

ACE

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CPC ■ SPECTRUM ■ PC
■ NINTENDO ■ SEGA ■

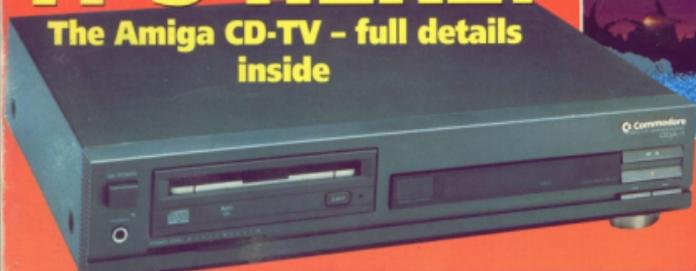
3D SENSATIONS

State-of-the-art 3D programmers reveal the secrets of tomorrow's worlds

ADVANCED COMPUTER ENTERTAINMENT

IT'S HERE!

The Amiga CD-TV - full details inside



Beast Two
Triumph of the game

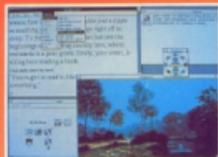
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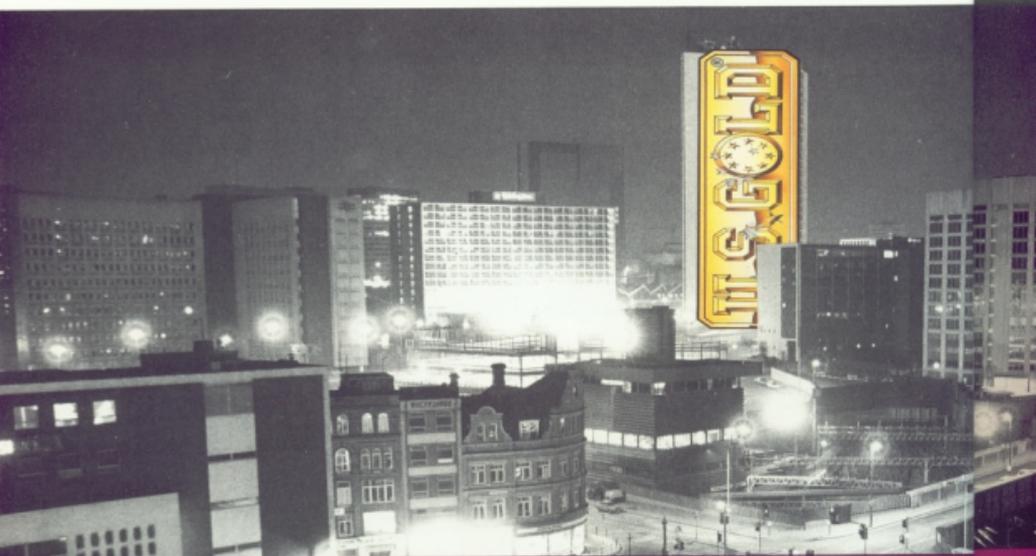
Wonderlands
Magnetic Scrolls
new game system

RED HOT!

Kick Off 2 Ninja Turtles

Over 40 games reviewed and previewed

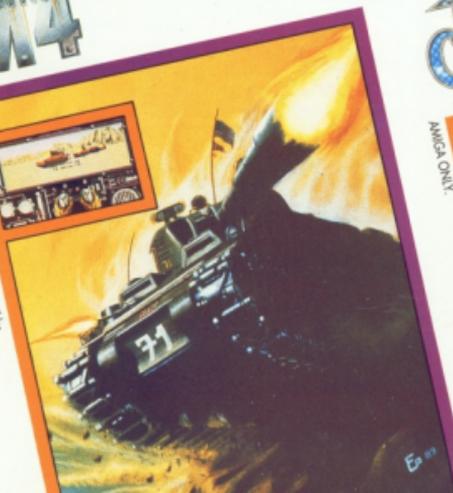




Discover Gold in 10

SHERMAN
M4

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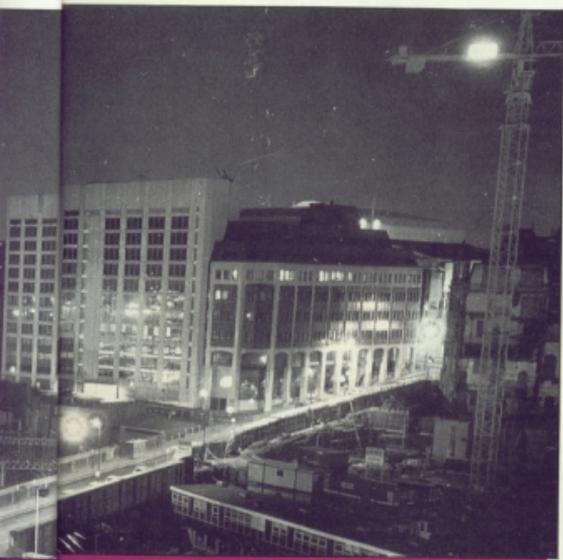


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ANSWER Type & Disk, SPECTRUM Type



On every corner, in every street, a quiet revolution draws the generations of a new age into a spellbinding challenge against that icon of modern living... the computer.

If only the driving forces behind this revolution in entertainment could recognise with the same fervent enthusiasm the needs and desires of their devoted public.

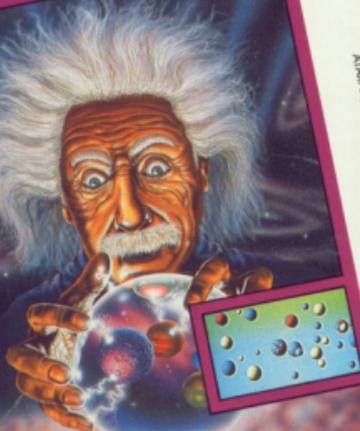
However, amongst those pioneers of computer games software stands one company, alone, a shining colossus in the art of computer entertainment. There is no other company that has displayed such enthusiasm, no other company that can demonstrate an unequalled track record and no other company that has recorded so many milestones in technical innovation, sophistication and breadth of product interest. From arcade action, through graphic adventure to strategic simulation there is only one company that has taken of the best to ensure the user enjoys nothing but the best.

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WONDERLANDS 71

Magnetic Scrolls claim people will not believe the raw power of their new game system.

YOU'RE NEXT! 67

Find out what happened when a group of ACE readers attended the first ACE Conference. The fun, the frolics...and the freebies. And you could be next.



The Commodore CD-TV - taking Amiga technology into the 21st century.

VIRTUAL REALITIES

ACE goes 3D this month with a series of exclusive articles that will carry you far into the silicon universes of the future. On page 19 you can explore the next generation of 3D software and hardware, and exercise your right to vote on the future using the ACE Debates Line. Then on pages 22-23 you can find out how the professionals create state-of-the-art 3D animations. Finally, there's a nostalgic look at 3D in the arcades on page 79. This 3D Issue is part of the ACE Specials plan that has already brought you reports on the States and Hypermedia. And there are many more to come...



Scenes as created by *Snapper Bytes* using *Synthetic Animation* software. The ad combines computer graphics, live action, and motion control.

THE ACE TREATMENT

Screenest now has three new sections: for computer, console, and CD software. If it's hot, it's here.

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WIN THE

DECLARATION OF INDEPENDENCE!

WE HOLD THESE TRUTHS TO BE SELF EVIDENT...

...That all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Gameplay, Challenge, and the Pursuit of High Scores; that to secure these Rights, Software Houses are instituted amongst Men, deriving their just powers from the Hardware they Program on; that whenever any Form of Software becomes destructive of these ends, it is the Right of the People to go out and buy something else.

We, therefore, the Representatives of the UNITED GAMESPLAYERS OF GREAT BRITAIN, in General Congress, Assembled, do, in the Name and by Authority of the High Scorers of this Land, solemnly Publish this issue of ACE Magazine, complete with its exclusive coverage of Ninja Turtles, Kick Off 2, and the Commodore CD-TV in the hope that it will show the World that we Gamesplayers mean business, and that the time has come for the World to recognise that Electronic Entertainment is the Law, AND THE LAW SHALL PREVAIL!

Signed, Jess Blaster, gamesplayer, Minton McGhoul, programmer, Darville Snork, hacker
(One abstention: Sqx Thripw, alien)

PS: If you really want to declare Independence, check out the review of Revolution on page 51.

GAMEPLAY

SCREENTEST37

Ye Gods! Kick Off 2, Beast Two, Sim City Terrain Editor, and new CD and console sections. That's 25 pages of solid gameplay muscle.



Pooty mania: Kick Off 2 in all its glory on page 20 - and you can also check out Italy 1990, World Cup Soccer, and the surprisingly promising Treble Champions on pages 46/47.

NEW BALLS PLEASE!92

Eugene Lacey sells his Wimbledon Centre Court ticket and goes out and buys a whole load of tennis sims instead. Wise move? Or foul serve?

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Four pages of solid titanium tips for the professional cheat.



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Yours, chum. You know who you are. You wrote that letter - and we printed it. Heaven help us.

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How you can win a trip to Hollywood, save money on the magazine, and keep up with the Jones'.

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Sneak previews of the forthcoming Computer Entertainment Show in September - the first ever games-only national exhibition.

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Another issue in the life of the software industry's oddest page bringing news of up-and-coming games releases.

IN THE PINK99

The complete software and hardware reference section for gamesplayers

WIN! WIN! WIN!

IT'S TRUE!26

The awesome Neo Geo console is the games machine that every beast-blaster dreams of. Now ACE and SNK are giving you the exclusive opportunity to have one in your bedroom. Go for it, get lucky, and watch your friends die of envy.



Moulton's Lord - just one of the stunning games that make the Neo Geo the No 1 Console Experience

NEO GEO

FLIMBO'S *Quest*



Take one innocent character, Flimbo, add a very broken heart, a pinch of heroism and one delicious damsel in distress.

Sprinkle a host of cameo roles featuring a derranged professors genetic mutations and you would be mixing the ideal ingredients of a cartoon style adventure game - par excellence.

**FLIMBO'S SERIOUSLY DETERMINED, BUT
OH SO SERIOUSLY CUTE...!**

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news

Have You Won the Fujitsu FM Towns Computer?

At last, the moment you've all been waiting for – the announcement of the lucky person who has won the exclusive ACE Mirrorsoft FM Towns postcard competition from issue 31. Thanks for your huge response, it was overwhelming.

The peeps at Mirrorsoft were so pleased with your response that they've decided to generously donate £550-worth of runner-up prizes. That's 10 copies of *Gravity* and 10 copies of *Triad*. The 930 ACE-rated *Gravity* from Imageworks is "a must for anybody who likes an involved game which exercises the old grey matter". It's available now on ST and Amiga for £24.99k with a PC version due in the autumn. *Triad* is a top-value £29.99k compilation package of *Rocket Ranger* (Cinemaware), *Speedball* (Imageworks) and *Blood Money* (Psygnosis) for Amiga and ST.

Here are the runner-up winners: JIMMY TURNER (Manchester), RAYMOND BAKKER (Holland), PAUL WINTLE (Canvey Island), B.HAGGARTY (South Humberside), D.LLEWELLYN (Kirkcaldy), PAUL GREEN (Bristol), MARK BELLABY (Tyne & Wear), EMILE CHASSEAUD (Lewes), GHULAM MUSTAFA (Dubai), DUNCAN WEBB (Hungerford), HEUNG WING CHEUNG (Cornwall), P.WALL (Gloucester), GLENN STAWFORD (Salisbury), RICHARD HEASMAN (Buntingford), KEITH DUKE (Eastbourne), SADEQ BO-OLAYAN (Kuwait), JOHN SHEARING (Godstone), F.McCOURT (Belshill), PAUL BRISTOW (Oxford) and D.RANCE (Hatfield).

Congratulations IAN DAVIES of Hereford, you've just won a Fujitsu FM Towns 32-bit CD-ROM computer worth over £1500! Sorry if you didn't win anything this time, there's always the next ACE competition...



Mirrorsoft's Cathy Canger and Allan Brawley pick the lucky winner from the thousands of entries

Computer Games Hit the Movies

Did you see the recent Wim Wenders season on Channel Four? The German film director's latest project is a movie based around an advanced computer game.

Until the *End of the World* is set in the beginning of the 21st century. Computer-generated images, designed by Sean Naughton of the Frame Store, will be used for a dream sequence that recurs throughout the film. The movie also features a nightclub scene with a pop promo of David Byrne of Talking Heads. The novel aspect of this is the spesh effects people have used computers to make Byrne appear 10 years older.

Japan's NHK is producing all the HDTV (High Definition Television) displays for the film at its prototype effects suite in Tokyo. Until the *End of the World* is coming to a multiplexed screen near you next year.



A snazzy skull from Coldcut's *Bide the Pressure* video

The Music of the Moment

Some Like It Cold, the latest LP from Coldcut in conjunction with Hardwire, is cyberfunk in effect. An invitation to take a sidestep into the future.

Coldcut's Matt Black and Jonathon More were the first UK DJ's to make a cut-up record back in '87 – the start of the sampling revolution. Since then, they've worked with Lisa Stansfield, Yaz and James Brown.

In '89 Coldcut met computer freaks Miles Visman and Robert Pepperell and formed Hardwire, a graphics house dedicated to proving that the Amiga, Macintosh and Archimedes micro's are the next logical step in video tech.

Another first came with Coldcut's *Christmas Break*, the first music video created entirely on micro.

Hardwire's latest project are longform videos for all trax on Coldcut's *Some Like It Cold* LP, to be released on VHS and CDV. They mix 'live action' from artists like Queen Latifah against 3D model animations, backgrounds generated using chaos theory, grabbed and processed pictures, and computer artwork.

Coldcut produce the bass-heavy dance beats, Hardwire produce the crazed cyberscratch visuals.

