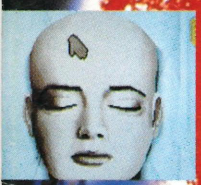
COMPLIMENTARY ISSUE

PC Leisure

The complete guide to PC entertainment



SKULL DIGGERY!

Cranial capers in Life and Death II: THE BRAIN

Superb WWI simulation strategy in



RED BARON

GREAT GAMES GUIDE
35 red hot titles you MUST have

FREE
LEMMINGS DISK
see inside

SECRET WEAPONS OF THE LUFTWAFFE
Goering's back...and this time he's MAD!

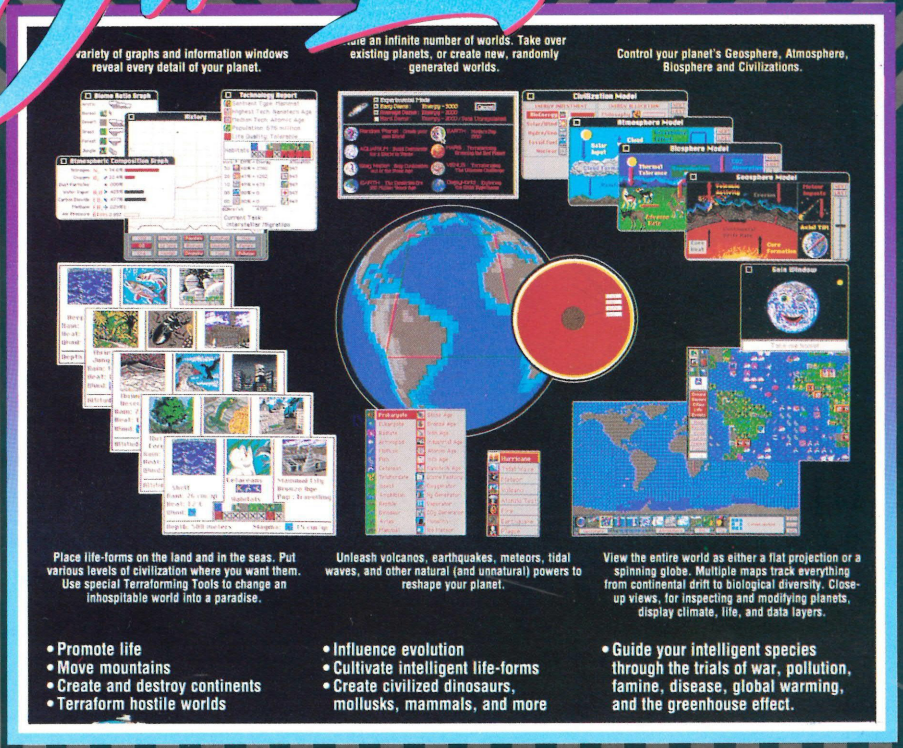
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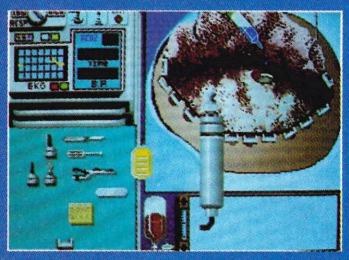
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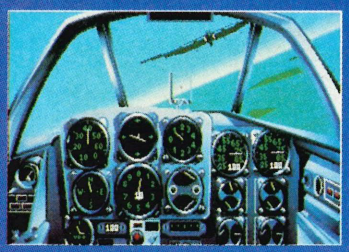
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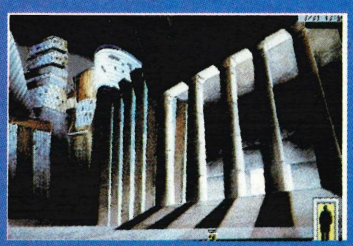
The ultimate offal hunt: Life and Death II: The Brain puts the scalpel right where it doesn't belong – in your hands! See page 34.



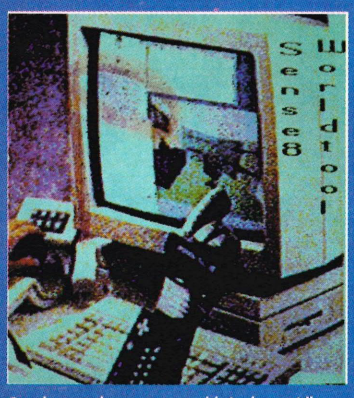
Secret Weapons of the Luftwaffe promises to be a worthy successor to Lucasfilm's superb Battle of Britain game. Check out page 22.



Is Red Baron the best combat flight sim ever? Low tech makes for high tension in this WW1 ace from Sierra/Dynamix. See page 30.



Rise of the Dragon is one of Sierra's most impressive games to date. Sample its superb graphics and gameplay on page 74



Reach out to brave new worlds in the rapidly expanding field of virtual reality. PCL goes Stateside to sample the latest PC-based system from Sense 8 – on page 63.

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PC Leisure

Special sample issue

Priory Court, 30-32 Farringdon Lane, London, EC1R 3AU. Tel: (071) 251 6222. Fax: (071) 490 1094

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MIRROR IMAGE

1991 sees the re-introduction of classic 16-bit releases under a new banner – **Mirror Image.**

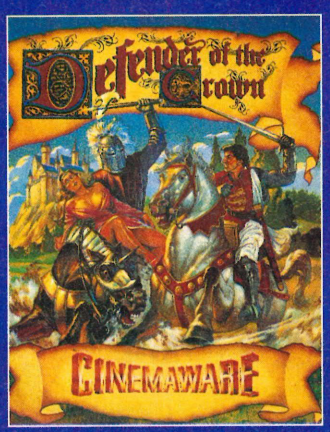
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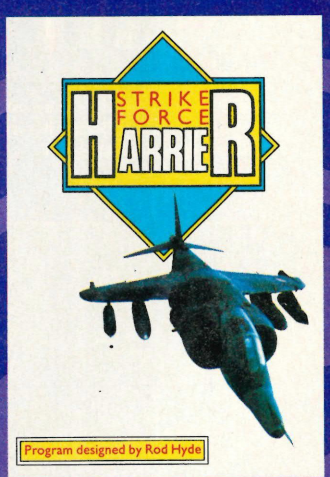
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ROCKET RANGER



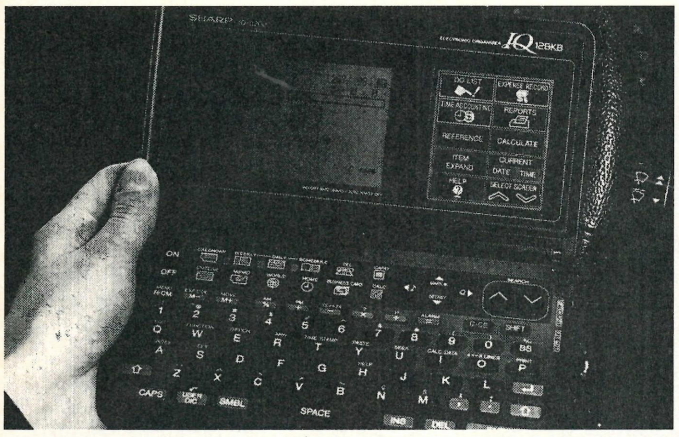
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Sharp's IQ 8000: awesome power in your pocket...and of course you can link it to your PC

NEWS

This Issue... Sierra launch their own UK company ● Sharp produce an awesomely powerful personal organiser ● Midwinter II heads for the PC ● Digital Magic offer you the chance to Escape from Colditz...and much more

HIGH IQ

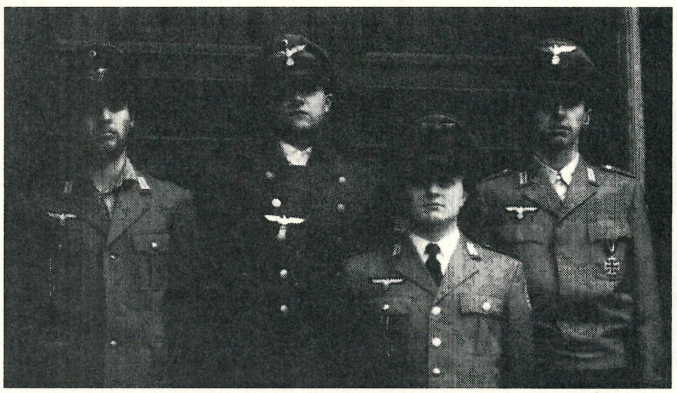
Sharp has launched a high performance organiser, the IQ8000, as a follow-up to its IQ7000 series (see PCL issue 5).

The IQ8000 is available in two configurations - with 64K or 128K memory. It has a qwerty keyboard and an LCD screen which displays 40 columns by eight rows of information. Built into the machine, and accessible via dedicated keys are new modules offering a timestamp on all files created, an outliner for jotting down ideas and a Help function. A name and address book, telephone numbers and diary/calendar, similar to those of the IQ7000, are also built in.

Sharp's IC software cards are compatible with the IQ8000; these range over a number of applications, from language translators, French and German dictionaries to a thesaurus and extra memory for the machine. Data can be transferred to and from your PC by cable.

The IQ8000 costs £199.99 for the 64K version, and £249.99 for the 128K model. Details from Sharp on (061) 205 2333.

ESCAPE FROM COLDITZ



Digital Magic is converting the board game Escape from Colditz for the PC and should have it ready for release next Christmas. All the elements of the board game will be included, with a main screen depicting a 3D view of the infamous Castle Colditz.

Pat Reid, one of Colditz's renowned escapees, advised Digital Magic on the game before his death last year, and his books The Colditz Story and The Latter Days at Colditz will be bundled free with the game.

Versions of Colditz have already appeared on some other 16-bit systems and early playtesting is distinctly favourable. The game allows you to control four different prisoners and involves mapping, strategic thought, and puzzle solving if you're to break out. Failure means either solitary or a bullet in the back. Watch out for the PC Leisure review later this year – the price should be around £30 and the developers say the game will support all graphics standards and the major sound cards.

FLYING HIGH...

Flight simulator fans will be interested to hear of a new US title currently available in this country from dealer Software Circus.

Airline Transport Pilot (ATP), by SubLogic, is a civil aviation simulator featuring Boeing 737s, 747s, 767s and the Airbus A320 Jetliner. You, as the pilot will be given tuition in controlling each plane, then you can set off around the airports of the US, subject to your communiques from air traffic control. There are 26 major city airports featured in the game and 350 in total.

ATP can also be used in conjunction with SubLogic's scenery disks for Microsoft's Flight Simulator 4, for added authenticity and enhanced graphic features.

Both ATP and the scenery disks are available from Software Circus at The Plaza, 120 Oxford Street, London W1N 9DP; telephone (071) 436 2811 for details.

...without your micro

Airline passengers are being advised not to take laptop computers with them unless it's absolutely necessary.

In light of events in the Gulf, Both British Airways and Heathrow Airport confirm that all electrical goods are subject to particularly strict scrutiny in security checks.

"We're certainly not banning portable computers, but we do recommend that passengers don't take electrical goods on board unless they absolutely have so," said a spokesman for British Airways. "The security process only slows things down for other passengers."

BUDGET SCROLLS

Hot on the heels of its success with the innovative Wonderland adventure, Magnetic Scrolls has put together new versions of its early adventures Fish, Corruption and Guild of Thieves, which will be released in a single package grandly entitled The Magnetic Scrolls Collection vol 1.

Rather than treating this as a straightforward rerelease, Scrolls has revised the three games to run under the windowing system used in Wonderland, with all the attendant help screens, objects lists and auto-mapping facilities. Many of the original graphics have also been enhanced in the process.

The Magnetic Scrolls Collection is due for release this month [March], and will cost £34.99.



Sim Earth was released officially at a heavyweight press launch in London in February. For those readers who missed the definitive PC Leisure review, the program is based on the 'Gaia' principle developed by Professor Lovelock, which essentially views the entire Universe as a single living entity. Players have the option of exploring the game with no set goals, or of pursuing goals of their own – developing a civilisation of intelligent reptiles perhaps – though anyone who has to deal with estate agents may suggest that this has already been done in real life. The program was designed by Will Wright, who designed SimCity with Fred Haslam, and who was inspired by Professor Lovelock's writings to create the game.

JUST ONE ZORKMID, GUV

Mastertronic has signed up a second batch of Infocom oldies but goldies for budget release.

Following the success of the rerelease of classic Infocom adventures such as Hitchhiker's Guide and Leather Goddesses of Phobos (see PC Leisure, issue 4), Mastertronic is pricing the extended Infocom range (originally costing over £30) at £9.99 – a genuine bargain for anyone who missed out on these absorbing text adventures the first time around.

The five next titles to be released are Zork II, Zork III, Enchanter and Sorcerer, which are all set in an underworld of wizards, warlocks and necromancers, plus Deadline, a whodunnit thriller with a Chandleresque atmosphere and a twelve hour deadline to identify the killer.

Infocom games were all the rage about five years ago, combining clever text programming with a tremendous sense of humour and creating an entire sub-culture of Frotz spells, zorkmids, and hideous grues.

Zork II should be available within the next month, with the others following shortly. Details from Mastertronic on (071) 727 8070.

MIGHTY MOUSE

Logitech have launched a new mouse range that could improve your high scores...

Yer average mouse can be one of the most irritating computer peripherals to use – especially if you're left-handed, since the most often used left-hand button sits awkwardly under the third instead of the index finger so you'll want to reprogram them – if the requisite software is provided.

Logitech, which has a fine pedigree in manufacturing mice for companies such as DEC, Apple and Hewlett Packard, has come to the conclusion that mice aren't very well designed at all – and not just for sinistradextrous (that's left handed to you and me) people either. After research into the ergonomics of using a mouse – which is the most relaxed, comfortable hand position, for example – has come up with the MouseMan range.

There are two basic MouseMan types: corded, ie, with a cable that physically fits into your PC's serial port; and cordless, which communicates its movement and button clicks with the PC via low frequency radio waves. Each is characterised by the curved moulding of the top of the mouse, as opposed to the conventional 'flat box' look. This, says Logitech, is the design that most naturally fits the human hand. The cordless version is also about one and a half times the size of the other; Logitech is recommending the corded version for people with average to small-sized hands, and the cordless models for hulking brutes.

The curved casing means that left- and right-handed versions need to be available separately, and Logitech reports that orders for left-handed MouseMen are way above the 15 per cent they would expect to be representative of the population at large.

All models are fully Microsoft compatible and operate at a resolution of 400 dots per inch. Software included with the package allows you to reprogram buttons and vary the speed of movement.

Corded MouseMan (for use by either hand) costs £65; the cordless devices are £120. Further details from Logitech on (0753) 37222.

TITBYTES...

EMPIRE are making great claims about their forthcoming release Megatraveller 1: The Zhodani Conspiracy. 'Takes science fiction role-playing light-years forward,' they say. The game is based on the Game Designers Workshop RPG of the same name and features 28 planets and satellites to explore, offering the player puzzle, narrative, and interactive character gameplay. Tactical interest is provided by 'realistic' combat sequences and the strategic challenge involves financial, skills, and political management. However, there's just one drawback: MT1 has already been available in this country, but Empire are certain that their version, which features a number of improvements over the original release, will be the one that deserves a place on your shelf. Contact Empire on 0268 541126.

●

GREMLIN are working on a version of Hero's Quest – the popular Milton Bradley game – and as a result SIERRA have had to change the title of their previous release Hero's Quest, which combined a degree of RPG with the traditional Sierra storytelling style, to Quest For Glory I: So You Want To Be A Hero. 'Only the name has been changed, it's still the same great game,' gushes the American publisher, who are making up for it all by bringing us another game in the same series, entitled Trial By Fire. TBF is set in an Arabian nights scenario and should be available now.

●

JEZ SAN, the man who brought you Starglider II and nothing quite so spectacular since, is now working on a flight sim project for EA featuring (amongst others) the same F117 craft you'll fly in MICROPROSE's F117A Stealth Fighter (see screenshot on page 10/11). Provisionally entitled Birds of Prey, the game is unlikely to be released until 1992.

●

SIM CITY FANS can now get their hands on two update scenario disks from Infogrames. The first, Architecture 1, features three cities of the future: set in the USA in 2055, in the EEC in 2155, or on the moon. Architecture 2 takes a more historical approach, offering Ancient Asia, the Middle Ages, or the Wild West. All periods feature varying constraints and conditions that will force different management styles on the player. Contact Infogrames on 071 738 8199 for further details – the packages should be available as you read this.

●

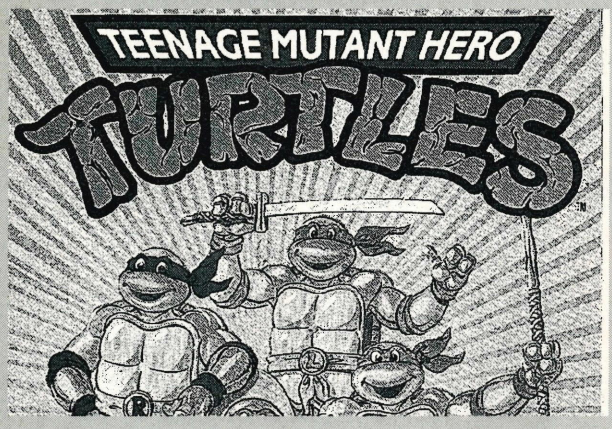
If you've been turned on by our recent reviews of games from **ACTIVISION**, consider turning yourself off. The company is in serious financial difficulty and at the time of going to press it was reported that the UK office has now closed completely following extensive redundancies last year. Support for Activision titles is therefore unclear at the moment, though it is unlikely that games like Battletech II (see PCL 5) or F14 Tomcat will disappear entirely – ask your dealer for the latest news as to who's handling these products.

●

...see more tit bytes elsewhere in this section.

THE TOP TEN PC GAMES

(Compiled By Gallup)



Heroes in a half shell – hitting the high spots again in the PCL chart

THIS MONTH	LAST MONTH		
1	2	TEENAGE MUTANT HERO TURTLES	IMAGEWORKS
2	NE	STRIKE FLEET	ELECTRONIC ARTS
3	NE	F19 STEALTH FIGHTER	MICROPROSE
4	NE	COLOSSUS CHESS X	CDS
5	NE	SUPER SKI CHALLENGE	PLAYERS
6	NE	PIPEMANIA	EMPIRE
7	1	HITCHHIKERS GUIDE TO THE GALAXY	MASTERTRONIC
8	NE	WONDERLAND	VIRGIN
9	NE	F16 COMBAT PILOT	DIGITAL INTEGRATION
10	NE	WORLD CUP SOCCER '90	VIRGIN

So PC owners are profound, sophisticated, adult human beings, eh? Then can someone explain why the heroes in a half-shell have finally erupted into first place? On the other hand, Colossus Chess X, F19, and Wonderland bring a touch of class to the proceedings.

FROM THE (NEW) EDITOR...

Welcome to the new PC Leisure...

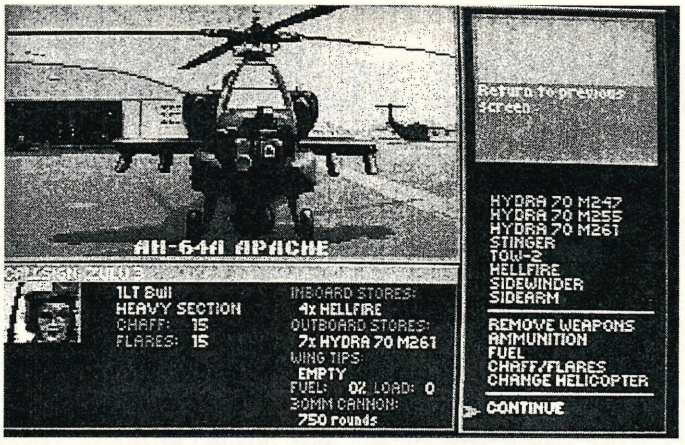
This issue boasts (or is guilty of, depending on your views) a few changes. We're not ashamed to admit that we think it's now far and away the best resource for all PC games players, but turn the pages and judge for yourself – and let us know if you have any opinions you want to share.

First, we've divided the magazine into sections. Every month there'll be SPECIALS (that's special features), ENTERTAINMENT TECHNOLOGY (coverage of the state-of-the-art PC games-tech, and games-related hardware), and REGULARS (letters, reviews, QED etc).

In addition, we've created a section at the back of the magazine, called EXTENDED PLAY. This will always have its own contents page (this month it's on page 83) and we'll be treating it as a magazine within a magazine, with regular coverage of PD/Shareware, software surveys, and other tidbits to keep you reading right through to the next issue date!

We've also radically altered and improved the games rating system – see page 45 for full details.

Finally, we want to get to know you better. To that end, we'll be holding open house here for readers every so often – see page 98.



Gunship 2000 – just one of the contemporary releases that demands a power PC

POWER TO THE PEOPLE

PC owners are splashing out on all-powerful 386 games systems, despite the recession, according to market research by Context.

Looking at sales of all PCs last year, Context notes that sales by volume rose by just 6.8 per cent, compared to 1989. "these figures show beyond doubt that the general economic climate in the UK has done the PC industry no favours," said Context Jeremy Davies, pointing out that towards the end of the year sales were declining on a comparative year by year basis.

Bucking this trend was an increase in sales of more powerful machines: a massive 260 per cent leap in 386SX sales, and more modest increases for 386-proper PCs and 286s. This was at the expense of 8088/86 (XTs) machines, which, in Context's survey accounted for just five per cent of the PCs bought in 1990.

The most popular low-cost PC compatibles continue to be Amstrad's, which sits at number three in Context's sales by volume chart, behind heavyweights IBM and Compaq, and ahead of such illustrious names as Tandon, Olivetti and Tulip.

In America, sound board penetration has increased to such an extent that all PC games offer some sort of board support, particularly for AdLib, SoundBlaster and Roland systems.

Meanwhile, US games companies persist in upgrading the expectations they have of gamesters' systems. Origin announced at CES that the base platform for future products would be a 12Mhz 286 with VGA graphics. Of course, you *can* play the games on an 8086, but that sprite will take about two months to cross the screen...

FIRE BY WIRE

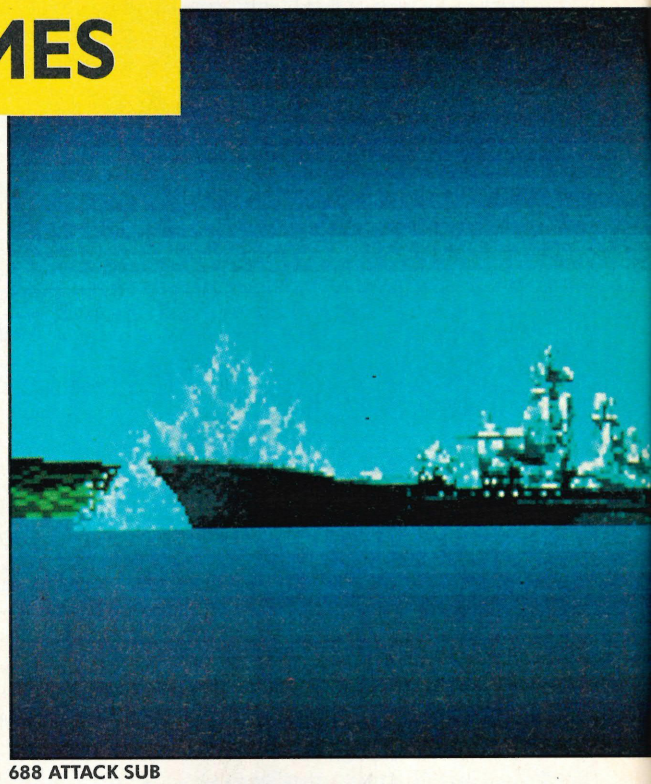
Spectrum Holobyte has taken on the idea of creating support for a modem link for its games which will run through all its releases from Tank onwards.

This (disturbingly timely) announcement means that all simulations will be based on the same playing area, so that two players, one with the forthcoming Falcon mkII, the other with Tank, can link their PCs via modem, and play against, or with, each other. Subsequent releases, which include an A10 simulator and a helicopter sim, will use the same scenario, which Spectrum Holobyte is calling the Electronic Battlefield System (EBS).

