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50 Budget games for less than £15

PC REVIEW

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CD Review Edition



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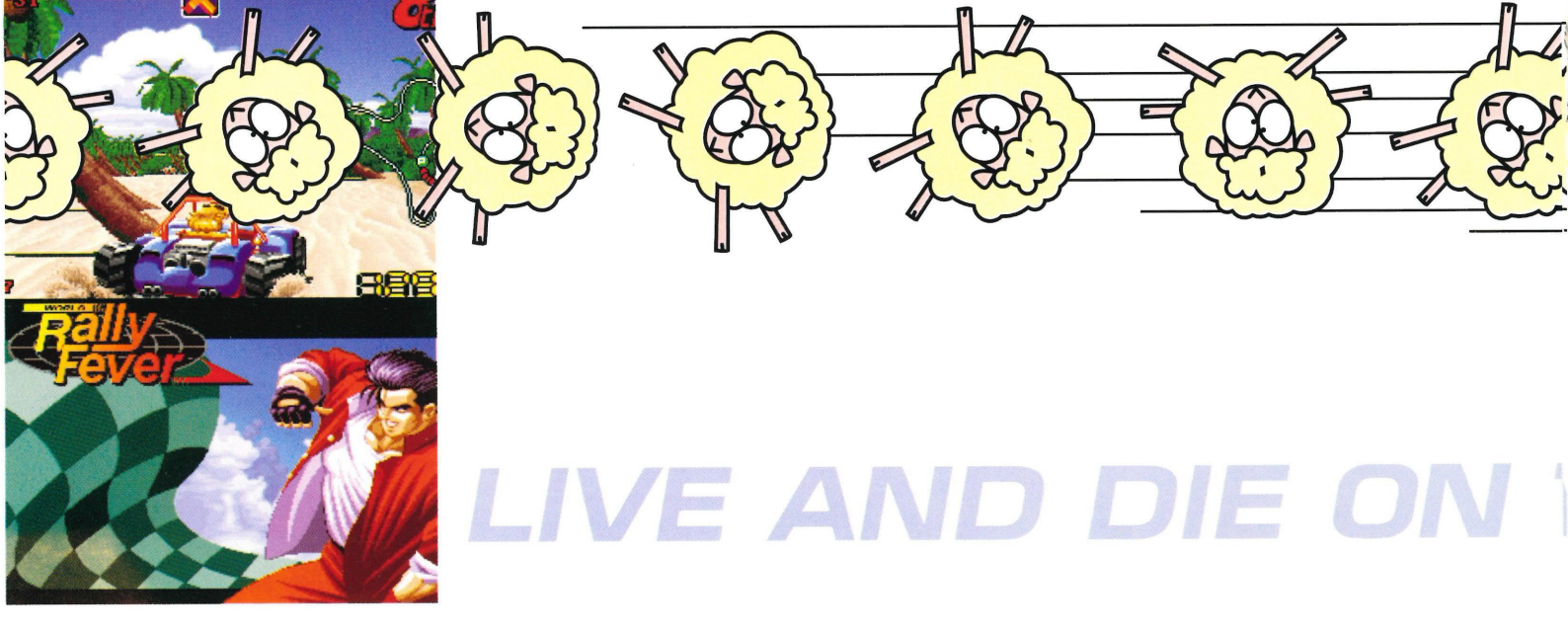
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- Lightning fast play and advanced addictive game
- Choice of nine cool animé style drivers
- Addictive gameplay to the core



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World Rally Fever

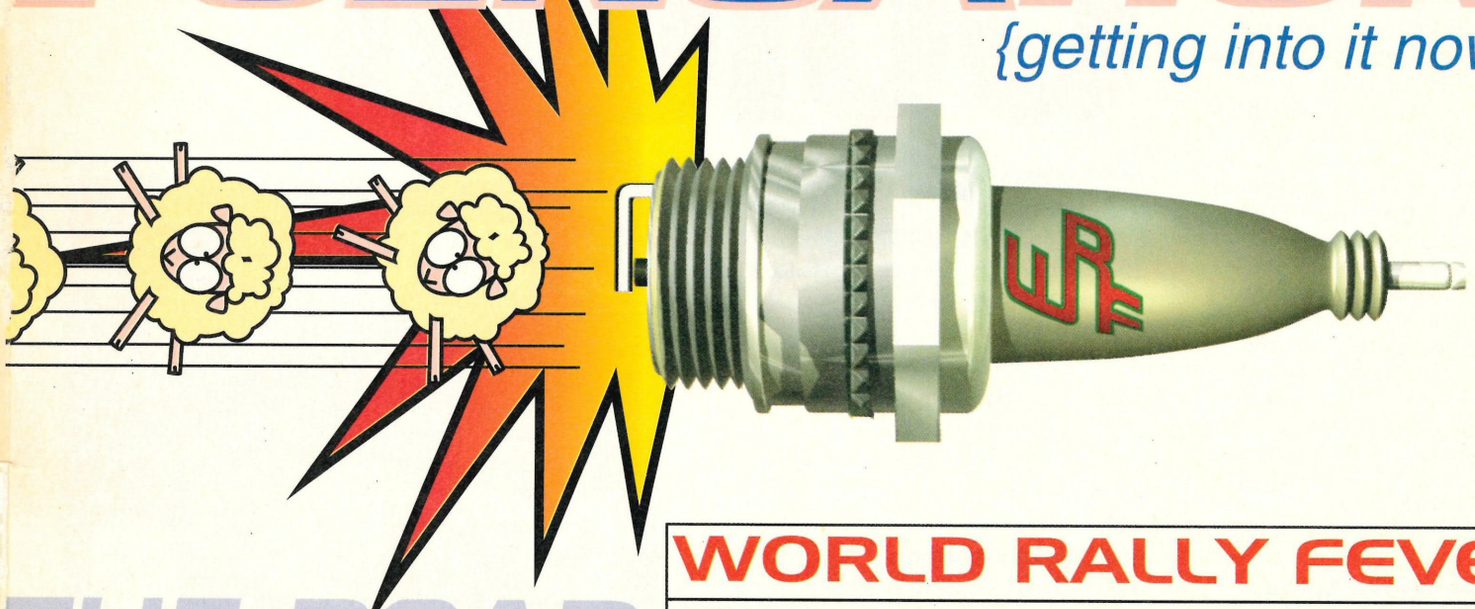
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May 1996 Issue 55



If you're running your PC in less than 16.7 million colours you aren't pushing your hardware enough. You don't know what you're missing!

When PCs first evolved, their colour support was marginal to say the least. Black and white – or rather black and green was your lot! But times have moved on, and now most of us don't even entertain the prospect of buying a mono display. Take the next step with our feature, move up from 256 colours and start to run a PC that truly can mirror the real world.

Also giving colour to this issue is a first preview of the single player version of *Quake* (see page 40), an interview with Daley Thompson about his new game, and everything you ever wanted to know about alcohol via CD-ROM and the Internet.

Thanks for all your letters of support on the Future Publishing takeover of *PC Review*. Keep them coming and I'm especially interested in hearing from any of you with feature ideas or things that you'd like to see in the magazine or on the *CD Review* disc. Enjoy the issue and I'll see you next month.

James Binns, Editor
(jbinns@futurenet.co.uk)

Cover Story

If you want to show, edit, print, scan, photograph or just play games in 16.7 million colours, then turn to page 6.



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CD REVIEW

Pinball, driving, tanks, organic art, guitars, medicine and more!

The jam-packed *CD Review* brings you the the usual top selection of manic games and killer apps. Plus, this month only, the exclusive chance to win a pinball table. Turn to page 14 for our complete guide to all the entertainment.

Try the new, written test with our exclusive Driving Instructor 2 demo.





Enter our Pinball Pro competition and you could win a real table of your own.

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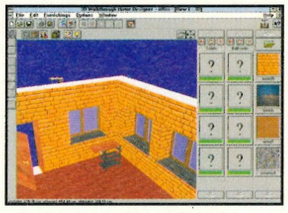
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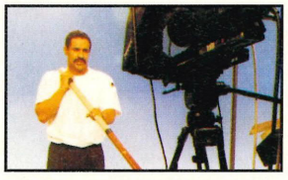
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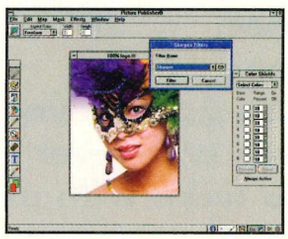
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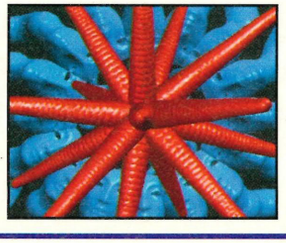
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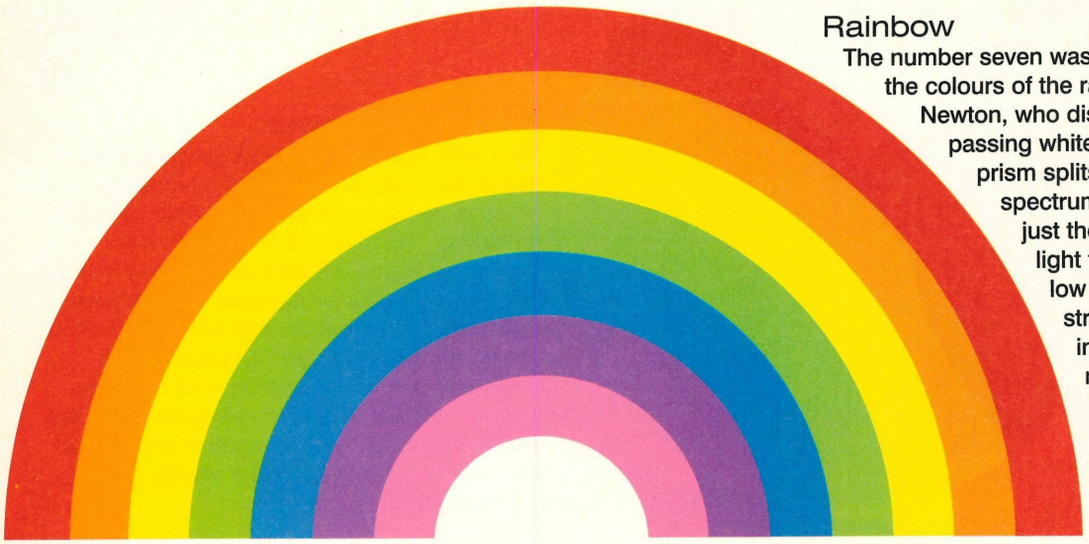
Turn to page 92 for our exclusive first review of William Latham's Organic Art. You might be astounded.

Colour By Numbers

PCs started out with just two of them. Now, an amazing 16.7 million colours are available. Here's everything you need to know about 24-bit colour. And there's more to it than just numbers.



Colour. It's everywhere. Everywhere on except your PC, perhaps. So far, most PCs have been set up to work with 256 colours. But the real world is bursting with millions of subtle shades. Wouldn't it be good if your PC could too? Relax - the frustration is over. It's never been easier or cheaper to upgrade a PC to work with every colour under the sun. Read on.



Rainbow

The number seven was first attributed to the colours of the rainbow by Isaac Newton, who discovered that passing white light through a prism splits it up into a spectrum. Colour is really just the visible range of light frequencies. At a low frequency is red, stretching down into infra-red and radio waves, at the high end is violet above which are ultra-violet, x- and gamma rays.

Today, the standard for colour is 24-bit. Full colour hardware is now so cheap that this is the colour depth you'll see on all new PCs, and older machines can be upgraded quite economically too.

But what's in it for you? 24-bit True Colour can make your PC an artistic workstation. When you look at videos, you see the flesh tones as they should be, not mottled with dots and patches. Photographs appear as clear and detailed as they do in real life. And if you work with paint, drawing or rendering tools you can make your creations look so much more convincing, realistic and vibrant.

If your PC is configured to work with a 256 colour display, you're missing out on a lot of information. For example, JPG images won't appear correctly. They'll be speckled and banded losing lots of detail. The same applies to MPEGs and AVIs.

Your eyes are used to seeing a full colour world. The human eye can resolve

If your PC is set to work with 256 colours, you're missing out on a lot of information.

around eight million different shades and, in fact, the seven colours of the rainbow – red, orange, yellow, green, blue, indigo and violet – are just useful conventions that make this huge number easier to describe. Colours are mainly detected by the eye's cone cells, which are used in daylight. The more sensitive rod cells, used for night vision, aren't so good at distinguishing between colours. In fact, your eyes have night blind spots at their centres where the cones outnumber the rods. That's why it's sometimes easier to see something at night if you look away from it slightly.

Colour perception is complicated and arbitrary. In the real world, colour is made because objects absorb some parts of the spectrum range and reflect others. An apple appears red because red is the colour that bounces off it. It's also possible to create colours electronically with lasers, LEDs and the phosphor on the inside of your monitor.

The same colour can appear different if you place it next to a big area of two other ➤

Image capture

There are two ways to get images into your PC. Scanners copy photographs and other graphics, turning them into bit mapped images. Full colour scanners are becoming very affordable indeed. For the full details, take a look at our scanner reviews on page 112.

For a more fun approach, try a digital camera. This looks and works just like an ordinary camera – point and snap – but instead of film you'll find a light-sensitive CCD (charge coupled device) chip which converts an image straight into a digital form. Instead of processing film you download it to your PC. You never run out of film, and you don't have to wait three days for your pictures to be ready. The downside? Cost. High quality digital cameras are costly. Professional models such as the Kodak and Canon ranges will set you back over £20,000.

For home use it's worth considering something like the new Kodak DC50. At around £800, it's not cheap, but it has automatic zoom, 1Mb of permanent memory inside and Kodak's patented full frame image sensor that can deliver images at 754 x 504 pixels. This resolution is better than that offered by many of the DC50s competitors. It's also a 24-bit camera which means all the snaps you take with it can be displayed in 16.7 million colours.

Another good choice is the Casio QY10. This model can actually show you each picture in its memory via a small LCD display on the back of its casing. It also sells at around £800.

For a fee, some High Street film developers will put a roll of film onto a CD-ROM for you. The cost of the service varies, but expect to pay £20 for the transfer and around £10 for the CD. You can keep adding images to it until it's full. These Photo CDs can be read on any multi-session CD drive – that's most of them – and imported directly into your favourite image manipulation software. The image quality is as good as your camera and film can produce and the service is a relatively cheap, easy and high quality way to get your photographic expertise into your PC for further treatment.



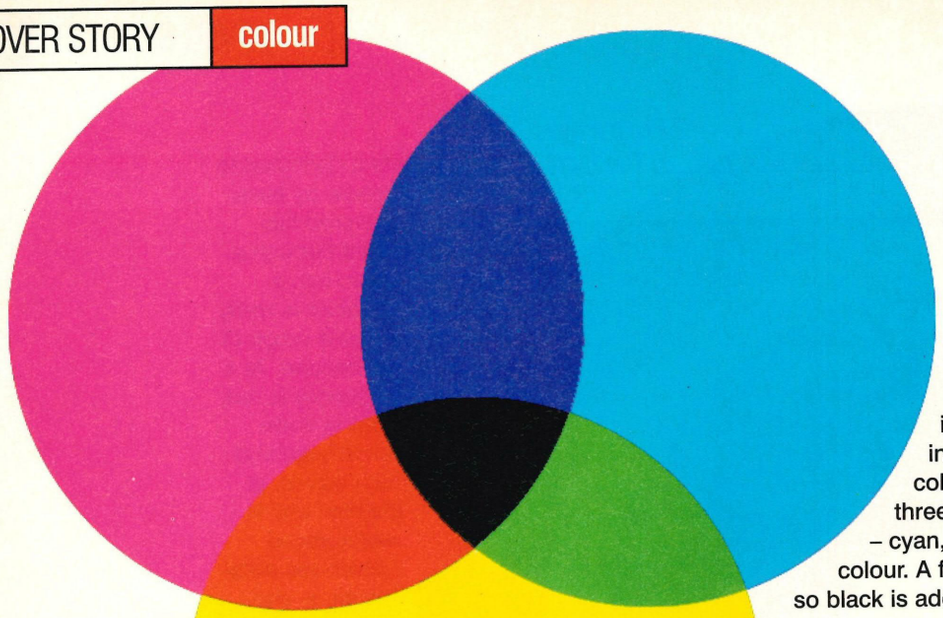
The Kodak DC50 is one of the latest models of affordable digital cameras.



It comes with an automatic flash, focus and zoom, plus a wide-angle macro feature.



The rear of the DC50 has an LCD displaying the settings and number of shots left.





Subtractive colour

Your eyes have different red, green and blue receptive cells, but your brain blends them to various degrees in a process called optical blending. This makes it possible to mix colours to create different ones. If they worked like your ears your eyes would see each colour individually, and monitors and printers would be infinitely more complicated. The subtractive colour model is used for printing, and mixes the three colours complimentary to red, green and blue – cyan, yellow and magenta – to produce any printed colour. A full mix of all three produces a muddy brown, so black is added separately.

True Colour
A graphics system that displays up to 16.7 million different colours using three bits of colour information for each pixel on the screen. Now becoming standard on PCs.

Hi Colour
16-bit colour, which can display just over 64,000 different colours on a screen. Previously popular, but now looking limited and about to become obsolete.

8-bit colour
Used by less sophisticated PCs, 8-bit colour can show up to 256 colours at a time. This is adequate for Windows programs and games, but not enough for artwork, graphics or photographs.

JPEG
A file format for graphics and photographs. The JPEG (Joint Picture Experts Group) system makes images smaller at the expense of some of the finer details.

colours. Different people are also sensitive to colour in different ways. Many people – men especially – are slightly red/green colour-blind, although this only shows up in special tests. A tiny handful of people can see slightly beyond the usual fange of the spectrum, directly perceiving what are ultra-violet and infrared. Animals and insects do this too. Bees can see ultra-violet and a field of flowers looks very different to them.

Designers and artists use colour wheels to decide which colours work well together. On a colour wheel the different hues (green, blue, red and the colours in between) are arranged in a circle. Some harmonise, some clash. The wheel shows these relationships graphically and makes it easy to choose colour for different effects. Interior designers and architects use the relationships between colours to set the mood of buildings and interiors. It's long been known that red is an exciting colour and pinks and pastels are soothing, and if you want a good night's sleep it's a very bad idea to paint the bedroom purple – it can make people suicidal. Advertisers too know how to choose colours to influence how products are seen. Green is a slow selling colour, for example, so you won't find as much of it on supermarket shelves as you will reds, blues and the colours in between.

Photographers and printers also know how to use colour effectively. One way of measuring colours is to equate them with temperatures measured in Kelvin (centigrade with 273 added to each figure). When things get hot they glow – first red, then orange and eventually blue, violet and white. The sun's colour temperature is 5600 degrees Kelvin, while a bright blue star like Alcyone might have one of 7000K. These temperatures provide a useful reference. Because colours vary according to the surrounding lighting, colour printers produce outputs calibrated to look good when viewed under light with a colour temperature of around 5000K, making sure this magazine looks right whether you read it in daylight, under flourescent lighting or under an ordinary lightbulb which makes everything more orange than it really is.

To create colours electronically, either on paper or on a monitor, three primary colours are combined in different proportions. Printing uses a system based on cyan (light blue), magenta (pinky red) and yellow to make colour mixes. In theory, mixing these colours should give black, but in practice

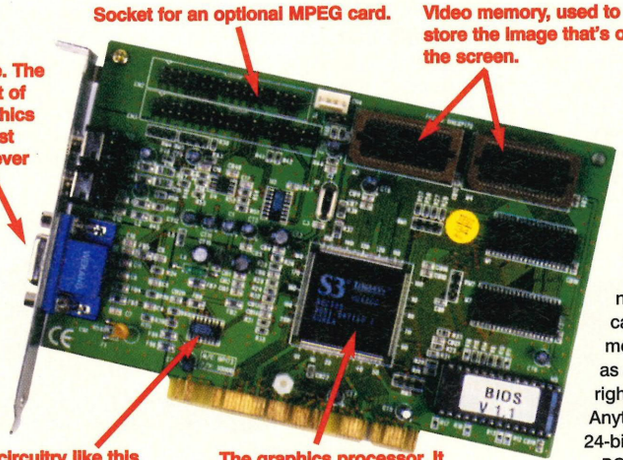
Video cards

All modern video cards have the same three main parts. Firstly, there's some special memory, which is used to store the image that appears on your monitor. Then there's the hardware that converts the contents of the memory into the electronic signals that drive the monitor hardware. Finally, there's extra circuitry that speeds up certain graphics operations. This means that video cards can draw boxes, circles and rectangles themselves without waiting for the processor to do it for them – perfect for speedy Windows, but also a boon for games which run much faster with this kind of hardware support. Recently developments also mean extras such as high speed video playback and special full colour 3D graphics facilities which are at the leading edge of game design.

A video card's memory needs to be fast because it has a lot of information to pump out. Each pixel gets one or more bytes – one byte for 256 colours, two bytes for the 64k mode, and three for 16.7 million colours – and has to be shunted out to the monitor roughly 70 times a second. This gives video cards a higher throughput than many hard disk systems. The more colours you use, and the more detail you want, the more memory you need. A 1Mb card is adequate for True Colour at 640 x 480, but you'll need 2Mb of video card memory for True Colour at 800 x 600. High end professional cards are fitted with 4Mb which can display 16.7 million colours at a resolution of up to 1024 x 768. Many recent cards are expandable, so you can slot in more memory when you need.

Apart from memory and maximum resolution, you also need to check the refresh rate – a measure of how fast the card can send the information to your monitor. In True Colour mode a card needs to shift three times as much information as a card showing 256 colours. Some cheaper cards slow right down when they try to do this. Look for a figure of 72Hz. Anything less will flicker. And check that this figure is true for 24-bit colour at the maximum resolution.

PC Review will be looking at a selection of video cards soon. Look out for our special roundup which pits some of the biggest and best cards against one another and singles out a winner.







Additive colour

The additive colour mode is used in monitors, which emit light from a phosphor screen directly, unlike printers which use inks that reflect colours. To create any colour on the screen, red, green and blue are mixed in varying proportions. White is produced by emitting all three colours equally at full strength. Black, on your monitor, is an absence of all colours – but look at a black monitor in the dark and you'll see that it's not as black as it could be.

inks are never perfect and the result is a sludgy dark brown. So, black is added as a separate ink to maintain sharpness. This four colour system, known as CMYK (K for key, or printers' black) is used for almost all colour printing, including that of *PC Review*. It's also used by colour printers from the cheapest to the most expensive. CMYK can't create special effects such as metallic and dayglo colours – printers add a special 'spot colour' process for those – but it's perfect for photographs and graphic dumps.

Monitors work differently. The primary colours used are red, green, and blue and combining these in different proportions creates the others. The difference comes through the fact that monitors emit energy in the form of coloured light, while printed paper and real world objects reflect it and so colours subtract. This is why mixing green and red ink or paint creates brown, but green and red light make yellow. Creating black with light is easy – it's simply the absence of any colour at all. White is a full-on mix of light colours. To drive the monitor a video card produces separate red, green and blue intensity signals. The more levels each colour can be, the more colours can be displayed. Displays at 256 colours use one byte for each colour. The colour isn't created directly, but is used as a reference marker into a table of all the possible colours. The table contains details of how each colour should appear, and changing the palette, the selection of colours from that table which is displayed, makes everything look entirely different. It's easy to set up a black and white palette with 256 hades of grey for example, although Windows defaults to a standard palette with a good selection of bright colours together with black and white. A True Colour 24-bit display uses three bytes to specify red, green and blue levels individually with 256 intensity levels for each. This creates 16.7 million possible colour combinations.

Mixing green and red ink or paint creates brown, but green and red light make yellow.

Scanners and digital cameras work ➤

Printers

What about getting all that lovely colour onto paper? Colour printing on the PC is now very affordable indeed. The most popular and affordable printers today use ink jet technology to create excellent full colour results. Ink jet printers work by squirting ink through a tiny tube with a heater coil around it. To create a dot the heater boils the ink and sends a droplet spurting out of the nozzle onto the page. Colour is created with four different inks – cyan, magenta, yellow and black – which combine on the page to give any colour you can imagine, in theory. To make the image appear smooth, the dots and the different ink colours are spread around each area of colour in a semi-random way. This creates the illusion of gradual shading.

Wax thermal printers, which create dots of colour by melting coloured wax ribbons onto the page are also very affordable and are capable of rich, saturated colour. But they're also very expensive to run, and some colours can be problematic.

For professional technology try dye sublimation, which evaporates solid inks onto the page. Dye-sub printers are still outrageously expensive – prices start at around £4000 – but the results are gorgeous. If money is no object then the best results of all come from colour lasers. These work just like black and white lasers but have four toner cartridges instead of one. Colour laser output is very crisp, but even the cheapest colour laser will set you back £5000. That's how much black and white lasers cost when they first appeared, so it's likely that colour lasers will start to become more affordable in a year or two.



Colour ink jets like this Oki are good for home use, but the colours on the output tend to be duller than you'd hope for.

When choosing a printer you need to watch out for three things: the cost of each page, the print speed and the quality of the output. A typical A4 page of inkjet printed output will cost around 15p and take about 20 minutes. The quality can vary a lot, so make sure you see some sample pages, preferably based on a printed photograph, before you decide on a make and model.

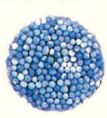
The best printers include colour calibration and control to help bring out the depth and richness of an image. On cheaper models you'll get contrast and brightness controls, and these are worth experimenting with to find the best results. It's also good to recalibrate inkjet printers regularly to keep images clear and pin sharp.

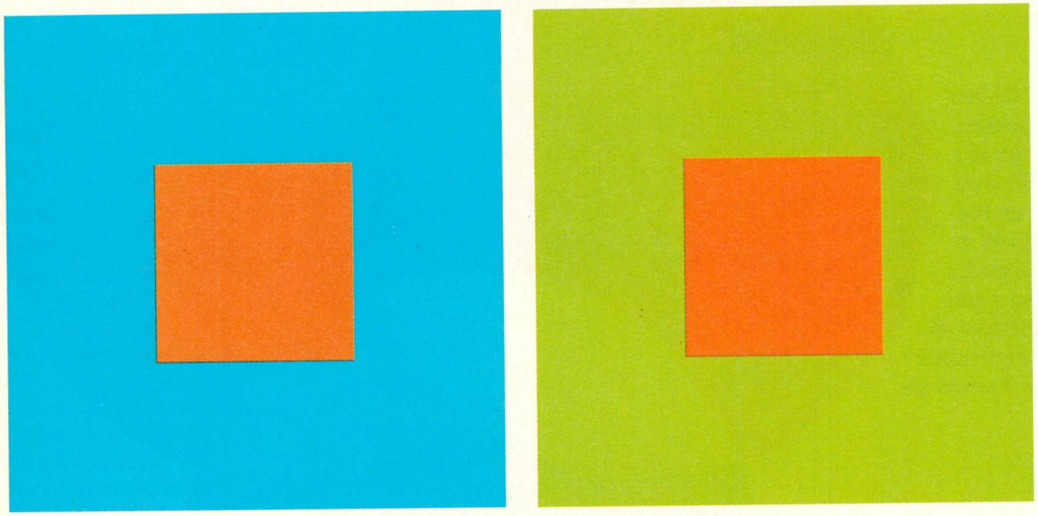
Hue
How bright or dark colour is. The black and white content of a colour. If you convert a colour image to black and white, the hue information is all that's left.

Saturation
The colour of a colour. Think of it as an index into a table of colours. Used with hue as one useful way to describe colours in art, design and image editing packages.

Primary colour
One of three colours – red, green and blue or cyan, magenta and yellow, depending on the colour process being used. They can be mixed to produce any colour in the spectrum.

Complementary colour
A colour produced by mxing any two primary colours. For example cyan is a mixture of green and blue.





Colour illusions

The way we see colours depends on the colours around them. In the illustration below, the colour fill in both centre boxes is the same. But because the colours surrounding each one is different, the two boxes appear to be slightly different as well. Our perception of colour varies according to brightness and lighting conditions, but our brains are clever enough to make compensations automatically.

Colour temperature
A measure in degrees Kelvin (K) of the apparent colour of an object. When something gets hot it starts to glow. The colour of the glow depends directly on the colour temperature.

CMYK
Cyan, magenta, yellow and key. A system used by printers that uses four different inks to reproduce any colour.

Spot colour
An extra colour added when printing, either as a special effect or to add a colour that can't be easily produced using the CMYK system, such as orange.

Phosphor
A chemical that lights up when struck by the beam from an electron gun. Used on the inside of monitor tubes to produce the display. There are three phosphors, arranged as tiny triangular groups of three dots – red, blue and green.

differently again. Three pass scanners use three colour filters with a single brightness sensor to check the intensity of each colour at every point on an image. Single pass scanners and digital cameras combine three sensors in one to list the colours in the image in one go.

Inside the PC itself, colour has been a patchy affair. The earliest PCs were strictly black and white – or more usually black and green – only. This was fine for business, but once other computers started working in colour the PC had to as well, and so the CGA (Colour Graphics Adaptor) standard was launched in 1982. This looks very poor indeed by recent standards with four colours at 320 x 200 pixels. Three years later it was followed by EGA (Enhanced Graphics Adaptor) which could cope with 16 colours at 640 x 350, but was slow and very difficult to program. It wasn't until the arrival of MCGA in 1987 – with 256 colours at 320 x 200 – that colour on the PC really started to take off. 1987 also saw the appearance of SVGA with 256 colours at a whopping 800 x 600, and optional True Colour (16.7 million colour) features. SVGA has remained the graphics standard since then, because True Colour is as good as it gets. The True Colour standard can display twice as many colours as the eye can see. A special mode known as Hi Colour (65536 colours) is used on some PCs, but it suffers from some of the disadvantages of 256 colour displays without conclusively sorting them out the way that True Colour does.

The earliest PCs were strictly black and white – or more usually black and green.

If you're using a 256 colour display, you can look at True Colour images but you won't be able to see them properly. To make it appear as if there are more colours than there really are the images are dithered – the colours are mixed in patches to create the illusion of extra shades. But it's not a very convincing illusion, and the dithering process hides some of the data present in the image. Printers also use dithering to make up for their low resolutions. The results

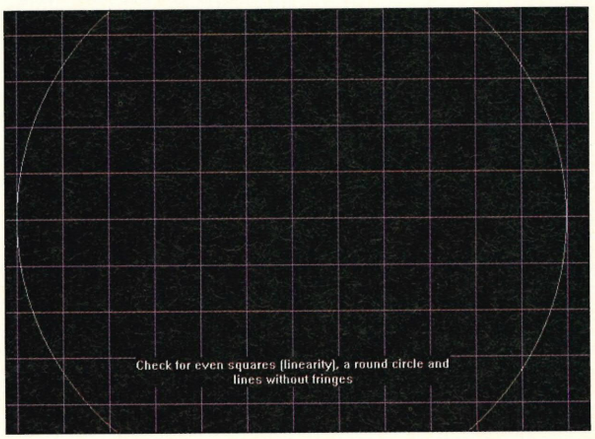
Monitors

If you have a VGA monitor you can use it to display 24-bit colour. The hardware is already there – you simply need the right software and the right video card to drive it.

In a desktop monitor three beams of electrons 'paint' an image by scanning a line down the screen very quickly. As the line moves the proportions of the different colours are varied. The screen itself has a phosphor coating which gives off light when electrons from the beams hit it. Each tiny dot on the screen is made up of three even tinier dots – one each for red, green and blue – and as the beam passes, it lights these up to create a single glowing speck of colour. Because the beam moves so fast and the screen is updated more than 70 times a second, the image appears stable and solid. The size of each dot, or dot pitch, tells you how crisp the picture from the monitor will be. A figure of 0.26mm is excellent, 0.28mm is about average, and anything larger will look blotchy and unclear.

A monitor's refresh rate tells you how often the screen is updated. If this number is too low, less than 60Hz, the screen will appear to flicker. Some monitor makers cheat by including an 'interlaced' scanning mode which draws two alternate screens offset by a tiny amount to enhance the maximum resolution. Interlaced monitor displays are best avoided unless you enjoy having your eyeballs vibrated in their sockets at 30 cycles per second.

Monitors are also limited by screen size – 14, 15, 17, 20 and 21 inches are the most popular sizes – and maximum resolution. If you want high resolutions you'll need a larger screen. For 800 x 600 you should look at a 15-inch display, and 1024 x 768 looks best with a 17-inch screen. The larger sizes are very expensive and mainly used by professionals who need to look at 1600 X 1200 displays.

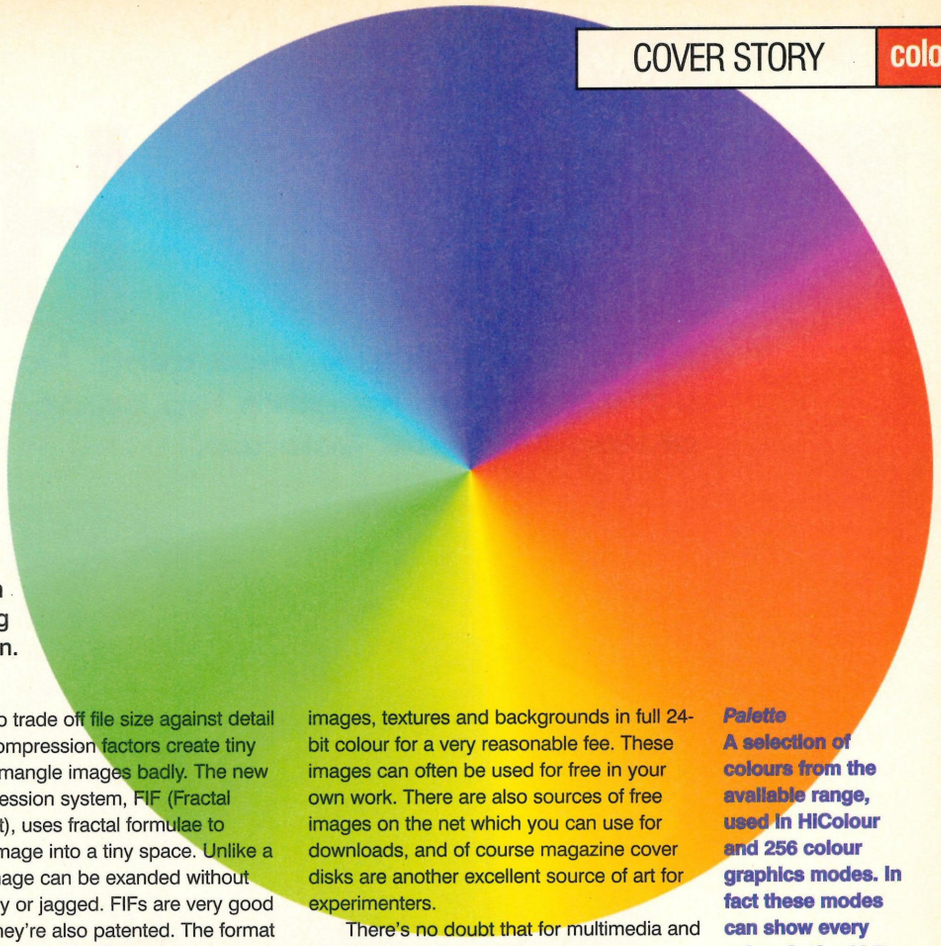


Put your monitor to the test using Monitors Matter with our cover CD this month. It works with tubes by most known manufacturers.

The final thing to check is screen quality. Ideally, the image should fill the screen with no black borders, and it should be perfectly rectangular with no curves around the edges. Lettering should be crisp and sharp, and the colours should be clear and natural. It's always a good idea to look at a monitor before you buy it to check for any obvious shortcomings.

Included on CD Review this month is *Monitor Tester*, a monitor testing program. You can use it to help detect screen distortions and misconvergences which can occur if the coloured beams inside your monitor aren't lining up correctly. Tubes by most of the main monitor manufacturers are supported.





Colour wheel

The colour wheel is a convenient way of showing how colours are related. Colours on adjacent parts of the wheel – for example green and blue – work well together. Colours on opposite sides clash. Designers use these relationships to create interesting visual effects. Adjacent colours look harmonious and relaxed together, while colours on opposing sides of the wheel tend to clash, creating conflict and tension.

are better with printers as far more dots are visible and the blending is much less obvious. In fact, all professionally printing uses a special kind of dither known as halftoning, which varies the size of a tiny grid of ink dots to create areas of light and shade.

Because each dot in a 24-bit image uses three bytes, True Colour images can be very large indeed. A 640 x 480 True Colour screen image takes up just under 1Mb – not much by modern standards, but a lot if you start working with images seriously. To make it easier to store these images on disk, many of them are compressed to fit into less space. The most popular PC compression formats are PCX and JPG. Unlike PCX, JPG is a lossy format, losing details permanently whenever you use it, although what's lost is usually too insignificant to notice. With JPG, it's possible to trade off file size against detail – very high compression factors create tiny files but also mangle images badly. The new image compression system, FIF (Fractal Image Format), uses fractal formulae to squeeze an image into a tiny space. Unlike a JPG, a FIF image can be exanded without looking blocky or jagged. FIFs are very good indeed, but they're also patented. The format won't be appearing in any shareware packages just yet, although FIF decoders are now available separately.

To make the best of 24-bit colour you need a good source of images. While it's now possible to use your own photographs with a scanner, a digital camera or a CD-ROM drive, there's no substitute for the work of a professional designer and photographer. Many companies now sell collections of images, textures and backgrounds in full 24-bit colour for a very reasonable fee. These images can often be used for free in your own work. There are also sources of free images on the net which you can use for downloads, and of course magazine cover disks are another excellent source of art for experimenters.

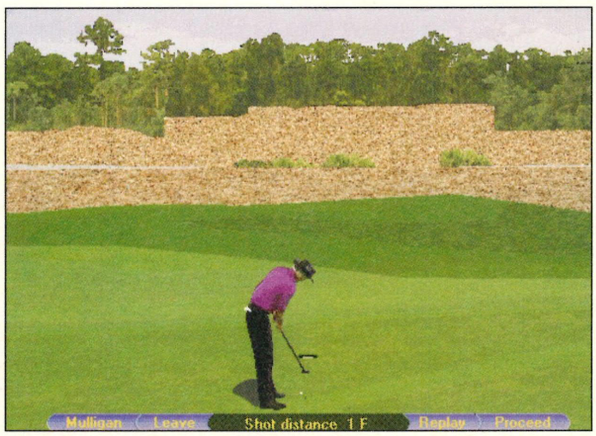
There's no doubt that for multimedia and graphics True Colour is impossible to beat. On a good monitor you can display more colour information than your eyes can use, and it brings the PC one step closer to being what it so easily could be – a window on both the real and the virtual worlds. Sometime within the next ten years or so holographic 3D displays will replace conventional monitors – but until then True Colour will remain the best. ***(RW)***

But what about games then?

With 24-bit colour now taken for granted by many PC users and software developers, you might think that games houses would have been using it for a long time now.

But it's not true. Almost all PC games still use 256 colour displays. The reasons for this are partly historical, and partly technical. Many games are still written with the legacy of the 386 in mind, and there is no way a 386 based system has enough power to cope with a full colour display. When you remember that full colour graphics need to shift and generate three times as much information as the standard 256 colour mode, it's obvious that you need a PC with a hefty spec to cope with the extra load.

But more technically, it's only been over the last year or two that video standards have settled down enough and become widely known enough to make it possible for games developers to consider writing full colour games. Before a game can be released it has to be tested thoroughly, and ideally it has to be tested on every single graphics card that's available – or all the popular ones, at least. In theory, compatibility problems should be non-existent, but unfortunately that's not how hardware works in the real world.



Greg Norman's Ultimate Challenge Golf is one game using 16.7 million colours, most of them are shades of green.

So games designers are being cautious about colour, and *Doom*, *Descent*, and even *Quake* remain 256 colour creations.

Here at *PC Review* we think this isn't good enough. SVGA modes have been standard on many games for well over a year now, and any game that can make use of a full 640X480 display mode with full colour is going to look superb. Now that a typical home machine might have a P100 processor and 16Mb of RAM, with the price of such a machine likely to tumble over the next year or so, there's no reason at all why games should limp along with a limited palette of 256 colours when they could so easily go the full distance with a True Colour display.

What's likely to make the difference isn't just cheaper RAM and processing, but the arrival of the new 3D accelerator cards which use full colour modes by default. These offer True Colour coupled with texture mapping and polygon generation – a game designer's dream come true.

The word from the games companies is that games that make use of these facilities will be due sometime in the next year or so. It's a long time to wait – but the results could well be worth it. Well, provided that the games that take advantage of True Colour are any good to play, that is.

Palette
A selection of colours from the available range, used in HIColour and 256 colour graphics modes. In fact these modes can show every colour in the 16.7 million colour mode, but not all at once.

CCD
Charge Coupled Device – a kind of light sensitive chip that's at the heart of digital cameras and scanners. CCDs are also used in video cameras, and in modern telescopes as a replacement for film.

Dither
A way of making more colours appear by blending areas of colour together. Dither on monitors looks blotchy and weak, but is used to good effect in colour printers where the dots are much tinier and less noticeable.

Anti-aliasing
A very localised blending of colour that's deliberately introduced around sharp edges viewed on a monitor. Used to make edges appear less jagged.

SNAP HAPPY

Hmm. Shiny, black, nice thing. No it's not more liquorice, but rather this month's top competition give away, courtesy of Kodak Digital Science.

For more information on the Kodak DC40 phone 01442 845 122.



Here at PC Review we love digital cameras. They're wonderfully instant and don't emit the nasty chemical odours you get in dark rooms. That's why we've pestered the people at Kodak Digital Science to let us give away one of their brilliant DC40s as a competition prize.

The DC40 has a good tactile feel and an impressive technical spec to boot. Featuring a 4Mb memory, it can store up to 48 uncompressed or 99 compressed images. The pics are 758x504 pixels and they're in 24-bit colour, which, in a round about way, is the reason we've chosen the camera as a compo prize this month.

After a snapping session, you can transfer the stored images to your PC using the supplied serial connection kit and *PhotoEnhancer* software. To buy the camera you'd have to accrue some £705 worth of credit card debt… but wait… we're giving you the chance to win one. Go for it.

The newer, improved version of the DC40 is Kodak's DC50, which you can read more about as part of our colour feature on page 7. Much like the DC40 in looks, it boasts a macro feature for close-ups, automatic zoom and a range of other improvements. It sells for around £800.

Question Time

Here are the answers… now guess the question. Just like in that US game show, *Jeopardy*. To give you a clue all the questions are in some way connected with rainbows.

Answer 1: Sir Isaac Newton
Answer 2: Kermit the Frog
Answer 3: Anita Harris

Yes. We know this is hard. But that just makes it the more challenging!

Rulin'

1. Questions, on a postcard or a stuck down envelope, please. Send them to: **Snap Happy, PC Review, Future Publishing, 30 Monmouth Street, Bath, Avon, BA1 2DL.**
2. Don't forget to put your name and address on the entry and get it to us before Friday 24 May, 1996.
3. This competition is not open to employees of Kodak, Future Publishing or Foam Plus.
4. No multiple entries. Enter more than once, and remember… we know where you live.
5. No correspondence will be entered into. The judge's decision is final.
6. The answer to our questions will be printed in our issue on sale 24 May 1996. The lucky winner's name will go in our July issue, on sale Friday 21 June.



THE SIMPLE WAY TO IMPROVE YOUR GAMES



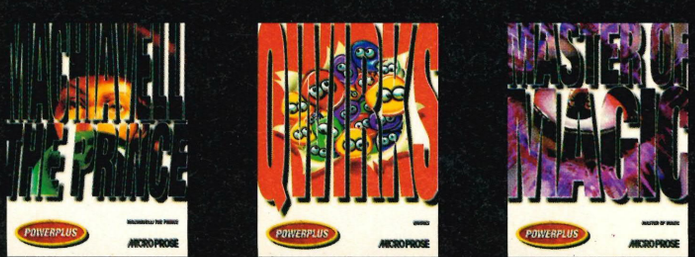
Machiavelli the Prince

Qwirks

Master of Magic

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CD REVIEW

Welcome...

We've return once again with a CD-ROM packed full of demos, shareware and other software for you to use. It offers no less than three separate menus designed to accomodate all types of PC users. Before you run our menu it's a good idea to quit out of any other programs that you might might have running already Here's how to get the menu you want up and running:

Windows 95 users

Our disc is remarkably easy to run in Windows 95, just put the CD in the drive, wait a few seconds, and the Windows 95 menu will run automatically. However, this feature is not supported on all machines so if nothing happens click on Start, then select Run. Use the Browse option to locate the file REVIEW95.EXE, and away you go.

Windows 3.1 Menu

In Windows 3.1 first click on File, then Run, then use the Browse option to select the file REVIEW.EXE. Double click the file name and the menu will appear.

Both Windows menus are split into five main sections, the contents of which are described in more detail on the following coverdisc pages. To get to a section click on its icon from the main screen, and then use the arrow keys to move backwards and forwards through the demos in the section.

DOS Menu

Since many games still need DOS to run, you'll find several of this month's games in our DOS menu. To get it up and running just type PCR or GO at the DOS prompt for your CD-ROM drive. You'll then be asked how many colours you want to run the menu in. Most systems these days can support 256 colours, so make this your first choice.

The program will remember which choice you made and goes straight to the relevant menu next time you run it, so you'll only be asked once. If you change your mind and want to run the menu with a different number of colours, then type TRY AGAIN at your CD drive prompt (usually D:\>).

Once the DOS menu is up and running use the arrow icons to scroll through this month's demo selection.

Running Programs Manually

If you have memory constraints, or you experience palette problems, then you might find it easier to run the demos manually using the Windows Run command. We've included a table on page 22 which lists the executable files you need to run for each demo.

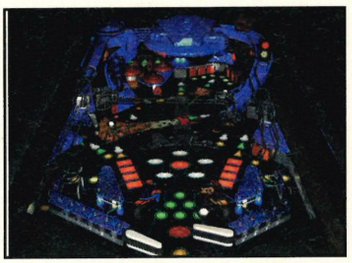
If you're having problems getting one of the demos to work then turn to page 22 and read our section entitled Problems and Memory.

Pro Pinl

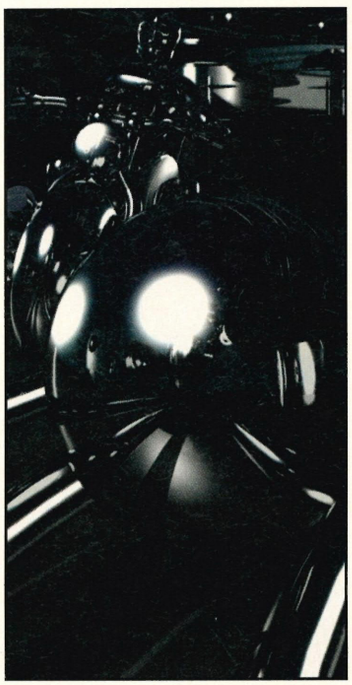
One lucky winner will get to walk off with a proper arcade pinball machine worth over £1000...

You think you're good at Pinball? Sure, everybody thinks they're good at pinball. You swagger around the greasy spoon cafes of the land feigning deaf, dumb and blindness, hammering the flippers, bumping in the plunger with your palm, looking macho and chasing the high scores. But at best, all you're doing is competing against the old gimmer in the corner with the whippet who's been learning on his own.

Wouldn't it be lovely to take on people just like yourself in a national pinball tournament? And to make it really worthwhile, how about the chance to win a full pinball table all your own. Well, now you can, courtesy of Empire Interactive and the national computer games retail chain, Electonic Boutique.



Pro Pinball is one of the most realistic Pinball games ever to appear on the PC. The high res graphics look great.



Fantastic ray-traced 3D rendering isn't only a feature of the intro sequence. The ball is ray-traced in play too.

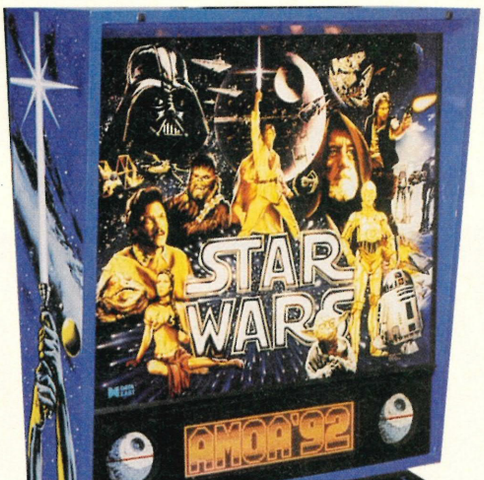
We were so impressed by the ballin' experience offered by *Pro Pinball* (reviewed PCR 51, scored 8) that we're running a competition based on the game, alongside our exclusive *Pinball Pro* demo. The prize in this compo is your choice of either a *Star Wars* or *Terminator* classic table. Each is worth around £1000 and would look wonderful gracing the home of any pinball fanatic. To get the chance to win one, all you have to do is play the *Pro Pinball* demo on CD Review, get the highest score you can, then send it in to us, filling in the slip to the right.



When the game loads up (we suggest you run it in DOS) the table will sit quietly humming to itself. To start the game and the timer hit the [S] key. You've got a minute's worth of play in which to get the highest score you can. Granted, if you lose the ball then you get another, but the clock keeps ticking.

To fire the ball into play, tap [Return]. The only controls you've got to worry about now, are the flippers, controlled by [Left Shift] and [Right Shift. There's a tilt function in there too, activated by the [Space] bar. We've found the PC pretty generous on the tilting, so nudge away.

When your minute of play is up, the PC will chug through adding up the scores and then offer up your final figure and a code. There's a special secret and private thing going on here that allows us authenticate your score. All that's left to do is to fill in the form. Write down your high score, with the code, add you name and address and send it in to us. Get your high score in by Friday 31 May and we'll print the winner of the compo in our issue on sale Friday 21 June. While you're playing from the comfort of your own home, happy shoppers in Electronic





The Star Wars pinball table is still a fixture in pubs, arcades and greasy spoon cafs up and down the land. Of course, if you don't want this fantastic piece of machinery, you could always pick the Terminator table (pictured above) instead. But first, of course, you have to get an ultra high score so get bashing those flippers. And hey, enjoy yourself while you're doing it.

ball

The Web

Boutique stores across the UK will be having a go too. So, there's the potentially thousands, or millions, of competitors. Are you up to it?

Developer: Empire Interactive
Publisher: Empire Interactive
Contact: 0181 343 7337
Price: £29.99
Minimum System: 486, 4Mb RAM, 4.5Mb hard disk space

PC REVIEW

COMPETITION

Name:

_____

Address:

_____

_____

_____

_____

Telephone number:

_____

High score (be honest):

_____

Security code:

_____

If I win, I want the (tick your choice) Star Wars ☐ Terminator ☐ ...table.

Send this original or a photocopy to: PC Review, Future Publishing, 30 Monmouth Street, Bath, BA1 2BW
Closing date for entries: Friday 31 May
Winner will be flagged in PC Review, issue 57, on sale Friday 21 June.

Competition Rules

1. This competition is not open to employees of Empire Interactive or Future Publishing.
2. One entry per reader. So make it your highest score.
3. The judge's decision is final and no correspondences will be entered into concerning the outcom of this competition.

empire INTERACTIVE

Assault Rigs

As well as boasting one of the slickest intro sequences we've ever seen – which follows the development of computer entertainment, from bat and ball to virtual reality – *Assault Rigs* is also a very playable game.

Running the demo, you'll be impressed by the front end, at least initially. But before long we're sure you'll want to explore the game, find out all the options, and hammer the keys until you've made your way through the demo.

The scenario included in the demo, called Room 101, is made up of dark urban landscapes. The best playing tips we can offer you are to use the strafe keys to slide round corners so you can come up shooting, and to work your way through the levels methodically. Take out everything one at a time so that you can be sure you won't get shot in the rear by something you've forgotten.

If you're not properly lined up, you may find that the tank flips on the ramps. Right yourself by hitting the roll button ([Keypad 0] on the default set up). For the lowdown on the full game, turn to page 55.

Developer: Psygnosis
Publisher: Psygnosis
Contact: 0151 282 3000
Price: £39.99
Minimum system: 486/66, 8Mb, VGA, CD-ROM drive



One of your goals is to collect the gems scattered around the level.



Take your cyber tank, or rig, if you will, and shoot enemy drones.



Oh how different it would be had it been named Assault Figs.



Great shooting action is assured, even in this Room 101 Assault Rigs demo. The explosions, we're sure you'll find, are particularly rewarding.

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Big Red Racing

They're big, they're red and you get to race them! *Big Red Racing* is a game with attitude. A game that demands your attention, and with our fully playable demo version you can experience it all for yourself.

When the game starts you'll be asked to enter your name. This is because the demo remembers how you had the game setup last time you played and will automatically load up your previously configured racing options. Now, isn't that nice of the team at Big Red?

In the demo, you can choose between three modes of play. Single Race and Tournament give you a one player game while Multiplayer lets you race against a friend using a neat split screen display. Once you've selected your game type you can customise your driver, logo, car and control keys. There are two jeeps to choose from, each with slightly different abilities.

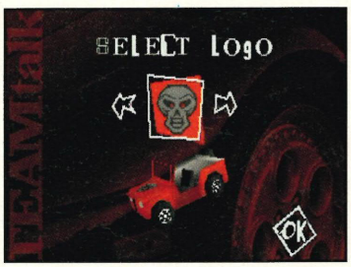
All that's left to do now is choose a track. The demo gives you a complete track to race around – the default setting. The Japan-based circuit is called Karma Corners. It's a dirt track so there will be plenty of skidding. A race lasts five laps and there are various check points you have to go through along the way.

There's a complete key listing in the CD card. You may find the controls difficult to use to start with, but you soon get used to them. For more information on the game, check out our review last month (*PCR 54*, scored 7). The demo comes in both Windows 95 and DOS flavours, so if you're having trouble running the Windows 95 version then try running loading the other version via our DOS menu.

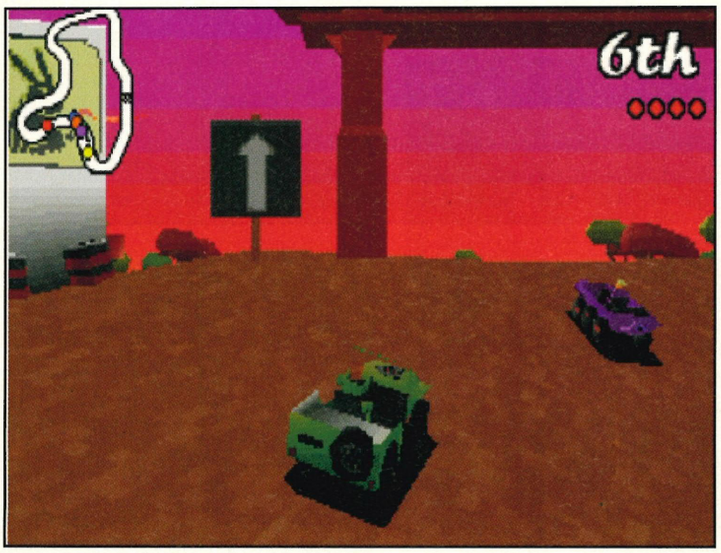
Developer: Domark
Publisher: Domark
Contact: 0181 780 2222
Price: £44.99
Minimum System: 486, 8Mb RAM, 7Mb hard disk space



Our demo version utilises a split screen display for two player mode so you can play a friend on the same PC.



One of the best things about Big Red Racing is that you can customise your car, even down to it's logo.



Our demo version gives you the Karma Corners dirt track in Japan to race around. There's bound to be lots of skidding and crashing before you cross the finish line. If you're going way off course, hit the [Ctrl] key to reset your car.

Chronicles of the Sword

Chronicles of the Sword is an adventure based on the Arthurian myths. Our fully playable demo version features a large section of the game for you to explore. Following an animated intro sequence, you'll realise that all is not as it should be in the court of Camelot. In fact there's a distinct odour of betrayal and murder in the air.

You control the character Gwain, a knight new to the round table who has just taken his solemn oath of loyalty to his king. At the beginning of the demo, Arthur sends you on a quest to find Merlin who has a mission for you. You are not to return to the castle until you've done his bidding.

The control system is simple. Just point and click and Gwain will move to where you indicated. As you pass your cursor over objects, you'll notice it will change shape. If a pair of walking feet appears, this means that you can walk to that location. If the cursor goes red then there's something you can pick up or look at. If you right-click, your inventory will spring up. Click on the eye to take a closer look at things.

The whole adventure is rendered in SVGA, so it looks gorgeous. As you walk around, the torches flicker, and there are lots of animations adding to the atmosphere. If you want to skip the rather long introduction, just click the right mouse button. For further information, see our review of the complete game on page 49.

Developer: Synthetic Dimensions
Publisher: Psygnosis
Price: £44.99
Contact: 0151 282 3297
Minimum System: 486, 8Mb RAM, 10Mb hard disk space, SVGA



Early English Christianity and chivalry make for perfect themes.



Gwain admires the round table, to which he has just been admitted as a member knight. He'll soon be sent on a mission by King Arthur himself to find the wizard Merlin. If you're into English legends, you'll love playing this demo.



Dark shadowy corners could conceal dagger-wielding assassins who would love to use the tools of their trade on you or your king. Murderous intrigue is a key element of the story in Chronicles of the Sword.

Azrael's Tear

Azrael's Tear is a first-person, real-time 3D adventure featuring complex interaction and dialogue with other characters, high-tension combat, and a host of puzzles to solve. The game is set in a vast underground temple called Aeternis, home of the mythical Templar knights, desperate ghosts, and mutated dinosaurs all kept alive by the providential powers of the Holy Grail itself.

Playing the full game, you assume the role of a futuristic thief equipped with high-tech mapping and sensor gear incorporated into a sophisticated heads-up display. Your task is to untangle the temple's mysteries, thereby gaining knowledge and gathering the tools that will take you to the Holy Grail – perhaps to return with it to the world outside. Along the way, you must take pains to plan out both your sequestering of the Grail and your intended escape route.

Our fully playabe demo gives you a taste of things to come and contains a few of the many rooms you'll explore in the final game. You'll find a full key control listing in the CD inlay and a review of the game on page 59.

Developer: Intelligent Games
Publisher: Mindscape
Contact: 01444 246333
Price: £44.99
Minimum System: 486, 8Mb RAM, 10Mb hard disk space



Though more fantastical in nature than Chronicles of the Sword, a demo of which is also on the disc, Azrael's Tear is also based on legends about knights.

Piranha

Piranha is a great new variation on the *Asteroids*-style video game.

Our fully playable demo version offers you the choice of a one player game, or a two player deathmatch.

In the one player version, you start off floating in space, orbiting a huge asteroid which, obviously, you have to destroy. The more you blast at it, the more it splinters into new pieces which you must shoot or avoid. The level ends when you've shot the asteroid so much it has completely disintegrated. Great blasting action.

You've got full 360-degree rotation. Just aim your space ship and hit the thrusters to move. When you shoot an alien it will turn into a power-up. Collect the power-ups to give yourself more firepower.

The two player death match pits you against a friend in various labyrinth-like combat zones. The first person to blast the other away is the winner, but be careful, you'll find your bullets ricochet off the walls so you can easily end up inadvertently shooting yourself. Still, playing a deathmatch is fun, and annoyingly challenging at times. There's a full key listing in the CD inlay.

Developer: OTM
Publisher: OTM
Contact: 01827 312302
Price: £24.95
Minimum System: 486/66, 8Mb RAM, 11.2Mb hard disk space



Asteroids-style gaming is back in fashion with Piranha. Our fully playable demo is full of frantic blasting action. There's also a great two player deathmatch.

STRIFE

A comet has hit the earth killing millions. However, it turns out that they were the lucky ones, those who did not die were turned into mutants by a deadly virus, or becames religious fanatics. You must destroy both threats in this mission-based *Doom* clone that uses a game engine licensed from the mighty Id Software. The designer of this game is now working on *Quake*.

Minimum System: 486, 8Mb RAM, 11Mb hard disk space



The knife is the first weapon you get. It might be a better idea to talk to this fellow instead of trying to waste him.

EXPECT NO MERCY

This is a bloody beat-'em-up based on a feature film with an 18 certificate. We've managed to obtain a 'bloodless' fully playable demo so that you can enjoy all the thrills without being offended by the gore. Kick those mutants. Keys are listed on the CD inlay card. Kickin'!

Minimum System: 486, 8Mb RAM, 5Mb hard disk space



The moves in Expect No Mercy are modelled on those of Kung Fu fighters, so expect realism all the way.

FULL METAL JACKET

Here's Mech game with a difference. Instead of the usual 3D view you look at the action from above as your robot roams a scrolling landscape. Choose which items of equipment to take with you at the beginning. Make sure you select a gun, otherwise you'll be easy prey to the other Mechs out there.

Minimum System: 386DX2, 4Mb RAM, 7.5Mb hard disk space



Full Metal Jacket starts with some earth shattering full motion video, which is very reminiscent of RoboCop.

OPERATION CARNAGE

You play the Guardian, pitched into a deadly battle against the Alliance. Moving from room to room, you will have to fight your way into the heart of the alien dominion and destroy it. Our huge, fully playable demo version has hours of gameplay as you do battle with countless robotic enemies.

Minimum System: 486, 8Mb RAM, 4.5Mb hard disk space



Scattered around each room in Operation Carnage you'll find power-ups to increase firepower for a while.

McAfee Virus Scanner

If you've ever lost months of work because of a virus that reformatted your hard disk without asking you first, you'll know just what a problem viruses can be. But worry no more – help is at hand with the McAfee Virus Scanner.

Computer viruses are to your PC what BSE is to the brain of a poor, unsuspecting cow. They can make everything seem mushy where the thinking's supposed to be going on until, in the worst cases, proper functioning is completely impossible. There's something insidious about a piece of software that lurks on on a floppy disk or CD, hiding itself inside other programs and files, waiting to spread as soon as it can.

Without protection it can take days, months or even years before you realise that your machine has been infected. What happens next depends on how evil the virus is. If you're lucky, your PC will slow down, or silly messages will start to appear. If you're not, you can say goodbye to the contents of your hard disk. Worse still, if you're on a network, the problem can quickly become pandemic, infecting machine after machine until... well, the result doesn't bear thinking about. Every year a significant number of users lose everything because they didn't take precautions.

You can buy commercial off-the-shelf virus checkers, but the *McAfee* checker on *CD Review* this month is unique in that it's a try-before-you-buy shareware offering. It even comes with a virus list dating from last Summer. Some viruses – such as the famous Brain virus which originated in Pakistan – have been around for six or seven years now. But new viruses are being created all the time, and some of the latest ones are fiendishly clever and devious. Certain kinds of viruses – known as the polymorphics – even mutate as they move from machine to machine. These are based on clever artificial life algorithms which we could easily do without. Others encrypt themselves so they appear like ordinary programs or data. This camouflage effect makes them much harder to catch, and the writers of protection software are always one step behind. But they bravely do their best to keep up with the misfits and a-life experimentalists who code these pests. What this means to you is that for maximum protection you should register *McAfee* and get an updated virus listing as soon as possible.

Unlike other virus checking programs, the *McAfee* scanner searches through memory, hard drives and floppy drives. Viruses can live in any of these parts of your machine, so checking floppy disks just isn't enough. If it finds a virus, *McAfee* can fix it quickly and easily. It also has useful extra features, such as the ability to schedule checks regularly and to choose which parts of your PC you want to examine. It's well worth installing immediately – just have a look below to learn about the program's features.

Minimum System: 386, 4Mb RAM, 2Mb hard disk space
Contact: McAfee 01344 304 730

Multi

This month, CD Review comes with five incredible demos covering many of the subjects multimedia CDs can offer.

For the computer artists out there, we have a screensaver demo of William Latham's *Organic Art*. This produces pictures of unearthly beauty that belie the complex mathematics behind them. FlagTower's impressive interactive documentary series continues with a *History of Medicine* and Arthur Miller offers up thoughts on his play, *The Crucible*. For anyone studying hard for their driving test, *Driving Instructor 2* will be a great help and *Guitar Hits* is every budding six-string strummer's dream.

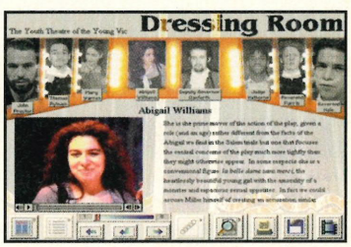
Most of this month's demos require you to have a run-time version of QuickTime for Windows installed on your system to view their video clips. You can check and install the latest version via the PC Essentials section of our on-screen menu.

The Crucible

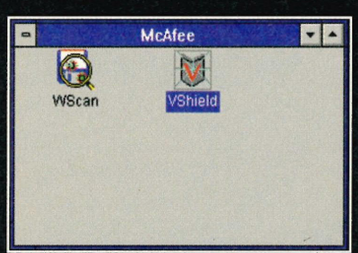
The Crucible CD-ROM provides a fresh view of the play by Arthur Miller, drawing parallels between the Macarthyite trials in the 1950s and the Salem witch hunts conducted in the 17th Century. The full version features the text of the play laced with hypertext annotations and more than an hour of video interviews with Miller.

Our fully interactive demo gives you a feel for the disc. You can try out the first part of each section: The 17th Century, the 1950s, the Dressing Room, the Play, the Playwright, the Balcony and the Bookstore. In these sections you'll find video, pictures and text, and video of Miller himself. Many of the interactive sections contain quite a lot of text, so dig around and see what you can find,. You'll be pleasantly surprised. And if you want more, see our review on page 101.

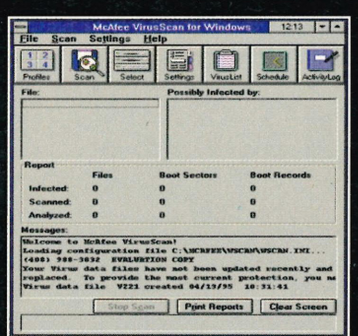
Developer: Penguin Electronic
Publisher: Penguin Electronic
Contact: 0171 416 3000
Price: £49.99
Minimum System: 486, 8Mb RAM



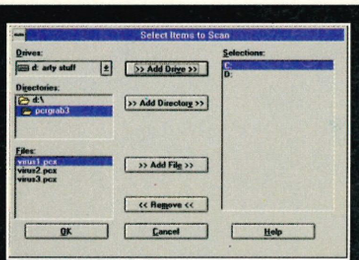
Many actors who have appeared in The Crucible have been profoundly moved by the play. In the Dressing Room you can hear their opinions.



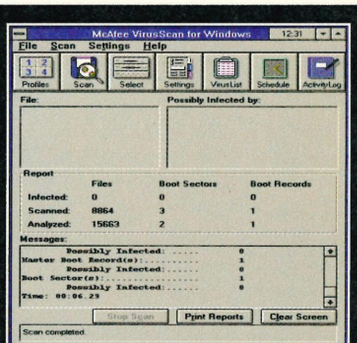
1 Installing the *McAffe* Virus Scanner creates a TSR (Terminate and Stay Resident) utility called VSHIELD that lives in memory and constantly checks for virus-like activity. This runs automatically on boot-up – you don't need to do anything more. WSCAN, on the other hand, is the user-programmable scanner, which you should use if you're worried about existing viruses.



2 The main virus scan window shows all the options. The toolbar along the top includes the master setup features, and the two windows below provide a running status when you run a check. The report area summarises the results of the scan. Finally there are printing and message options.



3 To execute a virus scan, click on the Select tool, with the hard disk icons on it. This shows a list of areas and items that the scanner will check. Drive C:, which is the main hard disk in most PCs, is selected by default. If you have any other drives you'd like to check, select them in the Drives selector and click on Add Drive. Button. Now you're ready to see what's happening on the viral front in there.



4 To start the scan, simply click on the Scan icon in the tool bar. WSCAN works its way through your files. It checks boot sectors, but also runs through executable files looking for suspicious activity. When it's done a summary of the results appears.

media

A History of Medicine

The latest in the renowned Flagtower series of interactive documentaries, this disc as its name suggests, traces the history of the healing trade.

The demo included here has many interactive sections for you to explore, with three time periods to investigate. In Early Medicine you can find out all about our nomadic ancestors and how they coped with diseases like Gangrene and Anthrax. In the Nineteenth Century you can discover the horrors of early surgery, while the Science and Technology sub section of the post 1945 era tells of Crick and Watson and their DNA work. From the Viewpoints section you can hear Professor Ray Porter talk about Quackery, the ancient art of selling bogus potions reputed to cure the patient of all manner of ills. See page 94 for our full review.

Developer: FlagTower
Publisher: FlagTower
Contact: 0500 486 500
Price: £39
Minimum System: 486, 8Mb RAM



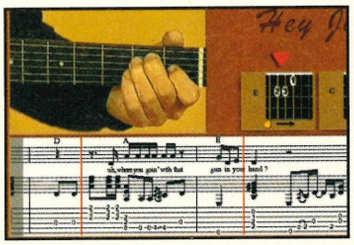
The DNA double Helix is one of the most powerful images of 20th Century science. It's a symbol of reproduction, life and individuality.

Guitar Hits

Guitar Hits is a unique guitar tutor which teaches you how to play rock classics with ease. Well, in theory anyway. The full version, as featured on page 98, includes the likes of Jimi Hendrix, Stevie Ray Vaughan and Lynyrd Skynyrd to name but a few. The songs are all played on a clean acoustic guitar to make the notes easier to hear.

Our superb demo version teaches you how to play the Hendrix hit *Hey Joe*, including all the fancy guitar bits which music books so often leave out. There's some great video footage showing you exactly where to position your fingers and the music is written in easy-to-read tabulature, so you won't need to be a musical genius to work it out. The best way to use the demo is to sit in front of the computer with your guitar ready before you start it running.

Developer: Ubi Soft
Publisher: Ubi Soft
Contact: 0181 941 4004
Price: £39.99
Minimum System: 486, 4Mb RAM



There's lots of close up video footage, so you can see just how to play Hey Joe for yourself. It's easy when you know how. Well, sort of.

