatoo co-op with you controlling Tiki the Kiwi through 20 levels of side-directional, platform perfection in a mission to rescue your kidnapped friends. On the way you’ll meet flying teddy bears, rabbits and bats while negotiating traps and hazards before your time runs out.

GRAPHICS AND SOUND • NZ’s visuals are kept simple and straightforward. But the sprites are so cute they’re near nauseating. NZ is full of great little touch-ins, like Tiki donning some sub-aqua gear when he enters water and teddy bears wearing radical sunglasses. There are plenty of backdrop objects to discover as well. The endless mind-numbingly sweet-sugar soundtrack does the job, and is backed up with a few spot jingles, in there to keep the interest up.

OTHER VERSIONS • The ST version has a slightly smaller play area, but

TODAYS THE DAY, THE TEDDY BEARS HAVE THEIR HEADS KICLED

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Express Listings!

The listings page with a difference: they're interesting...

Ten Shakespeare quotes about computing
10 Every one fault seeming monstrous till his fellow fault came to match it (As You Like It, Act II, Scene i, line 37)
20 On Amstrad hard disks
30 They have a plentiful lack of wit (Hamlet II ii 204)
40 On Codemasters Press releases
50 God has given you one face, and you make yourselves another (Hamlet III i 150)
60 On Atari's PR department
70 A tale told by an idiot, full of sound and fury, signifying nothing (Macbeth V v 17)
80 On the success of the 'Rambles' game
90 Confusion now had made his masterpiece (Macbeth II ii 72)

Ten pointless facts about IBM
10 It is called Big Blue after the corporate colour. Most of the employees wear blue suits.
20 The computer HAL in the film 2001: A Space Odyssey got its name from IBM. Each letter in HAL is the one in the alphabet before the corresponding one in IBM.
30 IBM UK is the country's sixth largest exporter.
40 IBM is said to stand by employees as variously 'I've been moved, I'll break marriages and it's better manually.'
50 The company song, 'Ever Onward IBM' is no longer sung in the mornings, but there is a company songbook in the US with hits such as 'I'm selling IBM' to the tune of 'I'm singing in the rain.'
60 It was formed as the Computing Tabulating Recording Corporation in 1914 and became IBM 10 years later.
70 An acronym used all the time in IBM America is the Statement Of Direction, or SOD, where the word has no untoward connotations.
80 If IBM were a country it would have the eighth largest GDP in the world.
90 'XT' stands for 'Extended Technology'.

Ten puns that have been done to death in computing magazines
10 C for yourself
20 Virgin on the ridiculous
30 From little Acorns
40 Taking the RISC
50 Sugar's bitter pill
60 This is the modern world
70 Comms to us all
80 In at the DTP end
90 Console yourself
100 Disk discovery

Ten more computing terms that would be used for double entendres in low-budget ITV sitcoms
10 Dongle
20 Dump
30 Floppies
40 Gender changer
50 Mouse balls
60 Spreadsheets
70 TOS
80 You
90 What You See is What You Get
100 WIMP

Steve Rider, London

* Any wacky ideas for listings? Send your suggestions to Listings, New Computer Express, 4 Queen St, Bath BA1 1EJ

Ocean had to redesign the packaging because the package showed too much of the model's right nipple.
60 Sidewinder
The game was fine but an illegal cracked copy circulated in which the player shot down sprites representing racial minorities.
70 Katamari
US Gold's game was just about to go on sale when Activision slapped a writ on the company saying it was too much like their own forthcoming R-Type. The game disappeared slightly modified after Christmas as Demons.
80 Raid over Moscow
Prowled CND demas outside US Gold's offices.
90 Race Against Time
The Jesse Owen foundation objected to the picture of the American athlete on the packaging of this charity title. The replacement, Carl Lewis, had to be pulled when his agent objected to the footwear he had in the picture — it was not the one he was currently sponsoring. The game stilled.
100 Kids Play
Another charity compilation delayed when AnaloSoft claimed one of the games had gone on without their consent — delays probably cost thousands of sales.

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