With PCs on a network, up to 30 players of any one of these will be able to log on, and join in an existing battle, or create a new one which others will be able to join in. All the games will, of course, be playable in a standalone mode as well.

Tank, with EBS support, has been available for some time; Falcon mkII is due out at the end of this month [March], with A10 Warthog scheduled for release in the autumn.

JUST THE THING AFTER ALL THE FUN AND GAMES IN THE OFFICE.



688 ATTACK SUB

The financial director has been querying your expenses. Again. The creep on the next desk just got promoted to the board. And the best secretary you ever had, ran off with a photo-copier salesman.

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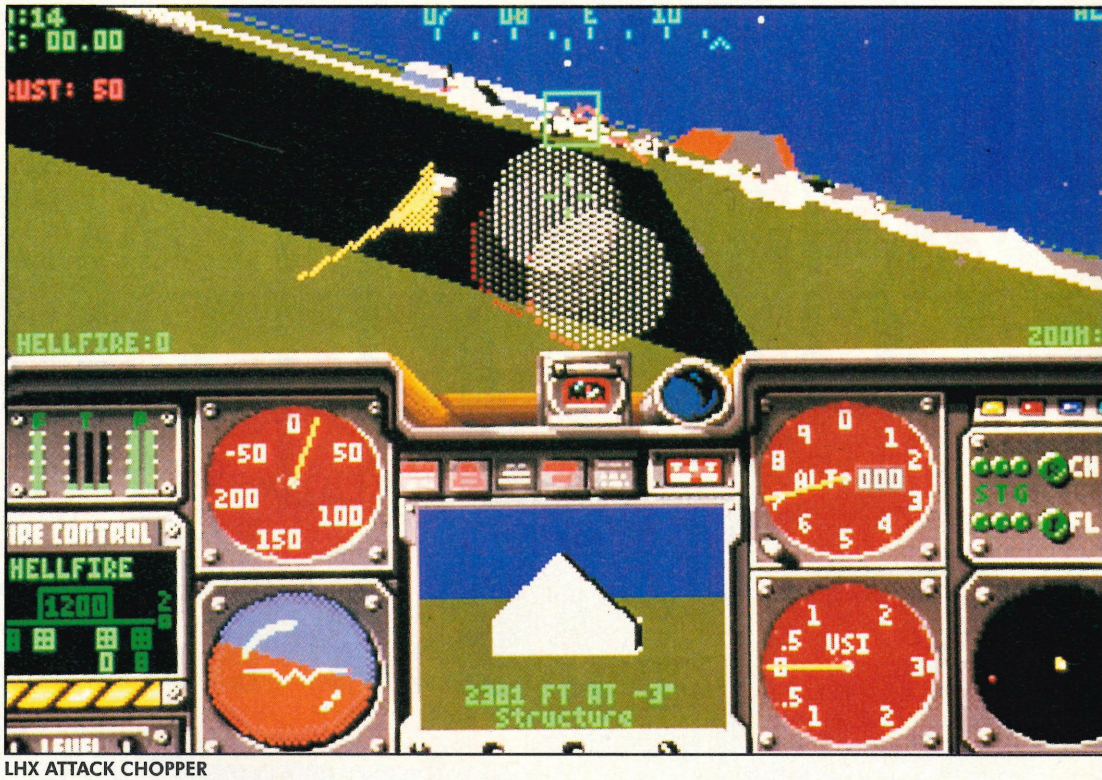
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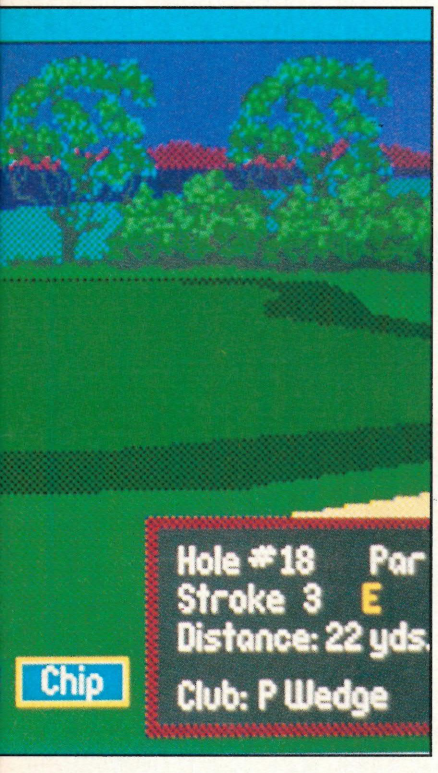
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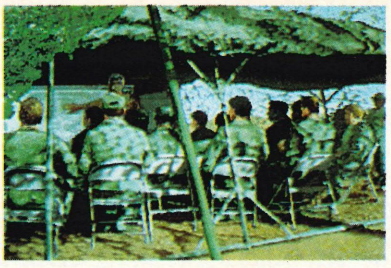
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GUNSHIP 2000



The eager troops prepare to hear the mission briefing.



Outfit your helicopter with oodles of techno-weaponry, from equipping advanced air-to-air missiles to selecting the amount of flares carried.



This has to be one of the heaviest metal releases of the year: the long-awaited sequel to the legendary Gunship gives you state-of-the-art simulation technology...and FIVE choppers!

You select the type of mission, duty roster and theatre of play from this screen.

What travels at 227mph, has a 30mm chain gun slung underneath its nose and can sustain a direct hit from a 23mm artillery shell? Easy, the Hughes AH-64 Apache anti-armour attack helicopter currently in service with the US Army. Back in 1987, stateside simulation specialist Microprose launched the most popular helicopter flight-sim ever released. Gunship, based around the aforementioned Apache chopper, has sold a staggering one million copies and won several awards. Now the Baltimore-based games developer is busy putting the finishing touches to a sequel.

In Gunship 2000, you can choose to fly up to three types of helicopter. These choppers are the technologically advanced machines that the US Army will be relying on throughout the 1990s and into the 21st century. Some of the beasts can even roll and loop, though fans of the original will be pleased to hear the Apache still plays a central role.

During the game you fly a variety of missions over Central Europe, Caribbean and the Persian Gulf. You command a platoon of five helicopters and everyone of these can be in the air at the same time! For real fun, a head-to-head option allows you to play against a friend. Each helicopter can be equipped with lots of tasty weapons before each mission. An intelligence report then outlines your primary and secondary objectives, weather conditions and enemy activity. A quick fiddle with the simulation parameters (such as the level of responsibility given to the computer-controlled copilot, quality of enemy and realistic or no-crash landings) and let the flight fight begin.

Gunship 2000 incorporates vast playing areas, it will take you over 15 minutes to fly in a straight line across one of the worlds. One of the more unusual options in this flight-sim is the way you are able to select a full-screen field of view with just the minimum instrumentation needed to fly your bird. In addtion to the numerous missions provided with the basic game, Gunship 2000 also includes a 'mission builder' which allows you to design, edit and save missions, so lasting interest is almost assured – provided you've got the imagination to create new tasks for yourself.

Visually, Gunship 2000 will shock you. Microprose has managed to create fast realistic landscapes using Topographical-3D. This new custom-designed graphics system generates terrain with depressions (river banks, valleys, etc) and elevations (mountains, buildings, and so on). How do you tell if a flight-sim has good graphics? Keep an eye out for the quality of its palm-trees...

"The incredible interest we've seen in Gunship over the years encouraged us to use the technology and experience we've gained since its release four years ago to create a product several years ahead of any other title on the market," explains 'Wild' Bill Stealey, the enthusiastic President of Microprose. For the record, the company embarked upon this project long before the Gulf War.

■ Rik Haynes



Out in the Persian Gulf... look out for T72 main battle tanks and the odd camel.

UGLY, MEAN AND DEADLY

Like the Patriot air-defence missile and Tomahawk cruise missile, the Apache helicopter was unproven in combat until the Gulf War. The performance of these three hi-tech systems during the conflict has impressed their most outspoken critics. Still, it is worth noting that in these days of computer-controlled 'smart' weapons, there's still room for daring pilots. After completing a strike deep behind Iraqi lines last month, an American Apache pilot spotted an exposed communications link. Unfortunately he was out of ammo. So he landed the chopper, climbed out of the cockpit, cut the wire, gathered it up and calmly flew his bird back to base. Eat your heart out Biggles!

RELEASE DETAILS

TYPE: Strategic Flight Simulation
PRICE: £39.99
RELEASE DATE: Late Spring
GRAPHICS SUPPORT: EGA, MCGA/VGA, Tandy 16-colour
SOUND SUPPORT: AdLib, Roland, Tandy

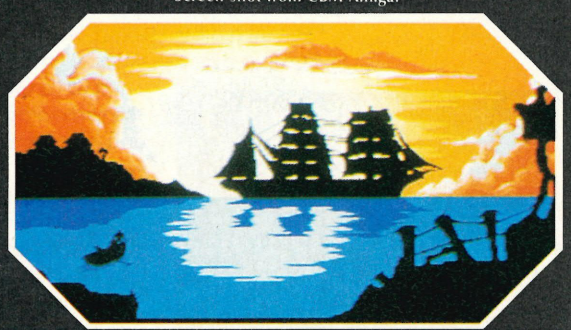
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Screen shot from CBM Amiga.



Based in the 1920's, Inspector Raoul Dussentier is aboard a ship in the Mediterranean. But no sooner has the cruise begun when Raoul is summoned to investigate a crime – the murder of his host Niklos Karaboudjan, the Greek shipping magnate. It's up to Raoul to throw some light on this sinister mystery!

- *Wide range of actions, including the option to question other characters in true Agatha Christie style.*
- *PC version features 256 colours, Ad Lib & Roland sonic support.*
- *Amiga version features 32 colours.*

ATARI ST, AMIGA & PC (CGA, EGA, VGA, TANDY AD-LIB & ROLAND).

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THE SECRET OF MONKEY ISLAND™



Screen shot from IBM PC.



A comedy set during the "golden age" of piracy in the Caribbean. The game's twisty plot leads our hero, fresh from the old world, on an hilarious, complex, swash-buckling search for the fabled Secret of Monkey Island.

- *Features dazzling 3D graphics, an original reggae sound track and a point 'n' click no-typing interface.*
- *A wide variety of original entertaining puzzles, unravel hidden meanings in hilarious repartee.*
- *Proportionally scaled animated characters and cinematic pans and camera angles.*

ATARI ST, AMIGA & PC (EGA, CGA, VGA, MCGA, AD-LIB, ROLAND and MT32 SOUND).

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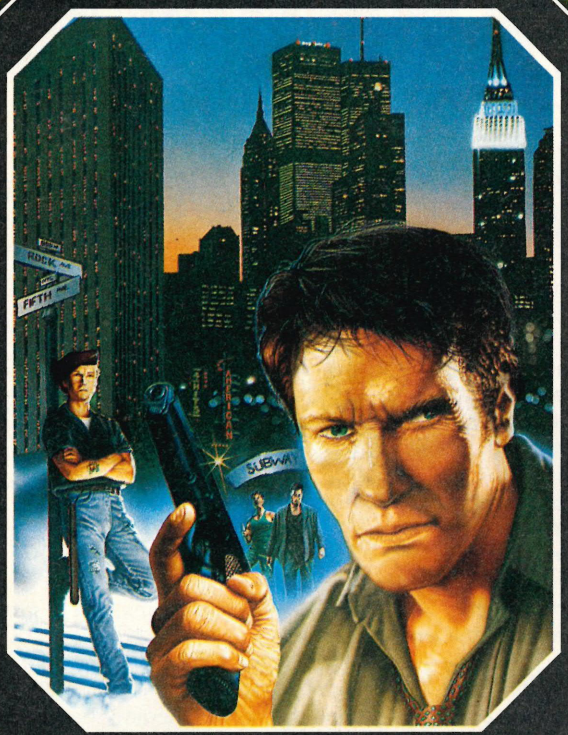
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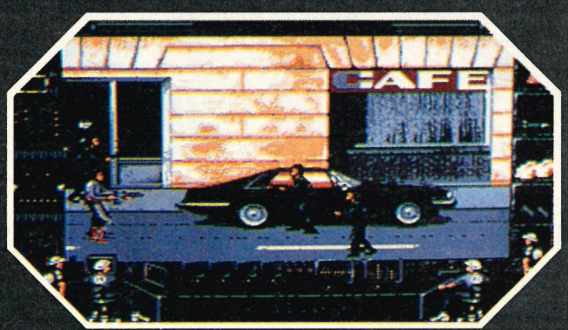
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CRIMEWAVE™



Screen shot from IBM PC.



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Your purpose: Wipe out the criminal organisation and rescue the President's daughter.

- *More than a "shoot em-up" game. Crimewave contains secret rooms, switches, keycards, different weapons, varying levels of difficulty along with a variety of other strategy elements that provide endless hours of challenge and excitement.*
- *A multitude of brilliant 256 colour scrolling game screens.*
- *Incredible digitalised "Motion Graphics" (featuring real actors and models).*

ATARI ST, AMIGA & PC (EGA, MCGA, VGA, TGA and REAL SOUND™).

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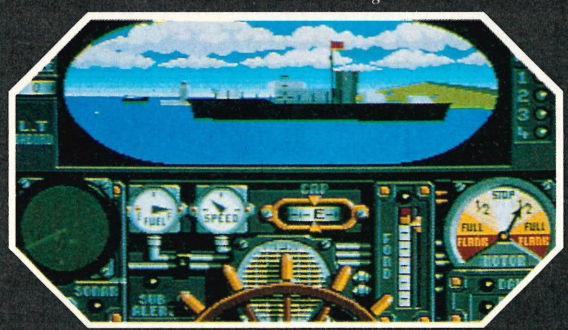
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From the creators of Sherman M4



Screen shot from CBM Amiga.



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A.D.S. is a stunning sea battle simulator using 3D technology.

- *40 page manual includes detailed maps of the combat zones together with historical and technical information.*
- *Adjustable difficulty level will suit all levels of player.*

ATARI ST, AMIGA & PC (EGA, CGA).

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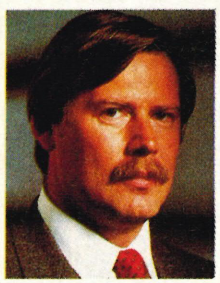
Screen shots are only intended to be illustrative of the game play and not the screen graphics which vary considerably between different formats in quality and appearance and are subject to the computers specifications.

CALIFORNIA DREAMING

In the first of a two part series, Ciaran Brennan takes a look behind the scenes at Sierra On-Line and talks to its president about CD and the future of games development...

Very few product lines ever achieve the ultimate accolade of becoming a generic term for all products in their field: Hoover has done it with vacuum cleaners, sticky tape is commonly known as Sellotape and animated adventures are known as Sierra games.

This doesn't seem so remarkable when you find that Sierra On-Line was probably the first in the market with this style of game (in fact, any style of computer game). It all began on Ken and Roberta Williams' kitchen table and has since grown to a company employing 350 people across four separate sites in the beautiful setting of California's Sierra mountain range (hence the name).



Ken Williams: a man with a vision.

From the wire-frame still graphics of the company's initial effort, Mystery House, to the 256-colour animations of its latest, Sierra has become a by-word for quality - to the extent that even the most casual PC gamesplayer doesn't need an introduction this long... so on with the show.

Having conquered the US - and made inroads into Europe without even trying too seriously - Sierra On-Line is now set to put some serious effort behind filling your hard drive, as it's recently opened a subsidiary in Reading to take care of its British business.

This doesn't only mean that Sierra games will now arrive on these shores quicker and in greater quantity, but also that Sierra fans can now enjoy some of the benefits that their American counterparts have taken for granted for years: a customer support line and dedicated bulletin board service to name but two.

Over the next couple of issues we'll take a look at the company in general, but more specifically at some of the advances in its development processes, including the use of digitising extravagant paintings for background shots and its new 'Rotoscoping' system which allows for much classier animation than in past efforts.

With developments such as these, it's hardly any wonder that King's Quest V cost in the region of $1,500,000 to produce - with more than $500,000 of that going on the original paintings alone.

But ultimately it's people more than technology which make for great games, so with that in mind we'll be talking to the people behind the Quests - starting with company founder and president, Ken Williams.

JUST WILLIAMS

Ken Williams is a man with a very precise vision of the future of electronic entertainment. Through Sierra On-Line, he was one of the first people to promote heavily the spread of sound cards across a wider base of US PC users - while in a recent editorial in Sierra's own user magazine he made a case for the move to CD technology which would indicate that he's about to do a similar thing for that format.

I put this to him, among a wide variety of other topics...

CB: It's one thing to get the customer to part with $150 for a sound card, but it's another thing entirely to get him or her to pay out $800 for a CD drive. Do you think that this format has a future?



The video suite combines state of the art editing equipment with something a little more down to earth - a standard PC.



In the beginning... each and every Sierra On-Line game begins life as a storyboard - a comic strip affair which details all of the games major events in chronological order.

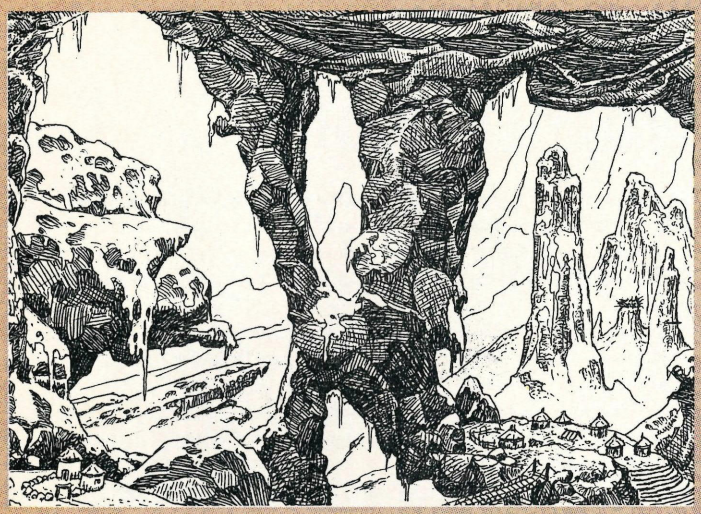
KW: I'm not sure how I feel - with a top of the range CD PC system, I think that we're charging them $3,000 for too little. There are other platforms coming along such as CDI that will only cost in the region of $1,000, which will mean that people won't necessarily need a 40Mb hard drive etc.

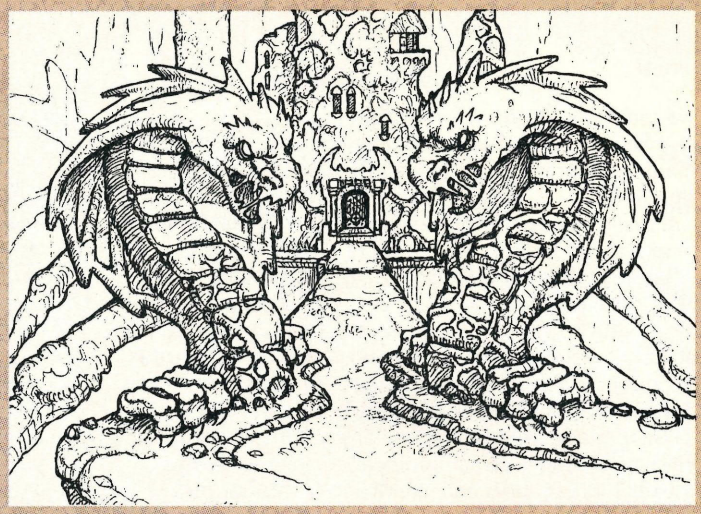
CB: ...but you have chosen the PC as the machine that you, as a company, want to develop for?

KW: No, I've got a vision in mind of what I think that interactive entertainment should be.We have always, from the beginning, considered ourselves to be an interactive film company. You go back eight years and even then that's how I thought of us. There's a progression involved: I think that it goes books, records, films and then interactive films.

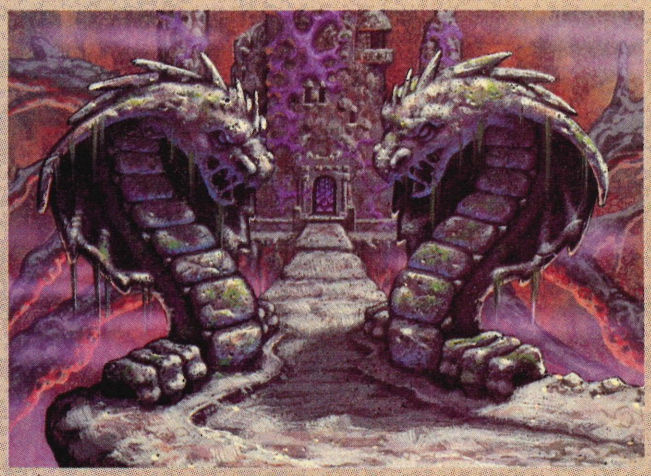
We're storytellers, using the computer as our medium: the IBM PC is the prevailing platform and we run on this machine for that reason - not because we agree that it's the best system. I know of nine different CD-ROM based machines coming out this Christmas, ranging in price from $500 to $5,000, but my preference is for an under $1,000 system with a CD-ROM drive, a Meg of RAM and preferably a 386SX or 68020 processor - that would run our products and do what we want.

CB: Isn't there a danger though,











PAINTING BY NUMBERS

Step-by-step, this is how Sierra's backgrounds develop. Following discussion between developer, publisher and artist, a series of pen and ink sketches are produced [figure 1]. When all parties are happy with the results, these are sent to the fine artists (some in-house, some in parts as far off as Korea) where they initial idea is realised as an oil painting [figure 2]. Finally this is digitised to produce the games eventual final background [figure 3].



that the package which you are offering to your customers through your magazine will be out of date fairly quickly?

KW: Yes. I've been talking to marketing about just that and we've postponed the launch until June because of a lot of new hardware which we know is coming out. And even in June when we market it I want to make sure that we put in a couple of pages talking about how we see the industry emerging and what the down side of this bundle is.

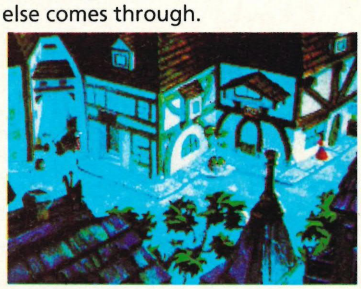
I want people to make an informed buying decision. There are some for whom it will be worth it, but if you were to ask me I would say that it's not an IBM PC with CD-ROM attached which represents the future. We'll make the hardware available, but I really hope that something else comes through.

CB: Would you be active in helping something else to come through?

KW: We're content providers, not hardware manufacturers. I don't believe that we should put our backing behind an individual machine - hardware and software are completely different animals. We make records that run on other people's record players.

We'll support everybody, because

"We'll support everybody, because we can run our software on just about every platform without any major reprogramming. We'll let them fight it out."
Ken Williams, President of Sierra On-Line



The opening sequence of King's Quest V provides a good example of how the Rotoscoping system helps Sierra's animators to achieve impressive results - even when using odd angles.

QUEST FOR NUMBERS

Now that it's Reading office is finally open, Sierra can offer help to stranded Questers on the following numbers...

The Auto Helpline: if you've got a touch-tone phone, you can receive assistance for all Sierra's games on 0734 304004.
The Bulletin Board: if you have a modem, you can dial up the BBS and receive hints or leave messages for Sierra's customer service department. The number is 0734 304227. The communications protocol is 8 databits, 1 stop bit, and no parity. The system operates on either 2400, 1200, or 300 baud.
Finally, if you're really stuck and neither of the above services can be of assistance, telephone Sierra direct on 0734 303171

we can run our software on just about every platform without any major reprogramming. We'll let them fight it out.

Actually, I guess that the key issue here is that I don't think that we're what drives the purchase of Multimedia. If you look at current PCs (in the home) computer games are what people spend their money on, but education and work in the home are what drive the purchase.

I think that parents will spend any amount of money on something if they think that it will educate their kids. So therefore I think that education will be the main thing which drives Multimedia products.