ACE News Service goes Interactive



ACE is establishing yet another industry first this month – our on-line fully interactive news service for gamers, providing short, regularly updated reports, every week on games technology, games gossip, and games in progress. You could also win a free software prize – every week.

Unfortunately, last month's trial went disastrously wrong after we were given an incorrect telephone number by the organisers. The person responsible has lived to regret this mistake... just! We offer our profound apologies to everybody who tried to call us – we have made good use of this time by making the service fully interactive.

So don't panic. The ACE interactive on-line news service will be fully operational from Tuesday 12 June. The number to ring is **0898 555563**. Calls cost 38p per minute peak, and 25p per minute off-peak. The service is updated every Tuesday at midday. Give us a call if you want to hear all the latest gossip from the CES show in Chicago...

Dial 0898 555563

From Tuesday 12 June

Dear ACE, Why do you keep on covering CD technology?

As we went to press, the launch of the 'CD Amiga' was rumoured to be only days away. After months of denial by Commodore, ACE secured exclusive details from the States - with the proviso that there may be minor alterations to the specification prior to launch. Here's the full story...

It's called the CD-TV - and the name is important. This isn't just an Amiga with a CD-ROM, this is a whole new ball game.

First, Commodore intend this to be the machine that blasts computer entertainment into every home. Even the Dickenson-Smythes are going to find it difficult to resist this one, however snotty they may have been about their next-door neighbour's addiction to Xenon II. Not only does the unit play all their music CD's (it has music CD routines built into ROM so you can do all the clever things that expensive, intelligent CD players can), but it will also offer access to a library of software quite unlike anything seen before on a home computer. Check out the software panel elsewhere on this page.

Second, the technology of the unit goes beyond a simple Amiga with CD-ROM attached. So far, CD-ROM's have simply been mass storage devices (mainly attached to PC's and PC Engines). The advantage is

that you can store tons of graphics and sound data, but the disadvantage is that you can't pull all the data off the disk at once. In particular, you can't pull sound and graphics data simultaneously, so you're unable to implement what is often referred to as 'talking head technology'. TT means being able to animate a computer graphic and pull accompanying sound off the disk at the same time.

The CD-TV has full talking head capability. That means you can add a whole new dimension of sound to existing Amiga titles, and develop new ones that really make use of the CD quality stereo the system offers. You can also map Amiga generated sound over CD stereo tracks. And since you have the equivalent of 700 Amiga disks on a single CD (which costs less to produce than two floppies)

you've got a lot of space for sound and graphics.

The problem of pulling data off the disk also effects another potential use of CD. Since your CD has the storage capacity to hold video images, it would be nice to present real-life video (or animation) footage within games - like the old Dragon's Layer laser disk games, for example, or a film license with actual sequences from the movie.

...HERE'S WHY!



The Commodore CD-TV. Note that this photograph is of a pre-production model - there may be minor variations in the appearance of the final version.

Unfortunately this means pulling even more data off the disk than it does to reproduce sound.

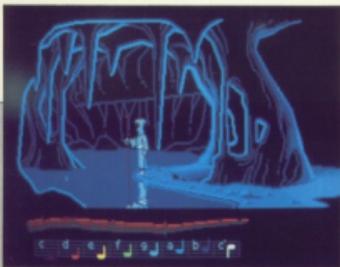
Commodore are making the extraordinary claim that they will be producing a Full Motion Video (FMV) adapter for the CD-TV. This upgrade will be possible because of the 'open architecture' design of the CD-TV which positively encourages upgrades and third-party add-ons to be connected to the unit.

If this FMV adapter does materialise, then the CD-TV will offer a complete home entertainment system for playing music CD's, videos, and computer entertainment titles that combine stereo sound and FMV. Add the existing colour graphic and sound capabilities of the Amiga and you really do have the entertainment machine of the future. And that's what ACE has been campaigning for for the last twelve months. At last, it seems, the machine has arrived that could serve as a platform for truly Advanced Computer Entertainment.

THE COMMODORE CD-TV

AMIGA OWNERS UPGRADE

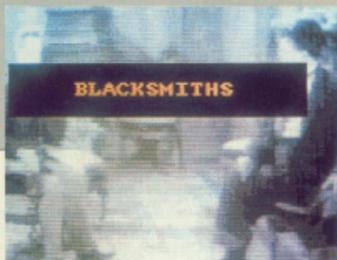
Yes, existing Amiga owners will be able to upgrade to full CD-TV capability later this year. Commodore plan to produce a small unit that will connect onto your Amiga (512K or 1Meg) as soon as possible. 'Those Amiga owners are very, very important to us,' said Gail Wellington of Commodore, 'and we aren't going to let them down.'



Lucasfilm are working on CD-TV projects. We expect one of the first to be James, since the game features a musical theme that could be ideally suited to the CD-TV's audio capabilities. And next? A version of Indiana Jones with skills from the movie?



Virgin's North Pole Expedition, recently translated onto PC (see page 61) will be the company's first conversion for the CD-TV.



ORL are very excited by the CD-TV as it offers the perfect hardware platform for their new range of hypergames, produced using their DINE system. Reported on *EDGE* in the ACE magazine is *Blacksmiths*, the first DINE title. Herewith the clues, to be completely re-programmed, using new high quality photographic material

CD-TV TO AMIGA UPGRADE

Although the CD-TV comes without a keyboard, you can upgrade it easily by adding a unit due for launch later this year that will give the machine full Amiga capability. You can word process in the morning and explore the North Pole in the evening all on the same machine.

THE GAMES

Everything's here to produce the games machine you've always dreamed of. Two player IR interface, overlaid CD sound and Amiga sound, IR remote controls, the existing Amiga graphics capability, MIDI for blasting synth accompaniment, high score RAM cards, and the promise of full motion video in the future. Wow!

So what's going to hit the shelves in the near future?

The answer, predictably, is nothing like as much as you'd like. ACE has uncovered a large ring of UK software companies who are producing software for the CD-TV, but none of them (except Virgin) were prepared to discuss their plans with us since this article was prepared before the official launch of the machine. However, we can make some firm predictions...

First, there are the titles Commodore have organised for the machine's launch. These include products from Rand-M-Nally (an interactive atlas), Lucasfilm (where the betting it'll be a version of Loom with enhanced audio!), Virgin Interactive (North Polar Expedition), and even some CD-TV versions of the famous Beatrix Potter stories for younger (or young at heart) players.

There's a superb foreign language disk as well, where you can click on words and hear them spoken in French, or Spanish, or whatever. And of course the CD means proper human speech - none of this synthesised rubbish any more. One application - will the Family Health Adviser - even diagnoses common family illnesses. And Jack Niklaus himself will be giving you practical tips on golf and shots of him playing in the CD-TV version of Jack Niklaus Golf.

In fact, most British and American software houses have expressed an interest in producing software for the machine, giving it a greater degree of support than any other computer has had at launch to date. That in itself must be encouraging.

Naturally, many softco's will be producing enhanced versions of existing games and the two player IR interface does very well for the latest trend towards multiplayer entertainment.

New software design techniques are also promised, as programmers produce scenarios with variable difficulty levels for each player character, allowing, for example, better gamers to compete on equal terms with their younger relatives. 'We're looking forward to a whole new category of family games,' said Commodore's Gal Wellington, '...where people can play together and the level of difficulty suits EVERY player, yet all are involved in the same scenario. This is very much a home information or entertainment device.'

In fact, it could be the final realisation of the Amiga dream - persistently marketed since birth as a business machine, against all the instincts and desires of us gamers, the CD-TV could give it a glorious games rebirth.

THE NITTY GRITTY

Price: UK price not yet certain, but US price under \$1000 (just over £600).

UK Launch Date: Not yet fixed, but the September CES show in

640*256 non interlaced 16 colours

320*512 interlaced 32 colours

640*512 interlaced 16 colours

Video display 512 lines, 50Hz, 6 bitplanes, 8 sprites per scanline

Ports: Centronics, RS232, external floppy disk, controllers, MIDI out, stereo headphones, personal RAM card for status storage (up to 64K)

CD-ROM SPECS:

Sony/Philips type CD-ROM

Data readout: 153.171 Kb/second (2Mbytes/second in burst mode)

Average access time 0.5 secs

Data capacity: 540 Mbytes

Capability of sound mapping Amiga-generated sound over CD sound

ON THE CARDS

The CD-TV also features a plug-in smart card capability, allowing the user to store high scores and other information on RAM-card. This could also be used to program your favourite audio CD's (tech tracks to play etc).

IN CONTROL

The CD-TV comes with a special infra-red controller featuring 10 function keys plus shift key to offer 20 options in total. There is a console-type control pad and two select keys. The unit also offers CD audio controls - reverse, forward, play/pause, headphone volume, and stop keys. In case of disaster, there's even a complete reset function. Optional accessories will include:

- floppy disk external drive
- trackball
- RAM-ROM cards
- Genlock
- Keyboard IR interface with track ball
- Keyboard
- Two player IR interface
- Modem

London seems a possibility. Should definitely be before Christmas.

System Overview: An interactive consumer product cosmetically resembling a VCR, intended for the home environment. Easy to use via infrared remote device and based on Amiga technology. Consists of a CD-ROM drive with CD-Audio capability, real time clock, and remote controller. It can be easily connected to a TV or monitor and stereo system. It is targeted at the family or audio entertainment enthusiast.

Objective: To give easy access to unlimited educational, informational, and entertainment-oriented potential using the multimedia features of graphics and sound.

Major functions:

- Playing Amiga CD ROM software which can integrate various qualities of audio
- Playing CD quality audio while displaying graphics (CD+G)
- Playing standard high fidelity CD-audio disks.
- Can be expanded to an Amiga computer
- CD mid out to drive other music devices

CPU details: internal circuitry based on existing Amiga design with additional custom chips for handling the CD-ROM interface and infrared control.

Memory: 1 Mbyte RAM, 2K non-volatile RAM for system clock, preferences etc., 512K ROM including audio CD routines.

Internal slots: Intelligent video slot (for optional genlock etc) 15 pin edge connector; DMA slot for networking etc...

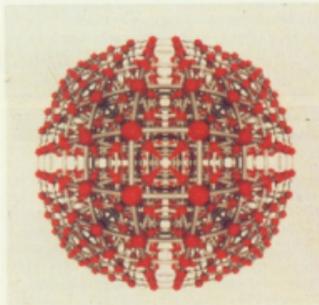
Video outputs: Analog RGB, Digital RGB, Composite video, component video Y,C, RF modulated, optional genlock capabilities.

Graphics display:

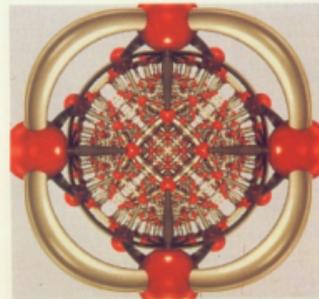
320*256 noninterlaced 32 colours

Sprites at the Speed of Light

Picture your world at the speed of light. Einstein predicted it in his special theory of relativity back in 1905. But no one has ever seen how objects would look traveling at 99% of the speed of light. Until now. Reaching beyond the range of human imagination, three researchers from Carnegie Mellon University in the States have developed an algorithm enabling them to generate graphical simulations of objects seen at these incredible speeds.



Lattice moves towards camera at 0.99c. © 1989 Hsiung, Dunn and Loefbourrow



Games will soon use Einstein's special theory of relativity, Rik Haynes finds out why...

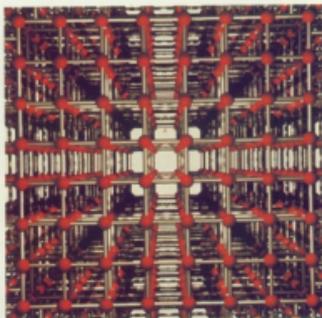


Robert HP Dunn and Ping-Hung Hsiung busy visualising relativistic effects in Spacetime

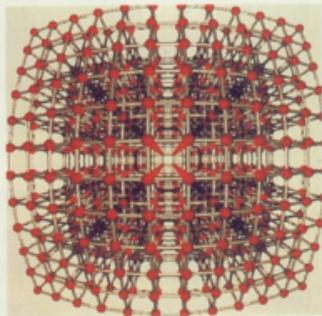
"The most beautiful thing we can experience is the mysterious."

Albert Einstein

Lattice moves towards camera at 0.99c at a latter viewing time t=30.30. © 1989 Hsiung



A regular lattice viewed at stationary. © 1989 Hsiung, Dunn and Loefbourrow



Lattice moves towards camera at 0.9c. © 1989 Hsiung

Ping-Kang Hsiung and Robert HP Dunn, working in the Imaging Systems Laboratory of the Robotics Institute, visualise the effect described by Einstein by incorporating the finite speed of light and the fourth dimension, time, into ray-traced graphics.

"We've developed an innovative ray-tracing algorithm to describe Relativistic Effects in Spacetime (REST). Our algorithm, called REST-frame, simulates a generalised world in Spacetime and gives the fine details implicit in the Special Theory of Relativity that have not yet been made apparent. These novel simulations disclose the non-intuitive realm of Special Relativity and, by visualisation means, advance beyond the findings of past revelations concerning relativistic effects," say Hsiung and Dunn.

But what has this got to do with games? Possibly everything. REST-frame could revolutionise the visuals in video games. Imagine it. Sprites bending back into themselves, transforming into amazing geometric shapes not yet seen by the human eye. Playing Star-glider II will never be the same again.