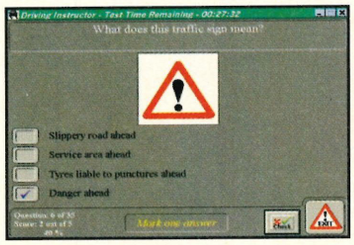
Driving Instructor 2

Some would say that taking your driving test is one of the most stressful things you can ever do, so the more help you can get with it the better. Luckily for us, the official *Driving Instructor 2* contains everything you need to know to pass your test.

This demo offers a sample DSA theory test as it would appear in the full version. There are 35 questions designed to test your knowledge of the Highway Code. Even if you've got your license, it might be worth a brush up.

To get to the test click the Self Test button from the main screen, then from the next screen click the Set Test Options button. Click the Begin Test button to start. Remember you're being timed, so don't dawdle on the questions. At the end of the test you are told the percentage of the questions you answered correctly.

Developer: Europress Software
Publisher: Europress Software
Contact: 01625 859 333
Price: £29.99
Minimum System: 386, 4Mb RAM



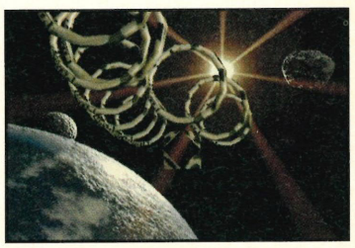
Driving Instructor 2 is designed to test your knowledge to the limit. The questions are fiendishly difficult – but 100% genuine.

Organic Art

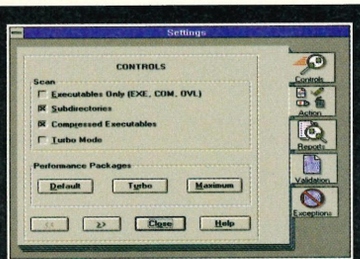
Created by computer artist William Latham and technical guru Mark Atkinson, *Organic Art* contains over 100 different virtual sculptures, each a living starting point for millions of genetic variations. Each time it runs, hypnotic 3D imagery is generated live in front of your eyes. In the demo you'll find five *Organic Art* scenes running in screen-saver mode. Each is designed to show some of the 3D capabilities of the full version.

Once the installation has finished answer Yes when asked if you would like to make *Organic Art* your default screen saver. A group of icons will be set up for configuring and testing the *Organic Art* screen saver. If you leave your desktop idle for the specified time then the screensavers will start automatically. See our exclusive review of the full package on page 92.

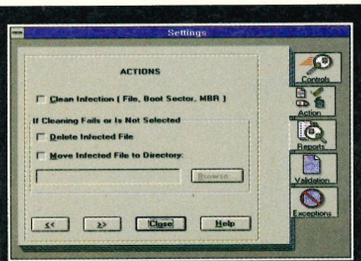
Developer: Computer Artworks
Publisher: Time Warner
Contact: 0171 391 4300
Price: £29.99
Minimum System: 486, 8Mb RAM



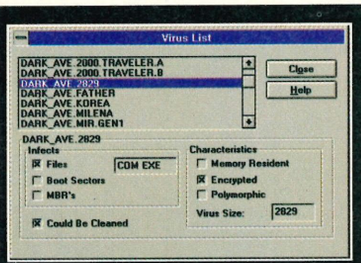
William Latham used similar software to that of Organic Art to create videos for the Shamen, as well as the cover to their last album, Axis Mutatis.



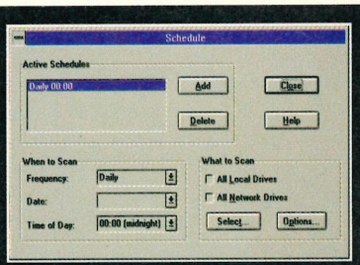
5 It's easy to set up the scanning so that WSCAN goes into as much or as little detail as you want it to. Click on the Settings icon and you'll see a tabbed listing of the virus checking options. You can configure WSCAN so it ignores sub-directories, and it can even scan through compressed executable files. The Performance buttons let you define these different modes as presets.



6 It's also possible to define how WSCAN handles whatever infected files it finds. It can either try to repair them, or delete them, or move them to a special directory for further work if the repair operation doesn't work. Most of the time it does, but the exceptions need to be quarantined to make sure they don't have the opportunity to do any damage just in case they are bona fide viruses.



7 *McAfee Virus Checker* also includes a huge list of all the different known viruses, complete with their tell-tale characteristics. Click on the Virus List clip board icon and you'll get the chance to scroll through the list in full. As you select each item, the different check boxes show the various properties of each virus, and whether or not WSCAN is capable of doing away with it.



8 Finally, if you want to run a virus scan regularly, click on the Schedule clock icon. This brings up a schedule window which shows a list of scheduling options. You can set the time of day when a virus check must take place, and also specify all sorts of different scan settings for daily, weekly, and monthly scans. And remember, if you decide to keep using *McAfee*, to contact them and get your full virus list.

Shareware

Shareware is often the only way small companies can compete with the industry giants. By offering you a free version of the software they're hoping to entice you to register for the full version, and it seems to work! So, if you find you're still using these titles a month after you've installed them then you really should get legal and register.

Once more this month we trawled the Net for the best shareware, and here's what we came up with...

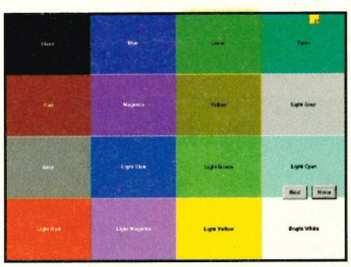
Monitor Tester

If your monitor is faulty then you're obviously not going to get the most out of your PC. Using *Monitor Tester*, however, is a quick and easy way of determining whether or not your screen is up to scratch.

Monitor Tester performs various tests in four sections: Colour, Focus, Geometry and Power Supply. In each of the tests you're told what the display should look like. If it's different then there could be somthing wrong with your monitor.

This software works with tubes made by most of big manufacturers, but if for some reason yours isn't compliant, wait a few months and give Monitors Matter a call. At the moment, they are working on a new version covering more type of tube.

Developer: Monitors Matter
Publisher: Monitors Matter
Contact: (01905) 613236
Minimum System: 386, 4Mb RAM



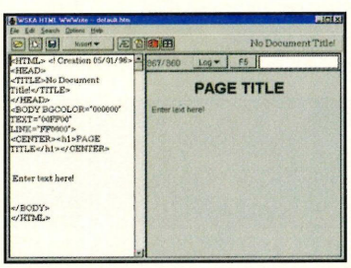
Here's part of the colour test. It's essential that your monitor can display colours properly, otherwise you're missing out.

WSKA HTML Editor

If you've ever fancied scripting your own Web pages then here's your chance. *WSKA HTML WWWrite*, despite it's ungainly name, is a powerful Web page editor which makes the creation of such pages so easy you could bash one together in under an hour.

Our shareware version is fully functioning, but if you're still using it after 21 days you should register for the full version. *WSKA* makes life easy by filling in all the header information for you, so half the work is done already. Full editing and printing options are available. If you like the idea of creating your own Web page, stay tuned to PC Review because next month we'll be showing you how in a full Internet feature.

Developer: Thompson Partnership
Publisher: Thompson Partnership
Contact: 01889 564601
Minimum System: 386, 4Mb RAM, 1.5Mb hard disk space



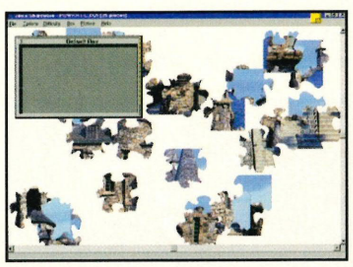
As you can see, WSKA has done most of the hard work for you already. This leaves your hands free to concentrate on good content for your Web site.

Jixxa

Jixxa is a truly realistic jigsaw puzzle – with a few improvements over conventional puzzles. This shareware edition offers 2 puzzles, but if you register for the full version you get 12. You begin a puzzle with pieces scattered randomly about the screen. Grab a piece using the mouse and drag it around. Drop the piece next to another and see if they lock. Once locked, the pieces become a single unit that can also be dragged.

Ask *Jixxa* for a hint or solution if you get stuck. Hint allows you to click on a piece to find a match. *Jixxa* can also solve the puzzle for you, at an adjustable speed so you can watch it happen and stop it at any time.

Developer: Rhode Island Soft Systems Inc
Publisher: Thompson Partnership
Contact: 01889 564 601
Minimum System: 386, 4Mb Ram, 2Mb hard disk space



With Jixxa you might spend hours trying to put together the jigsaw style puzzles. Get the full version and you'll find 10 more to play with.

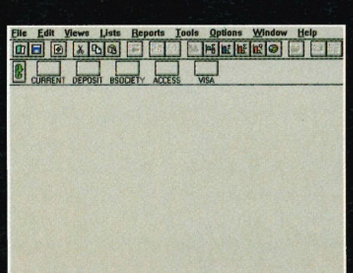
Money Matters Working Model

The fully working model of this accounts package lets you enter two accounts with 20 entries in each record. Use the extensive on-line Help to guide you in your use of the program and open up the example files to see a full set of 'real' account set ups in *Money Matters*.

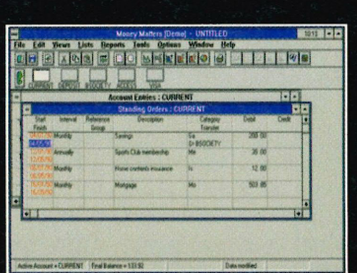
This limited demo includes all the features of *Money Matters*, but has been cut down to allow a maximum of two accounts with twenty entries in each account. To show off what it can do, a couple of example accounts have been included.

Developer: GSP Software
Publisher: GSP Software
Contact: 01480 496575
Minimum system 486, 4Mb RAM, Windows 3.1 or higher

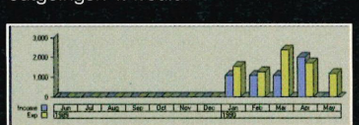
1 We'll start by loading in one of the two example files. Choose File, Open from the file menu and double click on example_st.mny. The file is first converted from an older Atari ST version of the program. When loaded it shows the main screen with five account buttons as below. Now, we're ready to do some number crunching.



2 To view the contents of each account, click on the grey Current account button under the main menu, and then select Account Entries from the Views menu. This lists the transactions in the account. Select Standing Orders, again from the Views menu, and you'll find a list of regular standing order debits.



3 Of course, you can view the contents of the other accounts in the same way. But *Money Matters* also produces reports and summaries. To see how income shapes up against outgoings select the Views menu and go down to the Income-expenditure graph. This results in a handy display showing a graph. For each month, two bars extend up from the axis. One represents the incoming funds for that month, the other, obvioulsy, being your outgoings. Wouldn't it be good if in real life the incomings always exceeded the outgoings.? It would.



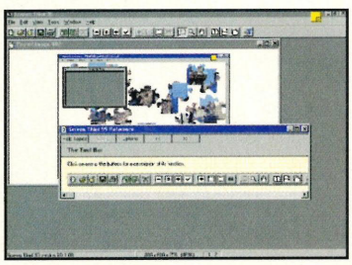
Screen Thief 95

Screen Thief 95 is the ultimate in screen capture technology for the Windows 95 operating system. Originally conceived as just a capturing tool *Screen Thief* has had image editing functions added.

At the time of writing we know of no other screen capture program which can reliably include the current mouse cursor in an image grabbed in Windows 95, let alone support coloured and animated cursors. The flexibility offered by the user-defined capture styles is unrivalled in any other product. Automatic and intelligent capture file naming often makes grabbing an image a simple one or two keystroke operation, and features such as the ability to capture individual MDI child windows, menus, and all the windows in an application mean that *Screen Thief 95* is definitely a tool for the professional.

In the Shareware section you'll find a fully functioning test drive of it. If you are still using it after 30 days you should register for the full version.

Developer: Nildram
Publisher: Nildram
Contact: 01442 891331
Minimum System: 486, 4Mb RAM, 2Mb hard disk space



Screen Thief 95 is one of the most powerful screen capture systems we've seen. This shareware version is fully functioning.

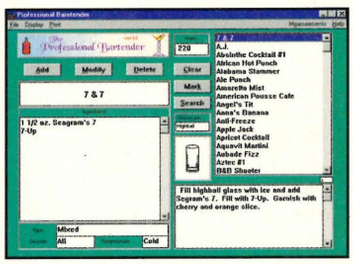
Professional Bartender

The Professional Bartender is a complete bartending program to assist both the cocktail shaking barman and the amateur mixer making a few drinks for friends. The program is easy to use, yet very powerful

On the main screen a list of 220 drinks is displayed. If you register for the full version you'll get over 1000 recipes. Clicking the mouse button on any drink will call up text instructions on how to make that beverage. Multiple drinks can be highlighted by holding down the [Ctrl] key while selecting a drink. Recipes can also be printed in case you don't keep a PC in your bar.

The drinks are listed according to seven catagories: Drink Name, Ingredients, Type, Season, Temperature, Directions and Glassware. There are often even pictures of what sort of glass you have to use. And by the way, if you want to know a little bit more about booze, turn to our feature called Everything You Always Wanted to Know About Booze starting on page 36.

Developer: Aardvark Software
Publisher: Aardvark Software
Contact: 001 703 425 6183
Minimum System: 386, 4Mb RAM, 1Mb hard disk space



Here's how you make a 7&7. Professional Bartender does everything but make the drink itself. Oh, and it won't wash the glass afterwards either.

The Essential Selection

To help you out with all your PC needs, and to assist you in getting the most out of this *CD Review*, we've bundled together a set of very handy utilities. It's called the Essential Selection for an obvious reason: if you don't have these things already, you need them.

Video helpers

Because multimedia products are so often produced on Apple Macs, you'll find QuickTime for Windows 2.03 handy whenever one of those Apple standard videos rears its head. Likewise, there's a run-time version Video for Windows 1.1a for the Windows-based video files.

PaintShop Pro

Every PC user needs a graphics package and the most widely used is *PaintShop Pro*. We've included both Windows 95 and 3.1 versions on *CD Review*.

WinZip

Winzip is an invaluable compression tool which can even help you free up more hard drive space when you need it. It's also extremly useful if you send or receive files over the Net. Again, we've included both Windows 95 and 3.1 versions on our disc.

Win32

A lot of Windows 3.1 programs require you to have Win32 installed on your system. You'll find a version here. Register it if you keep it.

Publishing double bill

Here are two different packages which compliment one another quite well. First up, a graphics editing package so you can put the perfecting touches on photos, clip art or whatever other graphics files you have. Then you can use them with the DTP package below it.

Picture Publisher 3.1

Complete working version of this image editing software, worth hundreds of pounds – or at least it was when it first came out. Click the Install button to set up the files and add an icon to your desktop from which you can run it. Turn to page 122 for our artistic project.

Developer: Micrographix
Publisher: Micrographix
Contact: 001 214 234 1769
Minimum System: 486, 4Mb RAM, 5.5Mb hard disk space

Print Shop Deluxe

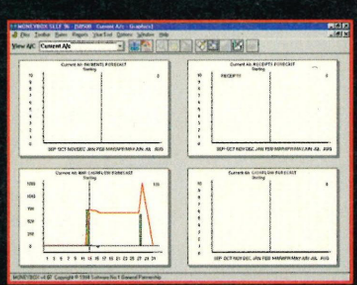
With the demo version of this home DTP program, you will be able to see various features of the product and be able to print out any sign you like. Although you will not be able to print from any other project types, you will be able to try all the features on screen. Turn to page 122 where we take you through the basics of designing greetings cards, invitations and certificates.

Developer: Broderbund
Publisher: Broderbund Software
Contact: 01753 620 909
Minimum System: 486, 8Mb RAM, 8.5Mb hard disk space

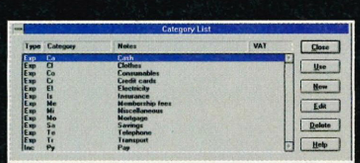
Money Box 4.06

Are your Bank charges too high? Are you paying too much tax? Get your personal finances sorted out with *MoneyBox*. Our trial version gives you 100 free entries to fill. We gave you the same demo last month – but couldn't resist bringing it back, particularly as by phoning the number below you can unlock the software and have the full version free of charge. If you want the manual (over 100 pages), backup disk and technical support too, there will be a charge of £14.95.

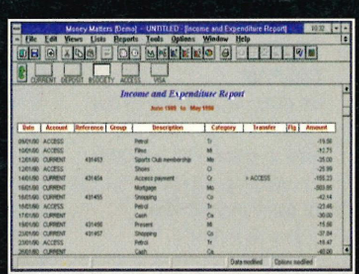
Developer: Simon Bevan
Publisher: MoneyBox Services
Contact: 0151 356 8000
Price £14.95 for manuals
Minimum System: 386, 4Mb RAM



4 But what about more detailed accounts? In *Money Matters* you can set up as many different expenditure categories as you want. To see an example of this in the demo, look at Categories from the list menu. You can add and delete your own using the buttons at the right, and even add VAT ratings for each item. The more advanced you get with the accounting the more different sorts of categories you'll want to set up. *Money Matters* is quite versatile in this respect, as you'll discover.



5 All this information would be useless if *Money Matters* couldn't summarise it for you. To see an example of the reporting features, select the Reports, Income-expenditure detail. This shows a complete list of income and outgoings over a period you can select, complete with totals at the end of each statement, like a personal ledger.

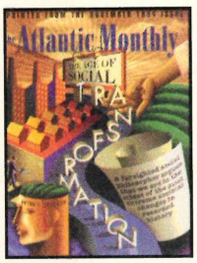


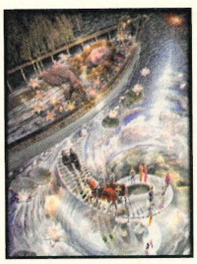
Ray Dream Gallery

The *Ray Dream Gallery* contains over 40 of the best 3D graphic pictures created with *Ray Dream Studio*. The images may be freely reproduced provided that the name of the artist and creating software are clearly annotated. You'll find the images saved as PIC files in the MEDIA directory of our disc. Alternatively you could just use the screen grabbing facility of *Paint Shop Pro*, which is also available on our disc, to capture the images.

Publisher: Ray Dream Europe
Contact: (0033) 1 69 41 97 22
Minimum System: 486, 8Mb Ram







Just a few of the bizarre but very excellent images you'll find in the Ray Dream Gallery. All of these were created in Ray Dream Studio, reviewed on page 104.

Gotta problem?
If you're having a problem with a *CD Review* demo we suggest you first read the corresponding entry in these disc pages. If you can see the files on your CD then the chances are that you don't have a faulty CD and may need to read through the Memory section below. If, on the other hand, your CD-ROM drive refuses to run, or read the disc then you should send your CD to the address below and a new, working version will be returned to you within 28 days.

PCR55 CD Returns,
PC Review,
Trevor Witt,
30 Monmouth Street,
Bath,
BA1 2BW

Windows 95

Some DOS games have problems running in Windows 95. We've included an option to run the DOS games that we know work in Windows 95 from our menu, but we can't guarantee they'll work on all systems. If you're having trouble running a DOS game in Windows 95, try running it from our DOS Menu instead.

First select Restart in DOS Mode from the Shut Down Menu. When DOS has started type D:\PCR, where D is the letter of your CD drive.

Install options

Make sure you select the default Installation path for all demos, otherwise when you click the Run button nothing will happen.

Support

If you need help getting a demo to work, call our support line on 01225 442244 and ask for Trevor Witt. Or email him on support@futurenet.co.uk

Disclaimer

CD Review is thoroughly checked for all known viruses, and independently certified before duplication. While every care is taken in selection, testing and installation of *CD Review*, Future Publishing cannot accept responsibility for loss or damage occurring during its use. You are advised to have recent, verified back-ups of all important files before installing new software.

Memory

If you have trouble running a demo it may be because you need more conventional memory. Conventional memory is the memory below 640K.

Even if you have a PC with 8Mb of RAM, that doesn't mean you'll have the conventional memory to run a *CD Review* demo.

To find out how much free conventional memory you have type **MEM [Enter]** at the DOS prompt. If the figure beside the line 'largest executable program size' is less than about 550k then you're system isn't set-up right.

You can free up more conventional memory by loading the EMM386 driver which allows you to move device drivers into upper memory, thus freeing up more space. To add the EMM386 driver you need to edit your AUTOEXEC.BAT and CONFIG.SYS files. It is always a good idea to make copies of them before editing them. At the C:\> prompt type:

COPY C:\CONFIG.SYS CONFIG.BAK [ENTER]
COPY C:\AUTOEXEC.BAT AUTOEXEC.BAK [ENTER]

If you have any problems later on you can return to these by typing:

COPY C:\CONFIG.BAK CONFIG.SYS [ENTER]
COPY C:\AUTOEXEC.BAK AUTOEXEC.BAT [ENTER]

To edit your system files type **EDIT** followed by the name of the file. These lines should be in your CONFIG.SYS file:

DEVICE=C:\DOS\HIMEM.SYS
DEVICE=C:\DOS\EMM386. EXE NOEMS
DOS=HIGH, UMB

Any lines starting with **DEVICE** should be changed to:

DEVICEHIGH

In the **AUTOEXEC.BAT** any device should now be sent to high memory. For example:

C:\MOUSE\MOUSE

should read:

LH C:\MOUSE\MOUSE

These changes will free more conventional memery

Another way to free up more conventional memory is to remove any Terminate and Stay Resident (TSR) programs from the system files. The following lines are not essential for using *CD Review*. Kill them by putting REM at the start of the line.

In CONFIG.SYS:
Any line containing **SMARTDRV.SYS, DISPLAY.SYS or COUNTRY.SYS**
In AUTOEXEC.BAT
Any line containing **SMARTDRV, DOSKEY,** or which loads a virus checker.

When you've made all the necessary changes reboot. To restore your system, simply reverse any changes you've made, or replace the new **CONFIG.SYS** and *AUTOEXEC.BAT* files with your back-ups.

EMS Memory

Some PC games require EMS memory rather then XMS memory. To configure your PC for EMS memory change the line in your **CONFIG.SYS** reading:

DEVICE=C:\DOS\EMM386. EXE NOEMS

to:

DEVICE=C:\DOS\EMM386. EXE RAM

Reboot your machine for this change to take effect. You will have to change back to XMS by reversing the above change for some of your other programs to work.

RUNNING PROGRAMS MANUALLY

If you have memory constraints, or you find there are palette problems and the display colours look wrong when running programs from our menus, then you may need to run the demos manually. Here's how.

Program Directory and File name

Assault Rigs: INSTALLA.EXE
Azrael's Tear: GAMES\ATDEMO\INSTALL.BAT
Big Red Racing Win 95: SETUP.EXE
Big Red Racing DOS: INSTALL.EXE
Chronicles of the Sword: GAMES\COTS\INSTALL.EXE
The Crucible: PENGUIN\PECDEMO.EXE
Expect No Mercy: GAMES\EXPECT\INSTALL.EXE
Full Metal Jacket: GAMES\FMJ\INSTALL.EXE
Guitar Hits: GUITAR\GUITAR.EXE
History of Medicine: FLAGTOWR\HOM\SETUP.EXE
Jixxa: SHARE\JIXXA\SETUP.EXE
McAfee Virus Scan: SHARE\SCAN\SETUP.EXE
Money Box: MBOX\INSTALL.EXE
Money Matters: MONEY\INSTALL.EXE
Monitor Tester: MONITOR\SETUP.EXE
Operation Carnage: GAMES\CARNSW\INSTALL.BAT
Organic Art: ART\SETUP.EXE
Picture Publisher3.1: PICTPUB\INSTALL.EXE
Piranha: GAMES\PIRANHA\INSTALL.BAT
Print Shop Deluxe: PRINT\SETUP.EXE
Professional Bartender: SHARE\BART\INSTALL.EXE
ProPinball: The Web: GAMES\WEB\INSTALL.BAT
Ray Dream Gallery: GAL95.EXE
Screen Thief 95: SHARE\SCREENT\SETUP.EXE
Strife: GAMES\STRIFE\INSTLL.BAT
WSKA HTML Editor: SHARE\WSKA\INSTALL.EXE

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towards your ultimate goal:
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Then fill in your passport,
get your International credit card
and let the journey begin!

Available from: Virgin · HMV · Game + all other good CD - ROM stockists
Available for PC and Mac CD - ROM.

BMG INTERACTIVE

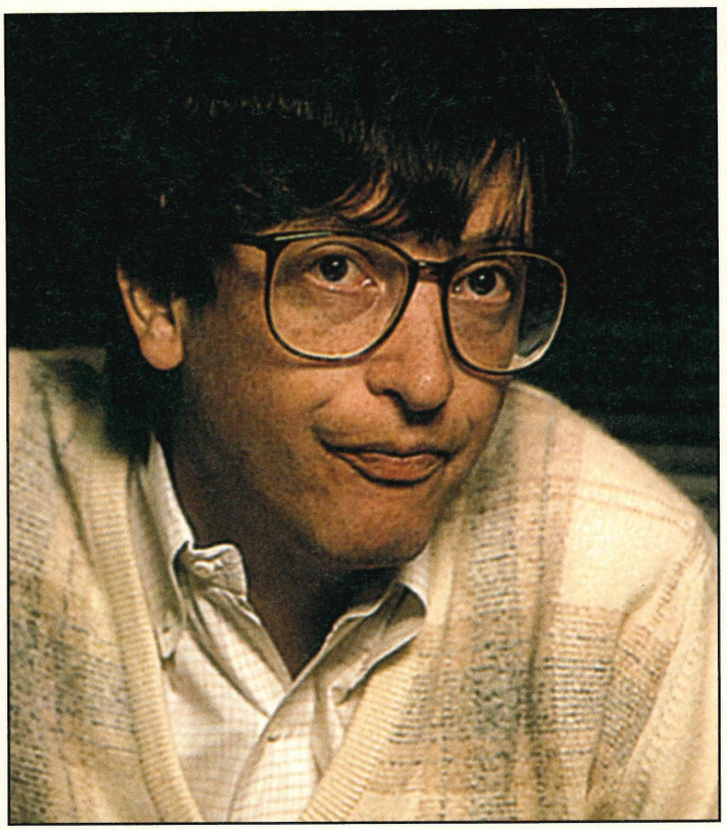
TATI

Distributed by BMG Interactive

NEWS

The latest developments at Microsoft, fancy new eight speed CD drive and big news for PC-owning X-Files fans. All in the news this month...

A PC in every living room



Will of Bill: Gates wants PCs to rub shoulders with sofas and rocking chairs.

Bill Gates is famous for a lot of things. Enormous wealth. Microsoft. Windows 95. And one of his stated goals: putting a PC on every desk. Now, he wants a PC in every living room too.

And it won't be just any PC either, it will be the Simply Interactive PC (SIPC), a computer that will connect to and control just about every other electronic entertainment device in your house. The PC will become the hub of your home entertainment system.

The PC will become the hub of your home entertainment system.

Needless to say it will be running a Microsoft operatings system, if not Windows 95. It will also take advantage of the Universal Serial Bus, an interface for connecting lots of peripherals to your PC without having to open it. There will also be an OnNow technology, which will eliminate the lengthy boot time of today's PCs.

The SIPC will also be on the Net, connecting to the world-wide computer network via TV cables. This is a complete U-turn for Gates. Less than six months ago he described the idea of an Internet PC (at least the concept of the cheap, stripped down device put forward by Oracle) as "stupid".

Gates unveiled his vision of this simple and easy to use PC at the WinHEC 96 conference last month, and demonstrated a few of the enabling technologies. He's already got the support of some of the industry's big boys like Intel, Compaq, Toshiba, Sony and Hewlett-Packard.

Don't, however, expect to SIPC machines on the shelves much before Christmas next year. So far, Microsoft has only come up with a general framework reference model for the SIPC. Few plans have been finalised and there's certainly no prototype.

Some industry observers have questioned Gates' motives for the announcement. They see it as a spoiler aimed against Internet PCs from Oracle, Apple, IBM and others. They also wonder whether Windows is up to the task of directing and controlling so many other devices, especially in the realms of home entertainment, where Microsoft doesn't have the best of reputations.

...and a PC in every desk

When Bill Gates made his aforementioned a PC on every desk quote, he probably didn't have in mind the kind of thing Future Electronic Furniture has produced – a desk with a PC literally built into it.

It may seem an odd concept, but the company's order books are full to bursting. "When we started this we thought we might get 15 to 20 orders a month – in fact we've got 1500 to 2000. Orders of £45 million flooded in within days of the launch," says David Gilbert, managing director of Future Electronic Furniture.

Gilbert puts this success down to the fact that a lot of businessmen, particularly company directors, don't want an ugly grey box squatting on, underneath or beside their desks. This is an ideal solution. The LCD monitor sits on the desk in a stylish mahogany frame while the CD-ROM and floppy drives, along with the the keyboard, are hidden in a pull-out panel apparatus. The rest of the PC is in the space between the back of the drawers and the back plane of the desk.

The company has been making furniture for 15 years, and came up with the idea of building PCs into desks as a result of David Gilbert's son's career as a freelance computer journalist.

Prices are seem reasonable as well. For £1,700 you can get an ash desk with a Pentium 100, 8Mb of RAM, a 1Gb hard drive and a traditional CRT monitor. A top of the range twin pedestal walnut partners desk starts at £3,800.

For more details call Future Electronic Furniture on 01273 814824.



Upgrading it might require some carpentry skills.

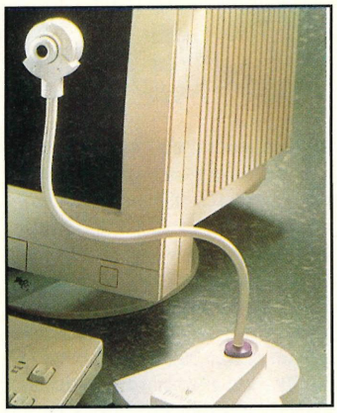
Your flexible friend

Video conferencing should be a lot more fun with the FlexCam – a flexible desktop video camera. Designed and built by VideoLabs in the US, it is an integrated camera and microphone mounted on a slender 18-inch flexible wand, which can easily be adjusted for precise positioning.

It consists of a 1/3-inch high resolution colour CCd S-video camera and microphone. The S-video is an upgrade over previous models and should provide a crisper, sharper image. This will increase the range of applications it could be used for such as quality control, presentations, and teaching. You could even use if for fun or use it as a Web cam.

The FlexCam is available in both PAL and NTSC models and includes industry standard, line-level audio. It is compatible with many of the digitising boards for Microsoft Video For Windows.

Call (001) 612 988 0055, e-mail videolabs@flexcam.com, or visit the Web page at http://www.flexcam.com.



The bending eye-rod of the FlexCam.

Chip spy faces 15 year stretch

Some people call them thieves. In the US, others prefer to call them 'hi-tech industrial spies' – and if they get caught they face 15 years in state penitentiary. Others still, we suppose, would just call them fools.

Espionage, deception, shady dealing. This is one of those stories you'd have though must be going on all the time in the cut-throat, competitive PC industry. But it doesn't seem to be all that common, at least not in the evidence of self-styled microchip spy Guillermo Gaede who has pleaded guilty to charges of mail fraud and interstate transportation of stolen property.

Translated into normal parlance this means Gaede video taped Intel's 486 and Pentium fabrication methods and tried to sell them to Advanced Micro Devices. Tried is the operative word because, even though these two companies are mortal enemies, AMD turned the tapes over to Intel, who in turn called in the FBI.

Once arrested, Gaede claimed he was a hi-tech industrial spy for both the US and Cuba. He said he'd stolen secrets from both Intel and AMD (he's worked for both) and sold them to foreign governments, including China, North Korea, and Iraq. Each of these countries denies knowledge of the man. That means he's either completely loopy, or they're too embarrassed to admit any connection with him.

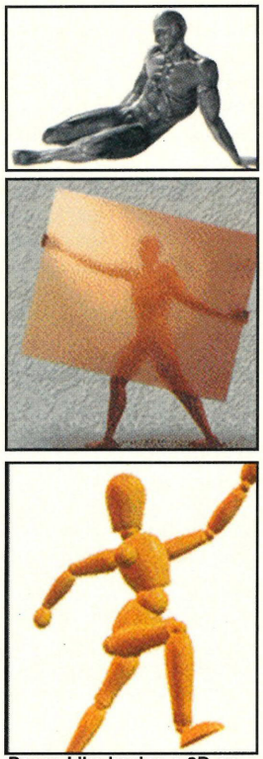
Either way he's up the proverbial creek without a paddle. Gaede is due to be sentenced in mid-June. The maximum sentence is 15 years.

Assume the position

Ever tried drawing the human body? If you have, you'll know exactly how difficult it can be to get all bits into proper proportion.

Not to worry, now there's a new product from America that makes oversized heads, wonky legs and unconvincing hands things of the past.

Fractal Designs has already made its mark as the developer of *Painter*, the most critically acclaimed natural media program on the PC. Now, the company has released *Poser*, a program aimed at serious and would-be artists alike. The program is a modern-day equivalent of the wooden models that conventional artists use to make different body poses. However, unlike the manikins, *Poser* enables you to use fully fleshed, correctly proportioned bodies representing a variety of frame types and sizes, ranging from children, to super-heroes, and covering both males and females.



Poser. Like having a 3D on-screen manikin... and more.

Each joint can be individually manipulated to duplicate any position that the human body is capable of. The finished model can then be viewed from any angle or perspective. *Poser* was created to work closely with 2D and 3D programs, and you can export your characters for use directly within packages such as Caligari's *Truespace* and *Ray Dream Designer*. The program will only run in Windows 95, so it should be nice and fast.

You can find out more about Poser by contacting Computers Unlimited on 0181 200 8282.

The Art of Escher

The interlocking 3D conundrums drawn by the Dutch artist MC Escher will soon be available on CD-ROM for you to muse over.

The first interactive publication for Thames and Hudson Digital, *Escher Interactive* will highlight various facets of the artist's work with features including a tesselation workshop, where you'll be able to design interlocking patterns, and animated versions of some of his most famous images including *Ascending and Descending* and *Moebius Strip*.

We'll be bringing you a review and the demo next month.



Escher Interactive includes a gallery of the artist's greatest works.

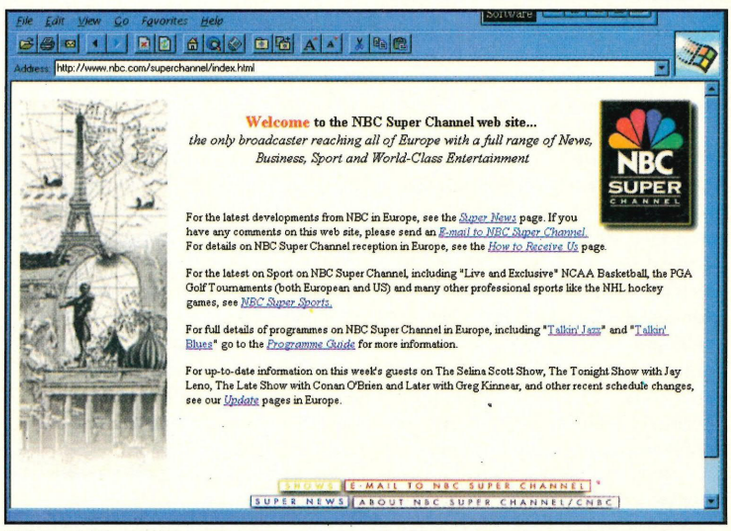
More PCs on TV

The US broadcasting giant NBC is planning to launch a range of computer TV channels for Europe, and it's likely that a lot of the programs will be supplied by Microsoft.

The content of these NBC-Microsoft channels will be mainly educational and promotional, with material on the latest PC equipment and software and how to use it. Both business and home users will be targetted, as wall as corporate IS managers. The first channel will be launched in Germany before the end of the year.

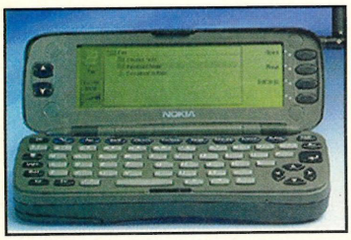
Meanwhile, Microsoft is working on the other venture it has with NBC: its on-line news service. Originally, this was going to form the backbone of the Microsoft Network (MSN), when the service was going to compete with the likes of CompuServe and America On-line.

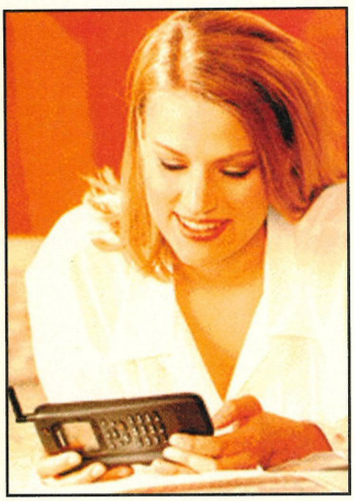
However, now that MSN has become just another Internet service provider, the Microsoft news service could become just another Internet news service. It's due to go live in July – in time for the centenary of the Olympic games in Atlanta.



NBC and Microsoft have teamed up to launch TV channels about PCs.

CeBIT Report





The Nokia 9000 – this month's most expensive toy.

This year's CeBIT was as busy and big as ever, with several major launches and hundreds of thousands of foot-sore visitors. This year's show was held in Hanover, and as ever it introduced all the latest in European hardware developments. Most of the major PC peripheral and add-on manufacturers were there.

Of most interest was the Nokia 9000 – a true handheld personal communicator. Nokia claims the machine, which combines a digital phone with a personal information manager, brings us into the real information age.

The company has cause to be bullish about its new baby. The 9000 won the best new product award at the show, and will probably be widely available through electronics retailers very soon. "Undoubtedly revolutionary, the Nokia 9000's combined features will change the way people work and radically change the market place," says Isto Pankakoski, managing director of Nokia Mobile Phones UK.

It's certainly the first time the PC and phone technology have been married together in such a miniature way. Unlike most PDAs on the market, however, it doesn't support handwriting recognition. Those who've used products that claim to recognise the handwritten word might consider this a virtue.

The device, which will fit neatly into most pockets, is based on an Intel 386 processor, has a slim LCD screen, and a QWERTY keyboard. It uses a clam shell-style lid and clasp design, with the phone built into to the lid, where the screen is.

Now, the thorny issue of price. The quoted price is around the £1,300 mark, which isn't cheap. However, the company does expect street prices to come in at less than £1,000. Call Nokia on 01480 434343 or see http://www.nokia.com.

CeBit also saw the old data storage rivals Iomega and SyQuest battling it out again. Both used the show to launch 1Gb back-up drives. Iomega's Jaz drive costs £399, while the 3.5-inch gigabyte cartridges are £89 each. As well as general back-up and restore applications, the Jaz is also capable of storing and playing high quality video and audio. It can even be treated as another hard drive.

SyQuest's launch was the SyJet. This is a 1.3Gb solution with a transfer rate of 4Mb per second and an average seek time of 11ms. The Jaz has a transfer rate of 10Mb per second and a 12ms average seek time. It's a little cheaper than the Jaz at £349 while the cartridges are £59.

For more information, Call Iomega on 0800 973194 or SyQuest on 00 49 711 900760, or, if you're on the Web, see there respective homepages at http://www.iomega.com and http://www.syquest.com.

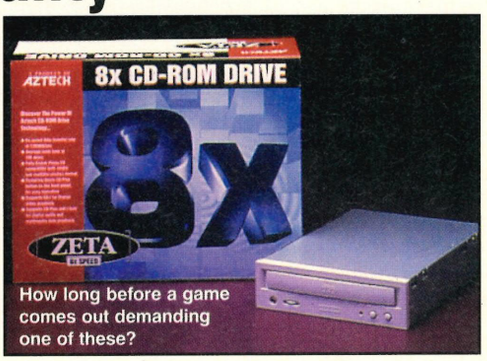
Eight speed CD is an affordable reality

While most manufacturers are just about rolling out their six speed models, Aztech has already released an eight speed CD-ROM drive. As if that isn't enough, they've also reduced its price from £151 to only £108 – that's cheaper than many six speeds. Aztec says that they've reduced the price in order to be even more competitive, in a very competitive market.

The budget drive conforms to all CD standards, including multi-session PhotoCD, and even Green Book CD-i. That means that you can use it to view your photo collection, watch Philips VideoCDs or any of the hundreds of ordinary White Book video CDs (if you have an MPEG-capable card in your PC).

Called the CDA 868, the drive comes with a concise manual, and easy-to-follow installation instructions. Because it's an ATAPI device, you can plug it into your existing IDE or EIDE interface. Alternatively, you can use the ATAPI interface that comes with it, leaving your IDE card free to host additional hard drives.

The drive itself performs data transfer at a respectable 1183K per second, while its average access time is 269 milliseconds. The CDA 868 appears to be a remarkable drive at a very good price. We'll be reviewing one in our next CD drive round-up. For further details, call Aztec on 01734 814121.



How long before a game comes out demanding one of these?

New from Yamaha

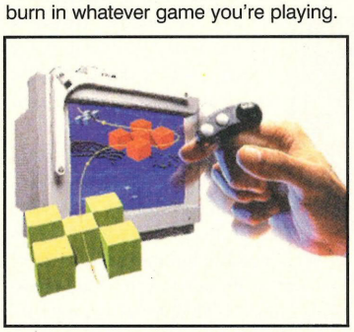
Last year, Yamaha turned the computer music world on its head when it released the startlingly powerful DB50XG daughter board for only £150. However, you need a Wave Blaster compatible upgrade slot on your sound card in order to use it. This means that thousands of potential customers for the new high-end technology either had to buy a whole new sound card, or live without the pint-sized powerhouse.

Now, Yamaha has released a new product that functions as a stand-alone sound card. The SW60XG costs the same as the DB50XG, yet it provides greater functionality. Like the original, it supports the exciting new XG MIDI standard, which represents a considerable advancement over the General MIDI/General Standard protocols. However, because it's a stand-alone unit, the SW20XG incorporates the features of a sound card as well as a MIDI daughter board. It's Sound Blaster compatible, so you can use it with your games, but because it has a line in connector you can feed your own audio signal into the card, where its trio of 24-bit effects processors can enhance and modify the live signal. Available effects include reverb, chorus, variation and voice cancel. The latter is of particular interest to karaoke lovers because, as its name suggests, it enables you to remove the vocals from any live music.

While the card is aimed at those people who were unable to use the DB50XG for one reason or another, both cards can be used in a single computer, providing 64 voice polyphony. Ring Yamaha on 01908 366700.

Keep your distance

Wireless joysticks have never become very successful for one simple reason – they're unreliable! They all use infra-red transmission to speak to your computer, which means that you must maintain a line of sight. Something interferes with that, and you crash and burn in whatever game you're playing.



The Owl. What a wise way of creating a wireless joystick.

The Owl is a new device that overcomes that problem by using ultrasonic communication, which apparently doesn't force you to sit directly in front of your screen. The ultrasonic receiver is an L-shaped bracket that is fixed to the front of your monitor, and connects to your PC via the mouse port. The mouse can be left in as well however, minimising the inconvenience when you return to more serious applications.

The actual joystick is nothing more than a handle on which sit two buttons. To exert control, you move your hand left or right, and the receiver triangulates your position. This is a more dynamic method than you're used to, and you'll soon develop a strong right arm! A UK distributor will be announced shortly.

Give your mind a workout

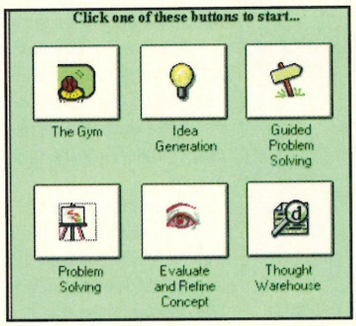
Guildsoft has just announced the release of *Mindlink Problem Solver, Corporate Edition*.

By *Corporate Edition*, the company simply means that it's a new, Windows version. *Mindlink* has been out for some time as DOS program, but it's been completely revamped for Windows.

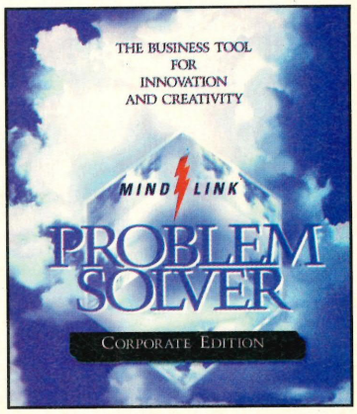
Unlike many conventional ideas processors, which solely help you to solve specific problems, *Mindlink* actually helps to improve your overall thought processes. You may not think of your brain as a muscle, but you can improve your creativity and problem solving with practice, just as a body-builder can increase his or her strength.

Mindlink was written in conjunction with The Synectics Corporation. No, don't laugh, apparently it's a respected US company which has spent over 30 years working with some of America's most successful power-thinkers – managers and directors of dozens of Fortune 500 companies.

The result of all this research has been condensed into a practical methodology which can be used to exercise your brain. The program costs £235 so, like the so-called power thinkers, you need a fit wallet too. Call Guildsoft on 01752 895100.



The first problem you have to solve is which button to click first.



This is the kind of marketing Fortune 500 execs really respond to.

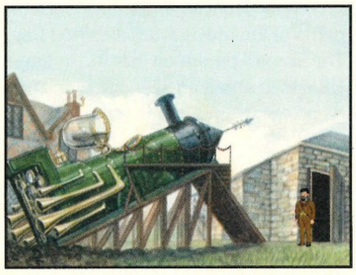
Funny how?



Three men, from left to right, Mike Lepine, Jeremy Beadle, Mark Leigh. Ignore Beadle though, he's not scripting a computer game!

Recognise these two chaps? Doing their best to look as though they have no association with the Britain's best known practical joker hovering behind them in a I'll-get-the-drinks-in sort of way? You may not know the faces, but chances are you'll know their work. Mark Leigh and Mike Lepine form one of the UK's most prolific comedy double acts. They're back room boys who've written for the likes of Hale and Pace, Jimmy Tarbuck, Russ Abbot, Brian Conley, Rory Bremner, Roy Chubby Brown, Josie Lawrence and even Jeremy Beadle. But let's not judge them just by their TV work, for these are also the comedy maestros who brought the world Ade Edmonson's *How To Be A Complete Bastard* and *The Ultimate Revenge Kit*.

So, why is *PC Review* giving these men the oxygen of publicity? Well, they've been brought in as script consultants on the next Divide By Zero graphic adventure *The Gene Machine* (formerly known as *Victoriana*). The latest betas we've seen looked promising and next month, as well as featuring an exclusive demo on *CD Review*, we'll also be interviewing Leigh and Lepine and asking them the question: Can video games ever really be funny? Jeremy Beadle probably won't be making another appearance.



Among the top celebs doing the voice overs for the game is son-of-the-doctor, Sean Pertwee. Here's a retro-rocket.

Multimedia duo from Strata

The US company Strata has announced the imminent release of two new high-end graphics and multimedia products for Windows 95 and NT users.

MediaForge is a multimedia authoring package which Strata claims is ideal for creating interactive titles, in addition to games and even Web pages. Because the program uses pure 32-bit code, it runs very quickly in Windows 95, and its drag-and-drop interface makes it very easy to achieve professional results.

Thanks to its integrated programming language, which is accessed via the *MediaBasic* editor, you can create titles that are impossible to duplicate with less sophisticated programs.

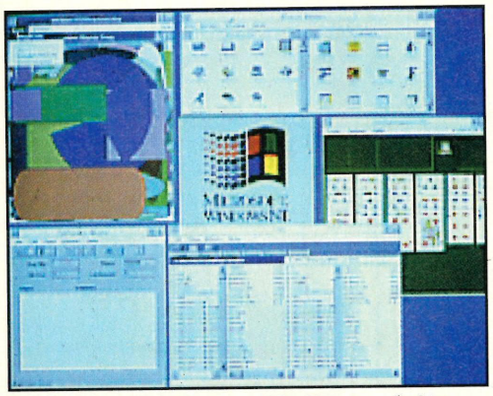
MediaPaint, meanwhile, is to be the first painting application for the PC to offer workstation functionality, including special effects and particle systems for creating natural-looking animation. Like *WinFX* from Blackbelt Systems, *MediaPaint* will provide you with many atmospheric effects, such as lightning, lens flares, bubbles, and so on. If and when we get our hands on it we'll review it.

MediaForge will cost £1169.13, whilst *MediaPaint* will seem a relative snip at only £527.58. If you've got that kind of money burning a hole in your pocket, you can buy the programs from Principle Distribution on 01706 832000. Alternatively the *PC Review* beer fund account number is...



Strata's MediaForge is a powerful new multimedia authoring package and was programmed entirely in 32-bit code. That means it's fast.

New Window on the World



The new version of Windows NT will have a desktop look similar to that of Windows 95.

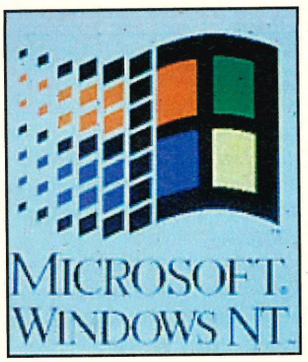
Final Betas of Windows NT 4 are currently shipping to testers and journos, and Microsoft's latest looks as if it'll keep to a July release date.

Microsoft describes the new NT as being, "Aimed at those people who run mission critical software, and who require an appropriately robust operating system".

What that piece of masterly techno-babble means is that NT is for people who can't afford Windows to crash. Anyone who depends on computer software for their livelihood, or who operates a client-server network, in other words.

The latest incarnation of NT will bost numerous new features, not least of which, is a new Windows 95-style user interface. Other new improvements include, advanced comms and fax software, support for hardware profiles, additional drivers, a 486 emulator for RISC machines, Network OLE and improved metafile spooling for faster network printing.

You can get the full picture by ringing Microsoft on 01734 270549.

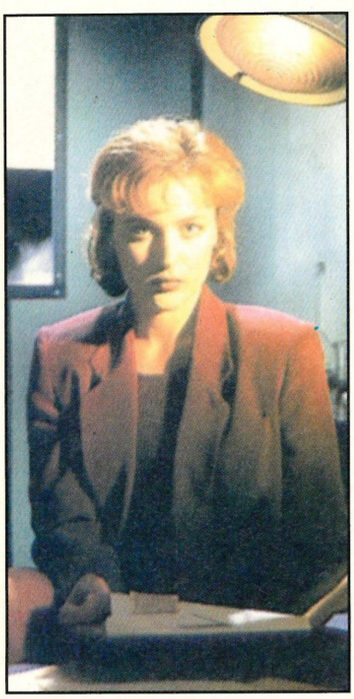


Windows NT is the business network version of Windows 95 and like 95 is 32-bit based.

License to Thrill

There's a genuine chance that the next year could actually bring some decent licensed products to PC games players. In a huge deal between Electronic Arts and the newly formed Fox Interactive, EA has taken control of distribution of Fox products worldwide outside of North America. This paves the way for a gamut of games based on the *X-Files*, the *Die Hard* movies, *The Simpsons* and a whole host of other hot properties.

The most exciting new project is the *X-Files* game. Already well into development, this *Myst*-style first person adventure will put you in control of your favourite characters from the show, with a new case and stacks of puzzles to solve.



Dana Scully, as played by Gillian Anderson. Be her if you want.

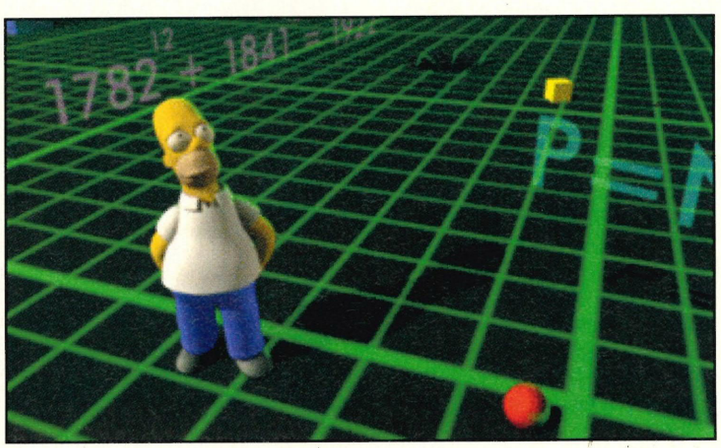
Gagged in Mulder's pad

Obsessive fans will be gagging for the second component of the game, whereby you get to snoop round Mulder's office. Open up a filing cabinet and hello, what's this? Dossiers on all the cases, and an episode guide. This encyclopedia, will be an added bonus, peripheral to the game itself and include loads of never before seen information. Unlike all the Internet sites relating to the series these show summaries will be written as if they were the X-Files themselves. Release dates on all the Fox Interactive products are sketchy, but if we're lucky the finished game could ship for Christmas 96.

Simpsons games have usually been disappointing, however hopes are high for the next offering: *Virtual Springfield*. Details on the gameplay are limited, but the level of detail the developers are hoping for is illustrated in their struggle to design the map of the *Springfield*, the Simpsons home town. The show's writer Matt Groening has never mapped the town properly and as any dedicated buff will explain, there are geographical inconsistencies in every show. Piecing together the town plan is only the first challenge in developing this cartoon action game. We've already seen the other Simpsons product, *The Simpsons Cartoon Studio*. It's a kind of design-your-own-show sticker book, complete with animated characters, backgrounds, furniture and sound effects too. Virtual Springfield is still in its early days, but we should have a review of the *Cartoon Studio* next month, in time for the May release.



Galen: the nice ape. Except the game will be based on the new movie rather than the 70s B-experience.



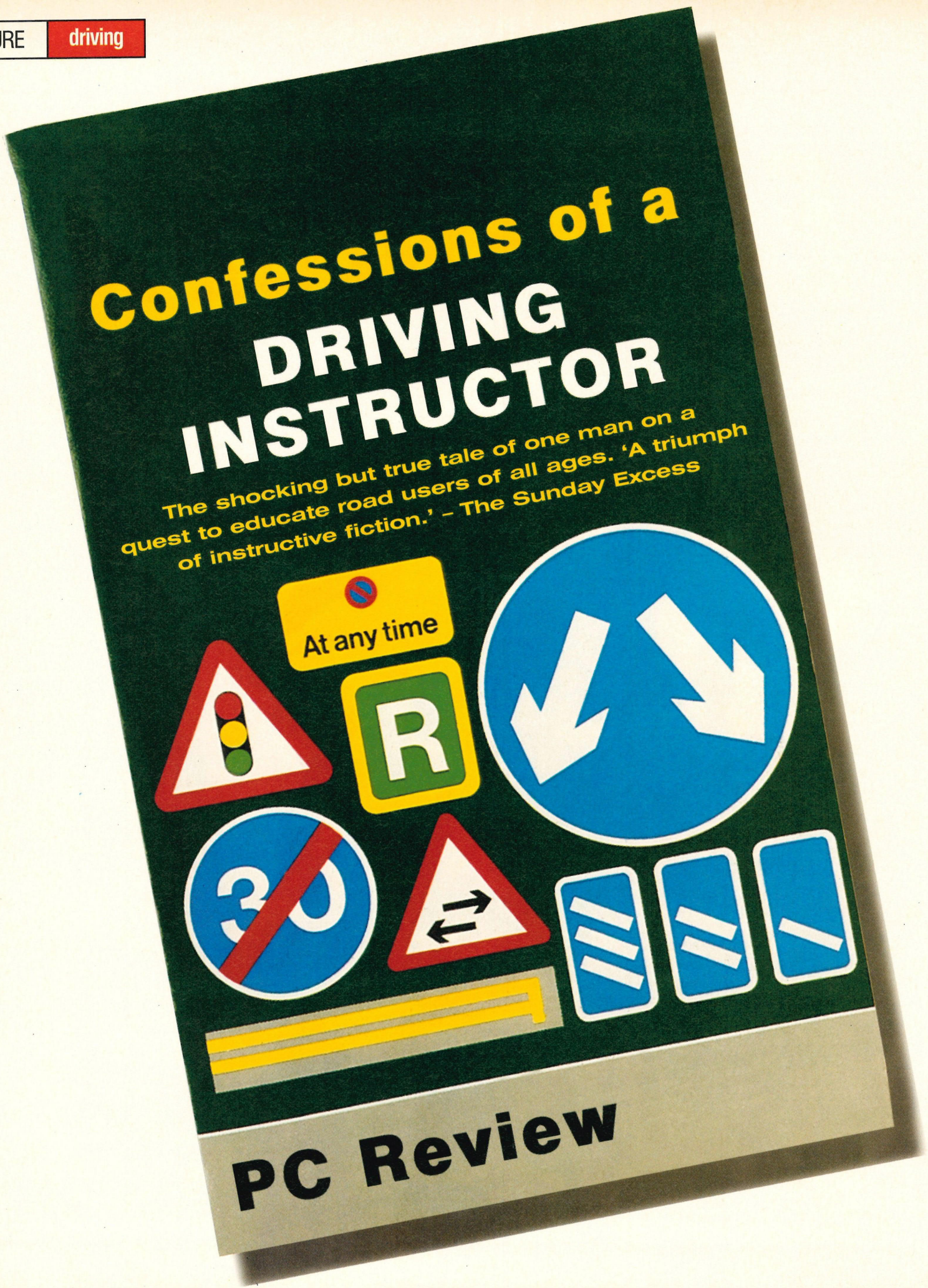
Digital Homer Simpson in the 1995 halloween broadcast. Homer accidentally leaves the normal 2D Simpsons world for a while. Very Toy Story, but nothing like the upcoming Virtual Springfield.

Yipee-ki-yay, and all that

The game based on the *Die Hard* trilogy, is down for a tentative June release, but we reckon it will be September. The action here will follow Bruce Willis' character John McLean through three distinct gameplay types. The first, set in a tower block is a third person perspective action game in the *Fade to Black* vein. The second section will have a *Virtua Cop*-style shooting spree with an onscreen cursor for shooting bad guys. Expect plenty of 'collateral damage', with shot-out glass, fire sprinklers and caving in roofs. The final sub-game is to feature action driving.

Other licences expected include a game of the movie *Independence Day*. The film will be out on July 4th in the US and is about an alien invasion. The game will follow shortly afterwards. Also look out for *Planet of the Apes*, an action adventure game and the conversion of *Aliens Versus Predator* from the Atari Jaguar – a pretty average side-on viewed scrolling beat-'em-up. We'll bring you firmer details on prices and release dates, as well as reviews and hopefully demos, as soon as we get the guff. Stay tuned.


The apocalypse
There's metal in the air...
... but the human race still has resources
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"This is THE game to play. A must have !"
Strategy Plus Magazine
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• New excitment with the Razor missions
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Confessions of a
DRIVING
INSTRUCTOR
The shocking but true tale of one man on a quest to educate road users of all ages. 'A triumph of instructive fiction.' – The Sunday Excess
At any time
R
30
PC Review

Can PCs ever really teach you to drive? James Binns asks the question and comes back with a dangerous answer... they're potential death traps.

Multimedia publishers, family magazines and game outfits are convinced that computers can teach you anything. You can trawl the Internet for knowledge, learn languages with CD-ROMs and point and click your way through any number of reference works. Wouldn't it be great, though, if they could teach you to drive?

It's impossible to like real driving instructors. Here are people who force you to do 10 three-point-turns in a row. If you're really that indecisive about which direction you want to face then you really shouldn't be on the roads. On top of that, they charge you for their company by the hour but say 10 minutes before your test, "Of course there's no way you'll pass."

My favourite vision of a driving instructor is one of a plastic variety. Remember the scene in Airplane when the autopilot is in fact a pneumatic man, inflated with the assistance of one of the female co-stars? I would have prefered that to a man in poor-fitting clothes who smells of scotch and has an obsessive disorder that demands you to stop whenever he twitches and bangs a magazine on the dash board. Advantages of the inflatable man would include the absence of odours and, of course, your ability to puncture him with anything sharp if things got a out of hand.

So can computers help? Let's look at gaming first. Years before I got my foot onto a clutch and a genuine wheel in my hands I played Geoff Crammond's *Revs* on my BBC Model B. Shearing seconds off my lap time at Silverstone, I mused at how easy it would be to drive a real car and how the moment I turned 17 I'd collect my driving license with my birthday cards and burn my bus pass. It never worked out that way. My first test was a disaster. The examiner had to go for the dual brake on a busy junction and went white as a sheet. He failed me, but at least I got under his skin. The second test saw the tester berating me for going too slow. He passed me but turned me into a teenage boy racer instantly. If the old classic *Revs* couldn't help me, then maybe the new generation of PC games could.

Learning to drive with PC games could present a few novel challenges, especially considering they're mostly racing games. Getting from A to B is fine. But taking the shortest distance between two points is positively discouraged. When reversing round a corner you have to stay a yard from the kerb… not take the racing line.

So, how about *Fatal Racing* as a tutor?

Learn as much theory as you can and then pay to sit by the nice man in the ill-fitting clothes.

Jumps, mid-air spins and collisions a-go-go. Best not even try learning on that one. The name's enough to put you off. Demolish-'em-up *Destruction Derby* from Psygnosis has plenty of lessons for the junior motorist. Areas you can expect to work on here are the crumple zones and the collision dynamics of London lanes. *Micro Machines 2* is a non-starter (boom-boom). A top down perspective won't teach you clutch control.

Screamer, meanwhile had plenty going for it. This *Ridge Racer* look-a-like has a promising control mechanism, but lets itself down badly on its sensitivity to collisions. Catch a kerb at speed in this one and you take to the air in a far too exagerated tumble And as for the bonus fantasy rocket car… that can only inspire dangerous ideas.

If you're looking for risky inspiration another game to give a wide berth is *Need For Speed*. Technically it's all very precise, with lots of car stats and rock guitar as some centre-parted chap tells you about these gears or that carburettor. Dangerous to get your hopes up to much. At least you can get busted for speeding though – only fair after if it's just after you've driven out of a pile up that'd put *Police Stop* to shame.

The one thing games can do that an educational or reference product wouldn't dare attempt is actually put you behind the wheel. While CD-ROM and Web sites claim to teach you the Highway Code, none could ever match the G-force of a handbrake turn.

With the written test racing to reality (see margin) you might want to sharpen up your theory. Europress' offering *Driving Instructor 2* (Available in May for £29.99) takes you through all aspects of the Highway Code and has plenty of tutorial information on understanding the theory of driving. Best of all it features the bank of 430 questions that the multiple choice tests will be taken from. Practice as many times as you like with the randomly generated mock tests.

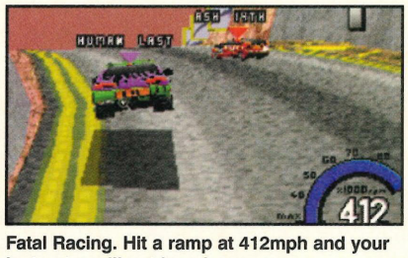
In conclusion, never trust the skills you learn in PC driving games. Learn as much theory as you can and then pay to sit by the nice man in the ill-fitting clothes. But next time he gets you doing a 30-point turn just grin and think of an inflatable doll man. ***(JB)***



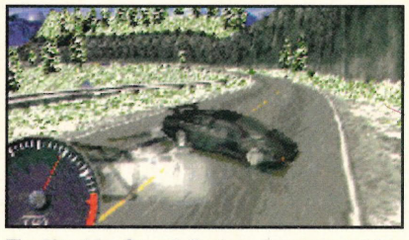
It might land upside down, but in games you always ends up on four wheels eventually.



Screamer. It offers tyre tearing arcade action over six tracks, but powersliding skills are not what your driving test examiner is going to demand of you.



Fatal Racing. Hit a ramp at 412mph and your instructor will not be a happy man.



The Need for Speed. Fantasy A: you can drive a Lambo. Fantasy B: you never get hurt.

CD REVIEW



Test yourself with the *Driving Instructor 2* demo.

Question Time

From July 1 1996, candidates taking their driving test will be obliged to sit a 40-minute written test consisting of 35 multiple choice questions. The theory test is made up of 12 sections, with themes ranging from basic road signs to 'Road Rage Situations'. To pass you'll have to get at least 26 of the 35 questions right, so as you can imagine there's been a stampede to get driving tests before the July 1st deadline. If you haven't already booked one, forget it. Slots all over the country are booked solid. So, why not warm up by trying these questions, taken from the full written test. Answers are at the base of the page.

1. You are driving on a well-lit motorway at night. You must…
a. use headlights only in bad weather
b. use only the side lights
c. always use your headlights
d. always use rear foglights

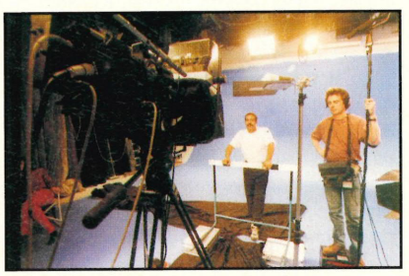
2. To move off safely from a parked position you should
a. use your mirrors and look round for a final check
b. signal if other drivers will need to slow down
c. NOT look round if there is a parked vehicle close in front of you
d. give a hand signal as well as using your indicators

3. When approaching a right hand bend you should keep well over to the left. Why is this?
a. It lets faster traffic from behind overtake
b. To overcome the effect of the road's slope
c. To be positioned safely if your vehicle skids
d. It improves your view of the road

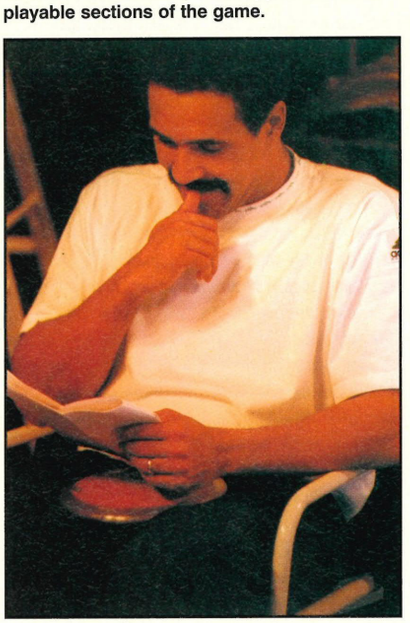
Answers
1. a 2. b, 3. d

Strange Daleys – that's a javelin he's holding, in case you wondered.

Dig



Thompson prepares to do say lines on the hurdles. His video clips will appear between playable sections of the game.



Avoiding the attentions of the director and the make-up lady, Daley, discus in lap, takes five to study his next lines and work on his irony.



Growing tired of filming, Thompson ponders pole vaulting over the camera and control desk and right out of the studio.

ital Daley

The double Olympic gold medallist, Daley Thompson, takes time off filming for his upcoming decathlon game to speak exclusively to PC Review.

Under the bright studio lights, surrounded by blue-painted walls, Daley Thompson is clearly getting a little impatient. Leaning on a hurdle with a camera trained on him and a mic boom dangling above, he delivers his line: "You just couldn't lift those knees over the last hundred meters, could ya?"

"Yeah, could you give me that just a little more ironic?" asks Tom Fiorini of Holy Mackerel! Media, the American company developing *Daley Thompson's World Championship Decathlon*.

"Irony!" laughs Daley in retort, a lively glint returning to his eyes and a wry grin spreading itself across his face. "That's a good word."

"Yeah, irony. You guys have that around here don't you?" continues Fiorini.

At this point no-one in the studio's quite sure whether the American is or isn't really conscious of his own irony, but Daley steps up to the hurdle once again. "You just couldn't lift those knees over the last hundred meters – *could you*?"

And who wouldn't forgive Daley Thompson for growing weary. He's been pumping passion (and irony) into decathlon-related comments from an autocue all day. Following the hurdles, he still has to do the discus, javelin and the 1500 meters to round off the full 10 events worth of video clips which will appear between the competition sections of the game.

In *Daley Thompson's World Championship Decathlon*, not only will you be able to control the athletes when they're doing the events, but there will be a bit of behind the scenes planning too. For instance, each competitor will be able to allocate skill points to the core decathlon abilities: running, jumping and throwing. "You have to build up the profile of your athlete," says Daley in a break from filming. "Give him endurance or coordination, or jumping ability and all that kind of stuff. It's easier than going training, that's what it is.

"I think it should be fun. The thing that I actually like about it is that, with the profile of the athlete, at least you're able to use a bit of strategy as opposed to a straightforward arcade game type thing."

And Daley's isn't new to computer games either. Ten years ago he put his name to *Daley Thompson's Decathlon* for the Spectrum and other 8-bit systems. Even today he sometimes enjoys a bit of joy-pad action with his kids, and he certainly isn't among the ranks of those who blame video gaming for the perceived declining interest in field sports in schools.



Watch for the release of Daley Thompson's World Championship Decathlon in June.

"I don't think it's an either/or thing. I don't see why they can't do both," he says. "Kids are still interested in sports. All the kids I know are interested in sports and computer games. To be honest, I think kids are just interested in anything that gains them a bit of knowledge and that they can do well at fairly quickly. Kids love competition."

While kids might like Daley Thompson's latest game, it isn't likely to require the frantic joystick waggling and button bashing those who grew up with games like *Summer Olympics* might be used to. As Daley points out, emphasis has gone on simulating the real demands of the sport.

"Everybody has to be able to run, jump and throw," he explains. "People's builds and their own physical gifts mean that they're stronger in some areas than others – naturally – that's just the way it is. So, you decide at some point that you're going to work harder on some certain things because they're what you need. So, it's a bit like this.

"Personally, I'd go with the speed and the jumping. I think they're the best things to have in the game too."

Thinking back to Daley's last and most memorable performance, when he struggled against a leg injury to finish fourth in his event at the Seoul Olympics in 1988, we had to ask if injuries would be included as well. "Aha. No, actually, that's one thing there's not. Ask Tom," he says, hailing Fiorini. "Tom, why are there no injuries in the game?"

"I think there is some injury factor in the game," comes the response.

"Well, it doesn't have to be too like real life. It would be horrible to get three quarters through the game and then have to stop, wouldn't it?" concludes Thompson.