CB: Do you think that your `story-telling' product is an extension of educational software?

KW: I've met a lot of educators who tell us that our product is very educational and we also get letters from parents who find six year olds showing new interest in reading in order to play with our games, but certainly we don't design the products that way, we just want to produce good fiction. We are however bringing out four educational products in the near future.

CB: With the arrival of Dynamix and Game Arts into the Sierra `family', you can no longer strictly be described as storytellers...

KW: Well no, but if you look at entertainment there is a large variety of categories. Fantasy or Role-Playing adventure games is a category which we have always been in and pretty much dominate, but the flight simulator segment is almost as big and we did not participate at all.

For example, if somebody wanted to compete with Sierra in the adventure games field, we've got a 10 year head start which makes us tough to compete with. The same applies to flight simulators - it would have been impossible for us to go straight in against people who've been in this field for some time.

Electronic Arts had a key developer in Dynamix, so we acquired their developer. They have an awesome product in Red Baron, which is the program that's made me most excited in quite some time.I think it's the first product that I've seen which is going to give Flight Simulator a run for its money.

Other categories which we're going to get into are board games - we've already launched the Hoyles' series - and sports, I'd like to see us do something in sports games pretty soon.

CB: So are you genuinely impressed with your own products?

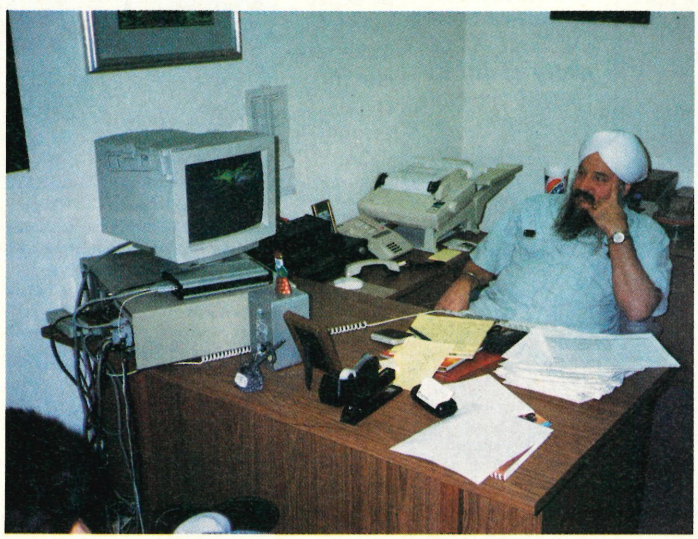
KW: No, I still haven't impressed myself. I look at our products and they look like interactive crossword puzzles. Until they've got speech and real actors, I think that we'll be confined to selling to `techno yuppies' - the kind of people who like to do something flash with their computers. I don't think that we're doing anything mainstream yet. Even if a 386 PC was dropped free on people's doorsteps, Sierra's business would still not double - our products are still too inaccessible for the average person.

CB: So after 10 years, how far are you along the road to achieving your dream?

KW: We're pretty close - but I'm going to be awfully happy in about three years. I want to get to the point where we can forget technology and focus on spirit, and in three years Sierra's reputation as a leader in technology will be highly irrelevant and all that will be relevant will be if the story's any good or not.

**** Next issue we'll talk to Sierra On-Line's top developers, including Police Quester Jim Walls, the guys behind the Space Quest series and the legendary Al Lowe - who answers the question `whatever happened to Larry 4?'***

"I still haven't impressed myself. I look at our products and they look like interactive crossword puzzles. Until they've got speech and real actors, I think that we'll be confined to selling to `techno yuppies' - the kind of people who like to do something flash with their computers."
Ken Williams, President of Sierra On-Line



Garuka Singh, one of Sierra's three publishers, hard at work putting the final touches to Robin Hood - The Quest For The Longbow, due out in the late Summer.

A BROADER SCOPE

The most obviously startling difference between King's Quest V and its predecessors is the remarkable way in which the characters inhabit the landscape, walking, running, swimming and flying with a new fluidity and realism.

This innovation has been brought about by the development of `Rotoscoping', an innovative combination of live-action video, digitisation and hand-drawing which is similar in style to the system now used by Hollywood's major animation studios.

Essentially the system works like this: real people are filmed on a moving treadmill, carrying out the various actions required by Sierra On-Line's characters (the `actors' hang from the ceiling for flying sequences, lie on chairs to simulate swimming and so on).

Although it would be nice if Roger Wilco could be made to walk like Clint Eastwood, the system isn't suitable for use with previously recorded film, as the snatches which this produces aren't usually long enough. Therefore the vast majority of actions have to be filmed from scratch.

The process is carried out against a blank background, making the later stages easier for the artist. At the moment, this background colour has to be cut out by hand, but the company is working on a system similar to that used in TV for superimposing people against film, where everything will be shot in front of a blue background and then cut out automatically.

As for the amount of movement which Rotoscoping can cope with, the video capture system breaks any action down into 16 component parts - if a longer movement is needed, a second animation is filmed and simply tagged onto the end of the first.

The finished video is then fed into the Rotoscoping software, developed in-house by On-Line's programming team as an addition to SCI. At this point the image is transported to the artist's screen, where he or she cuts out the background and the treadmill, leaving a relatively crude, but very realistic, image which is touched up by hand before being dropped onto the finished backdrops.

Although this process may sound complicated, it actually cuts out a good half, if not three-quarters, of the artist's work out and results in a more realistic animation than can simply be achieved by hand.

Bob Ballew, Sierra On-Line's Video Digitisation Co-Ordinator, sees the Rotoscoping system as an invaluable aid in the company's quest for perfection: "This system speeds up the artwork process, especially on an effect such as `foreshortening' [where, for example, one of the character's hands moves forward towards the screen, becoming larger in the process - as if it were actually moving in the player's direction], or using a complicated downwards angle. We use scaffolding in the studio to film from above - that's how we got the `looking down from above' effect in the opening sequence of King's Quest V where King Graham is talking to the owl."

The video studio has only been up and running for about nine months, but has already been used to originate roughly half of the animation in King's Quest V, and nearly all in the forthcoming Space Quest IV and Police Quest III.

Bob now looks forward to the day when the system will be used not only for character animation, but also to originate backgrounds for these characters to move about on. And with the beautiful panorama of Southern California's Yosemite Valley sitting on the company's doorstep, this should mean that future Sierra games should be as breathtakingly beautiful as they are playable.

SUPREMACY

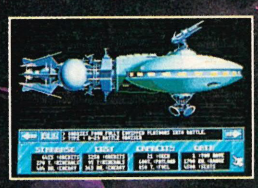
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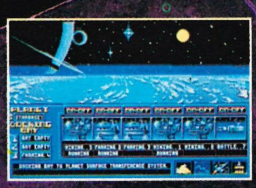


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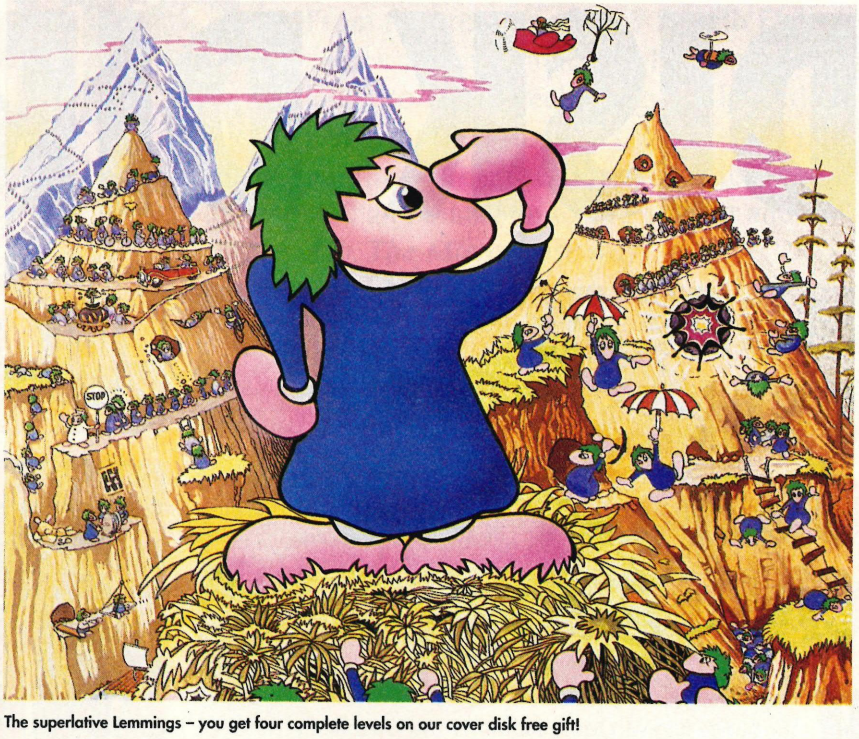
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THE DISK

Once again, ladies and gentlemen, *PC Leisure* is proud to present a silicon platter full of goodies, featuring...

Psygnosis'
LEMMINGS
And Artificial Intelligence Design System' RPG
Rogue



The superlative Lemmings – you get four complete levels on our cover disk free gift!

LEMMINGS

Reviewed in this issue and gaining the coveted 5-star PC Leisure award, this acutely addictive action puzzler has already caused a sensation on other 16-bit formats. Lemmings boasts a superlative game design which varies from the enjoyably easy to some very tough challenges indeed. What's more, it manages to pack the puzzles into an arcade format that occasionally blends testing physical gameplay with the puzzles. You get four whole levels..and when you've cracked those, you've got the whole game waiting in the shops!

PLAYING THE GAME

Lemmings is best played with a mouse but you can use either keyboard or joystick. There are full instructions in the About Lemmings option on the menu (but see panel on the left regarding the few machines with which the menu system is not compatible). The game is icon driven and gameplay basically involves selecting a skill from the icons at the bottom of the screen and applying it to the Lemming of your choice.

ROGUE

Rogue is a simple Public Domain RPG-inspired game. Simply load the game and type ? for instructions. The objective is to progress as far as possible through the Rogue world, gathering treasure and defeating monsters. If you like the game, there's a vastly enhanced version (needs a hard disk) available from PDSL as well called Nethack. See the panel below for availability details.

LOADING

It couldn't be easier... simply insert the disk in your A drive, and at the prompt type 'Go' and hit return. Select the option you desire from the menu (but see the panel on the right if the menu system does not work on your machine).

Your disk is supplied with a write protect sticky tab which you can use if you want, but note that Rogue writes a high score table to disk, so the disk should write enabled if you want a record of your progress.

LEMMINGS is published by Psygnosiswho can be found on (051) 709 5755, while Rogue is a Public Domain game available from (among others) the Public Domain Software Library, (0892) 663298.

WHAT TO DO IF YOUR MENU SYSTEM DOES NOT WORK!

Some machines are unable to run our menu system. Don't worry – you can still enjoy the disk and get everything out of it that other users can. The only difference is that you have to choose which files you want to run by hand.

To do this, insert your disk in drive A and type A: at the prompt to ensure you are logged on to the right drive. Then type DIR to get a directory of the disk. You should see five entries: two directories called ROGUE and LEMMINGS, and three files. The GO, RUN, and PCL files are part of the menu system so you needn't bother with them.

To play Lemmings, make sure you are in the root directory (type CD A:\), type CD LEMMINGS to enter the Lemmings directory. Then type either README for the instructions, CGALEMMI for the CGA version of Lemmings, or VGALEMMI for the EGA and VGA versions.

To play ROGUE, make sure you are in the root directory as above, then type CD ROGUE and then type R. New users should remember to terminate all commands with the return key.

DISK REPLACEMENT

If you would like a copy of this disk on 3½" format, simply send your original 5¼" disk, along with a cheque or postal order for £1.00 (to cover the cost of the disk, and handling charges) made payable to TIB PLC, to:

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36-50 Adelaide Street
Bradford
BD5 0EA

This address should also be used for returning faulty disks (along with a short note describing the problem). However before returning the disk, it may help to call TIB on 0274 736990 (fax 0274 737261) to see if the problem can be sorted out without making a return.

DISK DIRECT!

MORE PLAYABLE DEMOS ARE ONLY A PHONE CALL AWAY!

If you've enjoyed this issue's cover disk, then why not get your hands on even more fabulous game demos in this great *PC Leisure* disk giveaway? That's right - we're giving away 400 more demo disks to the first readers to call our special give-away phone lines – and the games are pretty hot, too!

US Gold are offering 200 copies each of their Battle of Britain/Secret Weapons of the Luftwaffe and Links (reviewed in this issue) demos to the first 400 readers who leave their names and addresses on our interactive phone line.

Each of these demos comes in its own package on a *high density 5.25" disk*. We're sorry but these are the only formats available. CGA owners are warned that the CGA options on the Battle of Britain disk are very limited (Secret Weapons has no CGA mode) – and Links is *VGA only*.

PHONE HASSLES

In the last issue, we advertised a phoneline service that many readers had difficulty in obtaining. We do apologise for this – the situation arose due to circumstances entirely beyond our control.

We have a different system this time. First, there is only a single number to call, and full instructions are on the line to enable you to choose the game you want. We should point out that there is of course the possibility that disk stocks may have been exhausted by the time you call. If this happens, we will use the line to give you an interactive PC games newsline with details of the latest releases – though of course you can always hang up straight away if you want!

CALL

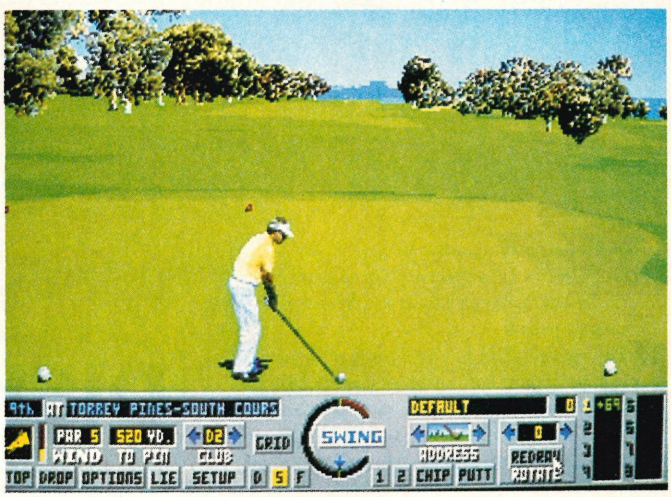
0839 121227

These special phone lines will only be open from March 15th to May 15th and US Gold undertakes to supply the demos to the first 400 callers within 28 days of the closing date. Calls are charged at 44p per minute, peak rate, and 38p per minute at all other times. Each call should last no more than two minutes, unless of course you choose to avail yourself of the newsline service.





Secret Weapons and BOB on one disk – but please note eqiupment limitations in the panel to the left. Powerful PC's are recommended



The superlative Links – but beware, it's VGA only and requires a power PC



KNIGHTS of the SKY

From the creators of F-19 Stealth Fighter, comes a flight simulator which applies the latest computer technology to the earliest dog-fighting aeroplanes. There is no radar. No fire-and-forgets. No E.C.M. Just your skill and ambition to live to fight another day. ***The MicroProse way.***

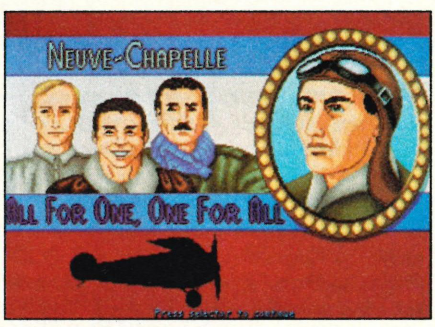


"For my country, my honour and my life - I am a Knight of the Sky."

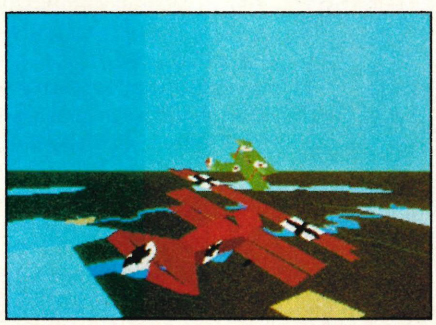
** Fly 20 planes, including every major fighter in W.W.I.*
** Navigate with actual mapping of trenches, roads, cities, aerodromes, anti-aircraft guns and more.*
** Accomplish hundreds of missions in 7 categories, including ground support, bombing and dog-fighting.*
** See the action from 13 dazzling 3-D perspectives.*
** Challenge a friend via modem or direct cable*
** Combine news and intelligence reports with your own intuition to track down the 16 men whose successes diminish your own.*
** In the gallant tradition of the ancient knights, you challenge each to determine who is truly World War I's Ace of Aces.*

"Ploughing through the clear, cool air above Flanders, my hunting ground, my domain. The ear-shattering drone of the engine, the blast of the ice-cold wind in my face, the strain of the knowledge that I dance on the brink of extinction. The shells pepper the muddy trenches below, the flak strafes the sky around me, but my mind sees only the challenge ahead."

MICROPROSE™
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SECRET WEAPONS!

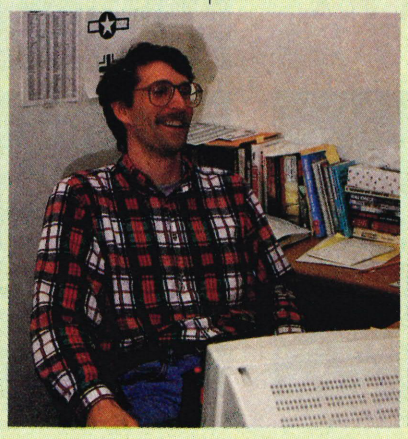
Goering's back – and this time he's mad! PC Leisure visits the Lucasfilm offices in California to talk with Secret Weapons producer Greg Hammond and gets a sneak peek at the forthcoming blockbusting sequel to Lucasfilm's Their Finest Hour

There are PC gamesters all over the world who'll put their hand on their hearts and swear that Lucasfilm's Battle of Britain is one of the best PC games they've ever played. The program was notable for its tremendous depth of play, covering authentic flight sim sequences in both British and German contemporary aircraft, mission tactics and campaign strategy – all superbly presented graphically and with a manual that practically made you an expert on the subject.

That's a difficult act to follow, even for games designer Larry Holland who lives, sleeps, and breathes World War II airforce history. TFH:BOB was the culmination of many months of research, not to mention the coding involved for which Larry was almost entirely responsible. However, Secret Weapons of the Luftwaffe promises to be even better – if that's possible!

Part of the success of SWOTL has to be credited to Greg Hammond, who took over as producer on the SWOTL project in October 1990, following the departure of the initial producer Tony Garcia. The game had been in primary development since late 1989 and during the following year Greg and Larry were already collaborating, particularly on the flight dynamics of WWII aircraft – a subject that Greg holds very close to his heart.

'This particular area was very important for us,' says Greg, 'and we spent a lot of time researching it, including checking out other products to see what they'd achieved. The flight dynamics we've managed to introduce into this project have been much more realistic as a result. Each plane really does feel the way it should in relation to the other aircraft. The smaller nimbler fighters can out-turn the larger fighters and the climb rates, roll rates, and other performance data seem to be much closer to what it was really like.'



Coding genius Larry Holland, creative force behind the Battle of Britain game and now repeating his success with SWOTL



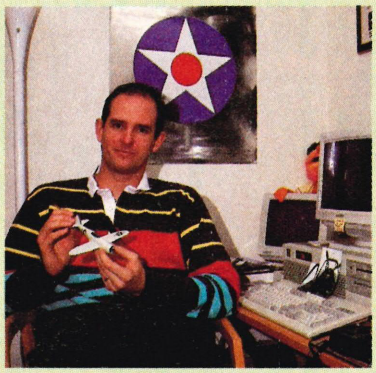
This sounds like man who's had his hand on the stick at ten thousand feet, but 'I'm not a pilot myself,' admits Greg, 'However, I've played just about every flight sim out there and read as much literature as I can get my hands on. And I reckon we're now doing just about the best work in this area that it's possible to do, in terms of bringing realism to the simulation.'

Part of this new-found realism is down to improved artificial intelligence in the game. 'That's clearly one of the major factors,' agrees Greg, 'Larry Holland has endeavoured to give the enemy pilots and your own wingmen a much better sense of what to do and when to do it. I think that anyone who's played Battle of Britain will soon realise that the computer controlled pilots will pull much more sensible, as well as realistic, manoeuvres – for example, if they're being shot at, they'll try really hard to get out of the way! The AI is definitely one of the aspects that make the product more realistic.'

There's also a whole new graphics handling system in SWOTL to cope with the display problems of having aircraft flying towards and around each other at high speed. SWOTL features a new dynamic scaling routine, necessary because if an airplane is off in the distance and coming towards you at 400mph – and you're in a fighter flying at a similar speed – it means your speed at closing is 800mph. In BOB the planes seemed to be drifting along at around 150mph. The new system means the planes don't appear quite as soon as they used to, and they're much smaller in the distance. You get this real feeling of speed as they close in and you pass each other. '...That's especially important in this game,' Greg points out, 'where we have some jet aircraft that are travelling as fast as 600mph at times.'

WHAT YOU GET...

SWOTL has taken between six and eight man years to develop. 'It's an expensive product,' admits Greg, but surprisingly these games don't seem to take quite so much cash to develop as the Lucasfilm graphics adventures, which naturally tend to feature more graphic screens. The game is packed with features, nevertheless. You can play either side in the war – the American or the German airforces. On the American side you can fly the P51, the



Greg Hammond, producer and collaborator on the SWOTL project, shows off one of the models used for digitisation during development

P47, and the B17 Flying Fortress. The focus of the game is therefore very broad in terms of mission types and objectives – the time span being 1943 to 1945, including the B17 bombing raids into Germany.

At this time the Germans were developing planes like the ME262 jet – the world's first operational jet fighter, the like of which no-one had ever seen before. Other German aircraft featured include the BF109 and Fokke Wulf 190 fighter interceptors as well as the ME163 rocket fighter (called the Comet), which actually featured a rocket engine powered by two types of fuel mixed together prior to combustion. Having only eight or nine minutes worth of fuel, it would blast off at 16000 feet a minute – 'An amazing plane,' according to Greg, 'but a lot of the pilots who flew it were killed – they either blew up in the air or while landing – they had to land on the skid as they didn't have any landing gear.' You can find out how you would have coped in the game!

the game so that the player can indulge in a few 'what-if' scenarios. If you play the German side, you can allocate manufacturing resources and, with hindsight, try to solve some of the problems the Germans faced at the end of the war.

Apart from the campaign mode, there's also the tour of duty, where you get to fly 25 missions as a bomber crew, 50 missions as an American fighter, or up to 100 missions as a German pilot – 'Basically, they flew until they dropped dead, because they were short on good pilots,' Greg points out. There are also special mission options – around three training missions per plane and a number of special historical missions – so that you can, for example, try to emulate Chuck Yeager's performance of becoming an 'ace' after a single mission, shooting down five enemy craft.

The tour of duty and campaign missions are generated randomly to some degree so that the lasting interest stakes are kept high, and as with BOB there's a mission builder module that allows you to design your own.

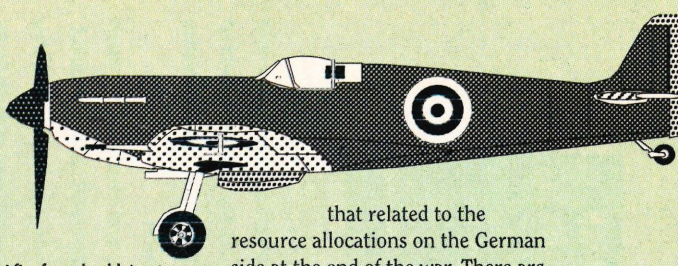
Geographically, the game universe ranges from American airbases in SE England to Southern Czechoslovakia – a lot more than any previous Lucasfilm



'Good Lord, Biggles...it's a Flying Wing!' 'Correction, Algy, that is a Gotha 229 – I've read the manual, you see...'