Major Japanese console and coin-op manufacturers are clamouring to claim the REST-frame code. American and European entertainment companies aren't standing still either. And it doesn't stop there. Movie moguls want REST-frame to enliven the special effects in their films. Carnegie Mellon University has already copyrighted the code, and has patents pending on the mathematical formulas. After all, there's no REST-frame for the wicked. Or is there?



july SUPPLY

Rik Haynes recounts the hyper without the hype

Fact: *UP AND AWAY* is the debut game from a new software development team, Expanding Minds. More facts: Split-screen display, platform parallax scrolling, over 20 individual interactive programmed characters. Yet more facts: *Up and Away* will be published on the Imageworks label this

autumn for ST and Amiga. Can you handle another fact? In America, 84% of organ transplants are successful in prolonging life.

"Our planet is hurt. Badly hurt. At a breathtaking pace personkind is exhausting all that makes survival on Earth possible. Our world is being stripped bare and choked by pollution. The balance of nature has been upset. We all share responsibility for what is happening."

FALCON MISSION DISK II. New improved Falcon. Beyond Visual Range Missiles. Radar Seeking Missiles. Intercept Missions. Unfriendly capable of launching two separate attacks on your territory using up to five aircraft. Interdiction and ground attack missions. Mission Disk 2 published this summer by Mirrorsoft for Amiga and ST.



A recent EA News Sensation, better known as a Press Release elsewhere in the biz, stated: "*FLOOD*, an original game from Bullfrog, the developers of *Populous*". There was more. "Despite the phenomenal success of *Populous*, Bullfrog feels that

certain games players were left out due to the game's sophistication. It is their current intention to produce games appealing to all markets. *Flood* has been designed with the younger player in mind, this is reflected in the humour and overall feel of the game." It ended, "*Flood* relates the sad story of Quiffy, a slightly overweight wee green Blobbie, the last of his race. *Flood* is a true 16-bit platform game."

Three youths who spray-painted 'Hitler is Back' on their New York school wall were sentenced to study the holocaust for a school test. John Carey, a Westchester County Judge told them, "I don't wish to punish any of you. I wish to educate you".



Soul-it-eeerie brother, is there still a part of you that wants to live. Soul-it-eeerie sister, is there still a part of you that wants to give. Check out Adamski's brilliant *Killer* soundtrack. Check out Jason Kingsley's computer graphics in the *Killer* video. Check out Kingsley's new-age game, *MURDER*, for US Gold in the autumn.



The Sales Curve has created a Storm. A new entertainment software label. The first game. **SAINT DRAGON.** Horizontally-scrolling shoot'em-up coin-op from Jaleco. Rescue an imprisoned giant dragon. Other games to be released. **SWIV, ROD-LAND, BIG RUN.**

The title. **PROPHECY I - THE VIKING CHILD.** The company. Electronic Zoo. The game. Platform. The features. "Full colour beautifully animated backdrops, 16 different levels, 9 end of level challenges, different shops and shopkeepers, secret bonuses, 22 original pieces of music, 24 sound FX, detailed 16 colour animated surround, 48 colour map screen to chart progress, impressive introduction and end sequence, a three disk product." The end.



Last month 37% of the American TV audience watched the 39-year-old pilot episode of *I Love Lucy*.

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METAL SOUND...
METAL PLAYABILITY...
EVERY "DINAMIC" GAME GIVES YOU...**



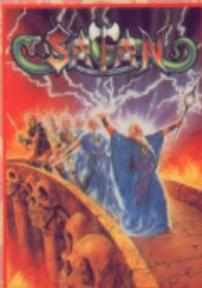
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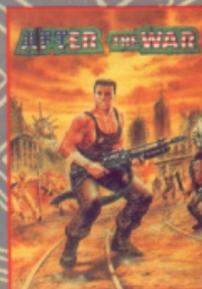
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**IN POST-HOLOCAUST MANHATTAN AFTER THE WAR
BRINGS YOU WILD STREET ACTION.**



Hate Mail

Just as we introduce our new CD Screentest section, along comes someone who thinks CD is rubbish....

DIY SURVEY

I was very interested to read in ACE, the ACE Debate and the three phone-in questions. I think it is a great idea to put an item like this into the magazine each month. At the CES show in September, MPH will be launching its own software title. However, before we decided to launch the title, I had to spend a long time researching the market and in

this letter I'm going to write what my research found out and to also voice my own opinions on the three subjects.

Software Licensing - Good or Bad? The results I got showed a massive NO to software licensing. Of all the people interviewed, only just over 1.7% said that they actually found a licensed game was more enjoyable and had more lasting appeal than an original game. The public felt that they could never rely on a licence to be playable or even well programmed. Nearly everyone asked said that they felt on the whole that original games are well programmed and well thought out.

My personal opinion is very much in line with the majority of the public. I feel that the licenses are actually killing the industry. A massive 96% of all people interviewed actually want the price of software to go down. The

reason why the large software houses won't reduce the price of games is this. It is nearly always the large software houses who write the licenses and to quote Gary Bracey of Ocean, "The disadvantages of software licensing are the huge costs involved". Who has to pay the cost of the license? The end purchaser.

The second reason why the licenses are killing the industry is because the technology in the arcades is just too far advanced for that of even the most powerful home computer. Everyone wants to produce the latest arcade hit but just how can you put the contents of an average arcade machine with 68000 and Z80 processors, dedicated graphics chip, dedicated sound chips and with a memory of several megabytes into a 16-bit computer with 1/2meg of memory. It just can't be done. Three and four years ago when everyone

owned either a Spectrum, C64 or CPC464, the arcade games that were being converted were relatively easy to convert. These games like *MkII*, *Hyper Sports*, were again both simple ideas, but so annoyingly addictive. Today, programmers try to convert *Afterburner*, *Hard Drive* which just can't be done. As for the films, they never convert well to a computer mainly due to the poor story lines.

The third reason why licensing is killing the industry lies with the programmer. All the big software houses have their own in-house programmers. These people do nothing all day but sit at a screen and program a computer. These people who have been with the software houses for some length of time must be so short on inspiration, it is hardly surprising that they often produce such rubbish. Of course, I am not saying all the house teams are bad. A lot of the newer ones - *Sales Curve*, *Assembly Line* - are very very good. However, the future of good games lies with today's young programmers who are growing up with 16-bit machines and using 16-bit techniques as opposed to the old 8-bit ideas and techniques. They have got enthusiasm, drive and most important of all, new ideas.

Golden Oldies. In the survey, about 65% of the public want conversions of the oldies if they are released at a budget price. Most 16-bit owners have upgraded to a 16-bit machine from their 8-bit and say, "is there a game like *Jet Set Willy*?" The answer is unfortunately no. Games today are often just too complicated to be really playable.

My opinion is that we need the golden oldies to compete against the licenses. To quote Gary Bracey again, "There is better impulse buying with licensed games". What would you buy if you were in a shop and saw *Jet Pack* for £4.99 or *Tin Tin* on the Moon for £19.99? There can't be many Spectrum owners who have never played *Jet Pack*. Even if the conversion is poor, you only need £5 as opposed to £20 which means that a lot more people would be willing to take a chance and buy the game. It can't take much for a good young programmer to produce an exact copy of an 8-bit game - especially Spectrum games - and then jazz it up - as in the case of *Manic Miner* - and put them on the same disk for a budget price. This way, everyone is getting a good deal. The original software house, although they're unlikely to be with us, and the end purchaser would both be happy with a situation like this.

Too many games get false reviews. Most magazines only review the graphics and sound in a game, and judge the game upon them - although thankfully you don't. This can't be done. Nearly all good old 8-

WHY BOTHER WITH CD?

Having been reading your magazine since it was first published, I can honestly say that the quality all round has gone downhill.

Since EMAP have taken you over, typographical errors have crept in, sentences missed out and generally annoying mistakes have been seen all round. Although you do have more features - a good thing to some extent - and other new stuff, I feel the general quality of writing has diminished somewhat. I know that the writers you have on ACE are excellent - I particularly used to enjoy Eugene Lacey's input in other magazines.

What annoys me most about ACE now is that no sooner have we bought an Amiga, ST, PC, Sega, Nintendo, PC Engine et al, you're bombarding us with all this information about FM Towns and CD-I. The Towns I'm not bothered about - it is your job to tell us what's new anyway, but this CD-I, DVI, etc is really getting on my wick. You've been going on about it now for the past year, if not more, and it is becoming a bore. The whole charge of CD-I has been farcical since Philips announced Compact Disc discs ago. Can we please give it a rest and, instead of threatening us with machines we'll most likely never have, devote more time and space to more closer-to-hand matters.

I would personally like to see more 'progress reports' on up-and-coming software, games or serious which I think would serve a much better service to the reader than listening to ACE "rave on" about machines that 99.9% of the British computer-using population has never seen!

Don't take this letter as a put-down, I enjoy ACE immensely but rectifying these few points would, I think, serve to improve this enjoyment. PS H to all Cnetters, Strawberry Head and The Camel.

DAVID CASSIDY, aka Zoggo on CompuNet, West Midlands

• While we love to hear praise, we also love to hear constructive criticism. Production problems are a menace on any magazine and the EMAP purchase involved a tremendous amount of administrative work which meant less time to sort out things like typographical errors. However, we think the magazine is now better than ever before - witness this issue with its world exclusives on CD-TV, *Ninja Turtles*, and much more. And we are now taking on more staff to allow us to pack even more between the covers. We're searching for a talented Staff Writer to join us on ACE. Are you interested? See the advert elsewhere in the *Pink Pages*.

Our brief on ACE is simple. We are here to develop a platform of expertise and information on the technologies that will - whether you like it or not - dominate gamesplaying over the next ten years. No other magazine covers as wide a variety of informative game topics as ACE does. No other magazine provides the definitive games reference material that ACE does. That's not a promise, that's a fact. We're just as happy to cover a CD-I title as a classic Spectrum game or console title. CD technology, however, will be part of tomorrow's Advanced Computer Entertainment. Check out pages 89 if you don't believe us... And you get a prize for speaking your mind!



WHAT DID YOU THINK?

Here are the results to the ACE Debates on Software Licensing, Golden Oldies games, and SAM Coupe...

SOFTWARE LICENSING - GOOD OR BAD?

What was said before...
"The advantages speak for themselves. By establishing contacts with the entertainment giants, we're helping to give the games market a more assured future."

Gary Bracey, Software Development Manager at Ocean

"It's killing the market. It stops innovation. The name is more important than the game."

Mark Cale, MD of System 3

The result...
23% of ACE voters thought software licensing is a good thing and should continue.

75% of ACE voters thought software licensing is ruining the software games industry and should be stopped.

What was said after...

"Your readers obviously don't vote with their money. Don't forget to mention the fact that I didn't have any time to think about my case for software licensing."

Gary Bracey

"I'm very surprised by this result. It's not reflected in the sales of games. If 75% of people agree with me, why don't they buy original product?"

Mark Cale

GOLDEN OLDIES - NEW VERSIONS OF CLASSIC GAMES

45% of ACE voters thought they'd like to see more releases of classic arcade and 8-bit games on 16-bit machines and the machines yet to come.

55% of ACE voters thought they'd rather have time and money invested in brand new state-of-the-art software.

IS THE SAM COUPE ACE?

55% of ACE voters thought the SAM wasn't their idea of Advanced Computer Entertainment.

45% of ACE voters thought the SAM sounded like their kind of machine.

bit games had simple graphics and basic sound but had superb playability. Today's biggest hits, Kick Off and Populous have simple graphics - although the graphics in Populous are very good - but they both have bags of playability. This is the man ingredient needed for a good game, not the graphics or sound. Too many people forget this.

Is the SAM Coupe ACE? In my opinion the technology in the SAM is wasted. There is a lot that is good in the SAM but it really needed to be a 16-bit machine to compete with today's computers. I can understand how the younger Spectrum owner

who wants an improved Spectrum will be over the moon, and for the younger first time buyer it is the perfect thing, but for the older more mature person, it is wasted because it is limited by it's Spectrum compatibility. While the processor is fast, it's not got the power or speed of a 16-bit processor. The most annoying thing about the SAM though, is that it has come too late. 16-bit machines are well established now and there isn't the room in any market for an upgraded Spectrum.

As you say in your magazine, the Coupe's in the terrible catch 22 situation as it hasn't got the software that it needs to get the sales. If it had been released two years ago, while the 16-bit machines were all £400, then at £250 with a disk drive, it would have got the software support that it needed and that would have made it the perfect ACE machine, but alas, now it's not to be.

Finally, if there is anyone who has written an addictive game on the ST or Amiga that they think is worthy to be released as a budget game or as part of a compilation, then please get in touch with me.

PHILIP HARMAN, MPH, 10 Chancellors Court, Eaton, Norwich NR4 6EY.

FLAWLESS PLAYABILITY

I enjoy your magazine but that is not why I am writing. After first owning a Spectrum 48K, then a C64, I now find myself computer-less. I am somewhat having problems choosing a machine though I don't want to hear the 'my computer is better than yours' debate. What I want to hear is, as I only want to play games, which machine is supported by the most playable and original software?

The Spectrum was, to my mind, the machine with the most playable games. The technical ability was not so good, so programmers concentrated on the game and let's face it, when games are expensive as they are now, who wants to stare at fantastic graphics and listen to fabulous sound but do nothing else. The point I am making is that I'm so sick of software companies using the technical merits of a machine and licenses to sell inferior products. I am sick of the software companies force feeding us with a million variations of the same game.

Anyway, after 'upgrading' to a C64, I was initially very impressed with its technical merits and performance, but I was very unimpressed with the non-existence of gameplay. Regretting my 'upgrade' I sold the machine shortly afterwards and considered buying an Amiga until my friend bought one. There is nothing wrong with the machine, in fact it is excellent, its just a pity 95%

of the programs aren't and why shouldn't they be? I think most of us already know the answer. My advice to the unfortunate programmers earning a crust by producing licenses, battery-fen fashion, is to go home, clear a space in your bedroom and think long and hard about what it was that got us all hooked in the first place. It was people like you with the ability and ideas who wrote, often for long periods at a time, the kind of classic games people enjoyed playing, e.g. Manic Miner, Atic Atac, and the kind of classic games people wanted to buy. Don't worry too much about selling your games as I believe the magazine you are now reading will review your game if you send them a copy, as that is their bread and butter. Good product sells itself and an expensive advert in the back of ACE magazine with recommendations from reviewers will go a long way to ensuring that you enjoy the fruits of your labours. Just take a leaf out of Jeff Minter's book.