Back on the set, and Daley's refusing to pose for the photographer. "Nah. I don't do that sort of thing anymore," he says. The camera starts rolling again and he carries on ploughing through his javelin lines. "Because you get three attempts at it, make sure you don't overstrain your endurance. Remember, the 1500 is next," he instructs his future decathlon gamers. ***(GW)***



The javelin, as seen in this in-game screen shot, is the penultimate event in the decathlon. Waste your energy points here and you might not complete the 1500 meters.

Coming soon...

We will have an exclusive demo of *Daley Thompson's World Championship Decathlon*.



Shot putting requires a strong and balanced athlete. It's in the legs.



High jumping was one of Daley's favourite events. Can you beat 210cm?



The publishers are working on a deal to get Adidas advertising in there.

The golden years...

Here's a quick sweep through Daley Thompson's glory years

1978 **Won Commonwealth Games gold medal at 20 years old.**

1980 **Broke world record and took gold in Moscow.**

1982 **Set new world record, won European Championships in Athens and Commonwealth Games in Brisbane.**

1983 **Gold at World Champs.**

1984 **Gold again in Decathlon at the Los Angeles Olympics. Set new world record.**

1986 **Common-wealth and European golds.**

1988 **Finished fourth in Seoul Olympics.**

1996 **Providing commentary for BBC in Atlanta.**




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Everything you ever

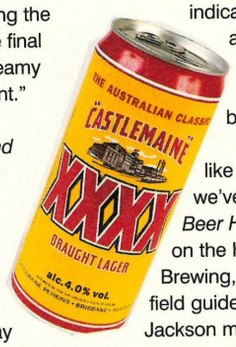
Refill your knowledge on all things alcoholic using the Internet and CD-ROM.

First, a warning. If you're an alcoholic, you may find this feature far too tantalising to read through without going for a bottle. Don't do it. Keep a dry whistle and a clear head. We won't be responsible for the bankruptcy of your humanity. If you must point your Web browser anywhere, make it *The Twelve Steps* Web site by Alcoholics Anonymous. Remember: "No other bankruptcy is like this one. Alcohol, becomes the rapacious creditor, bleeds us of self-sufficiency and all will to resist its demands."

Alcoholics, stop reading. Okay. While there are 12 steps to quitting drink, did you know that there are five steps to pouring a glass of Beamish Stout? or that there are four steps to wine tasting? We gleaned the first fact from the Beamish Web site. Here, you'll be told that Beamish has been brewed in Cork since 1792 and, you can learn to pour the stuff properly. Our favourite step in the process is number five: "When you've mastered the art of serving the perfect Beamish, use the final trickle to 'sign-off' the creamy head of a well-poured pint."

Those not into stout might enjoy Oz (*Food and Drink*) Clarke's four wine tasting steps instead, as presented on the *Microsoft Wine Guide CD-ROM*. One is look, two smell, three taste and four assess. You may be tempted to rename step three 'guzzle' and skip straight to it, but Oz does offer some good tips. For instance, to get a fuller flavour, try holding the wine in your mouth, breathing in over it through your mouth, then exhaling through your nose. Your brain will mix the odour and flavour of the wine, giving you a fuller experience – but don't choke.

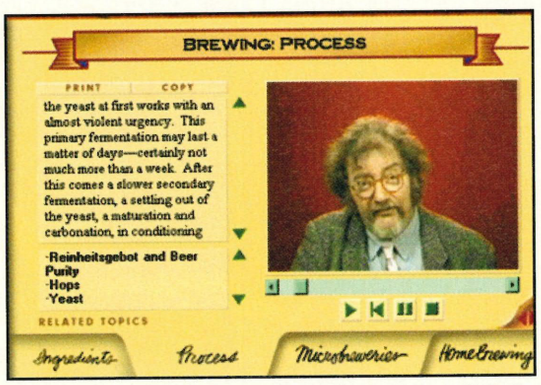
Beyond Oz's explanations of everything from glass shapes to tasting tours, the *Wine Guide* has a massive cross-linked wine database. If you were serving a carrot and coriander salad and wanted to know what three-star French white would support it, the Wine Selector will indicate that a good choice is an Alsatian Tokay-Pinot by Zind-Humbrecht. *Wine Guide* is the classiest booze disc around.



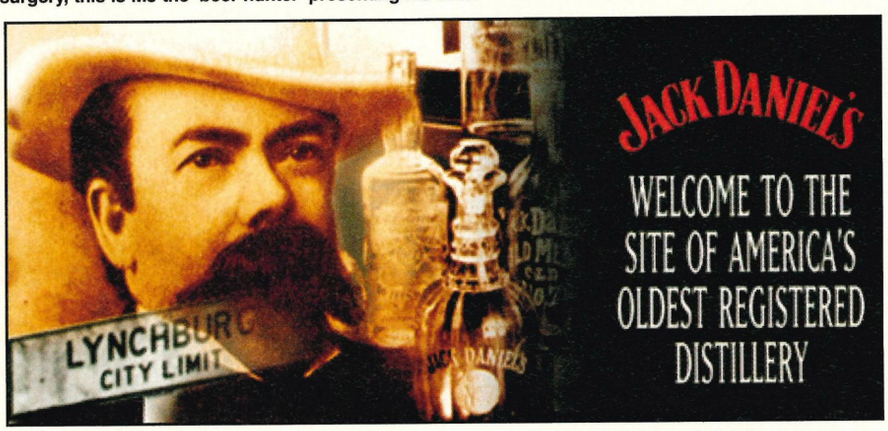
Shame there isn't one like it for beers. The only one we've come across is *The Beer Hunter*. It offers sections on the History and Art of Brewing, plus a brew supper's field guide. Presenter Michael Jackson might be an authoritative writer, but he's poor on screen. A haircut and voice coaching might have been in order. Although the description of the brewing process is reasonable and the history interesting, the field guide only covers the USA. Apparently, a UK version is in the pipes. Let's hope it has more reference material and a more up-beat style.

As beer is such a popular issue nearly everywhere, there's an understandable deluge of brew sites on the Web. One of the best for home brewers is *The Brewery*. "Your ability to judge subtle differences between beers is directly proportional to your degree of hunger. Consequently, all professional tastings should be conducted at 11:30 am to 1 pm. This time period is preferable prior to the dinner hour because the taster is less fatigued," writes pro beer taster Edmund Osterlund in some notes on his profession.

Then, you can proceed to test your hunger by brewing up a keg of Pumpkin Ale (a popular drink of the 1700s), or Hershell Chanukah's



Meet Michael Jackson. No, this is not the foul effect of plastic surgery, this is MJ the 'beer hunter' presenting his disc.



At the Jack Daniels homepage you can take a tour of America's oldest registered distillery, or download the black jack screensaver. Yeeehooohooohaw.

wanted to know about...

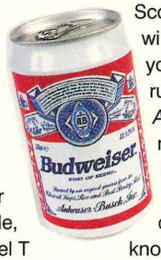
BOOZE

Mulled Athiest Ale. Pale, steamed, smoked, sour, herbal, fruit and brown ales all appear alongside mead, cider and lager. *The Brewery* even invites you to the 1996 Great British Beer Festival to be held at Olympia starting August 6th. Over 400 beers and ciders, plus… pub games. Yes!

The Brewery is pure text with nowt to look at. To remedy this, it offers a link to one of the strangest Web sites there is: *Beer Shots*. Here, you get to see what brews look like under a microscope. Apparently, beer isn't just a golden liquid when eyeballed extremely closely. Samples appear in psychedelic shades of blue, red and yellow.

Did you know that there are five steps to pouring a glass of Beamish Stout the Irish way?

The big breweries have all joined the race to have wacky consumer Web sites. One example is the Guinness site, which is tied in to their 'black and white' advertising campaign. Quotes about fish on bicycles and so on flash up repeatedly, but there's little on the stout itself and the we're-so-witty approach gets irksome. Too clever by a half.



Newcastle Brown is a famous British brew served well on the Net. You can read up on its history, finding that this ale was born in 1927, the year in which the first talkie movie was made, and when Henry Ford closed the Model T line. Broon brewing is explained to some depth and there's even a *Broonale Screensaver*. A Geordy Slang page, though, isn't as funny as it wants to be. Molson, Miller, Labatts and Bud all have okay Web sites as well.

On the other hand there are microbreweries. There's a list of links to sites on this North American fad at *Bubba's Beverage Page*. Look at pictures of fat men with unruly facial hair and big bellies. Read all about smoked oak casks and wort. One site in Japan, even invites you to take a *Virtual Brewery Adventure* in which you swim through brewing in 3D. "Inside the tank, they fly through a vast liquid-filled space that contains a 3D representation of the molecular structure of beer and its components. Each of the elements has a unique sound associated with it." Only in Japan.

Like beer, hard liquor, has a big Net following. One of the best whisky sites has to be *The Malt Whisky File*, a guide to Scotch full of details on distilling traditions in Scotland. You can even enter a draw to win a bottle of malt. To acquaint yourself with collectible samples of rum, vodka and gin, *Dr Cocktail's Apothecary* is worth a visit. A quick read of what he says about the hundreds of liquors he's tasted, and you know he's not only a hard drinker, but in bouts of sobriety knows what he's talking about too.

Radical cocktail seekers might also try *DrunkBoy's* ➤

The Web Intoximeter



"Alcohol is a central nervous system depressant and it is the central nervous system which is the bodily system that is most severely affected by alcohol. The degree to which the central nervous system function is impaired is directly proportional to the concentration of alcohol in the blood."

So, log onto the Intoximeter homepage, enter your weight and how much you've drunk, and it will tell you your blood alcohol level.

FutureNet

Links to all the Web sites mentioned in this article can be found at *PC Review*'s page on FutureNet. That's http//www.futurenet.co.uk

CD REVIEW



Mix a drink with *Virtual Bartender* on our CD-ROM.

Web Sites

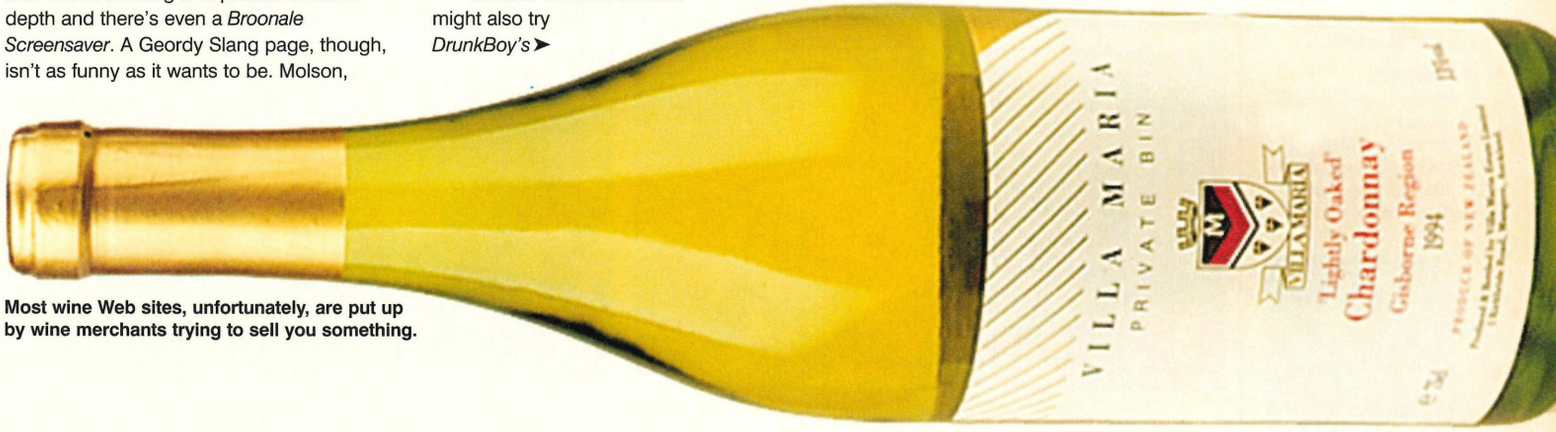
Aardvark Software
http://www.delve.com/aardvark.html

AA
http://www.phoenix.net/~cmarkn/12n12/steps.html

All About Wine
http://www.aawine.com/

Beamish
http://www.aardvark.ie/beamish/

Beer Shots
http://micro.magnet.fsu.edu/beershots/ ➤



Most wine Web sites, unfortunately, are put up by wine merchants trying to sell you something.

The Brewery
http://alpha.rollanet.org/index.html

Bubba's Homepage
http://www.valdosta.peachnet.edu/~mwilliam/BEVERAGE/brewery.html

Budweiser
http://budweiser.com/

Dr Cocktail's Apothecary
http://205.242.69.200/ted/apoth.htm

DrunkBoy's First Virtual Bar
http://www.csh.rit.edu/%7Etward/vrbar.html

Guinness
http://www.guinness.ie/guinness.html

Jack Daniels
http://www.infi.net/jackdaniels/

Labatts
http://www.labatt.com

The Malt Whisky File
http://www.scotweb.co.uk/whisky/maltfile/

Marilyn Merlot
http://wine.com/marilyn/index.html

Miller
http://www.mgdtaproom.com/

Newcastle Brown
http://www.broonale.co.uk/

Stoli Central
http://www.stoli.com/

WebCocktail
http://www.indimension.com/multimedia/drinks/recipes.htm

World Wine Encyclopedia
http://www.winevin.com/wine.html

Newsgroups

alt.alcohol
alt.beer
alt.drunken.bastards
rec.food.drink.beer
uk.food+drink

CD-ROMs

Beer Hunter £19.99 from Astrion on 0181 202 0011

Microsoft Wine Guide £40 from Microsoft on 0345 002000

Other

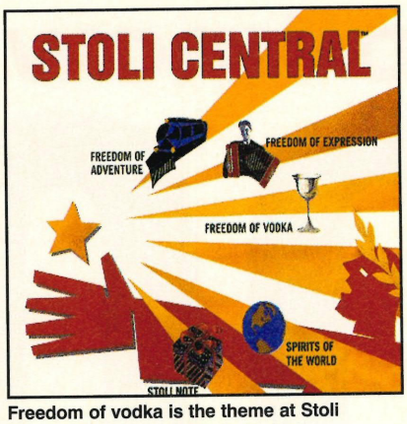
Virtual Bartender full version, $22.95 including P&P from Aardvark Software on 001 703 425 6183. (Eastern Standard Time in the US.)

Uncle Jesse

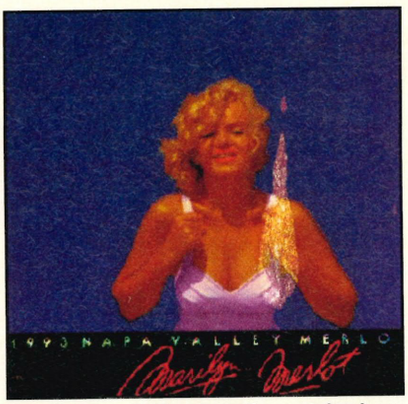
He kept Hazzard juiced in the 30s. Respect.
http://www.ghgcorp.com/ribigoness/hazzard.html



If you need help quitting booze, AA's Twelve Step guide will set you on your way.



Freedom of vodka is the theme at Stoli Central. Try Uncle Bubka's cocktail



Only in sunny California do they get drunk on wine called Marylin Merlot.

Virtual Bar. It gives you the chance to offer your own cocktail recipe, and read hundreds of others. Prairie Fire, for instance, is Tequila with 20 drops of Tabasco sauce. Or, you could try the Tequila Helmet Banger. "You put an helmet on your head and 4cl of tequila in your mouth. You swallow then somebody hits you with a baseball bat on the side of your head." Sounds more like assault with intent.



Far superior to *DrunkBoy*'s silly list is the *Professional Bartender* shareware program, downloadable from the Aardvark Software Web site (and on CD Review this month). Over 200 recipes, all in a database and all print-outable. A full version with 1000 recipes is also available. To a similar quality, but purely on the Web, is *WebCocktail*. Here you even see pictures of the drinks you'll be mixing – so you know what kind of glass to use.

Wine Guide is better than any Web site we've seen on that subject. Most wine sites are run by wine merchants flogging the grog. *All About Wine* is okay but very slow to download. You can read the history of wine, tap into wine databases and take part in Net forums run by wine experts. There are classified ads here too – antique wines and even bottle labels up for sale. *The World Wine Encyclopedia* is very good, with all the information you need on the world's viticultural regions. Very organised.

If you sift through the winery list at *Wine Online* you'll find something really funny: Marilyn Merlot. Yes, Nova Wines of California sells a blend wine named after the actress. "Each vintage features a different image of Marilyn Monroe and a unique label design, making the wine a much sought-after collector's item." We'd drink it.

Because booze is so popular (except in the Arab world) there is a real over-abundance of Web sites and newsgroups paying homage to it. We've sought out some of the best spots for content, but there are plenty more to discover. Things were disappointing on the CD-ROM side, however, with Microsoft offering the only decent option. Next month: animals. Maybe. ***(GW)***

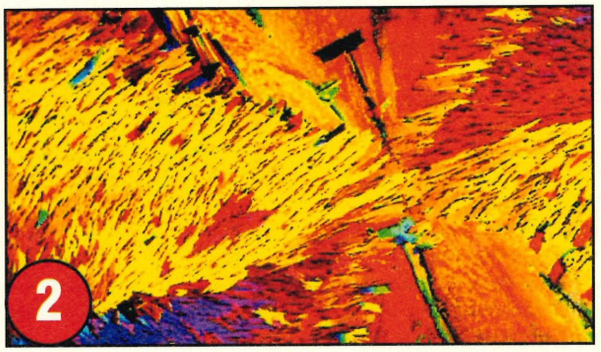
A strange new drinking game... Beer Art?

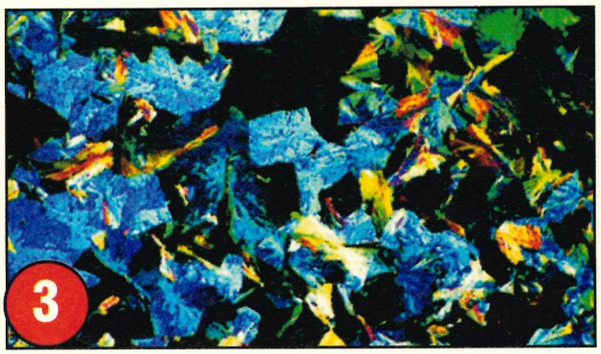
No, this isn't artwork of a mad drunk. These are actually photos of what various beers look like under an optical microscope, care of the *Beer Shots* Web site. Play the PCR Quiz by guessing which beers these are. We've provided hints from the bottle labels below. And here's the catch, each one you get wrong you have to go out and buy, then drink... If you happen to know what they are, you're far too close to your beer.

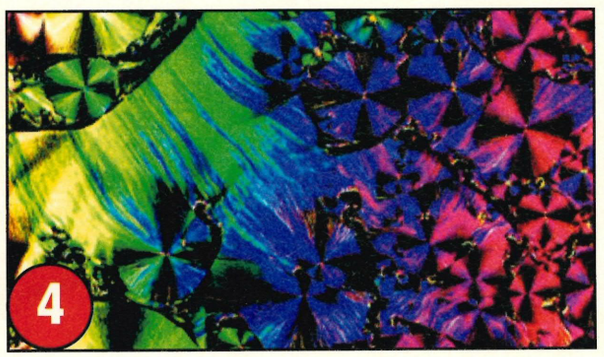
PCR QUIZ

1. Remains non-pastuerised to highlight its fresh taste.
2. The one and only. Clue: it's English. Come on, you must be able to guess this one.
3. The Australian Classic. But which one?
4. Brewed in strict accordance with the Reinheitsgebot – which is some sort of Bavarian brewing code. (That was a clue too.)









Answers: 1. Grolsch, 2. Newcastle Brown, 3. Castlemaine, 4. Becks.

WINDOWS
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Want to check it out? Check the internet: http:/WWW.Segaoa.com/

the SEGA GAME IS NEVER Over.



I make no apology. This month, the previews and news are eclipsed by one game. We've even killed the charts, the Game Design Masterclass and the Six of the Best section. The reason? Quake. Read the feature and find out why.

Normal service will be resumed, as far as possible, next month in our Preview Special, where we'll show you, for the first time, the ten games which are certain to dominate the rest of 1996. Apart from Quake, of course. See you then.

James Binns, Editor
jbinns@futurenet.co.uk

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Budget Bonanza
Over 50 budget games reviewed. And all of them sell for less than £15. What a bargain. See page 78

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QUAKE

The Single Player Experience

While networks around the world succumb to the public test version, James Binns got the chance to try the single player game with Id Software.



Get up and fight, you dog. The Quake deathmatch can really take it out of you!

Excellent. I'm sitting playing *Quake*. Jay Wilbur, Id's business manager, brought me a bottle of Molson Dry half an hour ago. It's unopened and warmed to room temperature. I don't want to drink. I don't want to eat. I just want to play *Quake*. Wonderful *Quake*.

Sure, it's still at alpha stage and yes, almost anything could still change, but this chance to try the single player game gives a clearer picture than ever before of what the finished game is going to be like. The non-player characters are active and brutal, and the maps have all the inspired design that you'd expect from Id.

Jay Wilbur is still hedging his bets, though. "The only thing that's final is the name… that there will be a Q in it." But even the name *Quake* was in jeopardy a few months ago. Some wily German thought he'd get a lead on Id by registering the name *Quake* as a trademark, thereby either making a packet when Id bought the title back, or merely spoiling their efforts. Whatever back room shenanigans and lawyer tomfoolery Id went into paid off. It's still going to be called *Quake*. According to Jay Wilbur, Id had considered calling the sequel *Bu**-*uc****-Mother-*uc****-a**-holes*. Try and trademark that in Germany!

Id is still hedging its bets over what storyline *Quake* will follow – but for all the right reasons. The single player experience, however, offers lots of clues. Some kind of time travelling scenario seems a likely bet. That would explain the bizarre mix of melee and projectile weaponry. Though you're tooled-up with guns, the enemy characters, like the Knight, have hardware such as swords. Jay Wilbur maintains that nothing's hard and fast at this stage.

So, all the time travelling rumours are… ahem… before their time. The plot will be finalised when all the levels are in place. In *Doom*, Wilbur reminded me, "the storyline was still being pieced together 15-20 minutes before the game went into circulation!"

Hand to hand combat?

What aspects of the game do you want to know about first then, eh? Weaponry? Level design? Enemy design? Possible sequels? Let's start with the weapons. As *Quake* was originally intended to be more of a close combat melee experience, there



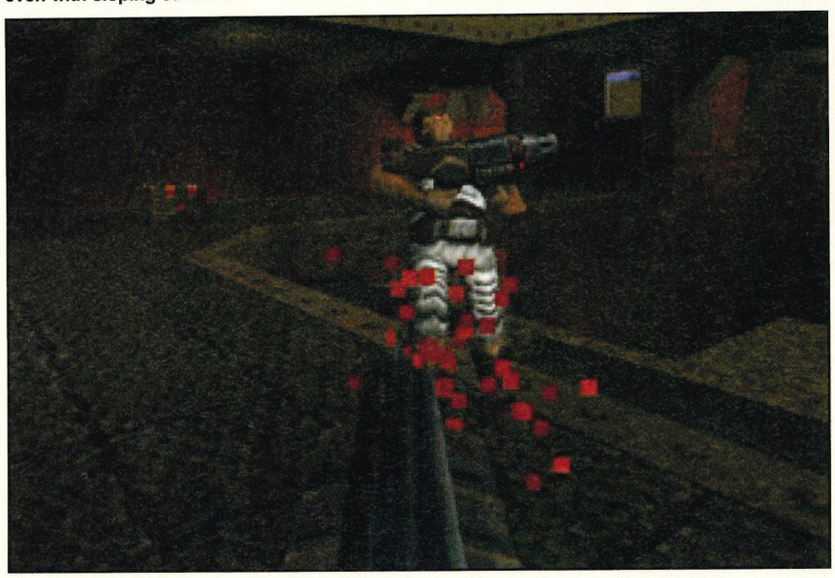
The Quake engine allows sophisticated levels, even with sloping surfaces.



A temple building deep underground. Check out those curves on the archway. Phwoah!



The Ogre has a lot of teeth and bloody claws. That's your blood that is.



Shooting any character – whether in a network or single player – game throws them backwards, the impact causeing their polygonal bodies to flail convincingly.



This demon can leap from a huge distance and pounce on you. He's fast and deadly.

Water fact

While the public test version of *Quake* gives you unlimited time underwater, in the full version you start choking and gasping after only a few seconds. Stay under too long and your as good as dead.

WADs are dead

The term WAD is the widely used name for the information file that makes up *Doom* and *Heretic* levels. Id are now ditching that name and will be going for the term PAK (probably).

No more Automaps

Id has no plans to include automapping facilities in Quake. So order in some graph paper now.

The level designer

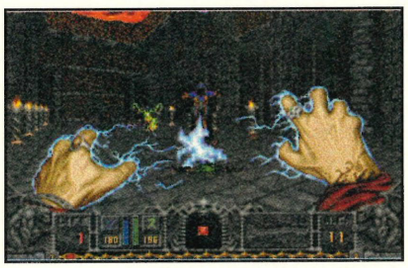
Though it was widely thought that Id would launch their own level designer for Quake, they are planning to release the spec and leave creating an actual editor to the coders of the world.

was much chewing of the cud on whether it would feature some kind of radical close-in weapon-handling ability, like being able to aim your weapon at a specific body part, such as a Knight's sword arm. The concern was that if everything was swinging then you'd be stuck with top-right-to-bottom-left motions. The hope was that you could aim your attack, waving a sword using the mouse as your control mechanism. Similarly, you'd be able to block an opponent's attack by swinging at his weapon, the result being a sword on sword clang. Comparisons with the on-off *Doom* chainsaw were inevitable – what players always wanted to do with that was carve up specific anatomical areas. The version of *Quake* I saw had single key presses for all the weaponry on offer. The close combat weapons are kept as simple as possible. Run in and hammer the key. No more than that.

The weapons selection was similar to the test version with the shotgun, super shotgun, nailgun, chain nailgun, grenade launcher and rocket launcher. No changes there. Typing in the God cheat brought into my inventory a lightning gun and a chain lightning gun. No such luck though as they hadn't been enabled in the game yet. The Shambler monster throws out lightning bolts so there's a good chance the weapon will behave like that. The gun barrel rendering at the base of the screen was similar, but expect major improvements here. Also, while there's no punch or kick option when you run out of ammo, Jay Wilbur suggested that they would be including a butt slam, whereby you could hit an enemy with the stock of a firearm.

Ow ow ow

The level design is coming along stormingly. A favourite level barked about by Internet chatterers, that may or may not have ever existed, was a huge room rotating on a horizontal axis, so you'd end up standing on the ceiling. Wilbur suggested that such a room was just a rumour. But, with the game's open-ended architecture, there'll no doubt be one posted on the Net within hours of the game's release. What I saw was more of the dark, brooding architecture anyone who's already played the public test version will be used to. They're definitely out to create a healthy respect for lava as there was no end of sudden hot-around-the-collar death sequences for me to deal with. There was shallow lava which I could sometimes make it across by running. The current burning feet sound (a sort of 'ow ow ow') is likely to be changed. The model *Doom* players will already be used to, of triggering doors via invisible trip wires, looks like it's back. Just like in the test version, in the single player version all the maps are truly three dimensional, with over and under passages and walkways.



These hands could be let loose on the Quake engine – if Raven extend the Heretic series.

To give you a feel for the first few seconds of a level, here's one I played. It begins in a narrow corridor. Ahead of you, there's a pile of power-ups and ammo. Running forwards, the platform which the artifacts are resting on suddenly drops out of sight. But, you've triggered the doors on either side of the corridor. As they slide away the path you've just taken is flooded with Zombies. Entering the level with just a shotgun (worthless against the undead – more of this in a moment) you're now at a fork. Taking the left there's a right and a leap across some lava to pick up a grenade launcher. Retracing your steps the grenades make mince meat of the zombies.

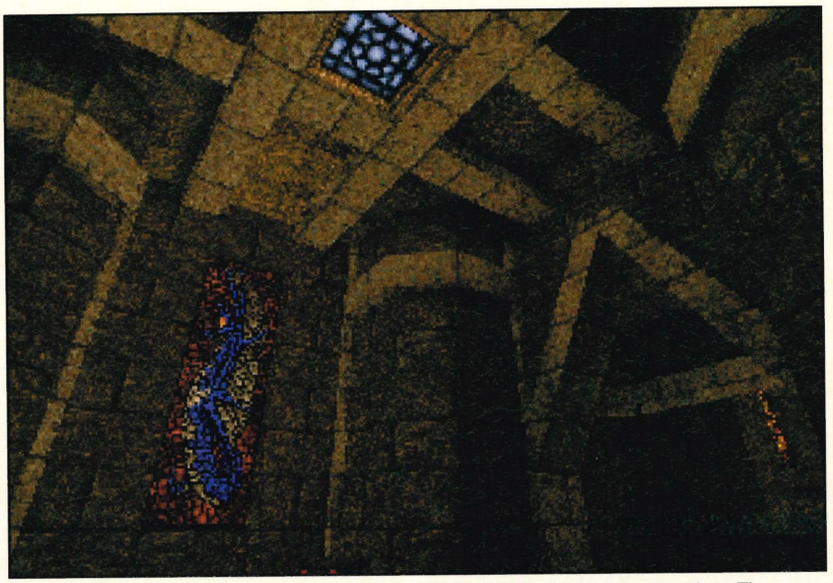
In one of their side rooms, you find a switch. Pushing this opens the right hand fork. Picking up a box of rockets and taking the newly opened route you find a narrow, winding stairway into a room with a square lava pit over which sits an obelisk. Sidestepping the lava you head to a lift at the back of the room. Stepping on it triggers the platform which takes you upwards at

What Now?

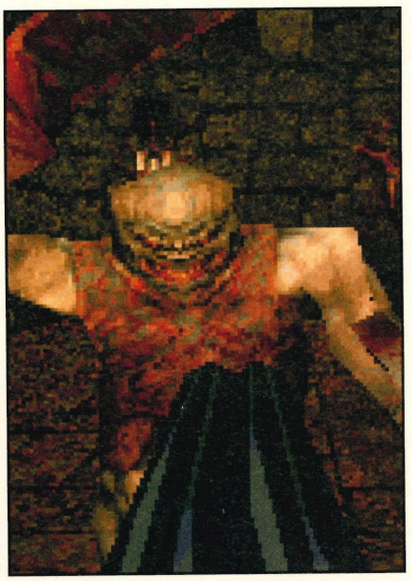
Be patient. The final game is coming and as soon as we have a release date we'll let you know. Then we'll be bringing you the definitive review of the finished game. *CD Review* will definitely feature the multi-level shareware demo, and our Play To Win section will have a strategy guide.

In the meantime the Quake Public test is available from us, *PC Review*. You can visit the *PC Review* home page on FutureNet (www.futurenet.co.uk) and download the Public Test zip file QTEST1.ZIP. Alternatively, find a friend with a modem and get them to zip it up on some floppy disks for you. It's less than 5Mb compressed and freely distributable.

The finished game will be ready when Id finish it and sold through GTi.



There may be stained glass windows in Quake, but don't expect too many churches. The crucified figures on many walls and 'Jesus buttons' are far from Christian.



The Ogre's vest gets stained red. Punishment for looking at you in a funny way.



The colour of the Knight's armour can vary. Here we see a fetching red with green.



Knocking a dragon out of the air should be easy. But, not when he's spitting fire at you. These graceful creations mean that you have no choice but to point your weaponry skywards.

speed, popping you out onto a roof where a Wizard is waiting. You hold your ground for a second, flinging pipe bombs at his floating form. But you should have switched back to the shot gun – the grenades simply fall through the ceiling, never reaching him. He swells up and throws an energy orb at you. You turn to run round a corner, but the orb follows, thudding into your back, tossing your lifeless form into the room below. Dead.



Body parts

The hacks, on the Internet within 24 hours of the public test release, gave the world a sneak look at the enemy characters. But they were hardly ready for public consumption. The non-player characters I saw in the single player version were much the same as those revealed by the hacks. Slick, detailed polygonal models including a flying Dragon, a Demon who leaps on you, an Ogre waving a chainsaw and a nail gun, knights with swords, a yeti-type Shambler, and the morphing Tar Baby. New to the game, though, are the Zombies. These characters, not revealed in the public test, are half-decomposed carcasses with flesh hanging off of them. Shotgun blasts aren't enough to kill them. These merely stun them and knock them off their feet. They really need to be blown to bits with rockets or grenades. Coming at you, as Jay Wilbur explains, "they give you a piece of their mind… and their ass," ripping off body chunks and throwing them at you.

Also not revealed in the public test are the Dogs – canine chums making a welcome return from the old days of *Wolfenstein*.

There were rumours that you would be able to control aliens and beasties as well as the standard big bloke with a gun. While Wilbur doesn't rule out users designing versions where this could happen, it won't be a feature of the regular finished game.

Particularly in it's early days, *Quake* was surrounded by rumours of the abilities of a god character that users could play. Such scandalous reports were fuelled by evidence that the game was originally going to be a Nordic God extravaganza – with Valhalla-esque characters and lots of hammers. The buzz was that the god character could change the environment during a game, being able to edit maps while live action was taking place. Wilbur rules out the possibility of a dungeon master-type character. You won't be able to alter the physical structure of a level. But that still leaves a massive grey area. There's still plenty a God character could control. You could spawn monsters, freeze characters and much more. But that was neither confirmed nor denied.

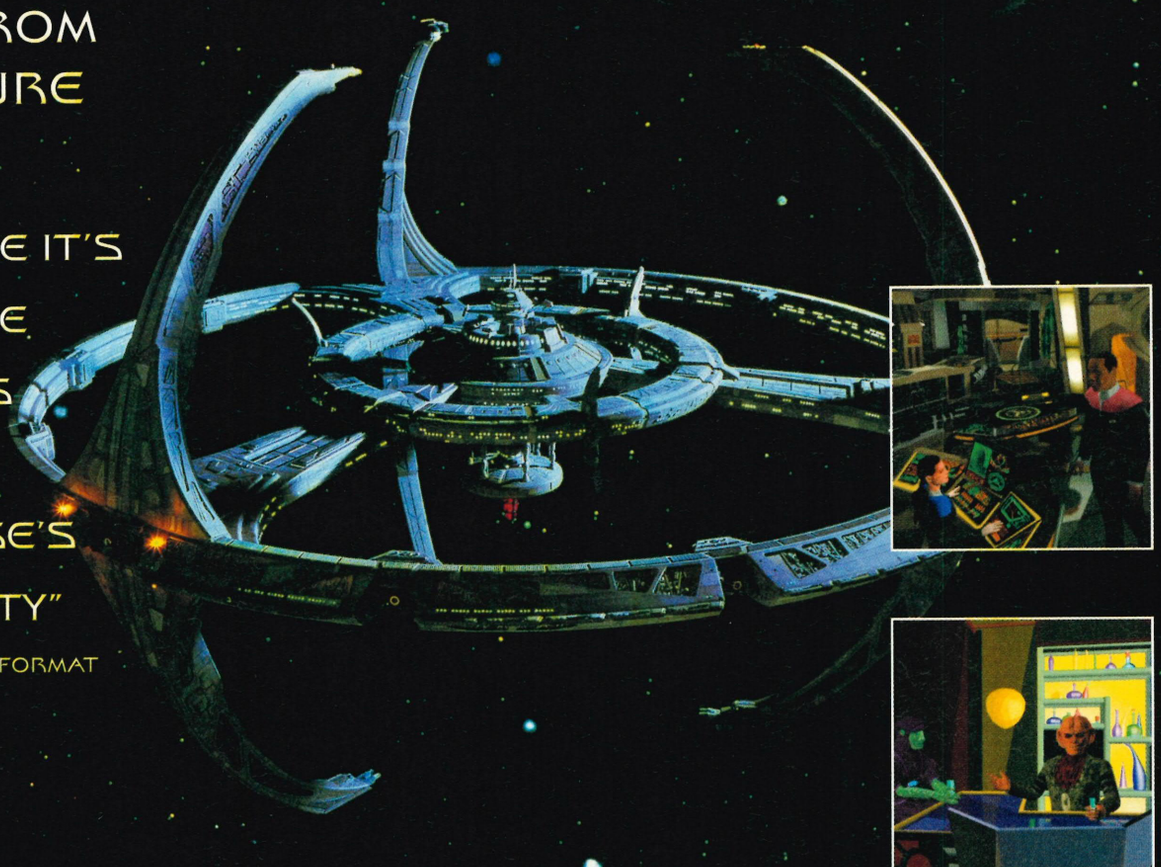
The next game

Of course, when dragged from the console and forced into the real world of warm beer, I wanted to know about the games to follow. Predictably enough, plenty of companies will want a slice of the *Quake* engine. Relatively few got a slice of the *Doom* apple, and Wilbur even had a voice mail message directed at anyone wanting to license the technology: "Forget it." A few did get a piece of the action, though, with Raven's *Heretic* and *Hexen* being the most notable examples. Less known is a game called *Strife* (a demo of which is on *CD Review* this month). Tim Willits a designer of *Strife*, who started out making *Doom* WADs, has been drafted into the gang to help design the *Quake* levels. Anyway, back to licensing. Pound will get you a penny the first licensed *Quake* engine will go to *Raven* to extend the *Heretic* franchise. Melee weapons, but almost certainly no hammers. If you're holding your breath for *Doom 3* with a *Quake* engine, then you better get an iron lung.

Rumours that *Quake* will be out in June are premature. It'll be ready when it's finished, okay? Id is under no pressure to finish the game. While every hour you wait for *Quake* seems like a decade, remember this: it'll all be worth it. I've played it and it's excellent. ***(JB)***

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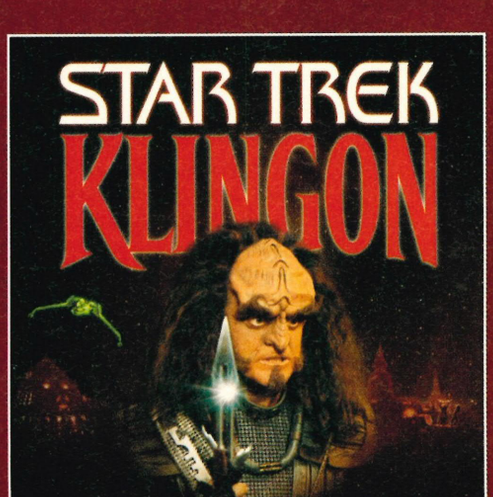
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Going to Wem-bel-ee... The twin towers staggeringly rendered for the Intro sequences.



Gremlin used a real life architectural expert to help come up with 3D renderings of all the biggest football grounds in Britain.

Euro-paen

Actua Soccer Euro '96 Edition: in progress

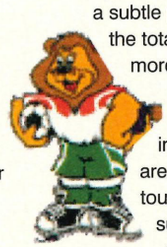
The past has seen many footy collectibles. The high tech 90s, however, brings a game replicating a whole tournament...

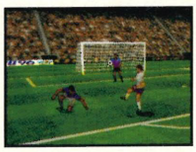
If the significance of the 1996 European Championships hasn't hit you yet, don't worry, it will. And the hype surrounding it is certain to mushroom. Euro '96 is the biggest sporting event to take place in this country since 1966 and all that. For the England football team, it is the first time the press have talked with any seriousness about getting some silverware since Booby Moore was accused of stealing jewellery during the 1970 World Cup in Mexico. Blanket TV coverage is planned and the likes of Schmeichal, Bergkamp and Brolin will ply their trade on British grounds for the first time in... a month. You'll be able to buy t-shirts, mugs, videos and books, but nothing will capture the event quite as well as the specifically customised version of *Actua Soccer* that Gremlin is to release.

This is *Euro '96*. And it'll be out a month before the competition starts. Such is the replication of the real event, you'd do well to buy the game, play it through to completion, then nip down to the bookies to slap a tenner on whoever is revealed as the future champions.

The emphasis is on simulation rather than arcade. Everything is tailored so that you can experience the tournament first hand: 16 teams split into four groups, with eight qualifying for the knockout stage, and the teams are based on their real-life European counterparts with all of their real strengths and weaknesses. The Dutch have a subtle passing game based around the total football of Ajax, Scotland are more direct, and the Germans have ruthless efficiency on their side. With the improved artificial intelligence these characteristics are carried through the tournament, and injuries, suspensions and disciplinary points are all included. As Steve McKevitt, Gremlin's PR Manager, explained to us in the *PC Review* office, "It's not necessarily the best team that will win, but the squad with the strongest depth".







Players get up from sliding tackles much faster in Euro 96.



You'll be able to aim the ball better from corner kicks.



A nice overhead cam shot of the keeper preparing for a kick.



We can't tell from the press box, but this could be a booking.



Goal celebrations are now more varied, unlike in Actua.



Keeps cuts out a low ball and get's down on it to make sure.



A slinky midfielder tries to slip a ball through to the striker in a beta version of the game Gremlin recently revealed to us.



The artificial intelligence of the defenders mean they mark forwards realistically.



The Croatians look like hot outsiders, if you're the betting type.

WIREPLAY

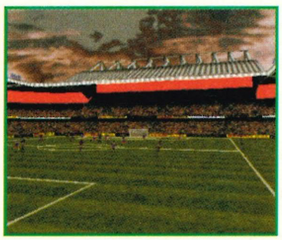
Euro '96 will be the game to help launch BT's Wireplay, a new games network enabling PC owners to play multiplayer games with anyone, anywhere at any time over the telephone. Wireplay will make it easy to locate games players from all over the country, and groups of PC owners playing *Euro '96* will be able to set up tournaments. Alternatively, up to 20 players will be able to play in the same match, each controlling a player.

With BT being the official telecom supplier to the tournament and Gremlin having the *Euro '96* licence, both parties are sure to benefit from the deal and as Mark Mattocks, Gremlin's Marketing Manager, commented "Put simply, *Euro '96* is the ideal game for the Wireplay launch".

Next Month

We'll be bringing you the full review and in July, the world exclusive demo.

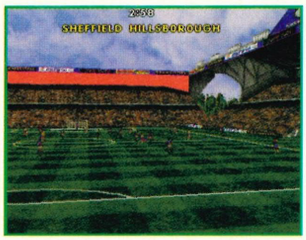
A PERFECT GROUNDING



Old Trafford. Hell.



Will there be singing fon the Kop?



Hillsborough's a Euro venue.

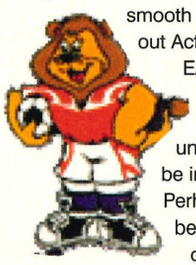


Looks like Villa Park to us.

There are eight venues for the 1996 European Championships, and all have been specially detailed by Gremlin to give added realism to the game. The eight – Villa Park, Anfield, Old Trafford, Elland Road, Hillsborough, City Ground, St James' Park and Wembley – all are replicated as you can see in these screenshots from the Beta version.

Barry Davies has once again done the honours on the mic with all the commentary heavily researched to ensure continuity with the tournament, so even though he did the recording months ago, Fowler and Southgate, Cantona and Ginola, will all get name-checks throughout should they secure late places in their respective squads.

One thing that hasn't changed radically, is the superb footy experience which *Actua Soccer* provides. *Actua* blew away the notion that great graphics and brilliant gameplay go together like Paul Gascoigne and referees.



Despite looking the best soccer game ever, it somehow also managed to be one of the most playable. Technically assured, the game speed was spot-on and full of subtle playability.

More than anything though, it was the smooth animation of players which singled out Actua's greatness. Surpassing even EA's Virtual Stadium. The motion captured data, detailed 3D models and multiple camera angles gave a unique feel. One which surely couldn't be improved on so soon?

Perhaps not radically, but it's certainly been tweaked. An extra four man-years of effort have resulted in what Gremlin is calling a True 3D engine – one which considers gravity and inertia with more relevance. New player models and double the number of motion captures have been included so that celebrations and hands-on-knee-I'm-knackered expressions are now seen. Klinsman dives have not been included, however…

As a living, running, kicking, tackling momento of Euro '96, this could well be the essential sports sim of 1996. It won't include large groups of Dutch fans roaming the streets of Birmingham, or drunken Scotsmen packing out the pubs in London, but it will have the football. And best of all it'll be available a month before the real thing. ***(RP)***

Developer: Gremlin

Publisher: Gremlin

Contact: 0114 2753423

Expected Price: £39.99

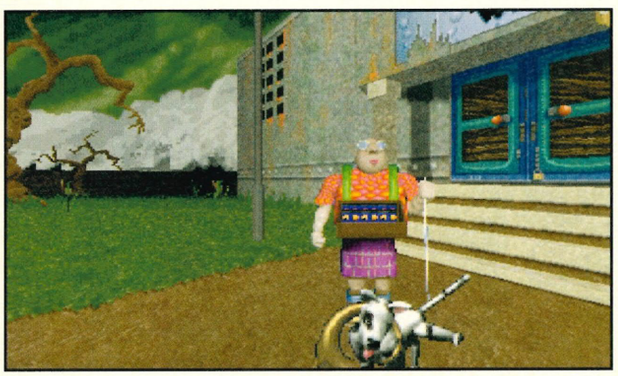
Expected Release: May

Gremlin's latest tour de force takes the point and click adventure into new graphical and intellectual dimensions.



Despite the name of the game, not everyone living in Neutropolis is normal. Especially not this mad bloke.

NORMALITY



The match-stick seller isn't blind – only colour blind. Give him a book and he'll hand over some matches. Handy for starting fires...



Hard boiled. Norm 2742 on duty guarding the shopping mall. Can Kent outwit him?

Developer: Gremlin

Publisher: Gremlin

Contact: 0114 275 3423

Price: £44.99

Minimum system: 486DX2/66, 8MB RAM, double speed CD drive, mouse

Kent isn't very pleased. Considering that he's just spent seven days locked in a cell, subjected to non-stop elevator muzak for the heinous crime of whistling a happy tune, perhaps that's not surprising.

Kent's problem is that he lives in Neutropolis, a vast city in the grip of a regime that enforces 'normality' as the highest social virtue. Ever since Saul, one of the city's twin founders, disappeared 30 years ago and his brother Paul took complete control, life in the once great city has become a dull, grey grind. The sun has been hidden by a sooty smog for so long that a whole generation doesn't even know it exists, whilst the ever-vigilant NormTroopers patrol the streets, always on the lookout for any signs of individuality or non-conformity. Wrong-doers like Kent are clamped down upon – harshly.

A careful balance is struck between character interaction, exploration and puzzle solving.

Rough justice

So now our hero finds himself confined to his apartment, with a Norm guarding the door and listening to ensure that his TV remains on 24 hours a day for the next week, just to make sure he's learned his lesson. The only ray of hope in this dreary picture is the mysterious note that was pushed into his cell, claiming that he is not alone in his desire for something different, and he should apply for a job at the furniture factory to find out more.

From this point on Kent's fate, and that of the whole city, lies in your hands. In *Normality* you must guide Kent, firstly to finding out the truth behind the facade of normality that pervades the city, and then in an attempt to save the entire population from Paul Nestalux's nefarious plans.

The first thing you notice about Normality is the presentation. Right from the start of the intro animation – a cleverly done *Bladerunner* pastiche, complete with voice-over by Kent – the whole game oozes polish. It's not until you find yourself in Kent's apartment, though, that you realise just how impressive Normality looks and sounds.

Rather than using the traditional side-on view popularised by the graphic adventures of LucasArts and Sierra, *Normality* is played in stunning first-person 3D. The engine is fast and smooth, but it's the attention to detail that really makes a good idea into a great one. Coupled with good effects and seemingly limitless digitised speech, this creates a unique and absorbing atmosphere. Where LucasArts' *Sam & Max* felt like watching a cartoon, *Normality* feels like being in one, and it's got a lot more pace than your average adventure too.

The Voodoo Doll

Normality has simple controls. When it comes to interacting with the environment, right-clicking on an object brings up this miniature version of Kent, with which you decide his actions...

Dazzling smile
Clicking on Kent's excessively white teeth tells him to start a conversation with the selected person, and gives you a list of responses to choose from.

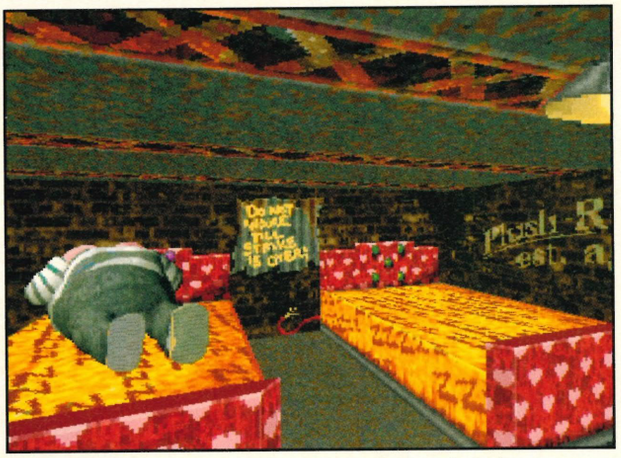
Shades
Flicking up Kent's shades lets him take a closer look at something, often providing you with useful information and even the odd clue.



Fist
The most general purpose option, this allows Kent to pull levers, flick switches and perform several more bizarre activities, depending on the object selected.

Hungry, Fella?
Perhaps strangest of all, rather than ordering Kent to eat something, clicking on the doll's stomach tells him to open things – doors, for the most part.

Crane
The carnival crane lets Kent pick up an object. If you decide to keep it, simply clicking on the backpack in the top right of the screen stores it in the inventory.



The fat furniture tester is caught by the bed's sleep-inducing emissions. Kent must activate the other bed to knock out a guard.



They hardly look like a revolutionary movement, but these guys are your only friends in the city. Kent must earn their trust.

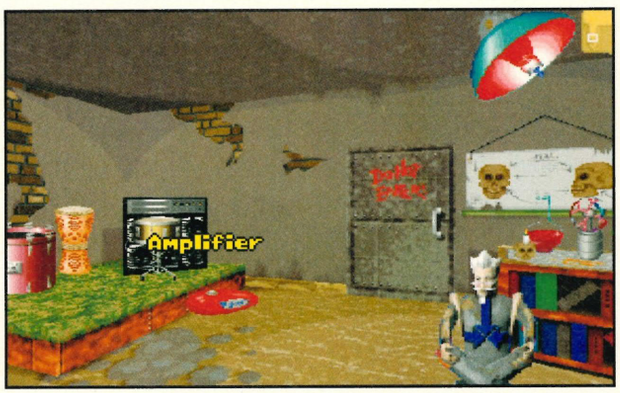




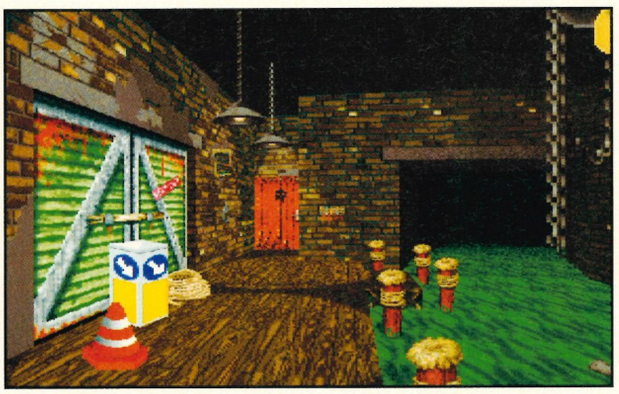


Motion Capture Mayhem

As well as the lovingly detailed in-game graphics, Normality is absolutely packed with animated cut scenes, nearly all of which use jolly clever motion capture techniques. Here is a small selection from the hundred or so on offer. Great.



Little details like cracked plastering, graffiti everywhere, flies in the toilets and strange lighting make Normality that extra bit interesting.



The river is so polluted in Neutropolis that it runs green. An errant traffic cone and a bollard may indicate the proximity of students.

Of course, all this visual splendour would be for nothing without a good game backing it up. Luckily, *Normality* lives up to its potential. Despite the 3D view, at it's core this is a traditional point-and-click adventure, and a good one at that. The plot develops well, rapidly expanding from the obvious to the convoluted, and the gameplay matches this development at a sensible pace. A careful balance is struck between character interaction, exploration, and puzzle solving, while the unique setting and twists and turns of the story keep you involved in the action.

Pay attention to what works

It's obvious that the developers have played a lot of graphic adventures, and have paid attention to what works and what doesn't. *Normality* is happily free of many of the bug-bears of the graphic adventure format, such as impossible-to-spot objects and awkward, pixel-perfect manoeuvres.

Unfortunately, it's not without some problems. The graphics, while always good, aren't as consistent as they might be, giving the impression that the design of some areas was a little rushed. Several of the puzzles, especially the later ones, require more than a little bit of lateral thought, and this isn't helped by the often bizarre nature of the settings.

Finally, your enjoyment of the game will depend on your sense of humour. Making computer games funny has always proved tough, and the character of Kent, although initially amusing, can quickly begin to pall. His smart comments become more than a little annoying after a while.

Potentially dubious humour and minor niggles aside, though, *Normality* is still an excellent game. The original setting, huge play area (over 120 locations) and clever mix of plot and puzzles would be more than enough to make this stand out from the crowd, but coupling them with the superb presentation and innovative use of 3D results makes *Normality* one of the best graphic adventures around. *(AB)*

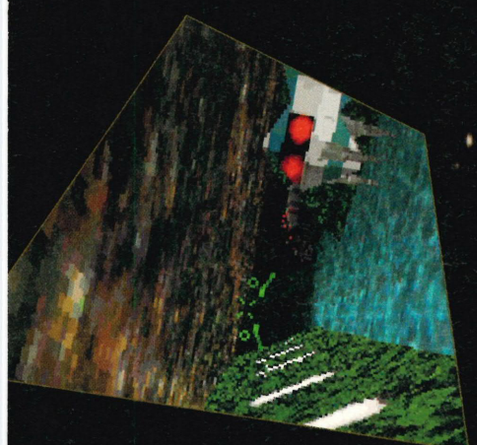
PCR VERDICT

The first real challenge to LucasArts' point-and-click adventure dominance in a long, long time.

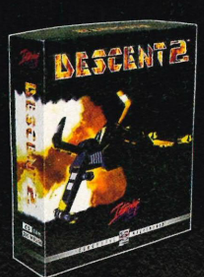
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DESCENT 2

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Well, it's none other than the skeletal swordsman.

CD REVIEW

Sharpen your sword with the demo on our CD-ROM.



This giant white snake is not going to let you by. So you'll have to introduce it to some of your heavy metal.



Knights in bulky suits of armour, plain dress and more than likely some white satin too.



Fans of the theory that Camelot is in fact in Cornwall will be glad to see the other classic Cornish legend smuggled in here as well.



All good knights must attend the chapel at some time. It plays important role in this game so prepare to dirty your knees.



One way to impress Arthur would be to get the Mr Sheen out and give this a bit of polish. The Round Table in all its glory.

CHRONICLES OF THE SWORD

They say the pen is mightier than the sword, they've obviously never been stabbed by one

Chronicles of the Sword is an adventure based on the Arthurian legends, so naturally the setting of the game is the England of yore. While, most of us would look for a *Monty Python and the Holy Grail* type of romp, Psygnosis has opted for a more serious approach, taking in plenty of characters and stories from the legends of our past.

Starting off as the esteemed Gawain, you're about to join the Knights of the Round Table. Yes, really, the Round Table. Your job is to stop the evil Morgana from destroying Camelot. A simple enough job, but Morgana just happens to be the King's sister and she's got magical powers to boot. The plot thickens as you go on, with different characters moving in and out of the game, but all leaving their impact.

You're about to join the knights of the Round Table. Yes, really...

That's one of the beauties of *Chronicles of the Sword*. The plot develops around you and you can never be too sure just who is on your side, giving you good advice, and who's getting ready to insert his dagger firmly between your vertebrae. The complexity of the plot aside, there is a lot more on offer in *Chronicles*. It's a huge sprawling adventure with many tasks to be done on the path to completing your overall quest. These missions make you feel that you are constantly making progress, rather than just solving puzzle after puzzle until you reach the last big mother of all puzzles at the end. This is a much more satisfying way of playing.

The plot, characters and quests are all wrapped up in some of the most gorgeous graphics ever seen in an adventure of this quality. As you can see from the screenshots on this page, the rendered scenes and large polygonal characters might make the game appear to be lifelike and exciting. Or so you would hope. They are also the only real drawback in the game. Their movement is a little too sluggish and the animation leaves a great deal to be desired.

This restriction of movement makes it look a lot less realistic but, this is more than made up for with the depth of the game. It doesn't feel as interactive as many other adventures but sticking with it is rewarding.

Chronicles of the Sword is an absolute must for anyone with more than a fleeting interest in the Arthurian legends. It's well researched and you'll find a lot of familiar names and ideas in here. While some more experienced adventurers may be put off by the sluggishness of the thing, and the fact that it requires a fairly hefty machine to run to its full potential, this is still a thoroughly enjoyable adventure. Not quite a classic but getting very close to it. ***(LE)***

PCR VERDICT

A challenging adventure that falls short of being a classic because of its slow graphics.

8

Developer: Synthetic Dimensions

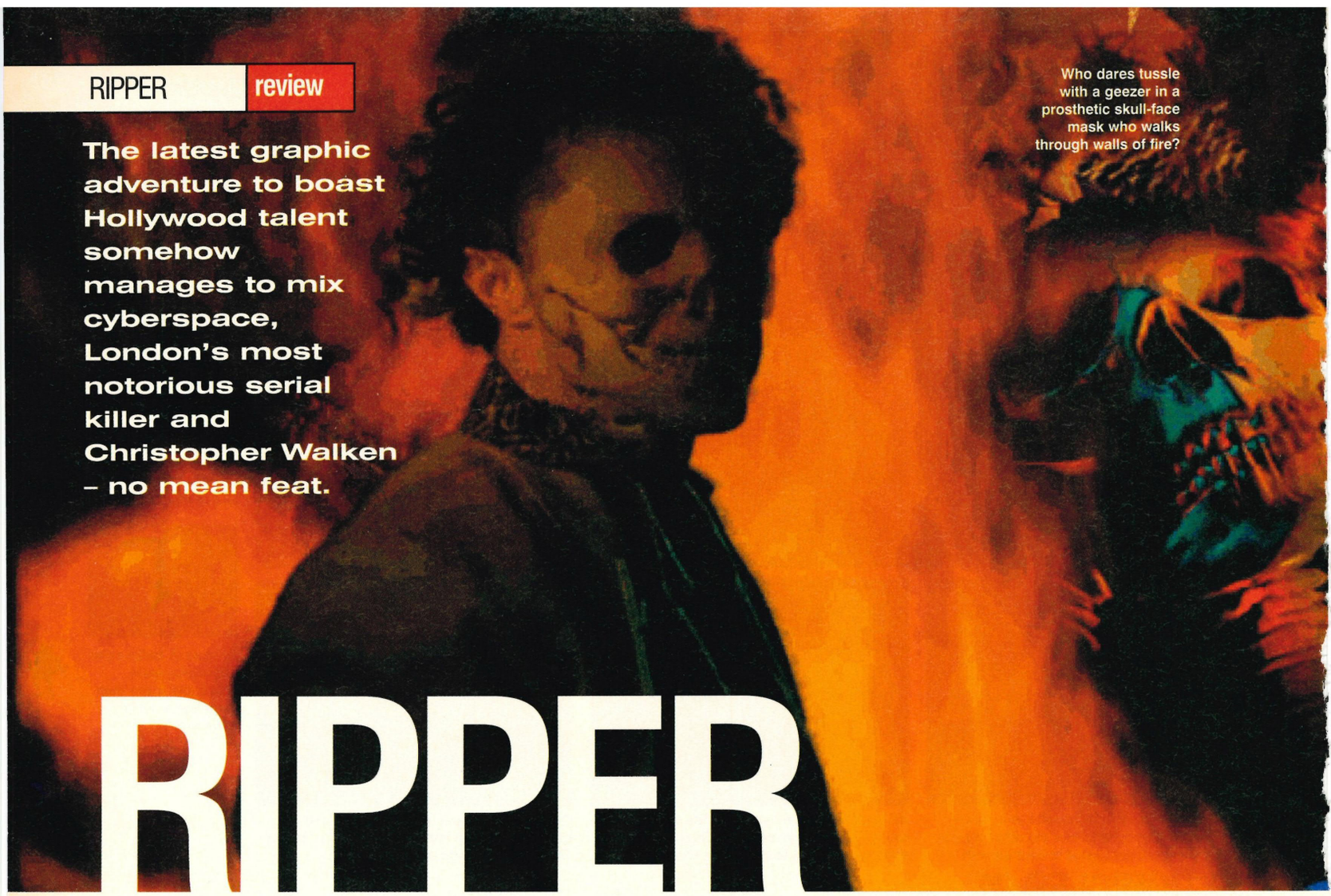
Publisher: Psygnosis

Contact: 0151 2823000

Price: £40

Minimum System: Pentium 75, 8Mb Ram, double speed CD drive, 10 Mb hard disk, SVGA

The latest graphic adventure to boast Hollywood talent somehow manages to mix cyberspace, London's most notorious serial killer and Christopher Walken – no mean feat.



Who dares tussle with a geezer in a prosthetic skull-face mask who walks through walls of fire?

RIPPER

An adventure game which disregards all the warnings against entering the interactive movie territory while combining a Jack-The-Ripper-in-future-America plot with cyberspace gadgetry must have a death wish. Either that or a very deep and wide bag of tricks. *Ripper*, while never pulling off the coup it so obviously wants to, is very much in the latter category. We may be back in movie-wannabe territory, but it rarely looks or feels this good.

In essence, what we have here is a first-person graphic adventure, all clever camera tilts to suggest head movement and ultra-detailed rendered environments so dark you'll be squinting to make out the detail even with the brightness up. Movement through the SVGA depicted locations is smooth and even has subtle speed variances to give the impression of our hero bursting through a door or creeping with hesitation. This is a major render-fest and no mistake. Fleshing out all the moodiness we have a few interesting additions, most notably the extra sequences where we see our main geezer playing out scenes with other characters – be they prompted by key events or part of a multiple-choice conversation system. The different resolutions and sudden introduction of 3rd person camera dynamics prevent a gelling, but the environments in both view types match well, and the effect isn't too disorientating. Besides, it's kind of a relief to know the character you're playing is really human, rather than just a bland pair of virtual eyes.

Ripper is an adventure, and to this end it includes a number of twists and plenty of puzzles. Many of these are part of the story, as with any adventure, but the others are rather stranger, less connected affairs. Attempting to operate a coin-dispensing gadget to open a cash register or discover the significance of changing the times on three clocks recalls the tests of *7th Guest* and *11th Hour*. As with those games, these mindbenders are too contrived to blend in with the adventure, though some will find them wonderfully challenging. Whatever, it's the actual plot which seals *Ripper*'s fate. For once the application of cinematic aesthetics really does make a difference.

Satisfaction for film buffs

The future detective noir has been done before – in the appalling *Hell*, for one – but this time there's a rhythm and structure to the story which will satisfy both movie fans and adventure gamers. In the New York of 2040, the Ripper seems to have been resurrected by someone's cyberspace gear. Victims die at the hands of an invisible killer capable of wounding with supreme precision, with countless simultaneously inflicted cuts. In the guise of unfortunately coiffured reporter Jack Quinlan, players are left in no doubt that these murders are not the work of an old fashioned serial killer, whatever the name might suggest.

And so players get to flip between grimy New York streets and psychedelic cyberspace, gathering clues and gradually discovering the link between the virtual killer and a band of one-time cyber pioneers. Indeed, the game actually contains four possible killers – complete it, and you can go back and follow the trail elsewhere. The cyberspace sequences are particularly well handled, all *Lawnmower Man* visuals and uneasy atmosphere. Even in the real world, there's a strong feeling of plausibility, which is jazzed up by a soundtrack featuring smart ambiance and the classic *Don't Fear The Reaper* by the Blue Oyster Cult.

Big name credits

Then there's the cast. Outdoing even the *Wing Commander* games, *Ripper* has the likes of Karen Allen and the ubiquitous John Rhys Davies (both from the Indiana Jones films), and Burgess Meredith (the *Rocky* movies and the *Batman* TV series) all supporting the heavyweight hamming of Christopher Walken. Camera work is good, the lines are sharp (and peppered with strong language), and the special effects create several totally sick gore scenes rather well. But it's our lead who really shines. In the role of shady cop, Magnotta, Walken overacts so brilliantly he threatens to burst out of the confines of the game at any moment – either that or re-do his classic pocket-watch speech from *Pulp Fiction*. No-one puts so much humour into menacing roles as Walken, and his ironic style suits video gaming to a tee.

Yet *Ripper* does have shortcomings. This may be a mammoth six CD blast with

Developer: Take 2

Publisher: Gametek

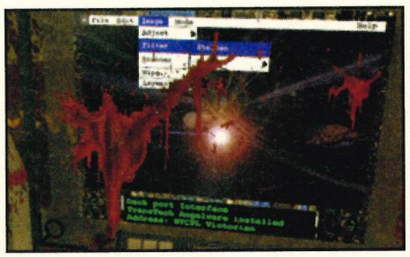
Contact: 01753 553445

Price: £49.99

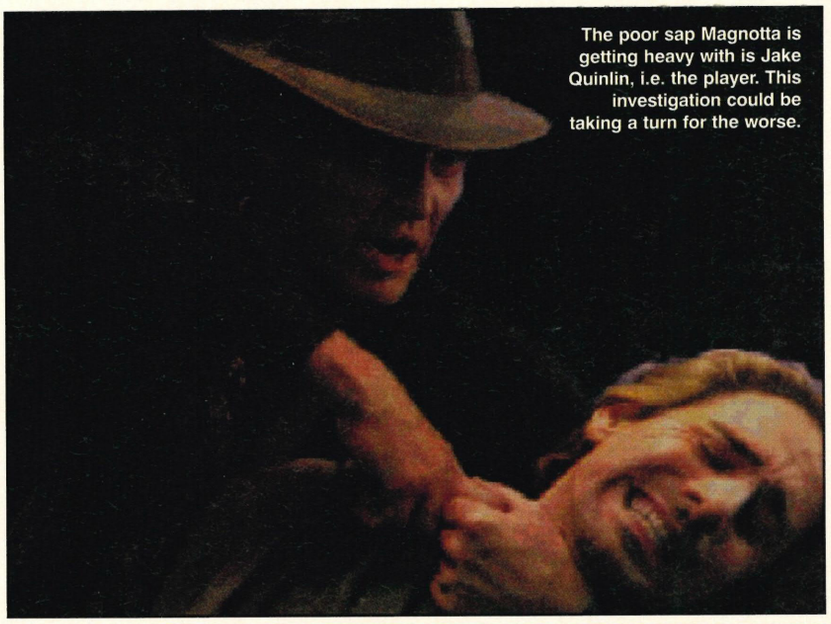
Minimum system: 486DX2, 8Mb RAM, 16Mb hard disk space, SVGA graphics, double-speed CD drive, mouse



Not surprisingly, the conversations are of the linear multiple choice variety.



A visit to Magnotta's office suggests that he's hiding something. Could he be the Ripper?



The poor sap Magnotta is getting heavy with is Jake Quinlin, i.e. the player. This investigation could be taking a turn for the worse.









A cut above... (How to make a killing with a little help from Hollywood.)



First you draught in bear(d)-u-like John Rhys Davies, a seasoned i-movie fixture.



Then add one of Batman's old adversaries in the role of twin brothers with glowing heads.



Sprinkle it with a feminine touch – make sure to get an actress Karen Allen in there.



Now the most important ingredient – a pure psychotic, like Mr Christopher Walken.

four different endings, but who wants to play it through four times? And gorgeous as those rendered graphics are, they can't hide the daftness of some of the puzzles. Would somebody really have a password stamped on their coffee mug? Puzzles are all well and good, but in Ripper too many feel like side-shows, rather than integral moments, while some are downright near impossible. And then there's the problem which plagues every game which relies heavily on pre-rendered and pre-acted sequences – they always work in a near-linear fashion.

Ripper isn't quite a blockbuster. But in reality it never could be. With this kind of game there's always some compromise, either in the movie-stylings or the gameplay. That said, solid design, a strong cast and immaculate presentation ensure there's as little compromise as possible. The acting and adventuring work in close harmony, and time and money have been invested on the script and control system as well as on the movie footage. It doesn't quite make the Hollywood A-list, but at least it succeeds as the best kind of B-movie. Which is kind of fitting for a game called *Ripper*, really. ***(MR)***



Dark settings combined with spinning blade effects embellish the cinematic art of death.



Seems unlikely he juggles those knives to entertain tourists on Saturday mornings...



Enter the lair of the cyber-spider. This shot is a good demonstration of the effectiveness of the prerendered sequences in Ripper.

PCR VERDICT

Finally, an interactive movie that works. The puzzles backfire on the five-star presentation.

7

Those that came before...

Previous interactive movies which *Ripper* sets out to surpass include, from top to bottom: *Phantasmagoria* (PCR 49, 5/10) with numerous US TV stars; *The Daedalus Encounter* (PCR 45, 6/10) with Tia Carerre; *Hell* (not reviewed) with Dennis Hopper; and *Wing Commander IV* (PCR 54, 7/10) with Mark Hamill.

It's elementary my dear PC User.



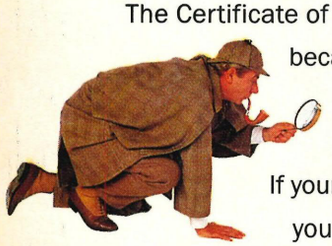
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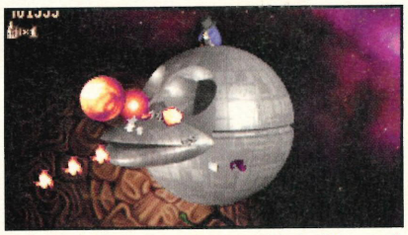
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It's the way Super Stardust 96 includes the sort of enemies usually found in Japanese R-Type influenced shoot-'em-ups that really impresses.



Right. Time to take on a very silly looking end of level duck-headed space ship in order to advance through the game. Finnish humour?