Greg reckons, however, that '...the most controversial plane in the game has to be the Gotha 229, the flying wing. This company were manufacturing planes in the First World War, but this model was designed by the Horton Brothers, who had been designing gliders. It had two jet engines like the 262, but a radical flying wing design, similar to the B2 today. It had a 48 foot wingspan and was configured as a fighter bomber.' In reality, the 229 only flew a couple of missions during the war, but Lucasfilm have included it in game. The game features a special accelerated time mode that means you can cover large distances without having to take a break for breakfast, lunch, and tea before arrival.

The manual also deserves a special mention. It's packed with historical interviews with people who flew during the war, another interview with Professor Williamson Murray who's one of the foremost authorities on the subject and who provided much of the reference material for the game, particularly the decisions



Spitfire fans shouldn't be disappointed by the fact that you can only fly German or American planes in SWOTL – the Spit may be a beauty, but you can fly them endlessly in BOB. SWOTL gives you the chance to 'ride' a rocket fighter!

that related to the resource allocations on the German side at the end of the war. There are 225 pages, most of which is historical background.

The game mechanics are simple to master, especially for anyone who's played BOB, since the controls have been kept as standard as possible. Newcomers shouldn't have much trouble as most keys are logical – L for landing gear, F for flaps and so on. 'We've really tried to limit the complexity of the game so that the player has more fun playing it and doesn't have to spend ages mastering the controls.'

"I reckon we're now doing just about the best work in this area that it's possible to do..."

Greg Hammond, producer of Secret Weapons of the Luftwaffe

THE FUTURE

SWOTL today, but what about tomorrow?

'I'm hoping that eventually we'll see multiplayer scenarios – we're very interested in doing that. We reckon it'll be much more interesting for the player to have human opponents to play against and with. The experience I've had with Genie's Air Warrior (A US on-line flight sim multiplayer game. Ed.) has convinced me that that's the way to go.'

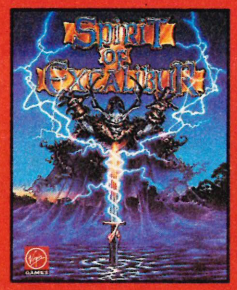
'I'd also like to see more realism in our graphics – that'll come as the hardware progresses. There are a lot of things that we'd like to do now but can't as we have to cover so many hardware platforms. Our target these days is a 286 12MHz machine. That's our bottom machine right now – but a couple of years from now, who knows? 586's running at 70MHz? One thing's for sure – there'll be more excitement for everyone.'

SWASTIKA NEIN DANKE!

What you see on the screen is largely thanks to graphic artists Jim McLeod and Martin Cameron, who also did the pics for BOB. Each artist took a different side, one doing the German craft and the other the English. The exteriors were all done by using models which were positioned on a stand and then digitised in different positions for reference. Those images were then taken and touched up – the effect of this is that during the game if you fly around a craft, the different rotations of view look particularly realistic. 'That's especially important when we're dealing with scaled bitmaps, which these are,' adds Greg, 'We start off with a few different sizes of airplane and between those sizes the program scales the shape automatically.'

One graphics element you'll notice is conspicuous by its absence is the swastika! Game designers have to be extremely careful on this point due to current legislation in Germany which has resulted in games being banned – Microprose in particular having suffered seriously in this regard with some of its earlier military simulations. 'We have a company who represents us in Germany and they help us keep track of making sure we're not doing anything that's going to be offensive. In the end, we had to change the packaging completely for Germany.'





A KNIGHT TO REMEMBER

A blend of fantasy role-playing, adventure and combat simulation set in a richly detailed world of mountains and rivers, villages and cities, castles and ruins of Medieval England.

Knights and lords, wizards and clerics of the court of Camelot are yours to befriend and command. Interact with peasants, warriors, maidens, nobles and bandits improving their abilities and skills as you go.

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* More than 2.5 megabytes of dazzling graphics
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* 16 screen scrolling map of Arthurian Britain
* Zoom from map level down to individual towns and cities
* Hundreds of hours of play-time
* PC version supports Roland MT-32, Covox, Adlib and CMS sound boards

Available on:

IBM PC (VGA, MCGA, Tandy, EGA)	**£34.99**
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IBM PC VGA SCREEN SHOTS SHOWN

Virgin GAMES CONCEPTS IMMACULATE

MUSCLE UP!

Where to start? Beginning, middle, end? It wasn't until I started to research the world of upgrading PCs that the enormity of the subject became apparent. There are a myriad routes you can take to make your PC faster, more colourful or just more fun. We shall be showing you what we think you need to know to help you choose what route you want.

The idea of these articles is to make a games machine out of what is likely to be a dusty grey slab in a store room or attic somewhere. Though even if you just want to improve your PC read on because there will be something here for you too. In this first article we simply introduce the subject of expansion. We've also included some background information on the PC which may help you to understand principles or topics covered in later instalments.

Don't worry if you're a complete techno-novice. Just to make myself clear; there will be NO detentions, NO written tests and NO crusty appraisals for people who find the subject of PCs difficult.(Though anyone who falls asleep in class will find themselves outside the headmaster's office in no time at all...) Nor is it the intention to bandy bits and bytes or talk in MegaHertz. This is a plain English guide to upgrading your PC. If, after all our detailed and patient explanations, you still have any queries, you can write to us here at PC Leisure or talk to the manufacture of your PC.

Don't, however, expect to be able to walk out and buy a single kit that will do absolutely everything for you. If that appeals, consult your dealer. This series is for those who want to upgrade on a budget and with discrimination. There is a thriving industry in add-on or replacement bit's and pieces and I'll be taking you through the different parts of your PC and talking about what bits you can bin and what to keep.

On a point of order, throughout this guide I'll be referring to the IBM PC. It was the first PC and represents all the deficiencies early PCs have. Of course, you may have a different type of PC or one from a different manufacturer – this is no problem; all the information applies to improving PCs and will apply to your machine too (if appropriate).



Sierra's Mother Goose is a typical CD product that makes especial use of the medium's particular advantages: greater graphics storage and lots of CD quality sound

Chris Long begins a long odyssey towards games nirvana, by turning his bog-standard PC into a powercrunching leviathan of awesome games potential...

UPGRADE HEAVEN

The PC is perfect for upgrading. It's almost as though IBM knew that the bits inside would soon become obsolete or outmoded and built in "plugability" as a safety net.

The "bits-that-do-things" inside a PC are more or less all exchangeable. This is as a result of the concept of slots and add-in cards. IBM weren't the first but they certainly were the most successful in producing a modular personal computer.

Inside the PCs system unit (system



Origin's Martian Dreams, expected on PC this Spring and the latest in the Worlds of Ultima series, is typical of modern releases that demand a power PC for optimum performance – or even for any performance at all. Increasingly, US developers are regarding a 12MHz 286 machine as the lowest common platform for their products

THANKS FOR THE MEMORY

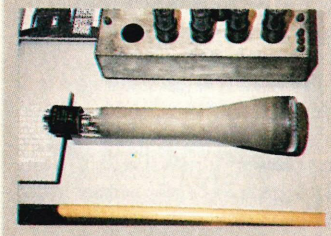
For those of you who are new to the technical side of computing, perhaps we'd better explain a bit of this megabyte and kilobyte stuff and how it relates to games.

A byte is eight bits and eight bits is what it takes to make up one memory unit holding either a single character or program instruction. In fact the smallest unit inside the PC is a bit, but until eight of them are strung together it doesn't do much at all.

Kilobytes (Kb) is a thousand bytes (OK, fuss fuss, for obscure mathematical reasons, it's actually 1024, but that's not important for us here). When discussing general computer topics the 'K' is usually the smallest unit talked about - unless it is a specific program or file.

Mb stands for megabyte which in computer parlance is "quite a lot". Quite literally a megabyte is one million bytes (more or less). It is used for hard disks and some floppy disks.

On bigger, more powerful PCs, memory is generally discussed in terms of megabytes. Though on earlier, smaller PCs you will hear people talking about the "640K" (ie. Kb) limit. This refers to the memory on the motherboard which the PC uses to run its everyday chores.



Nowadays a PC needs a full 640Kb (its maximum) memory to do its job properly. On 286, 386 and 486 PCs it's possible to use even more memory and this is counted in Mb. Most modern games demand 640K. Some contemporary titles (especially from people like Software Toolworks, Sierra, and so on) also support extended memory systems of several Mb.Having more memory available can help sed up some games dramatically. Instead of having to load in each screen from disk, they can store a 'back-up' screen in memory, display it, and then load in the next screen to stay in memory until its needed.

Don't bother upgrading to one of these! This is a rare example of an early cathode ray tube memory storage device. It worked by energising points on the phosphor screen and could store about 4K. You would need over two thousand of these tubes to cope with Origin's Ultima VI!

unit = the bit that the monitor sits on and where the disk drives sit) are a row of slots where you can insert cards that do different things in the system.

All the display electronics sit on the video card (or in IBM parlance display adaptor). This slots into the system unit with the connector for the monitor poking out the back. You can upgrade your display system as much as your budget will allow.

The disks in the system unit can also be replaced along with the electronics for driving them. It's worth thinking of it as a fun (and rather expensive) Lego.

For people with original or low specification PCs you can even swap out the motherboard (motherboard = the main circuit board inside the system unit where most of the computer's electronics, including the processor and slots, sit). This means that if you have an 8088 PC (sloww) you can replace it with a 386 motherboard (whoosh) and impress your friends.

Replacing a motherboard, however, can be a daunting as well as rather costly exercise. In this series, however, we're going to start with the basics. Almost certainly the most simple upgrade to make to a games PC is the addition of a games port. Simply plug in and go, and hey presto! – joystick capability – which makes a huge difference on some games.

About a year ago I actually went out and bought a card that had a games port on it. After I'd plugged it into my Dell PC I borrowed a joy stick and was immediately hooked on Flight Simulator.

That simple purchase made a big difference to my life and increased the fun I had with my PC tenfold. Stick with this series and you can share in the fun...

If you're impatient, why not enter our superb upgrade competition on page 92. You'll get the chance to win this fantastic collection of kit, including a copy of Wing Commander, a Sound Blaster sound board, a games port, and a joystick...Or you can get it from the shops for £199.95. See the compo page for more details



NEXT MONTH: Sound boards; games ports (which ones to buy, how much they cost, how to fit them) and what NOT to do with your slots!

PC HISTORY

In August 1981 IBM announced the IBM PC. PC standing for Personal Computer - this set the seal on a race that has been with us for the last ten years.

The story goes that at the time of the launch IBM expected to sell something like 45,000 PCs. (current estimates put PCs at over 45 million world wide). As you can imagine, they were rather surprised when it took off.

A major factor in its success was that IBM had effectively opened up the innards of the PC and allowed everybody to copy it. This "open architecture" approach meant that almost within the year Compaq had got its first PC on to the market, and soon everybody was at it.

The first PC came with very little memory, a monochrome screen and no hard disk. Nowadays that configuration is almost obsolete. It is certainly not recommended for playing games or home business programmes.

Early in 1983 the PC XT was introduced This has much the same equipment (including the 8088 processor) as the PC but includes a 10Mb hard disk. In the summer of 1984 IBM announced the AT which was the first 80286 PC this came with a 20Mb hard disk and introduced the high density (1.2Mb) floppy disk.

Next along was the 80386, IBM had lost interest in winning the "first out with the new technology race" and went in a huddle. In April 1987 it launched the PS/2 range which, though being 99.99% PC compatible, had a totally different inside.

Recently we have seen the release of the 386SX and the 80486. The former is a slightly less powerful version of the 80386 and the latter is the latest and most powerful chip to drive PCs.



Keyboard entry has come along on IBM's since this early example, which was used to enter data onto punched cards.



Now here's a great games machine! It's actually the first ever computer – or at least the first automated calculating machine that later inspired the formation of the IBM company. Designed by a Mr Hollerith, it uses cogs, counters and punched cards to carry out basic arithmetical operations

CHIP CHAT

The heart of any IBM PC or compatible is its processor chip. And over the years the family has been growing. The first in the line were Intels 8086 and 8088 chips. They have the same innards and both work with 16 bits at a time, but the 8088 talks to the outside world 8 bits at a time and the 8086 16 bits at time.

This means that when working the 8086 can shovel twice as much data in and out as the 8088. This makes the 8086 the faster of the two, though that extra speed doesn't make an awful lot of difference compared to today's chips.

The next chips along were the 80188 and 80186 these didn't differ a great deal from the 8088/8086 and very few PCs used these as their main processor.

When IBM launched the AT it was the first time the 80286 was seen. The 286 was more powerful than its predecessors and was highly successful. But as time progressed it became apparent that it fell into a halfway house between the 8086/8088 and the next chip along the 80386. The 386 showed up the 286 as a bit of a fraud. Although the 286 did a lot of things faster than the 8088/8086, it didn't do all the things that PC users wanted. So when the 386 arrived with its high speed and advanced functions, the age of power computing was upon us.

The 386 manipulated information inside it in 32 bit chunks and this made a big difference in its performance. Intel spotted an opening in the market and launched a 16 bit version of the 386 called the 386SX (and at the same time decided to give the 386 the suffix DX).

The 386SX has exactly the same 32 bit innards as its older sibling the DX but talks to the rest of the computer in 16 bit chunks. This means that, despite being slower, it still supplies the improved functionality of the 386DX but easily fits into designs for 286 PCs (which use cheaper components).

The performance of a PC is not only down to the chip type. The speed of the chip makes a difference too. As a rule of thumb, though, the higher the speed of a given chip the more powerful your PC will be.

PIXEL PERFECTION

The first PC was launched without any graphics capability at all. IBM claimed that serious business users wouldn't need any, so it only supplied the MDA (Monochrome Display Adaptor) system which is just black and white (ok, green and black - but you get the picture, or rather you don't).

Following closely behind this was CGA (Colour Graphics Adaptor) it was VERY basic and produced an almost unreadable text face. As a reaction to this a graphics company called Hercules introduced the HGA (Hercules Graphic Adaptor).

Still highly successful today, the HGA gives high resolution in monochrome (two colours) and is fine for text work and limited (ie, mono) graphics work. A lot of games used to support this standard but many state-of-the-art modern releases are now abandoning it.

After that IBM launched EGA (Enhanced Graphics Adaptor). This marked a turning point. EGA was, at last, a usable system; it produced readable text and good graphics and, after a slow start, eventually took off.

In 1987, at the launch of its brand new personal computer the PS/2, IBM announced its new graphics system VGA (Video Graphics Array). This is the current standard and although there are even better systems around VGA is the "maximum" most games are written for.

It's worth mentioning MCGA (Multi-Colour Graphics Array) this was also announced at the PS/2 launch and it offered more colours at a lower resolution than VGA. It was and still is installed in the low end PS/2s. It's important to point out that most VGA cards you buy will support this standard.

As far as games are concerned, many developers have now abandoned CGA altogether. Even worse, many games which claim to work under CGA are almost unplayable due to the restricted colour range. It's very frustrating to be playing a football game on the PC when you can hardly make

Monitors are a bit simpler. If you have watched television you'll understand the basics of what a monitor looks like and does, if you've not watched television - trust me.

The first system (MDA) had a very simple monitor and this just worked in black and white (its worth noting that black and white can mean: black on white, white on black, green on black, amber on black or any other combination of two colours supported by the monitor - though if you have black on black you have a problem). The HGA will also work with this screen allowing you to upgrade by buying just the card.

Colour monitors are a little more complicated. For CGA and EGA you need a digital monitor and for VGA you need an analogue monitor. The hows and why fores of the monitors are not too important, just remember that trying to get an EGA picture on a VGA screen from an EGA card is likely to result in a dead screen. Also, a VGA screen and adaptor card will be able to reproduce EGA and CGA screens when called to. Therefore if you are upgrading the screen it's probably only worth going the VGA route.

It is worth mentioning multiscanning monitors (more commonly referred to as MultiSync but that's a brand name owned by NEC). Multiscan monitors have the ability to switch in to the same mode as the display card - thus saving an awful lot of bother.

But, surprise surprise, they cost more than an ordinary monitor. Multiscan monitors are only really necessary if you intend to switch around your display adaptors and, as such, not needed for a games (or business come to that) PC.

DISK COVERAGE

A lot of time is spent describing disks and how they work. I won't be going into too much detail here, it's only worth covering this area with broad brush strokes and any serious technical details can be filled in later.

A disk works on the principal of an audio cassette. Information is written and read from the surface of the disk in exactly the same way as an audio or video tape.

That's it, simple wasn't it.

OK, the more difficult stuff. Here are the different types. There are two basic groups: hard disks and floppy disks.

HARD DISKS.

Imagine a filing cabinet, it will take a lot of information but, unless you are very unusual, you can't carry it around with you. It is used to store lots of information and once you've got it filed and organised you can't get by without it.

This is exactly the philosophy of the hard disk. It has on it all the background information to do your "computing" be it games or business. The first PC came with a 10Mb hard disk and now computers regularly come with 100Mb or 300Mb hard disks.

Generally, 40Mb is a workable minimum for your hard disk. You can get by with less but if you are spending money on upgrading you computer it's worth working to sensible minimums lest you end up with a PC that runs out of steam too soon. This is particularly important with today's games. Many products, especially those with lots of 256 colour screens, take up massive quantities of disk space. Some recent releases may demand as much as eight or nine megabytes of your hard disk. You could, of course, in theory copy from the disks supplied with the packaging onto your hard disk (this is called 'installing the program on your hard disk'), erase it when you've finished playing, and then install it again when you want to play again, but as it can take up to twenty minutes to install some programs, this is hardly advisable.

FLOPPY DISKS OR DISKETTES.

If you have the filing cabinet concept under your belt, the floppy disk will be simple. The floppy disk equates to a folder in the filing cabinet. It enables you to take a small bit of information around with you, which you can copy, work on elsewhere, or just show it to someone else.

So, with a floppy disk you have portable information. They come in several sizes and it's worth noting them. Very early IBM PCs had 160Kb or 180Kb single sided or 320Kb double sided 5.25 inch disks, these are rare and effectively non-standard.

All other PCs conform to the current standard, which is, 5.25 inch: 360Kb double sided double density or 1.2Mb double sided high density. And 3.5 inch 720Kb double sided double density or 1.44Mb double sided high density.

The double sided bit isn't that important (though it does help to know when you are buying the disks), but the densities are and when you install a disk unit you need to make sure you know what you have so that you get the correct diskette.

Both hard and floppy disk drive units are generally of a standard width and will usually fit in to the same housing in the PC. The only difference in size is the depth of the unit, these are known as half height or full height.

As you might guess two half height units make one full height unit. The net result of this is that, on older machines which were built for full height units, you can physically fit more in the system unit.

Although you might take floppy drives for granted, they do need careful consideration by any serious gamesplayer. For starters, more and more PC games are being supplied on the newer high density disk formats rather than the older 360Kb/720Kb ones. Even more annoying, you can't always tell (except by reading PC Leisure, of course) whether a particular package has got the right type of disks in it for your machine.

COMPACT DISKS

CD-ROM drives can be slotted into your PC just like any other drive – provided you've got the space to fit them in. As with any other drive, however, they'll need software to drive them and this can usually be installed by slotting in a card. CD-ROM, as the ROM (Read Only Memory) name suggests, cannot be written to, however. They are a 'read-only' medium and therefore cannot entirely replace floppies or a hard disk (at least not yet). Although there is very little software currrently on CD for PCs, expect this to change dramatically over the next two years.

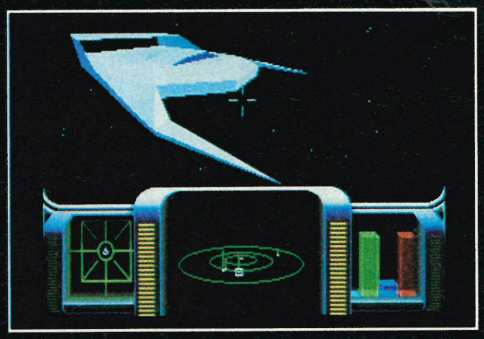


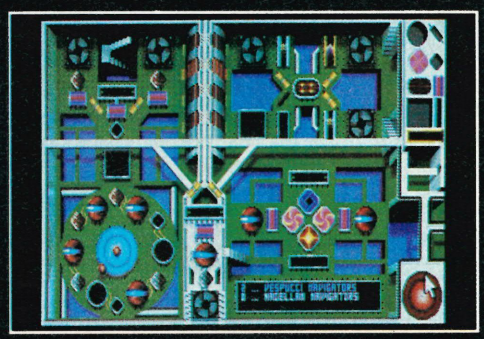
Although IBM were slow to jump on the graphics bandwagon, they've now fully committed themselves to graphic excellence, as this exhibition of fractal art running on VGA at the IBM Museum in New York demonstrates...

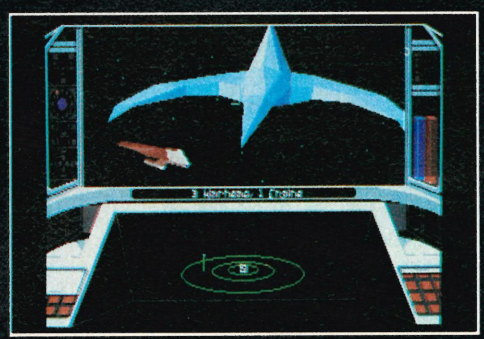
LIGHTSPEED™

INTERSTELLAR ACTION AND ADVENTURE







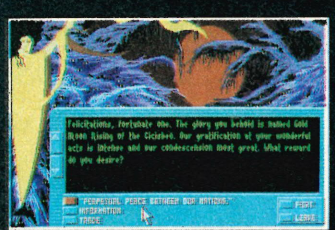


LIGHTSPEED™

INTERSTELLAR ACTION AND ADVENTURE







Lightspeed is MicroProse's first space simulation and it is one which will set new standards by which others will be judged.

Mankind's only chance for survival is to reach out and find new ways of sustaining life. Flying as the only human on a spaceship to the outer reaches of the cosmos, you attempt to find new worlds to colonise.

Flying at incredible speeds through deep space, you will come across many lifeforms along the way who, quite correctly, see you as the alien. All too often, you will find yourself fighting your way out of a tight corner against unknown opponents with incredible weaponry.

However, it takes more than fighting skills to succeed in Lightspeed, as you negotiate with weird and wonderful aliens using all the political skill, wit and charm that you can muster in order to obtain what you desire. Being an interrelated galaxy, the after effects of a chance meeting with one alien race might prove your downfall when attempting to converse with another.

With incredible sound and the latest in 3D light-sourced graphics, Lightspeed is MicroProse's first space simulation and will have you reaching for your anti-gravity pills before too long as you fight, trade, and talk your way towards your goal of finding a new planet for your people.

Available initially for the IBM PC and compatible machines, Lightspeed breaks new frontiers in space trading simulations, and goes boldly where few other games have dared venture.

REVIEW

THE DEFINITIVE GUIDE TO MS-DOS GAMING

Ole! PC Leisure takes great pleasure in introducing its new rating system for PC software. We reckon it's not only the best PC games rating system around, but the best in any of today's games magazines. You can check out the new features on the right – and here's why we think they're so special.

● They give you instant feedback not only on how good a game is, but *what sort of game it is*. No other reviewing system does this. In the centre of the panel are two colour-coded bars that tell you how much 'brainpower' and what degree of arcade skills the game will demand from you. the more intense the colour, the hotter the pace...

● They give you the low-down on hardware requirements for PCs (other magazines always forget that we PC owners are all different) and they deliver a proper verdict, including telling you at a glance what the lasting interest value of the game is

● And, of course, they give you an overall star rating and separate ratings for graphics and sound...

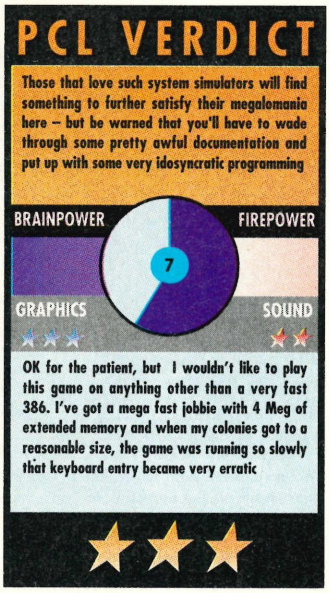
Welcome to the PC Pleisure dome, where those in the know get the knowledge!