Please don't recte lists of highly rated games I could try and how well these programs are faring in the charts because, to me, we have all been brain-washed into appreciating the type of product which six years ago would have received poor reviews, but now stands out from the crowd as 'quality' product.

Another machine I considered buying was the Atari Lynx. Fabulous though its merits are, each game is priced at approximately £30. Silly me, I thought the high price of software was because of piracy, yet the Lynx cards are virtually pirate-proof, as are, I expect the cartridges for the consoles. The hardware manufactures, it appears, are really ripping we consumers off. Whilst I don't object to technological progress, it does seem a shame that after many people have begged, borrowed or stolen to buy the new 'state-of-the-art' hardware, the company suddenly announce a new and even better product. Computers aren't like a cheap pair of shoes, to be replaced every few weeks, and it is high time the manufacturers realised this. I even hear that, as I write, Atari have an upgraded Lynx, almost ready. Then why the hell didn't they release it instead of this one? Profit, perhaps. Will software be the Stock, Atken, Waterman singles of the eighties and hardware the Rap music of the nineties? In short: here today, gone tomorrow.

Two friends of mine, who both owned Amiga's have after much expense arrived at the same conclusion as myself. We have in honesty decided to search through the local papers and pick up one of the many second hand Spectrum 48K computers to be had. The ones that we don't buy, we will certainly advise the owners not to let go at any cost

because it is better the devil you know than the devil you don't. It is a shame that this is the case, when technology can promise so much, but with regard to most things in life, it is what you do with it that counts and I'm not necessarily talking about graphics and sound, speed plays probably the largest factor. To me, the ultimate computer would be the one with the Great Graphics chip, the Fast Processor chip, the Superb Sounds chip and most of all the Flawless Playability chip. Though sadly, with the exception of the Spectrum, all new computers have disregarded the latter.

In conclusion, all I want is to play enjoyable, original programs with good graphics and sound on a computer which I won't need to replace within a year and not be robbed by software manufacturers using piracy as an excuse for high prices. I know I'm not alone in my feelings.

I feel this letter will do the whole industry a lot of good and let other disillusioned users know that they are not alone.

ANDREW HIRST, WEST YORKSHIRE

• There are good and bad games for every machine, that's why there's ACE - keeping you informed of the good and warned of the bad.

SAM COUPE COMPATIBLE

Now that the MGT SAM Coupe is out, I would like to say that it is a brilliant machine. It has superior sound capabilities to any 8-bit computer or the Atari ST and breathtaking graphics - close to a 16-bit's capabilities and a very fast BASIC.

The crunch comes when buying new software - there is no way for the buyer to discover whether a program will work on the Coupe using the Emulator, or if you're lucky (like me) have access to the Spectrum's 48K ROM.

The solution is simple. Software houses ensure that any new games will be written so that it will work on the Spectrum and the Coupe and put on a label something like "SAM Coupe Compatible", and also test their old games and put on similar stickers if they work on the SAM. Only then can we confused Coupe users find out whether to buy it.

I'm pleased that some companies are taking an interest in the SAM Coupe but I hope they will soon start including Coupe specific games in their range, then it will really take off. Finally, MGT have put a lot of hard work into the machine and they deserve to be rewarded.

PETER J HUTCHISON, Halifax
• SAM Stickers, sounds like a great idea. Over to you, softcos...

WORLD CUP SOCCER



I.B.M. Pc
AMIGA

ATARI ST

AMSTRAD

SPECTRUM

CBM 64

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GAME**
ACCEPT NO SUBSTITUTE!



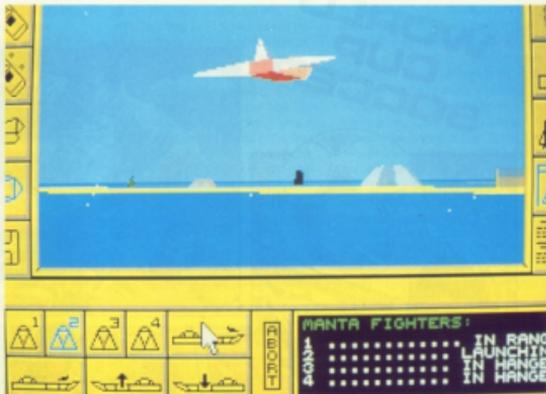
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Virus by David Bruben and Firebird. The Vertex is a point floating in three dimensional space, it's represented in the computer by three numbers: x, y and z. Z is used to tell how deep the point is into the TV screen. The Model is the computer's representation of the 3D shapes you want to move around. This consists of a cluster of vertices along with information about how to join them all together. A Polygon is a closed shape with straight lines. The finished model is a list of vertices, edge connection, polygon and colour information, and also one or two other things that you might want to sneek in



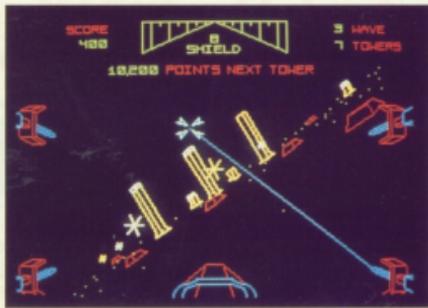
Carrier Command by Realtime Games and Rainbird. The Matrix is used to represent the orientation of those objects that can freely roll and tumble through space. A 3x3 matrix has the brilliant ability to represent the twisting and rolling of space. A matrix must be kept for each of the rotating objects in the scene, plus another one for the camera or eye - this is so you can represent the rotation of the thing you are looking from, as well as the things you are looking at. The Transformer lets you move objects through space - move the eye around the scene. You take all the 3D vertices in the picture and multiply them by the matrix for the camera - or the eye - and you take care of all the rotations. To translate an object just add on the amount of movement in the x-axis, y-axis and z-axis to all the x, y and z numbers

Damocles by Paul Wookes and Neogen. The trouble with all these three dimensional points is that the TV screen is only two dimensional. The Projection is a squashing procedure which takes 3D vertices and projects them onto the 2D TV screen. Things in the distance should look smaller than things nearby - the secret is to divide by z. You have the vertex (x,y,z) and you turn it into the 2D screen coordinates (X,Y) - just Xx/z, Yy/z. The Painters Algorithm ensures that your graphics code paints polygons at the back of your picture before things at the front. If you get this wrong, things look really weird

The Key

You don't have to be a mathematician to create 3D games - but it certainly helps. Glyn Williams and Rik Haynes unveil the secrets of the third dimension

Star Wars by Atari and Domark. If, after you've projected your vertices, you join up the dots with straight lines, you draw a picture which looks like all the objects are made out of frames of wire - Wireframe images. This is also called a Vector Display. The advantage of vectors is that they're very fast. The toughest part of all 3D computer graphics is not drawing what is there, it's not drawing what isn't there. Objects which are partially on-screen and partially off-screen must be Clipped against the edges of the screen. Exactly how you get around this is a very difficult issue - a triangle can be clipped against a rectangular screen and come out with seven sides





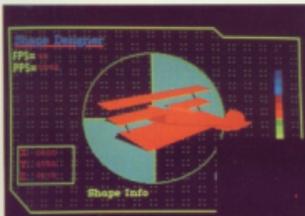
Starfighter II by Argonaut Software and Rubinfeld. If you paint solid-colour polygons on the screen instead of just wireframes you get a Solid Fill display. This should never be called a filled-vector display - the term 'filled-vector' was coined by a person who thought that solid fill displays were made by filling in the gaps in a wireframe display like paint-by-numbers. This never happens. With 3D graphics you have to do things as fast as possible. You don't have time to waste. The job of the programmer is to avoid every single unnecessary routine and speed-up every vital one. Stuff that's off the edge of the TV screen isn't really worth drawing and so should be forgotten about. It should be Culled.

"You're trying to suggest form in the cheapest way possible."

Glyn Williams, creator of Warhead



Why to Three Dee



Shape Designer by Glyn Williams, Motion Picture House. Instead of laboriously working out all his 3D models on graph paper - like he did with Warhead - Glyn Williams has written a Shape Designer program for his next game, Fokker working title. Starting out with Airfix kits and technical plans for World War One biplanes, Williams number-crunches their shape and form into 3D model data using the Shape Designer's intuitive language. Williams explains, "You try to produce a compromise between something that looks like the shape you're after, but is as simple as possible. A sort of impressionistic thing. You do a simplified form with all the key points which kind of make a skeleton of the shape. It's all trial and error. Instead of keeping one detailed model, I've also a far less detailed one to give the impression of the shape in the distance. It's like the special effects in the Star Wars movies - they had few Millennium Falcon models, each with different levels of detail, depending on what kind of shot they wanted. It would be inappropriate to use the most complex model in the distance."

Warhead by Glyn Williams and Activision. With 3D you're trying to give the best impression of realism, so in some circumstances it's best to mix 3D solid fill graphics with 2D sprite images. This explosion from Warhead is a 2D piece of hand-drawn pre-drawn artwork used to give better effect than a blast of 3D vectors.



READ ON

- Do you want to find out more about three dimensional graphics? Here are a few recommended reads: *Fundamentals of Interactive Computer Graphics* by Foley and Van Dam (Addison Wesley), *Principles of Interactive Computer Graphics* by Newman and Sproull (McGraw Hill) and *Microcomputer Displays, Graphics and Animation* by Bruce Artwick - author of *Flight Simulator* (Prentice-Hall).
- If you have any 3D queries write to: The Third Dimension, ACE, EMAP Images, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU. Also, if you've programmed a 3D demo, send it to us. You may see it covered in a future issue!

interceptor

Archipelago by Astral Software and Logotron Entertainment. There are three issues which are very important to creating animated 3D graphics on a micro. Speed, speed and more speed. The pictures must be updated very rapidly to convey a dramatic sense of speed and movement. To get perfectly smooth animation you have to generate 25 pictures or frames every second. This is asking rather a lot. In fact, it can not be really achieved on the present generation of micros. A typical ST or Amiga game animates a low-complexity scene at 4 to 10 frames per second. A fast PC can do a little better. This is the limit till we get better hardware - dedicated math and polygon chips. Achieving even poor frame rates on the current 16-bit micros requires a large programming effort and inevitably means programming in assembly language. Sadly, the immense effort in producing an effective working 3D graphics system often means that other games issues such as depth, interactivity and playability are neglected.

ON THE 3D HORIZON

- **INMOS Flight Simulator** written by INMOS applications engineers Phil Atkin and Steve Ghee. A simultaneous four player flight simulator knocking out at 23 frames per second. Uses 11 assorted Transputers per person. See ACE 7.
- **Microprose F-15 Strike Eagle** flight-sim coin-op. 30 frames and 60000 polygons per second. 256 on-screen colours. 80000 linked up to custom designed silicon. Created by Gene Lipkin, co-founder of Atari, now working at Data East. See ACE 32.

• **AttitTech Centre** environmental game simulator from ESP Corp. Displays 200 3D pre-drawn objects in real-time using a maximum of 64000 on-screen colours from a palette of 16 million. 40Mhz 34010 graphics processor. 20 channels of spatial audio using sampled or FM synthesised sounds. See ACE 28.

FRACTAL FACTS

Any irregular shape, form or distribution retains its irregularity at any magnification. Fractal geometry was invented by Benoit Mandelbrot, Professor at New York's Yale University. "You can use my geometry to create shapes that are perfectly repeatable, controllable and have measurable properties which are at the same time indistinguishable to a large extent from the messiness of the world. It's brought the idea of perfection down to Earth," says Mandelbrot. Fractal graphics are used in military simulators, stock market analysis and movie special effects.

SPECIAL THANKS

Special thanks to Glyn Williams for all his help and time

Rescue on Fractalus



Khalaan

Rainbow Arts

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Be spellbound. Let Khalaan enchant you. Adventures, dangers, intrigues and secrets await you in the mystical world of the Orient.

As one of four Caliphs you covet the throne of the Great Caliph, supreme ruler over all land and life. The army obeys your every whim, your ships ply the oceans, your caravans range far and wide, carrying exotic goods to your country's markets. You decide between war and peace

Khalaan is a complex strategy simulation. All actions are simulated in real time. You have also got an options menu at your disposal with which the skill level can be adjusted to suit your requirements.

- "PHOTOREALISTIC" graphics and animation
- Five gripping action sequences, one in 3 D
- Mouse, joystick or keyboard controls
- And let's not forget the atmosphere of "Arabian Nights".



Poker (working title) by Glyn Williams of Motion Picture House, Activision

Virtual Realities



The first affordable cyberspace technology will be user-interface units from people like Nintendo, so kids can have more intense video games. It's probably going to be like freebasing TV," William Gibson - author of *Neuromancer*, *Count Zero*, *Burning Chrome* and *Mona Lisa Overdrive* cyberpunk novels.

EXPANDING THE EDGE

What can we expect from the next generation of 3D games?

Glyn Williams: "Doing solid fill on the ST and Amiga is asking a lot. I don't think you'll see a huge amount of progress, I think people are pushing the outside of the envelope now. I'd like to see polygon games on the ST and Amiga which are much more fun to play. Better games that happen to have polygons in them instead of 'Wow, this game runs at a million frames per second, features 10000 models with millions of facets.'"

Michael Powell: "Better games. Better simulations."

Mike Singleton: "The maths involved in 3D graphics are quite horrendous."

Adrian Stephens: "I like to create the looks and do the maths."