This enemy's only vunlerable when it's in attack mode. Making full use of the wrap-around screen is the best way to stay alive.

STARDUST 96

Old game ideas never die – they just come back kitted out with power-ups and pre-rendered graphics. Raving from the grave this month is our old friend Asteroids.

Now that the PC has finally proven itself as a games machine, it seems like every coin-op game of yesteryear is crawling out of the woodwork. We've had countless R-Type rip-offs, an update of *Tempest*, and soon we'll even be sampling *Defender 2000*. And here's our old friend *Asteroids*, too – all dressed up in natty threads, but it's *Asteroids* alright.

The original coin-op did the rounds at the tail end of the 70s, its white vector-drawn hunks of rock and all-too friction free space shape confounding all but the most dedicated of arcade heads – this was the game which gave inertia a bad name. A bunch of Finnish programmers brought the beast back to life a year or so ago in *Stardust Super Edition*, and here they are again, doing… well, pretty much the same thing again, actually.

So, if you've already got the original *Stardust* in your collection, then just bugger off to the next review right now. What's here is souped up and much expanded on the original, but you're unlikely to fork out for both. The millions who missed out last time round really ought to pay attention, however, because *Super Stardust 96* is the kind of game which really does remind you how joyless so many PC releases are these days. Sure, it's got some poky rendered animations, and the in-game sprites are all obviously created using a 3D art package. But it's the explosion fetish that matters here. And my is it a big 'un.



The asteroids are just as beautifully rendered as ever, but like the alien ships, they're rather difficult to destroy.

In truth it plays suspiciously unlike *Asteroids*. The spacecraft is easier to handle (though a range of friction levels are available if you're feeling particularly masochistic), the gunplay is far more pronounced, and the addition of shields guarantees game times of longer than ten seconds. Moving around the screen isn't only quite manageable here, it's also essential to success. And yes, it features lots of lovely 3D-effect bits of rock to shoot at. But that's only half, maybe quarter of the story. *Super Stardust 96* also includes those essentials of the nineties shoot-'em-up: power-ups and end-of-level bad guys. Throw in a bunch of crafty mid-level space craft, cute backdrops, a choice of starting levels, passwords, and a face-punching 3D flying-down-a-tunnel section, and things begin to look very contemporary indeed. Add some of the best full-on techno and trance music yet heard in a game and you're in hog's heaven.

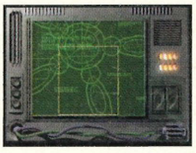


Avoiding this huge chunk of psychedelic outer space weirdness could prove difficult.

Let's not beat about the bush here, 2D shoot-'em-ups are yesterday's news, particularly ones in which all the action takes place on single, wraparound screens. But those inertial dynamics and the well-balanced gameplay mean that *Super Stardust 96* has just as much right to vie for your attentions as 3D blasters like *Pyrotechnica* and *Tempest 2000*, or cinematic pre-rendered shooters like *Wingnuts*. It's a particularly good choice for new gamers.

Okay, so even at 20 quid a render-packed version of *Asteroids* is something of a luxury. But luxuries don't come more direct and effective than this. And while it may be simple, it sure isn't stupid. ***(MR)***





The explosions (top) prove to be incredibly compelling rewards during Super Stardust 96. The interface-style (bottom) between-levels screen indicates what kinds of challenges await in the next level, and how tough it will be.

PCR VERDICT

Unpretentious to the point of almost being simplistic, Super Stardust 96 packs the power.

7

Developer: Gametek

Publisher: Gametek

Contact: 01753 553445

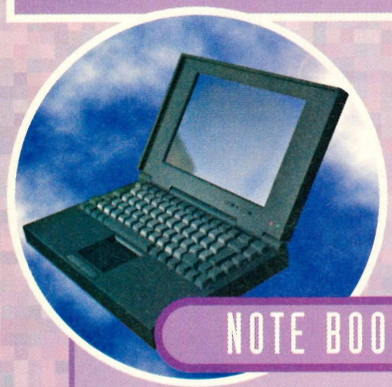
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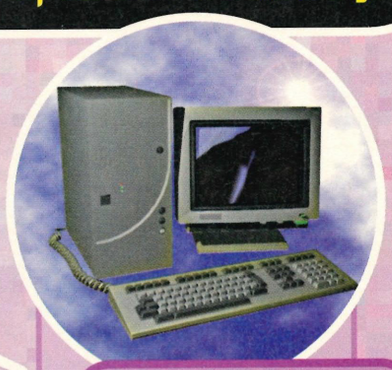
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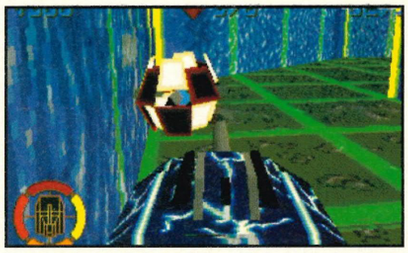
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In the future, all wars will be fought in cyberspace, in little tanks called 'rigs'. The future looks bright, then, but not that bright...

ASSAULT RIGS

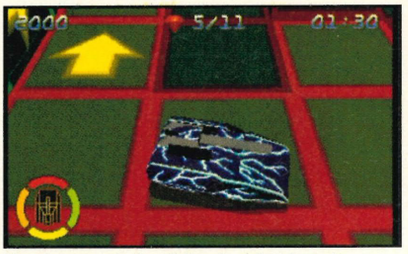
The early levels look like this. All grids and Tron-style mazes. So nearly a great game.



You can't see it from this still, but this is a spinning sentry droid – tough to kill.



This is the follow-cam view, which moves with your rig. Kill the baddies and steal the gems.



Here's your rig in all its electric-blue glory. This one is of the 'good all-rounder' variety.

CD REVIEW

Drive a rig in the Assualt Rigs demo on our CD-ROM.

So near and yet so far. The only thing that stops *Assault Rigs* from scoring eight out of ten, is the fact that it could have so very easily been a much better game than it actually is. A little bit more time spent here and there would have made all the difference. Time spent on the levels, on the controls and on the network mode – the programming equivalent of mowing the lawn before you have the Estate Agent bring a potential buyer round...

The plot, such as it is, drops you into a virtual arena where you must battle your way around in a virtual tank called a rig. As with *Battlezone* (an arcade game recently issued with a pensioner's bus pass), other rigs roll about trying to stop you, along with floating mines, insectoid drones and deadly laser traps. Why? Because you are in a cyber game-show, complete with a voiceover guy who will surely annoy you to death, should you get the better of the enemy. "Remember, kids, it's only a gaaaaaaaaame!" he bellows, from somewhere inside the matrix, whatever that's supposed to be.

The levels themselves are well designed. You begin with something simple, without any immediate danger, which gives you the chance to find the playing view you're most comfortable with. There's a follow-cam, a cockpit view, an almost isometric angle, and a plan-view. Though the follow-cam looks the best, the cockpit view is the easier option, appealing to the part of your brain marked *Doom*. However it's still useful having the other views on offer because some of the obstacles can be a touch tricky from the first-person perspective. You may, for example, find yourself negotiating an extremely narrow ledge, or lining yourself up for a jump – in which case the plan-view is almost always the best option.

Precious litter everywhere

You quickly discover that the most important thing is not so much to shoot everything, but to clear the level. You do this by collecting a number of gems which litter the arenas. Once you have enough, the exit door will open, and you can escape to the next level, where you will have to find more gems, in trickier places, and ward off ever-increasing numbers of enemy rigs. And that's it. That's the game. The levels change every so often, from gaudy *Tron*-like neon to dark and *Doom*y industrial arenas, with lifts, ramps and mazes, and you must learn to choose the right rig for the right job (there are three to choose from at the start of each level). There's even a network mode, though all you end up doing here is parking in front of your opponent and exchanging laser bolts until somebody loses, which lets it down a little, along with the controls.

There seems to be a little too-much inertia around, and there's a slight lag between the key-press and the steering, which rapidly becomes the PC equivalent of the itch you can't scratch. Luckily, *Assault Rigs* is more than just the sum of its parts. You do have to work out the best way to approach a level, and you do have to use the weapon power-ups to beat the bad guys, which makes for some fun gaming. More sophisticated than the classic *Battlezone*, and yet not as much fun. ***(CB)***

PCR VERDICT

You collect. You fight. You collect. You have some fun along the way. That's Assault Rigs.

7

Developer: Psygnosis

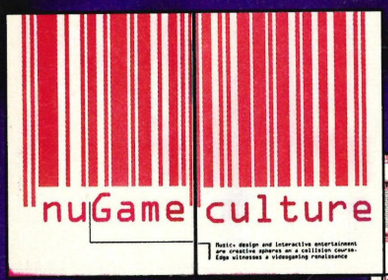
Publisher: Psygnosis

Contact: 0151 2823000

Price: £39.99

Minimum system: 486/66, 8Mb RAM, VGA, CD drive

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EXPECT NO MERCY

Another young upstart does its best to muscle in on the beat-'em-up scene on the strength of some cinematic graphics and a bucket of blood.

CD REVIEW

Try the *Expect No Mercy* demo on our cover CD.

Mortal Kombat 3, lest we forget, is a prince amongst beat-'em-ups because it features the sort of polished moves, well-tuned intelligence routines and dynamic situations which only coin-op sourced titles are capable of. The gore gimmick is merely the scarlet icing on the pulp-faced cake, not the reason for its success. *Expect No Mercy* is the latest beat-'em-up on the block, hoping to chop sock its way to the top on the strength of digitised actors (like *MK3*), gallons of blood and OTT death sequences (like *MK3*), and... little else. This is a beat-'em-up without grace, intelligence or anything remotely new to offer. This is really not very much fun at all.

There's a movie tie-in here, apparently, but such connections don't make the snippets, where a dodgy actor explains the plot, any more accomplished. It's in play that *Expect No Mercy* really shoots itself in the foot, however (no mean feat when you're trying to perform martial arts moves at the same time). By relying so heavily on the attack and defence movements of real, blue-screen captured actors, the action is slow, stilted and, ironically, unnatural. An attempt to add a basic game structure and some gross-out finishing moves doesn't really come close to papering over the gameplay cracks. Hell, the game doesn't even take into account processor speed – play on a 486 and everything is stodgy, play on a nice Pentium and cue Benny Hill fast-forward hilarity. Not funny at £40, though.

And that's all there is to it, really. Zero subtlety, not much in the way of positive control, and precious little playability. Think *Battle Beast* with people instead of cartoons. Think sub-standard. Expect no gameplay, basically. ***(MR)***



Before playing the game proper, you can hone those fighting skills in the virtual arena. Here, even the clowns carry bottles of ketchup.



Our hero tries to work his way into the lair of the Big Boss himself. Progress has rather slowed down at this point.

PCR VERDICT

It's got the looks, but Expect No Mercy is a real no-brainer. Avoid it.

3

Developer: Microforum

Publisher: One Stop Direct

Contact: 0181 9471001

Price: £39.99

Minimum system: 486DX2, 8Mb memory, 10Mb hard disk, SVGA, double speed CD drive, Win 3.1 or 95

TERROR TRAX

The X-Files, spooky first-person horror and next-to-zero interaction make for an exhilarating, but short-lived ride.

Coming on strong, like some MTV cameraman with his equipment strapped to his forehead, *Terror Trax* is an unashamedly movie-based slice of first-person horror. If there's over-acting to be done, sardonic comments to be made, or just some general camera tilting and jiggling to be performed, *Terror Trax* is happy to oblige. Cast as the remote controller from some *X-Files*-style US government agency, players get to control, to some extent, the actions of a couple of operatives, seeing what they see and instructing them to act in one of two ways at key points.

The TRAX department, as it's called, is pitched as some covert team who deal with emergency calls relating to supernatural phenomena. It's doesn't take long then, for the boys and girls to find themselves dealing with vampires and zombies. Acting and special effects are reasonable, but it's the constant camera swooping, neat direction and gloomy visuals which generate the wonderfully tense atmosphere.

While interaction is kept to a minimum, there is some fun to be had from the monstrous investigations. What ultimately ruins the effect isn't the lack of control, it's the length of the ride. Because of the multiple-choice nature of the game, it takes less than an hour to complete it successfully from scratch – about 15 minutes of game time if you know the solution. Even at this budget price, that doesn't equate to value for money. Ghoulishly good fun, but frightfully non-interactive, and too short. ***(MR)***



Scenes like this are bad enough, but when the bodies sudden reanimate themselves they really become a pain in the neck.

PCR VERDICT

Strangely effective in an X-Files gone horror sort of way. Too pricey, though.

6

Developer: Grolier

Publisher: Grolier

Contact: 0181 600 6023

Price: £21.99

Minimum system: 486DX, 8MB memory, 5Mb hard disk, double speed CD drive Windows 3.1 or 95

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As you can see, the graphics in Azrael's Tear are superb – and wait until you see this thing move...

CD REVIEW

Sample *Azrael's Tear* for yourself with our CD.











Forlorn ghosts, mutated dinosaurs, ancient puzzles, subtle clues and deadly foes are just some of the things that await you in the decaying temple of Aternis.

AZRAEL'S TEAR

At a glance, Mindscape's latest might look like yet another 3D blast-fest. But appearances can be deceiving...

Set in the trusty near future so beloved of games designers, *Azrael's Tear* casts you as a Raptor, a high-tech thief who lives by discovering and looting archaeological sites. In the years between now and the time of the game, vast geological upheavals have occurred, revealing ancient locations all over the world. Lacking the expertise to explore these places themselves, museums and wealthy collectors pay highly for relics and artefacts from these places. The game begins with you hearing of the greatest prize of all – the Holy Grail itself.

The Temple of the Grail

Azrael's Tear is played from a first person 3D perspective, with the hidden underground temple that holds the Grail seen through the head-up display of your computerised helmet. You can move and look around via the mouse, as well as manipulate objects, fire your gun, and use the helmet's built-in scanners to examine your surroundings.

It quickly becomes clear that not only does the Grail exist, but it possesses immense power. The temple, called Aeternis, is in a poor state of repair, but it's still inhabited by some of the original Knights Templar, who are responsible for its existence, and still alive after centuries. As you progress you discover that when Aeternis was built it was prophesied that a thief would come and take the Grail from them, and this is what they've been waiting for. Unfortunately, it's not quite as simple as just walking into the temple and picking up the cup. To ensure that you are indeed the thief of which the prophecy speaks, you must complete a series of tests.

So, despite its 3D view and the odd spot of violence, *Azrael's Tear* is a lot more than a simple shoot 'em-up in the mould of Doom or any of its clones. This is both its strength and it weakness.

It's obvious that a great deal of work has gone into this game, and the result is an impressive and internally consistent setting. The story of the temple's founding and the events since are gradually revealed, and the contrast between the ancient setting and your high-tech gear creates a unique atmosphere. This is enhanced by the amazing graphics, clever use of sound and the design of the locations.

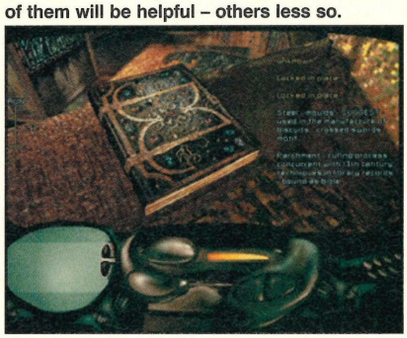
Fail and die in the deep end

The problem is that the puzzles themselves can be very tough, and tend to be of the fail-and-die variety. To make matters worse, the player is thrown in at the deep end, with little guidance or advice. Sometimes you're not even sure if you've actually completed a puzzle correctly, or whether you should go back and try something else.

However, if you enjoy a challenge and don't mind experimenting, *Azrael's Tear* is one of the most absorbing and atmospheric adventure games ever. After a while you start to get the hang of the game, and the style of the puzzles, which helps a great deal, and it's hard not to get caught up in the story that unfolds. It's just not for the faint of heart or easily frustrated. ***(AB)***



The power of the Grail has kept the Knights who built the temple alive for centuries. Some of them will be helpful – others less so.



The scanners built into your helmet are a mine of useful information, and often provide clues to what you should do next.

PCR VERDICT

A visually stunning and sophisticated adventure game that's just a little too tough in places.

7

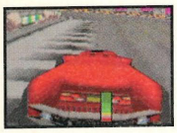
Developer: Intelligent games

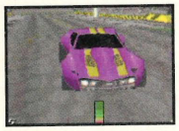
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Minimum system: 486 DX2/66, 8 MB RAM, SVGA and double speed CD-ROM drive





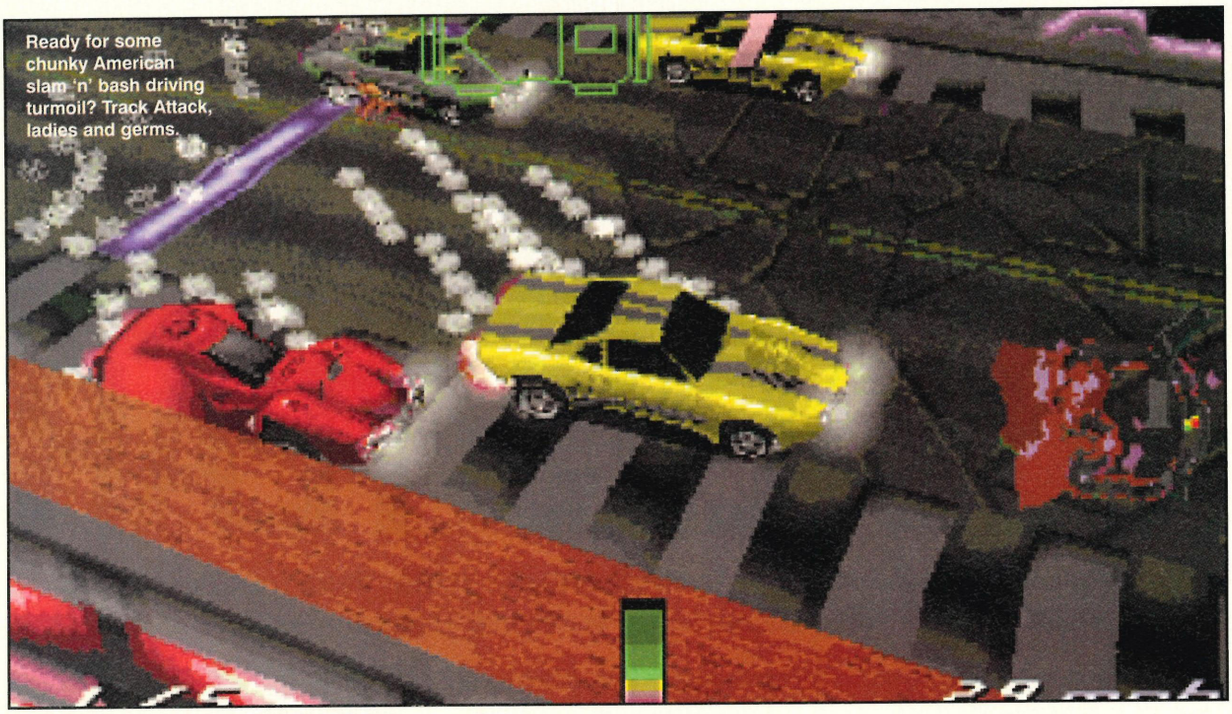




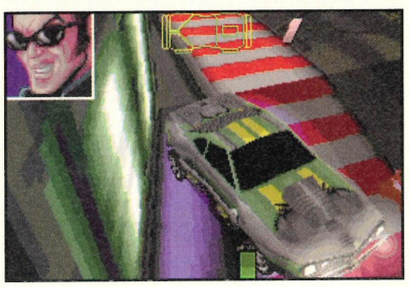
Take in a few views from around one of the tracks. The graphics look reasonably good here, but the gameplay's slow.

TRACK ATTACK

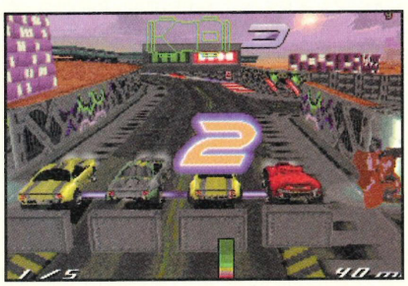
Geoff Crammond's long awaited F1GP2 has slipped again but MicroProse has found a stopgap.



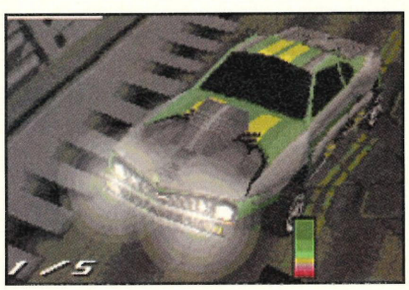
Ready for some chunky American slam 'n' bash driving turmoil? Track Attack, ladies and germs.



This driver's in a bit of a spin



Sitting on the grid awaiting the signal.



Headlights. Another nice touch.

Racing games are hardly what you would call thin on the ground at the moment, so anything new has to be very special to make any kind of impact. This is *Track Attack*'s problem. While it roars onto the scene with a few original touches it runs into a very solid brick wall in the shape of Virgin's *Screamer* and MicroProse's own *F1GP2* (which has conveniently slipped to make an unopposed gap for this number).

Track Attack is a cross between *Ridge Racer* and ram raiding. That's not the original touch though because let's face it, *Destruction Derby* has that area well sewn up. What's original about *Track Attack* is that you can actually alter the circuit as you race. Nothing major like a new section of track, but you can cause drawbridges, ramps or obstacles to appear in front of you or even behind you to deal with a rather attentive opponent.

No driving license required

While its Dynamic Track System, as it is known, makes for terrific multi-player action, it is almost completely obsolete in a one player game. The control system also lets the game down. It takes a lot of getting used to just how unreliable the set up is. The controls seem to vary from unresponsive to over the top during a single race. There's no happy medium.

This is not the only thing that lets *Track Attack* down badly in the face of *Screamer*'s opposition. The graphics are very chunky and even on a Pentium 100 it crawls along like a Sunday driver. And if it's like that on a Pentium, you can imagine what's it like on a DX4. Even if they do claim that this is the minimum spec, we don't recommend it.

Mad Austin Maxi

While the programmers have obviously concentrated on trying to make *Track Attack* different from every other racing game, they have ignored the golden rules. It has to be fast and it has to look good. *Track Attack* obeys neither. Having said that, however, don't be hugely put off. It's not an awful game. It offers a wide variety of tracks and a lot of action (albeit on the slow side). When you take the time to get to grips with the controls it does offer some fairly addictive action as you ram the opponents and utilise the DTS.

However, the likes of *Ridge Racer*, *Destruction Derby* and *Screamer* offer more and with the (hopefully) imminent arrival of *F1GP2*, *Track Attack* is going to get lost in the crowd because while it tries hard, it just isn't good enough. ***(LE)***

Developer: Arc

Publisher: Microprose

Contact: 01454 893893

Expected Price: £40

Minimum system: 486DX4 100, 8MB RAM, double speed CD drive, 40 Mb hard disk space, SVGA

PCR VERDICT

An average racing game that can't compete with the big boys. Poor controls and views.

5



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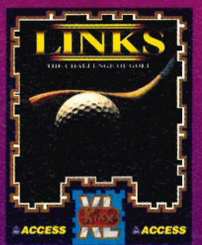
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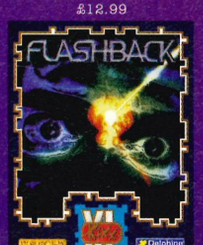
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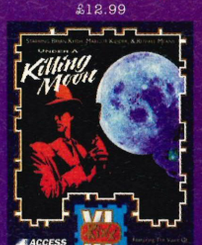
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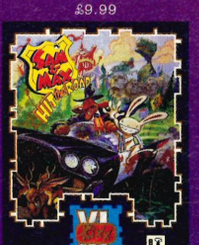
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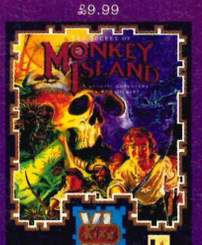
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As the BBC's Alien Empire series recently proved, the lives of insects can be intrinsically fascinating. Might the same be said of Bad Mojo, a game based on the life of a cockroach?

This locket is a recurring motif in the game. At certain points, it appears to convey new plot details.

BAD MOJO

Bad Mojo Cocktail

According to one of the puzzles in the game, you can make a Bad Mojo using the following: **7oz Grenadine 6oz Blue Curaçao 5oz Brandy** and **8oz Vodka**.

Pour the liquors slowly, in the stated order, over the back of a spoon and into a glass. There you have it.

Judging by its contents (we're just not mad enough to try it, see) the Bad Mojo cocktail is an acquired taste.

For more on drinking turn to our booze feature on page 36.

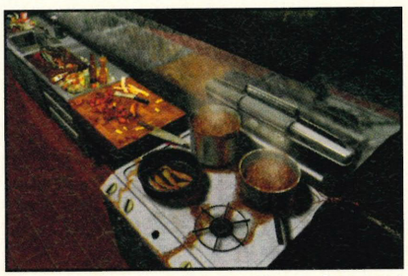
Developer: Pulse

Publisher: Acclaim

Contact: 0171 344 5000

Price: £39.99

Minimum System: 486/66, 8Mb RAM, double speed CD drive, 20 Mb hard disk space, SVGA, Windows 3.1 or 95



Frying fat, rashers of bacon, chopped veg and a dying fish are all details of the kitchen.



Having tipped a pile of razors onto the king rat, the roach can explore its lair.



Eddie's TV dinner provides a convenient insect bridge between a bed and a table.

Unique, different and weird, *Bad Mojo* is definitely something you should consider if you're in need of some alternative adventuring.

Bad Mojo firstly sets itself apart not only by having a decent storyline, but also by offering stimulating conceptual themes. Here is a story in which Roger Sams, an alienated, agitated man, is transformed into a cockroach, something like Samsa in Kafka's *Metamorphosis*. All he has at his disposal are six legs, the miniscule strength of a roach and his human consciousness.

As a player of *Bad Mojo*, you take on the role of Sams in insect form, guiding him on a journey of self-enlightenment. Roger is really a lost child inside, while his landlord, Eddie, is deeply unhappy. In helping Sams return to human form, you'll delve into his secrets, and discover Eddie's grief.

The most notable thing about *Bad Mojo*, beyond the fact that you're controlling a roach, is its graphics. The textures and extent of detail are awesome. Rusty pipes, crinkled blankets, sticky spills, tiled floors, slippery sinks and dusty carpets are just some of the surfaces you'll guide the roach across using the cursor keys. The kitchen counter, covered in chopped meat and veg, spilled sauces, spices and dirty utensils of all descriptions, is particularly incredible. You can very quickly become absorbed in environment the Sams-roach shares with his landlord and his pet cat.

While the game's eyecandy is intricately presented, the puzzles are too simple. There's no inventory or icon buttons, all you have to do is use what's around you as best you can. Although the problems are integral to the setting, they are a bit easy to get through, particularly with the clues given to you in dreamlike videos arising whenever you meet other creatures.

Don't, however, let that dissuade you if you're looking for something a bit different. There are four different endings, and the huge variety of sounds alongside the absolutely lush-looking settings make it well worth it. A fear of insects or a squeamish gut may put you off, but otherwise, *Bad Mojo* is a fun and interesting game. ***(GW)***



Some scenes in Bad Mojo might seem repulsive to anyone with a weak stomach. The roachified Roger Sams crawls over the face of his sleeping landlord, Eddie. Lovely.

PCR VERDICT

An extensive, highly detailed adventure. It's a bit easy, but the views are outstanding.

8

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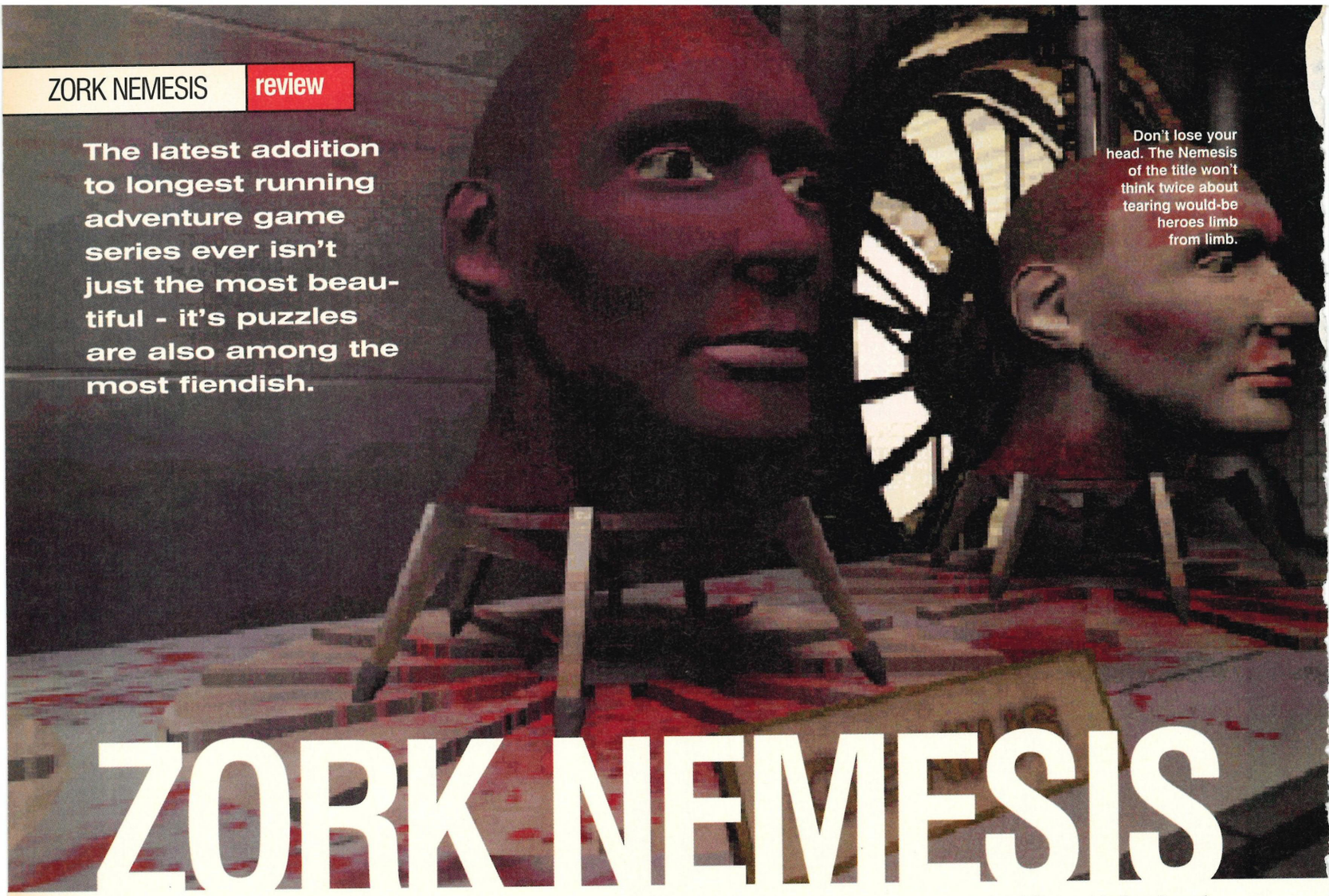
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The latest addition to longest running adventure game series ever isn't just the most beautiful - it's puzzles are also among the most fiendish.



Don't lose your head. The Nemesis of the title won't think twice about tearing would-be heroes limb from limb.

ZORK NEMESIS

It's possible to approach *Zork Nemesis* in a number of ways: as a hardened adventurer, weaned many years ago on the pure textual exploration and puzzle-solving of the original *Zork* games; as a casual adventurer interested in this *Zork* thing that everybody always talks about; or simply as an avid PC gamer keen for kicks and sucked in by the showy presentation of the thing. Either way, you're in for a particularly treaty time. It's not just money that's been spent here, it's time – and that makes all the difference.

Zork Nemesis is a wonderfully cohesive and downright absorbing experience.

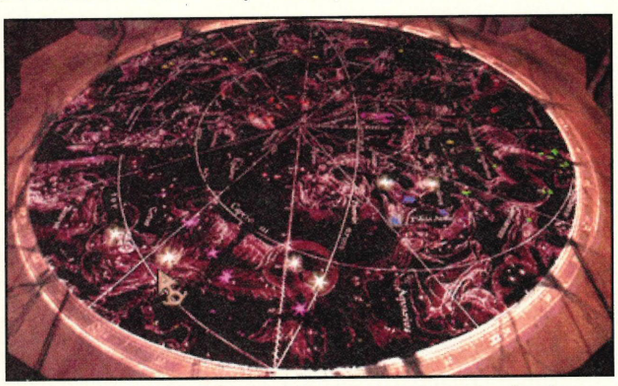
The original Zork was the grandaddy of the modern adventure, all two word inputs – Go North, Take Sword, Kill Dragon – that kind of thrilling wordplay. They may have been basic, but they were far from simple, however, and the location detail could be as rich as any passage from a fantasy novel. Behind the words an army of devious puzzles lay in wait, from simple object collection and correct usage problems to conundrums of a far more trickily themed nature. Those were the days.

Now, we have *Zork* on a mega-budget. In place of 30-word descriptions, fully rendered locations drape themselves on the screen, the ability to rotate them through three hundred and sixty degrees going some way to compensate for the lack of animation when you move between scettings. And in this none-more graphical game world the puzzles fittingly take on a far more visual nature. They're not a million miles from the *Krypton Factor* stuff found in Trilobyte's *7th Guest* and *11th Hour* adventures or the more recent and similarly designed *Ripper*, only this time the adventuring involves the forces of the evil Nemesis, four rather deceased alchemists and an elementally-related pathway to the *Forbidden Lands*.

Unlike in the previous *Zork* adventures, in Nemesis you find yourself fiddling with magical windows, mysterious sundials and awesome alchemical devices. Ironically, the only real complaint that could be levelled



The lush scenery of Zork Nemesis comes from the same hand that worked on illustrations for the last Batman movie – quality stuff.



Puzzles range from sussing out which constellations are related to which to far more diabolical brainteasers.

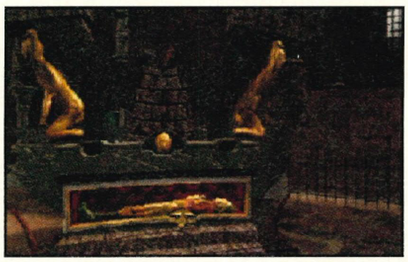
Developer: Activision

Publisher: Activision

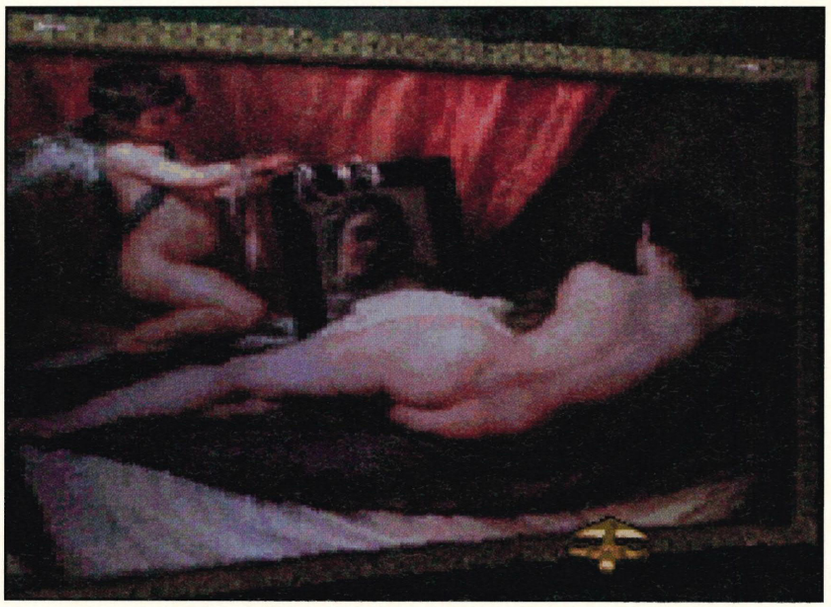
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Price: £40

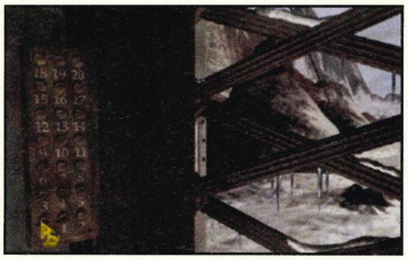
Minimum system: 486DX2, 8Mb RAM, 50Mb hard disk space, SVGA video card, mouse, Windows 95 optional



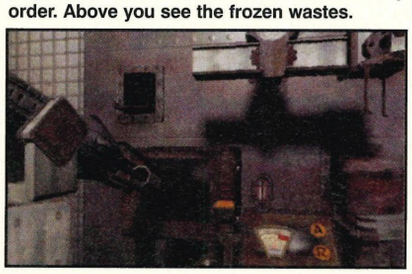
The four alchemists may have died at the hands of the Nemesis, but their souls aren't at rest yet. Pop round for a quick chat.



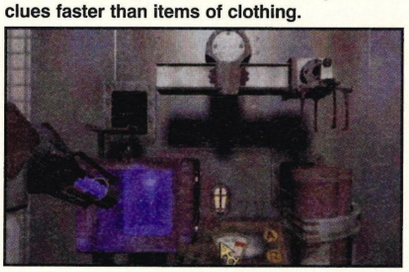
Before adventurers get to explore the Forbidden Lands, the mysteries of the temple must be unravelled. Help comes in the unlikely form of this talking picture. The shameless girl will drop clues faster than items of clothing.



Having solved the mysteries of the temple, players can tackle the Forbidden Lands in any order. Above you see the frozen wastes.



A strange contraption featuring a grabbing arm, two buttons and some brains in jars.



Throwing a switch puts a little light on things, but doesn't explain what the brains are for.

here, is that the game is arguably just too hard. Because of the visual nature of things, some of the puzzles prove themselves extremely confusing or obtuse – though remembering the way things relate to the four elements – fire, water, air and earth – usually helps out. Less fair is the occasionally confusing geography, which can make essential pathways too easy to miss.

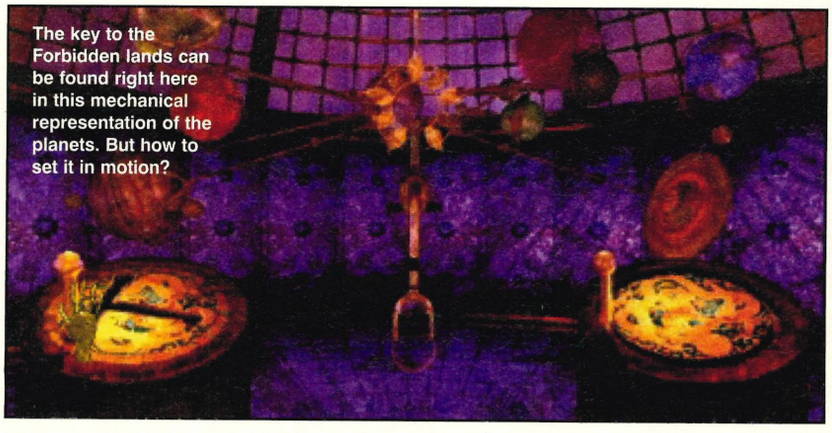
Mostly though, *Zork Nemesis* is a wonderfully cohesive and downright absorbing experience. The use of a professional scriptwriter hasn't harmed the game, and the storyline is something upon which the entire gameworld is hung rather than serving as some fluffy, irrelevant intro or other such unlikely premise. The puzzles are colourful and visual as are the physical beasts you occasionally come up against – sort of the *Crystal Maze* gone fantasy. And then there's the look and feel of the thing: It's big, it looks good, and the script is as neatly rounded as the presentation.

Thankfully then, despite dragging one of the oldest icons of adventure gaming into the age of Pentiums and 3D rendering, the good name of the *Zork* series hasn't been tarnished. Instead, the audio-visual splendour of your modern PC has been fully utilised. It all leaves you wondering just what the next *Zork* installment will be like. **(AB)**

PCR VERDICT

Zork Nemesis has a rare depth of gameplay and near-faultless game design. Lovely stuff.

8



The key to the Forbidden lands can be found right here in this mechanical representation of the planets. But how to set it in motion?

Chemistry set and match...

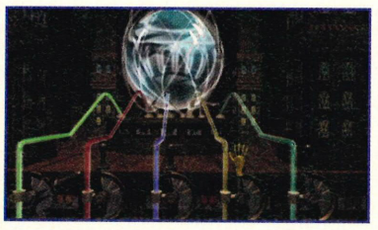
The key to obtaining the fourth and final element in the temple is to have air that's visible.



Five taps control the flow of air into the glass bowl at the centre. Alas, it's hard to see how the contents of each piece of pipe is different.



Looking round the side we find this curious image of a black beetle. Clicking on it brings the shutters down over the windows.



That's better – we can now see the colour of the air in each tube. So solve the puzzle, we mix the different colours to come up with clear air.

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If you are a real game freak then you know that normal PC Joysticks just don't make the grade - sloppy movement and only two buttons make them useless for most role playing and fighting games.

REVENGER

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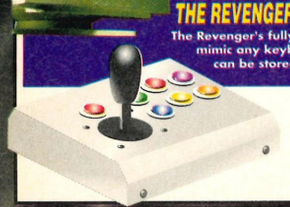
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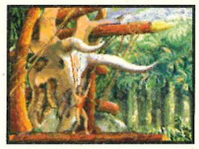
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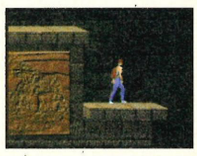
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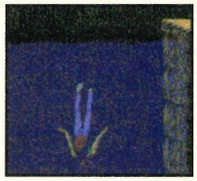
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BERMUDA SYNDROME

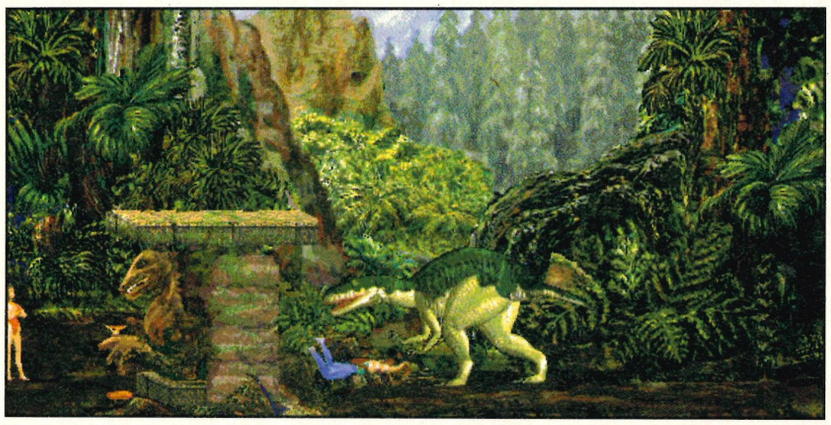
The German developer Century Interactive puts you into the Bermuda Triangle, but is the result two-dimensional?







Three of the settings in Bermuda Syndrom are the outoor jungle terrain (top), the indoor ancient ruins scenes (middle) and the underwater swimming bits (bottom). Something of a graphically superior Pitfall, really.



The beautifully detailed dinosaurs are one of the best features of Bermuda Syndrome. There are around 50 creatures in total spread across the game's 200 or so screens.



The Princess looks on as Jack is dragged off into a tree by a giant snake.

Given that they were greeted with so much acclaim and adulation when they were first released, it's a surprise that there are so few clones of Jordan Mechner's *Prince Of Persia* and Eric Chahi's *Flashback*. *Bermuda Syndrome* was obviously heavily influenced by those two seminal titles but at least German developer Century Interactive has tried to expand the boundaries of this unique style of arcade adventuring.

The plot is Saturday morning serial material, with a new cliffhanger on every screen. It's 1942. Jack J Thompson's B-17 bomber has been shot down over the Bermuda Triangle and crashed on a strange island. Dinosaurs, snake people and tribesmen fill this lost world and Jack parachutes into the action, foiling a human sacrifice to save a scantily-clad local Princess.

You and the Princess have to make your way through four different platform lands over around 200 screens. And what screens. Former Disney artists were brought in to work on the look of *Bermuda Syndrome* and their input really shows. The graphics are consistently impressive from finely detailed jungle backdrops to superbly animated dinosaurs and other characters.

Each screen, however, usually has only one or two interactions on it and few platforms to negotiate. At the start of the game, most of the problems are self-contained. All you have to do is observe the behaviour of the creatures and work out where you have to stand, shoot or jump to thwart them. Eventually, the dilemmas facing Jack and the Princess increase in complexity forcing you to trek back and forth between screens in search of objects. Teamwork also plays a part as Jack can ask the Princess to help him out of certain situations.

Former Disney artists were brought in to work on the look of Bermuda Syndrome.

The basic controls of *Bermuda Syndrome* are those of *Prince Of Persia* and *Flashback*. Jack walks, runs, jumps and crawls in set units of animation and to get around a screen you have to move him with pinpoint accuracy. This reduces the arcade feel of the game but, perhaps aware of this, Century Interactive has given Jack a few more adventure elements to contend with.

A button press brings up a small action window with an inventory and three icons – Pick Up/Use, Talk and Princess – letting Jack manipulate the objects he finds, chat with the locals through multiple choice dialogue and ask the Princess for help. These extra options may nudge the genre forward a bit, but not enough to make *Bermuda Syndrome* an essential purchase. For all the crisp graphics and adventure-like touches, this game is still weighed down by the baggage of the once-innovative 2D platformers that inspired it. Slow-paced with unforgiving controls, *Bermuda Syndrome* has far too much trial and error gameplay which calls for relying on the Save Game facility, rather than your skill or powers of deduction. ***(CB)***

PCR VERDICT

Pulp premise, sharp graphics and animation, all let down by some reheated gameplay.

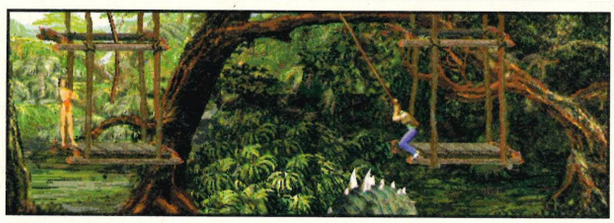
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Jack swoops in to help save a Princess from sacrifice.



The well animated prehistoric reptiles can look astounding.



A Stegosaur hides in the bushes. Jack has to climb the platform, slide the vine, swing across and get his gun out shoot the dino.

Developer: Century Interactive

Publisher: BMG

Contact: 0171 384 7864

Price: £34.99

Minimum System: 486/33, 4Mb RAM, double speed CD drive, Mouse, SVGA, Windows 95 or 3.1

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FANTASY GENERAL

Cast a hex

Hex-based games have long been the format for computerised PC war/strategy games – basically because that's what everyone's used to using. Love 'em or hate 'em thery're pretty much here to stay (unless, of course you're into simulations). Still, it's nice to report that Empire has come up with a new slant on the hex-based war game: 3D. Find out more across the page with *Battleground Ardennes*, aka Battle of the Bulge.

Fantasy it may be. *Warcraft* it ain't. *Fantasy General* is a hex based war game, so expect bags of strategy, and not so much action. You direct units of elvish chariots, flying lizards, unicorns, magic users and all manner of weird and wonderful beasts in your quest to overcome the evil rulers of a realm called Aer.

You assume the role of one of four characters, each with abilities ranging from strong magical skills, through healing powers, to good old-fashioned brute force. Once you've chosen your own character, you select your army. The units you've got available depend on the character you've chosen. The arch mage for example, will be strong on units with magical abilities, while the warrior will rely more on traditional infantry and cavalry.



Combat is as easy as marcing up to your opponent and charging right in.



Get an instant update on how your units are performing and what they're status is.

Next, you decide whether you're going to play a campaign, scenario or in the arena. This last option is a one-off battle and gives you the option to play a human opponent. The other two are series of battles fought against the computer, which takes the role of the evil ruler of Aer.

Finally, if you've got the patience in your first battle, you assign research and spending levels. This may not seem important at first, but as you get in to the game they become influential. Without decent research levels your units won't expand or improve, and you'll find yourself overwhelmed by your opponent.

Fantasy General uses the same engine as *Panzer General*, so it's quick to learn and easy to play. At first this is a bit off-putting, especially if you play in Easy mode. It all seems too easy. Pick one of the two higher difficulty levels and the challenges become more demanding.

The problem is, your enemies get much more powerful faster than you do, and unless you husband your forces carefully, direct your researchers wisely and have a large enough treasury to keep the re-enforcement's coming, you're going to find the forces of evil very quickly overwhelming your realm.

It also becomes apparent that the whole thing is a lot more subtle than it first appears. In the early battles a headlong charge against the enemy wherever and whenever they appear will usually see you through. Not so in the later battles. Cunning and tactics become much more important, as does an understanding of the particular strengths and weaknesses of each of your unit types.

The proper use of magic also becomes more important. You get to cast a character spell each turn, and usually a couple of unit spells. These are more effective if used in certain combinations, and you often need to plan beforehand how you are going to use them best.

A word of warning to *Panzer General* players – *Fantasy General* is not as good. There isn't really the depth, game play or satisfaction you get from *Panzer General*. After a few resounding victories with *Panzer General* you begin to feel you could really command an army. With *Fantasy General* you never feel like you're doing anything more than pushing counters around a board with hexes on it. ***(JT)***

Developer: SSI

Publisher: Mindscape

Contact: 01444 246333

Price: £44.99

Minimum system: 486DX2/66, 8Mb RAM, double speed CD drive SVGA

PCR VERDICT

Never truly manages to suspend disbelief. Not as good as Panzer General.

7

BATTLE GROUND ARDENNES



Just one of the live action clips you'll get when you play Ardennes.

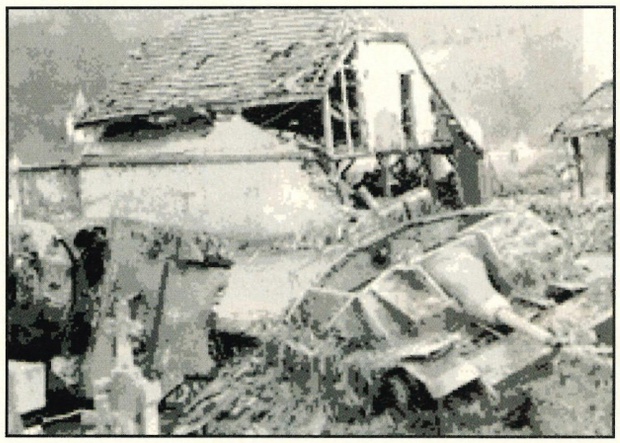
Otherwise as the *Battle of the Bulge*, Ardennes was Hitler's last gamble on the Western Front. He rightly suspected there was disagreement within the Allied high command about how best to take advantage of the victories gained since D-Day. Mountbatten wanted to lead the British into German territory almost immediately, while Eisenhower wanted the glory for the GIs, which meant a period of consolidation. Hitler tried to exploit the split and launch a counter attack through the Ardennes where the Allied line appeared to be at its weakest.

The plan was to drive a wedge between the two main forces of the Allies, right through to Antwerp cutting the Allied forces off from each other and then force another Dunkirk. It was a bold strategy, and one that almost worked, at least in terms of exploiting divisions in the Allied high command.

Battleground Ardennes is a faithful reproduction of the days over Christmas and New Year 1944-45. Its 3D interface and relative ease of use in game play, makes for an attractive game.

Unfortunately it is fatally flawed in one respect: you can't change history. Hence, it's not much fun. Each of the 23 scenarios is a stand alone battle – the results of the previous one do not effect the subsequent one, and you can't play the whole thing as a single campaign.

Beyond a couple of 'what if?' scenarios, there's nothing to hold your interest and no real incentive to even play all the scenarios through. A serious short coming in our opinion. ***(JT)***



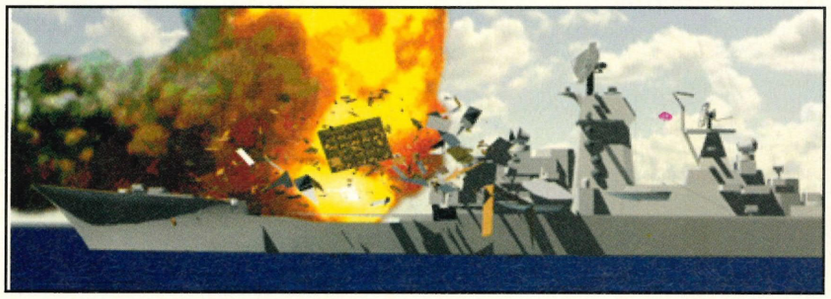
Er... and another one. In fact Battleground Ardennes is a great history lesson. Maybe that's why the game won't actually let you change it.

PCR VERDICT

Good graphics, easy to play – but you know exactly what's going to happen, which limits the fun.

6

Developer: SSI
Publisher: Empire
Contact: 0181 3437337
Price: £44.99
Minimum system: 386DX/33, 4Mb RAM, double speed CD drive, SVGA



Nice graphics – shame about the gameplay. The sense of being in any sort of game is completely removed, and you're only briefly reminded by scenes like this.



You'd better get used to this view – you're going to see it more than the one on the left.

FAST ATTACK

Do you enjoy modern submarine warfare? Hanging around underwater in a steel box, listening to sonars pinginging? Then, you'll love this game. If you have any doubts, or suffer from claustraphobia, then steer well clear.

The problem with modern warfare simulations in general, and naval warfare in particular, is that you spend all your time staring at various screens, learning procedures, and trying to work out what the hell your crew is talking about. The enemy is reduced to a blip or echo on radar or sonar. And all the fun is taken out of firing weapons because they're 'smart' – there's little chance they're going to miss.

All you have to do is learn and remember the sequence of loading, arming and firing. All this may be more realistic, but it's sterile and boring. No amount of pre-rendered graphics, digital explosions and great sound effects is going to make up for the fact that for 95 per cent of the time nothing happens. Just like in real warfare.

Unlike modern flight simulators where there is some action, skill and tactics required, modern submarine warfare seems to consist entirely of getting as close to your target as possible without being seen or heard – unleashing a deadly assault of weaponry and slinking off again.

If you want to know what it's like to be in command of a nuclear submarine, then *Fast Attack* will show you. It's certainly not as exciting as the movies *Crimson Tide* or *Hunt for Red October* would have you believe. But if you want some fun with submarine warfare there are any number of other, better alternatives – *Silent Running* and *Aces of the Deep* to name but two. And if you like naval battles in general you might try *USS Ticonderoga*. ***(JT)***

PCR VERDICT

Boring, sterile, and all in all far too realistic. But at least there's a periscope.

5

Developer:
Publisher: Sierra
Contact: 01734 303322
Price: £39.99
Minimum system: 486, 8Mb RAM, double speed CD drive, SVGA, Mouse

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Strategy Plus Magazine

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Star Trek: DEEP SPACE 9

Harbinger

You have to admit that although *Deep Space Nine* had a shaky start, since *The Next Generation* finished its run the show has been going from strength to strength. There's never been a better time to produce a game based on the Niners.

Star Trek: Deep Space Nine – Harbinger casts you as a Federation diplomat, assigned to assist in a first contact with a race from Gamma Quadrant, a vast, unexplored region. The aliens, known as the Scythians, come from an advanced civilisation, but are otherwise a mystery.

Things do not go smoothly. As your ship nears the wormhole to the Bajoran system where DS9 is located, you are attacked by a group of strange craft. You manage to escape into the wormhole, only to emerge into a vicious plasma storm that threatens more destuction. After that, things start to get really complicated.

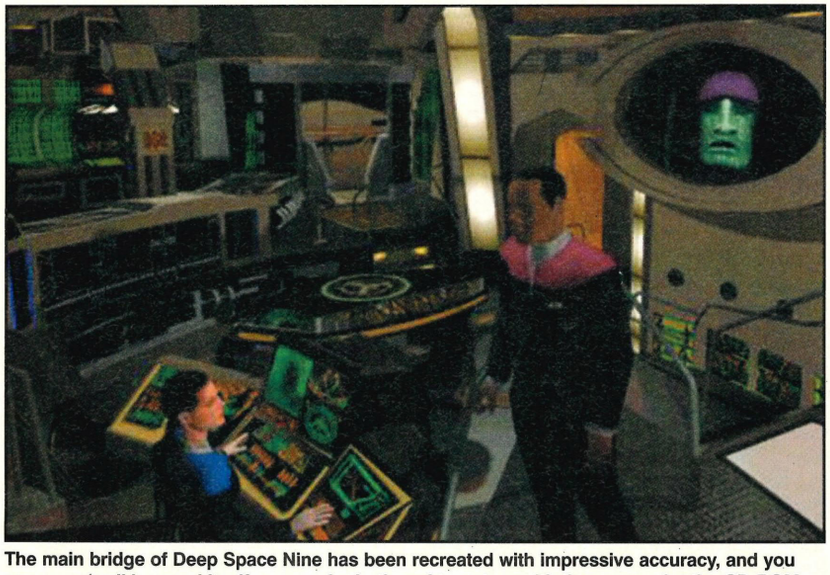
Harbinger is played from a first person 3D perspective similar to that in *Myst*. As you move your mouse pointer around the screen, it changes shape and you can interact with the environment and anyone in it, or move from screen to screen. Other characters are animated, and all talking is presented in digitised speech, with real voices supplied by the actors from the show. At certain points you simply choose your own response from a list.

Graphically, *Harbinger* is nicely done. Although there's no smooth movement from view to view, a great deal of work has gone into capturing the sets of the show and the computerised crew members. Having the actual voices of the cast also adds greatly to the sense of being there.

But not everything is so impressive. *Harbinger* is yet another attempted interactive movie, and suffers intrinsically as a result. The gameplay is limited to moving from location to location, talking and playing small puzzle subgames with the odd combat sequence thrown in.

The worst thing about *Harbinger*, though, is the game's noticable lack of speed. The CD access is constant, and becomes incredibly frustrating, even with a quad speed drive. The sub games take up to a minute or two to load, and even moving from one screen to another causes an annoying pause.

Although the graphics and sound create a great atmosphere, the lack of any real gameplay quickly spoils the effect. *Harbinger* is one of the better interactive movies so far, and *DS9* fanatics will forgive its failings. Less obsessed *Star Trek* fans, though, would be better off with MicroProse's *Next Generation* game. ***(AB)***



The main bridge of Deep Space Nine has been recreated with impressive accuracy, and you can even 'walk' around it – if you can be bothered to put up with the pauses for the CD-ROM.



Bars are always a good place to pick up some gossip – Quark can be very helpful.



Funny red blokes with big guns are just one of the challenges you'll face while aboard the station.

PCR VERDICT

An ambitious attempt at an interactive movie, let down by simplistic gameplay and slow CD access.

5

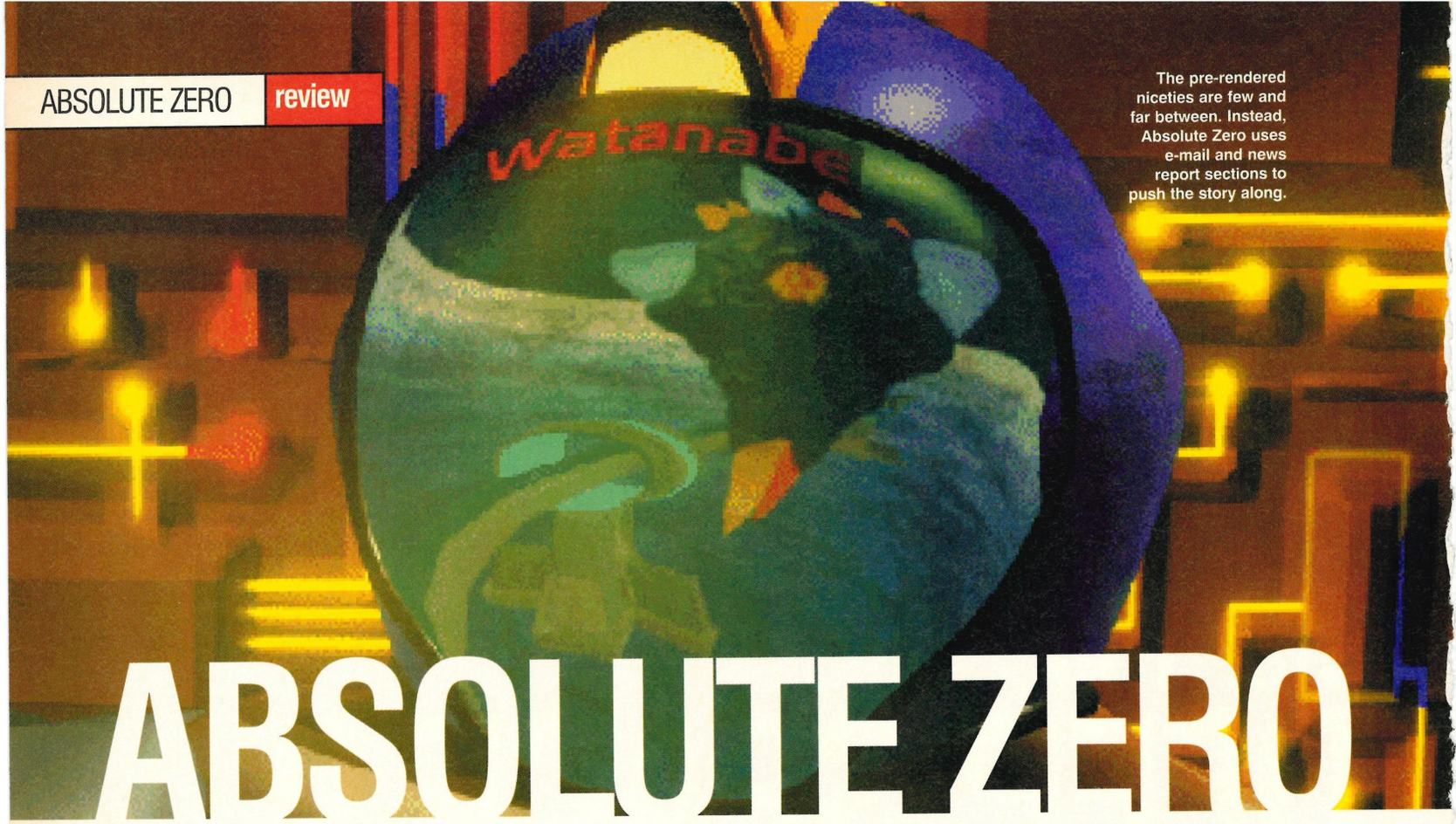
Developer: Viacom New Media

Publisher: Viacom/CIC

Contact: 0181 563 4013

Price: £39.99

Minimum System: 486DX2/66, 8Mb RAM, 10Mb hard disk space, SVGA, double speed CD drive, mouse



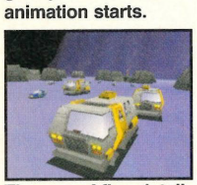
The pre-rendered niceties are few and far between. Instead, Absolute Zero uses e-mail and news report sections to push the story along.

ABSOLUTE ZERO

Jupiter's moons, a bunch of recently woken and very grouchy aliens and the chance to play seven different characters ought to make Absolute Zero a winner. But...



Bizarrely, the computer control sections of the game rely on Silicon Graphics rendered sequences to zoom stuff in and out. But the images go all grainy as soon as the animation starts.



The use of fine detail and gouraud shading comes into its own on vehicles like this. Sadly, such dynamic external views aren't integral to the game.

Some games are so nearly there. *Absolute Zero* blends role-playing, adventure, shoot-'em-up and simulation, with the unique idea of having players take on the role of a different key character for each mission. Add the evocative setting of Jupiter's moons and hostile aliens awoken by mining work, and we're dealing with something just different enough to demand our attention.

Holding the game together is a computer system giving access to the current character's e-mails, news reports, intelligence documents and so forth. Data on technology is also available, with new hardware appearing from the boys in the laboratory in time honoured fashion. From here it's into the game proper, a full 3D flight sim-cum-shoot-'em-up, taking the action to the surface of the moon Europa, into the mines, and even into alien territory. There are seven different vehicle types to play with in all, and no small amount of weaponry.

Styled after the *Wing Commander* series, the missions in *Absolute Zero* are based around way-point navigation. It's simple enough, and gives full freedom while helping pilots follow the correct mission path. Indeed the voice-overs are great, with plenty of contextual dialogue peppering the game.



The vehicle detail in Absolute Zero is excellent. Texture mapping, however, is almost non-existent, making it hard to judge distances.

Less impressive are the visuals. There's little texture mapping, and planet surfaces come off worst. All sense of geography is lost, the only ground detail being cities here and there. Compared to *Magic Carpet*, *Absolute Zero* suffers.

Controlling the various vehicles is vague. Spaceships lack any real character, making conflict and general flying a bind. This may be an arcade-based game, but surely there should be some attempt at approximating the feeling of flight. This lack of realism, combined with the abstract graphics has a surprisingly damaging effect on the game. Everything is far too indirect, and consequently its hard to get involved, despite the storyline's best efforts.

There's a heap of good ideas in *Absolute Zero*. Rarely have a storyline and arcade sequences worked together so well. And despite a lack of texture, many vehicles are fantastically detailed. But those drab barren landscapes leave you with no real sense of being there. Cold. ***(MR)***

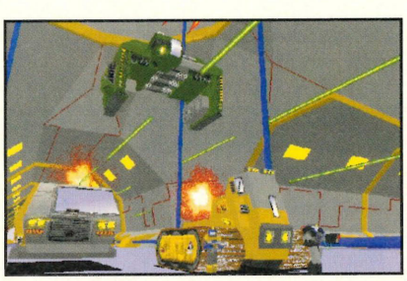
Developer: Domark US

Publisher: Domark

Contact: 0181 780 2222

Price: £39.99

Minimum system: 486/66, 8Mb RAM, 2Mb hard disk space, SVGA graphics, double speed CD drive, mouse



The underground setting is more effective than sections featuring the lunar surfaces.



The aliens begin the game with superior technology. You must try to catch up.

PCR VERDICT

Varied, but the clever background work is let down by poor action sections and ineffectual graphics.

6


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We've seen movie licenses come and go, but how about a game based on a sequel that will probably never be made?

Diane Fossey was not acquainted with this ape, but if whe were no doubt she would have called him 'Fangs'.

CONGO

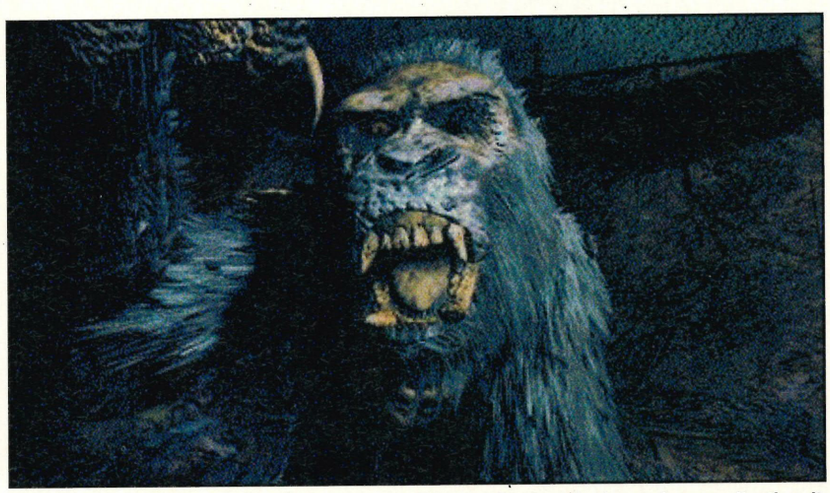








You'll have to hack your way through anything from dense jungle to old Mayan temples to find your team and that annoying talking gorilla.



A mean gorilla with large teeth and even unfeasibly long finger nails demands your attention. It appears he's likely to reject your friendly offer to rid his coat of fleas.



Video messages from this lady keep you up to date on your quest.



You find the remains of a camp here but just don't go bursting through the doors.

Developer: Illumina

Publisher: CIC

Contact: 0181 846 9433

Price: £40

Minimum system: 486 DX2 66, 8Mb RAM, double speed CD drive, 5Mb hard disk, SVGA, Windows 3.1 or 95.

Congo is the film that blew the Michael Crichton-films-do-no-wrong myth. It's also the game that proves that you need more than a few impressive animated sequences and a movie tie-in to make an entertaining piece of software. Any game based on a film about lasers, gems and talking apes hardly sounds promising.

Credit must go to *Congo*'s creators for not taking the easy option. How easy it would have been for them to knock out a platform game or an interactive movie. Instead they came up with an adventure that mixes video sequences with exploration and some intricate puzzles, to create what is basically the sequel to the movie.

You are dropped off in the middle of the jungle with only a handheld computer and your wits to find the previous team and solve the puzzles that await. The locations are joined by either pre-rendered paths or 3D interactive sequences like steering a boat across a river trying to avoid rocks or travelling through caves. These action sequences prove very frustrating as it's trial and error, not skill, that will get you through. You can never see which is the wrong route, you just click and see if you die.

The puzzles, which form the heart of *Congo*, are logical, but get very intricate the further you reach. The only problem here is that some of the items you may need to solve a puzzle are miles away and you need to explore a hell of a lot to make sure that you find everything. You also have to travel back and forth through the same locations a lot. That stinking night watchman feeling.

When playing *Congo* you always feel that you're being led somewhere, never fully at the helm. A graphic adventure should really move along at your pace, not trying to pull you here or there. If only it were possible to have combined graphics this good with a more traditional adventure gaming style, then *Congo* would have been a much better game to behold.