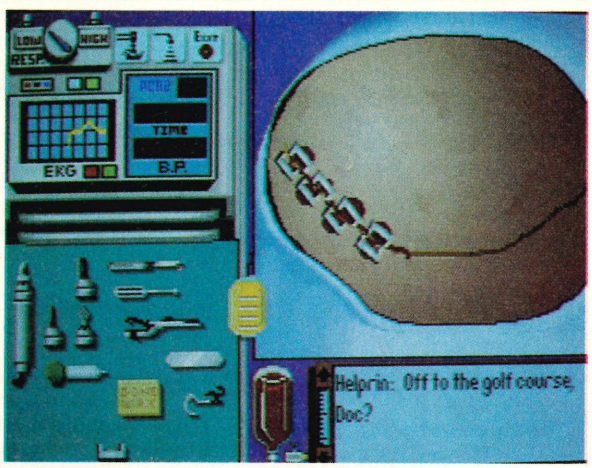
THE PCL VERDICT BOX

Here's what you get. At the top of the panel on the right, you've got the OVERALL VERDICT COMMENT. Jump to this for a short summary of the game.

In the centre, you've got the LASTING INTEREST DIAL, which rates a game from 1 to 12 depending onhow long it will keep you coming back for more. 12 is a blockbuster, 1 is bin fodder. You've also got here the BRAINPOWER and FIREPOWER indicators: the more intense the colour, the higher the skills required. GRAPHICS and SOUND are rated out of 5.

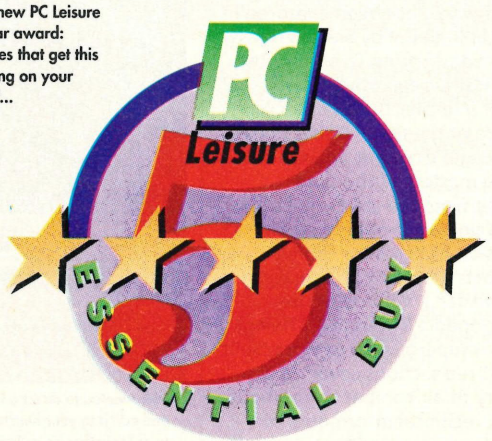
Finally, you've got two panels – a HARDWARE comment and the PCL STAR VERDICT. Five stars: essential, one star: yuk. Five star games get the PCL Award...





Life and Death II: one of this issue's titles that fully deserves it's PCL 5 Star Essential Buy Award

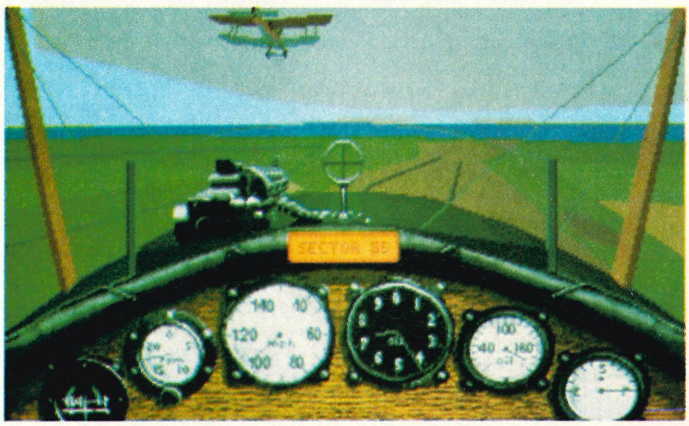
The new PC Leisure 5 Star award: games that get this belong on your shelf...



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Sierra/Dynamix. *Pages over 52 are in the full version of PC Leisure - still on sale until May 16th.*

RED



Wot no missiles? Each cockpit has an individual layout, to match its real-life counterpart. The instruments are just as realistic too, note the ball-bearing-in-a-groove artificial horizon.

Dynamix/Sierra
(0734) 303322

£39.99

5¼"	✓	3½"	✓
CGA	✗	EGA	✗
VGA	✓	Hercules	✗
Mouse	✓	Joystick	✓
Roland	✓	AdLib	✓

The aeroplane – without doubt the most important contribution to modern warfare and, some would argue, contemporary computer entertainment. World War I marked the introduction of aerial combat and since that and the launch of Microsoft's Flight Simulator, things have never looked back.

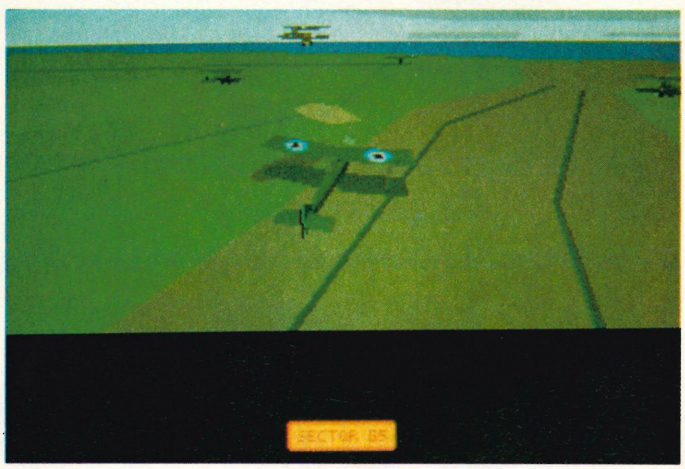
The whole period between 1914 and 1918 – at which time one man's name (Manfred von Richthofen - the Red Baron) was held synonymous with flying – has been captured in incredible detail by Sierra's newly adopted offspring Dynamix. Red Baron offers everything from a career in either the German Air Service or the Royal Flying Corps to a single dogfight against one of the masters of the time.

Right from the start you know that Dynamix is upholding Sierra's tradition of value-for-money products – the box it comes in is larger than a volume of the Encyclopedia Britannica. The manual is a superb piece of work, split into three sections covering the history of air combat throughout WWI, technical information on the planes involved and, naturally, how to play the game. It's well illustrated, easy to follow and up to the standards of many professional history books.

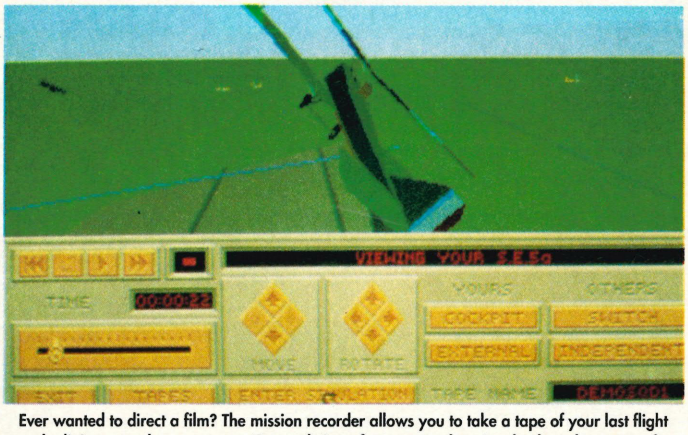
But you didn't spend forty pounds for a book. What of the game? It's incredible. Forget stealth planes that can fly invisibly over Libya or space fighters with cinematic interludes, this is raw flying at its finest - and most lethal. Although your Sopwith Camel can't do high-g turns or loops, what it can do is evoke sheer terror as a striking red Fokker Dr.I buzzes past, less than ten feet away, machine guns blazing.

Sierra/Dynamix have been touting their 256-colour technology for some time, but until now it hasn't had such an effective use. Shading might seem like a small thing, but when used as effectively as this, you really notice - and appreciate - the difference. Fly under another plane and its shadow will pass over you. Look around a zeppelin and see it gradually get darker as you go from one side to the other. It really does put everything else to shame.

Before each flight you have to go through a series of comprehensive setup menus. A flight can be one of three types, a single mission, a dogfight against a famous ace or part of a whole career in one of the air services. Each of the computerised aces has been modeled after the real person, each with their own level of intelligence and style of flying. The real Red Baron always felt that a loop was a cowardly tactic and as such you will never see him perform one in the game. With over twenty aces to fly against, it's one hell of a challenge to beat them all.



Step outside the cockpit for a moment and appreciate the natural beauty of your 3D environment. Your plane can be viewed from any angle you care to choose and from as close or as far as you want.



Ever wanted to direct a film? The mission recorder allows you to take a tape of your last flight and edit it to your hearts content. External views from every plane involved can be accessed to put together an action-packed movie to show the kids.

With the type of flight chosen, the next step is to set the flying conditions. This has got to be one of the most detailed set-up screens around; everything can be altered from the layout of your cockpit to whether or not the carburettor can freeze up. The digitised backdrops that go along with these screens are very high quality and the portraits that go

BARON

quality and the portraits that go with the British and German flyers take stereotypical images to the extreme. Handlebar moustaches and cropped blond hair - straight out of a movie.

The flight section is Red Baron's real jewel in the crown though. The instant you start flying you know you are in for a treat, as your sound board-generated engine buzzes around you and you embark in some of the smoothest rolls and turns and fastest 3D action around.

Every diamond has to have a flaw, Red Baron's only fault lies in the general outcome of a given mission. Should you fail (be shot down or crash etc.) then the whole mission fails. To think that your other pilots (some of whom are more experienced than yourself) can't cut it without you is stretching credibility somewhat.

You might be forgiven for thinking that a WWI simulator wouldn't last ten minutes against the laser-guided missiles of today's games but after ten minutes of play you'll realise that this is one of the finest flight sims since Digital Integration's Fighter Pilot on the Sinclair Spectrum.

PCL VERDICT

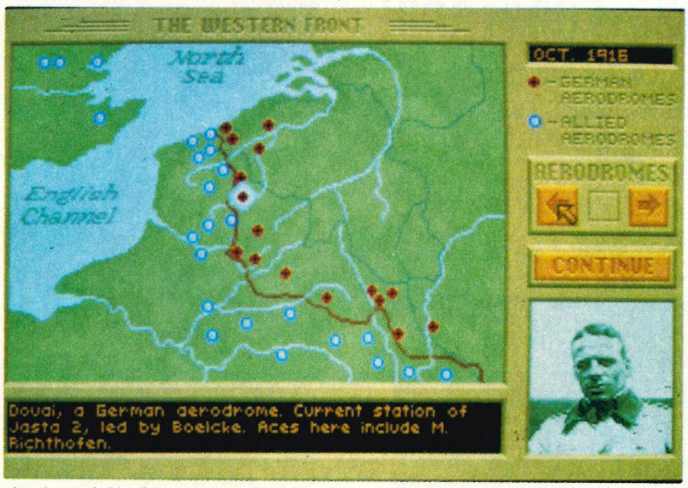
Although it's pricey, Red Baron is an in-depth and detailed flight sim. The 3D is smooth, the action is fast and the atmosphere is immense. What really makes it stand out from the crowd though, is its instant accessibility

BRAINPOWER FIREPOWER



GRAPHICS SOUND

Bad news for those with underpowered PCs here. Red Baron won't accept anything less than VGA and a fast hard disk. Slower processors are definitely not recommended.



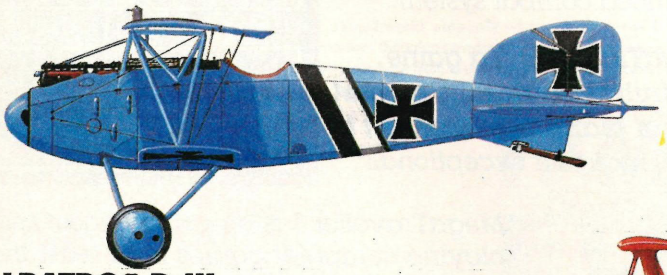
The playing fields of Europe. On one side stands the German Air Service, on the other is the Royal Flying Corps. Playing a career enables you to move from one aerodrome to another in the fight against the enemy.

etc... THE PLANES OF THE RED BARON



ALBATROS D.II

The D.II saw action for the first time in September of 1916. They were deployed in modest numbers until the arrival of the Albatros D.III in early 1917.

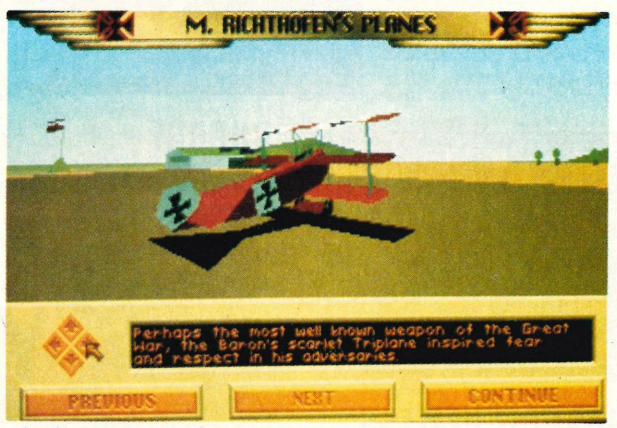


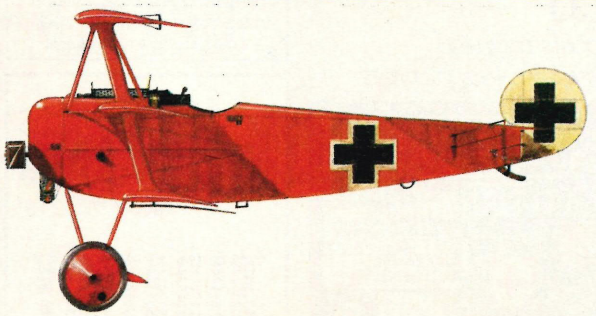
ALBATROS D.III

The D.III was Germany's best scout during the early part of 1917. It was fast and maneuverable for its time. It largely held responsible for Bloody April - the name given to April of 1917 when it inflicted huge casualties on Allied aircraft.

FOKKER DR.I TRIPLANE

The plane most favoured by the Baron and most of Germany's other ace pilots due to its extremely good maneuverability and the fact that it could climb fast.





How to recognise different types of planes from a long way away. While in the hangar, each plane is fully rotatable and is useful for identifying the good guys from the bad guys.

MEGATRAVELLER 1™

THE ZHODANI CONSPIRACY

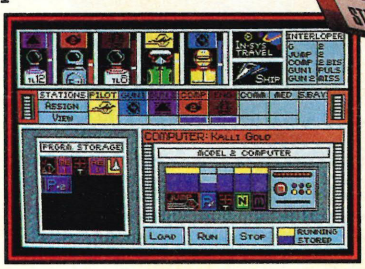
TAKES SCIENCE FICTION ROLE-PLAYING LIGHT YEARS FORWARD!

" Heralded The American Computer Role-Playing Game of the Year!"

AVAILABLE ON:
ATARI ST • COMMODORE AMIGA
IBM PC & COMPATIBLES



The four legendary Frontier Wars have passed, each started by the Zhodani and each ending in a shaky peace....

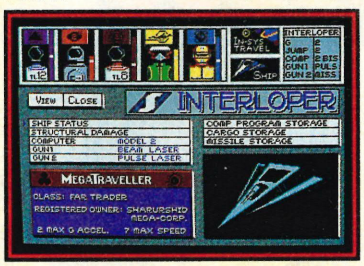


.....Now with the help of corrupt Imperium officials the Zhodani and the Outward Coalition are planning a fifth. Smuggling arms to traitorous groups within Imperium borders the Zhodani are planning to strike from within.

BASED ON MEGATRAVELLER BY GAME DESIGNERS' WORKSHOP, THE WORLD'S MOST POPULAR SCIENCE FICTION GAMING SYSTEM

VERSATILITY

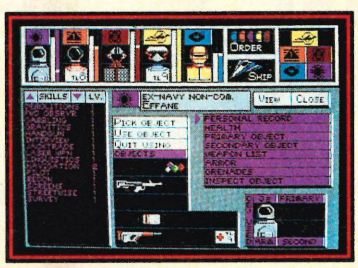
The most sophisticated character generation system ever devised: five military classes, more than 70 talents and abilities. Allows player to control character development through 5 services: Army, Navy, Marines, Merchants and Scouts.





IMAGINATION

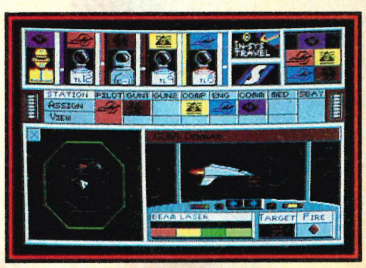
Flexible gaming system supports any playing strategy and allows multiple solutions to problems and obstacles.



FIREPOWER

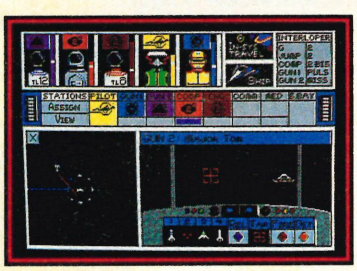
Realistic, combat sequences let you control each of your characters individually, while still giving general combat orders to the other members of your party. Utilise more than 30 weapons and skills in this advanced combat system.

72 varied skills to learn and use including medical, piloting, communications, laser weapons, bribery, demolitions and handgun.



COURAGE

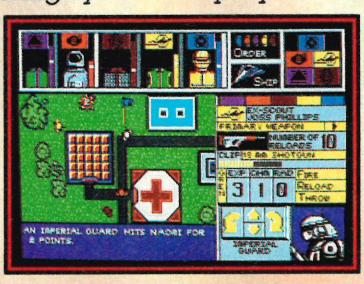
28 planets and satellites to explore in 8 systems filled with exciting puzzles, dangerous subplots and interesting characters to encounter.



"MegaTraveller 1, a game that truly warrants the highest level of praise, the attention to detail makes it exceptional!"

RESOURCEFULNESS

Saving the universe costs money: a detailed bartering system lets players earn Imperial credits through interplanetary trading, with 30 types of cargo.



SCREEN SHOTS TAKEN FROM IBM PC VERSION

Supports Ad Lib Music Card and Real Sound for state-of-the-art musical score, digitized speech and realistic sound effects.

EMPIRE
STRATEGY

"MegaTraveller 1 is one of the finest role-playing computer games in at least the last three or four years."
"MegaTraveller 1 is one of the best science fiction role-playing games ever for the computer."

QUOTES TAKEN FROM DRAGON MAGAZINE U.S. & QUEST BUSTERS MAGAZINE U.S.

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**EMPIRE SOFTWARE, 4 THE STANNETTS,
LAINDON NORTH TRADE CENTRE, BASILDON, ESSEX SS15 6DJ.
TEL: 0268 541212**

JONES IN THE FAST LANE

Ahh life, you know how it is. You are born, you work, you die. Not the most interesting of topics to transform into a computer game, or is it? Anyone who has ever played Milton Bradley's Game Of Life will know exactly what Sierra is trying to recreate with its computerised version of life's eternal rat-race, Jones In The Fast Lane.

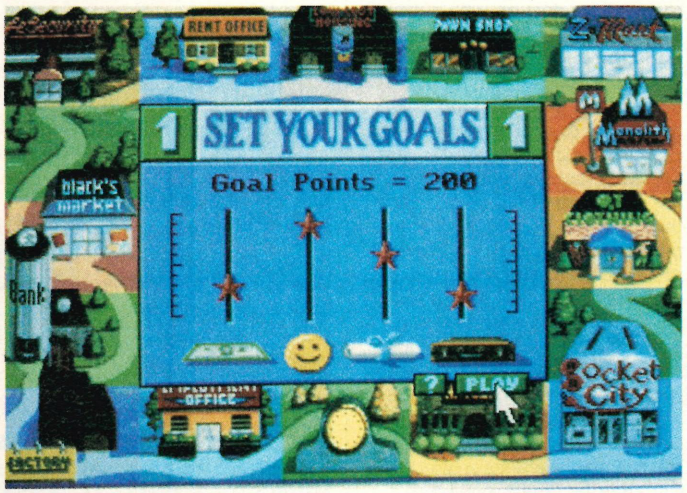
A computer board game is hardly a new idea (see issue 4) but at least Jones scores originality points by not being a conversion of a 'family favourite'. The aim is to wander around the board, a week at a time, making decisions such as what job to take and when to work, whether to go to school, what to eat etc. Ultimately, you are working towards a pre-determined score, defined by four goals - happiness, career, money and education. Doing relevant things on the board increases your score in each. Buying a new stereo increases your happiness while getting a raise increases both your money and career points. It's a novel idea and one that works quite well, especially as each player can set their goals individually, allowing for novice players to play on a par with experienced ones.

Like most Sierra titles, Jones is easily accessible, mainly thanks to the player cards provided. One for each player, they describe the basics of play and different strategies and are easy to follow, allowing for a fast flowing, fun and furious game. This level of excitement is only really generated with three human players, as a single player game soon becomes monotonous.

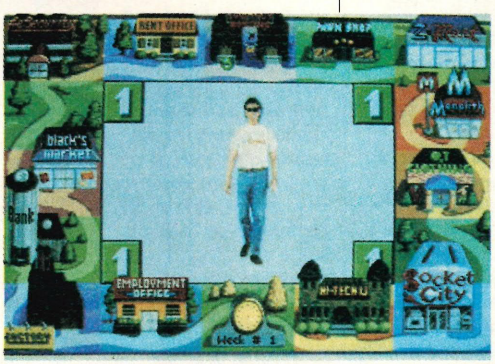
Therein lies Jones' biggest handicap and one that affects virtually every board game – maximum enjoyment only comes with multiple players. Despite the fancy 256-colour digitised graphics and the thumpingly good musical scores (with a sound board at any rate) you're still unlikely to get much out of it on your own. It's a very good multi-player game, one of the most original computer/board games to come out for a long time and it does indeed provide hours of fun. But it's an occasional thing, similar to when a group of friends come round for a night of Trivial Pursuit or Pictionary (cue cries of "Yuppie").

If you're prepared to put this one negative aspect aside, you could get a lot of enjoyment out of Jones. The graphics are colourful enough to attract younger players, while the older gamer will find it just as compelling because, chances are, he or she will be able to relate to a lot of the things that take place (although not treating them so light-heartedly). Jones manages to breath new life into the computer/board game genre and opens the door for plenty more original ideas.

■ Paul Presley



Everyone needs something to aim for in life, so at the start of each game you get a chance to set your goals. Assign a number of points to each category and the first player to reach them wins.



It's a small world, especially when you see Jones' board. Size isn't important though as everything you need to support a comfortable lifestyle is here from a university to fast-food joints.

Sierra
(071) 727 8070

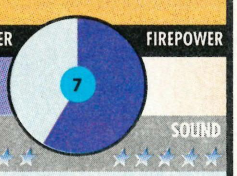
£29.95

5¼"	✓	3½"	✓
CGA	✗	EGA	✓
VGA	✓	Hercules	✗
Mouse	✓	Joystick	✓
Roland	✓	AdLib	✓

PCL VERDICT

Switching between landing parties, planetary roving and interstellar space travel is engrossing and adds a new element to the standard sci-fi RPG formula. Dedicated RPG'ers will know what to expect, but should be pleasantly surprised

BRAINPOWER FIREPOWER
GRAPHICS SOUND



You should be OK on this one – there's not so much disk access as there is with other Sierra games, that need to load in a new scene every time you enter a new location.

★★★

etc... FAMILY FUN

The main criticism facing computerised board games is whether or not they are worthwhile. With conversions this is doubly so, why pay £25 for PC Scrabble when you can get the real thing for ú10? Admittedly this is a modern, hi-tec world we live in, but can a box of chips really replace the warm feeling you get sitting around a roaring fire with the family, rolling dice and answering questions, desperately stopping the cat from walking across the board and chewing your counter?



Happiness is achieved through wealth, and wealth is achieved through work. The employment office offers jobs at every location on the board although, as with real life, you'll probably start by saying, "Do you want fries with that?".