Martin Kenwright: "Speed and detail are going haywire."

Jez San: "The good 3D programmers have got the games as fast as they can go."

Martin Kenwright: "People rush to get the fastest 3D - but it's as fast as it's going to get."

Ian Oliver: "People can't perform miracles. They should relax the realism. That's why we set things in the future."

David Braben: "A lot of 3D games are just 2D games with 3D graphics."

Jez San: "You'll start getting more interesting shapes. Curvy instead of lines and polygons. We're working on things like transparency and shadows."

Brian Pollock: "The base routines are already down. The frame rates are there. Only programmers are interested in the number of polygons per second."

David Braben: "Computer graphics seem to go through fashions. At the moment that fashion is 3D."

What kind of 3D games will you be playing in the future?

Rik Haynes polls the experts for their predictions...

Andy Craven: "3D is a bandwagon. It's the in-thing."

Jez San: "We're leading the field in terms of 3D technology."

Andy Craven: "3D games are still hyped up on the technology."

Paul Carruthers: "3D games will speed up a bit more."

Ian Andrew: "Our freescaping games will be getting more complex."

Brian Pollock: "Publishers play on the snob-value of 3D games."

Andy Craven: "You have to produce good games, not just good tech."

Mike Singleton: "Starlord uses a new technique to fade into the distance, giving a misty distance look. It looks like you've got headlights on your spaceship. I've also just started work on *Midwinter II*. It will use the same graphics system, but you'll get extra transport modes and a different environment. The snow has melted. You're off the coast of West Africa. This time you'll be a single hero or heroine instead of a team. There are some rather nasty interrogation sequences with the Secret Police. The game will be broken up into missions. Sorry, no release dates."

Brian Pollock: "In *Thunderstrike* I've tried to convey a real feeling of space. 3D is far more flexible than sprites. You also need intuitive controls. I'm a lot less interested in the technology. *Thunderstrike* is something I've always wanted to do."



Glyn 'Warhead' Williams

EXPERTISE

- IAN ANDREW of Incentive - *Driller*, *Darkside*, *Total Eclipse*.
- DAVID BRABEN - *Elite*, *Virus*.
- PAUL CARRUTHERS of Astral Soft ware - *Archipelagos*, *Resolution* TD.
- ANDY CRAVEN of Vektor Graphics - *Bomber*.
- MARTIN KENWRIGHT of Digital Image Design - *F-29 Retaliator*.
- IAN OLIVER of Realtime Games - *3D Bank Daul*, *3D Starstrike*, *Carrier Command*.
- BRIAN POLLOCK - just finished *Thunderstrike* for Millennium.
- MICHAEL POWELL - *Powerdrome*.
- JEZ SAN of Argonaut Software - *Starflight*, *Starglider II*.
- MIKE SINGLETON of Maelstrom Games - *Lords of Midnight*, *Whirligig*, *Midwinter*.
- ADRIAN STEPHENS of The Assem bly Line - *InterPhase*.
- GLYN WILLIAMS of Motion Pic ture House - *Warhead*.

Paul Carruthers: "The idea of a 3D image isn't enough anymore. Gameplay aspects will become more important. You shouldn't use 3D unless you have to."

Ian Oliver: "Battle Command and Duster are aimed more at the American style of gaming. We'd like the British market to be a bit more mature and discerning."

David Braben: "Speed is essential, but the game-play's far more important."

Andy Craven: "We're currently working on five 3D games, one for *Mirrorsoft*, two for *Activision*, and two for *Virgin/Mastertronic*. *Mirrorsoft's* *Killing Cloud* uses a lot of 2D screens, we're trying to do down the 3D and concentrate on great routines. It will have real cylinders. For *Activision* we're working on *Mechwarrior II*. This is a collaborative venture between three software development companies. Three companies, three styles, all mixed into one. It could be a nightmare

"The good 3D programs have got the games as fast as they can go"

Joe San

mixing it all together. Of course, we're doing the 3D bits."

Michael Powell: "Today you can take top polygon performance for granted."

Adrian Stephens: "People will make an appearance. Things are strictly mechanical at the moment. The games will probably be more fantasy-orientated."

David Braben: "There are too many tank and flight simulations."

SOFTWARE SENSATIONS

The race is always on to produce a piece of white hot code. What new software techniques will make the transition from innovation to application?

David Braben: "Programming 3D graphics isn't hard, flying realistically with correct motions and collision detection are the hard bits."

Glyn Williams: "I don't think you're ever going to see ray-tracing as a live action thing. Ray-tracing is to do with optical simulation, calculating what every single beam of light in the scene does - that means a lot of work. But you will be able to see light source modelling, where sources of illumination illuminate polygons which reflect the light in a more realistic manner and actually cast shadows. There are some games that have already started to do this. Also smooth shading of objects - so instead of objects looking like they're made out of origami, they're separate pieces of facets. You need at least 256 colours to do this. With texture mapping you can take a photograph and stick it on a polygon. But all this is big computer stuff - at the moment."

Ian Andrew: "It's a trade off between resolution and detail."

Mike Singleton: "I'm getting into curves."

Glyn Williams: "Eventually you'll be able to use the real technical drawings straight from the designers for vehicles and buildings with satellite data for the landscapes."

Adrian Stephens: "People get stuck using the same 3D techniques."

Ian Oliver: "Too many people spend too much time



Duster by Revolution Games, Mirrorsoft



Thunderstrike by Brian Pollack, Millennium

WRITE ON

Do you agree with the experts predictions? What type of game do you think you'll be playing in 5, 10, 20 years time? And what hardware will it be running on? This is your chance to predict the future. Write us at: VIRTUAL PREDICTIONS, ACE, EMAP Images, 30-32 Farringdon Lane, Priddy Court, London EC1R 3AU. The most original or amusing concept wins a special software prize for your micro. Don't forget to include your full name, address and computer model.

tweaking their 3D engines and ignoring gameplay. We nearly went that way with Carrier Command."

Andy Craven: "I employ a guy just to sit there working on new 3D software routines. It's a battle of technology."

FRACTAL FUTURES

Will Mandelbrot's geometric baby find a place in future 3D games?

Mike Singleton: "Fractals are essential if you're going to do a game with any breadth in it. As processing speeds increase you won't just get fractal landscapes but detailed fractal objects like trees."

Michael Powell: "You can use fractals to create terrain meshes."

Glyn Williams: "Rescue on Fractalus used a clever technique called Polynomials - equations that make things look like fractals. Sort of ragged-edge polygons. It would be nice to see someone pushing fractal games a bit further."

HARDWARE HEAVEN

Software is only as good as the hardware it's running on. Will future 3D games run on dedicated consoles, CD-ROM, CD-I, or something even better?

Ian Oliver: "We tend to lead with the PC."

Michael Powell: "More and more arcade games use polygons."

Mike Singleton: "Dramatic changes require better hardware."

Joe San: "Every hardware designer I meet I ask to put a polygon chip into their next machine. One day they will."

Glyn Williams: "A general purpose graphics engine could do anything - aircraft, cars, tanks, submarines, terrain, spaceships, etc."

Adrian Stephens: "You need more colours, higher res, and faster processors."

Michael Powell: "It would be nice to have a console that doesn't concentrate on sprites and scrolling."

David Braben: "Consoles with dedicated polygon chips will produce the 3D games of the future."

Mike Singleton: "My ideal machine would be a console with polygon and floating-point co-processors. I'd love to do games for the new Microprose coin-op."

Adrian Stephens: "Dedicated polygon processors will take half the fun away. They'll level things up. You need to keep the edge."

David Braben: "There's enormous potential in CD-ROM and CD-I."

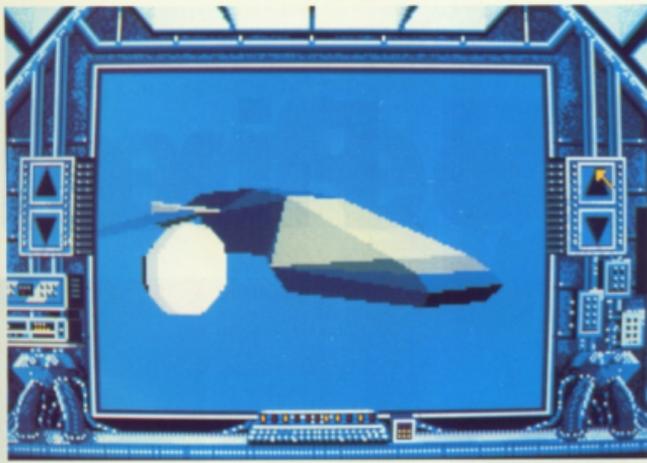
Joe San: "I'm very interested in CD-ROM, I'll support it where I can."

Martin Kenwright: "I'm getting into CD-I very soon."

VIRTUAL VENTURES

Virtual reality was first conceived by IE Sutherland at the University of Utah back in 1968. Basically the idea is to create a complete artificial world inside your computer. You interact with this world - or cyberspace - using sophisticated human-machine interface peripherals like data glasses, gloves and even suits. You're

Killing Cloud by Viktor Graphics, Microsoft



"You're creating illusionary worlds, actually creating space in the computer that you can enter into and interact with!"

Glyn Williams

able to look at, and move around this artificial world as if it was real. You enter a virtual reality. Cyberspace is today. NASA develops it. VPL constructs it. Nintendo plays it. Cybergames are tomorrow...

Mike Singleton: "Virtual reality is the way things will go. It's most people's ideal. Most people want to get totally lost in a game. The trouble with reality is that it's too boring - you can't make things too real. How do you edit out the boring bits? I'd like to do a virtual reality *Lords of Midnight*."

David Braben: "Cyberspace and alternative reality are amusing buzzwords. They are just one interesting avenue connected to control methods. The trouble is, they're very solitary. Multi-player games with big displays make a lot more sense."

Jez San: "Cyberspace. I like the idea. You could do it cheaply. The Nintendo/Mattel Powerglove is incredible. Virtual reality will be in the arcades in five years time. There are much cheaper virtual reality options. We've looked at doing cyberspace already. We'd really go to town on it, we'd love to do it."

Ian Oliver: "A lot of hardware power is needed for cyberspace applications. It's all good fun. As you can probably guess we don't take things too seriously."

Adrian Stephens: "In the far distance there will be more virtual reality stuff. It looks astounding. You can create a far richer world. 3D is the only technique you can use to move around an artificial reality. Cyberspace is a natural for human-computer interaction."

Ian Andrew: "I believe one of the main areas of game-playing will be real-time alternative realities. Nothing beats it. It's the ultimate game feeling."

Paul Carruthers: "Certain hardware will be created for virtual reality. Cyberspace is happening. But I can't

imagine it taking over. The price won't come down for 10-20 years. I can't really see it taking off as the ultimate game."

Andy Craven: "We already have the cyberspace software, all we need now is the hardware. Our 3D software technology is perfect for it. I'm looking for a joint venture with a hardware company specialising in cyber-kit."

Michael Powell: "I think you're going to get hi-tech helmets like the one's fighter pilots use. Beyond that, you'll just plug it straight into your brain."

Glyn Williams: "You're creating illusionary worlds, actually creating space in the computer that you can enter into and interact with. Cyberspace will be good. You can imagine yourself going round a virtual dungeon in your living room, hitting things on the shelves and treading on the cat."

Brian Pollock: "Virtual reality. Excellent. Amazing. When I was at school I wanted to interface a video camera with the brain to create blotchy sight - patches of light and objects. Imagine replacing all the sensory nerves with silicon."

Martin Kenwright: "I can see really incredible things on the horizon."

Glyn Williams: "You just want something that's bloody good fun."



Andy Craven of Viktor Graphics



Blitz on the 3rd Wave Entertainment System by David Braben and Jim Bell

IS THERE SPACE FOR CYBER?

You've read the experts thoughts on cyberspace and virtual reality. Now it's your chance to cast your vote on the future. Just pick up your phone, dial the number, and register your vote.

0898 400 786* - "I can't wait to play a cyberspace game."

0898 400 787* - "Cyberspace. Do me a favour, I'd rather go train spotting."

The results of this survey will be announced in a future issue of ACE.

*Calls are charged at 35p per minute peak, and 25p per minute off-peak. Lines are open 24 hours a day.



Pixel

Technology interfaces artistry,
art infuses tech. Analogue
alternatives, digital dreams.
Rik Haynes scans the state
of the silicon art



WIRED ▲ Designed by Snapper Films. Directed by Matt Forrest.
Computer Animation by Digital Pictures

HOW TO MAKE DIGITAL PICTURES

Digital Pictures produces high resolution 3D computer animation for film and television. The London-based firm has won numerous awards around the world for its work. Clients include Channel Four, BBC, Access, Smarties and Commodore. Five stages to pay the wages...

STAGE ONE: PRE-PRODUCTION

"Computer animation is a totally new medium which offers a rich new world of effects and techniques for film and video. Difficult traditional methods are easy to achieve using computers. Digital Pictures closely liaises with the client to create a 'novel and innovative' sequence. Both sides need an understanding of what is needed and how to achieve it."



STAGE TWO: MODELLING

"The artwork for the elements and objects to be included in the sequence are translated into a form that the computer can manipulate. Digital Pictures uses a 2D digitising tablet and a sophisticated 3D digitiser that allows complex solid objects to be input. It's also possible to create some objects 'Procedurally' using special software. Landscapes are often produced using 'Fractal Modelling'. Similar methods can simulate naturalistic surfaces like clouds and water along with textures like marble, granite or woodgrain."

STAGE THREE: ANIMATION

"Digital Pictures has developed its own real-time animation system using Silicon Graphics Iris workstations. The

animation is set up using a 'Wireframe' display. The animator picks an object and orientates and positions it on-screen. A number of 'Key Frames' are created. All the inbetween frames are then automatically 'Interpolated' and the sequence can be played back at different speeds. The animation system is also used to move and direct the camera or eye position, the position under observation and the placement and orientation of the lights."