Congo isn't a bad attempt at creating a movie-like adventure but it is let down by the interactive 3D scenes – which are very frustrating – and the feel that the game is tolerating you rather than being played by you. The plot is a little amateurish and the atmosphere isn't at all consuming as some modern day adventures. A round of applause for not taking the easy option goes to the creators, but a whole bunch of boos from the gallery as well for coming up with an adventure that is bettered by a lot of older titles that are out now on budget labels everywhere. ***(LE)***

PCR VERDICT

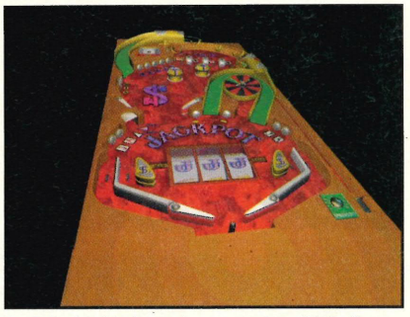
Doesn't measure up to the standards set by earlier adventure games. The 3D sections are awful.

5

PINBALL 3D-VCR

Pinball really should be left where it belongs: in the pub. It doesn't really fit into our computer world of amazing graphics, fast action and addictive gameplay. You're hardly likely to spend a few hours a night, for several weeks, maybe even months hitting two buttons to control flippers are you? Can pinball really be as compelling as *Command and Conquer*? We think not.

This latest entry into the pinball market from 21st Century (who by sheer coincidence have about half a dozen pinball games out there now) offers exactly two new features, neither of which are that impressive.



A pinball table based on a casino. Pinball Fantasies had one too – with stacks more features.

The first is a ten-ball multiball option. You need a pretty powerful machine to see this at its best, and it's not that impressive even then. Sure, your score may rocket while multiball is in play but you can't really watch what's going on because you have to concentrate on your flippers.

Then there's the VCR section that allows you to record your games. Well correct us if we're wrong, but the idea of sitting back and watching a pinball game being played out on screen with no-one playing seems a bit pointless. In fact it's one of the most superfluous features ever applied to a game.



Tarantula is actually one of the more tedious tables. It may look nice but it's pretty featureless and boring to play.

It just goes to prove that pinball game programmers are finally running out of ideas.

The four available tables are all designed using good looking 3D rendered graphics, but for £30 you are going to want something with a lot more gameplay than this has to offer. A few minutes on each table and you'll see all that they have to offer and get thoroughly bored with them.

Another major problem is the fact that games like *Pinball Fantasies*, which are infinitely superior to this, are at the moment available on budget labels for about a third of the price. And check out our exclusive *Pinball Pro* demo on *CD Review*. In the value for money stakes *Pinball 3D VCR* has a lot less to offer and is not as impressive as the plethora of other, cheaper pinball titles already out there. ***(LE)***

PCR VERDICT

Graphically good but with no gameplay to speak of and no outstanding features.

3

Developer: Spidersoft

Publisher: 21st Century

Contact: 01235 851852

Expected Price: £29.99

Minimum system: 486DX/33, 4Mb RAM, single speed CD drive, 8 Mb hard disk, SVGA



HEXEN

We've had a new set of Heretic levels to take our minds off Quake, and now an add-on level pack for Hexen. But is it enough?

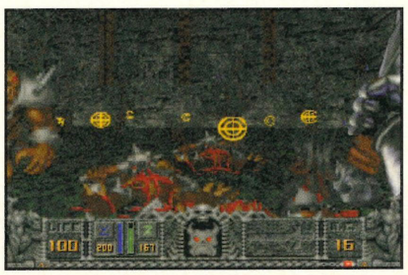
Death Kings of the Dark Citadel



Dealing with the bad guys the Paul McKenna way. We're about to make this horned beast regress to a former life. Or he'll be leaving this one behind at the very least.



Some of the blighters really have this hack and slash thing sussed. They've got shields



These gold things are discs of repulsion – handy for forcing the enemy away.



Of the three character types, the Sorcerer is the softest, but he has the powerful spells.



Ethereal gates allow inter-level travel. Trouble is, return visits to levels are often necessary.

There's something slightly disappointing about this and the recent attempt to revive *Heretic*. Bringing them back now, particularly while the world crosses its legs in anticipation of *Quake* is like forcing Elvis fans to sit through performances from his Burger King years. *Hexen* is lovely, but in the cold light of 96 it's all too easy to pick faults.

Hexen was the game which enhanced the *Doom*-gone-RPG angle of *Heretic* yet further. Levels were more expansive, special effects tweaked that bit more, and the exploration element brought to the fore. It's a style which has been further developed here, with levels that look and feel like real locations rather than arbitrary mazes. Some levels could take novices a couple of hours to complete, as befitting the 'expert' nature of this add-on pack. But there lies the rub.

While it's all well and good to increase that sense of realism, while pushing the fantasy angle and fleshing out the game world, there comes a point where wandering around just gets plain dull. Endlessly searching for that elusive hidden switch or missing key is something that happens far too often here. Such design is sort of understandable, given the fact that combat proves more varied than with the ranged weapon system of *Doom*. Here, close combat is often necessary, demanding a weird strike-then-run sort of strategy. But simply upping the size of the levels doesn't work. If anything it kills the pace of the game.

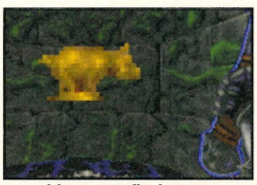
While Hexen: Death Kings totally fails to break any new ground, it is smashing fun to play.

But let's not bury *Hexen* just yet. Time has not been as kind to it as the *Doom* games and there's much that developers Raven and Id did get right. That 3D system may look blocky, but it's fast, and *Hexen*'s monsters are capable of scaring the pants off the player at times. And just like Id's other releases, the control system is slick. While *Hexen: Death Kings* totally fails to break any new ground – after all, it's just an add-on disc – it is smashing fun to play.

Purely in terms of a pound per level, it's hard to criticize, and Deathmatch fans are catered for with newly designed multi-player levels. But having battled right through the original *Hexen*, are you really be gagging to dive back in there. More likely that twenty quid will be kept by, ready for that crucial next Id release. You know the one. ***(MR)***



Go for a dip in your local well...



...and here we find one porky little piggy.



Now it's time to turn the bad guys into Sunday roast.

Developer: Raven & id

Publisher: GT Interactive

Contact: 0171 258 3791

Price: £19.99

Minimum System: 486/33, 4Mb RAM, CD drive, 4Mb hard disk space, mouse or joystick optional

PCR VERDICT

Though fast and frantic, Hexen is already showing its age. And the levels are too expansive.

7

ARCADE AMERICA

A flaccid American kid belly-bounces his way across the good old US of A. Hurray.

Gee, those wacky Americans. What will they think of next? *Arcade America* shows just how far down the slippery slope things can go, by attempting to palm off a couple of primitive early-80s platform and maze game ideas on us, in the hope that we won't notice the lack of depth behind some gorgeous cartoon graphics and wacky sound effects. Then, to add insult to injury, they completely screw up the most basic of game ideas anyway. They're having a laugh at us, there's no other explanation.

Arcade America invites us to "grunt, jump and belly bump across the country". Perhaps, in the small print, they should have mentioned that the journey would take the form of a simplistic road racing, collect and avoid game, which features only three possible positions to place the car in.

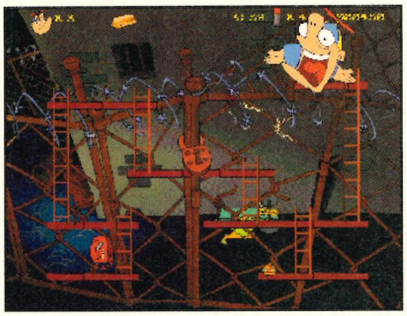
Sophistication? Not round here mate. But that's not all. For the land of the free also appears to be the land of the substandard platform game, where our hero Joey – a regular Californian boy with his arse hanging out of his jeans, and his brain lost somewhere in his baseball cap – gets to jump around, flip switches and attack the bad guys with his catapult or his frontal flab. Except that the bad guys regenerate when on levels which must be revisited, some disappear then reappear right on top of the Joey, and others collectively display the intelligence of a tub of lard. It takes a spectacular inability to grasp simple gameplay mechanics to make a game this frustrating and unplayable. Make no mistake, countless platformers on the dear old Sinclair Spectrum did it better.

Quite what a dog of a game is doing with such attentive presentation, a likable soundtrack and glorious cartoon graphics is anybody's guess. *Arcade America* looks really rather wonderful. But just try playing it. Or rather, don't. You may lose faith in humanity as a result. ***(MR)***

PCR VERDICT

A waste of cartoon graphics – Amnesty International should be informed of the torture this causes.

1



Some levels have extra hidden bonus rooms, which are accessed by throwing a switch. Complex gameplay is not a thing of the past.



Ultra-realistic 3D road racing in America? No. You switch between three lanes on a tiny animated scene at the bottom left of the map.

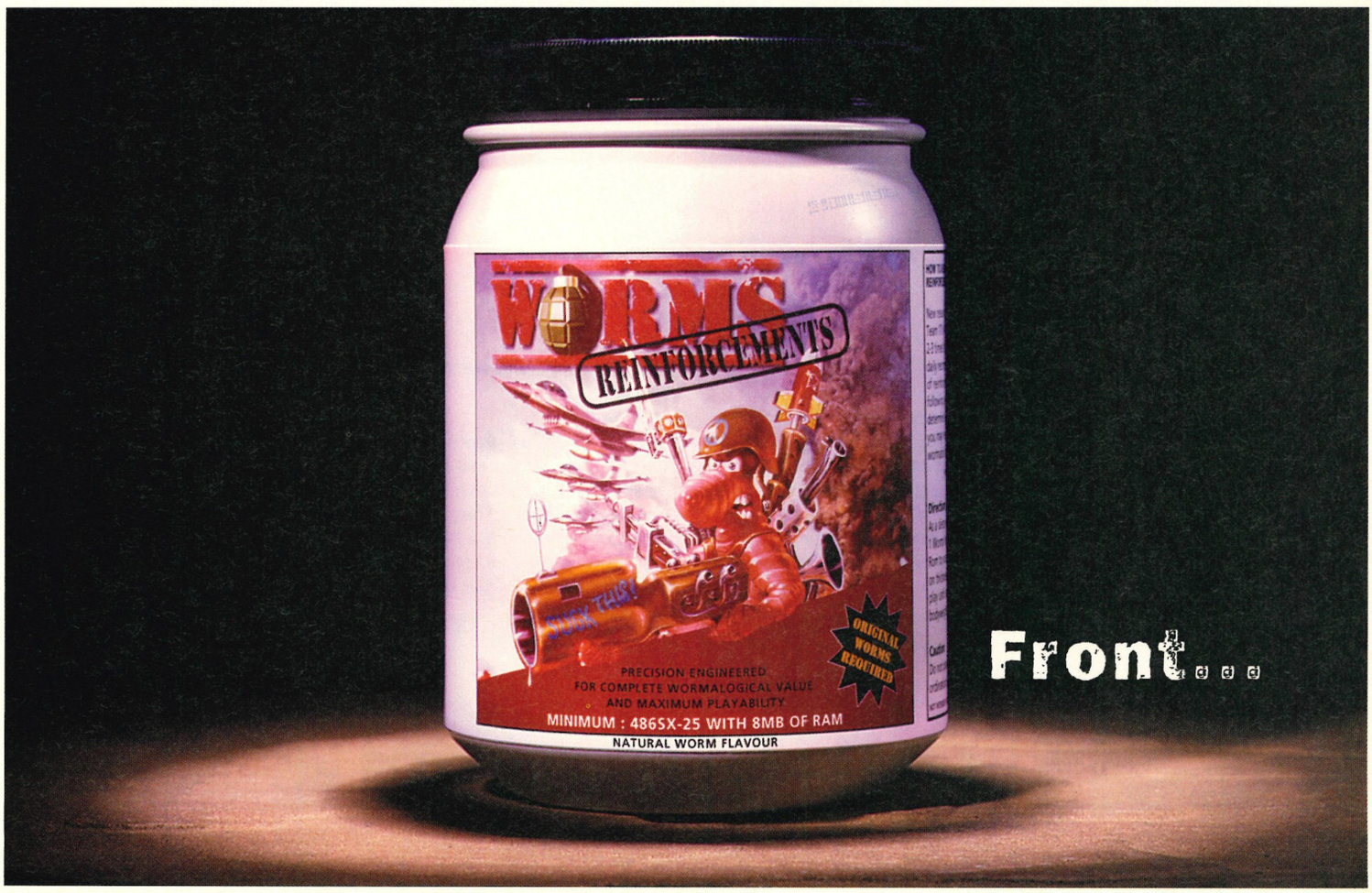
Developer: 7th Level

Publisher: 7th Level

Contact: 01632 355666

Expected Price: £35

Minimum system: 486DX, 8Mb RAM, 400K hard disk space, double speed CD drive, Windows 3.1 or 95



BUDGET BONANZA

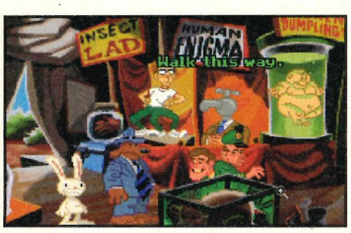
© 1996 Images by PhotoDisc

PC Review presents the definitive guide to budget games. Over 50 games, all classics, each costing less than £15.

Sam & Max Hit the Road

£12.99 Lucas Arts/White Label

Balk at the notion of a detective dog and a psychotic rabbit if you must, but this tough-talking adventure in Americana is arguably the finest game ever made. Tightly scripted, utterly hilarious and armed to the teeth with snidey whacks at living the twilight world of Trailerparkland USA.



Terminal Velocity

£12.99 Kixx

Taking *Descent* outside for a breath of fresh air *Terminal Velocity* boasts a similar 3D engine and smooth gliding. With a shoot-on-sight mentality you fly dangerously over a barren landscape before diving into underground tunnels. Most effective when playing the network option.



Ultima Underworld: The Stygian Abyss

£11.99 EA

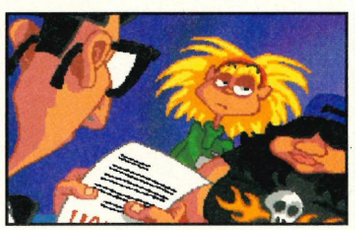
It's four years old, the graphics are all muddy but this, the first in the series, remains a classic. Immersive locations and *Doom*-matching 3D help, but what makes *Ultima* such a great RPG is the spell system and the ever-mutating story line. Monsters. Magic. Great.



Day of the Tentacle

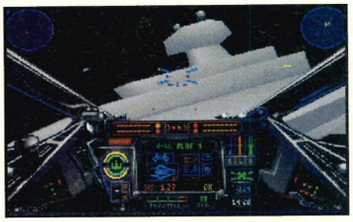
£12.99 Virgin White Label

Two years ago, nerds ruled the world. And in among the Beavises and the Waynes came LucasArts' contribution to misfit yoof culture. Well scripted and genuinely funny, DOTT is time travel in an Aerosmith T-shirt, dumb-arsed, slapstick and blessed genius animation. You'll laugh. You'll cry. You must get it.



X-Wing
£9.99 Virgin White Label

It's no surprise then that *X-Wing* has dominated the cheapo charts of late. While it looks cruelly dated the cool-shooting agenda remains the same with impossible steering decisions melting into rapid fire as you swoop through space with a mighty filmic score for accompaniment. Gaming should always be this way.



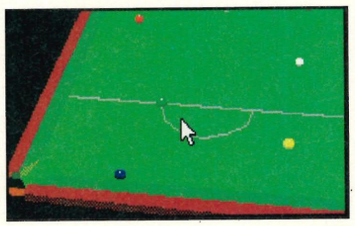
IndyCar Racing
£14.99 Virgin White Label

Concrete and steel make the loudest of bangs and although the sequel has stolen the champagne of late, this ancient racer still clatters hard into the pixallated barriers. Walls scream towards you and as you tear round the tracks with imaginary foot glued to the floor, instinct tells you that nothing must get in your way. Cheap thrills for sure.



Jimmy White's Whirlwind Snooker
£14.99 The Hit Squad

The widest of snooker wide boys has fallen from his chirpy perch of late leaving this excellent smash-a-bout as an epitaph to his glory. Cheeky balls grin, time-flies urge you to get on with it and the table barks with a realism stolen from every snooker hall in the land. But Virtua Snooker's better!



Michael Jordan in Flight
£14.99 The Hit Squad

If you've got the Air Jordans, watched the programme on Channel 4 and have an unquenchable desire to launch into a slam-dunk, chances are you'll be up for a bit of three-on-three. Ultra-fluid player movement, lighting pace and some worthy advice from the over-paid Gulliver himself make up for the shallow gameplay and the fact that only one end of the court is available. It's the world's third-best basketball game.



Rise of the Triad
£12.99 Kixx

Uh oh, here comes another *Doom* clone. This time the demons are drugs barons and the violence factor is turned up to 11. *Scarface* meets *Westworld* in the corridors of sour. Blood spurts everywhere, the armoury is impressive and the bodycount like that of an abattoir after an extremely busy morning. Hardly subtle and lacking depth *ROTT* can't really be called a classic. But it sure is worth a blast.



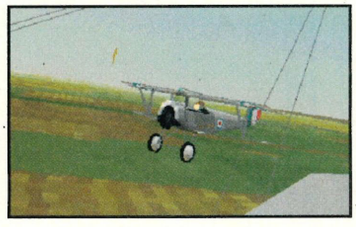
TFX
£12.99 The Hit Squad

Peace is fragile, and you are in charge of the Tactical Fighter Experiment, keepin' duh peace with bullets and bombs. From this murky landscape emerges an original and underrated flight sim. Big bruising graphics and complex gameplay provides creepy atmosphere by the cargo load and the flashiness means *TFX* has barely dated since it's arrival. Reason enough to go out, be ruthless and shoot a bogey.



Dawn Patrol
£14.99 Virgin White Label

From the creak of the wings to the chug of the engine, everything in *Dawn Patrol* is gloriously antique. Dogfighting is the name of the game and once you've got used to the primitive sky machines this proves to be a riot of classic combat that almost recreates the sheer bloody lunacy of flying around with only a pair of goggles for protection. Science? Pah, who needs it. Sopwith's are go.



Desert Strike
£9.99 Gremlin

Despite the monotony, the shaky scrolling and the restricted environment *Desert Strike* has something that endears it to lots of gameplaying pilots. Namely, fun. Whatever its flaws, and yes there are many, this primitive-looking roustabout is as close to the arcade as you can get without going up to the counter and asking for change. Strategy, control and more fancy shootin' than is morally decent.



Great Naval Battles
£14.99 Kixx

Nine tactical battles,fine presentation and minute historical detail characterise the greatest naval blast-a-rama that this magazine has ever seen. Spanning the entire WW2 conflict, the level of involvement is all-embracing and as you plan, manoeuvre and inevitably light the touchpaper on the giant guns, you can't help feeling that re-writing history is just part of the fun. A massively absorbing game.



Five Tips For Top Bargain Hunters

1. Take your time
Remember that when you pay for a much-hyped new game you are paying for the moment. Those crucial hours when that game is the most important game in the world. Think on. Wait a few months, even weeks, and you'll be able to pick up the same game for a vastly reduced price.

2. Shop around
Yes, it sounds obvious but prices of games can vary wildly from shop to shop and huge savings can be made. Get a list of stockists in your area. Pick up the telephone. Also, look out for compilations. Ask the price of your desired game and voila – cheapo Shangri-la for a lot less moolah.

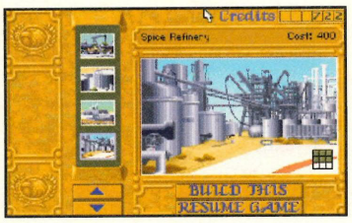
3. Cheapness isn't always labelled
Here we enter the realm of the special offer, the accidentally unlabelled and the mentally challenged shop manager. Take a good look around the store, scanning the shelves from top to bottom. After several hours and one blinding headache your sure to have found a bargain. Now, rush out of shop, punch both arms in the air and join the nearest religious cult. Remembering to get some Anadin on the way.

4. Take Advantage of Reader Offers
Free games, top magazines and not a worry in the world for twelve long months. Sorted.

5. The foreign approach
Buy a pair of over-long shorts, a colourful rucksack and some tasteless shoes. Go into your local game emporium whistling Vanessa Paradis' *Joe le Taxi*. This will confuse the assistant and in his panic there is a decent chance he may hand over several top games. Don't give the game away by calling him 'mate' (foreigners don't use that word), and when the deal is done, run like buggery.

Dune 2
£12.99 The Hit Squad

Big selling book, dreadful film, excellent PC game. *Dune 2* could have been called *Alien War On Spice Island* and still been one of the finest strategy games ever. Complex and absorbing this sim war involves much blasting and plenty of thought. *Dune 2* is C&C's older brother, y'know, and that makes it easily worth the cash by itself.



Space Hulk
£11.99 EA

Paying more than a passing nod in the direction of the *Alien* films, *Space Hulk* crawls through the blackened tunnels of disused space ships in search of scary monsters imaginable. Throughout the game the atmosphere is chilling. Distant moans, spurting steam and eerie whirring fans disguise sudden and highly explosive moments.



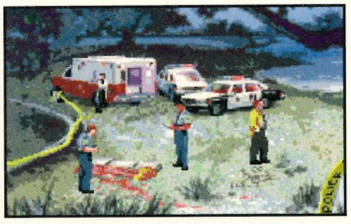
Perfect Sport
£14.99 Instant Access

Don't be fooled by the title. What we have here is *Jack Nicklaus Golf* and *On The Ball* in one price busting package. While Jack is as dated as his golfing game the old thing still plays a pretty mean round. Pre-PGA, it topped the leader board. Expanding the ball, On the Ball (World Cup) is footie management with a sense of humour.



Gabriel Knight – Sins of the Fathers
£9.99 Sierra Originals

Considering the recent mainstream-isation of the *X-Files* this could be something of a timely budget release. Voodoo, New Orleans and all manner of strange circumstances help *Gabriel Knight* to be one of the spookiest adventures around. The puzzles are twisted with a certain Lynch-factor.



Overlord
£9.99 Virgin White Label

The first outing for Rowan Software's acclaimed flight simulator engine, *Overlord* plonks you into the cockpit of a Spitfire in the middle of WW2 and orders you to hit the target. The missions are varied, the planes superbly detailed and the action heavy with billowing fire and exhilarating pace. Simple, atmospheric and available in the brilliant clarity of SVGA. Plane blokes, buy this.



FIFA International Soccer
£11.99 EA Sports

With the 96 version leaving this seminal kick-about languishing on the bench, relegation to the budget shelf extends its career. Expect detailed sprites, an isometric angle and fluid, beatific football complete with backheels, chips and curlers into the top left hand corner of the net. *FIFA* is dated, sure, but the playability factor remains the same. You played a good game, son.



Under A Killing Moon
£12.99 Kixx

Caused quite a stir when it was first released, this interactive movie cum point-and-click adventure, featured some star talent in almost-convincing-enough performances. The scripting was reasonable, and *UKM* had a very sinister tone. A sequel, also from Access is already in the works – look out for a full-price release from Virgin Interactive some time this year. Watch out for that crazy Indian, though.



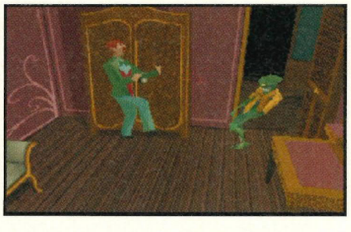
The 7th Guest
£9.99 Virgin White Label

Kick-starting the whole CD-ROM thing for games, *The 7th Guest* is both graphically hypnotising and rather shallow. A taste of things to come, no doubt. Despite its obvious flaws, this tale of spooks loose around a house is a masterpiece of dazzling special effects and mildly irritating puzzles. Show it to your PC-unfriendly mates and spend long rewarding afternoons shouting: "Who's in the house?"



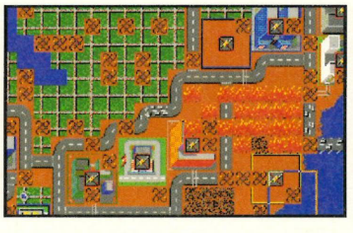
Alone in the Dark
£12.99 Virgin White Label

Name-checking author HP Lovecraft this benchmark in PC horror may be visually primitive but the antics of Mr Pointy Hands, private detective Edward Carnby never fail to entertain. Ambience creeps uncomfortably around the grim locations, approaching cinematic sensibility, while leaving a taste of pure horror sticking heavily in the back of the throat. Go carefully.



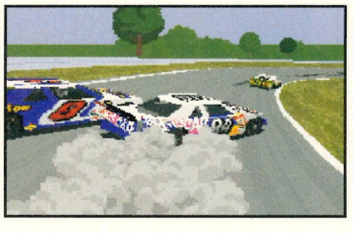
Sim City
£9.99 Maxis

This giant of a simulator needs no introduction. It is, quite simply, one of the finest PC games ever released. Creating your own working city you will become a monstrous egoist holding destiny in your hands as you erect statues of yourself in public places and change people's lives on a whim. The rumour that Sim City is better than life is currently being investigated.



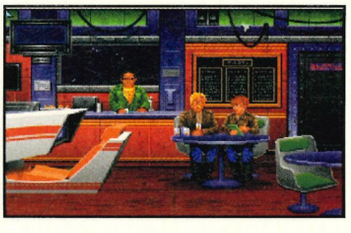
Nascar Racing
£12.99 Virgin White Label

Although it moves like a slug on less powerful machines, *Nascar Racing* remains a triumph of motor violence on asphalt. Mirroring the values of the arcade, collisions and cut-off's are as essential as pressing the accelerator floorwards and as you bang and bolt around the smoke billow becomes an ever-present addition to your vehicle. Buckled metal never tasted so good.



Wing Commander
£11.99 EA

Marrying *Flash Gordon* to *Battlestar Galactica* proved to be something of a masterstroke for this most seminal of space sims. Depending on who you talk to it is either an inspirational glance into future space or a load of nonsense masquerading as a shoot-'em-up. It has already sold in huge numbers. Sequels inevitably followed but opinion remains divided.



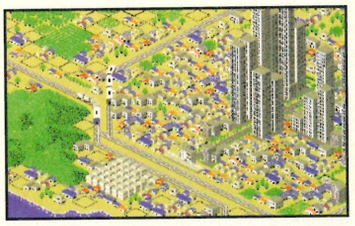
Chuck Yeagar's Air Combat
£9.99 The Hit Squad

Almost older than war itself this little WW2 flight sim moves like lightning and is, in gameplaying terms, a purist's dream. Six planes and 50 missions allow scintillating dogfights that spit bullets across two generations – from, WW2 to Vietnam. Choose your conflict and fire away.



A-Train
£9.99 Maxis

Rail bosses looking to shift passengers at the lowest possible cost could learn a thing or two from sitting down in front of *A-Train*. Essentially *Sim City* on tracks, the graphics boast fine detail and the gameplay has a similarly complex structure. When you tire of getting folk from A to B you can do the stock exchange thing. Spend away.



Beneath A Steel Sky
£9.99 Virgin White Label

Apocalyptic name, apocalyptic game. Hurled into a barren world of totalitarian oppression you play the character of Robert Foster and point-and-click your way through a mazey computer city in order to save humanity from the usual band of evil lunatics. Naturally, this takes some time but the tasks are involving and the plot gripping.



World Cup USA 94
£9.99 US Gold

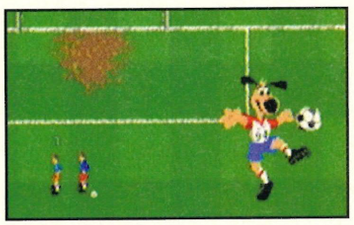
The greatest World Cup since 1978 makes for a classy and sophisticated PC game that allows you to replay the tournament with the addition of the England team if you wish. Arcade and strategy make for involving matchplay using the Sensible overhead view. *World Cup USA* can be customised to your own requirements but the players names are not real in spite of the official rights being paid for.

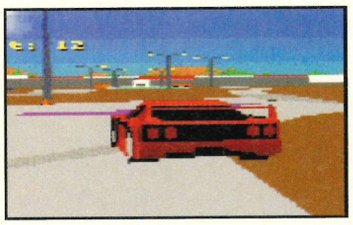
Car and Driver
£9.99 The Hit Squad

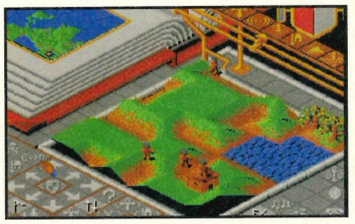
The originators of the US magazine must've stayed up all night thinking of that inspirational name. Somehow it became a huge success and riding on its back spoiler was the PC game, a place where 3D thrills have the high-revving attitude of a Chevrolet. Numerous locations and 10 different cars jostle for space alongside tips, tactics and enough four-wheelery to make Jeremy Clarkson's head spin.

Populous
£14.99 The Hit Squad

Characterised by all manner of earthquakes, fires and floods, *Populous* was one of the first God games and played a large part in growing a small fortune for a certain Peter Molyneux. But don't hold that against it because this is very inventive gaming that pits you and your tribe of little people against the savage beasts of nature. Hundreds of miniature worlds and one long journey without deodorant. Cheers.







Soccer Kid
£7.99 Krisalis

Platformers are the PJ & Duncan of PC gaming. Lightweight, escapist yet somehow endearing – and popular among ITV viewers. With a ball at his feet for novelty value, this kid shoots his way through all manner of baddies, looks decidedly cute and causes high levels of addiction in people old enough to know better. And when an opera singer gets on the ball… Woah!

Mortal Kombat
£8.99 VIE

Managing to offend just about every moral saddo this side of the 12 disciples, *Mortal Kombat* became a notoriously super game. Becoming a folk devil was all part of the plan for this bloodiest of street fights, and while the outraged talked of societal breakdown the rest of us got on with the business of finishing our opponents with the deadliest of moves.

Hired Guns
£9.99 Psygnosis

Dateline: 2712. Situation: Critical. Response: Save imaginary planet by shooting everything in site. *Hired Guns* puts you in control of four angry young men who blast through a hostile environment where an eerie passage is the closest thing to safety. Sure, the graphics are lazy and the gameplay becomes repetitive but the explosive nature of the action is thrilling.







10 for under a Tenner

Caesar 1
£7.99 Sierra Originals

Empire building and management with a Roman flavour. Comb your hair forwards and march with this very unusual God sim.
Rating: 3 Piggies

Tornado
£4.99 Action Replay

So realistic the RAF used it as a training aid. Super-fast powerflying without disturbing any farmyard animals. Woof, bark, donkey etc.
Rating: 3 Piggies

Harpoon
£4.99 Action Replay

Torpedoes are not the only fruit. Nope, there are depth charges, sea mines and missiles too.
Rating: 3 Piggies

Apache Light
£4.99 Action Replay

Imagine a brilliant helicopter sim with no campaigns or multi-player option. You've imagined *Apache Light*, low on calories but high in fibre.
Rating: 4 Piggies

Wizkid
£4.99 Regenerator

Wonderful collision of arcade, adventure and puzzle games that moves like a fly to you know what.
Rating: 4 Piggies

Archer Maclean's Pool
£9.99 The Hit Squad

Not about swimming or archery, this cool poolhall shuffle was bouncing balls off cushion's when Virtual was just something you nearly did.
Rating: 4 Piggies

Zool
£4.99 Regenerator

Join the ninja-beast who definitely isn't an ant in this platform romp. Showing its age, but respectable enough and at a dead good price.
Rating: 3 Piggies

Carrier Command
£4.99 Kixx XL

Still deeply satisfying to old seadogs and aeronautical stratigists alike.
Rating: 2 Piggies

The Even More Incredible Machine
£9.99 Sierra

A good deal of satisfaction can be garnered from your involvement in the clockwork tick of a perfect machine. Honestly.
Rating: 3 Piggies

Magic Boy
£9.99 Empire

Topping the budget charts like Babylon Zoo without the sickening vocalist, Magic Boy is cuter, scrolls better and never says 'spaceman'.
Rating: 2 Piggies

Contact List

Regenerator
0161 832 6633
Ultra cheap label offering games that were all pretty big in their time. A relatively new label, only launched in November 95, with some 12 products on its books. Plus four new launches a month.

Hit Squad
0161 832 6633
A label under Ocean which as well as getting Ocean products, license third party stuff from 'everybody and anybody.'

Digital integration
01276 684 959
Responsible for the Action Replay range and the PowerPlus compilations. Generally does budget versions of Digitial Integration, Empire, Infogrames and Loriciel product.

Kixx XL
0121 625 3366
A division of US Gold, this label tends to get Microprose, FormGen, Krysalis, Access and old Delphine and LucasArts products.

White Label
0171 368 2255
Certainly one of the most respectable budget labels, this Virgin Interactive front gets first refusal on the LucasArts stuff and plenty more besides.

EA Classics
01753 549442
Look out for the CD-ROM version of many of EA's games like Syndicate – listed under Hit Squad for floppy release.

Empire
0181 343 7337
Magic Boy is its only outing right now, but look out for compilations over the next few months.

Instant Access
0181 205 2596
Turning its back on encryption software and jumping feet first into compilations.

Sierra Originals
01734 303322
Dead cheap re-issues of Sierra's point-and-click adventures and strategy ranges.

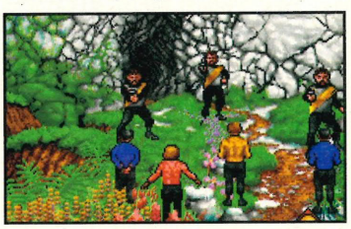
Gremlin
0114 2753 423
Used to run a budget label called GBH (Gremlin Budget Hits) but now it's just 'review the price' rather than rebadging it.

Psygnosis
0151 282 3000
Like Gremlin, not a budget label, but rather some agressive price reviewing and dare we say it... 'dumping'!

Cannon Fodder 2
£9.99 White Label
Typically, the folk at Sensible Software manage to bring comedy cuteness into the bleakest of situations. War, what is it good for? Laughing at, apparently. Don't let the appearance fool you – *Cannon Fodder 2* is a worthy sequel to what came before. *Sensible Soccer* with guns across all manner of jungles, tundras and deserts with enough heavy artillery to send Conan Powell scurrying back to base camp. Anarchic gaming at it's best.



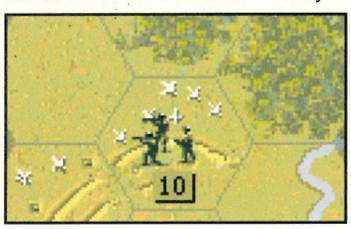
Star Trek: 25th Anniversary CD
£12.99 Virgin White Label
Before that bald bloke came along to spoil the party, *Star Trek* was a thankfully ludicrous affair prone to clichéd bouts of Spockisms and technology that bordered on the insane. Although it feels a dated this adventure in deepest, darkest space still throws large amounts of poisonous alien dust down the trousers of the pre-tenders whilst whistling a merry tune called 'Kill Anything Hostile'.



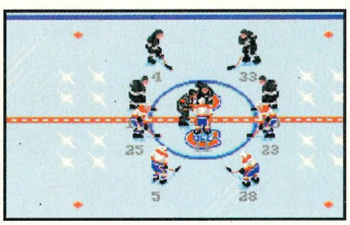
Raptor
£9.99 Kixx XL
Vertical scrolling is not exactly standard in PC games yet *Raptor* uses it to create some of the most devastating velocity ever seen. Lovingly crafted landscapes fly by as you reach into your armoury and pull out a frightening array of missiles, blasting and destroying anything that stands in your way and generally behaving as badly as your funds will allow. It's mindlessly, hedonistic and thank the Lord for that. Count the pigs.



Panzer General
£9.99 Ergo Software
Like chess, war is three parts strategy, one part action. SSI understands this well. *Panzer General* raises more tactical questions than a table full of nuclear scientists on a day out at Sizewell B. Somehow it remains highly playable, set among the heavy metal rolling stock of WW2 and bolstered by SVGA graphics and entertaining animation. For purists and novices alike this game could well prevent any unwise career moves into the military.



NHL Hockey
£11.99 EA
The roar of the crowd. The chilling grinding of skates on ice. The dull thud of a punch in the mouth. Ice hockey is fun for all the family and *NHL* is one hell of a ride. Instantly playable, even for the Anglophile, this carnival of sticks, stones and broken bones brings all the heady attitude of the arena with it, including much Statto-ing. The sequel may be even better but the guy in black and white said the decision was marginal.



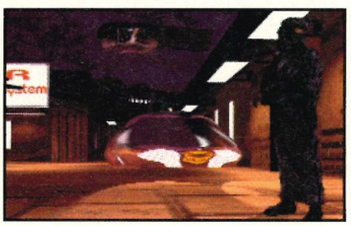
Hexx – Heresy of the Wizard
£9.99 Psygnosis
Dungeons, dragons and real-time 3D make up for a lack of sophistication in the graphics department and mean *Hexx* is one of the finest games in the RPG genre. Initially claustrophobic, the spells and weaponry soon reveal a highly playable *Ultima*-style agenda where the bad guys disappear in a haze of putrid green fire. Simple and traditional enough to appeal to the pointy hat brigade.



Rebel Assault
£12.99 Virgin White Label
A million copies sold and rising. *Rebel Assault* may be the poor little brother of the *Star Wars* games but its slick graphics and high octane action make it a spectacular arcade game. Combat, chase and shoot and a pedestrian *Doom*-style mission provide variety and although its a brief encounter *Star Wars* fans will embrace it.



Syndicate
£11.99 EA
A slaughterhouse of a strategy game, *Syndicate* drips with an unease and manages to be shocking and sophisticated at the same time. Maybe it's the flame-throwers, maybe it's the Uzis, but somehow all this carnage makes real sense. Stylish ultra-violence from a twisted future world where logical thought buys you guns.

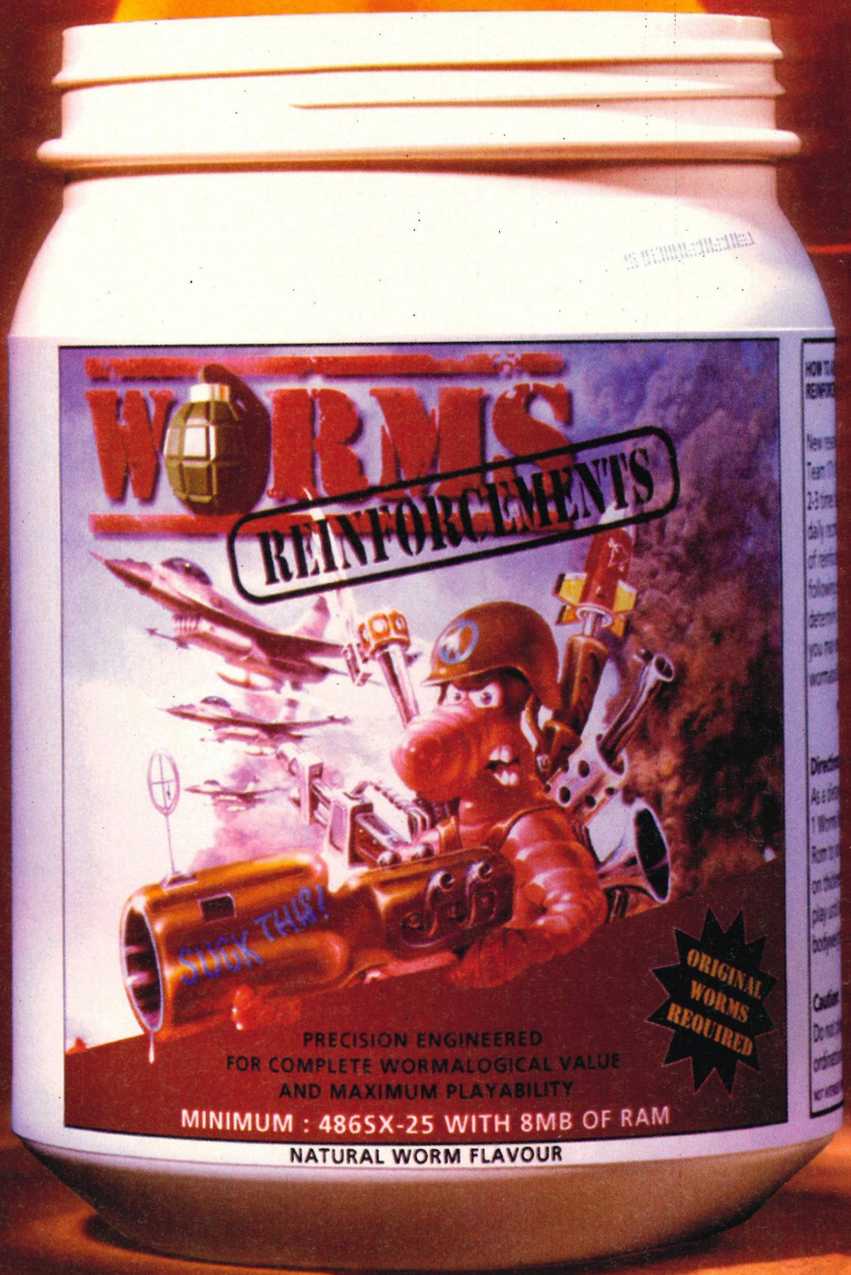


Shadowcaster
£11.99 EA
Before Raven Software held hands with Id to make the excellent *Heretic* they wrote something of a blueprint in *Shadowcaster*. Half *Doom*, half *Ultima*, the game is heavy on blood and big on atmosphere with growling monsters. Notable elsewhere for featuring underwater swimming. Something strangely overlooked in most RPG's.



Back Again!





So you've got the measure of Worms? You've got them right where you want, squealing on the spot. They're impotent beneath your stubby little thumb and now you're ready to press hard. Oh you think you're a real man now don't you?

Well sorry to burst your bubble but those Worms just got tougher. That's right: the pointless violence just turned inane, the addictive gameplay is now like life support. You don't stand a chance.

Tel : +44 (0)1924 271637
Fax : +44 (0)1924 267658
Email : support@team17.com
URL : http//www.team17.com/

Worms - the super-playable multi-player arcade strategy carnival has just got bigger and oh-so-much-better! This stunning ammo-pack beefs up your Worm like you could never imagine!

Distributed under licence from Team 17 Software Ltd.

Play to Win

Lost on a sea of unhappiness? Marooned on an island of frustration? Has your sanity long since abandoned ship leaving you doggy-paddling in a quagmire of despair? Don't despair. Instead, prepare to be winched to safety by our tips and cheats.

Warcraft 2 PCR 53, Score: 9

Rather like the original *Warcraft*, *Warcraft 2* has a multitude of rather helpful cheats hidden within. Just hit [Enter] then type them in during play and Bob will reveal himself to be your uncle.

VALDEZ: Gives you 5000 oil.
SHOWPATH or ON SCREEN: Displays the entire map.
MAKE IT SO: Speeds up building and training units.
NOGLUES: Lets you wander through magical traps unharmed.
THERE CAN BE ONLY ONE: Takes you to the end of the game. What a cheat.
UCLA: Displays 'Go Bruins' on screen. Yes.
HATCHET: Harvest your lumber with just two mighty chops.
TITLE: Increases the speed of your units.
SPYCOB: Gives you 5000 oil. More oil. Great.
NETPROF: Treat yourself to a Disco 2000 laser show. Sort of.
DAY: Displays 'fief' on the screen. How marvellous.
FASTDEMO: Makes the demo scenes at the main menu start faster.
GLITTERING PRIZES: Instant 10,000 gold, 5000 lumber and 5000 oil.
IT IS A GOOD DAY TO DIE: Our favourite – Invincibility.
SWAPMASKS: 'Let loose the Fogs of war!'



Type: IT IS A GOOD DAY TO DIE and... you won't die. Excellent.

Rebel Assault 2 PCR 52, Score: 8

Last month we slipped you all the level codes this month we've unearthed something far more curious. It seems that indeed, the force IS with you.

First press [Alt] and [V] then type LETGO when prompted, to engage *Rebel Assault 2*'s Force Mode. Now by pressing the following keys you'll unleash all sorts of treats.

+	Decreases your damage. Handy.
-	Increases your damage.
[Alt]+ E	Awards you with extra lives
[Alt] + L	Gives unlimited lives
[Alt] + V	For a secret enhancement. Hmm.

And the mode business doesn't stop there. Oh no. For not only is there a Force Mode there is Yoda Mode too! Firstly ensure you are in Force Mode then type ISNOTRY to activate Yoda Mode. Now press the following keys and combinations to enjoy the effects.

[Esc]	To skip the current level.
[Alt] + J + ?	Jump chapters. Where the '?' is the level number.
[Alt] + P	Activates auto play mode, where the game plays with itself. As it were.
[Alt] + M	Shows you all the movies Sit back and enjoy.
[Alt] + V	And again, [Alt] + V. Which performs a strange secret thing.

Worms PCR 51, Score: 9

Have you got *Worms*? Not the hideously unpleasant internal parasite. We're talking about *Worms* the action strategy game for your PC, featuring, appropriately, worms. If you have then there's probably a couple of things you should know.

You can create your own custom levels? It's easy. Simply exit the Team Selection screen and enter the Level Generator and press the spacebar. Now you can type in any string of letters and numbers and the game will use them to create a brand new level. Your name, your cat's name, anything. It's magic.

If any of your new landscapes particularly tickle your fancy then pause the game and write down the code so you can replay them. And did you know that if you type BAABAA during the game gives you infinite Banana Bombs, Sheep, and Miniguns?



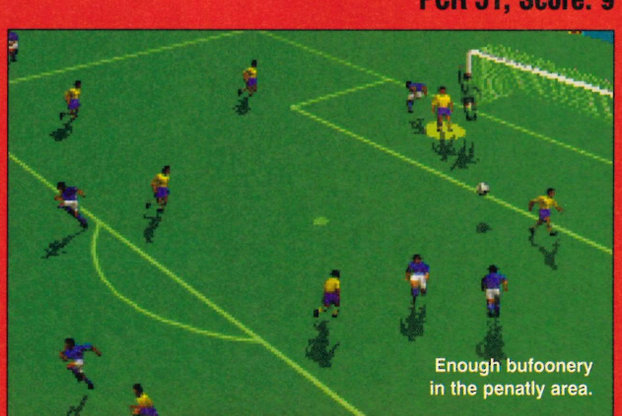
Scattered multiple explosions with our Worms tips.

FIFA 96 PCR 51, Score: 9

Bit of a sneaky one this. It seems that all you've got to do to get the goals you so ardently crave is perform the following simple and completely legal manoeuvre

As soon as you get the ball make your way to the edge of the pitch and peg it hell for leather towards your opponents net by holding down the [Ctrl] key (or whatever your 'sprint' button is). You should find that opposing players have a rather hard time timing their tackles as you hurtle by and, in the unlikely event that they do make contact, it'll result in a throw-in to you. And that's not all. When you finally reach the corner flag, merely releasing the [Ctrl] key (or 'sprint' button) will prompt your player into performing a perfect cross-goal lob which, provided your team have their wits about them, will most likely be directed across the line. And if you don't trust your team mates to finish the job for you, you can quickly switch players and go for the header yourself.

Alternatively, if the opposition up ahead looks a bit tasty you can release your sprint key early and try and curve the ball into the back of the net.



Enough bufoonery in the penatly area.

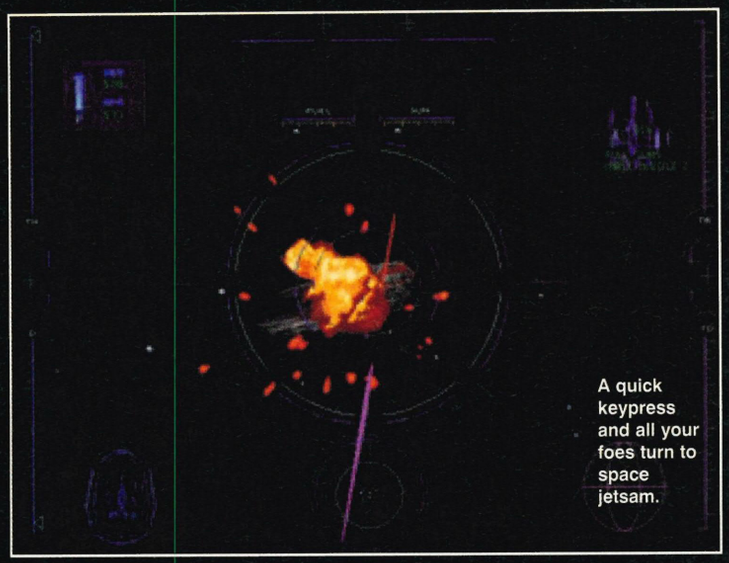
Wing Commander IV

PCR 54, Score: 7

The *Wing Commander* series continues unabated with the startlingly named *Wing Commander IV* featuring, once again, Mark Hamill, Malcolm McDowell and the fabulous John Rhys Davies. It' a right rollicking adventure and which may be enhanced thus:

First of all start the game from the DOS prompt with the command WC4 –CHICKEN.

And if that wasn't fun enough by pressing [Ctrl] and W you'll instantly destroy any craft you've got a lock on. Nice. Or if you can't be bothered to get a lock on them pressing [Alt] + [Ctrl] + W will destroy them wherever they are. Great.



A quick keypress and all your foes turn to space jetsam.

Fury 3

PCR 50, Score: 7

It may look like it's called Fury 3, resulting in fans of the game searching high and low for Fury 1 and 2 but it's not called that at all. It's rather stupidly called Fury-cubed, okay? Anyway, on with the cheats. Just type them in and you're off.



Ah-ha! That'll be TUFENUF in action again, to boost the shield.



Wonder if Bill Gates ever conquered this level without cheating.

TRYMEON	Invincibility.
IMTUFF	A mere 30 seconds of invincibility.
TMWORMIT?	Level warp, where '?' equals the level between 1 and 8.
ICUNOMO	Delivers 30 seconds of invisibility.
LIVINITUP	Delivers some Turbo units.
GIVINITUP	Gives 1000 Turbo units. Cool.
SSMOKIN	Gives 950 Turbo units… should you need them.
PACKIN?	Gives the weapon of your choice, where '?' is its number.
URDUSTD	Gives super-turbo speed.
JUMPNIT	Takes you to the end of the level.
TUFENUF	Tops up your shields.

And rather less usefully…

FRAMEIT	Shows the frame rate.
SCOPEIT	Turns on the fabulously exciting oscilloscope.

Civilisation 2

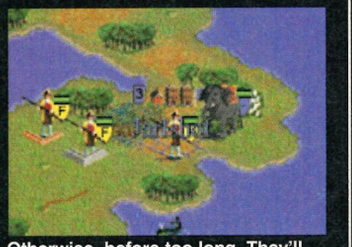
PCR 54, Score: 9

A top game this one. Behind its cold facade of little blokes on little maps (as it has been described) lies a hot-bed of political unrest and extreme genocidal violence. Lovely. Unfortunately, newcomers tend to find it a bit befuddling, resulting in them getting pasted every five minutes.

This can be avoided by choosing to research gunpowder as soon as possible. In the skills menu don't give anything else a second glance. It's that gunpowder that's going to be your saviour. Once you've acquired it don't pass it on to your enemies, that way it'll take them ages to catch up. Enabling you to use your new musketeers – the hardest, meanest most lethal troops you can have early on – to thoroughly thwomp anybody who so much as looks at you a bit funny. Bang.



If you've got the gunpowder, keep it to yourself. Don't even contemplate lending the recipe to your neighbours.

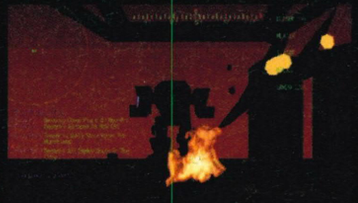


Otherwise, before too long, They'll be lining up on your boarders threatening to end your game.

MechWarrior 2

PCR 47, Score: 7

There may be more Mechs than you can shake a large stick at already in *MechWarrior 2* but it's always nice to have a couple more isn't it. As Aunt Nora used to say before she was wheeled away, you can never have too much of a good thing, and *MechWarrior 2* is, indeed, a very good thing. So don't be shy you lot, come on, dive in!



Get three new mechs to drive around in MechWarrior 2.

To get your mitts on those extra mech follow the following three pifflingly simple steps.

Firstly select Trials of Grievance from the main menu. Nextly, select the star configuration option (you know, the five-pointed star) for the Mechs in your group.

With us so far? Now erase your current call sign at the configuration screen, and replace it with ENZO. Then, if you enter the Mech lab there'll be three brand stomping new mech-beasts for you to have a go on: the Tarantula, the Battle Master and the Elemental combat armour. All mighty fine in their own respective ways.

You can take them out for a run round town, but be sure they're back in the garage before your father gets home. Don't forget to replace any petrol you use, and if there's just one scratch on them, there'll be trouble.

Hi Octane

PCR 46, Score: 8

And you thought that hovercrafts were merely for crossing the Solent between Portsmouth and the Isle of Wight. How wrong you were. In the future they're going to be used for violent and races to the death. Boost your chances of survival by pressing the following:

[Alt] + [F1]	Destroy yourself.	[Alt] + [F5]	Shield top up.
[Alt] + [F2]	Destroys all enemies.	[Alt] + [F6]	Adds an extra lap.
[Alt] + [F3]	Fuel top up.	[Alt] + Y	Autopilot on.
[Alt] + [F4]	Ammo top up.	[Alt] + C	Autopilot off.



The prefered mode of transport for dueling gents of tomorrow

Terminator future shock

Tired of trudging around a bleak post-apocalyptic city without the faintest idea of what you're doing? Read part one of our solution to Terminator: Future Shock.

MISSION ONE: FIND A CAR

Your objective is to find the Tiki Grand Hotel. This is north from your start position. Pick up all the ammo and the two weapons nearby, and head north around the prison camp and you'll reach some buildings. Look up for a beam connecting two buildings. One of these buildings is the hotel. Go to the front and enter.

Head up to the roof where you must cross that narrow beam from the hotel to the building next door. Beware of the HK lurking below. Take out the offending craft before you start to cross. A grenade should do it

Once on the next building, waste any enemy droids awaiting you on ground level. The more you kill now the less there'll be later. Go down to the ground floor, exit through those double doors. Watch for a lurking HK in the area. The car is over to your right. Pick up the goodies and use the car to end the mission.



First things first, grab the pick-ups and lose that pipe



On your left, The Grand Tiki Hotel. Check in and raid the mini-bar.



There's your escape route. Whatever you do don't look down.

MISSION TWO: DRIVE TO HQ

Mirror, signal and manoeuvre west across to the highway. Some of the nasties you encounter on the way will be difficult to shake off so the best tactic is to stop every time you spot something and deal with it. That way you won't end up with a rampant hoard of robots chasing after you.

Once you reach the highway take a right and head north under the raised concrete. By staying under the highway and driving through the gaps in the supports you'll avoid quite a bit of unwanted trouble. That said, there are still one or two swine lurking around here who'll give chase. Best kill them now, eh? You'll know you're heading in the right direction when you reach the overpass. Go under it and keep heading north.

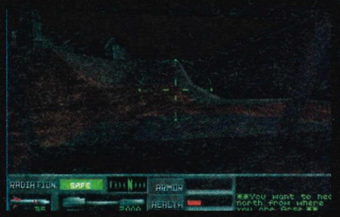
At the highway junction take a left and travel north west for a bit. Unfortunately the bridge ahead is down, and so you'll have to jump the gorge. It's dead easy really, just make sure you're travelling at full speed and you should be okay.

After the gorge, the highway heads in a more westerly direction, keep on it and drive between the buildings which you'll reach after a while. The off-ramp you need to take is just up ahead on your right. Be warned, there's a high concentration of enemies around here so you're going to have to have your wits about you. Keep looking all around and clear the area ahead before you drive into it. Once up the ramp turn right after the warehouse and follow the road for a couple of blocks. Turn right there and you should receive a message from your buddies.

Now head east, the resistance headquarters is to your left three blocks up ahead. Simply drive round the back and park alongside the other cars to complete the mission.



You're going the right way, stay on the road then under the flyover.



There's the off-ramp you've been looking for. Go up it and shoot.

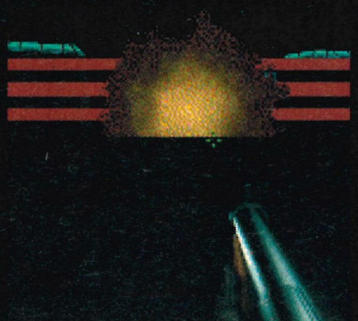
MISSION THREE: RESCUE PRISONERS

Head west until you reach a crater by a petrol station. There are quite a few items to be had around here so make sure you get 'em. Now go north past the building and the mounds which appear on the right.

There's a wall to the right. Follow it until you see a mountain. Turn left, go through the opening ahead. Go right to the electrified fence – camp gate. Approach the fence and drop one of your satchel charges [F5] next to it. Enter the camp and watch out for Terminators. Go north and by the doors you'll find a pedestal, on which there's a switch. Trigger it by climging the up hillock then down onto the pedestal. It opens the doors.

Enter each barracks in search them thoroughly for prisoners. Throw any switches you find to open doors you'll find later. Search until you receive the message to move on

Make you escape via the sewer next to the third barrack. The sewer is a simple maze. There's a grill at the exit. Go through and find the car nearby. Activate it to end the mission.



Blow the fence with the satchel charge to get into the camp.



Once inside keep an eye out for enemy machines and gun turrets.

MISSION FOUR: LOCATE THE CRASHED HK

What's the betting you're itching to get your hands on one of the enemy's HK craft? Well you've got to find one first.

Fortunately, one has crashed nearby. How convenient. To get there you should follow the mountain path into the second area of the city. Keep an eye out to your left for a sewer pipe which you should enter. Go through the sewer into the crater made by the crashed HK. There are a few robots hanging around here but nothing that should pose too much of a problem.

Go up to the HK and activate it. You should hear it start up and you'll receive a message. Now return to the sewer pipes where you came in and exit via the lower of the two (not the one you came through before) and work your way through the maze and out to safety to complete the mission. Dead easy.



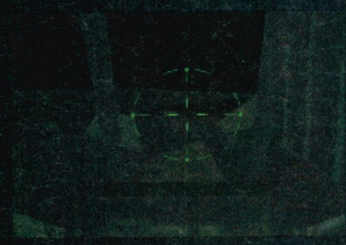
Negotiating the sewer maze shouldn't pose too much of a problem.



Take out the guards at the other end and find the HK.

MISSION FIVE: HK CAMP ATTACK

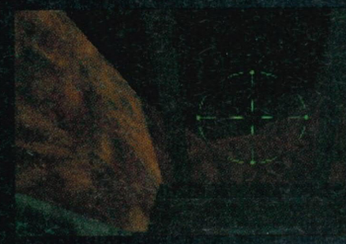
Head south-east in your new HK until you reach the drainage pipe. Go through the tunnel and kill the three bad guys at the end. Now head north to the camp. Your task there is simple – destroy everything. First take out the guns on the turrets, which will be firing at you and then destroy the turrets themselves by shooting at their bases. There's a few walkers around here but they won't put up much of a fight.



It's not to hard to fly the HK once you get the hang of it. Honest.



Fly carefully, avoiding the sides of the tunnel. Take it easy.



That base is around here somewhere. Don't leave until you've found it.

MISSION SIX: DESTROY THE SATELLITE DISHES

Finding the satellite base is easy. The road you're on leads right to it. Once there, go to the far side and have a look over the cliff. If you're in the right place you'll see a platform below on which there is a generator. This generator powers the force-field around the satellite array and must be destroyed so that you can get at them. Don't bother climbing down, just lob a few grenades at it. Now, waste the Terminators on the platforms above you before they give you too much hassle.

Enter the substation – it's the long thin building nearby. Watch your step here to avoid plummeting to your doom. Make your way down to the bottom watching for the Terminator waiting in ambush there. Once it's quiet again have a look around to find the body of your fallen comrade, Corporal Willis. Take the satchel charges he was carrying and shoot out the computer in the same room, thus disabling the substation. Return to ground level to finish the job in hand.

Now it's simply a matter of placing the satchel charges at each of the three satellite dishes. Switches turn on the platforms, enabling you to reach them. The task is made slightly more awkward by the Flencers which await you by dish number three. Kill all of them to prevent a nasty shot in the back. Dishes duly destroyed, it's mission accomplished.



You're getting close to the base. Get ready for action.



You'll have to get rid of that fence to make it to the dishes.



Another day, another satellite dish goes up in smoke. They won't be enjoying any more of Rupert Murdoch's fine programmes.

MISSION SEVEN: BACK TO BASE

Curses! Your base is under attack. Go west until you reach the warehouse which should loom into view on your right. Go right at the off ramp and into the warehouse. Yes, the crates can be destroyed but don't – you'll need them later. Use that broken garage door and the boxes to make it onto the ledge above. Now make your way across onto the bathroom roof and continue until you're directly below the smaller hole in the roof. Use the beam there to clamber through the hole and onto the roof.

Use the air ducts to get to the larger hole and when you reach the other side jump onto the crane there. Go down the crane to the switch and activate it to turn the crane. With the crane in a different position climb it to get over the fence and onto the beam. Walk down this beam and into the brewery and go to second floor.

Climb the ramp to the top and press the switch to move a platform into the correct position. Now jump over the beer vat by the hole in the wall and down onto the platform that you moved. You can now jump through the hole. Jump onto the beer vat outside, then onto the truck parked next to it, then over the fence. The HQ is a little way over to your left where some T-800s and a Goliath tank are going to work on it. Dispatch them swiftly with some grenade-flinging and gun-toting skill. The mission is complete.

THOSE CHEATS AGAIN

If the task in hand is ever proving too tough to complete justly and fairly you can always cheat. Just in case you missed these codes last month here they are again.

First of all press [ALT] and the [#] key together to get the 'Enter code' prompt up. Now just type any or all of the following:

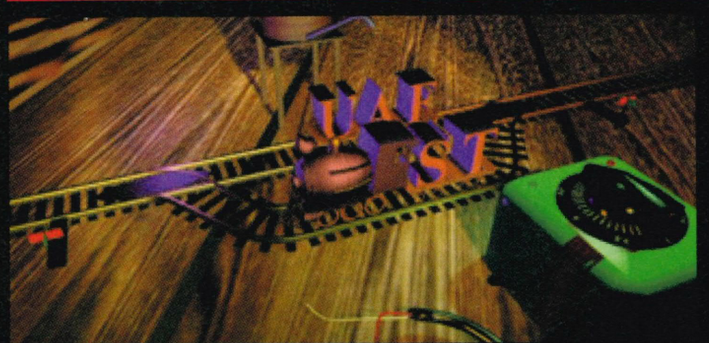
BANDAID	Gives full health and armour.
FIREPOWER	Gives all the weapons.
NEXTMISSION	Skips to the beginning of the next mission.
TURBO	Speeds the game up.
SUPERUZI	Supercharges your Uzi.
ICANTSEE	Gives you an see-in-the-dark image enhancer.
COUNTERS	Shows your position, the map number, and the number of objectives remaining.
GARBLE	Displays the code you're typing.
VERSION	Shows the game version number.
HELLO	Displays 'Hello?'
WHOAMI	Reminds you of your name.

more next month

The 11th Hour

It is with great pride and an aching brain that we present the second and final part of our The 11th Hour solution guide.

1 THE FAUST TRAIN PUZZLE



Let's call the straight track the main track, the curved loop of track the siding and the far right end of the track the end section shall we? The aim here is swap the letters around until they spell the word 'STAUF' at the end of the track. The green dot on the controller moves the train forwards and the red dot moves it backwards. The two sets of points may be changed by clicking on them. Got it?

When the puzzle starts 'F' is on the main track and 'AUST' is on the end section. Let's go...

1 Move the train forwards, leaving the 'F' behind and use the siding to pull the 'AUST' letter-by-letter past the 'F' and onto the front of it until you have 'SAUF' on the main track and 'T' on the siding

2 Move the 'SUA' onto the siding giving 'AUST' there

3 Push the 'F' down to the end section.

4 Push the 'A' down to join the 'F' in the end section.

5 Move the 'UST' onto the main track, giving 'TSU' on the main track and 'AF' in the end section.

6 Move the 'A' onto the main track giving 'ATSU' there.

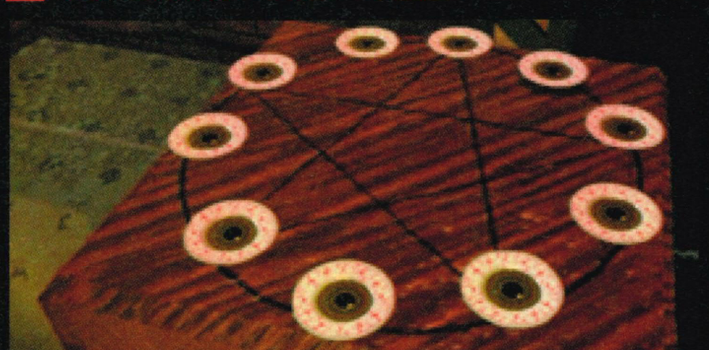
7 Move the 'ATS' to the side track giving 'STA' there.

8 Move the 'U' into the end position.

9 Move the 'ST' onto the main track giving us 'TS' on the main track, 'A' on the siding and 'UF' at the end.

10 Finally move the 'ATS' one at a time into the end section giving us 'STAUF' there.

2 THE DINNER PLATES PUZZLE



What you're trying to do here is to create a stack of two plates at each point of the star in the pentagram. Number the plates from one, at the top, through to ten, going in a clockwise direction and then perform the moves listed to the right.

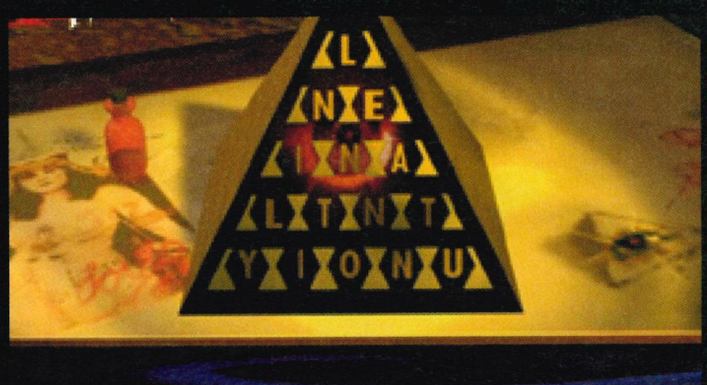
6 to 3
8 to 1
4 to 9
10 to 7
2 to 5

Simple.

3 THE PYRAMID PUZZLE

You're trying to spell two words here, clicking each letter in turn and not passing through that letter's space for a second time. It's quite a tricky task but one which is made much easier when you know what the two words you're trying to spell out actually are.

The two words are: UNINTENTIONALLY STRAIGHTFORWARD. Now go to it.



4 THE GEM PUZZLE

In this puzzle the gems must be rotated or swapped so that the colours on the facets of the gems where they touch are identical. Name the six gems one to six, starting at the top and going clockwise. Now:

1 **Swap gems 1 and 2** by clicking on one then on the other.
2 **Rotate gem 4** by clicking on it twice until blue is the top colour.
3 **Rotate gem 5** to match the yellow side with gem 4.
4 **Rotate gems 6 and 1** so they meet at yellow.
5 **Rotate gem 2** to match orange with gem 1.
6 **Rotate gem 3** to match red with gem 2.



5 DICE CUBE PUZZLE

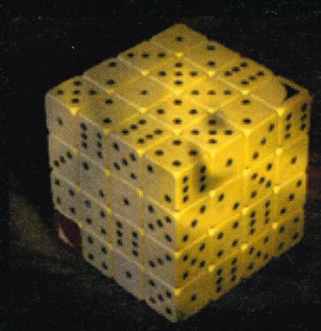
You're trying to trace a path from the staring die face at the very bottom left across and up to the end die face at the top right.

Number the die faces going from left to right from the starting point giving faces 1 to 7 on the bottom layer. Number the next level of dice 8 to 15, and the one after that 16 through to 23. The third layer of faces, will be numbered 24 to 31. Finally, assign the faces along the top edge of the pile 32 through 37.

Now simply click on the following faces, some of which will be selected automatically.

Click 1, 2, 11, 4, 13, 14, 21, 29 and 37 to do it.

Or alternatively, by the numbers on the die faces: 4 to 1 to 3 to 1 to 4 to 6 to 2 to 1 to 2 to end.

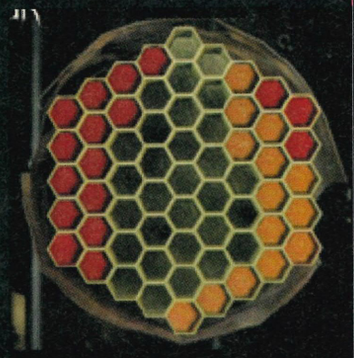


6 THE BEE HIVE PUZZLE

Your aim is to fill more hexes with honey than Stauf does with blood. Unfortunately, due to this being a game played against Stauf, no two games are the same, so there's no set solution. However, there are a couple of things to bear in mind which should help considerably.

If you play aggressively, moving towards and trying to capture Stauf's hexes, you will lose. Stauf is much better at this than you are. By far the best strategy is to allow one of your start points to be captured, say the left-most point, concentrating on merging the other two, taking out one of Stauf's start points.

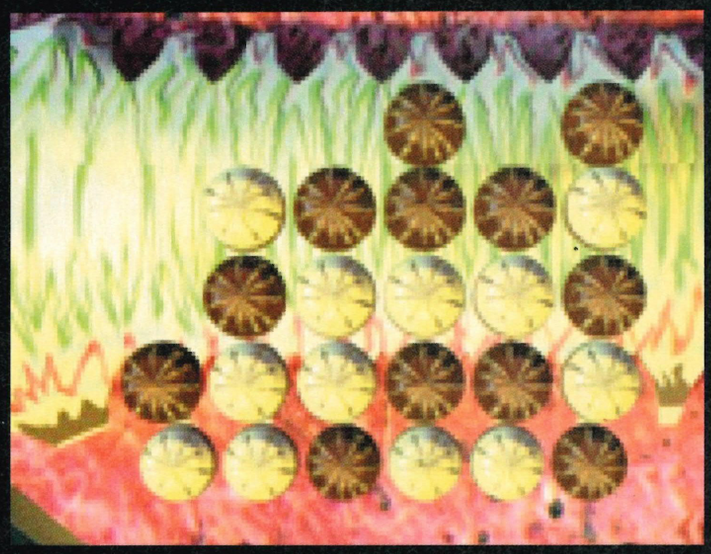
If you stay out of Stauf's way you can gradually take possession of half the board with ease. Of course as both you and Stauf expand your captured territory you will meet in the middle but hopefully you'll have captured enough hexes by then to come out on top. Remember, you don't have to win by a mile, one more hex than Stauf is enough to win, so don't get greedy.