LIFE AND DEATH II

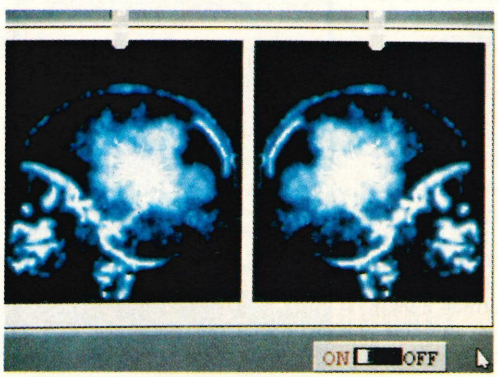
THE BRAIN!

The Software Toolworks/ Mindscape
(0444) 831761

£29.99

5¼"	✓	3½"	✓
CGA	✗	EGA	✓
VGA	✓	Hercules	✗
Mouse	✓	Joystick	✓
Roland	✗	AdLib	✓

Life & Death II is a surgery simulation where you take the role of doctor with the PC acting as medical professor teaching you the tricks of the trade. Yes, if you're the sort of person who loves to freeze-frame gruesome surgical operations on TV, your time has come...



X-rays can confirm the presence of a skull fracture.

After an absolute age installing the game and losing a multi-megabyte chunk out of the hard disk, you're ready to begin. In the original Life & Death, players became physicians responsible for performing a stomach-churning appendectomy. In this follow-up, you can set your sights a little higher and 'go for brain'. DIY brain surgery: just what the doctor ordered!

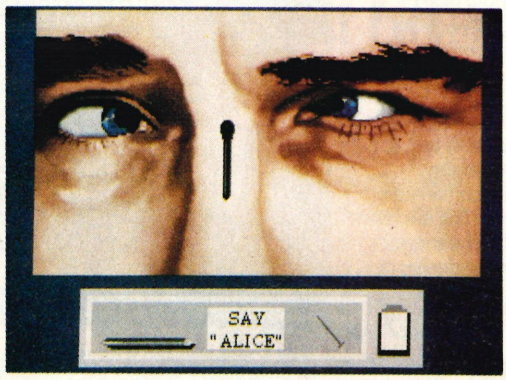
During the game you see an elevated plan of a Neurosurgery hospital wing. Just click on a room to enter it. Stroll around for a guided tour of your new work-place. Find out what a CAT scan does and how to read the results of an X-ray. A receptionist provides help to any dizzy docs or why not take a rest in the cafeteria - if you can stand the sarcastic comments from your comrades in amputations. If you have the time, go to one of the four small cubicles and examine your first patient.

A sickly-looking wretch lies on the examination bed as you click the clipboard for a brief description of their symptoms and order some lab tests. You touch the patients head, torso or legs to perform specific neurological tests. Hammer the knees, stick a pin in the left arm, ask the patient to say 'Alice', and so forth. A boring book on Neurology keeps you updated with brain trivia and related medi-facts.

In addition, The Toolworks General is equipped with the latest in medical marvels. That CAT scanner, for example, combines the use of computer and X-rays to help you hunt for tumours, aneurysms, subdural hematomas or infarctions. Carry On Carefully, even testing can prove fatal. A patient equipped with pacemaker will go into cardiac arrest if you attempt a Magnetic Resonance Imaging (MRI) scan, while an angiogram examines the integrity of blood vessels and kills anyone allergic to the contrast dye injected into their bloodstream during the procedure. Clues are included in the software to keep you on the right track - so pay attention.

Thanks to the physical examination and laboratory tests you should have a good idea of your patient's condition. Does he or she have an aneurysm, tumour or food allergy? Every disease or condition has tell-tale signs. What's the difference between a cocaine and morphine addict? No sweat – a morphine overdose causes the patients eyes to narrow with non-reactive pupils whereas a cocaine addict has dilated pupils. In both cases, these patients appear perfectly normal in CAT, MRI, X-ray and angiogram tests. So you click on the patients head and shine your torch into their eyes to tell them apart - then send them to a psychiatrist and chalk-up another successful diagnosis. If you're unsure about the patient, exit back to med-school and do some swotting. Here you learn how to incise and open the scalp, interpret MRI scans and diagnose infarctions. Medical mavericks will pleased to hear they take a guess and prescribe treatment if they don't mind a bollocking from the boss.

If your hunch – sorry, highly professional and informed diagnosis – requires surgery, you will be paged to the operating theatre and the fun really begins. The patient, complete with fully shaven head, lays on the slab next to your tools of torture. Scrub up, put on your surgical gloves, 'disinfect' the patients head, inject some antibiotics, pick up the scalpel, cut along the pencil line, and you're away! Try to keep your victim's – oops, patient's – blood-pressure at 110/70.



Brain surgery is enough to make you go cross-eyed with confusion.

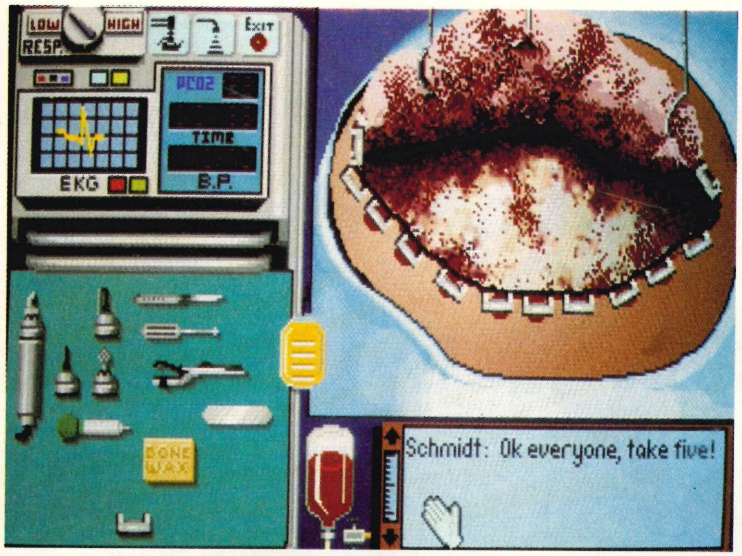
Now you're ready to pull back the scalp and pin it down with a fish hook. Ouch. Lucky the patient is still under (ah...er...better check on that, doc). Reach for the irrigator, or sickbag, and trephine drill (used to drill burr holes in the skull). By the way, the irrigator is used to lubricate the skull and prevent heat build-up during drilling. Don't take any notice of med-school when brain burring. Oh, and one should mention perhaps that this is one of the few games that actually has a fatal error in the instructions – you stop the drill by pressing the ENTER key, not by holding-then-releasing the fire button as described. I lost count of the number of patients lost before I finally solved this frustrating mistake.

There's a wealth of operational procedure and medical information to take in and remember during an op, like what the hell is brain tightness? Apparently, pressure in the cranial cavity will sometimes lead to brain tightness and you have to click on the exposed brain to see if it is relaxed. If it does become tight,



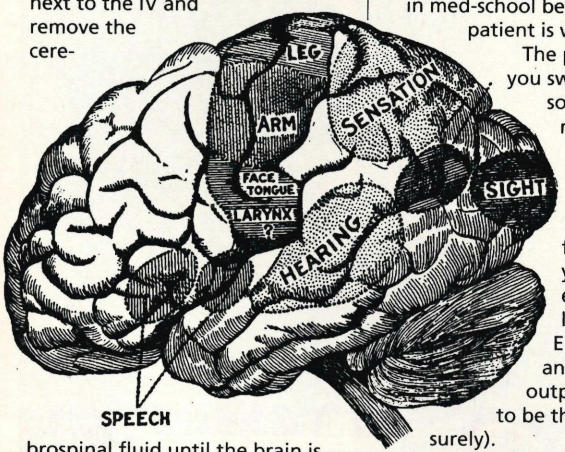
This patient looks pretty ill, any takers for 5-2 odds that she's on cocaine?





Let's cut to it...

you must open the spinal tap next to the IV and remove the cerebrospinal fluid until the brain is relaxed. Easy, eh?



It will take umpteen attempts before you successfully perform an operation, so don't be surprised by the odd severe ticking-off by the Chief Neurosurgeon and a compulsory refresher course in med-school before the next patient is wheeled in.

The program lets you switch the sound FX and muzak on or off and set three levels of play. At the more difficult levels, you encounter extra problems like abnormal EKG patterns and low urine output (something to be thankful for, surely).

Luckily for the weak-hearted, Life & Death II uses 'attractive' hand-drawn pictures instead of images digitised from video footage of real brain operations. Animation is minimal. Full 256-colour VGA visuals are there to be seen if you can stand the sight of torn brain tissue or drill-scorched skulls. The constant EKG beeps creates a great sense of urgency. You'll cry or curse when you get the first of many 'flatliners' - at least you get another chance, the poor patient just wins a one-way ticket to the morgue.

Life & Death II has genuine widespread appeal – anyone at any age can pick-up a scalpel and 'have a go'. The Brain has a macabre sense of fun and there is far more to do and discover in this surgical sim sequel than there was in the original. Software Toolworks warns that "Under No Circumstances should any person rely upon or be influenced in making any health-related decision". Fancy that! You'll probably never go near a hospital again after playing this game but at least it should cure your morbid fascination of blood-thirsty TV ops. I wonder what's next... Life & Death III: The Vasectomy...or Revenge of the Killer Brains?

■ Rik Haynes

PCL VERDICT

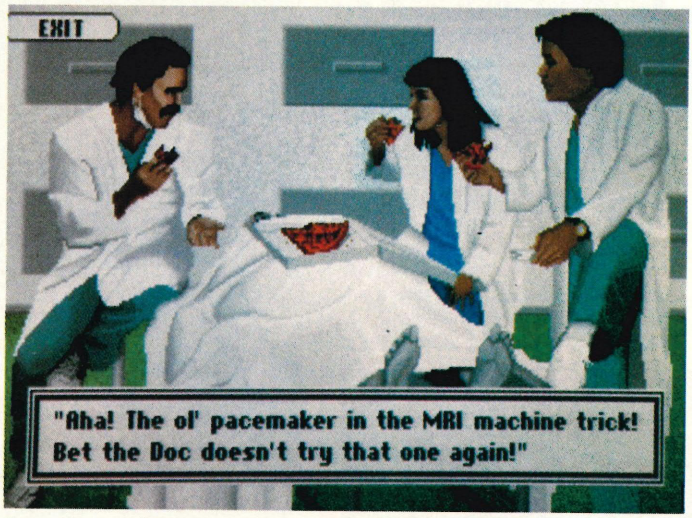
A cross between entertainment and education, following meticulous procedures in L&D2 can get boring – but there's nothing like the satisfaction of a having a brain in the hand

BRAINPOWER 7 FIREPOWER

GRAPHICS ★★★★ SOUND ★★

Mindscape recommend a 12MHz AT or faster. Those without HD or VGA should avoid There's a wait between screens even with a hard disk.

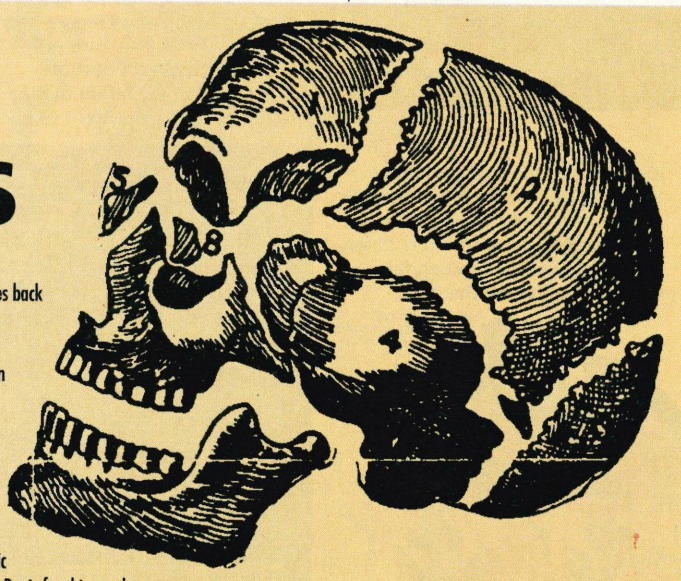
★★★★★



You need extra anchovy toppings after an unsuccessful operation.

etc...

SURGICAL SPIRITS



Brain surgery hasn't always been supported by futuristic CAT scans and laser scalpels. The profession dates back to prehistoric times when holes were hacked into the heads of cavemen to release evil spirits. The ancient Greeks and Romans may have refined the art of surgery, but the first signs of modern techniques didn't appear until the Renaissance. Before the 16th Century, your local barber was just as happy performing an amputation as a short-back-and-sides (though sometimes the two amounted to the same thing).

This appalled Ambrose Pare, the father of modern surgery, who was born in 1510. After becoming a surgeon with the French Army, Pare wrote the influential book 'The Method of Treating Wounds Made by Harquebuses and other Guns'. Then, in 1543, Andreas Vesalius published 'Seven Books on the Structure of the Human Body' - the first complete works on the human anatomy. The barbaric treatments of purging (induced vomiting) and bloodletting (draining of blood) still continued though.

Over three hundred years later, a surgeon at the Glasgow Royal Infirmary introduced the use of carbolic acid as an antiseptic to stop infections in wounds. Joseph Lister was given the title of Baron Lister of Lyme Regis for this revolutionary breakthrough. Last, and by no means least, Wilhelm Konrad Röntgen invented the X-Ray in 1895 despite being expelled from school for bad behaviour at the age of 16. Just think what he could have done after a game of Life & Death II.

LINKS

The Challenge of Golf

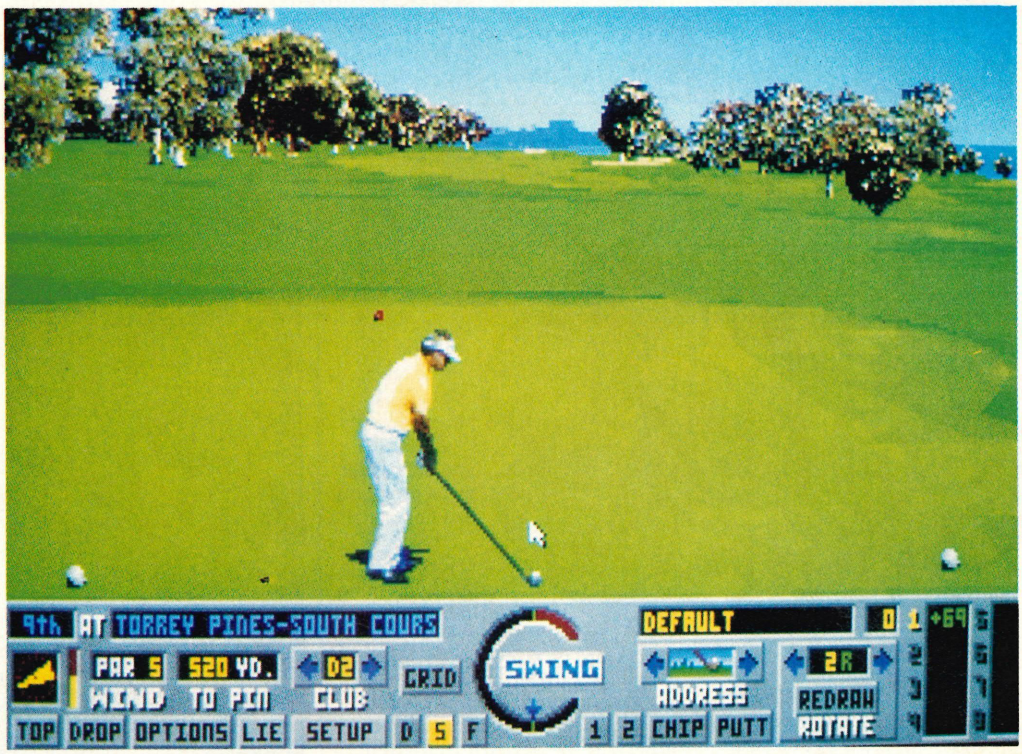
Access/US Gold
(021) 356 3388

£34.99

5¼"	✓	3½"	✓
CGA	✗	EGA	✗
VGA	✓	Hercules	✗
Mouse	✓	Joystick	✓
Roland	✗	AdLib	✓

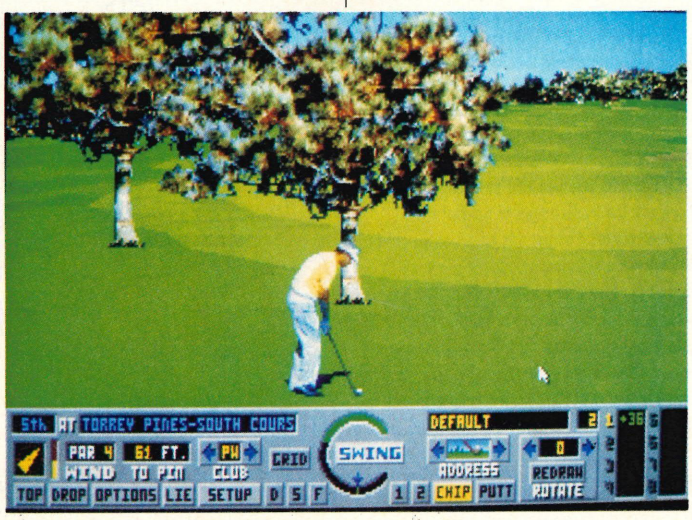
Six years ago, a small American games developer created the 'definitive' golf simulation with challenging but easy to play courses and near-perfect golf control. The game was called Leaderboard and Access was the company responsible. Several expansion disks later, Access has just released the first golf game to introduce 'total reality'. Is there a more incredible feeling than hitting a perfect drive squarely down the middle of a lush green fairway surrounded by the quiet majesty of nature?





A poor 8MHz PC takes 33 seconds to draw this minimum level start on the ninth...

Golfers do it with a swing. Links allows up to eight golfers to play the Torrey Pines PGA Tour golf course on the West Coast of America. You can choose to play the full 18 holes, the front or back nine in one of three difficulty levels. As an example, on the Professional Level swing timing is very critical and beginners don't have to worry very much about bad timing.



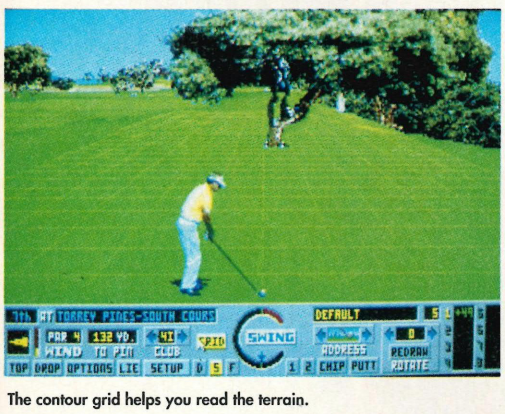
Looks like I'm going to hit the tree, Jim.

Soon you're on the tee, staring down the fairway packed with realistic three-dimensional images of trees, bunkers and obstacles. Even the contour of each hill and slope is shown. Your every move in Links is controlled by the panel at the bottom of the screen. Here you can turn on a grid to correctly 'read' the green, change the level of graphical detail (useful if you've got a low performance PC) and save the current 'round'. Once you've finished with this golfing toy-box, you should be ready to pull your first stroke. Simply select the correct club for the impeding shot and click on swing. A power indicator is then displayed, release your button to control the desired amount of clout. Then comes the difficult bit. As the indicator level descends to the green mark, you must press the button again to set the snap. If the snap occurs exactly at the green mark, you hit a perfectly timed shot. The further you miss the mark, the worse the shot. For



A top-view of the current hole shows the positions of all players.

added effect, you can easily adjust your stance, ball position and club face from the control panel. If you play a good shot why not go for an instant replay from one of two distinct viewpoints? If it goes wrong, select a 'Mulligan' and play another shot from the same location.



The contour grid helps you read the terrain.

I was impressed by supreme 256-colour VGA visuals of Links, and dismayed by the length of time they take to draw. The Access claim of total reality is not that far off the mark. Sampled sound effects of birds singing in the background and remarks about good and bad shots all add to the atmosphere.

You should never tire of Torrey Pines because the pin placement is random every time you tie-off. Long term Links interest is to be boosted by additional courses. Access is currently preparing more difficult golf clubs to conquer in the form of add-on datadisks. Firestone and Bountiful will each cost £12.99 and come on 3.5" and 5.25" disk formats. They should both be available as you read this.

Access claim this is a "quantum leap ahead of any computer golf game that you've ever seen". Beyond the hype, there lies a genuine claim – Links has just joined Leaderboard as the yardstick to judge other golfing games by.

■ Rik Haynes

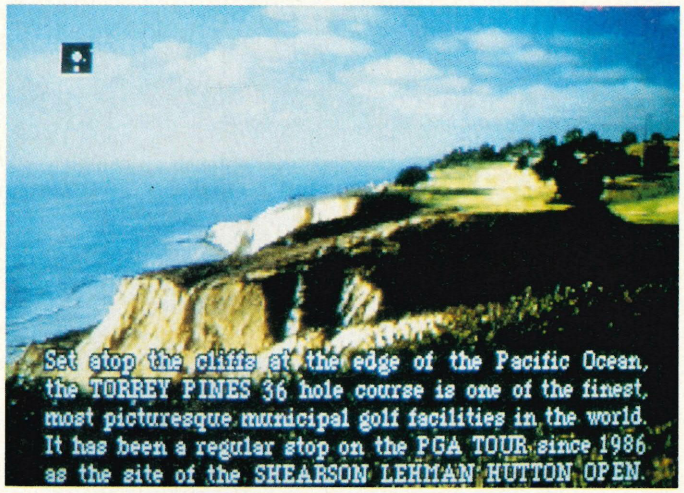
PCL VERDICT

If fancy graphics and realism are your thang and you own a meaty machine, go for this one! PGA Tour Golf from Electronic Arts is more playable but Links wins out in terms of presentation. Every golfer will now want to visit Torrey Pines

BRAINPOWER 10 FIREPOWER

GRAPHICS SOUND

Sorry buster you're out of luck. Links is only compatible with IBM PS1/PS2/AT/286/386 or compatibles

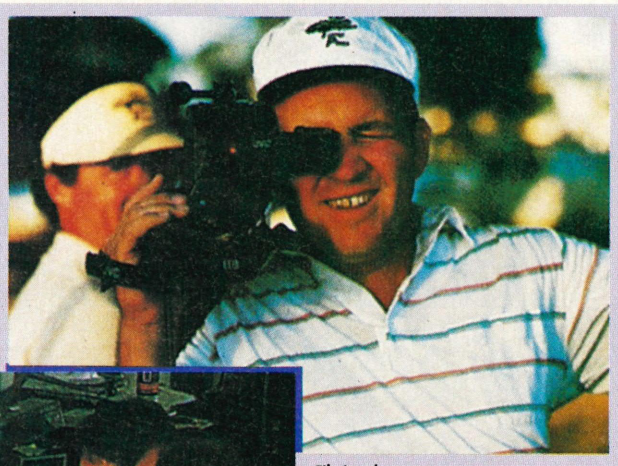


The Torrey Pines Golf Course simulated in Links has been a major stop on the PGA Tour since 1952.

etc...

GOLF BALLISTIC

How did the Links design team replicate every minute detail from the Torrey Pines Golf Course in America? With a great deal of difficulty. The guys at Access took over 500 aerial and landscape photographs and shot the entire course on video. They also obtained topographical and grading drawings, and information on prevailing winds and weather. Topographical maps were then converted into terrain data. Access found every tee box, bunker and hazard - digitised the actual vegetation - and placed them in the correct location on the course. Using a specially designed course editor to smooth and refine the original terrain data, Access then installed 'niceties' like ball washers, benches and the clubhouse. The course was then thoroughly playtested. The whole process took two people, two months to complete. Access claims Links generates 700,000 bytes of course data - "ten times more than other golf games".



Filming the course...



Converting the digitised video material and other source files using the course editor



Four levels of difficulty will help you to learn quickly - and optional autopilot landings will allow you to concentrate on airborne action. The controls are simple, effective, and easy to remember. It is a great flight sim for beginners and experts alike.



Fly missions in any of six real world arenas from the Persian Gulf to Vietnam, Central Europe to the Middle East and the North Cape to North Africa, giving you a total flying area of nearly half a million square miles.
Each area contains hundreds of missions and each mission will differ depending on your chosen tactics, even if you fly it twice!