STAGE FOUR: COLOUR AND LIGHTING

"A growing number of techniques exist for changing the material attributes of computer generated scenes. The simplest are 'Face Shading' which simulates flat matt surfaces and 'Phong Shading' - a method for representing shiny smooth surfaced objects. In addition to simulating natural light sources like the sun, Digital Pictures can also create a wide variety of artificial illumination effects including variable beam spotlights, lamps of different colour and brightness and glow effects. Both lights and objects can selectively cast and receive shadows. Digital Pictures has also developed powerful mapping techniques. 'Texture Mapping' allows 2D colour images - which may be frame-grabbed, live action, painted or synthesised - to be warped and pasted onto the surfaces of objects in the scene. It's used to provide colour and surface details. 'Bump Mapping' is similar to texture mapping but is used to simulate tactile qualities - wrinkled or rough surfaces like granite or embossed paper. 'Environment Mapping' creates a convincing illusion of fully reflective surfaces like mirrors, chrome, ceramics and precious metals. Digital Pictures renderer and compositor can also simulate other material qualities like transparency and translucency."

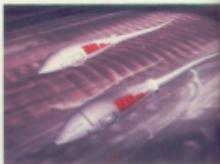
STAGE FIVE: THE PRODUCTION RUN

"When everybody is satisfied, the main production run begins. Depending on the length and complexity of the sequence this may take anything from a couple of hours to over a week. Digital Pictures outputs on both video and 35mm pin-registered motion picture stock at 2000 line resolution - suitable for cinema release."



YOPLAIT

Directed by Richard Dean. Produced by Berkosky Morrow Barrett. Computer Animation by Digital Pictures



▲ DISPATCHES "VIRUS"

"Budgets are tight, the market is increasingly competitive, and the paintbox wars are hotting up," says Imagic - producer of 2D and 3D computer graphics on Pastiche, Silicon Graphics and Apple Macintosh decks. Imagic recently won the Apple Business Excellence Award in the TV and Film Category

el Perfection



▲ ACCESS "PERCENTAGES"

Designed by Robinson Lambie-Nairn, Philip Dupee. Directed by Martin Lambie-Nairn, Computer Animation by Digital Pictures



▲ TIN TOY

The first computer animated film to ever win an Oscar. By John Lasseter's Pixar computer animation company in San Rafael, California. A string of computer animated hits including *Luxo Jr.*, *Red's Dream* and *Knickknack*. Produces special effects for movies like *Return of the Jedi*, *Star Trek II: The Wrath of Khan* and *Young Sherlock Holmes*. See ACE 28. Tin Toy © 1988 Pixar

"Our graphics supercomputers are visualisation tools sculpting data into a form the mind can easily accept and absorb."

Silicon Graphics



▲ SMARTIES "GREMLINS"

Designed by Matt Forrest, Temple Clarke. Animation by Bruce Steele, Phil Mitchell, Temple Clarke. Produced by Snapper Bytes

ONE MILLION POLYGONS A SECOND

Do you seek peek pixel performance? Silicon Graphics BBS Powervision graphics supercomputers are the biz. Hardware accelerated geometric processing coupled with high speed image processing. Cutting edge tech. Powervision delivers 1 million polygons per second, 1 million anti-aliased RGB vectors per second, 1.5 million anti-aliased RGB points per second, a polygon fill rate of up to 200 million pixels per second, and a screen clear rate of up to 1.6 billion pixels per second. Imaging functions can be performed at up to 128 MFLOPS in the graphics pipeline. CPU power from 20 MIPS to 234 MIPS. A minimum of 140 bits per pixel, a maximum of 268 bits per pixel. 1280x1024 res. Real-time render. The perfect beast for the perfect beat. The snag? Prices start at £35000.



▲ ALTERNATIVE IMAGES ▲

The Amiga can still cut it. Alternative Image produces 2D and 3D animation using Amiga technology and a Sony Vision mixer. Heeri Buljko told us AI's software stories. "Deluxe Paint III is excellent for video titting, graphic sequences, logos and slides for palette output. Video-scape 3D has brilliant animation capability. It outstrips Sculpt for speed and productivity. Sculpt 4D produces professional looking imagery and good object creation, but is very tedious and longwinded in some of its animation capabilities. Animagic has an amazing DVE emulator - ADO and Mirage type effects aren't possible in any other program - but the flexible animation editor is prone to GURU at times." AI is offering an animation to videotape or 35mm slide film transfer service for the general user as well as the profession. Call 0533 440041 for more details

INTO THE M C



There's nowhere to hide from... "SLY SPY"
His calling card is your invitation to dance with danger!
Experience the explosive existence of the secret agent in this arcade action thriller that will leave you gasping for breath!

DATA EAST



TAITO

THE FASTEST, MOST THRILLING, 3D DRIVING GAME YET!

Take the wheel of your turbo-charged Porsche as you and your partner go in pursuit of dangerous criminals all driving an evil array of souped-up roadsters. Need to catch up in a hurry? Well, just one press of your **Turbo Button** will leave your eyes in the back of your head!



From the Island of Doh to Monster Island you will encounter Doh himself, stinging insects, hideous toy creatures, lethal combat machines, mechanical assaults, the formidable beings of legend and folklore and finally you will enter the world of darkness and its inhabitants!

Featuring all 7 islands and faithfully reproducing the fun and excitement of this monster arcade hit.



TAITO



THE FASTEST, MOST THRILLING, 3D DRIVING GAME YET!



NULLIS



*ALL GAMES AVAILABLE ON SPECTRUM, AMSTRAD, COMMODORE, ATARI ST, CBM AMIGA.

*F. 29 RETAIL IATOR ONLY AVAILABE ON ATARI ST & AMIGA

X C

FUTURE...



Utterly mouth-watering graphics and an amazing depth of play ... the best flight simulation I have ever seen (and there's nothing on the visible horizon that looks set to come close). It's not a simulation, it's an experience ... Ocean's first flight sim is the best out!" Zzap 97%



SHADOW Warriors

SHADOW WARRIORS, the latest, greatest and most ambitious martial arts coin-op game now rages onto your computer featuring interactive scenic backdrops! The secrets of the Ninjitsu assassination techniques have been handed down since the Mediaeval wars...now they live on in the jungle of the American metropolis.

A thousand years of the Ninjitsu secrets at your fingertips... the Phoenix Backflip, Triple Blow Combination, Flying Neck Throw, Hang Kick and more, give you a formidable armoury of stunning moves.

Take your techniques to the streets

SHADOW WARRIOR...
the hero of the nineties.



SCUNDUS

ocean

What a

It could be yours. The console that every well-informed gamer has been drooling over ever since the first reports of its existence arrived from Japan. The Neo Geo 16-bit console has a spec that should really get the adrenalin going, including 4096 colours on-screen at once and 13 channels of CD quality sound.

As well as cartridges, the Neo Geo will also take credit-card style memory cards – not for the games (although that is possible) but to store your current game status – giving SAVE game options with almost any game, something which no other console currently offers. Save game/status options are very important since they enable game designers to implement more complex game scenarios on consoles, including fantasy and RPG programs.

You can see the Neo Geo 'in the flesh' on the ACE Living Room of the Future stand at the Computer Entertainment Show in September. But even better, you can now – if you're lucky – see it in your own living room even earlier – and become one of the first people in the UK to get their hands on this ultra-sexy bit of kit.

THE COMPETITION

The truth is, it couldn't be easier. All you have to do is answer the three questions in the panel on this spread, write those answers on the postcard mounted on the front of the magazine, and mail the card to us so that it arrives on or before the closing date. You could soon be joining the ranks of ACE Prizewinners and playing some of the hottest games around!

THE QUESTIONS

Here goes with your chance to win a Neo Geo console. Answer these three questions correctly and you're in with a fighting chance!

1. The Neo Geo is marketed in Britain by DG Marketing. Which Japanese company produces it?
2. Does the Neo Geo console use 8-bit, 16-bit, or 32-bit technology?
3. How many sprites can you have on-screen at once?

If you've got the answers, you could win the prize! Jot them down on the special postcard mounted on the front cover and get them off to us pronto!

ACE and SNK – aided and abetted by DG Marketing – give you an exclusive opportunity to win the games machine that makes other consoles look like ZX81's – the fabulous Neo Geo...

THE PRIZE!

The winner will be the sender of the first postcard pulled at random from those received either on or before the closing date for the competition (see below) and bearing the correct answers to the three questions.

The prize will be... yes, yes!... one perfectly wrapped, spanking new, Neo Geo console direct from Japan. And as a special bonus, we'll throw in some free software – the choice will depend on what is available to us at the time.

The closing date is 5th July 1990. No employees of EMAP, DG Marketing, or SNK or those involved with the printing, distribution, and sale of ACE magazine are eligible for entry. The decision of the judges will be final and no correspondence will be entered into. As soon as a winner has been selected, we will forward the prize as soon as possible, but obviously we can't be responsible for third party delays. We will, however, do all we can to minimise any hold-up.

Here's the machine...



The Ultimate Console – soon to be blasting away in YOUR bedroom?? Get lucky – and get that postcard off pronto!

a prize!

TOP PLAYERS GOLF

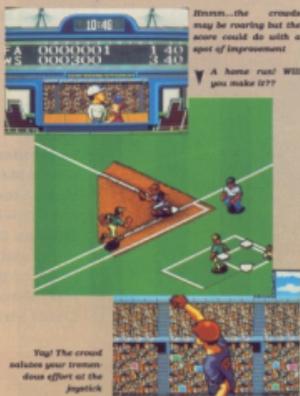
Golf games have been staging a comeback recently, with Gremlin launching Ultimate Golf and Golfmania on the Sega – not to mention the superb TE Soft Golf on the FM Towns (see page 61). But when it comes to graphic presentation, the SNK Neo Geo version has to be seen to be believed....



Didn't we do it well? The final presentation screen where you take all the honours – if you're good enough

BASEBALL STARS PRO

American sports are really hitting the games scene now. Ever since American Football fans began clamouring for micro versions of their favourite sport, US and Japanese companies have been casting the net to bring in more and more special interest titles. Here's Baseball Star's Pro on the Neo Geo. With presentation like this, the real thing is beginning to look a bit jaded...



...and here's what it can do!

NAM - 1975

Will Vietnam ever fade into history? NOT if they keep bringing us games like this, it won't.



Who cares about the dark about origins of this scenario? With graphics like this, even if it was dark we wouldn't dark out

We couldn't get to this stage in the game, but we think it possible that something may just have happened to your plane. Something nasty...

Egads! They're coming from all over the place. Great sound, great graphics, and a great deal of bloodshed. Definitely not for pacifists

MAGICIAN LORD

Ouch. This game undoubtedly has some of the best graphics we've ever seen in a console arcade/adventure. When you're not casting fireballs at the hideous variety of evil minions the game throws at you, you're wondering what a Dungeon Master scenario would look like on the Neo Geo – and when we can afford to buy one, if it appears.



Tim to one that when you hop up to the left you get blasted by a fire-breathing Archambassador. Or something worse...

Putting how the opposition always cheat. Here they've decided to ignore the force of gravity and take you out from above

NEO GEO POWER

Processor: 68000 assisted by a Z80A
ROM: up to 64Mbytes on plug-in cartridge
IC Card: stores status and player data for up to 27 games titles
Sprites: Max on-screen at once: 380, with hardware assisted scaling
Colours: Max 4096 on-screen out of palette of 65536
Graphics: 3 independent background video screens
Sound: 13 sound channels including one noise

Rent-a-game?

Although we were unable to secure software suppliers at the time of going to press, we will definitely be supplying some free Neo Geo software to the winner. Further titles may be available on a rental basis from the distributors – important since the final cost of software may be high due to the vast memory storage requirements of the Neo Geo's massive game scenarios.

READERS' OFFER



Lords of the Rising Sun



Phobia



It Came From The Desert



Toobin



Dragon Spirit



Star Wars



Hard Drivin'



Conflict Europe

TITLE	FORMAT	PRICE
Dragon Spirit	ST/Amiga/PC	4.99
Conflict Europe	ST/Amiga/PC	9.99
Shuffle Puck Cafe	ST/Amiga	9.99
Phobia	ST	7.99
A.P.B	ST/Amiga	9.99
De Ja Vu	ST	4.99
Toobin	ST/Amiga	5.00
Fernandez Must Die	ST	7.99
Castle Master	ST/Amiga	19.99
Three Stooges	Amiga	9.99
Hard Drivin'	ST/Amiga	9.99
Shadow Gate	ST	4.99
Uninvited	ST	4.99
Lords of the Rising Sun	Amiga	24.99
Interphase	Amiga/ST	19.99
Chaos Strikes Back	ST	19.99

8-BIT GAMES

	AMS	SPEC	COM
Dragon Spirit	4.99	4.99	4.99
Hard Drivin'	5.99	3.99	-
Toobin	3.99	3.99	3.99

SPECIAL OFFERS

- It Came From The Desert (Amiga 1Meg Only)
- Antheds Data Disk (Amiga 1 Meg Only)

NORMALLY £34.98 (R.R.P)

OUR PRICE £24.99

- Star Wars Trilogy (ST/Amiga) [3 disks]

NORMALLY £24.95 (R.R.P)

OUR PRICE £14.99

Please state clearly which machine you have

Cheques payable to: EMAP Images

Send to: Readers' Software Service

PO Box 136, Peterborough PE2 0XW



GREATEST SHOW ON EARTH

- The show you've been waiting for. The show you deserve. The show you can't afford to miss.
- The only show dedicated to games. CES will feature the latest in games hardware and software from the likes of Mirrorsoft, Commodore, Ocean, Sega, US Gold, Nintendo, Domark, SNK, Psygnosis, Microprose, Virgin/Mastertronic, Activision, Electronic Arts, Palace, Accolade, Hewson and Gremlin.
- Take a trip to tomorrow. ACE will be sponsoring the LIVING ROOM OF THE FUTURE exhibit featuring Philips CD-I, the IMME engine hyperspace room (see ACE 31) and SNK NEO-GEO console. We also hope to include cyberkit from Roland and the other leading consumer electronics manufacturers shaping the future of Advanced Computer Entertainment.
- Meet your favourite celebrities and musicians. CES is sponsored by the Childline Charity. A substantial amount of the door fees will be handed over to Childline.
- Appear on television. CES will feature live broadcasts on major TV and radio programmes.
- CES. 13-16 September 1990. Earl's Court, London. See you there.