7 THE CONNECT 4 PUZZLE

This is a simple Connect 4-style puzzle played with chocolates on a cake, but made far more tricky by the fact that your opponent, Stauf again, is really good at it. There's no way that you're going to sneak a simple four-in-a-row past this guy. You're just going to have to brush up on your technique, building several sets of three so that when Stauf blocks one you can jump in and win with another.

As with all the versus-Stauf puzzles there's no carved-in-stone solution. It can only be won with brain-power alone unfortunately. One consolation is the fact that you only need to beat him once, no matter how many times he thrashes the pants off you, so stick at it.



8 THE BISHOPS PUZZLE

As with the earlier Knights Puzzle you've got to exchange the black and white pieces here. Only this time they're bishops instead, and they can't come to rest in line with a piece of the opposite colour. Tricky.

Number the possible position 1 to 10 as follows.

```
   3   7
1  5   9
   4   8
2  6   10
```

Now perform the following moves, where W9 to 8 means move the white bishop at position 9 to position 8.

W9 to 8
B1 to 4
W8 to 3
B4 to 6
B6 to 9
W3 to 1
W10 to 3
B9 to 7
W1 to 6
W3 to 1
B7 to 5
B5 to 10
W6 to 9
B2 to 5
W1 to 6
B5 to 3
W9 to 7
W6 to 4
B3 to 8
W4 to 1
W7 to 2
B8 to 9



9 THE FURNITURE PUZZLE

This is one of the trickiest puzzles in the game. You're trying to move the piano out from behind the furniture and through the door to the right.

Number the sofas from 1 to 4. Sofa 1 in the lower left, 2 in the upper left, 3 in the lower right and 4 in the upper right. Now label the chairs A, B, C, and D from the bottom to top. Now perform these movements:

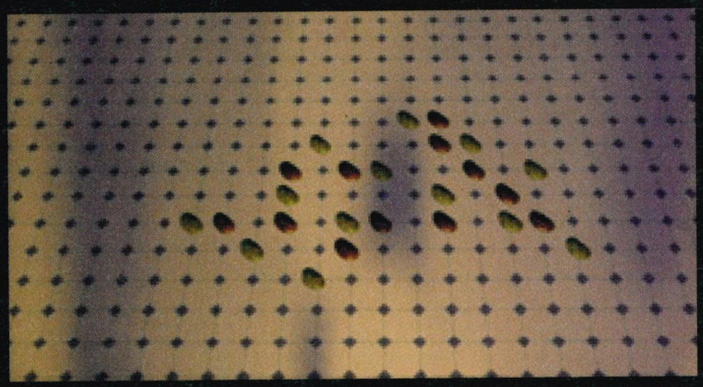
Move the table right.
Move chair B right and up.
Move chair A up.
Move chair B right.
Move sofa 3 left.
Move the table down.
Move chair B right.
Move chair A up.
Move sofa 3 up.
Move sofa 1 right twice.
Move the piano down.
Move chair C left twice.
Move chair A left twice.
Move chair B left twice.
Move sofa 4 down.
Move chair D right twice.
Move sofa 2 right twice.
Move chairs A and C up.
Move the piano up.
Move sofa 1 left twice.
Move sofa 3 down.
Move chair B down and right.
Move the piano right.
Move chair C down twice.
Move chair A left and down.
Move sofa 2 left twice.
Move chair D left twice.
Move sofa 4 up.
Move chair B up and right.
Move the piano right.
Move chair C right and up.
Move sofa 1 up.
Move sofa 3 left twice.
Move the piano down.
Move chair D down and right.
Move sofa 4 left.
Move chair B up.
Move chair D right.
Move the piano up.
Move sofa 3 right twice.
Move sofa 1 down.
Move chairs A and C down.
Move sofa 2 down.
Move sofa 4 left twice.
Move the piano up.
Move chairs A and C right twice.
Move sofa 1 up.
Move sofa 3 left twice.
Move chair C down and left.
Move the table left.
Move chairs D and B down twice.
Move the piano right.
Move chairs A and C up twice.
Move the table left.
Move chair B left and down.
Move the piano down and right out the door.

4 THE DOLLS HOUSE PUZZLE

In this Othello-ish puzzle you can win in one of two ways. One, position five of your stones in a line, or two, capture five pairs of Stauf's stones by trapping them between yours. The trick here is to never let Stauf build more than three stones in a line. As soon as he does, place one of yours at the end. Four stones in a row and a fifth is inevitable. No time to weep.

There's no set way to win but the best strategy is to try dotting your pieces around, never allowing two to be captured at once by placing them side-by-side. As the board fills up, any quick thinker should be able to squeeze in a five-in-a-row somewhere. Good luck.

This is the final puzzle in the game. Success here will result in you being able to choose one of three possible endings in Stauf's 'game show', only one of which is truly correct. Enjoy.



THE RIDDLES

A VITAL INSTRUMENT PART
Instrument and vital part? An organ. Which you'll find in the Chapel.

22233642 - 736846873
It's a number/letter substitution. Academic Penthouse is the answer. It's the rook on the chess table in the attic.

LIGHT PIECE FROM GREAT ORCHESTRA
Hidden in 'great orchestra' is 'torch'. Like the one on the altar in the church.

CHEESY GADGET...
Larger means greater. Cheesy gadget is grater, which is on the stove in the kitchen.

500 = 100 = 0
Think Roman Numerals. 500 is D, 100 is C. It's the 7th Guest CD in the lab.

TEAPOT SHOT...
The pearlies are teeth and teapot shot is an anagram of toothpaste. It's on the sink in the bathroom.

SLYNESS HOLDING SHIPMENT...
Slyness is guile. Guile plus chop? It's the guillotine in Hamilton Temple's room.

POOR DRAINAGE COULD PRODUCE A FLOWER
An anagram of drainage is gardenia. As featured in the picture at the top of the stairs.

SOUNDS LIKE IT GOT HIGHER FROM WINE
Wine? Red wine? Higher? Rose! It's the red rose in Martine Burden's room.

WHAT KIND OF JEWELLERY IS ANGRIER
An anagram of angrier is earring, like the one on the dresser in Julia Heine's room.

WELL MANNERED COCKNEY...
Well mannered is behave. Behave in cockney sounds like beehive. As in the room at the top.

INSTRUMENT IS SHARP...
Missing its head? Take the first letter of sharp. It's the harp in the music room.

A DEFECTIVE TRUCK...
Balls are nuts. To bust is to crack. Oh dear, it's the nutcracker by the Game Room door.

LOOK AT KEY MISSING FIRST...
Key missing its first letter perhaps? Ey. It's the eye-ball on the pool table in the Game Room.

DISABLED CUTTING EDGE
It's the knife stuck in the headboard in Hamilton Temple's room.

UNREASONABLE REASON: A reason is a motive. Unreasonable is loco, believe it or not. Locomotive is train. It's Stauf's train again.

PAPER USED IN UNUSUAL THESES
Theses is an anagram of sheets. Aaah. The sheets on Martine Burden's bed.

ADROIT HOLDING SHARP INSTRUMENT.
Adroit is clever. Sharp instrument is cleaver. Like in the kitchen.

A DESSERTED ARTHROPOD
It's the Trilobyte-shaped dessert in the dining room.

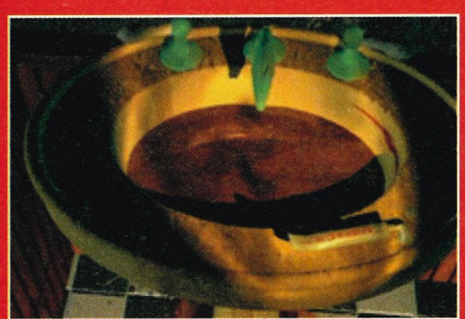
663 264625 46 2 6455466
More number/letter substitution fun. Suffice to say its the lion near the top of the stairs.

DRINK LEFT AT SEA
Left at sea is port. You'll find some on Edward Knox's bedside table.

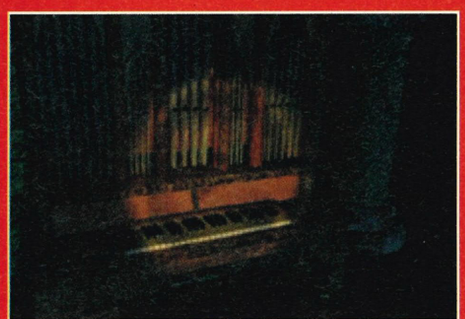
SNAKE, BABY, TRAP
Snake and baby? It's the baby's rattle in the secret room reached via the floor in the corner of the Doll room.

A LETTER FROM GREECE...
Roman numerals? XI maybe? Like on the grandfather clock in the hall.

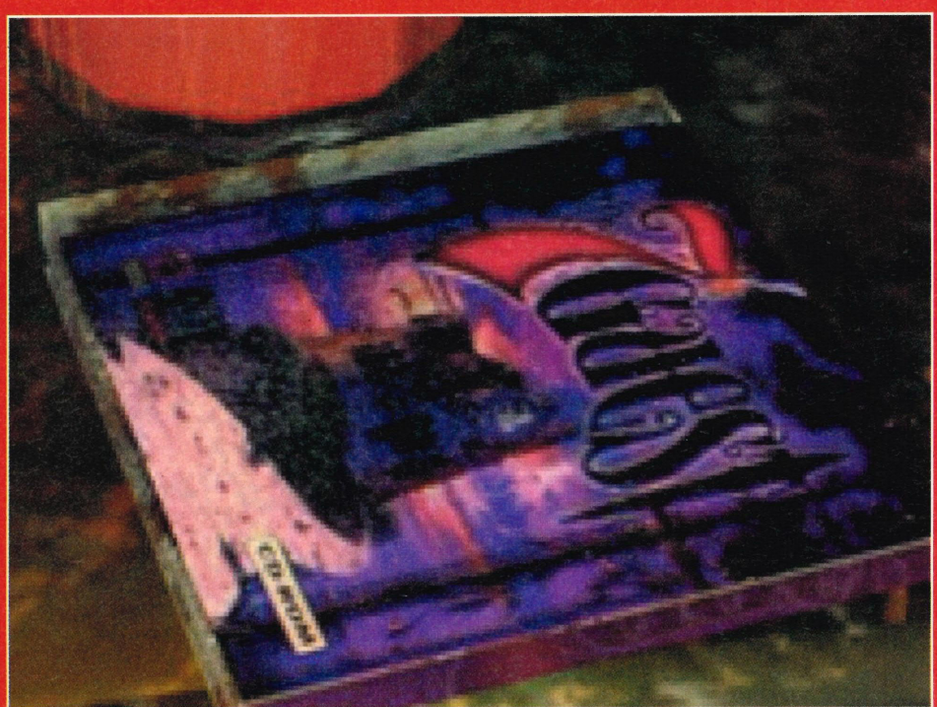
THIS EIGHT LETTER WORD...
'In' the beginning, 'kst' in the middle, 'and' at the end. It's the inkstand on the desk in the library.



You're well on your way to washing your hands of all the puzzles and riddles in this game.



Care for a vital instrument part? Well, you'll find this organ in the chapple, if that's any help.

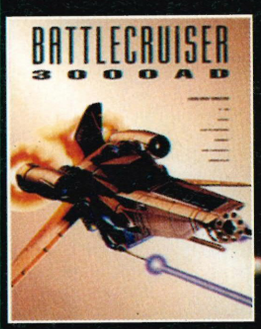


Those cinematic tricksters at Trilobyte not only managed to get a product placement for the The 7th Guest into The 11th Hour, but they also based one of the riddles around it. Funny guys.

BATTLECRUISER 3000AD

'Battlecruiser 3000AD is here and it's fair to say it's better than Elite in every department.'

94%
PC ATTACK



'It's far more simple to get into than say Frontier Elite II and to be honest it's more rewarding at the end of the day.'

9/10
PC REVIEW

LIFT OFF

MAY·96



THE FINAL COUNTDOWN

PUBLISHED BY GAMETEK

AVAILABLE ON PC CD-ROM

CREATED BY TAKE 2 INTERACTIVE SOFTWARE

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What a month it's been in our multimedia section. Last month most of the discs we reviewed were pretty average, and we expected that to continue this month. We were surprised, however, when several of our writers came back this month with good tales to tell.

One of the stars has to be *Guitar Hits*, an excellent music tutor, the stunning quality of the photography in *Volcanoes* marks that disc out, and Flagtower's *History of Medicine* did well too.

But first, allow us to indulge ourselves by creating some truly breathtaking images with William Latham's wonderful *Organic Art*.

Garrick Webster, Deputy Editor

CD REVIEW



The Organic Art screen-saver is on our CD-ROM.



Get molton hot with the superb photos in Volcanoes. Page 96.

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History of Medicine 94
Volcanoes 96
Art of Singing 98
Guitar Hits Volume 1 98
The Crucible 101
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The tentacles of this organic art sculpture reach out into the blue. It's one of 130 made by Latham and his team for the disc.

Organic Art

Computer Artist William Latham is welcoming you to create your own organic art images, using the same formulae and genetic patterns as he does.

This is not multimedia in the commonly understood sense of the word. *Organic Art* isn't a reference disc full of pictures. It does not contain volumes of hyper-linked text all about the William Latham, his career and his life story. There is no quiz tacked on to make it educationally worthy, nor are there any contrived interpretations of what this art means.

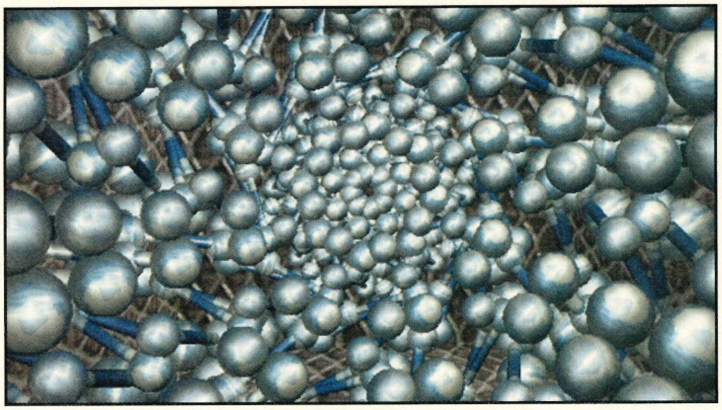
Rather than exploiting the huge capacity of the CD-ROM to store all kinds of text, video and photographic information for you to sift through, *Organic Art* puts your PC to much better use. The media here are shapes, colours and self-generating patterns, all built into a program that utilises the immense algebraic powers of your machine. Organic Art is one of very few programs that enables you to use your processor to create the kind of breathtakingly freakish scenes that only computers are can conjure.

Anyone who knows the work of William Latham and is interested in how it is created must get *Organic Art*. Within minutes of loading it up, you'll be throwing together the kinds of strange, evolving animated images previously the preserve of programming and artistic experts like Latham himself and the artificial life movement in America. While genetic art programs have been available as shareware, none is this powerful or as easy to experiment with.

Basically, Latham gives you a series of parameters to work with, and invites you to do what you might. When you've created your animation, you can import it into the *Organic Art* screensaver playlist or save it as a bitmap to be used as wallpaper on your desktop background.

The basis of your animations will be the shapes you choose, and over 50 of them are provided including stars, cones, cubes, spheres, petals, pyramids, hearts and more exotic ones like palm branches, arm bones, faces and skulls. Each shape can appear in wire frame, solid or gouraud shaded





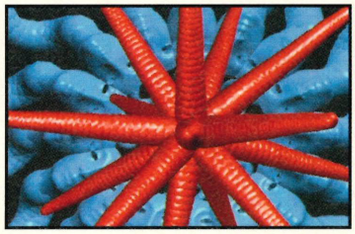
That, right, is like the brain of an android. Like bubbles of magnetic logic everywhere. Email me more. UUBooBooBinHexEncodeMe. Coooo-well.



Can yer tell what it is yet? Could this be the psychadelic eye in the sky?



Another preset from Latham and his gang. This one's called Cosmic Rings.



Now you didn't expect that, did you?



Hit the Mutator button and... wow.

textures, in one of over 100 colour schemes. They can also be sized using a simple slide bar.

With your shape chosen, you can set its pattern of motion – and here's where the tricky algebra comes into play. Latham has formulated some 30-odd generative patterns to choose from, and these determine very much how your artwork will turn out. The Spherical options, will leave you with a fully rounded pattern, the Web ones splay objects around the screen, while the Twisting choices leave crazy helixes sprouting all over the place. Depending on what Generator you've set, you can have either one or two shapes moving about the screen.

With the objects in motion, you can decide whether you want them to leave trails as they move, or not, and how quickly they move around the screen. Then, you have to get yourself a background. Again, a pull down menu does the magic with a selection of around 90 backgrounds including plain colours, Escher's conundrum staircases, sunsets, alien landscapes and weird globby, rendered things in a huge array of colours.

Finally, light and shadows can be toggled (often revealing unthought of colourations on the animated forms) and you can increase or decrease the overall complexity of your creation using the Branches and Ribs slide bars. These essentially control how many branches are developed by the generator. The more branches and ribs, the more detailed and repetitive the outcome.

Just experimenting with it can become an addiction.

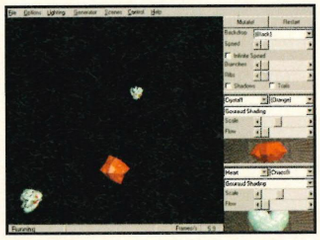
Now, if the starting-from-scratch procedure described above sounds mind boggling, that's because *Organic Art* can be a little mind-boggling in its depth. If this scares you, however, you can easily start off by fiddling the parameters on one of Latham's premade animations instead. There are some 130 of these, and all of them are also available for use as screensavers. Or, for a totally new starting point, you can just hit the Mutate button and Organic Art will randomly combine shapes, background, generative pattern and the rest for you. Often, the results of mutating are garish and ugly, but refine a few settings, and... from out of chaos, reason and beauty.

Organic Art is not flawless. It's great to play with if you don't mind randomness, but trying to create something you've actually envisaged is frustratingly tough. And although there's music provided, the sum total of this is seven minutes of ambient stuff. It's not that the music's bad, it fits the images very well, but there's not enough of it.

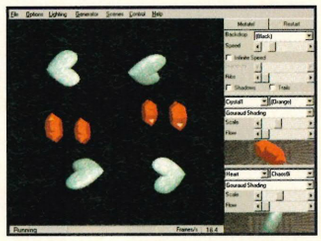
Nevertheless, this disc is essential for any aesthetic fiddler. It can create works no art, photo manipulation or fractal package can come near. Just experimenting with it can even become an addiction. With the number of possible outcomes almost infinite, *Organic Art* might keep you busy for quite a while. And you'll be amazed at just what your PC can do. This is not multimedia. It's better than that.***(GW)***

Growing a Scene...

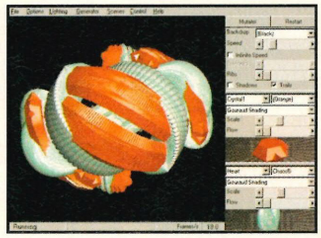
Here's how to create something using Organic Art.



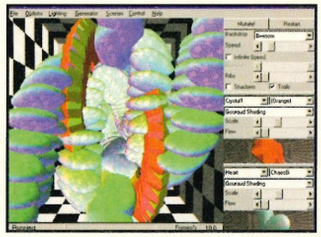
Choose an orange crystal and a white heart and the shapes appear. You can scale their sizes too.



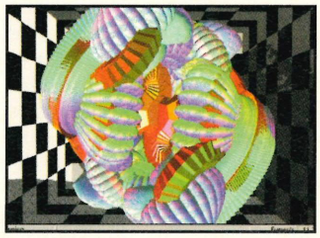
Selecting the Double Caterpillar generator and upping the speed sets the shape whizzing around.



Whack on the Trails option, and the shapes leave twisting, melding trails behind them as they move.



Now, you can put in a background, like this B&W one, and set up a lighting option. We used 'RGB'.



Turn on shadows and, hide the toolbar, and you can observe your *Organic Art* beast is free to mutate.

PCR VERDICT

Easy to use and addictive. You'll be creating radical images and animations

9

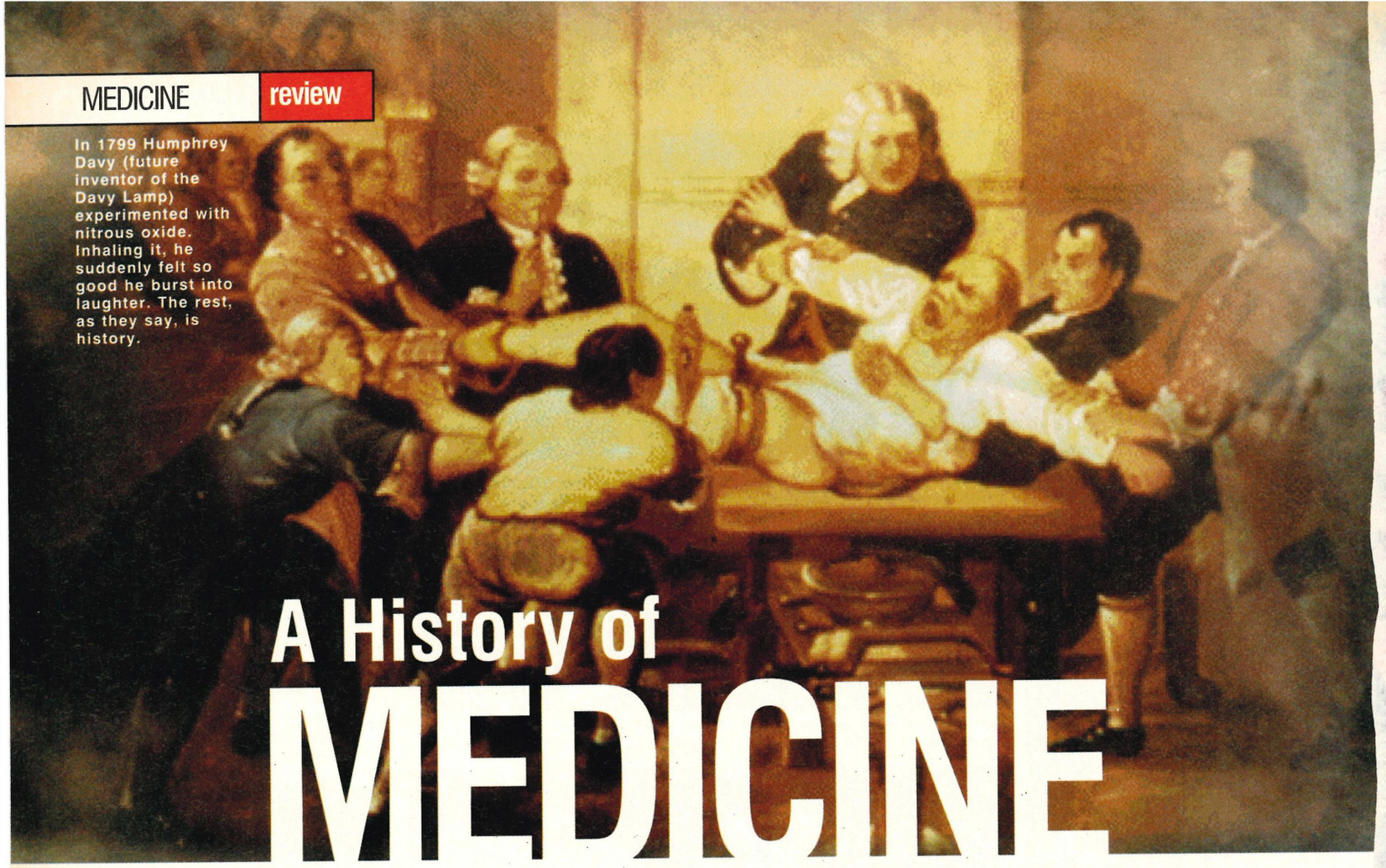
Developer: Computer Artworks

Publisher: Time Warner Interactive

Contact: 0171 391 4300

Price: £29.99

Minimum System: 486DX/66, 8Mb RAM, 20MB hard disk space, CD drive, 256 colours, Windows 3.1 or 95



In 1799 Humphrey Davy (future inventor of the Davy Lamp) experimented with nitrous oxide. Inhaling it, he suddenly felt so good he burst into laughter. The rest, as they say, is history.

A History of MEDICINE

CD REVIEW

Sample a bit of the *History of Medicine* with our CD-ROM.

Feeling a little bit queasy? You will be after this no holds barred history of the struggle against disease and sickness.

Right then. Bite on this and try to relax while we strap you down to the table and remove a few of your extremities with blunt implements. You'll probably suffer a slow, painful death from infection anyway, but hey, it's all in a good cause.

The caring profession seems to have a past filled with more torture and atrocity than organised crime, and delving into FlagTower's new double disc set isn't for the faint-hearted. As long as 10,000 years ago, the ancients (especially in Peru) were practising the gentle art of trepanation – boring through a person's skull into the mushy stuff within. The was presumably to release trapped devils, but more surprisingly, there's evidence that many people not only survived it, but came back for more, ending up with skulls like colanders. For the treatment of mental health it was an idea almost as preposterous as it's modern day counterpart, Care in the Community.

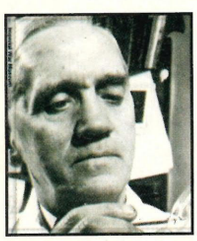


Looking back then, many ideas in medical history seem totally dumb – hindsight is a very exact science, after all. But then brain cells are among the smallest in the body (it says here) so perhaps it shouldn't come as any surprise. Indeed, "the brain cells found in the cerebellum – at the back of the brain , lodging on the floor of the skull – measure only 0.00002 of an inch. More than 300 would fit on the head of a pin". If you're lucky though, you've got enough to fill quite a few pinheads.

And there's another thing. Being made to appeal to Americans you get measurements in good old fashioned inches. No metric nonsense. For that, it's almost worth putting up with the American accents, and they really are very American. None of your mid-Atlantic tones here.

What really shows through, however is the stupendous brilliance and perseverance of medical pioneers down the ages. Even though an element of luck was normally involved, as with Rontgen and his x-rays, there was an awful lot of sheer brain power and hard graft. There have been many failures, and FlagTower rightly points these out. For example, x-rays were used with such abandon in some places that one company even advertised x-ray proof underwear for ladies worried about peeping toms. On the sad side, x-ray machines were also used routinely for checking everything from pregnancy health to children's shoe sizes. Not until 1956 was the link between x-rays and child cancer discovered.

The History of Medicine takes you on an epic journey through the length and breadth of medical history, from charlatans and quacks to top surgeons, scientists and nurses. It's the most captivating FlagTower disc. The quality and quantity of the images is fabulous, and the interactive documentary presentation never worked better. ***(MRR)***



PENICILLIN
Alexander Fleming took a temporary job at St Mary's Hospital just to stay in the hospital's rifle team. He stayed 49 years. His discovery of penicillin resulted from leaving a mouldy dish on a workbench before a three week holiday.

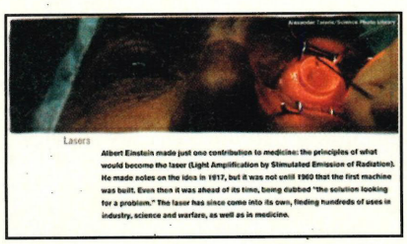
Developer: Flag Tower

Publisher: Flag Tower

Contact: 01500 486500

Expected Price: £39

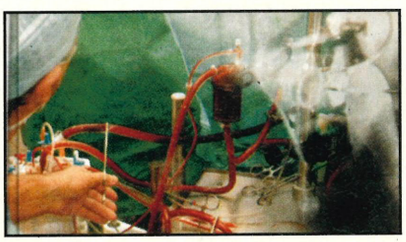
Minimum System: 486, 8Mb RAM, double speed CD drive, SVGA graphics, 1Mb hard disk space, Win 3.1 or 95



Lasers

Albert Einstein made just one contribution to medicine: the principles of what would become the laser (Light Amplification by Stimulated Emission of Radiation). He made notes on the idea in 1917, but it was not until 1960 that the first machine was built. Even then it was ahead of its time, being dubbed "the solution looking for a problem." The laser has since come into its own, finding hundreds of uses in industry, science and warfare, as well as in medicine.

Seeing the light – lasers owe their origins to one of Einstein's theories. Now laser surgery makes complex eye operations possible with the minimum of trauma to surrounding tissue.



Open heart surgery only became possible in 1953 with the invention of the heart and lung bypass machine. Without the contraption keeping the body ticking over, brain death would occur in minutes.

PCR VERDICT

Lots of information, well delivered and excellently illustrated. A bit slow in places.

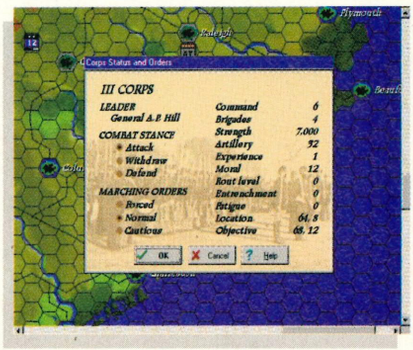
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INTERACTIVE MAGIC PRESENTS

AMERICAN CIVIL WAR

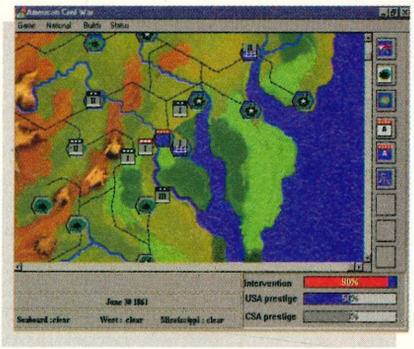
From Sumter to Appomattox

- Play the entire Civil War, from the opening guns of Bull Run to the final surrender of the army of Northern Virginia -- or enter the war in the Spring of 1862 or 1863.

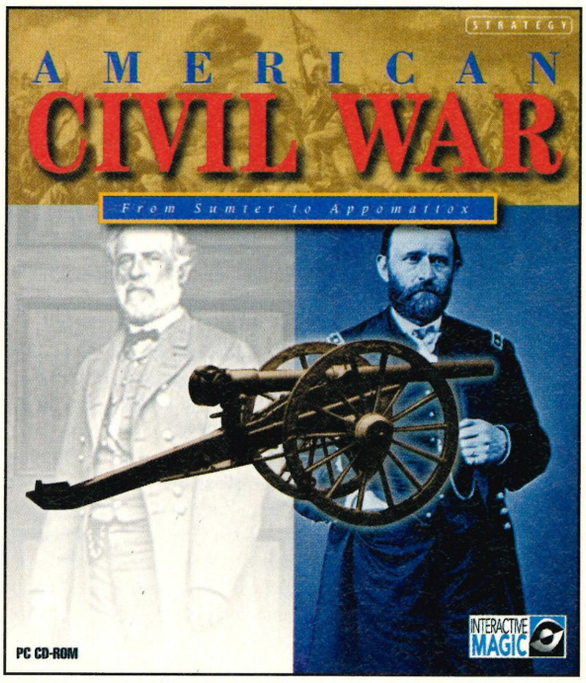


- Easy to use, intuitive Windows interface.

- FREE Multimedia CD-ROM, *Fateful Lightning: A Narrative History of the Civil War INSIDE!*

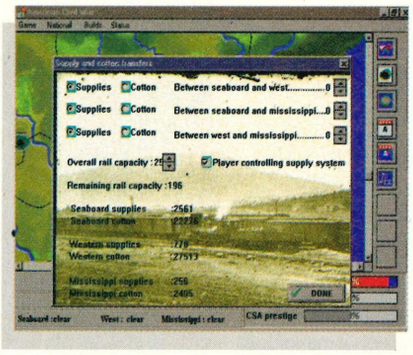


- Includes an incredibly accurate database with every major commander from both sides of the war - over 125 historical leaders.



"...the only strategic-level Civil War game worth playing."

-Computer Gaming World



RRP £39.99

PC CD-ROM

Look out for more Interactive Magic information on: **www.imagicgames.com**

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Tel: 01276 62462 Fax: 01276 62446

INTERACTIVE MAGIC(UK) Ltd
Watchmoor Trade Centre, Watchmoor Road,
Camberley. Surrey. GU15 3AJ.

Glowing lava is the subject matter of this superb disc by Corbis, Bill Gates' other company.

Pictures from award-winning photo-journalist Roger Meyer, narration by award-winning Helen Mirren, multimedia by award-winning Corbis. Sheer talent, plus volcanic power.

VOLCANOES

Life on the Edge

The subtitle here is fitting. After all, you have to be a little crazy. Commissioned by *National Geographic* magazine, photo-journalist Roger Ressmeyer spent 14 months finding out where and when volcanoes would be erupting and getting to them as fast as he could. His brief was to bring back photographs 'the like of which had never been seen before'. Dicing with death, Ressmeyer (who is more at home photographing the less menacing starlit galaxies of afar) says he took the job in fear and trepidation, not sure if he was up to it. Nevertheless, Vulcan must have been smiling on him because he ended up capturing the most eruptive year for centuries in his global pursuit. He later said he was never sure if he was chasing the volcanoes, or being chased.

Dramatic they may be, but a bunch of exquisitely taken photographs, scanned and presented on CD-ROM, would by itself have been a wasted effort. Give us a glossy book with big pages every time. But there's more here than a just a stack of photos. The key word is photo-journalism. You don't merely get to see volcanoes in states varying from deep slumber through to hyper-activity, you get to meet people who live and work in their shadows, farming the land, or climbing into them with scientific instruments trying to formulate new theories, or study old ones.

With *Volcanoes*, you get to travel with Ressmeyer to Indonesia, Japan, Italy, the South Pacific and just about anywhere else. The experiences are so expertly delivered you can almost smell the sulphur. And the fear. Forget the interface (though it's every bit as good as you'd expect from Bill Gates's digital art company). The thing that really puts the drama into the presentation is the menacing and moody music, but more than that, the supremely brilliant narration by Helen Mirren. With a script and delivery that teeters on the edge of going totally overboard, Mirren's narration turns Ressmeyer's photography into something genuinely breathtaking.



Enter the pink cave. These mysterious and beautiful tunnels can be found beneath the Laacher See, a German volcano that erupts once every 10,000 years. And it's 1000 years late.

Developer: Corbis

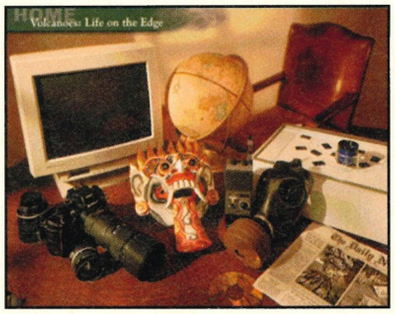
Publisher: Corbis

Contact: 0171 278 1387

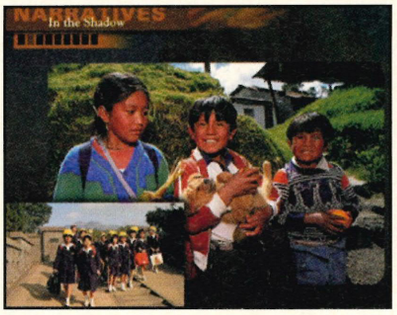
Price: £49.95

Minimum System: 486, 8Mb RAM, double speed CD drive, SVGA, mouse, Windows 95 or Windows 3.1

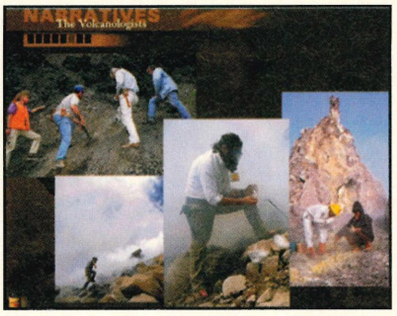
Helen Mirren meets serial killers of a geographic kind...



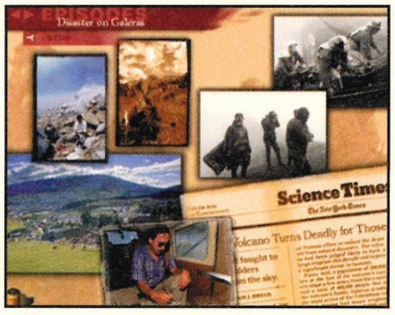
1 From this desk-like interface screen, you can get right up close to all aspects of volcanic activity with almost no personal danger.



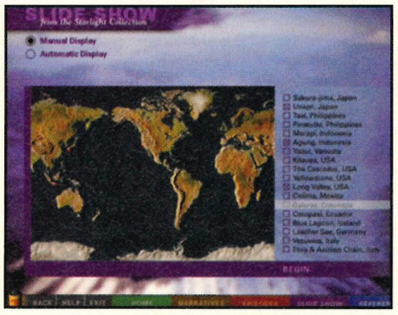
2 Volcanoes also relays many stories of astonishing bravery amongst folk who have to rely on the fertile volcanic soil and 'live on the edge'.



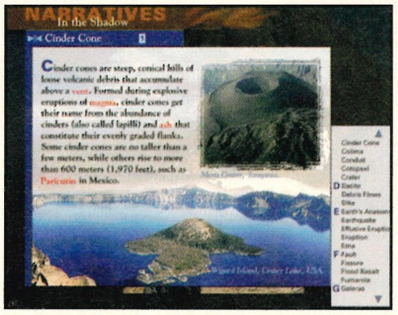
3 Then there are those who study volcanoes. These scientists are climbing an active volcano with only gasmasks for protection. Bet they drink Pepsi Max.



4 But sometimes, scientific ventures end in disaster. In January 1993, six scientists were killed in Colombia when Galeras erupted.



5 Hundreds of photos are stored on the disc. If slide shows are what you want, you can create your own and even add Helen Mirren's narration.



6 The reference section is enough to ward off any accusations of superficiality. Basic alphabetised entries are connected by hypertext.

Vulcan

In different accounts, the lame Greek god, Hephaestus, was cast from Mount Olympus by his mother, Hera, or thrown from the heavens by his father, Zeus. The Romans called this fire god Vulcan and placed his home under Hiera, or present-day Vulcano. The ancients called volcanoes both etna and hiera.



Roger Ressmeyer, more at home with photographing remote and unthreatening space scenes, felt a little nervous about coming face to face with fire-spitting volcanoes. In the end he spent a whole year chasing the ultimate eruptive phtotgraphs.

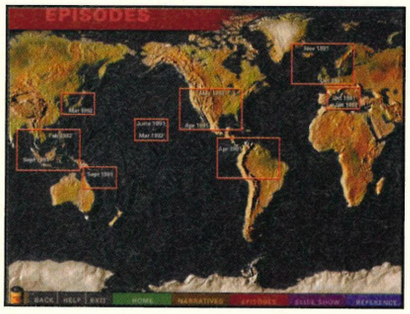
The disc manages to be genuinely sinister, especially when Mirren talks about people who live at the edge of disaster. Peasants forced to make the most of the super-fertile volcanic soil often accept the dangers as nature's way, even in the face of evidence from scientists that the volcano is about to erupt. But a great deal of prayer and hope seems to go on as well. "In April 1944," says Mirren, "a flow of lava from the Mexican volcano, Paricutin, threatened the village of San Juan. Most of the inhabitants fled, but some refused to give up their ancestral home to the volcano. One man was killed as he accidentally tumbled into the lava flow. Fittingly, he was the last person to be buried in San Juan". Even when people are evacuated, they often return to Volcanic areas before they're quite safe.

And if you can drag yourself away from the interactive documentary style delivery, there's a whole wodge of well-written background material on all things volcanic. For example, the tsunami, or Japanese 'harbour wave', is actually a series of giant waves caused by undersea eruptions or earthquakes that can travel at 500 mph. In deep water, their height is almost undetectable, but as they reach the shallows of the coast, they can rise up to 100 feet tall. In the 1883, eruption of Krakatau, 33,000 people lost their lives to a tsunami that destroyed 300 coastal villages.

There's more here than just a stack of photos. The key word is photo-journalism.

As well as hard facts, the disc digs deep into mythology and legend, unravelling stories that have been spun to try and explain the immense power of volcanoes. The tallest tales seem to come from Indonesia and South America, but Hawaii also has some tales to tell. For instance, they'd have you believe that the goddess Pele (no relation to the footballer) is alive and well and living in the crater of Kilauea. In the 19th Century she was the central figure of a religious cult, but more recently has become associated with most Hawaiian eruptions. A strange wig-like substance has been named after the goddess and is known as 'Pele's hair'. This naturally spun glass is a type of tephra, apparently, and is formed from fountaining lava. A single strand is about half a millimetre in diameter and can be up to two metres in length.

The blend of narrated photo essays and reference material is beautifully achieved. *Volcanoes* is as much a work of art as it is a documentary. Of course, it'll be of most interest to those who like geography. But even if natural history isn't your thing, you'll still find the stories, the words and pictures of *Volcanoes* every bit as spellbinding. ***(MRR)***



In the Episodes section follow Ressmeyer's journey around the world with but a few mouse clicks.



Breathtaking photography is the foundation of Volcanoes, but Helen Mirren's narration, and moody music, bring the disc to dramatic life.

PCR VERDICT

Gorgeous. This disc is utterly captivating even if you couldn't give a hoot about volcanic eruptions.

9



Wander around The Art of Singing's computer-generated opera house. Dressing-rooms, studies, practice rooms, stage, porter's lodge – it's all here. The only thing lacking is a pair of opera queens in the bar trying to get one up on you.

The Art of Singing

Singers are the world's biggest classical stars. Literally. Why? Rob Ainsley looks at an introduction to the wonders of the classical voice, and nearly sings its praises...

Developer: Notting Hill

Publisher: Notting Hill

Contact: 0171 229 0591

Price: £39.95

Minimum System: 486, 8Mb RAM, double speed CD drive, SVGA, Windows 3.1 or 95

Getting the message of classical music across is hard. Attempts usually end in confusing, elitist jargon, or patronising wibble (the worst of Radio 3 versus the worst of Classic FM...). Opera and song are areas especially prone to that, as anyone cornered by a smug opera queen desperate to embarrass you will know. Anything which can demystify and enlighten is welcome, and overdue.

In *The Art of Singing*, you explore a computer-rendered opera house. By nosing around the dressing and rehearsal rooms, library, concert hall, seminar rooms, canteen, cellars and even porter's lodge, you can approach the subjects of opera and song from angle you like. Have singers such as Thomas Hampson or Joan Sutherland chat to you about their art, look up information in the library, or attend Dr Jonathan Miller's seminar on why music affects us so deeply – his illuminating answer: "We don't know..."

Best of all, you can listen to 50 minutes worth of singing by the likes of Pavarotti, Sutherland and others, with programme notes and lyrics in front of you. Entertaining snippets of trivia come up from time to time, such as the strange case of Hindemith's opera *News of the Day*, which was sued by a gas company for commenting on the smell and danger of gas water heating!

The singing extracts are well-chosen. No-one can argue with Callas' 'Vissi d'arte'

Guitar Hits VOLUME 1

Music, we're told, can make us more intelligent, but how smart is this guitar tutoring CD-ROM?



Choose your song from one of the seven great numbers on offer. There should be something to satisfy almost everyone's tastes here.

Developer: UbiSoft

Publisher: UbiSoft

Contact: 0181 941 4004

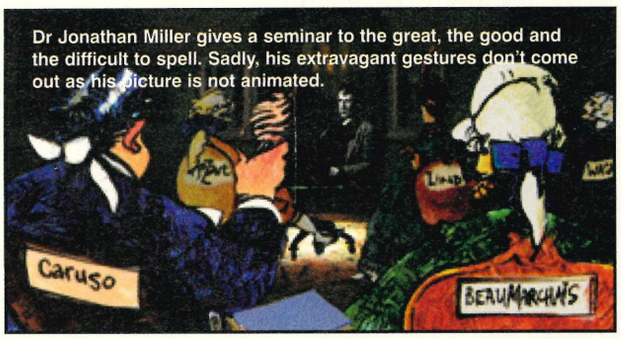
Price: £39.99

Minimum System: 486SX/25, 4Mb RAM, double speed CD drive, 4Mb hard disk space, SVGA, Win 3.1 or 95.

It's one of life's great paradoxes, the guitar. It's an easy instrument to learn, and yet is often taught so terribly badly. Anyone who's ever been tempted to fondle the frets will be familiar with the common approach to self tuition – buy a dumb looking book that promises to teach you how to play rock music in seven minutes, but give up guitar forever after two minutes of *She'll Be Coming Round The Mountain*.

What hope lies in CD-ROM then? Well, until now, not much. But at last, with *Guitar Hits*, there's a multi-media package that approaches guitar tuition in an entertaining and genuinely educational way.

Guitar Hits recognises and supplies the fundamental thing that people want to do with their guitars – they want to play songs. You are taught to play seven bonafide guitar classics: *Hey Joe* (Hendrix), *Life By the Drop* (Stevie Ray Vaughan), *Sweet Home Alabama* (Lynyrd Skynyrd), *Dust in the Wind* (Kansas), *Blowin' In The Wind* (Dylan) and *Wild World* (Cat Stevens). It's not just the chords of the songs either, it's all the fiddly bits, the choppy rhythmic counterpoints and melodic decorations that made them guitar classics in



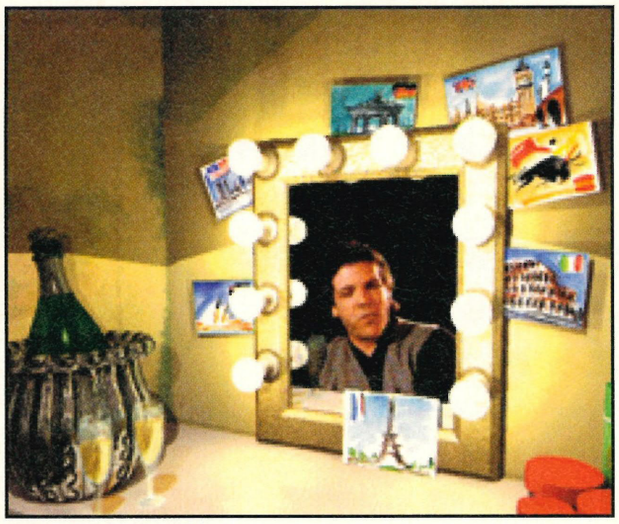
Dr Jonathan Miller gives a seminar to the great, the good and the difficult to spell. Sadly, his extravagant gestures don't come out as his picture is not animated.



Shhh! The Study Room lets you look up info on singers, styles, composers, techniques, etc.



Watch a singing practice in blotchy, but fluent, video, in the Practice Room.



In the dressing rooms downstairs, you can see video interviews with singers such as Tom Hampson (above), or redecorate Joan Sutherland's dressing room.

from Puccini's *Tosca*, or Fischer-Dieskau singing Schubert's *Winterreise*. More context to read while listening to the music would be welcome – not just notes on the composer or the lyrics, but why F-D is on about an organ-grinder with his nagging melody.

The obligatory interactive goodies are in there: you can redecorate Sutherland's dressing room, but where is she? You can construct and then hear *Frère Jacques* from the notes if you get it right, but it would be more fun (and instructive) to hear the music when wrongly put together too.

Any worthwhile treatment of music needs plenty of background text, and there's a good effort here, cross-referenced through hotlinks, though a few non-working links and typos have slipped through. 'Maccagni' and 'appogiatura', for example, rather than Mascagni and appoggiatura.

But it's fun to explore, and contains a lot of movement thanks to the plentiful (if blotchy) video sequences. The tone is about right – lively but unpatronising, detailed but not confusing. If you want music, context, insight and art, stick to the music CDs. But if you want to explore the voice in an easy and entertaining way, and pick up enough to bluff your way past the opera queens in the bar at the ROH, this is the thing. ***(RA)***

PCR VERDICT

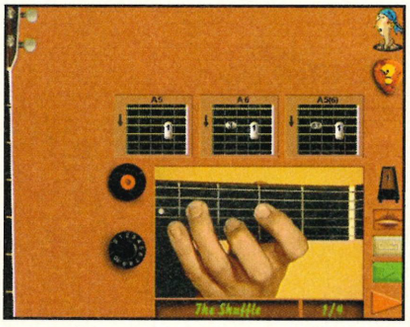
Accessible introduction to a vast subject. Good on snippets, okay on insight.

7

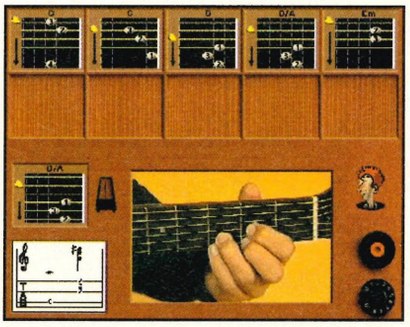
CD REVIEW



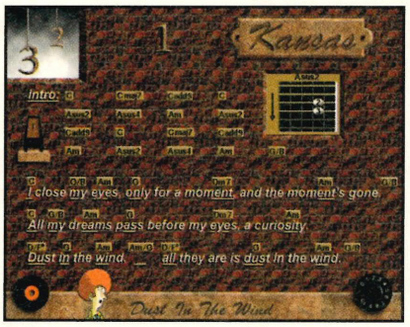
Strum away with the *Guitar Hits* demo on our CD-ROM.



If you're new to this guitar playing lark, there's a handy Lesson screen, where a disembodied voice instructs on the finer points of the song.



Click on a chord diagram box, and some bloody helpful video and tablature helps you sort it all out.



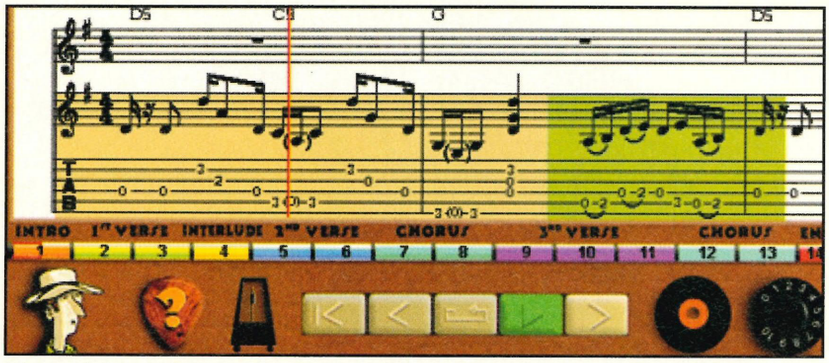
If all you want to do is strum along to the song, here's the Words screen. The lyrics are printed with chord names above. Superb.

the first place, and many of the techniques covered can be easily adapted to other musical contexts with a little imagination.

It's the presentation that makes this system work so well. You're confronted with video clips of the left hand fingerings, together with standard musical notation and guitar tablature (a common way of showing how to play guitar music by identifying the position of the fingers on the fretboard of the guitar), and of course the audio of the guitar part itself, all working together to cover every single cranny of information on how to play the music for yourself.

Okay, so you'll need a little familiarity with the guitar to get the most out of *Guitar Hits*, but even the lowliest novice will get some benefit from the information contained here. You could start by picking up a few chord shapes, later on gradually developing some of the other ideas, until you've finally nailed the whole thing note for note. If any particular segment is giving you trouble, close in on it, for a more thorough explanation, and practise it to your heart's content. Smart.

There are all the extras you could wish for, too – a built-in guitar tuner, a metronome for practising, volume control, it's all here. And even more exciting is the fact that it's labelled Volume 1, from which one can only assume that there's more on the way. Join us in rejoicing, this is the finest approach to guitar tuition yet to be committed to CD-ROM. If you want to play, buy this immediately. ***(TT)***



A lesson in Lynyrd Skynyrd-ness. The great thing is, there's no other medium that could do this. CD-ROM rules!

PCR VERDICT

A great disc that can't fail to excite you. Aimed at beginners and intermediate players.

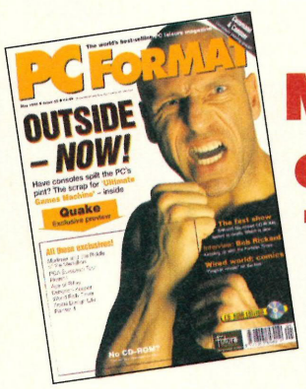
9

PC FORMAT

Buy it – or else!

This month: PCs and the super-consoles scrap for the title of 'Ultimate Games Machine'

- ***Quake*** **– exclusive video footage on the CD**
- **Bob Rickard of *The Fortean Times* interviewed**
- **The Fast Show: six speed CD-ROM drives tested to death**
- **'Graphic novels' hit the Net**
- ***Command & Conquer* tips**



May issue on sale Thursday 11 April

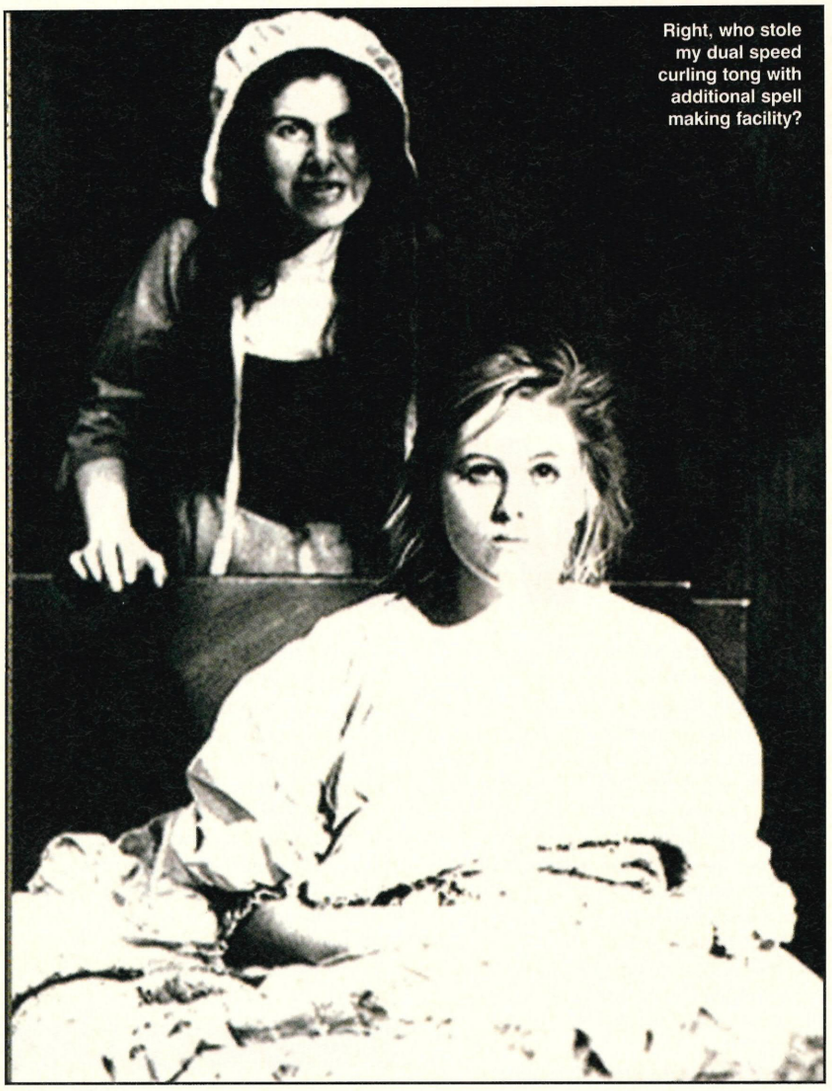
THE CRUCIBLE

CD REVIEW



Judge the *Crucible* demo with our CD-ROM.

The hunt is over. The crowd is baying. We strap Penguin's new reference work into our critical ducking stool.



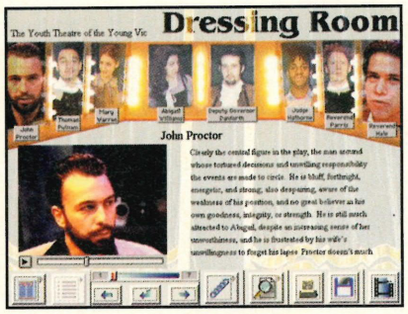
Right, who stole my dual speed curling tong with additional spell making facility?

For most of us in the 20th century, the word 'witch' probably conjures up hackneyed images of broomsticks, pointed hats and warty noses. Pummelled by countless artistic interpretations of potion brewing hags we often forget about what being labelled a witch actually meant just a few centuries ago.

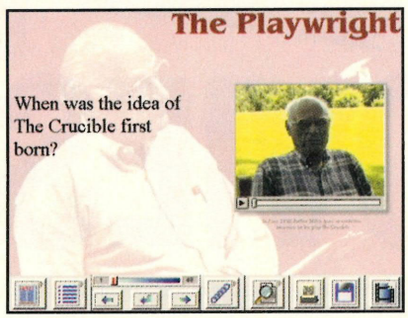
Alongside their recent publication of *A Jack Kerouac ROMnibus*, reviewed last month, Penguin has turned its attention to another American literary icon, Arthur Miller, focusing on one of his best known works, which used the Salem witch trials of the late 17th century as its theme. Created in 1953, *The Crucible* is a disturbing tale drawing parallels with McCarthyism and the persecution of left wingers in the 50s. You can forget ruby slipppers and cutely named cats, in 17th century Salem a woman accused of witchcraft could have been hung from the nearest gibbet before she could say hocus pocus – without the slenderest frog leg or bat's hair in evidence. Miller's play effectively portrays the paranoia, hysteria and religious fervour that the fear of such an accusation brought. Consequently, it asks many political, legal and moral questions of historical and contemporary relevance.

Theatrical focal point

Like many reference works before it, *The Crucible* CD-ROM is divided into several categories accessed from a main screen, in this case designed around a theatre foyer. The 17th Century section offers original source material from the time of the Salem witch hunts along with historical notes, while The 1950's provides a parallel, focusing on Miller and McCarthyism. In The Dressing Room actors discuss characters and The Playwright centres on a video interview with Miller where he answers questions on his play. Finally, The Balcony and The Bookstore contain extracts from criticisms, reviews and articles. The play is, of course, the primary focus of the disc and, being hyperlinked, anticipates questions from users. Complimenting the text, a filmed performance is also provided at the end of Act Three.



The thespians of the Young Vic describe the inner truths of their characters.



A digitised Miller, interviewed in the cosy confines of the Video for Windows studio.

Designed primarily for students, the disc is easy to navigate and, like all good reference works, has a number of search facilities. Some other useful features include a print option and a teachers' guide offering activities and questions to use in conjunction with the text. A copy of the paperback completes the package.

The Crucible CD-ROM, though lacking in finesse compared to the Kerouac disc, is nonetheless an effective teaching tool for the school and home user that demonstrates the PC's ability to mix video, audio and text successfully. It is a pity that like the Kerouac CD its price means that it cannot merit a higher than average rating. ***(JT)***

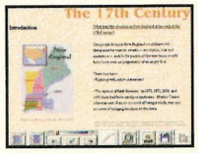
PCR VERDICT

A good reference work. Though not as stylish as A Jack Kerouac ROMnibus, it's just as pricey.

5



Welcome to the foyer. So where are the overpriced choc ices, the dippy ushers and the cantankerous old doorman ?



Smallpox, war, being hung from the highest gibbet for dancing naked in the woods. Those were the days.



With this NUS card, Mr Miller, you can expect to enjoy substantial savings on travel, leisure and grunge albums.

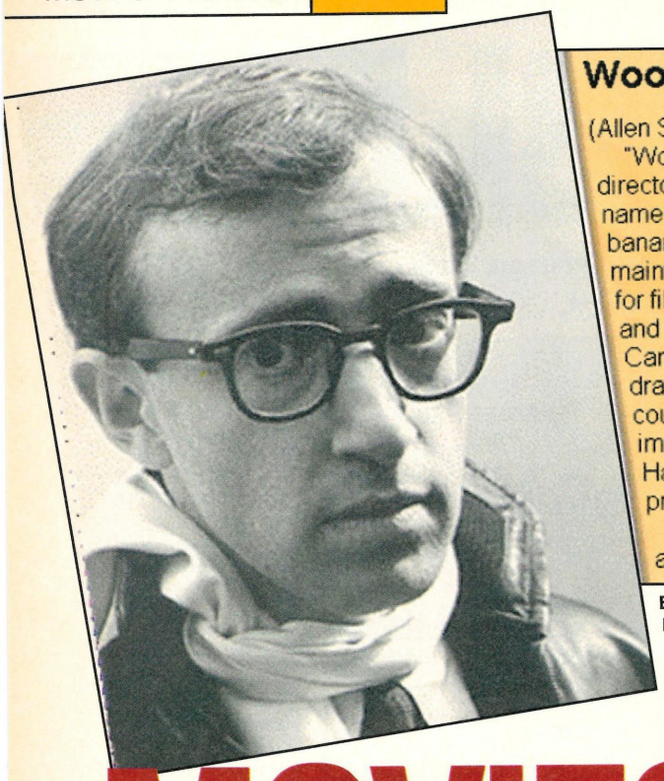
Developer: MediaRight

Publisher: Penguin

Contact: 0171 4163000

Price: £49.99

486, 8Mb, double speed CD-ROM drive, Windows, SVGA, 4Mb hard disk space



Everything you ever wanted to know about Woody Allen but were afraid to ask. Hypertext links enable you to switch to reviews of his films.

With a cast of thousands, this reference work is looking to make an epic entrance. Is it ready for its close up?



From the main screen you can spotlight ten different genres, star biographies and an addictive Movie Trivia game.

Blockbuster Video Guide to MOVIES & VIDEOS



To win the Trivia game you have to reach the golden seat by sliding along the rows and answering movie-related questions on the way.

For some, life is about taking on the big boys, standing up to the all-powerful in an attempt to achieve the impossible. Sometimes the infeasible is achieved, as with good old David and his trusty slingshot. However, as our boxing hero Frank Bruno sadly proved, more often than not the mismatch is all too apparent. The *Blockbuster Video Guide to Movies and Videos*, in the true spirit of the underdog, is a new CD-ROM release that, due to the very nature of it's subject and approach, pits itself against the mighty *Cinemania 96*.

Slicker than a 50s hairpiece

Well, for one thing the presentation is excellent – from the main screen to the reviews, biographies and Movie Trivia Game. Based on a best-selling book by Dell Publishing, it has a slick feel to its design and hypertext links are found throughout. In all there are over 21,000 reviews, 4000 biographies, 5000 photographs and 15 video clips on the disc, accessible either from the main category interface or from a search facility filterable by title, year, rating, genre and more. Emphasis has been placed on grouping films into the ten genres of Drama, Action, Family, Comedy, Horror, Musical, Documentary, Sci-Fi, Crime and Mystery and Westerns, both as a teaching tool, (you have the option of taking a guided tour of the genre's history complete with audio-visual commentary), and also as a means of arranging the volume of information. There is no randomised spin-the-wheel and choose the film facility, but the *Guide* suffers little from the omission.

Lacking incisive criticism

Compared to *Cinemania 96*, the written reviews provided by Blockbuster, although adequate, are not nearly as comprehensive. Your choice of a film will probably be influenced by the star rating rather than any incisive criticism of which there is very little. Also, there are not nearly enough video clips to browse through, and at the risk of sounding chronologically prejudiced, the clips that are provided are all pre-70s.

However, the well written biographies, compelling multi-player Trivia game, genre tours, and the facility to update the guide on a monthly basis with downloadable reviews, means that the inexpensive *Blockbuster Video Guide to Movies and Videos* is a more than worthy underdog. It has taken on a giant and although not beaten it, come out of the ring relatively unbruised, and at a very good price too. ***(JT)***

PCR VERDICT

Not quite as huge as Cinemania 96, the Blockbuster Guide is cheaper yet equally addictive.

7

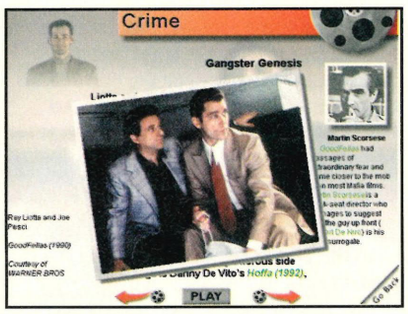
Developer: Creative

Publisher: CentreGold

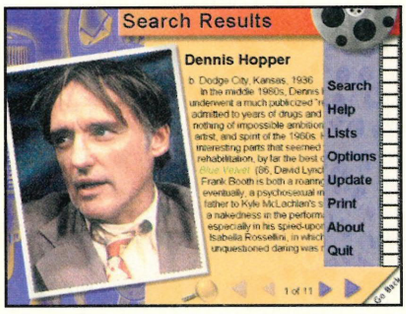
Contact: 0121 625 3388

Price: £19.99

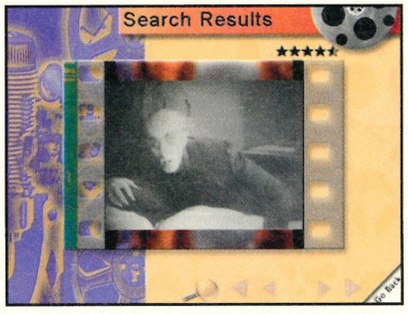
Minimum System: 486SX/25, 4Mb, double speed CD drive, Windows, SVGA, 7Mb hard disk space,



A review of Scorsese's gangster biopic masterpiece, Goodfellas. There are around 21,000 more reviews to choose from.



Wild man of cinema, the easy rider, Dennis Hopper. The pull down menu on the right accesses some of the disc's general features.



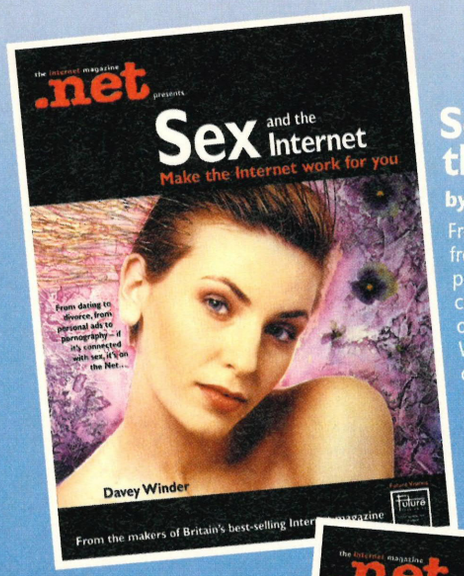
Nosferatu is one of 15 video clips presented on the disc. We recommend you only watch it with another adult present to hold.

the internet magazine

.net

NEW!

presents

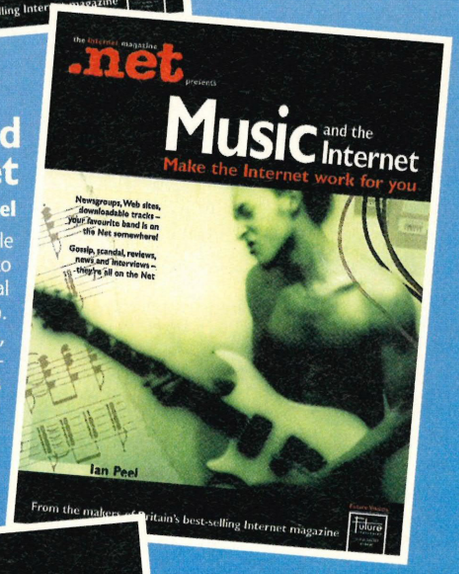


Sex and the Internet

by Davey Winder

From dating to divorce, from personal ads to pornography – if it's connected with sex, it's on the Net. Davey Winder is in the words of the BBC, "the UK's foremost guide to the Internet".

Order code: FLB 0497

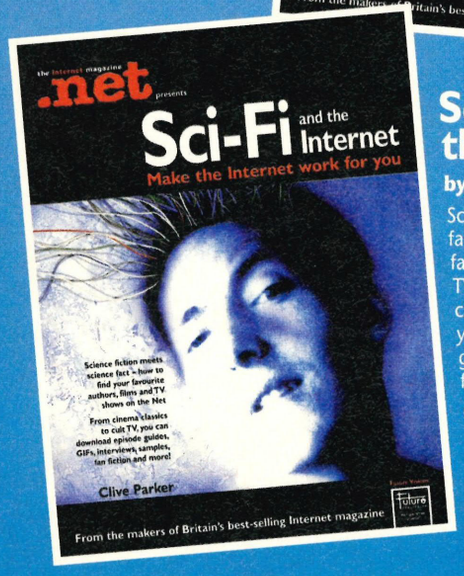


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by Clive Parker

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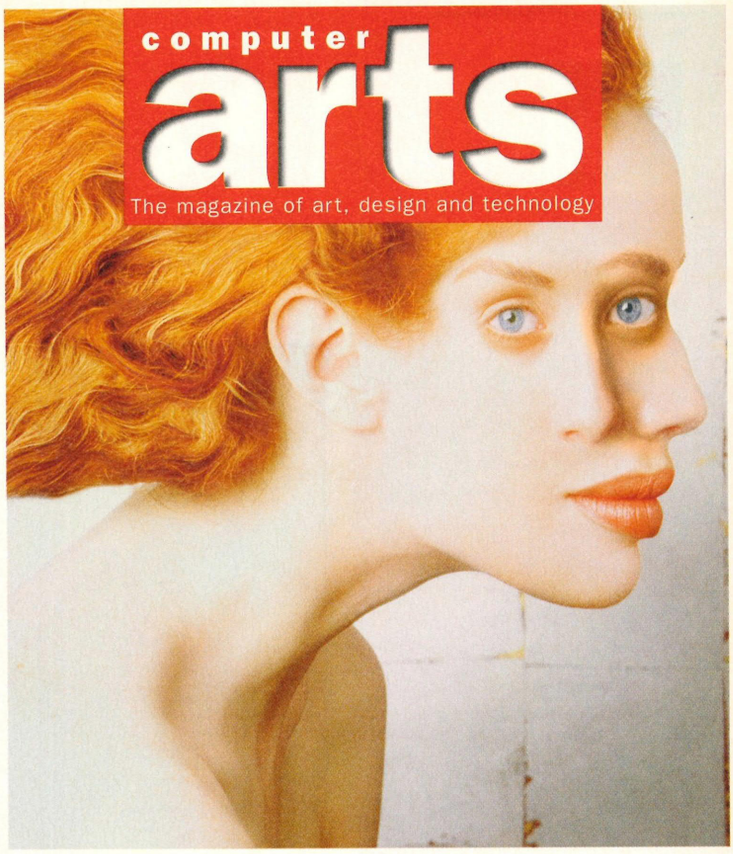
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"It makes professional ideas available to amateurs"
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◆

"Good reviewing by people who know what they're talking about"
Student

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"At last, a magazine from the country that has arguably produced some of the best designers, animators and games houses in the world"
Lead Animator Designer

◆

"I love the CD and the chance to try out expensive packages at home"
Graphic designer

◆

"The profiles are excellent, the exposure is very impressive"
Postgraduate researcher

Keep an eye out for the next edition of Computer Arts

Launches: Thursday 6 June



Hello and welcome again to Get Serious, the section of the magazine where we review the newest and most useful applications and hardware.