IBM PC & Amiga screen shots



An amazing ten viewpoints give you the opportunity to view the fast flowing 3-D environment from virtually anywhere around your plane - and a unique "Director" option can be used to automatically change the view for you, so that you're always looking right at the centre of the action.



The newest smart weaponry and laser-guided armaments are primed for launch - it's your job to make sure that you're in the right place at the right time, and avoiding the constant enemy attack being thrown at you.



Enemy pilots and missile crews act and react intelligently and quickly. Success depends on making the right moves - and making them fast. F15 Strike Eagle II puts you in the hottest seat of them all - Take a look for yourself.



F15 Strike Eagle II follows F19 and Gunship into the front line. The latest and gr

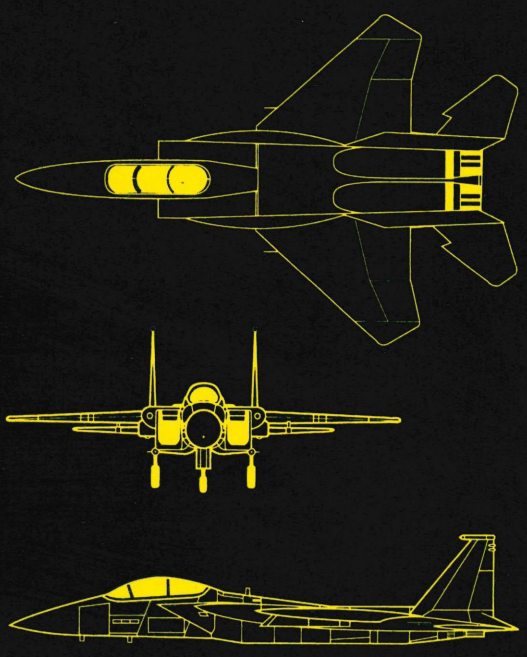


AIR SUPERIORITY

The F15 Strike Eagle is the latest in a long line of F15 Eagles, whose development began in the mid '60s. Originally conceived as an ultra-powerful, ultra-fast air-superiority fighter, the design has developed into an air-superiority fighter with ground-attack capabilities.

The F15 Strike Eagle is one of the fastest, most manoeuvrable, and most powerful military aircraft in the world. It has the capacity to carry the latest air-to-air and air-to-ground armament in addition to its 20mm cannon.

The latest version of the Strike Eagle is equipped with a sophisticated zoom FLIR/TV/Laser target tracking system that allows the pilot to see close up views (either TV or thermal) of the target at all times.



MICROPROSE™
SIMULATION • SOFTWARE

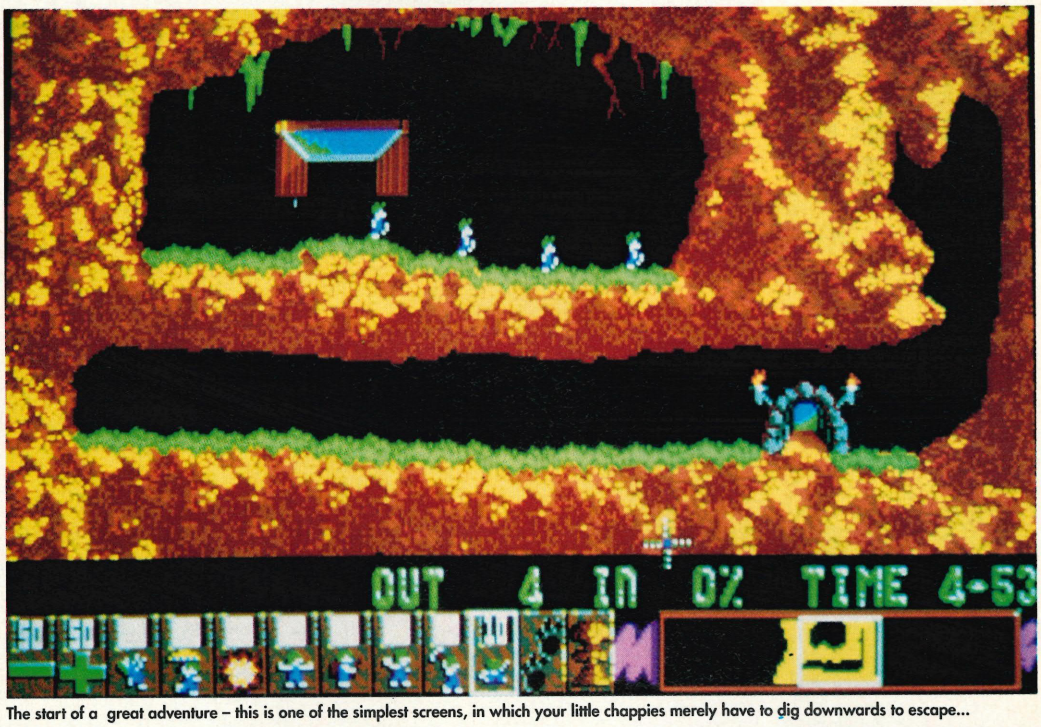
atest from MicroProse will soon be available for Commodore Amiga and Atari ST.

LEMMINGS

What a delicious role reversal this is. A game where success relies on ensuring the safety of a mass of peculiar little creatures, rather than their destruction, may seem like the ultimate in justifiable entertainment to the morally twitchy among us, but one presented in such a way that it still delivers the thrills and frustrations of the finest shoot-em-up must surely be a masterpiece.

Irritatingly, the game's design features few innovations, being a virtually flawless combination of existing procedures and proven features ensuring playability, longevity, ease of use and entertainment value.

The player adopts the role of skills manager, guiding a number (set automatically by the game) of endlessly obedient Lemmings through screen after screen by selecting a skill from a list in the lower part of the screen and then bestowing it on an individual lemming of his choice. The lemming will then endeavour to act appropriately immediately. Some skills can be stored. Others can't. Lessons in lemming control are swiftly learnt. Frightfully literal these little creatures; tell them to dig a hole - they'll dig and dig until something stops them. Make them walk one way or another and they'll do just that, even if their actions result in death.



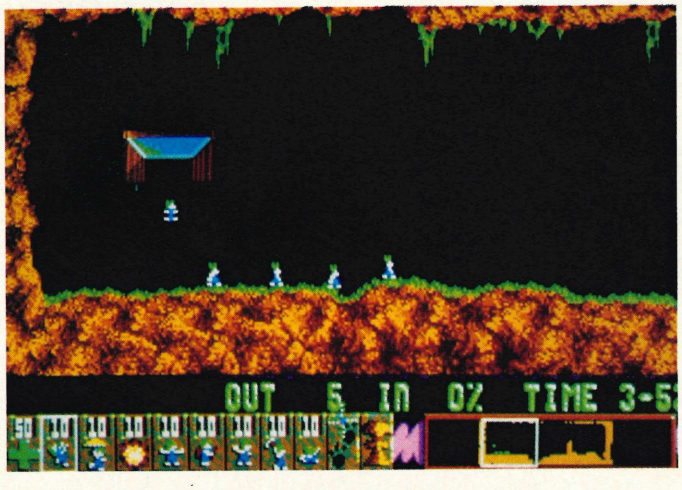
The start of a great adventure – this is one of the simplest screens, in which your little chappies merely have to dig downwards to escape...

Depending on the particular screen you attempt, you will find your plans hampered by tight time limits, deadly screen design or a high rate of lemmings requiring rescue. Any of these factors can flaw you on their own. The later stages of the game comprise all three in fiendish combinations.

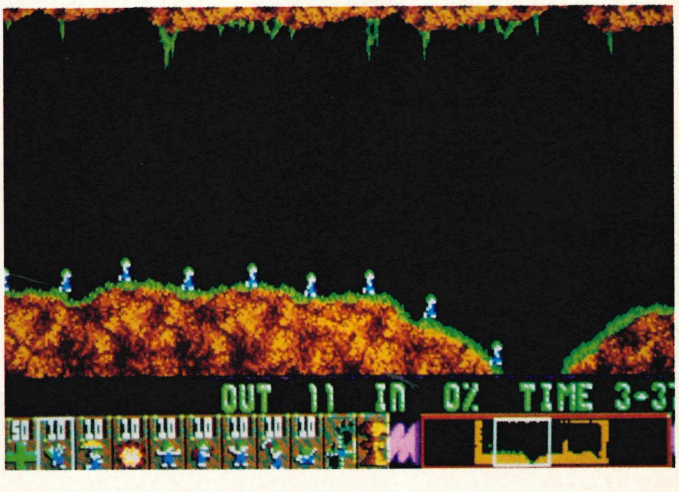
It's the variety of the challenge which makes Lemmings so enthralling. One screen will teach you to think on your feet and allow a reasonably high number of lemming deaths in return for you rescuing the required number in a short time. Another will demand absolute precision, allowing the death of not a single one, but giving you time to think.

Again, even once you have decided on a policy for each screen, actually performing the escape is far from easy. Players in possession of above-average mouse-skills will have an advantage over joystick jockeys from the word 'go'. Since the essence of the game is speed, the player must be able to dart back and forth from one lemming who's running out of bridging blocks and is about to fall into a vat of molten lava, to another who is about to dig through the bottom of the screen. While at times it can begin to feel a little like one of those spinning plate acts in the circus, it's all immensely enjoyable.

Control of the game is precise and friendly, both during the



This is another EASY level...Here come the little fellas for their morning constitutional...



Ooops! They've decided to jump into an abyss. Better make one a bridge builder and another a blocker to stop them going past him and plunging to their doom while he works...



game itself and in the front-end. From menu screens you can jump to any screen of your choice (assuming you know the correct code which is yielded on completing the previous level).

The visual appeal of the game is a crucial factor, and for once it's true to say that the EGA version is just as pleasing to look at as the VGA mode, and even the CGA mode is perfectly respectable. This is a game that doesn't require flashy graphics, but the programmers haven't let that stop them polishing their pixels.

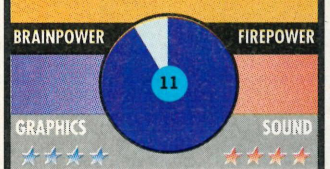
Although it's easy to have an 'oh, what a marvellous idea!' feeling about the game, at the end of the day, it's not the idea behind Lemmings which makes it so good - it's the execution. The way the game works; the way the icons work; the THREE different ways you can skip around the map, the identification of the highlighted lemming in the bottom of the screen, the design and pitch of the puzzles. These are the things which make it special.

An excellent game. Thoroughly recommended.

■ Richard Evans

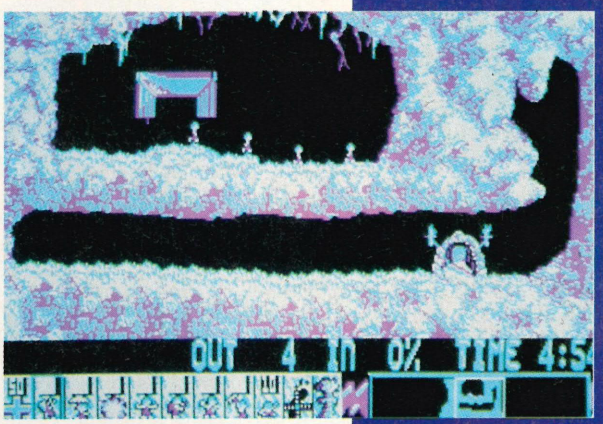
PCL VERDICT

Lemmings is one of those games that you can always come back to. The time limit and level password system mean that even when you've cracked a limit, you can get back to it to improve your performance. A winner.



For once this is a game that you can enjoy on almost any PC – it will even work (albeit extremely slowly) on the ancient 4.7MHz mode4s. Everyone can save a Lemming...

★★★★★



Even CGA mode is eminently playable – full marks to Lemmings for reversing a trend and not making playability totally dependent on processing power and graphics

Psygnosis
(051) 709 5755

£24.99

5¼"	✓	3½"	✓
CGA	✓	EGA	✓
VGA	✓	Hercules	✖
Mouse	✓	Joystick	✓
Roland	✖	AdLib	✓

LEMMING CONTROL

CLIMB!

Climbing lemmings will perform a single climb each time they are instructed to do so. They climb vertically and can scale sheer faces only. Steep diagonal surfaces can not be dealt with by climbers. Special care should be taken when scaling pillars and towers, since they will simply walk off the other side once they reach the top...

SLOW-FALL!

The only way to survive a long fall onto a hard surface is to slow the rate of decent using a brolly. It's extremely rare that you'll have more than seven brolly-bearing lemmings, so these guys must be used to make bridges or dig tunnels for the rest of their number to use.

EXPLODE!

Sacrifices are frequently necessary during the game. As well as being the only way to remove Blocker lemmings, forcing one to explode can open new routes of escape from certain screens.

BLOCK!

Often it's far safer to allow one or two lemmings to move further ahead than the rest of the party to check for traps and construct a safe escape route. Blockers will halt the progress of any lemmings and will send them back in the other direction. Remember that blockers must be removed by blowing them up, so standing them on weak bridges is a bad idea.

BUILD!

Bridgers carry twelve pieces of insto-bridge in their napsacks. They can build virtually anywhere, and so long as you have bridge icons left in the panel, you can make one builder build as far as you want. Bridgers build at approximately 30 degrees from the horizontal, and later screens demand careful positioning of bridges away from deadly traps.

DIG HORIZONTAL!

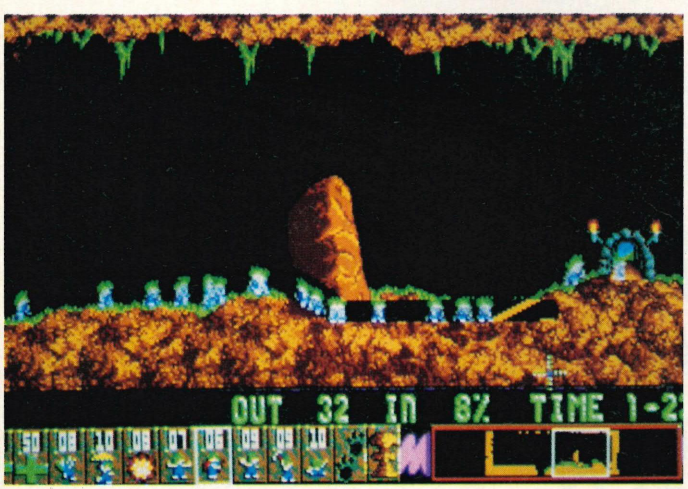
If there's anything diggable facing a lemming once this icon is used, he'll start digging horizontally and won't stop till he either hits the other side or hits something through which he can't dig.

DIG VERTICAL!

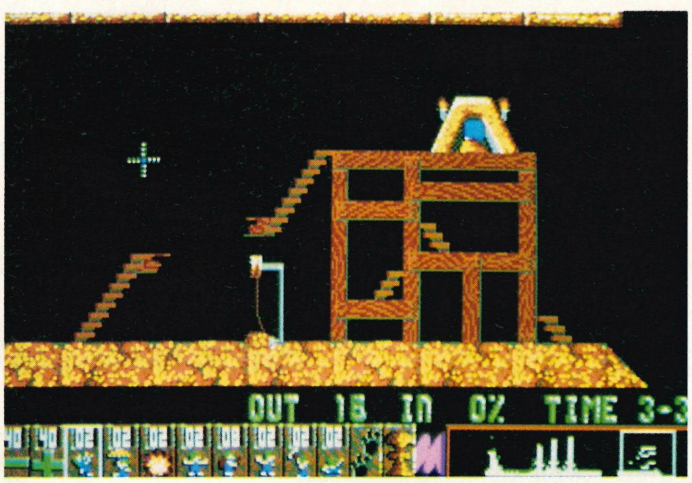
See above. However, remember that a long drop produced by digging vertically down is every bit as deadly as one already in place. You don't want all the lemmings to start pitching themselves down the hole after the digger.

DIG DIAGONAL!

See above. The problems with vertical digging aren't common to these fellows, but they do have a habit of digging right off the end of the screen if you don't stop them.



We've built the bridge, blown up our 'blocker', tunnelled through another obstruction and made our way to safety. Now it's on to the next screen...



...which has some darn slight trickier problems to tackle!

Genghis Khan

In a simulation, altogether military, economic and diplomatic, you will re-live the amazing rise of a simple tribe chief, TEMUDJIN, who will gradually become the famous and terrible GENGHIS KHAN ruling the world's forever greatest Empire stretching from China to the Urals.



In GENGHIS KHAN, strength and military skills are not suffficient. You will have to show diplomatic talent as well. A good marriage may allow you to establish long lasting alliances.



While setting your abilities, will you rather favour your military leadership capacity than your diplomatic talent?



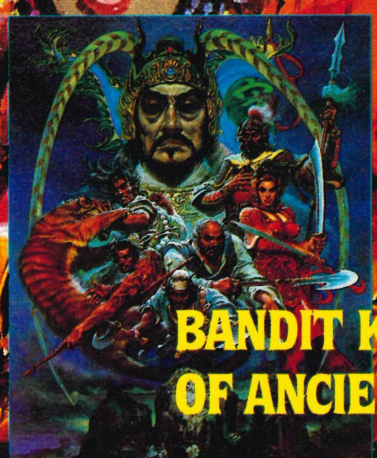
Which character will you embody? Richard I - King of England, the Byzantine Emperor Alexious III, Shogun Minamoto or the famous and terrible GENGHIS KHAN?



On the battlefield, GENGHIS KHAN sends his awsome cavalry against the Merkits. But beware of ambushes!



Two scenarios are at your disposal: as Temudjin in "Mongol Conquest" you will try to unify all the tribes and become GENGHIS KHAN in "World Conquest".



BANDIT KINGS OF ANCIENT CHINA

The next game will recall the epic struggle in the year 1101 in China between the evil Minister Gao Qiu, who had seized all Imperial authority, and the loyal warriors, who are the last hope of China and the dethroned Emperor.

KOEI

INFOGRAMES

Note: the game GENGHIS KHAN is provided with a complete instruction manual and hisktorical notes.

EXTENDED PLAY

PACKING MORE PLEASURE INTO PC LEISURE!

Welcome to the back-door pages! This is the area of the magazine where, every month, we'll be including both regular and irregular features and items of special interest. This month, we're giving you:

- a definitive list of 35 games for those of you who are either new to PC gaming or who want to add something special to your collection
- the first of a series on budget DTP for maniacal pamphleteers who want to change society
- a great competition to win a stunning stereo sound system for PC's
- the PC Leisure prize crossword
- reviews of two red-hot shareware products and news of others to come
- and, most important of all, the chance to make these pages yours – and win some free software into the bargain.

See the questionnaire below....

IN THIS SECTION...



WIN THIS SYSTEM:
see page 92.

PUBLISH AND BE DAMNED.....85
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GREAT GAMES TO SHARE.....93
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MAKE THESE PAGES YOURS!

....And win some *free* software! Just answer the questions below, cut out this coupon, and send it to **PC LEISURE EXTENDED PLAY, Priory Court, 30-32 Farringdon Lane, London, EC1R 3AU** to arrive before April 20th 1991. The first FIVE forms out of the hat after that date will receive a great free game for their PC. All you have to do is tick the boxes and fill in the answers where appropriate...

1. In this new issue of PC Leisure, did you like the design of the magazine A LITTLE ❑ A LOT ❑ NOT AT ALL ❑ DON'T KNOW ❑.

2. Mark the following sections between ten (excellent) and zero (rubbish)

News .....
Letters.....
Competitions.....
Extended Play section .....
Sierra feature.....
Secret Weapons feature.....
Virtual Reality feature .....
Muscle Up feature.....
Review section.....
DTP feature.....
Shareware feature .....
35 Great Games feature .....
Crossword.....

3. Your age.....

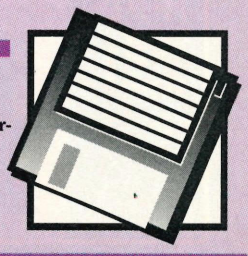
4. Is your machine a (tick one)
Bog standard PC.....
XT .....
286 .....
386 .....
486 .....
Other (specify).....

5. (Optional question) What features or other topics would you most like to see in the Extended Play section?

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Your name: .....
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Daytime phone no (if poss)
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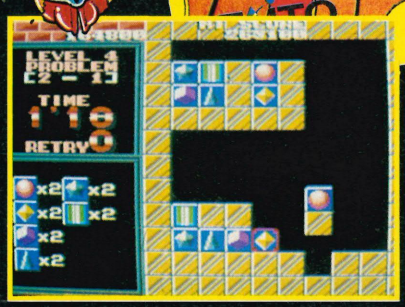
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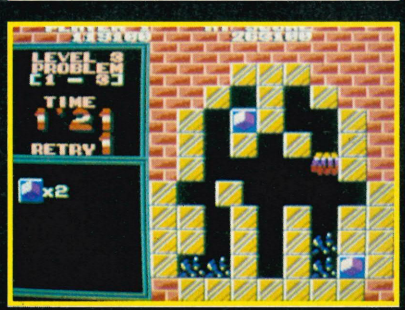


THE ARCADE BRAIN

PUZZNIC







"Puzznic has some very
addictive gameplay
Early levels provide a nicely graduated introduction to an
utterly compulsive game
EASILY ONE OF 1990'S BEST PUZZLE GAMES" ZAPP SIZZLER

"Just about as puzzle gamey as they come..
this is a class act alright
Right from the start this game
oozes a certain elegance" YOUR SINCLAIR

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35 ESSENTIAL BUYS!

We've divided the games up into categories – a dangerous exercise because there will always be someone who thinks a title has ended up in the wrong category. However, we thought that this would make it easier for some readers to locate the type of game that they were looking for.

We've also omitted hardware compatibility details (in the interests of space – which is tight enough as it is). If you have a high end machine, you shouldn't have any problem with the games here – but if your machine lacks, for example, a hard disk or an EGA card, you should check with the manufacturer concerned before buying. to this end, we've made sure that all software house contact numbers are included.

In one or two cases, prices may have altered by the time you read this issue – but the good news is that prices normally go down, not up!

Finally, we've tried to make sure that this list is genuinely useful – so we haven't included titles that may no longer be on the shelves.

REAL WORLD SIMULATION

PGA TOUR GOLF

Electronic Arts (0753) 49442

One of the few golf games that isn't 'officially sponsored' by anyone and one of the few golf games that is any good, in fact it's incredible. It takes every euphemism in the book and lives up to them: easy to control but a lifetime to master, provides endless hours of entertainment etc. Even if you're not a golf fan it's still enjoyable.

4-D SPORTS BOXING

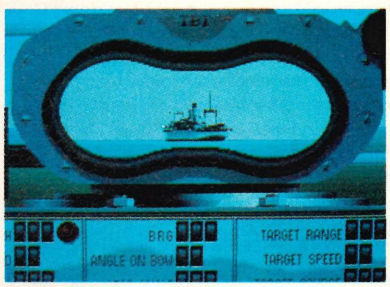
Mindscape £29.99 (0444) 831545

This superb 3D boxer from Mindscape was featured in issue 3. It got five well earned stars for putting you up against various other unsavoury characters and giving you the opportunity to use a combination of fighting strategy as well as sheer brute force. With its excellent gameplay and great graphics 4-D Sports Boxing is a good buy... you're the fourth dimension by the way.

INDIANAPOLIS 500

Electronic Arts £24.99 (0753) 46465

Arguably the best racing game outside the arcades. That's a heavy accolade, but this simulation is an extremely enjoying experience. The aim, surprisingly enough, is to win the famous Indianapolis 500, a multi lap extravaganza of American national heritage. Superb detail coupled with amazing speed - but it's perhaps unwise to try this on anything less than a nippy 286.



SILENT SERVICE II

Microprose £24.99 (0666) 504326

The superb sequel to the old Silent Service that was released six years ago and still plays well, despite its poor graphics and sound. This version is much improved in the pixels department but also boast improved sound and even better gameplay. Microprose have triumphed again – simulation enthusiasts should storm their local software retailers at once.