NEXT MONTH ACE GOES OUT WEST

HURRAY FOR HOLLYWOOD

We take a trip to the tinsel town for an on-location report. Are the movie studios getting into games? Are games getting into the movies?

THAT MAGICAL TOUCH

We hope to visit Industrial Light and Magic, the leading special effects company who worked on all the *Star Wars*, *Indiana Jones* and *Star Trek* movies.

THE BEST SHOWS

The best coverage of the biggest show by the best magazine. ACE is the only British games magazine to cover the Chicago Consumer Electronics Show with TWO reporters and a photographer.

WIN A TRIP TO HOLLYWOOD

Get Back to the Future with this exclusive ACE/Mirrorsoft competition to win a FREE HOLIDAY in HOLLYWOOD for TWO and VISIT the UNIVERSAL STUDIOS.

THE BEST BUYS

Don't forget ACE is the essential buyers guide to games software and hardware. Hot off the Shelf gives you the low-down on the latest ACE-rated games. ACE Classics reminds you of the greatest games of all-time. ACE Buyers Guides, the facts not the fiction, every month.

PLUS ALL THE ACE REGULARS...

Definitive reviews, exclusive previews, first news, informative views and in-depth interviews from the world of Advanced Computer Entertainment.

There's only one games magazine in the world more exciting and informative than this issue of ACE... and that's the next issue of ACE!

ACE 35 HITS THE NEWSAGENTS ON THURSDAY 5 JULY. Be there or beware.

**Find out its limits.
Look in the mirror.**



Introducing the powerful new Atari 1040 STE. With such an awesome machine, we're convinced the only limits you'll come across are your own.

Based on the incredibly successful 1040 STFM, the 1040 STE itself goes beyond the limits of its predecessor.

The 'E', by the way, stands for 'Enhanced'. But once you've discovered its amazing array of features, you may consider 'Enhanced' to be the understatement of the decade.

Perhaps the most outstanding feature of the 1040 STE is its graphics. Its palette contains over 4000 colours (all right, 4096 to be exact).

To ensure precise and realistic images, the STE features 'hardware scrolling', enabling smooth scrolling in any direction and split-screen effects. And, with the SM124 monitor, you'll get razor sharp black-out-of-white text that's as clear as the type on this page.

To complete the picture, it is able to 'phase-lock' its video output to an external video source, permitting direct linking to a Genlocking device.

The 1040 won't just have your eyes swivelling in their sockets. Your eardrums will also take a pounding from the 8-bit PCM stereo sound.

The new PCM (Pulse Coded Modulation) sound system's two chips allow the 1040 STE to replay high-quality sampled sounds, in stereo, without burdening the CPU. Or, for even more of an earblasting, just add a couple of RCA output jacks and power the sounds through your own stereo.

Of course we mustn't forget memory. One megabyte of RAM comes as standard. If that's not enough, the 1040 STE provides four SIMM sockets. Simply plug in some SIMM (Single In-line Memory Module) boards and boost the RAM up to four megabytes.

To help you handle all this technology, we've added even more: a Blitter chip, capable of shifting data at high speeds independent of the CPU, and a new version of TOS.

The TOS 1.6 (operating system) has an enhanced file selector with drive-change buttons, improved desktop with file move, MS-DOS compatible disk formatting, and better application installation and auto-booting facilities.

As you'd expect, there's a huge range of peripherals including hard disks, floppy disks, laser printers, colour monitors and even Megafile 44, Atari's unique 44-megabyte removable hard disk.

As well as all this hardware, there are hundreds of software programmes for the 1040 STE - we're even throwing in the ST-Series Productivity and Leisure bundles free.

The Productivity bundle features a database, spreadsheet, word processor and business graphics package, and there's S.T.A.C., FirST BASIC, Hyperpaint and Prince in the Leisure bundle.

If you're itching to get your hands on the controls, there are two 15-pin analogue controller ports (which accept paddles, light-guns and light-pens) and a 9-pin mouse port and joystick port.

With adaptors, up to six people can use the 1040 at one time. Just in case it's too much for one person to handle.

At £499.99 it certainly won't be too much for one person to afford.

The ideal computer at the ideal price, you may think. We think so, too. But there remains only one potential problem: not whether you'll make impossible demands of the 1040, but whether the 1040 will make impossible demands of you.



Please send me further details of the 1040 STE and other Atari products.

NAME:

ADDRESS:

..... POSTCODE

Please send to Atari Corp (UK) Ltd, Atari House,
Railway Terrace, Slough, Berkshire. SL2 5BZ.

ATARI 1040STE

WITHOUT IT YOU'RE JUST PLAYING GAMES

Worlds in the Machine

Everyone likes to play God. We all have times when we sit in front of the box, watching the world's Governments making an ever increasing mess of things, and think 'Give me a half a chance and I'd soon have things sorted out! Well now there are a number of games and simulations on the market which give you that half chance, and let you try your hand as a part time God.

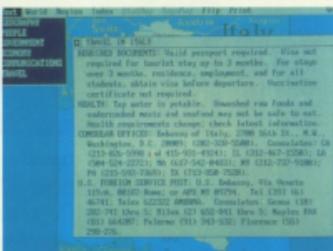
The popularity of games like Sim City and Populous, are evidence enough that games players have the sort of egos that can run a world. Well here are three more programs - two simulations and an electronic atlas - that put you and your micro on top of the world. We take a look and find out how clear the view is.

WORLD ATLAS

SOFTWARE TOOLWORKS/MINDSCAPE HAVE GOT EVERYTHING MAPPED OUT

One question that you always have to ask yourself when you are about to shell out sixty or a hundred quid for an electronic version of something that is readily

Laurence Scotford looks at three new programs that stuff the world into your micro



Screen of information can be called up using the menu bar. This one details travel in Italy



This, unfortunately, is the highest resolution that World Atlas is capable of delivering - Countries, and Major Cities

available on paper is: 'What can I do with this that I can't do with a traditional paper version at ten quid?'

Software Toolworks claim that the advantage of their atlas is that a large database of encyclopedic information as well as the maps are instantly available. This encyclopedic information actually consists of details on Weather, Population, Economy, and so forth. The same sort of information is also available in our office Collins World Atlas. It is even more readily available (you just have to open the book rather than switch on the machine and start-up the software), and it only

cost us £10. See what I mean about that essential question?

Well, that's enough grping - there are plenty of good things about World Atlas that go some way towards outweighing the price factor.

The first thing to note about the software is that it won't run on just any old hardware. If you haven't got EGA or VGA and a hard drive then forget it - the program comes on eighteen disks and takes half an hour to install, so this is certainly not the sort of thing you'd want to run from a floppy drive even if you could. A

mouse is not compulsory but pretty much essential if you are going to use the software properly.

Selecting and switching between maps is achieved fairly simply by pointing with the mouse and using the menu bar at the top of the screen. This can also be used to call up information on the features of the region you are currently studying. The options for moving between screens are comprehensive and do manage to prevent using the atlas from becoming laborious.

One problem that did quickly rear it's ugly head is how limited 6 megabytes of disk space really is. The maps will only zoom in to country level, and only the major cities are shown. Our £10 Collins Atlas, on the other hand, shows all major towns as well, and the maps have far greater detail.

World Atlas is a nice idea, and Software Toolworks should be praised for breaking away from the mainstream of utility software. The program is, however, likely to fit more comfortably into an educational niche than a practical one.

PRICE POINT: PC \$59.99 (disks) £99.99 (CD ROM)

BALANCE OF THE PLANET

CHRIS CRAWFORD/ACCOLADE DEMONSTRATE THAT SAVING THE WORLD IS NOT AS EASY AS IT MIGHT AT FIRST SEEM

If you thought that being a politician was easy, then this simulation will make you think again. Your goal in this game is to gain as many points as possible for promoting ecologically sound policies, and lose as few as possible for implementing ecologically damaging policies.

The way that you affect what happens in the world is fundamentally by adjusting your fiscal policies. How much do you tax CFC production for instance? How much money do you pump into research into alternative forms of energy?

It sounds simple, but it's not. If excess CFC production is causing Ozone depletion it is not enough simply to levy huge taxes on the responsible industries in order to reduce the level of CFCs in the atmosphere. There are many knock-on effects which have to be taken into account.

The interconnection of policy decisions is well demonstrated by the program. Selecting one of the entries on the initial page will take you to a colourful screen which describes that particular area of the Earth's Eco-Socio-Political systems (phew!). For example, clicking the mouse on Starvation Points leads to a screen explaining the world's starvation problem. To one side of this are a list of causes and effects. By clicking on these you can weave your way through an interconnected series of factors until you come across a parameter you can change by altering your fiscal programme.

When you have made all the changes that you require, the software will calculate the effects of your policies - on the whole these are usually appalling. By selecting the Feedback page at this stage you can identify which are your best and worst areas. This gives you a good idea of what to start looking at for your next five year plan.

When you have played Balance of the Planet for a few hours you will start to come to the realisation that things are not quite as simplistic as they might at first appear. It is very difficult to succeed in this game, if anyone manages to achieve a balanced planet I'll be very surprised.

PRICE POINT: PC £39.95. A portion of the proceeds will be contributed to the Tropical Rainforest Appeal.

Balance of the Planet				
Policy Summary for 1990				
Source	Tax Rate	Income	Flow	Expense
Self Tax	6.0%	50.00	Property Income 1	20.00
Self Tax	6.0%	50.00	Self Research 1	20.00
Self Tax	6.0%	50.00	Self Research 2	20.00
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Self Tax	6.0%	50.00	Self Tax 195	20.00
Self Tax	6.0%	50.00	Self Tax 196	

Your dates:

13th-16th
September

Your venue:

Earls
Court

Your show!



Continuing the tradition
but dedicated to leisure.

Sponsored by C&VG, SINCLAIR USER, CU, ACE and THE ONE.

Contact: Sally Buller at EMAP International Exhibitions: 01-251 6222 ext: 2406
or Gary Williams ext 2518

Screenest

New Sections!

This month sees the launch of a new Screenest, designed to give our readers a solid foundation for the games reviews of tomorrow. We've divided the section into three.

First, you get reviews of traditional **COMPUTER** games running on ALL major formats (including 8-bit and minority machines).

Then there's our new **CONSOLE** section, bringing you up-to-date coverage of the most advanced console entertainment.

Finally, ACE is the world's first magazine to introduce a regular section for the exclusive review of **CD** entertainment – the storage medium and hardware format of the future.

At last – computers, consoles, and CDs, for the complete coverage of games today – and tomorrow.

ACE Rated!

Question: Is this game really going to grab me? And for how long?

Answer: the PIC curve – the heart of the ACE Rating System.

Each review carries a PIC Curve (see Pic Power panel) and special 'Version Boxes' that give you details of the game's implementation on a specific machine. These boxes include ratings for...

GRAPHICS

All aspects of the game's graphics – with the limitations of each machine taken into account.

AUDIO

The music and sound effects are rated here. A high rating is reserved for even limited machines like the Spectrum and PC if the computer's shortcomings are cleverly sidestepped.

IQ FACTOR

The Brain Strain rating. Note that ACE readers are generally reckoned to be more intelligent than other human beings, so the ratings may be lower than you expect...

FUN FACTOR

Basically a measure of mindless addictiveness. Games like *Atariworld* and *Flying Shark* require virtually zero brain power but are still remarkably addictive. Most coin-ops score well here because they are designed for instant satisfaction. Games don't have to be either fun or intelligent – they can be both.

ACE RATING

To get a really high rating a game will not only have to be very addictive but stand the test of time as well. Here's a general guide to what the ratings mean:

900+ A classic game, recommended without reservation.

800-899 A superb game, but perhaps lacking the long-term depth to last into the month and year categories.

700-799 Still highly recommended, but probably has



NEW ACE AWARDS

From now on, ACE will be awarding new seals of approval for outstanding software performance. If a game really breaks the boundaries in sound, graphics, or originality you'll see the appropriate ACE Award flash on the review. Unless it's truly dire – in which case it'll get the ACE Turkey award. Software houses: you have been warned!

a couple of aspects to the gameplay that take the edge off it.

600-699 The 'fair' zone, where it tends to be very good – if you like that sort of thing. **500-599** This still has good things going for it, but the game clearly has some noticeable problems.

400-499 Problems with gameplay and programming make this an inferior game.

300-399 Not only is the gameplay bad but the design was probably flawed in the first place.

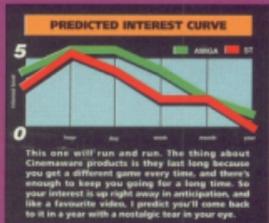
200-299 Things are getting really serious now...

100-199 ZX81 games running on an Amiga.

Under 100 Nothing has ever achieved this appalling level of rating. If anything ever does, it wouldn't even be worth having it for free.

VERSION BOXES

This covers version-specific information on graphics, audio, loading problems etc. If there's no box for your machine but a version is planned, it'll be covered as an update in a later issue.



PIC POWER!

The PIC – Predicted Interest Curve – is the most sophisticated reviewing tool around.