With the wonderous 3D animation of *Toy Story* wowing us in the cinema, we thought it fitting to kick off these pages with a review of *Ray Dream Studio*. If you gander to the right a bit, you'll find out just how much we liked it. But that's not all, we put two home DTP programs head to head, and we've taken four flatbed scanners to the test bench in a hardware round-up.

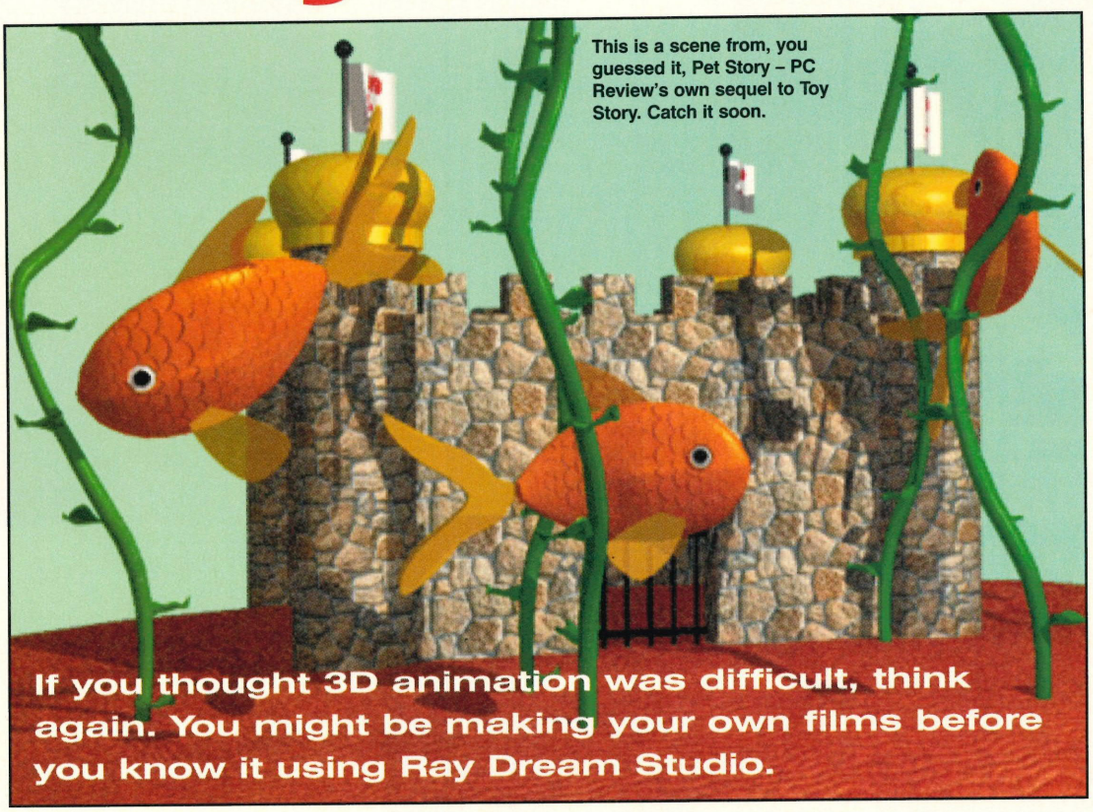
And if none of these things grab your interest, there are also reviews of 3D home design, money managing and music making software. The selection is stupendous, but don't let me hold you up any longer. Enjoy this month's Get Serious.

Mat Broomfield, Technical Editor

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Ray Dream



This is a scene from, you guessed it, Pet Story – PC Review's own sequel to Toy Story. Catch it soon.

If you thought 3D animation was difficult, think again. You might be making your own films before you know it using Ray Dream Studio.

Designer, if you've not heard of it, is a ray tracing program much respected due to its easy drag-and-drop interface. In fact, Corel liked it so much that they bought version three to bundle with their own graphics pack. The new *Ray Dream Studio* package, however, consists basically of *Designer 4*, with the additional enhancement of *Animator*, an integrated module that takes care of all types of animation, from the simplest, to the most complex.

Designer 4 uses much the same interface and screen layout as the previous version, though some toolbars and options have been optimised to make them even easier to use. This is quite an achievement, because the program is almost entirely mouse controlled. You can build models, create scenes, add lighting and colour, set views and create animations without ever touching the keyboard (except to hold down the Control, Shift or Alt keys).

One way that *Designer* simplifies the creative process, is by providing you with wizards to perform some of the most complex and repetitive tasks. The Scene Wizard offers you a choice of various set scenes, then helps you customise your choice to your own requirements, adding lighting, walls and so on until you've formed a basic template onto which you can build your own world. Alternatively, you can choose from numerous preset indoor or outdoor scenes, complete with appropriate objects and backdrops. The 'foggy morning' and 'red planet' scenes are particularly attractive.

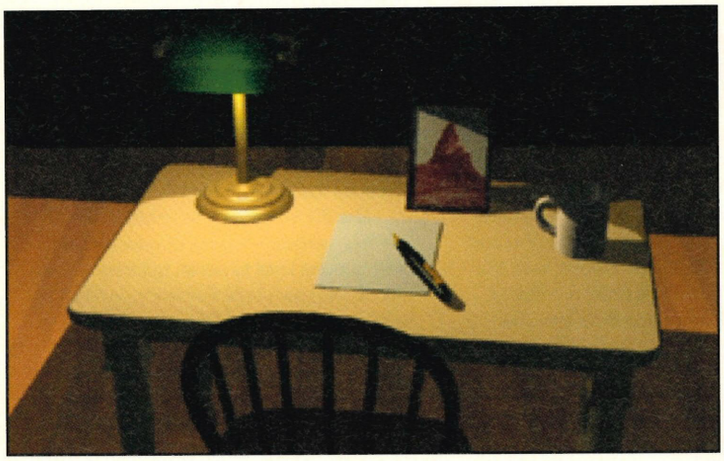
Ray Dream Studio is the epitome of software that's been designed with the end-user firmly in mind at every stage.

Once you've created a scene, you can populate it with objects. Some 500 ready-made ones are provided for you to import into your setting. Covering every conceivable theme, from works of art to cowboy hats, false teeth to shrimps, you just drag them from the menu onto the scene, which itself is represented in perspective view. If you switch the plane grids on, each object (including lights and cameras) casts a 'shadow' onto the grid, denoting its exact position across all axes. Move a shadow and you alter the object's position. This obvious system makes the process of scene creation so much easier, and you'll only find it in *Ray Dream*.

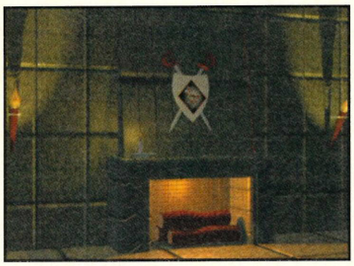
If you prefer not to use off-the-shelf objects, you can always make your own. *Studio* provides you with numerous base shapes like spheres, cubes, cylinders, etc. These can be moulded and manipulated into whatever shape you require. Again, the plane grids make this process simple – you can concentrate on each projection of an object without having to worry about its other dimensions. This is really a digital form of the orthographic projection system used by draughtsmen for years, but it works even better.

For converting vector drawings like Corel or Illustrator clips, you can use the extrusion or rotate tools to add

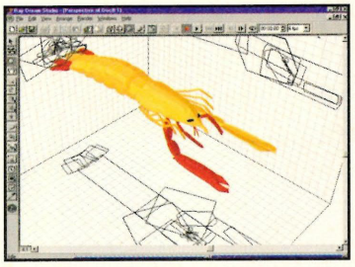
Studio



This homely table and lamp template is one of the set scenes provided.



Texture mapping and the lighting engine on show in a medieval scene.



Ray Dream's modified orthographic view makes it easy to position objects.

that extra dimension. Of course, there's also a freeform tool for creating shapes from scratch. This method is complex, but if you follow the tutorials, you should be able to create pretty complicated objects within a day or so of buying the program.

Once you've loaded or created an object, you can define numerous details such as colour, reflectiveness, texture, opacity and more. Shaders are small textures that are used to apply properties to an object – for example, a non-reflective marble surface. You combine shaders to create new ones, so you might apply a metallic shader to a mesh one, to come up with a textured metal.

It's the addition of the *Animator* module that really makes this version of the program so special. You can move the camera, deform or move shapes or even re-colour them, all with no more than a few mouse-clicks. The simplicity of *Studio*'s animation system, coupled with an awesome amount of underlying power, will amaze you as you begin to appreciate its potential. The system pivots around a time-line display which you use to indicate the duration of each motion. Choose an object, go to a different place on the time line, move or reshape the object, or alter the camera view and soon, you've made a movie. What really adds the power, however, are the transition and tween options, which allow you to define motion characteristics. A ball moving from left to right, can easily have a bounce added to it, and a cube can be made to tumble or pulsate.

These days, it's expected that good ray tracing programs will offer texture mapping, multiple light sources, deformation, and a drag-and-drop interface. But that such a package should be so well designed and easy to use is something special. *Ray Dream Studio* epitomises software that's been designed with the end-user firmly in mind at every stage.

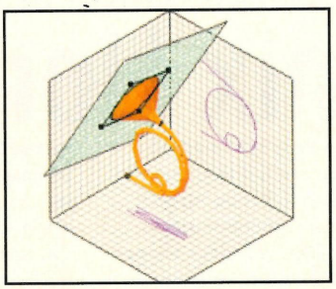
PCR VERDICT

Ray Dream Studio is one of the best programs available for the PC. The more you use it, the better it gets.

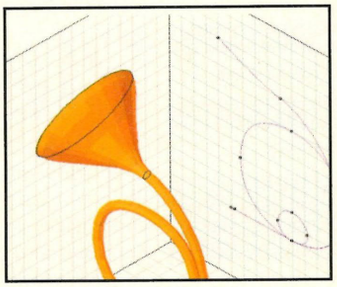
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Making a ray traced fanfare...

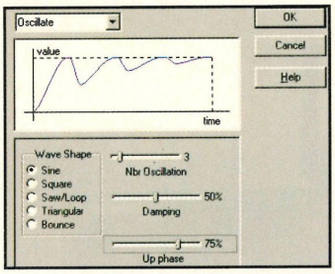
This is the quick and simple four step procedure we followed to create a little fanfare-style animation using Ray Dream Studio. What might take half a day to create in other ray tracing animation packages here takes but a few minutes. The idea here was to make an animation of a 3D horn being blown in tribute, with the added effect of having that horn appear to pulsate as the music came out of it. Here's how we did it...



1 We start by loading a horn in from among the premade objects, and going to the object modeller, where we alter the size of the bell.



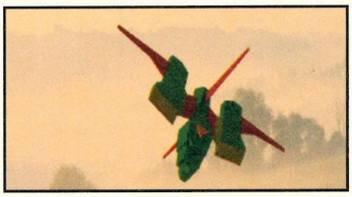
2 We can then use the planar view to remould the shape of this instrument however we like, making it the right horn for our fanfare.



3 The next stage involves assigning a transition which will make the horn's bell appear to pulsate as the noise comes out of it.



4 The final stage involves assigning a rotation to the trumpet, then duplicating it twice more. Offset the rotation of the horn, and, ta-daaaah!



Here we've used the foggy morning template with a spaceship model.

Developer: Raydream

Publisher: Raydream Europe

Contact: 01483 474534

Price: £?????

Minimum system: 486, 12Mb RAM, CD-ROM drive, 40Mb Hard disk space, SVGA



You can use the program's wizards to build scenes and objects in a few seconds.

Mobile HOMES

Build and furnish your dream home, or experiment with the one you've got with this foursome of 3D design programs.

Planix Home Architect 3D

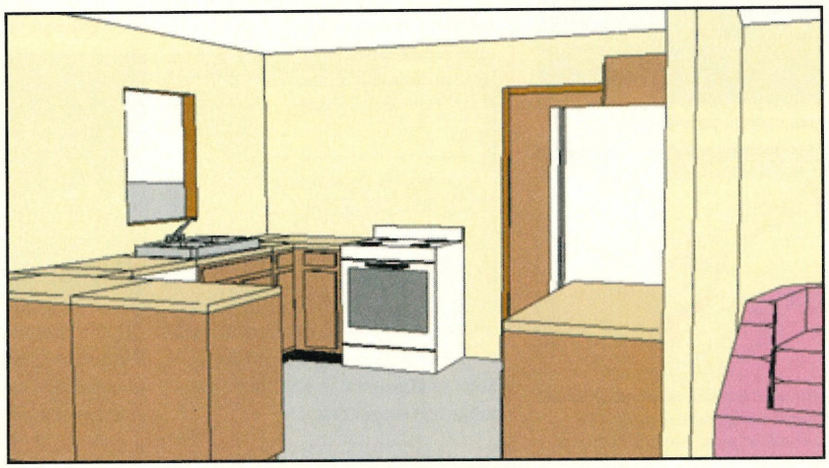
Developer: Softdesk
Publisher: Roderick
Contact: 0181 875 4400
Price: £45.83
Minimum system: 386, 4Mb RAM, Windows, 12Mb hard drive, VGA

Here, we move away from mere 3D representation of a building, and closer to the business of planning and construction. *Home Architect* is similar to *FloorPlan*, but it provides you with a cleaner interface, which makes it less intimidating for the beginner.

Even so, the program seems primarily geared to the making blueprints rather than 3D images. It comes with 500 floor-plans for you to use and adapt. This resource makes *Home Architect* a great source of ideas if you want to remodel your house. You can readily view successful designs, and, the program comes with a great number of objects ready for you to drop into your drawings. Although there are more objects than in *FloorPlan*, they're less easy to use because there's no 3D preview mode.

The 3D mode is quite primitive. There are four predefined types of view ranging from ground-level to aerial, but they all use the same drawn-style rendering. Whilst this is adequate for positioning, it totally fails to create any sense of atmosphere.

Nonetheless, *Home Architect* can generate material requirement estimates for you. It quantifies the contents of a house, but if you attach a value to each item, it can create quick inventories for insurance purposes. You can tailor reports to show you a building's electrical wiring, security status, entry and exit points and more. This well considered feature makes *Home Architect* a clear winner. ***(MB)***



Home Architect from Planix may not do the greatest 3D rendering, but it's the most comprehensive package going.

PCR VERDICT

Brimming with useful features, yet it sacrifices nothing in terms of user-friendliness.

9

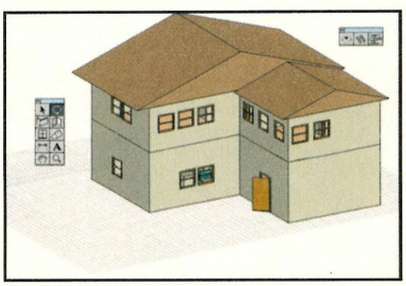
Home Design 3D

Developer: Expert
Publisher: Software Partners
Contact: 01954 206626
Price: £14.99
Minimum system: 386DX, 4Mb RAM, Windows, 4Mb hard drive, VGA

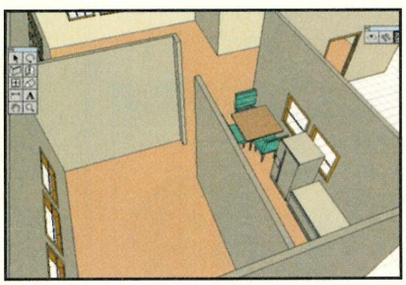
Like *3D Walkthrough*, the emphasis of the program is on creating a flexible 3D view that you can walk around in freely to get the flavour of any home improvements you might be considering. Unlike *Walkthrough*, though, *Home Design 3D* lets you create buildings of more than one storey. The software is supplied on a single floppy, which restricts the number of furniture objects included. All three of the other programs score big points in this area, so the shortfall is especially noticeable here. An extra furniture disk is available for £15.

Although the 3D world here is only represented using line drawn graphics like in a cartoon, with none of the wonderful texture that attracts you to *3D Walkthrough*, it's very easy to grab the mouse and go for a walk around the inside of your building, turning this way and that to view any new layouts you may be trying. You can even jump into your 'helicopter' and fly around the outside of the building you're planning.

Home Design 3D's 2D interface, works differently to the other programs. Instead of each room consisting of four walls, with windows and doors placed upon them as extra objects, it treats a room as four corners. Therefore, when you move one of them, the walls and features on those walls, are repositioned at the same time. This approach is good, but the program produces blueprints that are hard to read and too cluttered. *Home Design* has an easy interface, which is due in equal measure, to a dearth of features and good program design.



Using the Helicopter function you can fly around the outside of your house too.



Home Design 3D is extremely affordable and very easy to use, but sadly basic.

PCR VERDICT

An affordable start for anyone intersted in home design. Not very comprehensive on features.

8

3D Walkthrough Home Designer

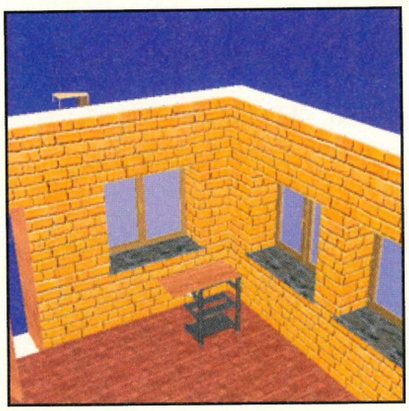
Developer: Data Becker

Publisher: Data Becker

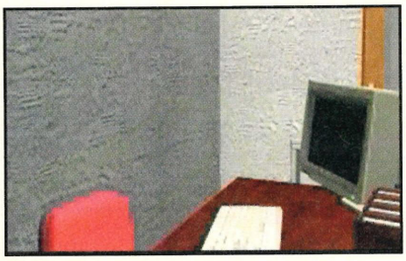
Contact: 01420 22707

Price: £49.95

Minimum system: 486 DX2 66, 8Mb RAM, CD drive, Windows, 6Mb hard disk, VESA or PCI graphics card



A scene from one of the 3D walk-throughs from whence 3D Walkthrough Home Designer gets its name.



It may look bad in two dimensions, but in 3D your plans are given amazing textures. Will your house really look like that?

When frustration is your very first reaction to a program, it's a safe bet that not enough thought has gone into its design. When that emotion is evoked half a dozen times more before you even start to use it, then there's something seriously wrong. To read the packaging, 3D Walkthrough seems to offer all the right things, but as you start to install it, you realise that some major shortcuts have been taken, and that Databecker just hasn't considered what it's like to actually use this program.

The installation routine is a mess, leaving you with surplus copies of the program on your hard drive. Once you come to actually run the software, you realise that it doesn't automatically detect the location of files required to get going, and the software won't load until you manually point it in the right direction.

Whilst we're on the subject of manuals, it's essential that a complicated product like this should come with something to guide you through the installation and use. It doesn't. Furthermore, the tutorials jump from subject to subject too quickly and have misleading illustrations.

Despite this, the program acquits itself surprisingly well. It comes with a few basic floor-plans and a variety of furniture. You can create your own floor-plans, but there's no way to design new furniture. The program is the easiest of all to use, but that's primarily because it offers so few features. That's not a criticism, it has all most home users need - walls, doors, windows, furniture, even wallpaper, curtains and carpets. The most impressive part of the program, is the quality and speed of the 3D renderings, and you can even create highly detailed animated walk-throughs. ***(MB)***

PCR VERDICT

A mixture of great features, good graphics, but poor design and sloppy manuals.

7

FloorPlan Plus 3D

Developer: IMSI

Publisher: FastTrak

Contact: 01923 495496

Price: £69.95

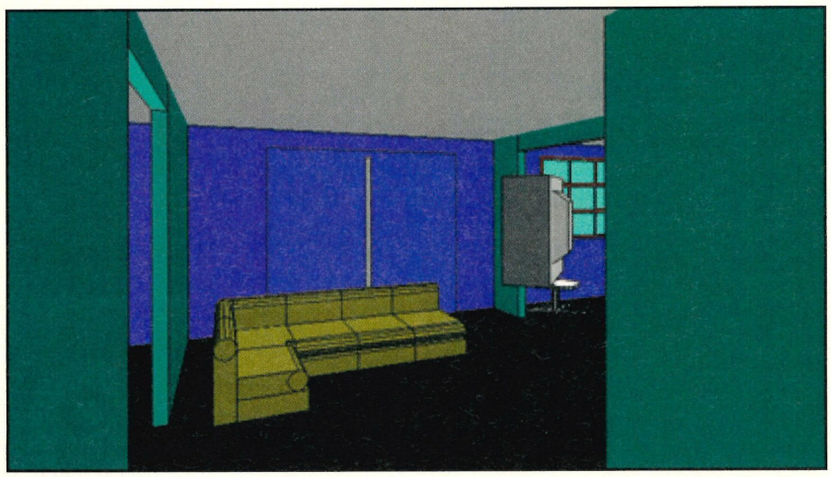
Minimum system: 386 SX, 4Mb RAM, Windows, 6Mb hard disk, VGA, soundcard, Windows 95 optional

Unlike *3D Walkthrough*, *FloorPlan* feels right the second you load it. Much more complicated, ir has a strong architectural feel to it and is more like using a proper CAD package rather than a home design tool. In fact, it combines elements of both disciplines. The objective in home design software is to simplify the job of creating realistic floor-plans so that you can quickly experiment with various furniture layouts and colour schemes. CAD programs on the other hand, are all about precise two dimensional technical representations of the 3D world.

This program comes with lots of predefined symbols, enabling you to design plan-view blueprints that convey all the information needed to build a house. Wiring, plumbing and roofing can all be included. If the symbol you need isn't there, you can make your own, using a set of freehand drawing tools provided.

The program comes with libraries of hundreds of objects divided into categories like furniture, appliances, cabinets and even landscaping. That last category is handy as it contains plants, decking, outdoor furniture, fencing and everything else you'll need to plan landscaping work. Each object has 2D and 3D representations and may be freely scaled and rotated, with changes made in two dimensions, affecting the appearance and position of the three dimensional object.

When it comes to 3D, it's very easy indeed to select a viewpoint and render an image. The program is well designed, but even the shaded, outlined 3D view is only a pale shadow compared to the shaded, texture mapped splendour of some of *3D Walkthrough*'s images.



The 3D renderings aren't that amazing to look at, but FloorPlan does have a useful walk-through mode and you can preview 3D objects before using them.

PCR VERDICT

FloorPlan Plus combines technical precision with powerful drawing tools. Not impressive in 3D.

7

Corel Print House

First into the design-and-print ring comes the heavyweight Corel Print House, aimed at Windows 95 users who can't quite justify CorelDRAW!

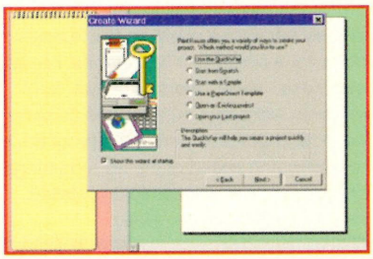
CD REVIEW



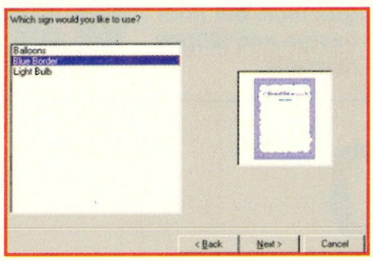
World exclusive demo of *Print Shop Deluxe*.

Inky fingers...

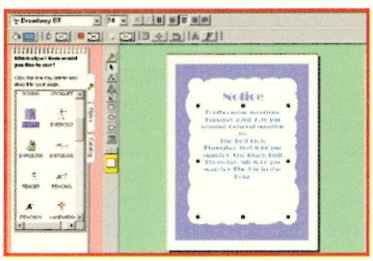
Here are a four of the basic features may find yourself poking around with in Print House.



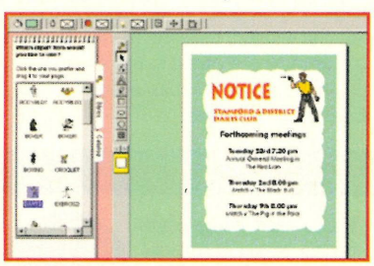
What would we do without wizards? The first step to publishing success with Print House is to select a wizard, a ready-made sample or a Paper Direct template.



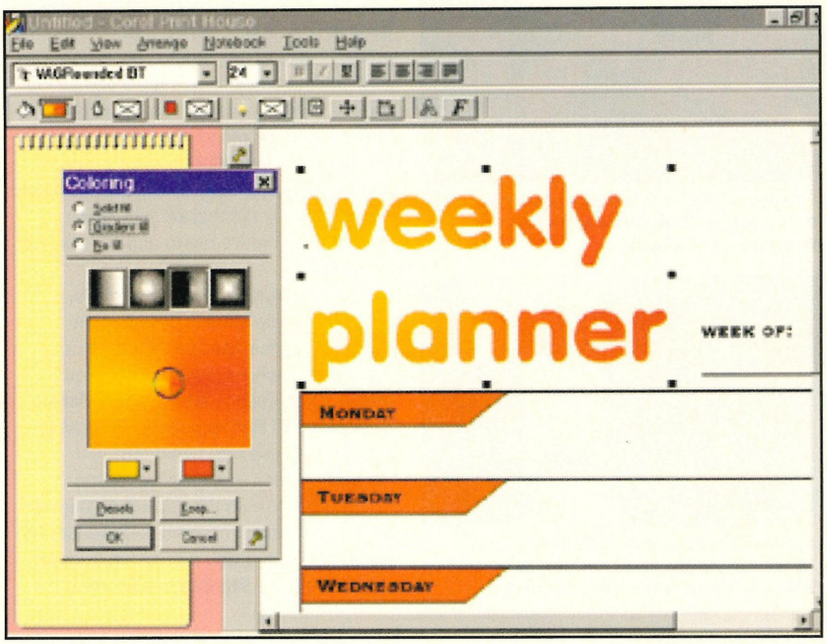
You can choose from cards, signs, banners, calendars, brochures, business forms, labels and letterheads, among others. This will be a simple notice form.



You enter the text in the appropriate wizard dialogue box and Print House displays your design in all its glory. Or lack of it, as the case may be.



By adding some clip art, tweaking the colours and tidying up the text, you might come up with your own method of poster design using Print House.



Some colour radient fills can be designed and used for jazzing up your documents, but Print House has only a limited range of text effects.

How often have you wanted to fire up your PC and print out a poster or certificate in five minutes? The trouble is, some heaveyweight DTP programs take almost that long to load, and by the time you've hunted down the right bits of clip art, your five minutes is up. This is where *Print House* might come in. Its one purpose in life is to help you produce a widest range of documents in the shortest possible time.

Print House is a cut-down version of the top end graphics powerhouse *CorelDRAW! 6*. It's a true 32-bit application, so you need Windows 95, and it's powerful enough to let you import, edit and export clip art in several formats, including the proprietary Corel CMX format. If that doesn't impress you, the CD-ROM contains 5000 clip art images, 1000 jokes and phrases, 1000 photos and over 900 sample documents for your use. There are also 100 quality TrueType fonts, 600 templates for Paper Direct's range of pre-printed stationery and dozens of backdrops. Like *Print Shop Deluxe* (reviewed last month), it also features editable mailing lists for invitations, name badges and so on.

The program hides its lineage well. It looks very different to *CorelDRAW!* though some of the toolbar icons are a bit of a give-away. The window is divided into two with a small, thin notebook to the left and the drawing on the right, both separated by the toolbar with its text, draw and shape icons. Hit New and you get various options, including wizards or ready-made samples you can tear apart and put back together.

Unfortunately things go downhill from here on in. Despite the huge library, the templates are disappointing and the wizard is a waste of time. The fruits of its labours are lame in comparison to those in Microsoft *Publisher* and the budget competitors.

Print House also feels sluggish. It's only a little slower than other DTP options, but there are some infuriating pauses even with a fast CD-ROM drive. To make matters worse, it tended to crash on our test machine for no apparent reason. It also appears to have print problems. Colour pages output to a colour-capable Deskjet all emerged in various shades of blue.

In its favour, *Print House* has a manual that catalogues every font and picture. Unfortunately, some of the images in the book were numbered completely differently on the CD, rather defeating the object. In all, *Print House* is a poor effort from a company that should have got it right. ***(CH)***

Developer: Corel

Publisher: Corel

Contact: 01703 814142

Price: £39.99

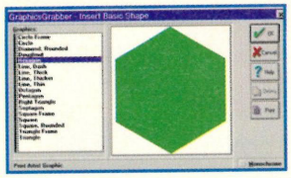
486DX, 8 Mb RAM, CD ROM drive, 20Mb hard disk space, VGA, Windows 95

PCR VERDICT

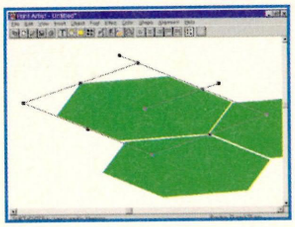
Slow, buggy and unresponsive, Corel Print House is generally a big let-down.

3

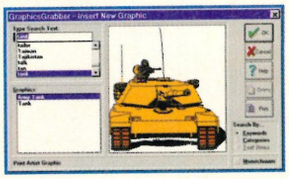
Building a logo with Print Artist...



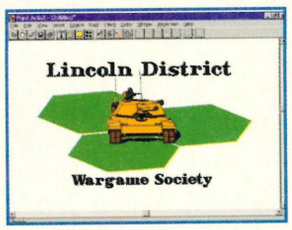
Here's the design for a club logo in the making. It's a wargames club so a hexagon is a good solid symbol to use.



The single graphic is skewed, rotated and duplicated twide to form a backdrop for the rest of the graphic.

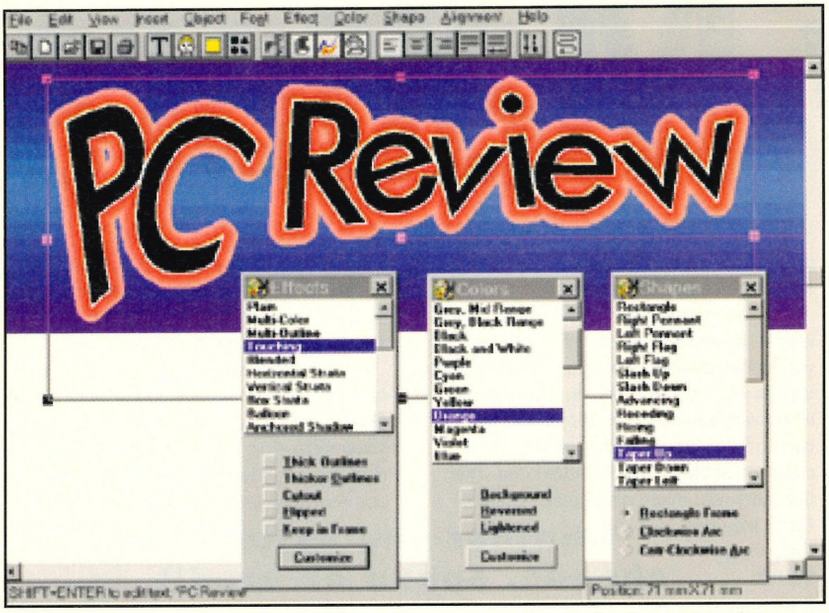


The third step is to add some clip art. In this case a simple keyword search of the database reveals just the right image.



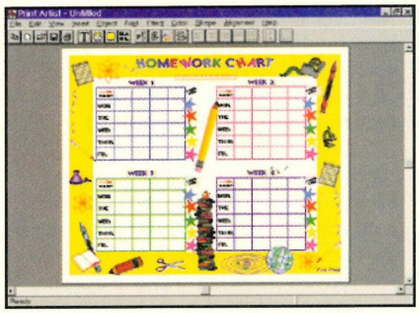
Text can be added quickly and easily. In this case no special effects are required, though Print Artist does offer a range.

Print Artist 3.0



Did we mention text effects? Print Artist has some spectacular ones lined up and ready to go.

And in the red corner, with a distinct weight advantage but a longer reach, stands Sierra's Print Artist...



A predesigned homework chart. Nice.

Print Artist tackles do-it-yourself DTP in a slightly different way. For a start, there is much less emphasis on wizards. Instead it offers you a wide range of ready-made designs that you can adapt quickly and easily to your own needs. Many of them don't look too useful on this side of the Atlantic, though an attempt has clearly been made to inject some clip art with a European flavour. You can also import your own, of course, although it tends to be fussy about bitmaps and complicated vector graphics and won't display some photographic images on the screen.

Print Artist offers you the choice of designing signs, certificates, letterheads, business cards, greeting cards, postcards, banners, envelopes, calendars and crafts. The last category holds a wealth of projects, from custom bridge score cards to gift boxes, model buildings, and party hats.

Print Artist has over 6700 clip art items and JPEG images, as well as a library of quotations, that you can use in your designs. You can opt for three levels of installation that leave varying proportions of them on the CD rather than copying them to your hard drive. A 200-page manual tells you all you need to know about the program and how to get the most from it. This makes it ideal for beginners, but a printed catalogue of the clip art would have been useful.

There are two ways to approach design using *Print Artist.* First you can choose a document type and then select from a list, looking at previews of each one. Alternatively, you can build up your page from scratch by choosing a backdrop and adding images, clip art and text. This makes it a good program for designing complex graphics such as logos as they can be grouped together and copied elsewhere using the clipboard or exported as bitmaps or EPS files. In this respect it is similar to *Print Shop Deluxe*, reviewed last month.

The interface takes some getting used to but once you've embarked up the learning curve, it's quick and clean. There is a toolbar along the top of the workspace in addition to the menus. Graphics can be placed anywhere inside the workspace or positioned on the page itself. Hundreds of preset effects are available and these can be selected from the *CorelDRAW!*-style roll-ups which offer on screen previews. This way you can see exactly how a special effect can look when applied to text or graphics.

For many users, *Print Artist*'s biggest asset will be its modest hardware demands and the speed of operation on older PCs. If you're looking for something quick and easy to learn, yet with all the power you're ever likely to need, add *Print Artist 3.0* to your shopping list now. ***(CH)***

PCR VERDICT

Neat and easy-to-use, Print Artist is a DTP package that has it all. Recommended.

8

And the winner is...

Of the three quick and easy DTP packages reviewed over the past two months, Corel Print House proved to be the most questionable in quality. It has a vast repository of fonts and graphics, but is outpaced by the other two. Print Shop Deluxe, reviewed last month and on this month's CD Review, is fast, flexible and fun, with good instructions. Unfortunately, though, it's let down by a quirky interface and is slow at screen redraws. That leaves Print Artist 3.0, reviewed opposite, as our winner. There's little more than a hair in it, but we recommend it.



Hey, we even designed a winner certificate for Print Artist 3.0 using Print Shop Deluxe, which you can try out with this month's cover CD.

Developer: Sierra

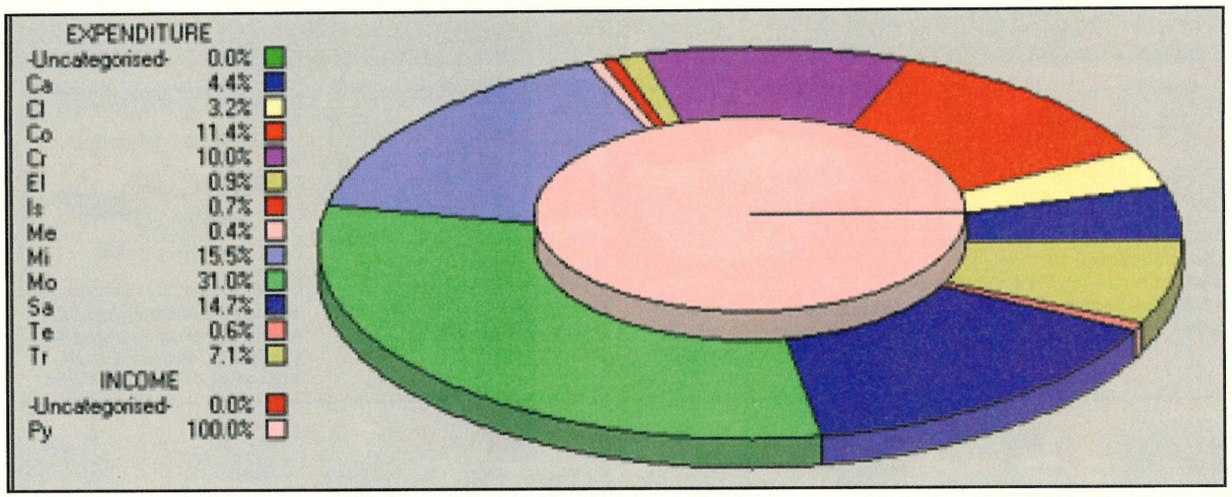
Publisher: Sierra

Contact: 01734 303171

Price: £39.99

Minimum system: 386, 4 Mb RAM, CD ROM drive, 10Mb hard disk space, VGA, Windows 3.1 or Windows 95

Analyse how you spend your money using the Category pie chart option.



There's no need to guess at your finances each month. Money Matters can do all the hard work for you.

Money Matters

CD REVIEW

Try *Money Matters* with this month's CD-ROM.

Do you await your bank statements each month with mixed feelings of trepidation and excitement? Do you know exactly how much you have in each account at all times? Or are you like most of us, finding out once a month whether we need to tighten those purse-strings?

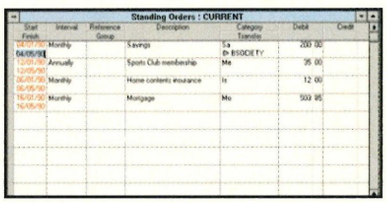
Money Matters can handle up to 40 accounts, so you can track your money through banks, building societies, stock portfolios, VAT accounts, credit cards and so on. Each account is represented by an icon, and you can choose from one of dozens of predefined graphics, covering most banks and credit card companies.

Once accounts are set up, it's simply a matter of recording its cash-flow. Whether you write a cheque, spend on credit, repay a loan or win the lottery, all must be entered, along with a transaction description. In certain fields, you can choose from a list common entries via a drop-down list. The Category field might offer you a choice of Cash, Income, Groceries, Electric, Savings and so on. If the required word isn't listed, you can simply type it in. This is the only nod *Money Matters* makes towards user-friendly data entry, and it's annoying to have to re-type the date for every entry. You can copy and paste, but other packages provide better solutions. On top of manual entries, you can set up repeat ones to cover things like standing orders, loan repayments and so on. These will then be automatically appended to each month's statement.

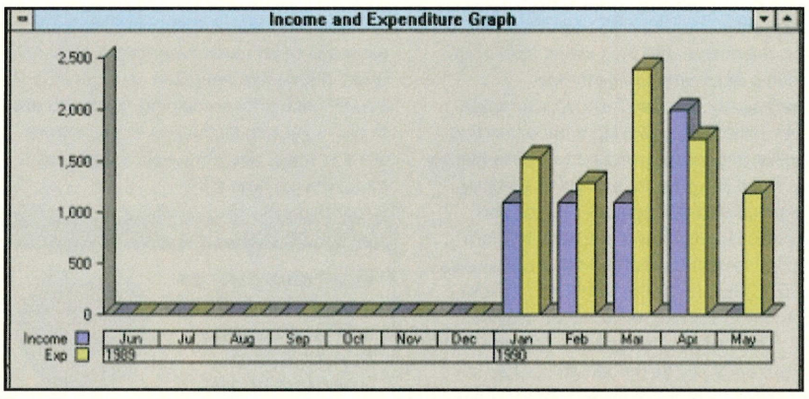
Whether you write a cheque, spend on credit or win the lottery, all must be entered.

When your accounts are up to date, you can compare the money you've paid out against the figures reported on your bank statements. This is a great way to avoid slow-moving cheques from catching you out. As you would expect, *Money Matters* can generate reports and graphs which summarise all aspects of your finance. For example, you can produce a budget plan, then compare your forecast against your actual performance. This is an especially useful tool if you're trying to assess your ability to cope with new financial commitments, because you can quickly identify areas that could be improved. Or, you can choose to view a pie chart. Great.

Money programs are like font and clip art collections: ten-a-penny. Any company wanting to market such a program should be eager to add numerous differentiating features. GSP has added a few tweaks, but generally there's nothing revolutionary. ***(MB)***



Enter payments in the standing orders section to simplify your accounting.



Compare your income and expenditure using one the program's numerous graph features.

The Loan Calculator

One nice feature that's been borrowed from another GSP Program called Loan Analyst, is the Loan Calculator, which you can use to speedily work out the periodical repayment, or duration of any loan. And, if you own the Loan Analyst package, it can be launched and used directly from within Money Matters.

Developer: GSP

Publisher: GSP

Contact: 01480 496666

Price: £19.95

Minimum system: 386, 4Mb RAM, 3Mb hard disk space, mouse, Windows 95 or Windows 3.1

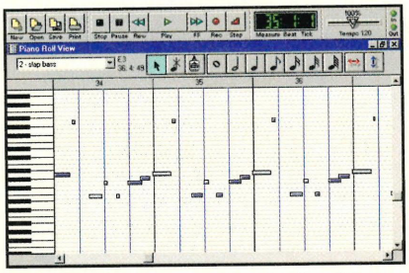
PCR VERDICT

Money Matters is competent, but unexceptional. Its price is the main selling point.

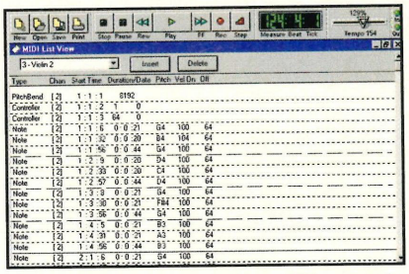
6

Midisoft Studio 4.0

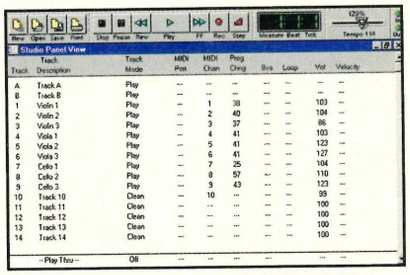
Is Midisoft Studio 4.0 the best place to write and record music? We turn it on and twist the knobs to full volume...



Piano Roll View is a new introduction. It's an essential part of any sequencing package.



A complete catalogue of all the MIDI events in a particular track. You can tweak them too.



The Panel View makes real-time playback changes relatively simple.

Soundtrackers and MOD file players are all very well, but if you want to write serious music with your PC, then you need a MIDI sequencer. Most UK musos tend to plump for the offerings of either of the two big European developers, Steinberg or Emagic. Steinberg's famous high-end sequencer, *Cubase*, comes in a cut-down, entry-level version called *Cubasis*. Emagic, similarly, has *Logic* and *microLogic*.

Display and manipulate

Studio 4.0, developed by US company Midisoft, is aimed at the *Cubasis*/*microLogic* market. The package presents you with several ways of displaying and manipulating your music, though it's principally based around a score editor, called Score View, with traditional music notation. If you can't read music, there's a piano roll editor, where notes are displayed as holes on a scroll.

To get music into *Studio*, go to the MIxer View, pick an empty track, toggle the record switch to active, wait for the count-in and play your MIDI keyboard, presuming you've got one. Simple as that. Now edit your music. Tidy up the timing, cut and paste parts like you would, transpose notes up and down the octaves. All standard sequencer fare, really.

Studio has a handy Panel View, allowing you to quickly choose instruments or set volume levels as the music plays back. A list editor displays all the MIDI data for any track, so you can edit every last detail of your music. *Studio*'s score notations cover the basics – notes, lyrics beneath musical staves, some phrasing and printing – but don't expect all those dynamics in Italian usually found on sheet music.

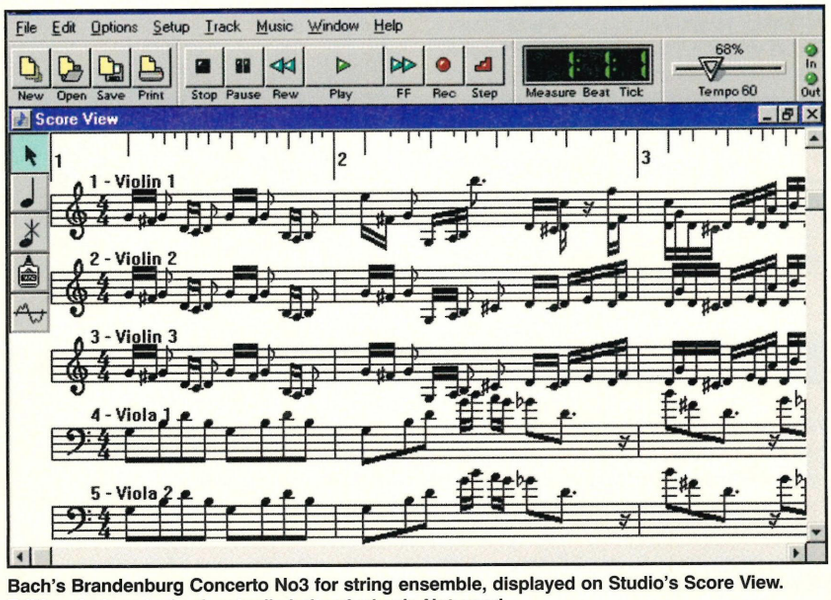
What's more, *Studio* comes with limited audio support. WAV files can be triggered simultaneously with your MIDI notes (two with the Win95 version, but only one file with 3.1). The Wave Editor enables you to record, trim and enhance audio bytes.

But *Studio* is not without its quirks, shortcomings or the odd bug. Tempo is controlled by a slider, and setting an exact tempo from the main screen is not easy. There is a tempo map for plotting changes in speed, but it uses a disparaging system of base, absolute and scaled tempos. Ouch! If you hit Play somewhere in the middle of the song, you automatically trigger the current file, whether you want to or not. The fast forward and rewind controls are faulty too, tending to zap the song's beginning or end in a split second, before you have a chance to stop it along the way.

Makin' life easier

What would make life easier is an Arrange View, where you can see at a glance the structure of the song, and how tracks relate to one another. It's a device that musicians prone to repetitive styles favour greatly. The Arrange page is the reason *Cubase* and its derivatives are so popular – *Cakewalk* and *Logic* have adopted it too. What's more, if you start with the basic *Cubasis* (£129) or *microLogic* (£99), you can upgrade as your sequencing skills develop.

Studio is a jack of all trades but master of none. Wave editing, lyric writing and even e-mail support are in there, to the detriment of areas like the piano roll editor. It gives you the power to do more than dabble, and the audio integration is an exciting feature, but if you want to make music and notation is not your bag, look elsewhere. ***(DR)***

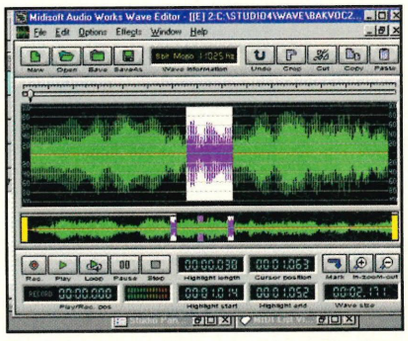


Bach's Brandenburg Concerto No3 for string ensemble, displayed on Studio's Score View. Editing during playback actually halts playback. Not good.

PCR VERDICT

Good all-round approach to MIDI music and audio recording, but not without its quirks.

6



Studio boots up with a colourful combination of the Mixer and Score Views.

Developer: Midisoft

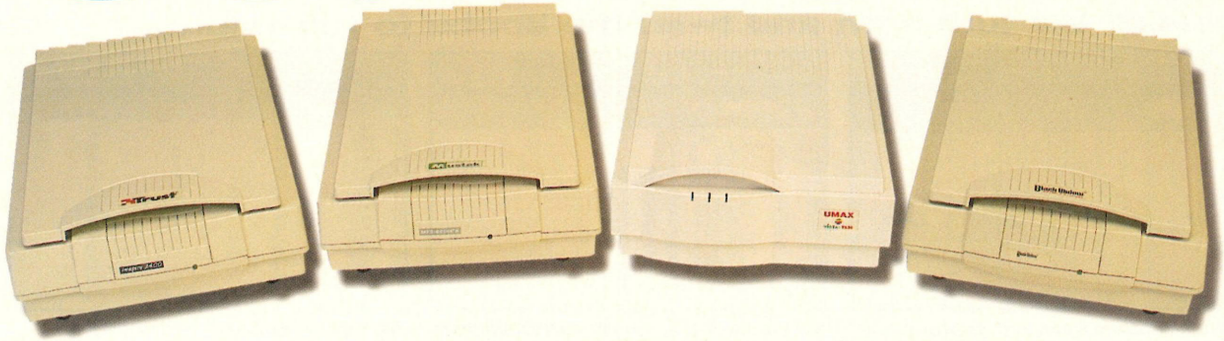
Publisher: Koch Media

Contact: 01420 541880

Price: £149.99

Minimum system: 386, 8Mb RAM, Windows 3.1 or 95, VGA monitor

Scanned ar



Transform your work into a vivid and exciting feast for the eyes. Here's a quartet of scanners for you to tuck into.

According to the saying, a picture paints a thousand words, and it's true. One image can replace reams of descriptive text. But it's not all about saving time and effort – pictures have aesthetic value too. They can transform a dull page of text into something that begs to be read, or an exciting page into a work of art. And in this digital age, it's not all about paper media either.

With the right choice of graphics, you can make multimedia presentations that dare you to look away. Pictures add interest to text, and the right picture can convey ideas, emotions or technical information instantly. With a flatbed scanner, you can be certain that you always use exactly the right image – provided you have it at hand to scan.

A flatbed scanner is a device that enables you to copy pictures from books, photos or wherever, and convert them into a digital form that you can include in your computer projects. Once you've scanned an image, it's free of the constraints of paper, and you can do things with it that Gutenberg couldn't even have imagined. You can manipulate it in an art package, or use it as a texture for ray tracing. If you're into animation, you might use it as the basis of a morph or perhaps you might clip out individual characters to use as sprites. The list of things that you can do is limited only by your imagination.

We've decided to look at flatbed scanners – so called because they provide you with a bed of glass onto which you lay the material to be scanned. Though they take up space, they're superior to hand scanners, because they produce a larger, better quality image, at a higher resolution. They're also easier to use. We've evaluated four great budget models for you. ***(MB)***

TRUST IMAGERY 2400



Best suited to those who scan large transparencies.

Supplier: Express Micro

Contact: 01909 530242

Drive: £428.88

This unit has the highest resolution optics of the four scanners reviewed. In fact, at 600x1200 dots per inch (DPI), it's extremely unlikely that your needs will ever exceed its capabilities, especially when you consider that it offers an interpolated resolution of 2400x2400 DPI. Even professional magazines rarely need to scan images at resolutions above 400DPI, so all that extra power will be largely wasted unless you're going to do enlargements, in which case you'll neèd good quality images to scan from – magazine photos just won't do!

This is a three pass scanner, and its passing mechanism is slow even at only 200DPI, an A4 scan takes 5.5 minutes, so this is easily the slowest unit in our round up. You might reasonably argue that it's entitled to be a little slower as it's capable of producing twice the quality of the others, once you start scanning above 600DPI.

Of course, TWAIN software drivers are included, so you can use the scanner from within your graphics software. Unfortunately, the driver leaves something to be desired. Also included is the *Wordlinx* OCR package. The weakest of the bundled OCR programs, it only provides basic features, falling far short of sophisticated programs like *Text Bridge*. However, it can manage text conversion at about 11 seconds per page, and is adequate for most jobs. For graphics work, Trust has bundled *Image Pals*.

As with the other three scanners, for about £200 extra you can get an add-on transparency adaptor for scanning transparencies and negatives.

The 2400 offers the best resolution but really penalises you in terms of speed and price. Worth a look, if you do a lot of enlargements.

PCR VERDICT

Best suited to people who scan big transparencies, or who need to enlarge images.

6

Glossary

24-BIT COLOUR
Colour is represented in a computer using binary numbers stored in bits (BInary digiTS). 24 bits is sufficient to store the entire visible spectrum of 16.7 million colours, although some professionals are now looking to 32-bit colour for extra subtlety of contrast.

INTERPOLATION
The process of calculating additional picture information using the existing data. In the case of scanning, it's used to provide higher resolution images than the scanner is physically capable of producing. It's a good compromise between lower resolution images and costly hi res optics.

OCR
Acronym for Optical Character Recognition, this is the process of recognising text in a scanned image and converting it into a text file that can be loaded into a word processor. Some OCR software can manage multiple languages and fonts, and can even insert pictures back into the correct places.

nd Delivered

Black Widow ScanPro 2400 SP

Black Widow already leads the way in terms of value-for-money flatbed scanning, and its parent company, Devcom, is a fierce innovator in this field. This particular unit is special because it's so small and lightweight, whilst still offering the same scanning area as the competition.

The other scanners in this round-up are cumbersome units much bigger than a desktop PC casing. They completely dominate any desktop, and are consequently not very convenient if you need to use them often. This attractive scanner is about the size and weight of a printer, so you won't be getting a hernia each time you lift it.

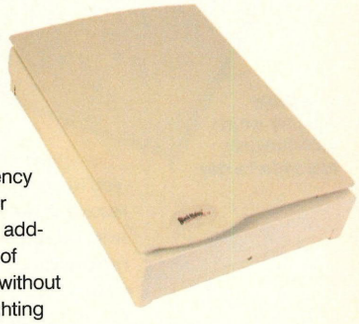
Of course, size is not everything, but this beauty has the muscle to back it up. For starters, it's a single pass unit. That means that it acquires the red, green and blue components required for a colour image, in one pass of the scanning head. That's not inherently impressive, but when it enables you to scan an A4 page in just under two minutes, you can appreciate how much time you'll save during the lifetime of the unit. It uses a 300x600 optical array, which, coupled with its software, can provide interpolated resolution up to 2400 DPI.

On the subject of software, there's some good news and some bad news. Previously, Black Widow scanners came bundled with *Text Bridge Pro*, an optical character recognition package made by Xerox. This is probably the definitive OCR software available at the moment, and its inclusion was a tremendous bonus and added real value to these scanners.

However, it did increase the overall price of the kit, so Devcom has decided not to continue including it, opting instead, to offer *Text Bridge Pro* as an optional upgrade for a most reasonable £19. By way of some small compensation, the TWAIN driver software has been enhanced and simplified.

At least Devcom is still willing to provide the graphic editing program, *Image Pals*. If you want something with a bit more clout, however, you can upgrade to various versions of Adobe *Photoshop* for between £99 and £150. Incidentally, by the time you read this, a transparency adaptor should be available for £199. Taking the option of this add-on, you'll be able to do scans of transparencies and negatives without having to worry about back lighting issues.

Software and add-ons aside, the compact size, high speed and reasonable price of the ScanPro 2400 makes it a surefire winner. We recommend it.



The deadly Black Widow ScanPro 2400, our worthy winner.

PCR VERDICT

The ScanPro proves that small can be beautiful, and is a good performer too.

8

Supplier: Devcon
Contact: 01324 825999
Price: £316.08

Umax T-630

With an interpolated resolution up to 4800DPI, the T-630 provides twice the resolution of any other scanner here, but it still only uses 300x600 DPI optics. It's also worth asking yourself when, if ever, you're going to need that sort of resolution.

The T-630 does include the nicest, and most powerful TWAIN drivers of all, but they're very demanding on conventional memory, so you might find it difficult to set up, especially if you hoped to run the scanner off your own SCSI card.

At only 86 seconds for a full colour A4 scan, it's surprisingly fast for a three pass device. This speed is useful for graphics, and even better for OCR work where you tend to need a higher throughput of pages for a single job. Umax have played to this strength by bundling a suite of programs known as *Presto*, which comprises an OCR program, fax software and various other utilities. The OCR program isn't in the same league as *Text Bridge Pro*, but like *Wordlinx* (bundled with the Trust Scanner), it's adequate for most jobs, provided you don't need to retain fancy text styling and layouts. The fax software is an added bonus that's not offered by the other contenders.

As if that software wasn't good enough, Umax have excelled by including Adobe *Photoshop LE*, a cut-down version of the world's most popular graphics package. This program is worth over £100 on its own, and it provides all the tools you'll need to produce professional quality graphics.

As with the other three scanners, this one has a SCSI interface, however, as mentioned earlier, memory restrictions imposed by the TWAIN driver, may force you to use the supplied interface. Although the T-630 isn't as sleek or portable as the ScanPro, it's more than a match for it in every other regard, including price.



Not too fast, but bundled with some good software.

PCR VERDICT

Not be as compact as the ScanPro, but it's faster and comes with better software.

7

Supplier: Tech Direct
Contact: 0181 2862222
Price: £351.33

RESOLUTION
Resolution refers to the amount of detail that a scanner is capable of recording. It's determined by the fineness of its optical array and is described in dots per inch. The higher the number of dots per inch, the better the resolution. It's common to see a higher vertical than horizontal resolution.

SCANNER
A character in a David Cronenburg movie who makes your head explode using the power of his mind. Oops sorry, wrong scanner! A scanner is a piece of hardware that converts information on paper, into digital data (an image or text) that can be manipulated in a computer.

TWAIN
Tool Without An Interesting Name. The name given to a software protocol that enables programs to load images from external devices like scanners. A TWAIN driver usually provides a scanning interface, but once the scan is done, the TWAIN software leaves you to work in your application.

Mustek Paragon 6000



A capable scanner which, unfortunately, has seen its day.

This triple pass scanner has been around for quite a long time now, and frankly, its age shows. It has 300x600 DPI optics, like the majority of the low-end flatbed scanners, but its TWAIN drivers are so feeble that it only manages a maximum interpolated resolution of 1200 DPI.

However, the point can't be made often enough, that you're unlikely to ever need even that much resolution, let alone more. Unlike the T-630, which is lightning fast, despite its three pass mechanism, the Paragon 6000 is disappointingly slow, taking over three minutes to complete the test scan. Of course, the Imagery 2400 took half as long again, but then it does provide double the optical resolution, so it's excusable.

In fact, this unit is identical in shape to the old Black Widow Pro 1200, which Devcom has now superseded with the single pass ScanPro range. Although the number of passes isn't a life and death issue on its own, when it adversely affects speed as it does in this case, then it becomes important.

The original version of this scanner came bundled with some very suspect software, but most of it has now been upgraded to make it altogether more capable. The most notable addition is the inclusion of *Text Bridge* OCR software. This superlative package can save you so much time and effort when it comes to document conversion, it's a surprise it hasn't become the standard with all scanners.

The Paragon 6000 also comes with U-Lead's *Image Pals* graphic software. This program has all but become the standard give-away for flatbed scanners, and it's a very powerful and versatile program, much like *Paintshop Pro* in many ways. All this great software means that this unit is optimised for productivity, be it in a home or small to medium office environment.

Like the other scanners, the Paragon 6000 comes with its own SCSI interface, and is easy to set up. You'll need a free 16-bit slot for it, however, which is a problem if you're running out of space inside your PC.

All in all, though, it would be very hard to justify the purchase of this scanner. The Imagery can do things at higher resolutions, the ScanPro is smaller and faster and the T-630 is much faster and comes with more bundled software. The only saving grace about the Paragon 6000 is that it comes with the excellent *Text Bridge* software for OCR. Nevertheless, the deal that Devcom is currently offering undermines even that tiny advantage.

Supplier: Roldec

Contact: 01902 456464

Price: £299.63

PCR VERDICT

It's the cheapest of the scanners we looked at, it loses to the others in every other regard.

5

Test Results

To compare the four scanners, we hooked each one up to a 100 MHz, 16Mb Pentium using the supplied SCSI interface, and a fresh version of Windows 3.1 for Workgroups. We tested out the TWAIN drivers by scanning from within *Picture Publisher 5*. For our speed test, we took a colourful A4 page, selected the area to be scanned (exactly 210x297 millimetres) and started timing from the second we pressed the scan button. The images were scanned at a resolution of 200 DPI in 24-bit colour. You should bear in mind that performance will be affected by the speed of your hard drive, your operating system and the amount of RAM that you have available.

Model	Optical Resolution (DPI)	Software Resolution (DPI)	Software included (OCR/graphics)	Scanning speed (A4 sheet in seconds)
Imagery 2400	600x1200	2400	Wordlinx/Image Pals	334
ScanPro 2400SP	300x600	2400	none/Image Pals	113
Mustek Paragon 6000	300x600	1200	Text Bridge/Image Pals	208
Umax T-630	300x600	4800	Presto/Photoshop LE	86

Conclusion

Choosing one of these scanners will depend very much upon your requirements. As they range in price from £300 for the Mustek Paragon 6000 to £430 for the Trust Imagery 2400, choosing by cost is a tight issue. You give up a lot if you go for the Paragon, but might buy into a lot of resolution you don't need with the Imagery, which offers double the normal optical resolution.

Furthermore, it's highly doubtful that you'd notice the difference between an actual 1200DPI scan and a 600 DPI image that has been interpolated. We'd only really recommend the Trust Imagery 2400, then, to people who have very high quality images to scan and to those who want to scan transparencies and enlarge them to a very large size. For most purposes, however, the extra money you pay is going on power you most likely don't need. The Imagery is good, but it's also a bit slow.

That leaves us with the Umax T-630 and the ScanPro, both of which are fast and effective. The Umax has better TWAIN drivers, a good variety of software and can scan at higher resolutions. If you do a lot of transparency work, need to scan negatives or require a slightly higher than usual quality, it makes a good choice. And the inclusion of Adobe *Photoshop LE* makes the offer seem even more attractive.

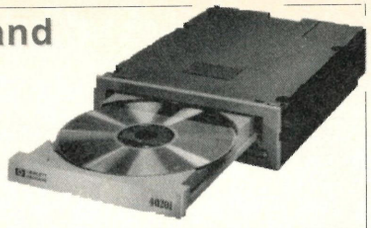
For the home user, however, the compactness of the ScanPro is a massive plus. In fact, it was the neat size and design, above all else, that helped make the ScanPro our top choice in this round-up. Spending the extra £19 on the OCR version – which adds Xerox's *Text Bridge* software to the bundle – is well worth it.

But not only is the ScanPro by Black Widow compact in size, it's also compact in the time it takes to actually do a scan. At just over £300, it can scan a full page of A4 in just under two minutes, which is pretty good.

Like two of the other scanners we've reviewed, the ScanPro comes with *Image Pals* for manipulating your scans once you've done then. However, for around £100 extra, you can get *Photoshop LE* in the mix as well, and you'd still be undercutting the Trust Imagery by a few pounds.

So, with it's low price, compactness and relative speed, the Black Widow ScanPro 2400SP wins our recommendation. **(MB)**

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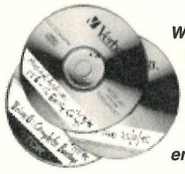
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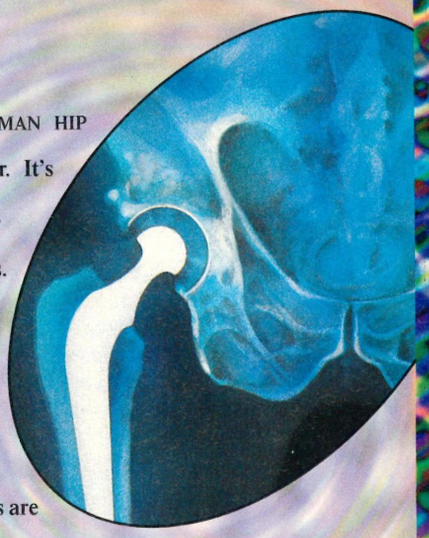
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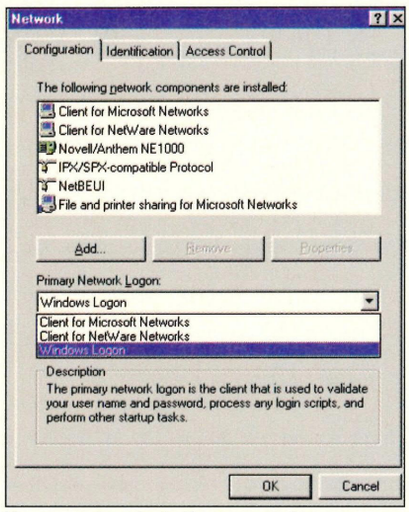
Lost your menu bar in Windows 95? And hey, what happened to those CD-ROM drivers in DOS? Technical Editor Mat Broomfield deals with these irks and others in Q&A...

WINDOWS

Annoying Windows Password

Q Whenever I load Windows 95, it keeps asking me to enter a password for the Microsoft Network. I don't even use MSN. How can I get rid of this annoying requester?

A Right click on the Network Neighbourhood icon then select Properties. Go to the Primary Network Logon requester and choose Windows Logon. Click OK to accept your selection. From now on, you shouldn't be asked for any more passwords.



You can exterminate those annoying password requests that appear when you start Windows 95 in your Network Configuration.

Smooth fonts in MS Plus

Q I've selected the Smooth Edges Of Screen Fonts option in Microsoft Plus but can't see any difference. Why doesn't it work?

A You're right, it doesn't make screen text look any better. It uses a system known as anti-aliasing to soften the jagged edges of each character. The only trouble is, it's only visible if you're running Windows on a True Colour or High Colour display – the effects don't show up on a standard 256 colour desktop.

Unstable System

Q When I originally installed Windows 95, there were problems with missing files, yet the program seemed to work properly once the installation had completed. Now, whenever I open the Control Panels, Windows locks up and I can't do anything. Must I resign myself to re-installing everything from scratch, or can I repair the damage?

A Although you may eventually have to re-install Windows, you might find that the additional programs you've installed, don't need to be re-installed. Before you resort to such drastic measures, it's well worth giving Windows a couple of chances to repair the damage itself.

You can do that by loading in Safe mode. To do this, reboot your computer and press [F8] when the words 'Starting Windows 95...' appear on the screen. Now choose Safe Mode and allow the computer to load Windows.

Once Safe Mode has been loaded, reboot the machine, and allow it to load into Windows as normal. Safe Mode attempts to repair your damaged system, and it's worth repeating this cycle a few times if needs be because according to Microsoft folk, Windows attempts different solutions each time if it's not immediately successful.

Desktop Icons

Q How do I create desktop icons for my programs? I thought it was just a matter of dragging them from the Start menu, but of course, that doesn't work as once you try and click on something in that menu Windows will open that program. What's the solution?

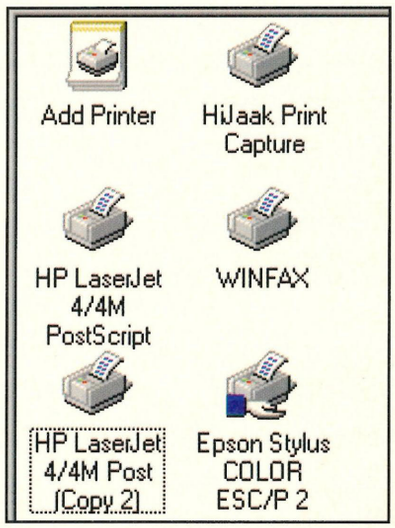
A Right idea, but you're looking to the wrong source. Open Explorer and go to the directory containing the program you want to create a desktop shortcut icon for. Now drag the program icon from there onto the desktop. It'll probably be automatically renamed to 'Shortcut to...' whatever the program is called. Click on the name and you can rename it whatever you like. Useful for those oft used apps, definitely.

Missing Printer Driver

Q I've got an old Brother MT1724L dot matrix printer, but Windows 95 doesn't support it. I know the printer's old, but it's ideal for printing multi-part forms and doing proofs. I'd hate to give it up. Do you know if there's a Windows 95 driver available for it? Or can you suggest any alternative solutions please?

A Windows 95 can still use some drivers designed for earlier versions of Windows, although they certainly won't be as efficient as the speedy 32-bit ones. Windows 95 routes all printing via a 16-bit GDI anyway, so you won't lose that much speed. When installing your printer, click on the Have Disk button, then tell the program exactly where to find your old printer driver.

If, for some reason, you don't have an old Windows driver, you can still probably print ASCII text, although you'll lose the benefits of graphics and scalable fonts. In all likelihood, your printer can emulate a more common model such as an Epson LX or an IBM Proprinter. Using a DOS word processor, you can choose the correct emulation mode and print away. It might not be perfect, but it's better than nothing.



If you have an old printer, you might be able to make emulate a printer for which Windows does supply drivers.

Q&A Q&A Q

Can only install Windows from CD

Q I need to reinstall Windows 95, but the only version I have comes on CD. My CD drive doesn't come with drivers that can be installed via DOS, so that means that I have to install an older version of Windows first, just so that I can get my CD drive working in order to read the Windows 95 disk. This seems rather stupid. Isn't there an alternative?