JETFIGHTER

DLL (0983) 864674

The PC version of FA/18 Interceptor, it is so up-to-the-minute that within two days of US President George Bush being elected into office, every copy was updated to change the programmed name from good ol' Ronnie. The game combines fast-action 3D with realistic controls and works beautifully.

KNIGHTS OF THE SKY

Microprose £39.99 (0666) 504326

More impressive attention to detail from Microprose in this impressive flight sim that puts you up against the German aces of yesteryear. A tough game, and now possibly overshadowed by the superlative Red Baron (see review in this issue).



Whether you're new to PC gaming – or simply want to add to your collection – you've hit the right page. Here they are: 35 PC Leisure recommended titles...a wicked selection of software that could change your life and should certainly change your collection!

RAILROAD TYCOON

Microprose £34.99 (0666) 504326

Play the boss of a large railroad company in this original, detailed, and authentic simulation that takes your from the first days of steam through to the early part of the 20th century. Watch your fortunes rise and fall as you busy yourself with costs, technical advancement, width of the tracks and more. Very playable, historically fascinating, and yet another tribute to the ingenuity of programming genius Sid Meier.

FLIGHT SIMULATOR V.4.0

Microsoft £44.95 (0734) 391123

For those who want to really fly, this is the undisputed king of heavyweight flight sims. With its magnificent attention to detail and much improved graphics, Microsoft have done a grand job with this latest version of their all-time classic. Fly a Cessna 182, a Gates Business Jet, a Sopwith Camel or a Schweizer 2-32 Sailplane over lanbd, sea, and even cities at night.



THEIR FINEST HOUR: THE BATTLE OF BRITAIN

Lucasfilm/US Gold £29.99 (021) 625 3388

Superlative combination of combat flight sim and strategy game, this game allows you to fight various different aircraft for either Britain or German in the Second World War. Lucasfilm combine long-term campaign interest as you endeavour to change the outcome of the war with excellent tactical sequences and tremendous graphics. A classic.

M1 TANK PLATOON

Microprose £39.95 (0666) 504326
You take on the role of tank commander in an all-out war with – oops – the Russians. What sets this game apart is the degree of control and management options (you have a whole platoon of vehicles, as well as air support), the 3D topographical landscape, the long term strategic challenge, the mission variety – in short, the usual winning Microprose recipe.

RED STORM RISING

Microprose £34.95 (0666) 504326
The game of the book by Tom Clancy 'surfaced' some time ago in the form of an excellent submarine simulation, involving you as the commander of various subs (according to the time period you have chosen). Heavy on strategy with dozens of report and management screens plus a 110 page manual, the action takes place under the shadow of World War Three. Graphical representations lean more to the diagrammatic than the realistic, but this doesn't detract from a heavyweight long-term challenge.

CARRIER COMMAND

Rainbird £24.99 (0666) 504326
Not really a real-world scenario, but a seminal 3D combat and strategy game in which you control all manner of military and naval hardware. The STANZA organisation are responsible for taking control of the ACC Omega, an advanced warship carrying all sorts of military hardware, in order to start a process in which they could take over the world. You are the commander of the ACC Epsilon, Omega's sister ship. Your task is to assume control and defend the islands that hold the world's last remaining fuel reserves.

SIM EARTH

Maxis/Ocean £34.99 (061) 832 6633
This hugely enlarged sequel to SimCity attempts to reproduce the Gaia philosophy (that the universe is a single, living entity) in a planet-management simulation which ranges from intensely serious eco-manipulation to whimsical creation of plague, death and destruction. On slower machines the gameplay can be less than comfortable, but in terms of size, scope, and complexity alone this looks like becoming a classic.

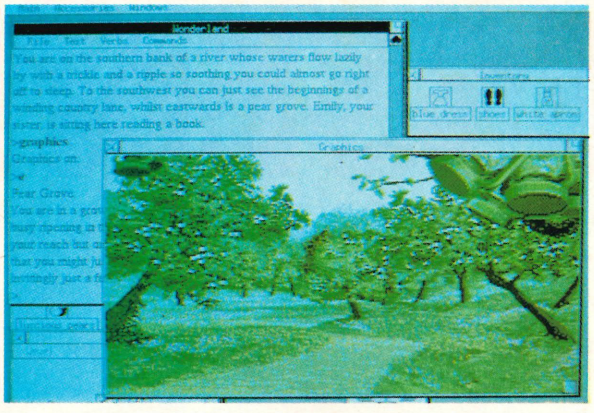
FANTASY / ADVENTURE

THE SECRET OF MONKEY ISLAND

Lucasfilm/US Gold £29.99 (021) 625 3366
An excellent animated graphical adventure in which you take on the character of Guybrush Threewood, an eager trainee pirate looking for a crew. With its fine attention to detail and easy to operate point'n'click interface system, The Secret of Monkey Island is a must for all adventurers.

WONDERLAND

Magnetic Scrolls £34.99 (071) 727 8070
It was Magnetic Scrolls who produced this great text-based adventure, although there are pictures within the WIMP (Windows, Icons, Menus and pointers) environment which, in some



scenes, can be interacted with. There are over a hundred locations in the game, based around the Lewis Carroll book, and the new operating system has to be the best ever for fantasy adventure. It has been suggested that this game may signify the comeback of the text based adventure...we wouldn't be surprised.

WORLDS OF ULTIMA: THE SAVAGE EMPIRE

Origin/Mindscape £34.99 (0444) 831545
Origin/Mindscape have yet again come up with the winning formula for a great adventure/RPG that uses the same software engine as Ultima VI. You are asked in a dream by Lord British to investigate 'the ruined moonstones'. And you do your own thing from then on. Engrossing environments and spellbinding stories are a feature of the Ultima series and Savage Empire is no exception.

ZORK ZERO

Infocom/Activision May be hard to get hold of, but check with your dealer
A prequel to the classic text-only series, author Steve Meretsky combines a hilarious narrative with fiendishly clever puzzles. From the annoying Jester that constantly crops up to hinder your progress to the 1,000 floor council offices, Zork Zero is a romp no dungeoneer should be without.

ULTIMA VI



Origin/Mindscape £34.99 (0444) 831545
The Ultima series features multi-character RPG gameplay with – in recent games – superb graphics and extended gameplay. This latest addition upholds the tradition with stunning scrolling overhead displays of your location and a simple but powerful command structure. Set, as all Ultima games are, in the land of Britannia, you have been recalled to set things to right in the company of your old companions (who you can load in from previous games if you're lucky enough to have played them).

WASTELAND

Electronic Arts £24.99 (0753) 46465
This is an RPG. Wait! Don't get any ideas about mystical lands, spells, wizards, warriors etc., because this RPG is set in post-holocaust Earth and instead of the usual spells to interact with, your influence and power here is carried in the barrel of your gun. All the usual post-holocaust types are there, including radioactive mutants, Hell's Angels and even trigger-happy 'men of the cloth'. Programmed by Interplay (of Bard's Tale fame), the graphics are a bit of a let-down, but there's no shortage of challenge.

BREACH 2

Impressions £24.99 (071) 371 9191
This RPG bucks the current trend by going for extreme simplicity, involving you and a team of nine soldiers in a series of rapid 'rounds' against a variety of enemies. Furiously addictive, without having the seemingly-traditional "Emperor Zing-Zang has invaded a small wheatfield in Devon" rubbish, and there's even a feature where you can create your own missions. Lotsa fun.

INDIANA JONES AND THE LAST CRUSADE

Lucasfilm/US Gold £24.99 (021) 625 3388
Based on the film of the same name, this almost certainly ranks as the best Indy game yet. You must attempt to recover the Holy Grail (the cup from which Jesus drank at the Last Supper) before the Nazis get their grubby paws on it. And don't think that because you've seen the film, you can complete the game, because there are extra places to visit, characters to interact with, and puzzles to figure out. With an easy to use command system and great graphics, Indiana Jones and the Last Crusade is a thoroughly enjoyable adventure romp.

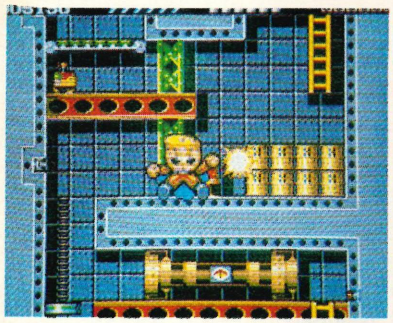
CURSE OF THE AZURE BONDS

SSI/US Gold £29.99 (021) 625 3388
Third and best of a series (still continuing) of computer RPG adaptations of the Advanced Dungeons and Dragons games system. You and your little band of followers wake up one morning to find you all have some strange markings on your arms. No, you didn't get drunk the previous night and get your arms tatooed for a "birrov a laff", so you try to remove them but they won't budge. So you seek professional help from a group called the "New Alliance". But your troubles have only just begun, for when the blue marks glow, they make your not-so-merry men commit crimes. Rather variable graphics but an excellent romp.

IT CAME FROM THE DESERT

Cinemaware £24.99 (071) 928 1454
This adventure sprang forth from the loins of Cinemaware, rather like the large radioactive ants that form your quarry. first though you must show proof to the fat mayor that the town is in imminent danger. This game was acclaimed for its cinematic presentation; that and the fact that it's great.

GOOD CLEAN FUN



RICK DANGEROUS II

Rainbird £24.99 (0666) 504326
In this follow-up to the superlative platform original, Rick takes on the guise of Flash Gordon. In what's arguably more of a revamp than a sequel, you take on some unruly aliens in an attempt to save the world from yer run-of-the-mill Armageddon. All fun, no brains.

PRINCE OF PERSIA

Broderbund/Domark £29.99 (081) 780 2222
The Grand Vizier Jaffar has assumed power in the Court of Persia in the absence of the Sultan and has locked his daughter in her room with the intent of having her for himself... but you had other ideas, and got locked up for them. Now you must escape to save the Sultan's daughter! Prince of Persia is an amazing game with stunning animation. As you climb up through the dungeon's levels, facing all sorts of challenges, you'll find the backgrounds a bit dreary, but the gameplay makes up for them without compromise.

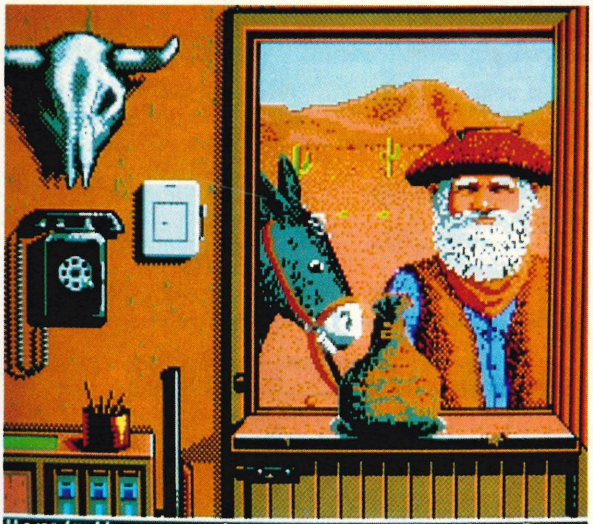
MISSIONS IN SPACE

ELITE PLUS

Firebird £34.99 (0666) 504326
Six years ago Elite was released on the BBC. Its vector graphics and combination of strategy with combat was revolutionary for its time. Today, with improved graphics and sound (which you really need a VGA 386 PC to enjoy to the full), it remains a classic. Your objective is to rise through the ranks to Elite status; where you may be sent on secret missions for your masters. Other objectives include making money and upgrading your Cobra Mk 3.

WING COMMANDER

Origin/Mindscape £34.99 (0444) 831545
Take on the threatening cat-like Kilrathi as a wing commander (hence the name) in small,



very fast well armed starfighters. The future of the human race lies in your hands in this cinematically presented but very playable simulator of the future with stunning graphics and great atmospheric sound – for those with the right equipment, that is. You will also need a very (12 MHz at least) fast machine. If you're lucky enough to have the hardware, this is the software to get.

VIRUS

Firebird £24.99 (0666) 504326
Not, as some uneducated PC owners might think, a game where you ruin someone's entire software collection, but a superlative 3D shoot 'em up with dollops of strategy as you control a small craft in a hair-raisingly fast flight over 3D topographical landscape to destroy invading aliens. Programmed, incidentally, by David 'Elite' Braben.

XENON 2

Image Works £24.99 (081) 928 1454
Renowned contemporary shoot-em-up that caused a stir on the ST and and Amiga and is now on the PC at last. And about time too. Fight your way up the screen slaughtering the alien scum as you go... and that's about it. You can buy extra weapons in the shop that crops up halfway between and at the end of levels. If you're in the market for an excellent shoot 'em up, you need look no further.

PUZZLE POWER

PIPEMANIA

Empire £24.99 (0268) 541126
Playability is the name of the game in this addictive little puzzler from Empire. In a scenario that rivals Tetris for simplicity, you must build up a pipe network on the screen, gaining extra points for things like loops, racing against time as the 'flooz' liquid flows along the network – spill a drop and the game's over. Simple, but horribly addictive.

TETRIS

Mirrorsoft £Out of circ. (071) 928 1454
The game that started the puzzle boom, and the first Russian game every to hit it big in the West. Now reputed to have the largest distribution of any game, bar (possibly) Super Mario Bros, this ingenious and simple puzzler involves manipulating falling geometric shapes to form complete lines. Clever scoring system and accessible gameplay stimulate total, dangerous addiction.

THEY STAND ALONE

THE SENTINEL

Firebird £24.99 (0666) 504326
This is a game...that is rather hard to explain actually. Here goes: the Sentinel is placed at the top of a sort of vector graphic mountain. You must try to get up there and knock him of his perch, so to speak. However this is made harder by the Sentinel's sentries and the way you are forced to climb; by creating a shell and jumping into it. Placing boulders underneath your shell lets you rise... but it's not that easy! You can't build anything unless you can see the square on which you want to place your,object and you have to have enough energy, which you get by consuming various objects. Several years old now, but when it comes to combining originality with gameplay, this game still towers above most titles.

POPULOUS

Electronic Arts £24.99 (0753) 46465
Has anyone not heard of this game? The progenitor of the current crop of 'god games', your aim is to become the most powerful divine entity, competing with Evil by massacring his misguided people. Of course the same fate may befall your own followers if Evil gains the upper hand, so bless your disciples with fertile lands and pray that you have enough magic (in the form of manna) to destroy your enemy's crops... Endless possibilities, 500 worlds to conquer, and enough to keep you busy for...rather a long time actually.

MIDWINTER

Rainbird £34.99 (0666) 504326
Mike 'Lords of Midnight' Singleton consolidated his reputation as a designer of some of the best games around with this 3D fractal-based megagame. Following a meteor strike in 2017, the remnants of the human race struggle to survive in an ice-age environment. In the Azores, now a snowy wasteland, General Masters intends to take over the small community to which you belong. You must ski, hang glide, snow buggy and cable car your way in between the separated "towns", heat mines, and other landmarks, recruiting assistants and fighting the enemy. The only slight flaw is that there is a way to crack the game that takes only a few minutes – but it could take you while to find it!

SIM CITY

Infogrames £29.99 (071) 498 7593
Superbly original god game in which you toy with the fate of the wretched sims and develop your own urban planning fantasy. By the same team that have recently brought you Sim Earth.

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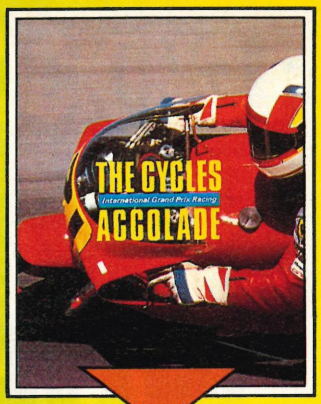
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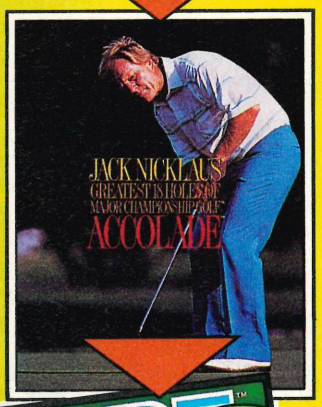
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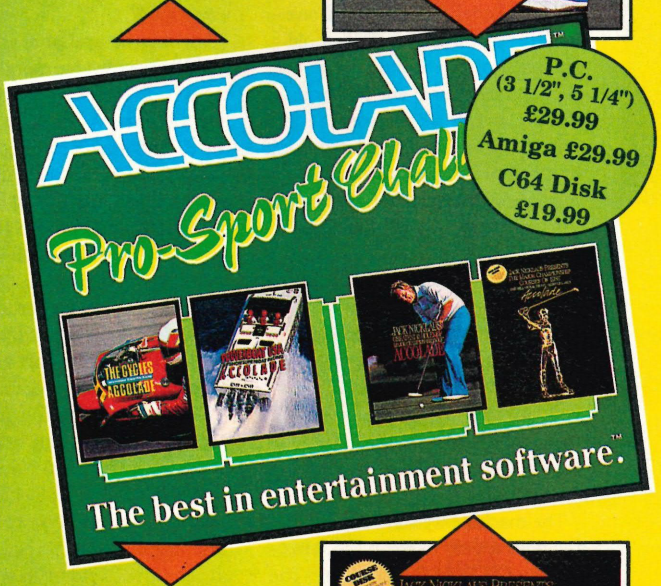


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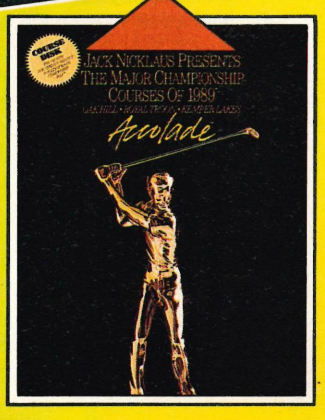


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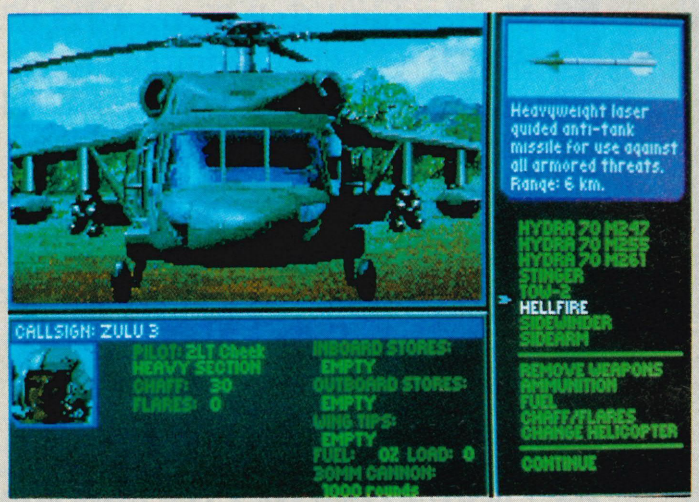
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PC NEXT ISSUE

The PC Leisure Cover Disk #4

This month you got Lemmings – just wait till you see what we've got lined up for you next time!





Features planned for the next issue include:

- Gunship 2000 – how does it play?
- Spectrum Holobyte's Electronic Battlefield
- Live report from Chris 'Balance of Power' Crawford's - Development conference in Californai
- Reviews of all the latest red hot releases
- A superb, surprise competition
- Further instalments of our new series on powering up your PC and DTP for fun...

All of this and more in the May/June 1991 Issue of PC Leisure - On Sale May 15th

THE FINAL WORD

Ever wondered what goes on at the PC Leisure towers these days? We thought that now the magazine is going from strength to strength it would be good to get some of our readers into the den to discuss the magazine, games, and life in general – before adjourning next door for a pint (or an orange juice if you're either sensible or under age!).

Naturally we're busy chaps here, heavily involved as we are in the onerous business of playing games, so we can't throw the invitation open to dozens of you at a time. The best system, we reckoned, was a first come, first served set-up.

So, if you'd like to pop along and visit the PC Leisure office, drop us a line on a postcard (no sealed correspondence, please) to:

PC Leisure Open Day
30-32 Farringdon Lane
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We reckoned we could hold one meeting every issue, and it would be great if those coming could, er, read the magazine, eh? That way we can pretend to ask you some serious questions about what you think of it before getting down to the purely incidental activities of drinking and chatting. See you soon...

*

As we went to press, rumours abounded concerning Amstrad's new machines – about which you will probably know an awful lot more than I do since the details should have been announced before you read this.

The machine we were all expecting does appear to be on the cards – that's a CD-ROM PC, of course. The fact is that there is already a considerable amount of CD-ROM software for the PC and it's about time that more people were given affordable access to it.

Other manufacturers, Commodore and Philips especially, make a lot of noise about their all-singing, all-dancing CDTVs and CD-Is, but the truth is that when it comes to CD, the PC is already streets ahead of every other machine.

There are two reasons for this – all of which is very good news for the gamesplayer, by the way. The first is that Microsoft has invested very heavily in CD research and is naturally going to push that investment onto the PC before it implements it on any other platform. Electronic Arts, for example, were a very important player in the early CD development days and their design guru Greg Riker later left to join Microsoft's CD team.

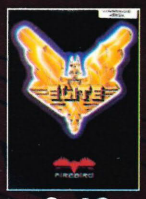
The second reason is that PC's have had CD's to attach to them for longer than any other machine. In the early days, this was because large corporate database users demanded the higher storage capacity of CD. Nowadays it tends to be because there are more PC CD owners than any other system. This chicken and egg situation has, for once, delivered the egg before the chicken. Or should it be the other way round?

Anyway, the upshot of all this is that the next twelve months should see a PC CD software scene much like there was in the early days of the ST and Amiga computers. We can expect to see a regular supply of titles, some of which will be hopelessly derivative and – in the worst case – will be identical to the original floppy disk versions. Others, however, will almost certainly be hugely inventive and original. As soon as those titles start appearing, CD ownership will rocket...

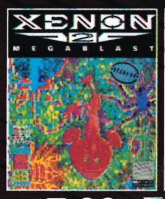
The prices are coming down too. Right now you can buy one-off CD drives for under £400. You can expect this to shrink by half within two years. Couple that with the often overlooked fact that it is actually cheaper to publish a multi-disk floppy game on a single CD and you have a sure-fire recipe for mass ownership.

All this means that the PC, despite being the 'venerable old man' of leisure computing, is actually right there at the cutting edge of games technology. Add its easy upgrade paths (make sure you don't miss our Muscle Up series, starting this month) and you've got yourself the ultimate games machine!

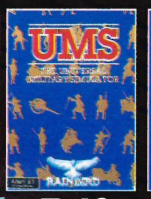
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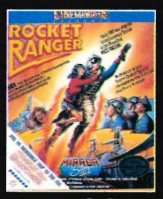


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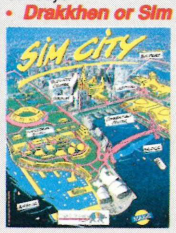
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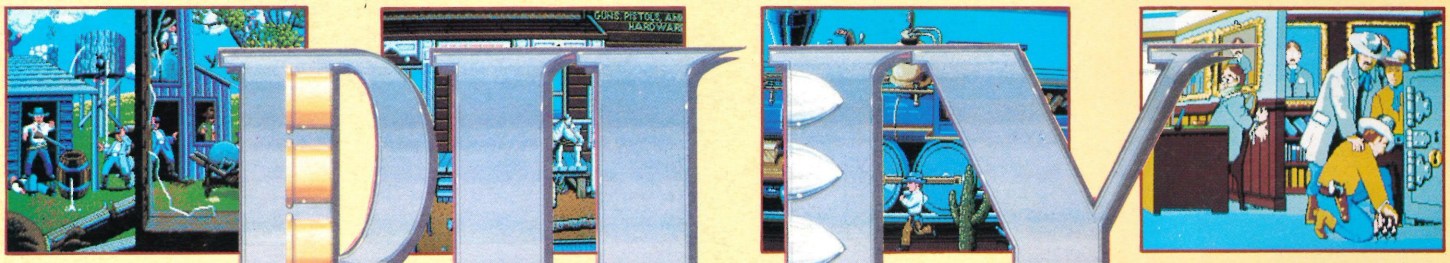
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