A You're obviously referring to the upgrade version of Windows 95, because the full version is supplied on floppy disks. Still, you've hit upon a serious limitation in the system, but fortunately you can easily overcome it if you know what you're doing. Start by copying the Win95 directory from the CD onto your hard drive. This means that you won't be able to reformat the drive, but you can certainly erase the data from it using the Deltree command. Be sure to leave the command.com and two io. files intact, as well as the recently copied Win95 directory. Now reboot the machine, then go into the Win95 directory by typing CD Win95. Now type Setup, and Windows 95 will install fully from hard drive. Incidentally, this is a far quicker way of installing software than loading directly from CD.

Disappearing Drives

Q I use my PC on a peer to peer network with Windows for Workgroups. I've only recently bought a CD drive, and now I notice that my network connection has disappeared from File Manager. I can add it again, but unexplained disappearances like this worry me. Any idea why the computer has arbitrarily erased a connection that worked perfectly for years?

A The connection hasn't been erased, the letter assigned to it is double booked. If you go into File Manager and choose Disconnect Network Drive, you'll see the connection still exists. The CD drive, however, has higher priority because it is assigned a physical drive letter in the config.sys, whereas the network connection you refer to is localised to Windows File Manager. When the CD is assigned, else (except hard drive letters) shuffles along to make room. But because File Manager assignments are not floating assignments they can't be moved, so the first one is simply overwritten by the CD. Just delete the assignment and reallocate the next available letter to your network.

DOS

Can't copy disks

Q Recently, all Microsoft programs have started coming on disks that you can't copy. Has the company decided to start using copy protection, or is there some other explanation?

A Microsoft has started using a new high density formatting system which enables the firm to store just under 1.7MB of data on a normal high density disk. Although this may seem to act as a copy prevention measure, it's probably done for economic reasons. You can read and copy the disks using a shareware program called FDFormat, which is widely available on the bulletin boards. If you're not on the Net, keep an eye out for it as an inclusion on CD-ROM shareware collections.

Double dutch space

Q I have a 386 with a 170Mb hard drive. I've just acquired a new 540 Mb drive and I thought it would be a good idea to run DoubleSpace on the drive before I started using it. After a very short time, DoubleSpace finished, but remarkably, it reported that I had less space after compression than before. What on Earth is going on? Is the drive faulty?

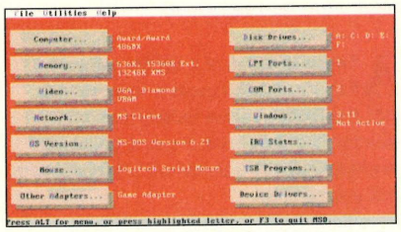
A No, the drive is not faulty. The fact that you're running on a 386 suggests that you're using an old BIOS. Older BIOSes are incapable of recognising IDE drives with a storage capacity of greater than 540 Mb, but by the time DoubleSpace had added its own system files, it actually appears to erode your maximum space.

The solution is either to create two smaller DoubleSpace Volumes, or to divide your drive into two or more partitions using the Fdisk command before you start.

MSD Liar Scandal!

Q I bought a Pentium chip for a bargain price at a computer fair. The man on the stand said that it was part of a job-lot that had been incorrectly labelled as P75s when they were in fact P100s. I installed the processor and it appears to run perfectly. The first thing I did was run the Windows 95 version of MSD to check that the chip was as described. To my horror, MSD reports that it's only a 486DX running at 100MHz. Have I been ripped off, or is there another explanation?

A You'll be relieved to hear that there's a simpler explanation. Even though



Microsoft Diagnostics is not modern enough to accurately detect Pentium processors.

Windows 95 is a brand new system, the version of Microsoft Diagnostis included within it, is not. In fact, it's so old that it doesn't even recognise Pentium processors! It manages to correctly identify the speed however. The mere fact that the chip that you bought had the right number of pins to fit into the processor slot, indicates that it's definitely a Pentium – a 486 chip is much smaller and has fewer pins. Don't worry, it sounds as if you have managed to pick up a bargain. You may notice that the chip identifies itself on the BIOS screen as the computer boots up.

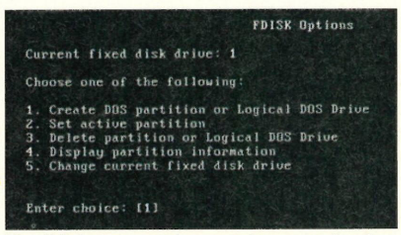
Terminal hard drive

Q My hard drive has gone down and hence I can no longer boot up from it. My BIOS detects the disk as it should, but the drive otherwise appears to be lifeless. Fdisk sees the DOS partition but doesn't recognise the system type. I've heard that there's a switch that I can use to recreate the boot block, but it's not listed in my DOS reference. The Help command doesn't assist me either.

A The reason the switch you're looking for, isn't listed, is because it's so potentially dangerous as it rewrites the master boot record of your hard drive. We discussed this last month too, but as a number of people have written in requesting the exact command, here it is:

Fdisk /mbr

But remember, if you trash your hard drive, it's on your own head.



The Fdisk command can restore your hard drive, but it has the potential to erase all data and damage special operating systems too.

READERS TIPS

Changing Attributes

If you've ever copied the contents of a CD onto your hard drive, you'll have discoved that all the files are automatically set to read-only. Changing the Read-Only attribute via File Manager can take ages, especially if there are a lot of sub-directories.

You can swiftly change the attributes of all files in the current directory using the **Attrib** command from DOS. By adding the **/S** parameter, you can extend the command so that it applies to all files in sub-directories of the current directory too. Here's how: change to the required parent directory and type: **Attrib [+/- attribute] /S**. For example, to unset all read-only flags, you'd type: **Attrib -R /S**. To set them again, you'd use **Attrib +R /S** The other flags include:

A=Archive bit.
S=Set as a System file.
H=Hidden.

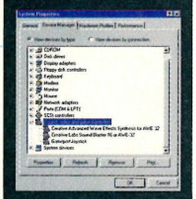
Hope this helps.

S. Cunningham, Leeds

READERS TIPS

Sound card sorrow

Last month, you gave a tip about how to improve sound card quality. If the sound is really scratchy or crackly, it could be that the software DMA setting is different to the card's hardware setting. If this is the case, simply adjust the software setting accordingly. Under Windows 95, the easiest way is to go into the Device Manager (right click on My Computer, then select Properties). Once you're in Device Manager select Sound, Video and Game Controllers, choose your card, then click the Remove button. Restart your computer when asked. Now double click the Add Hardware button – you'll find it in the Control Panel, which is accessed by opening My Computer. Follow the on-screen instructions which enable the Add Hardware Wizard to auto-detect and configure your sound card. All that remains is to restart your computer and everything should be fine!



You might improve sound by deleting its driver and letting Windows detect the correct settings.

HARDWARE

Thief's last laugh

Q My computer was stolen last week, and to my surprise, the police managed to recover it. To my dismay, I'm now asked for a password when the system boots up. I didn't set the password, and the police can't get any help from the kids who stole my system. I presume they've set up a password in the BIOS. How do I bypass it?

A The whole idea of a BIOS password, is that you don't bypass it. Having said that, the BIOS requires battery power to maintain the password. If you're lucky, your motherboard has a password disable jumper that you can use.

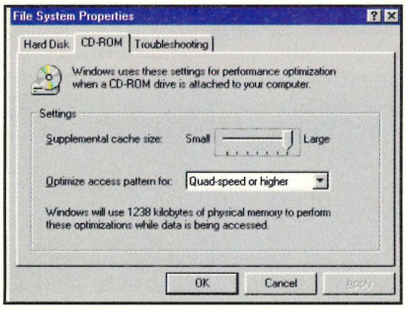
Alternatively, you might be able to remove a battery and the lock-out will go with it (after anything from a few minutes to a few days). If this doesn't work, or the battery is integrated, you can either wait till it runs down, although it could take months or even years. If you're very experienced, you can give it a helping hand. Whilst *PC Review* most definitely does NOT recommend this technique, it is sometimes possible to short the motherboard (with the power unplugged) to discharge the battery and capacitors. If any readers know of a better solution, please drop us a line.

Slow CD

Q I've installed a quad speed CD-ROM drive, but it isn't supported directly by Windows 95. Although it still works, it seems to be running much slower than it did under Windows 3.1. Do you have an idea why?

A When you have a CD drive that Windows 95 doesn't recognise, Windows tries to guess the best settings for it. Unfortunately, the operating system occasionally gets it wrong. The easy solution is this: right-click on the My Computer icon and select Properties. Click the Performance Tab, then the File System button. Finally, click the CD-ROM tab to open the CD-ROM optimisation dialogue.

You'll see a requester labelled 'Optimize access pattern for...'. This is probably set to Double Speed. Change it to Quad Speed, then click the Apply button, and OK to return to your desktop. You'll need to restart the computer for the improvement to take effect.



You can enhance the performance of some CD-ROM drives simply by changing the Windows driver settings

Crowded house

Q I have a Videola card that worked perfectly until I upgraded from an IDE to an EIDE I/O card. I can no longer use the Videola from Windows and the machine now regularly crashes, especially during hard drive access. What's up?

A EIDE cards require an extra IRQ address that IDE ones don't use, and it's probable that the one it uses by default is clashing with the one needed by your Videola. This seems especially likely as the system seems to crash during hard drive access. Have you tried using different IRQs on the Videola or I/O card? Does the computer only crash when a certain hard drive is being accessed (if you have more than one)? There is always the possibility that your motherboard BIOS simply won't work with the new card. Does everything return to normal if you replace the old ISA I/O card? Perhaps a different make of EIDE card might solve the problem. Or a motherboard with a newer BIOS...

Distant Computing

Q I use my computer for graphics, and I particularly enjoy using natural media paint programs like *Fractal Design Painter*. The trouble is, even though I use a decent Microsoft mouse, the cable often gets in the way or becomes tangled, which really irritates me and affects my stroke. I've heard about various cordless mice, but if my experiences with cordless joysticks are anything to go by, the technology is quirky at best. Have things improved at all?

A In fact there are three types of cordless mouse available: infra-red, ultrasonic and radio controlled. Infrared mice need a constant line of sight between the mouse and a receiver attached to the computer. Ultrasonic mice don't require that, but can be interfered with by certain audio frequencies. Radio controlled are by the far the best, and of course, the most expensive. You should take a good look at the Logitech Mouseman cordless if you want to try the best of the breed. You can telephone Logitech on: 01344 894300.

VESA VESA

Q I desperately want to upgrade my 486 VESA motherboard to a Pentium PCI one, but I don't want to lose the use of my Real Magic card whioh requires a VESA feature connector to work. Is there some sort of converter that I can use to convert the Real Magic from VESA to PCI?

A In fact, you don't need a converter because the Real Magic will work perfectly well in a PCI machine provided it also has some ISA slots. The Real Magic actually uses an ISA connector. The VESA feature connector that you refer to, is a graphics protocol, not a motherboard one. It's used to connect the Real Magic to your graphics card so that the MPEG signal can be overlaid on the VGA image. Although it is possible to buy graphics cards that plug into a VESA motherboard slot, most new cards, regardless of the slot they plug into, also have a VESA feature connector which is merely a small male plug on the graphics card. You may need to buy a new graphics card if yours plugs into a VESA slot on the motherboard, but at least you can still use your Real Magic.

Transparent solution

Q I've just bought a flatbed scanner to archive my photos and negatives. The photos scan just fine, but I've tried scanning the negatives, but it doesn't work. Is there a way that I can scan them directly, or must I get the negatives developed and printed first?

A You can scan the negatives on your scanner, although it's an expensive job. The problem is, to scan negatives, you need to backlight them. You'll need a device called a transparency adaptor. They're available for most flatbed scanners and will set you back about £200-£300. They're primarily designed for scanning positives, but your scanning software should offer you a Negative option too. Check before buying the adaptor. Or, you may attempt to make your own backlight. A miniature flourescent tube would probably generate the kind of even white lighting that's required.

Windows only modem?

Q When I try to run a version of *Doom*, *Hexen*, *Slipstream* or any other DOS game, my modem refuses to reply to the initialisation string. I've only just bought the AT&T 28,800 voice/fax/data modem, which, whilst saying nothing in the manual about DOS or Windows compatibility, only comes with Windows software. Have I bought a Windows-only modem?

A There's no such thing as a Windows-only modem. All modern modems respond to a basic set of commands – most usually the Hayes AT set. These commands don't necessarily offer control over every single feature of the modem, but they certainly handle such things as connection, handshaking, rate negotiation and fallback modes. All modems respond to a binary data stream sent by your computer. This data can be sent equally well from DOS or Windows.

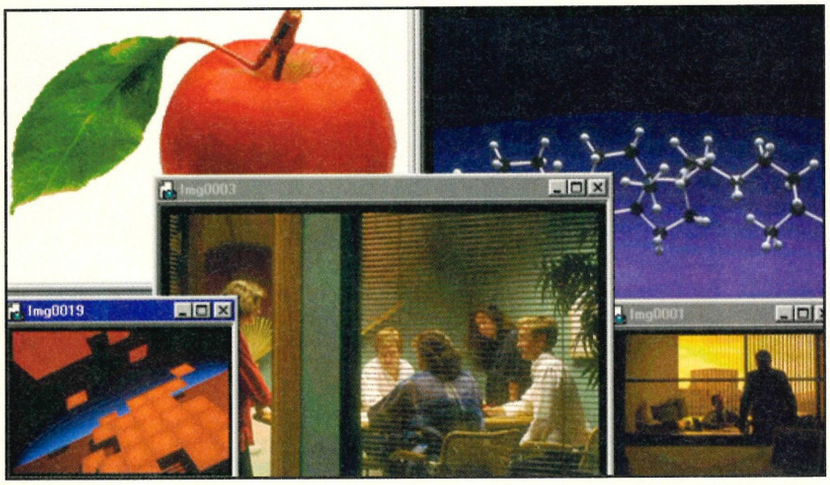
It's very difficult to diagnose the exact nature of your problem without more info. Are you sure that your getting a clean line between you and the other computer? Bad lines can cause problems, especially during handshaking. Can you connect to the other computer using a standard comms package in DOS or Windows? If the answer is yes, then look at the game software to identify what is failing when it tries to connect. You might even try phoning the technical support line of the game's publisher.

MIXED BAG

Graphic formats

Q Why are there so many different bitmap graphics formats? What's the difference between them? I know that some are more compact than others, but is that the only real difference?

A Some graphics formats were originally developed to meet the individual needs of specific companies. Many of them have been so widely used that they've become industry standards. The GIF format, for instance, was developed by CompuServe as a compact format for transmitting graphics by modem. There are differences between the formats. Some store size and resolution information, others don't. Some proprietary ones even store information about masks and selections. GIF can only represent 256 colours, whilst JPG offers good compression at the expense of picture quality. TIFF is a lossless format and produces relatively compact files too. JPG and GIF are the two formats most widely used on the Internet. JPG is also frequently used for distributing very large (20 megs or more) pictures to commercial users by CD. For smaller images TIF, BMP and PCX are probably the most popular 24-bit image formats.



There are more graphic formats than you'll ever need, but TIF, BMP, GIF, JPG and PCX are the most commonly used and recognised ones.

Smoky problem

Q I smoke quite heavily, especially when I'm working on the computer. My friend says that I'm damaging the PC by doing so. I notice in films they often run computers in environmentally controlled rooms, but that's just science fiction, isn't it? Just what effects, if any, do cigarettes have upon my computer?

A Clean rooms are certainly not science fiction, but the equipment being protected is a good deal more sensitive and valuable than your home system. However, your friend is absolutely right, smoking does damage your computer. The problem is the tar residue that cigarette smoke leaves. Most obviosly, your monitor screen needs frequent cleaning. A more damaging effect is caused when the residue gradually builds up on internal cooling fans. Because the tar's sticky, dust becomes glued to it, which can eventually result in the fan to seizing up, causing bits of the computer to overheat. As long as you check every few months, you should be OK. Take care not to smoke around any kind of exposed media such as Syquest cartridges or 5.25-inch floppy disks, as the residue will shorten the life of the drives they are used with.

T-Shirt taster

Q I'm thinking of setting up a T-shirt printing service in my local shopping arcade. I gather it's quite easy to do. What equipment would I need?

A I don't know about commercial systems, but Quill Marketing produce special paper so that dot matrix and bubble jet printer owners can print T-shirt designs. These designs can be ironed onto cotton, producing a kind of spongy textured transfer. It does require a little practice to get perfect, but the end results are surprisingly good. With a digitiser, a video camera and a bubble jet printer, you could easily produce commercial quality work. However, as time would be a factor, you'd be well advised to look at one of the faster bubble jets, unless you expect each customer to wait for half an hour! You can contact Quill on: 01603 748002.

Playstation PC card?

Q I've seen the two new 3D game cards for the PC and they both look pretty poor, even on a powerful machine. Is it likely that we'll ever see a Playstation card or better, or should I go out and buy the real thing?

A It's inevitable that, sooner or later, there'll be 3D cards available for the PC that exceed the Playstation's 3D abilities. Now that the market has demonstrated a desire for polygon renderers capable of bigger and better *Doom* type games, it's just a matter of time. Whether such a product will arrive soon enough to make it worth passing on a Playstation is another matter. The current generation of cards is quite disappointing, and it's doubtful whether significant next generation improvements will arrive any time soon. Of course a PCI version of the 3D Blaster sounds a bit more powerful, but there's still a long way to go. If you like what you see on the Playstation, go buy one and enjoy it. It could be months or years till PCs catch up. But don't get rid of your PC; it's an upgradeable system that will last into the future!

Wasted bits

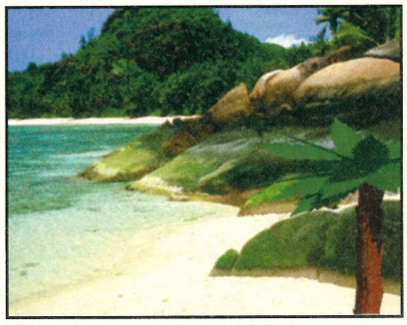
Q I was always led to believe that 24-bit planes was enough to create every single visible colour. Now I see 32-bit scanners and 32-bit modes in software. I'm confused.

A 24-bit colour represents 16.7 million different shades. More in fact, than you can distinguish on a pixel-by-pixel basis. However, the larger the areas of adjacent colour, the more visible the difference from one shade to the next. Apparently, 32-bit colour is used to provide superfine detail for poster work. 32-bit colour is not actually printed, but by using it for scanning, it generates better tonal subtleties which are evident even in 24-bit prints. When you talk about 32-bit graphics packages, it's more likely that you're talking about 24-bit software that has an 8-bit alpha channel. The alpha channel contains a 256 shade grey scale image that's used as a mask for applying filters and special effects.

Z-Buffer v Ray Tracing

Q I notice that some 3D packages offer Z-buffering whilst others provide standard ray tracing. What's the difference, and which is best?

A Z-buffering is a way of calculating and rendering images based upon object depth. It's much quicker than conventional ray tracing, but not as accurate, but for home use it's likely to provide all the realism you need. Ray tracing is the process of calculating the appearance of a scene by re-tracing the route taken by every ray of light that falls upon a given pixel. It can be incredibly tedious.



Z-Buffering is a quicker and inferior alternative to ray tracing.

Error Arena

This is a new monthly column that intends to explain some of those weird, inexplicable errors that pop up on your PC with such alarming regularity. Got an odd error message, send it in and we'll try to decipher it.

This month, we explain the following error: 'ADVASPI in CONFIG.SYS forces MS-DOS compatibility mode'. Strange?

Not really. This message tells you that a driver loaded into the config.sys file is forcing Windows 95 to run in real mode, which is a fallback mode used for compatibility reasons. Unfortunately, it's less efficient than Protected mode, and you should avoid using it if possible. The specific driver refered to by the error is probably connected in some way to a SCSI device. If the device is supported directly under Windows 95, you can remove the previous driver from the config.sys without difficulty. If it isn't, you should contact the manufacturers of the SCSI device to get a Windows 95 driver for it.

If you happen to come across any odd error messages you'd like us to have a crack at explaining, write them down and send them in. Details on when and how the message arose would be of great assistance as well. Our address is as follows:

Error Arena
PC Review
30 Monmouth St
Bath
BA1 2BW

We look forward to reading all your weird and wonderful error messages.

Getting to grips with...

Print Shop Deluxe

It's a one-stop design shop for the home or office. Follow our step by step tutorial and get started with your own DTP.

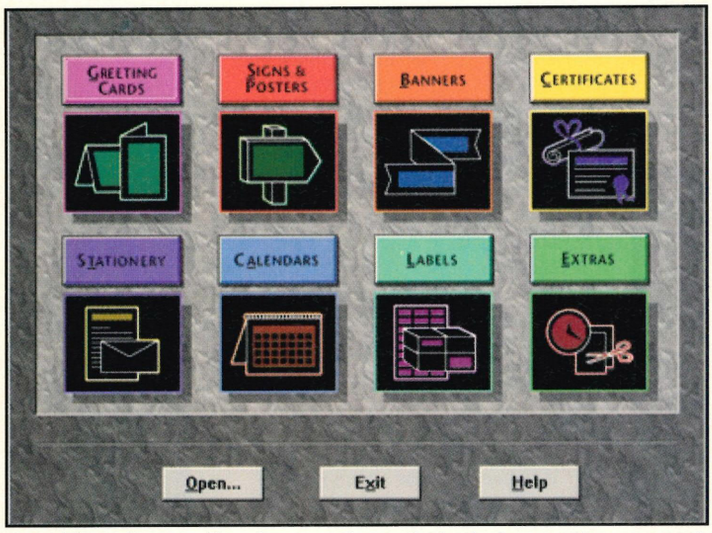
Ever tried designing a wedding invitation or a poster using standard DTP software? Then you'll know it isn't easy. Staring at a blank screen is doesn't provide much in the way of inspiration. But with Print Shop Deluxe, you don't need it. It's all been done for you. You choose from lists of existing designs and modify them until you have what you want. Then you just press print. It really is that easy.

Ready-made designs for greeting cards, posters, signs, banners, certificates, letterheads, business cards, postcards, calendars and labels are all to hand. If you don't like the ready-made varieties, you can make your own document from the ground up by following the step-by-step menus that offer you choices of things like background, border and style. The demo on *CD Review* doesn't let you save documents and you can only print signs and posters. However, you can use and experiment with the full range of 4,500 clip art images and 70 plus TrueType fonts in this working demo. But of course, in the full version you can do a lot more.

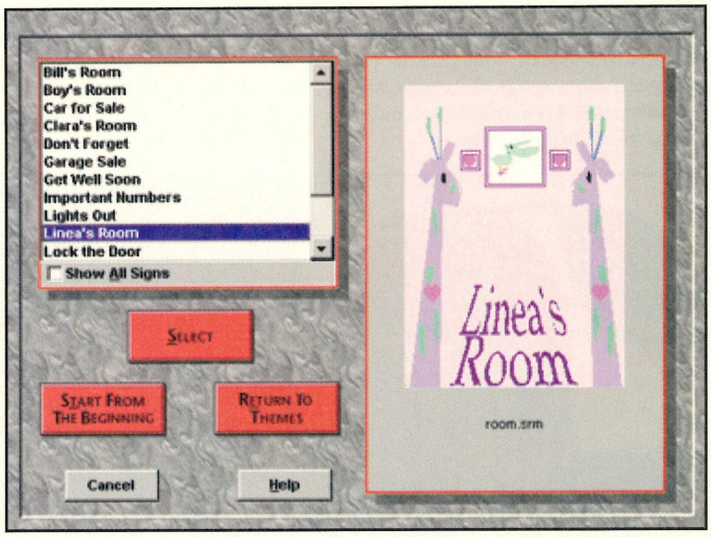
If anything, *Print Shop Deluxe* is much more than just a desktop print shop. It's a vast department store full of clip art, fancy fonts and ideas to help you design and print almost anything you'll need for the home or office. ***(CH)***

Tell-tale sign

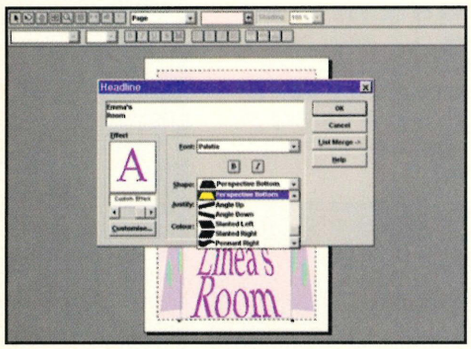
Design and print your own sign... yes, we know it's not the toughest project in the world.



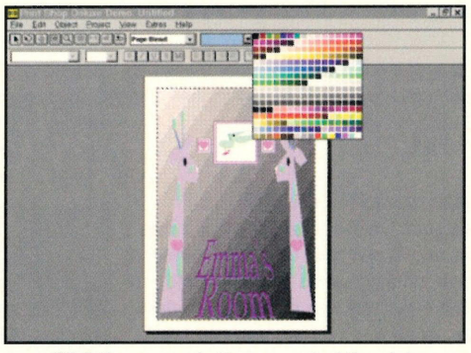
1 The main menu. From here you choose the basic document type you want to create. Greeting cards, Banners, Certificates, Stationary, Calendars, Labels and Extras are all available, as you can see. But as we're making a sign, you'll want to click the Signs & Posters button. Or, you could just hit the [S] key, the shortcut for Signs.



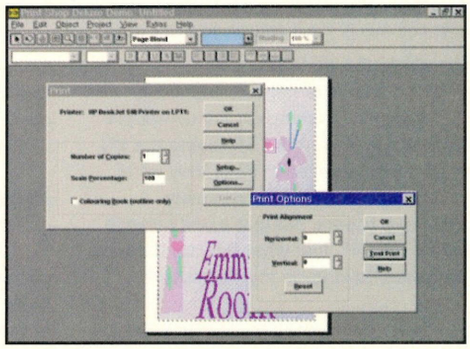
2 You can now Select A Ready Made or Start From The Beginning. Click on the left button and you'll find five sign themes, Home, School, Community, Business and Celebration. Click on the Home button and then choose Linea's Room from the list. Notice that you see each one previewed in the box on the right but remember, if you're not 100% happy with it, you can change it.



3 Now you will be in page view. There's a good chance that you won't have anyone called Linea in the family. To change the name, double click on the frame saying 'Linea's Room' and change the name in the edit box. You can add text here too and experiment with various special font, colour or style effects using the browser. The text can also have one of a number of shapes. To experiment, click the box that says Perspective Bottom and select another shape.



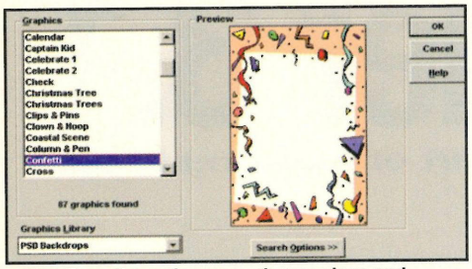
4 Click the mouse button on part of the pink background and you will see the word Page appear on the toolbar. The page has a solid pink fill. Under the Project menu, select Page Blend and then Diagonal Blend from the sub-menu and the background will change. At present the Page Colour is pink and the Page Blend colour is black. Click on the word Page on the toolbar and then select Page Blend. Click on the box to the right and from the palette pick a lighter colour like white or blue.



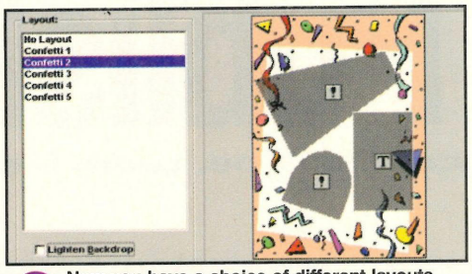
5 Using this demo, you can now print out, but the words 'Created with Print Shop Deluxe' will appear across your output. this does allow you to test your printer and see what it can do. From the print dialogue (under the File menu) you can choose a scaling factor. This is useful for proof printing as you can print out 30 or 40% scaled thumbnails first, which saves wasting too much time or ink on documents that may have errors in them. Or, you could print extra large posters or signs.

Poster Party

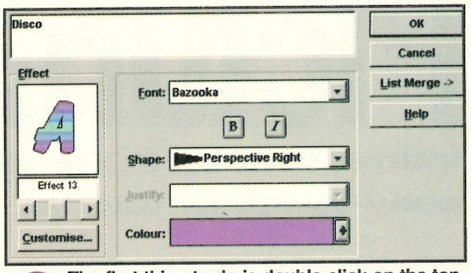
This time we'll design our own simple but effective poster for a school disco.



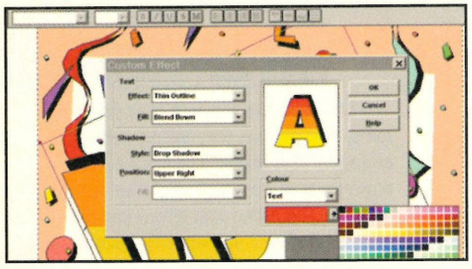
1 From the main menu, choose signs and posters and select Start From The Beginning and then the Tall (portrait) paper orientation. Choose the border-like Confetti background to catch the eye.



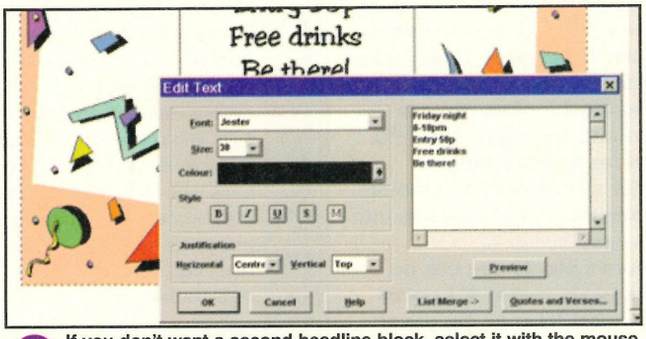
2 Now you have a choice of different layouts based on the Confetti background. Scroll through them and choose Confetti 1. You can lighten the background if it's too strong.



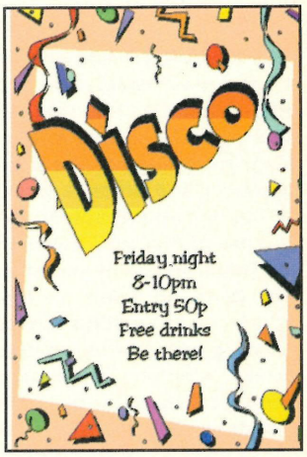
3 The first thing to do is double click on the top block. The edit dialogue appears, ready for you to type in your chosen text. Enter the word Disco. You can alter the font, shape and colour too.



4 If none of the effects appeal, you can create your own. Click on Customise and you can alter the outline, fill, style and position of the text, as well as the colour of each individual element. To create a two-colour gradient inside the text, assign Text one colour and Text Blend another colour. If you want a gradient-filled background, assign one colour to Shadow and a second to Shadow Blend.

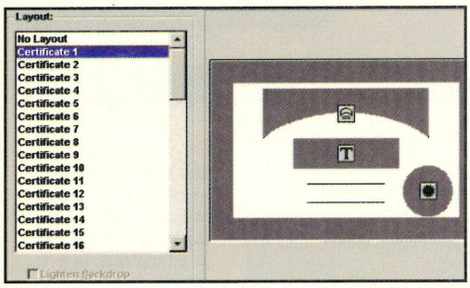


5 If you don't want a second headline block, select it with the mouse and press the [Delete] key. You can do this with any block you don't need. The last step is to double click on the text block and add the time, date and place details. Again you can choose a stylish, coloured font although you don't get the same range of special effects in a text block. Notice that under Style you can select bold, italic, underlined and

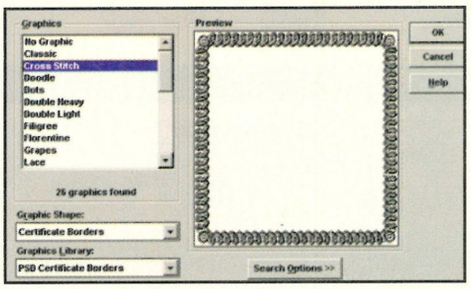


X Certificate

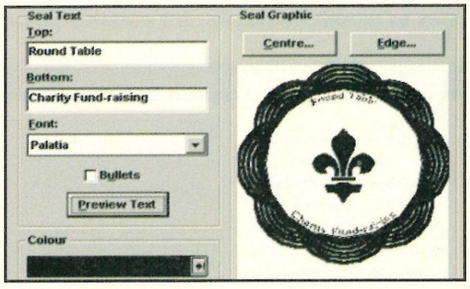
A local charity wants to reward the efforts of its individual fund-raisers with customised black and white certificates showing the person's name and the amount raised. If you had to design each one manually it would be hard work but with Print Shop Deluxe it's no trouble at all.



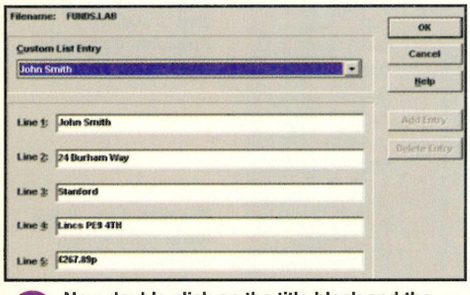
1 Click on Certificates, then Start From The Beginning and choose Wide paper orientation. Skip the backdrop browser by pressing OK and then select a layout from the layout browser. In this case Certificate 1 fits the bill. Notice the different design elements situated on the page.



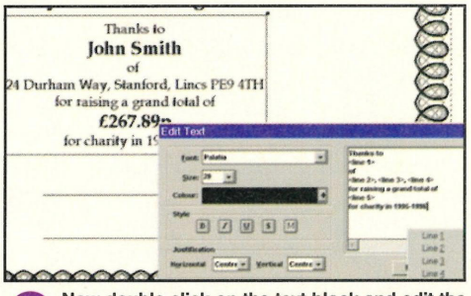
2 You will now see a full screen representation of the same layout. Double click on the border and the graphics browser will appear, displaying all the possible borders with a preview of each. Some are black and white, others colour - choose a black and white border and click on the OK button.



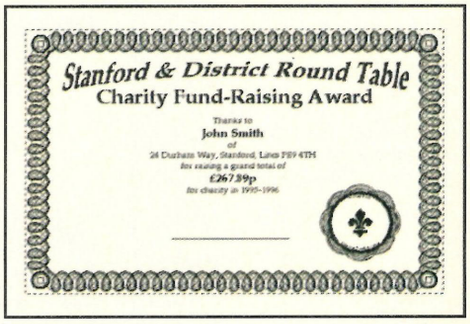
3 Double click on the round graphic – the certificate's seal. Two separate graphics make up the Centre and the Edge. You can also place text inside the Edge. Click on the Centre button and in the small browser get a new seal and click okay. Repeat to get a new Edge graphic.



4 Now double click on the title block and the signature block to edit them. Before you edit the centre text block, select Edit Custom List from the Extras menu. This calls up a form used for names, addresses and amounts. Enter the details for each fund-raiser. Use Line 5 to for total money raised.



5 Now double click on the text block and edit the text. Use the List Merge button to place the fields from the list wherever you want them. This way you can create individual certificates for each fund-raiser. You don't need to lay out each individual certificate - Print Shop Deluxe does it all for you.



6 And here we have an example of a customised certificate. All that remains is to print out. With the demo, you can only print monochrome. But we created it to be mono anyway.

Getting to grips with...

Picture Publisher 3.1

Intimidated by PC graphics? Don't be. Learn the art of masking in our easy-to-follow tutorial.

We're giving away a complete version of *Picture Publisher 3.1* on this month's *CD Review*. Create, save and print your own artistic creations. *Picture Publisher* is one of the biggest names among image editing packages. And whilst Micrografx are up to Version 5, they've been good enough to let us include a fully working version of an earlier incarnation totally free.

***Picture Publisher 3.1* includes plenty of professional editing features that make it the ideal tool for anyone who wants to explore colour art and editing on their PC. Also, you'll find built-in support for a wide range of scanners and printers, plus a file system that can handle all the common graphics file formats. Getting images into and out of *Picture Publisher* is easy.**

Once they're in memory, there's plenty you can do with them. An intuitive toolbar system makes it easy to access all the editing features. Apart from all the usual painting and drawing options, there's also support for masks, which let you mark part of an image for further editing by shape or by colour. A wide selection of filters (image processing tools) is available.

In spite of *Picture Publisher*'s power, it remains easy to understand and use. A full on-line manual is included to make sure you never get lost. This includes explanations of each tool and option. To complete the package there's a selection of 24-bit colour images which you can use to start you off on your exploration of the editing possibilities, and a collection of tutorial examples to introduce you to new creative possibilities.

Exploring the toolbar



Picture Publisher's toolbar offers quick access to its main editing features. The tool in use is shown in the square at the top left of the main editing window. The tools include a very healthy range of editing options, some of which are only seen in professional packages many times the price. To access the tools click on the main toolbar and then choose a tool from the sub-menu that appears. For help on a tool, click on the context sensitive help option in the main help menu.



Starting at the top, you'll find the masking tools which mark part of an image for further work. Masking by shape is useful, but masking by colour makes it easy to lift parts of an image before editing them. For example you can pull black text off a white background, and then change the background to a texture or another image.





The next two toolsets offer painting tools, and options for making subtle changes. The Smooth tool, for example, blurs parts of an image together. A handy option is the Stitch tool which can splice scans together if you specify marker points.



The fill options include impressive gradient fills which blend one colour into another, and texture fills for backgrounds. The remaining tools add freehand shapes, text and eraser options, and zoom in and out of the image. The colour probe tool is particularly useful – it can pick up a colour from one part of an image so you can paint with it somewhere else.



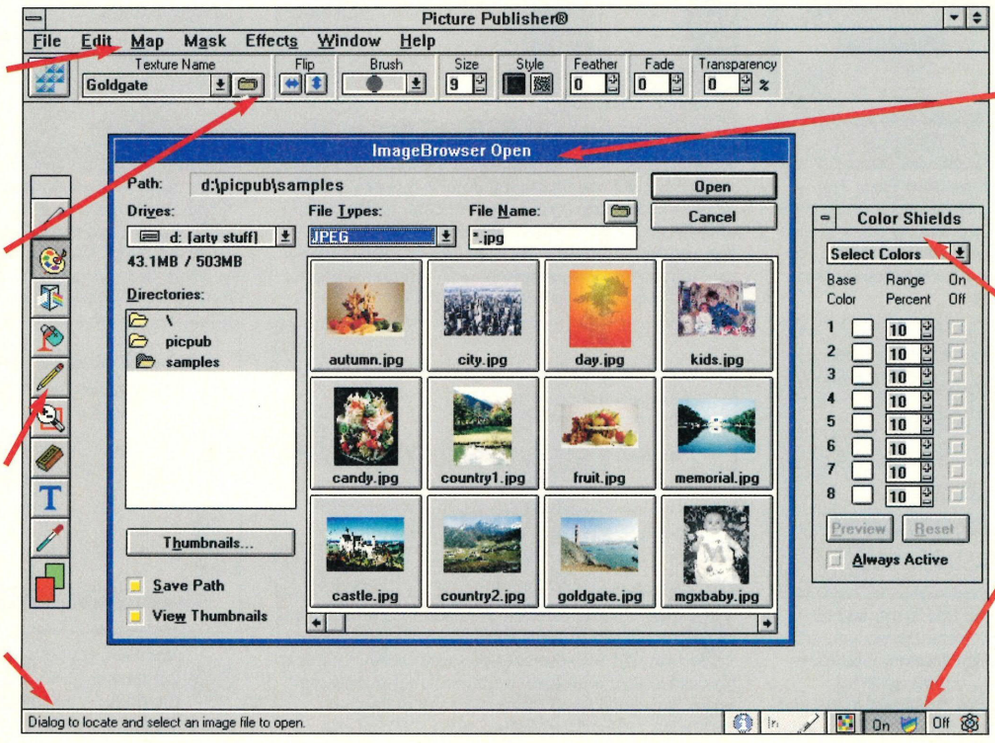
Picture Publisher's workings explained

The main menu bar includes the file management system, the help features and some of the more powerful editing tools, such as the filters and mask options.

This area shows the currently selected edit tool - here the texture paint tool – and its control options.

The tool bar offers quick access to the editing tools.

This line of text describes each option – it changes as you move the mouse.

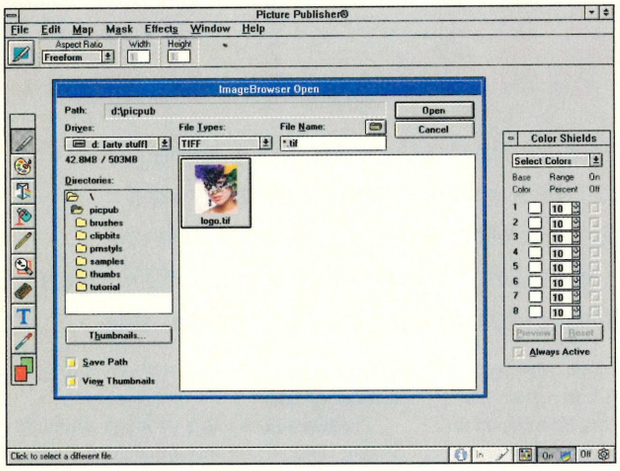


The image browser appears when you try to open a file, and displays thumbnails of all the files in a directory.

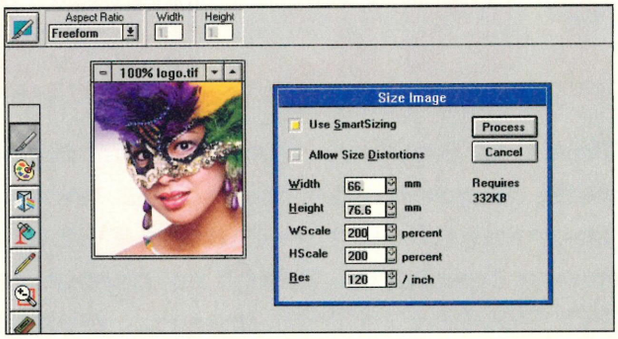
The colour shield box appears when you select the colour shield option. It's part of Picture Publisher's powerful mask control system.

The status bar at the lower right shows advanced editing options for the current image.

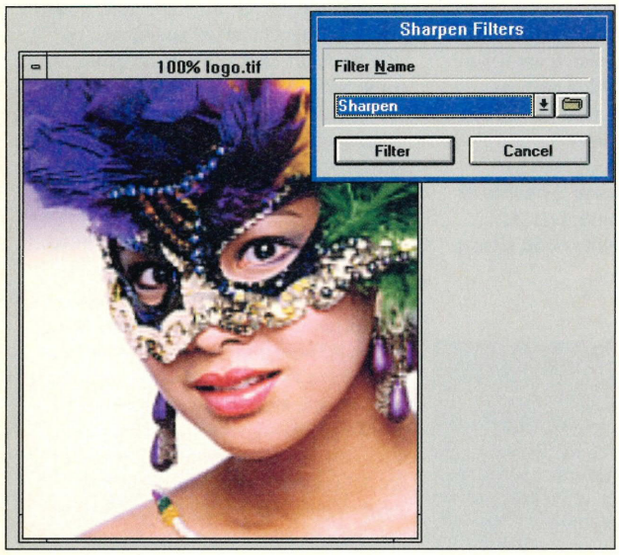
Editing made easy



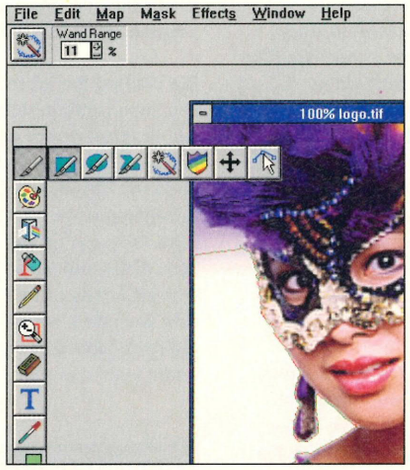
1 To start exploring the editing possibilities, load in the file LOGO.TIF. It's in the top level PICPUB folder. You'll see the image browser appear when you try to load it, so you can be sure it's the one you want.



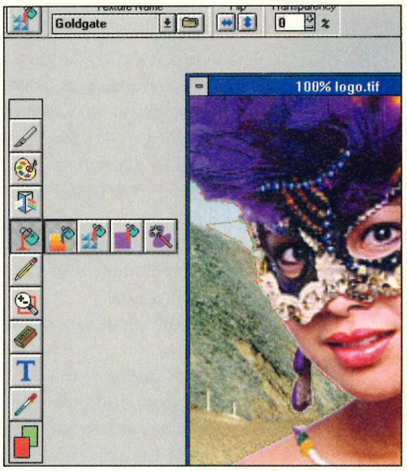
2 This image is rather small, so before we do anything we'll resize it. Select the Size option under Effects, click on the Use Smartsizing option and type in 200 into either the Wscale or Hscale box. Now we have an image that's twice the size, but otherwise unchanged. Hmm. Nice feathers.



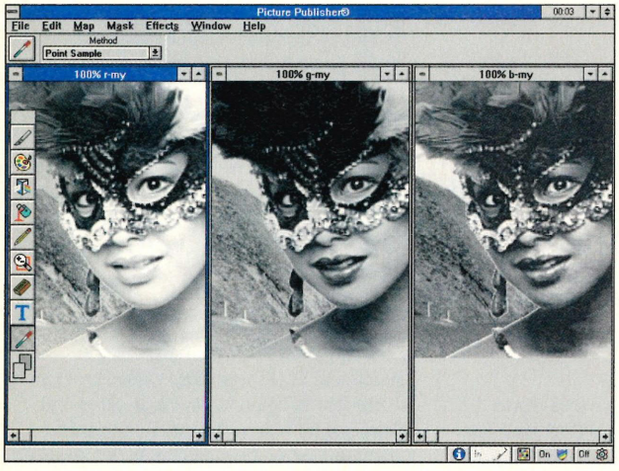
3 If you look closely you can see the image is looking slightly blurred now. We've tried to expand it to show more detail than was available in the original. But this can be changed. Under Effects, choose Sharpen – one of the built-in filters – and the image appears to get the missing detail back.



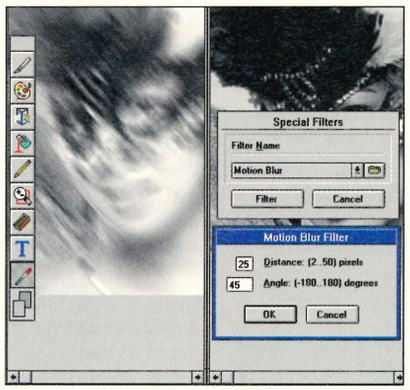
4 Now let's add a background. Click on the top box in the tool bar, and a range of related tools jumps out to the right. Select the magic wand – it's the red wand with the star on top, set the range to 10% and click somewhere in the white area at the left of the image. Then click on the small area between the girl's neck and earring at the right. This masks these areas – a moving outline appears to show you they've been selected.



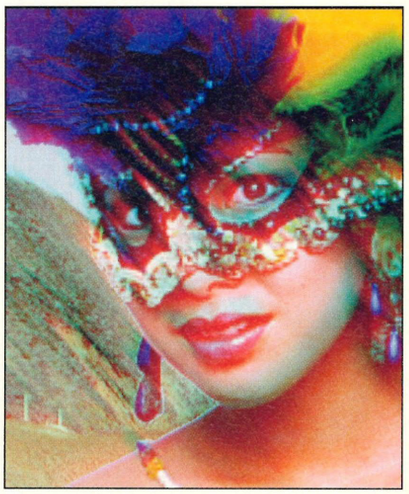
5 Now select the texture fill tool from the paint-pot tools. At the top where it says 'texture name' find the GOLDGATE.JPG image, which is in the samples directory. Make sure transparency is set to 0%. Now click with texture fill paint pot in the masked area. The GOLDGATE.JPG image is copied in – but not to anywhere else in the image. This leaves a purple gap at the top, so repeat steps 4 and 5 clicking in the purple area till the whole background has been filled.



6 To remove the flickering mask, select Remove Mask under the Mask menu. Now for the fun part – select Split Channels from the Effects menu. Choose the RGB option, and then choose Tile Windows from the Arrange option under the Window menu. Now we have separate images for the red, green and blue components of the original. This is where the deeper capabilities of Picture Publisher come into play.



7 Make sure the red layer of the separated of the image is selected, and click on Special in the Effects menu. Choose Motion Blur, and set the controls for 25 pixels and 45 degrees. This will make an alteration just one colour channel of the image. The green and blue layers should stay the way they were. The results on the red one, however, will look very strange and disturbing, but don't worry, we're not quite finished here yet.



8 Select Combine Channels from the Effects menu and the original image appears, now creatively modified. Working on a single colour layer with different filters before reconstituting the image can create some spectacular effects. Keep experimenting with the package and see what happens...

THE MAIL THE

The PC Review mail box is positively bulging at the seams with reader missives this month. You gave us a piece of your mind on the Future Publishing take-over, plus plenty more besides. Want to make an issue of something? Try the PC Review letters page... editor James Binns answers all.

Anybody out there?

From next month our letter of the month will recieve a cool £50 – so if you've got a burning issue you want to get off your chest, make a buck while you're at it! Alternatively just write in with any question you want answered. If you wrote to the old *PC Review* address then don't hold your breath waiting for the letter to be printed as we've moved! Write to us at: The Mail, PC Review, Future Publishing, 30 Monmouth Street, Bath, Avon, BA1 2BW. Or send the editor an e-mail on jbinns@futurenet.co.uk.

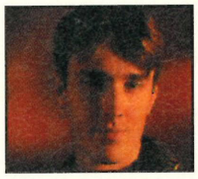
Where are they now?

Hello! I've bought *PC Review* virtually since it started, and I have always thought it a superior magazine. I was somewhat distressed by the delay in release, and surprised by the change of ownership. I like the new colours on the cover of the magazine, and I am pleased with the look of *CD Review*. I am also happy to see not too many changes to the excellent format in the magazine itself. I would like to know where Cal Jones has gone, has she moved to another magazine? And also Rik Henderson, where is he? Good luck with the magazine!

Paul Thacker, via the Internet

Cal Jones is off writing for another well-known computer magazine – but if you want even more of her, then check out her Observer column every Sunday. Rik is still in magazine publishing – working on a top secret project for someone else... so I guess they're now our competitors. We'll keep you updated on all the old gang.





Cal Jones and Rik Henderson. Together at last on our letters page. Gone. But still out there... somewhere.

Worm out of this one

As an avid reader of *PC Review* I was disappointed not to find results of the first leg of your Fantasy Worms League!

As my team have been trying hard for the results we need for victory, I scoured this month's edition to no avail. Has this been an oversight? Has Gazza broken his leg? Will I have to wait till the next edition for the results? Hope to hear from you soon.

Alan Simpson, Manager, Trainer, Groundsman, Crapbags PLC



Worms are back – and they've brought their pals with 'em!

We ditched the Worms League. Erm. Because we thought it was a dodgy idea. But to make up for it, we've persuaded Team 17 to design a special never-before-seen *PC Review* level, which we'll be bringing you on next month's *CD Review*. Also, look out for the *Reinforcement Pack* data disk – out in the shops now for £14.99. Loads of new levels, a couple of new weapons, network support, the ability to load up your own sound effects and a level designer.



The Quake Public Test – available from us.

Quake-less

I see from the April 96 issue of *PC Review* a reference to *Quake*. The public test version is supposed to be FTP downloadable from your Web pages. I can't find it. Can you supply me with the precise URL?

Robert Kiley, Camberley

Oops. It wasn't up on our site, simultaneous with the mag's release. But scoot on over to FutureNet now. It's there and waiting at http://www.futurenet.co.uk.

New Look

I just thought I'd take some time out to comment on the new look *PC Review*. I'm one of the people who have been getting the magazine from its very first issue, originally buying the 5.25-inch disk version at my newsagents, and then getting the 3.5-inch version on subscription. A few months ago I moved up to the CD-ROM version, still on subscription.

I realise that as this is your first month in charge, I should probably go easy on you, but there's a few things I've always noticed about *PC Review* that I'd like to know. Firstly, I'm an Irish customer, and my magazine was, by default, always delivered two weeks later than the issue date. I was just wondering if that will speed up a bit now. As far as I know, it's going airmail, so it surely shouldn't take two weeks.

That said, I'm glad that the May edition is being released 5 days before May, it was strange releasing a March edition while still only halfway through February.

My next question is about subscriptions. I've have a subscription for your magazine now for over 3 years. I've always noticed that you have all these special offers to entice new subscriptions (which is fair enough, we all have to make money) but I was wondering if it might be a good idea to introduce a cheaper rate to people who have been subscribing for a long time, a sort of reward for loyalty. I'm not only saying this to reduce my own payments, I'm sure there are quite a few people who would appreciate this service. Good Luck with the magazine, and I'll keep on getting it.

Jason Browne, Ireland

We're working on some new offers for people who want to re-subscribe. Existing subscribers will be hearing about these in the next few months. As for why you were getting the issues so late before... haven't got a clue. We've been onto our circulation bods who reckon the onsale dates in Ireland are the same as the UK. And what's more as a subscriber you should get the mag first. Next issue on sale 24 May. Hope you get that one on time.

Monopoly

As a hardened PC mag reader, and a devotee of *PC Format* and *PC Gamer*, I have to confess to being totally disgruntled and bemused by Future Publishing's acquisition of another of my favourite reads, *PC Review*.

I am disappointed at the change in ownership for the very simple reason that, as someone who reads a PC leisure and games magazine each month, it is

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important to me that each publication has a different flavour, albeit that basically the same ground is going to be covered.

Looking at the current Future Publishing PC portfolio, I am bound to wonder how *PC Review* is going to maintain its own identity (or is it going to be combined into, say, *PC Format*?). I am particularly concerned at how you can differentiate yourselves from *PC Format*.

The debut issue was good and, being fair, does retain most of the old *PCR* feel. I like the fairly serious approach. Some of the mags play heavily for laughs, but *PCR* has always tended to deal it straight.

I particularly love the cheap non-CD version – I have a cellar full of coverdisks, most of which never get anywhere near my machine. Perhaps a benefit of being on-line, but I am tired of the whole coverdisk concept.

Phil Boardman, Salford

Fear not. We're working on a very tight brief not to put *PC Review* through the Future-tron machine. We've carved it out so that writers we use won't appear in any of your other magazines. We bought *PC Review* as a going concern and aren't planning any major redesign work. We're certainly not planning a merger with *PC Format*, or any other Future magazine for that matter.

We appreciate your concerns about monopolies, and while we wouldn't recommend you read any magazines but Future ones, any visit to a newsagent should convince you that there are plenty of non-Future mags out there. And here in Future Towers, we've managed to create what you'd pretty much call an internal market – all the mags compete against each other and you should just hear the things *PC Format* says behind our backs! Any other fans of the non-CD version out there?

Take VAT!

I am not pleased about the way that prices are displayed in advertisements in your magazine, and indeed in most computer magazines. Although they are made to appeal not just to the general public but to businesses as well, they still display the price as though you are getting a bargain. But the prices being printed are there without the addition of VAT.

Looking like a bargain when in actual fact you had to look at the small print hidden at the bottom to see the real price! I think that this is conning the public especially when you have (in some cases) to work out the VAT for yourself.

Gary Smith, Glasgow

Couldn't agree more. Prices not taking VAT into account, in my opinion, deal with actualities in a more than economical manner. You'll be glad to learn that this is one thing which the powers that be in this land – whoever they are – have taken action on. Give it a couple of months and advertisers will be forced to display all prices inclusive of VAT. Do we deliver or what?

Cheetah!

You printed some cheat codes for *Mech Warrior 2* (PCR 53), but I can't seem to make them work. I've tried every way I can to input them, but with no joy. Help!

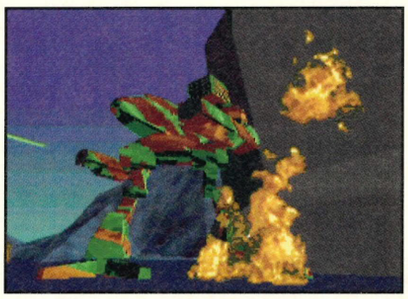
Andrew Taylor, Bournemouth

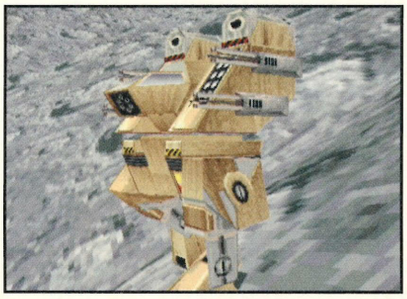
The tip needed a bit more explanation. To make the cheats work, you need to hold down [Ctrl], [Alt] and [Shift] as you type in the commands.

De-install

I was slightly shocked to say the least when my *PC Review* plopped onto my doormat. Two weeks late and under new management. Well, I was surprised. Yes, better paper and the same winning format – please don't change it too much. I've just tried the *Earthsiege 2* demo on *CD Review* – I've yet to try the rest. Excellent game. Liked the new front end for the menu, but what impressed me most was the deinstaller. It's a good idea and I hope more demos have this function – saves filling up my hard drive. Keep up the good work.

R. J. Brown, Dorset





Stomping robot combat action with Earthsiege 2 and MechWarrior 2 – together at last on our letters page.

Software companies of the world take note. Mr Brown speaks sense. More de-installers – or uninstallers as they're sometimes called – please! We're currently negotiating a deal that will bring you a deinstall program every month as part of The Essential Selection in *CD Review*. More news on that soon.

Length isn't everything

Could you make the reviews longer? Half a page in most cases just isn't enough. I like to know in detail about a piece of software before I buy it. Also, I would like to see the letter and problem pages toward the end of the magazine expanded. I feel these pages are important as usually user problems are not isolated. Through these pages users can share their problems and solutions.

Craig Buck, via the Internet

We tend to give longer reviews to more expensive, extensively hyped and better games or software products. Often, when an application is good and/or widely used, we will also do a tutorial on it in the Getting Serious section. You might look there if you want an even more in-depth treatment of the software than given in the review. When something only gets half a page, there's usually a good reason why. You'll also notice that we've doubled the size of the letters page this month... just for you! As for the Q&A section – if we get a deluge of reader questions we'll bump them up too.

Team Sports

All the ratings in *PC Review* are the express opinion of the person who reviewed the game. Would it not be more accurate if the review was conducted by an extra person and their views on the game summarised? After all, some games aren't everybody's cup of tea. A three-person team worked extremely well in old editions of *Amiga Format*, and gave three well-balanced views on every game. I know that you are all extremely busy people, but I believe that doing this would improve your games section no end.

Tino Todino, via the Internet

We think that reviews work best as the opinion of one person – too many verdicts diminish the overall authority of the magazine. All reviews are checked thoroughly and controversial marks will frequently be the issue of a heated (and often violent) office debate. But as we say, reviews never pretend to be more than a personal opinion. Otherwise the section becomes a wishy washy "Good if you like this sort of thing" compromise.

PCR Poll

Bundle or Pile-on? Think back to your school playground days? Someone gets pushed to the ground, and all the other kids come running and jump on top of that person forming a huge, writhing human mound. In fact, all activity in the playground has stopped and everyone but everyone is adding their body to that pile of people. The one at the bottom is lying face saying his arm is broken, but the moans and cries of pain are muffled in the melee. And the kid with the loudest voice in the school is shouting.

What would that child be shouting at your school? Would it be:
a) Pile-on! or,
b) Bundle!
Write to us at the usual address and let us know your thoughts on the phenomenon. In the interests of democracy, only one vote per reader.

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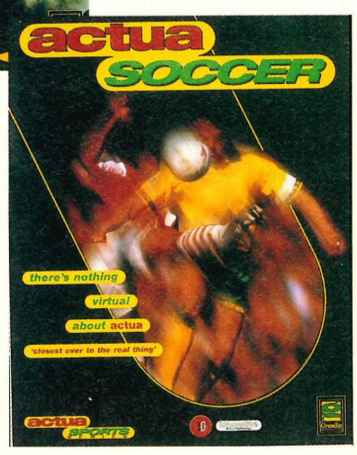
You have a choice. you can either continue buying your copy of PC Review from the newsstand every month and run the risk of them selling out before you get there, or you can subscribe, get your copy delivered free to your door (if you live in the UK) and get your free gift. We know which we'd go for!

Choose your free gift!



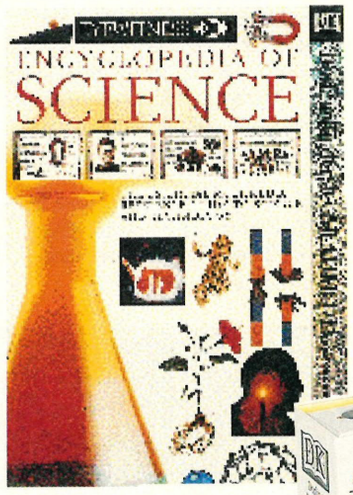
Fatal Racing

Speed kills. But in Fatal Racing it could be all that saves your life as you race and jump in this mad driving game.



Actua Soccer

Without question the finest footie game you can buy for the PC, Actua Soccer is a vital addition to any self-respecting game player's collection.

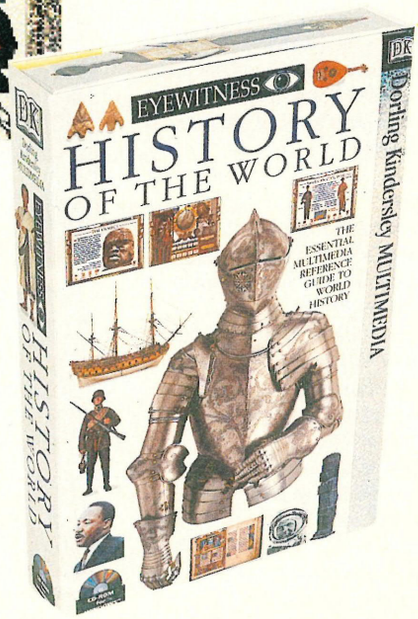


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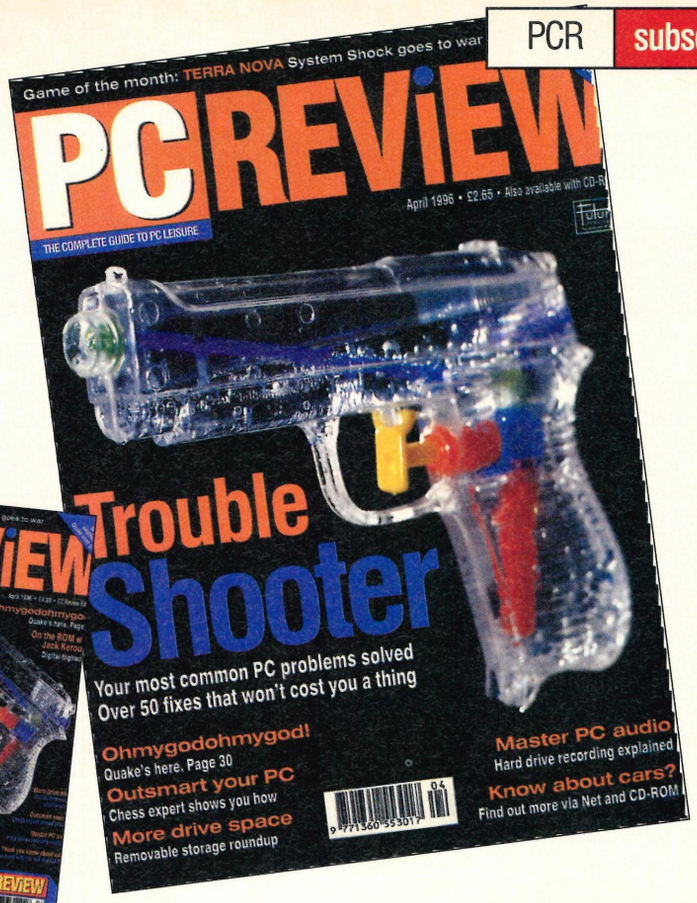
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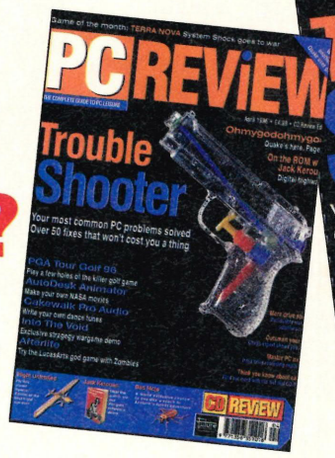
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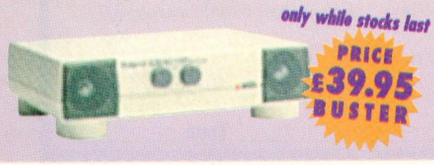
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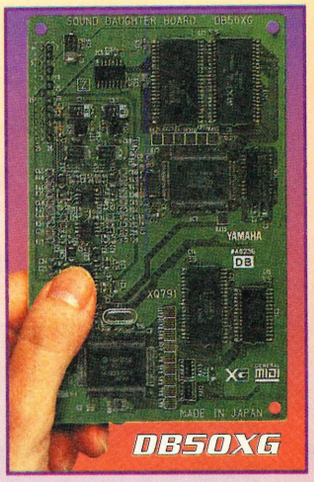
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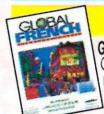


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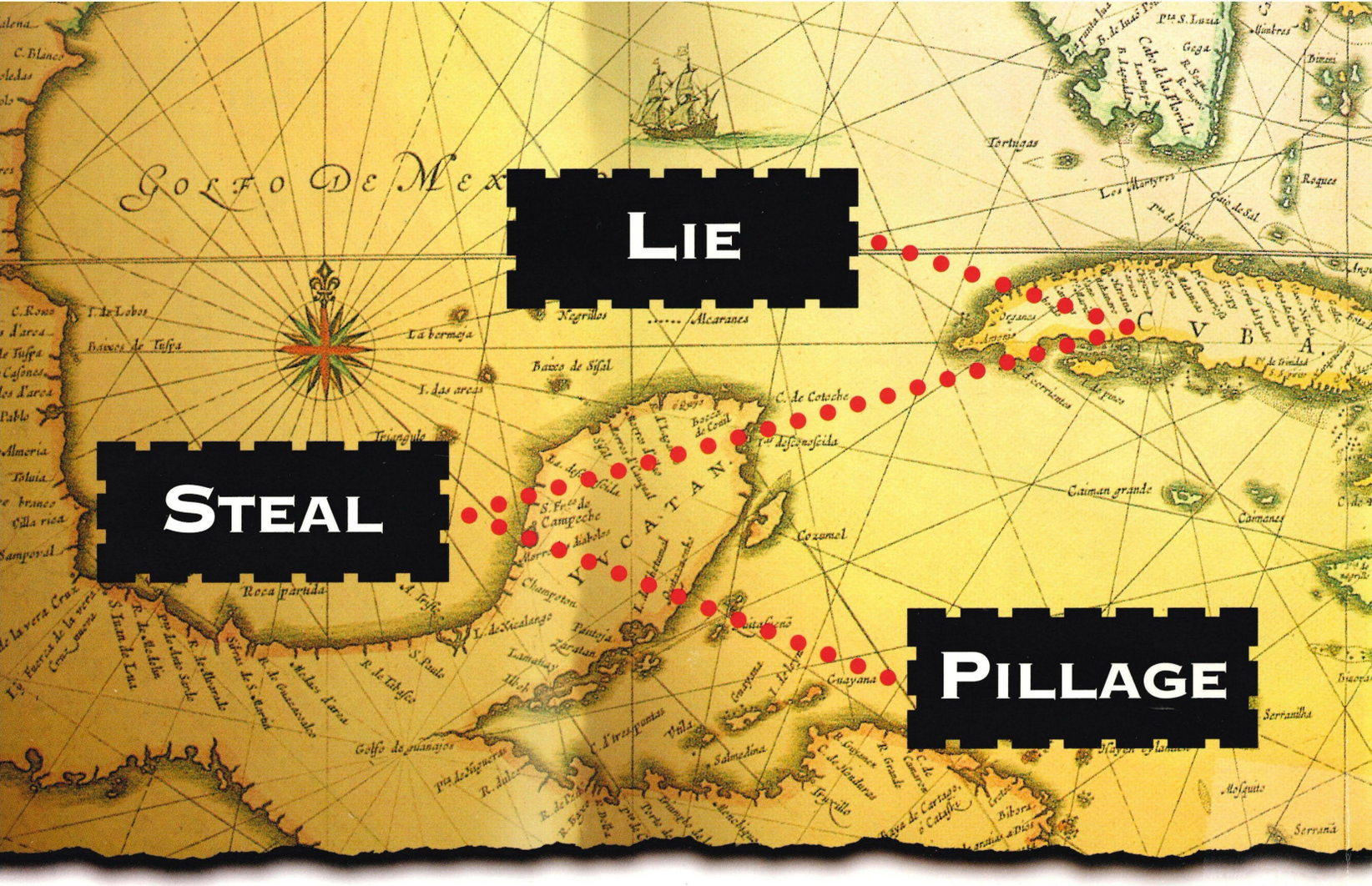
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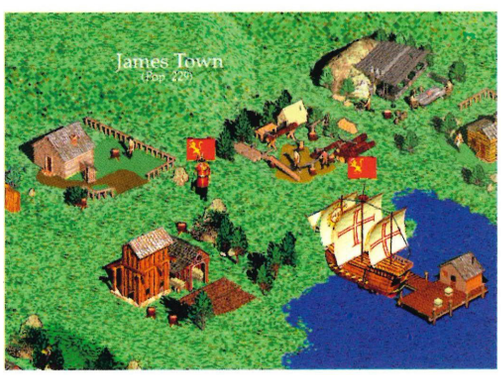
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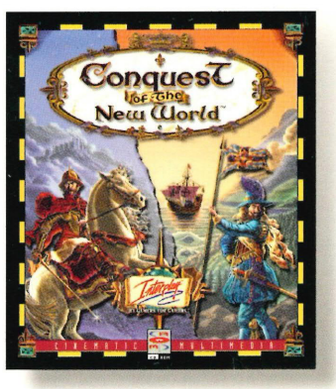
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