We on ACE know you don't just play a game – you experience it. The Predicted Interest Curve is the only review system that takes this all-important factor into account.

The curve is divided into six sections, indicating the player's attention level after one minute, one hour, one day, one week, one month, and one year. But this tells you an awful lot more than just what your interest level will be at any given time (although that's obviously important in itself)...

For example, a high one minute rating means that the game must look fantastic and get you all excited from the word go. That means it's probably a good game to show off to the neighbours – who probably aren't going to pay attention for much more than a minute anyway.

The minute, hour, and day ratings can tell you a lot too. If there's a dip here, followed by a rise, you've got a game that may take a bit of getting into – not recommended if you like to get down to something quick and easy. Alternatively, the graphics may put you off for a while until the gameplay starts to grip. Check out the PIC comment for more details.

Finally, you've got the month and year ratings. The better a game holds up here the more deserving it is of your hard earned cash.

THE ACE PROMISE

1. Unlike many magazines, ACE ONLY reviews finished games. It's reviewed here. It's what you'll get in the shops. If there's any exception to this rule, the page will clearly be marked **PREVIEW** and the game is not rated. We won't let you down by reviewing half-finished versions and demos.
2. Every game has been extensively tested. If we come across bugs or other deficiencies, we check immediately with the company concerned. Then we give you the whole story. Whenever possible, we'll give you more than just the review – analysis, comparison, and technical information is all included wherever possible.
3. All ratings are carefully calculated. You can rely on them to make your buying decisions.



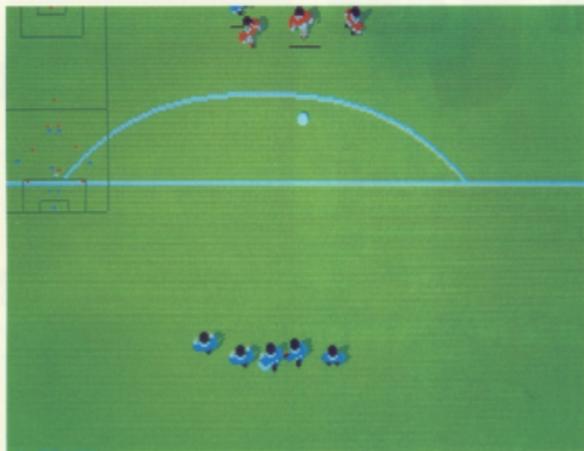
Reve – this is the second time this US Gold game has appeared in the Screenest section. That's because when it first arrived in our office it wasn't finished and we promised it to keep you up to date. Now you can check out the rating and the final verdict...



Going beyond *Shadow of The Beast* – *Paganini's* follow-up to the best-selling Amiga title is one of the games previewed in this issue – we'll be reviewing and rating it when we receive the finished version.



Get on the FM Towns – just one example of a machine format that's laying the foundations for a CD-games future. We've reviewed this best-selling FM Towns game in this issue to give you a solid image of tomorrow's games technology.



The footy miracle continues as ANCO take their winning formula and add a whole host of new features. It all adds up to not one, but DOZENS of games in one package...

I've been working on this for two years," says Anco director Anil Gupta as he boots up the Kick Off 2 disk in the ACE office. "I wanted a totally integrated football game, the Flight Simulator III of footy, that would live forever." This man has balls, no doubt about it...

And first impressions of Kick Off 2, 95% finished when we played it (so an ACE review rating will have to wait) certainly seemed to bear out Anil's claims. KO2 is not one, arguably not even two, but dozens of different games in one package. Here's the commentary...

OPTIONS			
PITCH	NORMAL	HET	SOGGY
DURATION	2 X 2	2 X 5	2 X 10
HIND	OFF	LIGHT	MEDIUM
EXTRA TIME	NO	YES	
ENTER TOUCH	YES	NO	
LEAGUE SKILL	INTERNATIONAL	DIV. 1	DIV. 2
GAME SPEED	NORMAL	50%	75%
DIFF. LEVEL	TEAM A	TEAM B	
SELECT TACTICS	TEAM A	TEAM B	
DONE			

Ready to go



A free kick, and there's a wall right in front of you. Just one of the many new gameplay features in KO2.

The game kicks off (sorry) with nine playing options. First, there's Single Game. This offers one or two players against the computer, or two players against each other. In this respect, it's rather like Kick Off 1, but there are revolutionary changes that really set the new game apart.

First, you can choose a whole load of gameplay options (see screenshot). Second, you can import whole teams from Player Manager. This presents unlimited opportunities in itself, training teams to beat the computer (or your pals). Thirdly, and most important of all, KO2 offers two different gameplay techniques.

The first technique is similar to KO1 - auto-player activation with the active player being the one who's nearest the ball. The second option is quite different. You can choose the members of your team from a roster displayed before you play and while you do this you can nominate any team member as an 'active player'. In this mode, you control the one player only during the match, so it's wise to make

KICK OFF 2

SILKY SKILLS

KO2 also breaks new bounds for a footy game by including a whole range of gameplay tricks that can keep you outpacing your opponent. Here are a few examples from the many options available:

- you can determine the distance and direction of throw-ins
- you can influence the direction of the ball for a split second after taking a kick
- you can vary the distance and direction when taking corners, enabling you to pass or shoot across the goal
- you can change tactics at any time during the game
- you can introduce a substitute at any time
- you get three options when taking a free kick: pass it, jump over it, or kick it forward, and you can put a bias on the ball when you kick it as well, influencing its direction during the next 36 frames (approx half a second).

Most of these options are determined by movements of the joystick and firebuttons and therefore remain invisible to your opponent. I.E. They are not flagged on-screen as a warning to the opposition!

All this adds up to some pretty hairy gameplay, hence the 'slow game option' which is vital for practising some of these silky skills if you're not to get mud in your eye and a drubbing from your pals.

sure that he's a forward. And remember that all players have their own characteristics in KO2, so you may find you've selected a slow dog who won't be able to keep up with the hares. Never mind, you'll know for next time!



The options screen

MULTI-PLAYER

Not only does KO2 offer oodles of gameplay advantages over KO1 (see Silky Skills box) but it also broadens the challenge by offering 1,2,3, or even 4 player games, with two players slogging it out against another pair.

KO2 was also originally intended to field a whole 16-team league, but there were a host of phone calls to Anco about the fact that this feature was going to be limited to 1 Megabyte

KICK OFF 2

KICK OFF 2

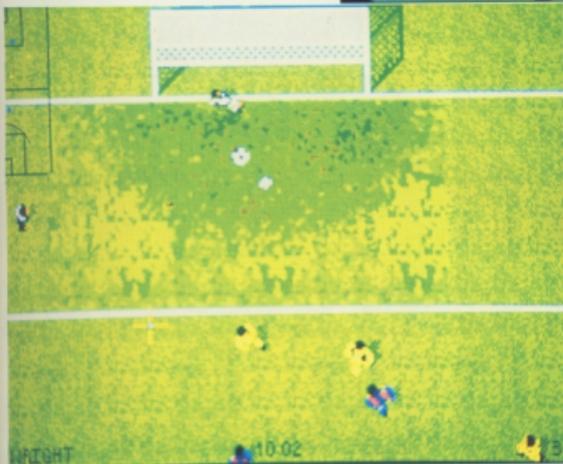
PRACTICE

SINGLE GAME

THE LEAGUE

INT.
FRIENDLYACTION
REPLAY

OPTIONS

SPECIAL
EVENTS

The nice kit our gear our team in your favourite two-colour combination

A soggy pitch on the Amiga - looks pretty bad, eh?!

GAMEPLAY OPTIONS

Here's the complete list of options when you start:

- Single game
- Practice
- League
- Cup
- International Friendly
- Special Events (see panel elsewhere)
- Design Kit
- Action Replay
- Gameplay Options

The last item is extremely comprehensive. To start with, on the Amiga you get four different types of pitch ranging from normal through wet and soggy to plastic. You can choose from a variety of game durations, ranging from 2*2 minutes to 2*20 minutes (the old 45 minute option has gone). You can choose whether you want Extra Time in the single game. You can also choose Aftertouch, which enables you to control the ball for a split second after you've kicked it. You can change the skill between International, Division 1, and Division 3 and you can slow down the game to 50% or even 25% to practice special manoeuvres (essential for beginners since many of the options are pretty hard to handle).

SPECIAL EVENTS

If you think KO2 sounds out of this world, the Special Events option blasts it right out of this solar system. Get a load of this...

KO2 features a unique option that allows you to slot in special KO2 data disks, to be released by Anco at the very generous cost of £4.99 each. Bearing in mind the cost of certain data disks we could mention (Sim City, Bomber et al) we reckon this is a pretty decent shot.

There will be five types of data disk. The first gives you complete teams ready to play, containing a world-famous clubs past and present.

Arsenal players could, for example, get a disk featuring their club's line-up between 1967 and 1987. So if you and your friends support different teams, you can now fight it out on-screen as well as on the turf.

There will also be a special full 4-division League team line-up data disk.

Thirdly, there will be tactics disks, containing special tactics data for use during play. Fourthly, there's the Kick Off 2 Maths Disk. A bit of a strange one this, it will use the parameters from the program that determine shot distance and so on to provide a set of mathematical exercises for brainboxes. Sounds as if the schools may be kicking each other to get hold of this one.

Finally, you get true special event data disks, featuring World Cup, UEFA Cup and other championships, each complete with their own special rules and procedures.

Now, at last, you can tackle any football challenge the world can throw at you, at home.

Amiga machines. As a result, the original 8-team structure has been retained, but each team can be a Player Manager imported team (if you have the program) and it will still fit into 512K.

Finally, you get a stunning action replay facility that you can even save to disk, enabling you to build up your own library of 'Great Sporting Moments'. And ACE readers may like to know that this facility could win you £1000 in the ACE Kick Off 2 Golden Shot competition in the September Issue (out in August).

Oops, we nearly forgot the Special Events. Find out more about them in the panel on this page.

There's no doubt about it. Kick Off 2 has the potential to be the first fully-fledged football simulator that also delivers a bootful of solid gameplay. We reserve rating until we've tested the finished version, but so far the evidence points to a very strong contender for Game of the Year. Wait for it...it'll be worth it.

● Steve Cooke

RELEASE BOX

ATARI ST £19.99uk IMMINENT

AMIGA £19.99uk IMMINENT

C64/128 £7.99uk TBA

No other versions planned



Your team roster. Choose the players you fancy here, and if you want you can select one to be the active player during the game.

BEAST TWO

AND BEYOND...

Not content with their domination of software technology, Psygnosis are now preparing to take gameplay to new heights with a series of highly original, complex scenarios. ACE went up to Liverpool to find out what's coming down...

Shadow of the Beast is one of the best selling games on the Amiga, thanks to its superb graphics and technical use of the machine. But that's what you'd expect from Psygnosis – technical excellence second to none. What you might not always expect is wildly original gameplay ideas – or at least that was our opinion until our recent visit to the Liverpool powerhouse.

There's a revolution going on here. Not content with their reputation for programming expertise, Psygnosis are now investing a lot of time and money in developing depth of play. First to benefit from this approach is *Beast Two* (working title only at present) which takes the best-selling scenario and floods it with additional gameplay features.

Beast Two retains the parallax scrolling, sideways-on viewpoint, but spices up the scenario with multiple objects and weapons and – even more extraordinary for an arcade game of this sort – limited interaction with other characters.

As you move up through the various levels of the hostile environment you find yourself in, you'll occasionally find yourself in situations you simply can't get out of on your own. At one point, for example, you're overwhelmed by superior forces and dragged off to jail. There you join another miserable wretch and only by carrying on a (limited) conversation with him can you get the information you need to escape.

Other additions include a far greater emphasis on brainpower as you negotiate your way round obstacles, plus a simple inventory system. The price for all this improvement? Slightly less detail on the principal sprite. Any beast can live with that, surely?

Meanwhile, Psygnosis have been working



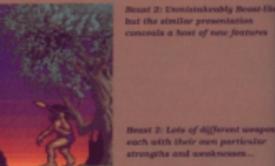
Beast 2: Climbing up that chain could be fatal – maybe it is a good moment to find a guinea pig to go up there before you!



Beast 2: Unmistakably Beast Two but the similar presentation conceals a host of new features



Beast 2: First messages appear at the bottom of the display. Right now you're in prison and have to find a way past that guard.



Beast 2: Lots of different weapons, each with their own particular strengths and weaknesses...



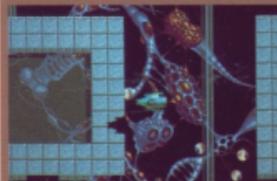
Amiga: And believe us, it is. The game features several different computers as you battle across a planetary system, plotting your course using a special computer that calculates orbits and distances



Amiga: Just one of your friendly alien neighbours. RIIIEE!



Amiga: Once on the planet surface, you can fly through ducts and bug group-ups



Amiga: Overhead view as you kick the station surface prior to landing



Dr Muller (also called Outcast) at present features the most extraordinary group of misfits, galloping rather than he's encountered. Here they are cowering at the top of the stairs awaiting the fate of their companion who is about to be splatted by the infamous Dr Muller. You can guide the Outcast to safety by blowing a trumpet at them



Nothing in *Unreal* should be taken at face value. Even an apparently harmless pool of water can hold some surprises.

UNREAL

A sneak peek at UBI SOFT'S new arcade adventure employing both two and three-dimensional graphics

Impenetrable plots it seems, are de rigueur for fantasy games nowadays, and Ubi Soft's latest opus is no exception. The storyline to *Unreal* reads like a rather chaotic mix of all the Disney fantasies ever written. In essence the idea is that you, Targan, must set out with the help of a friendly dragon to rescue your kidnapped soul-mate Isolde from the clutches of the Protector of Evil. You are aided by an old magician (the defeated Protector of Good).

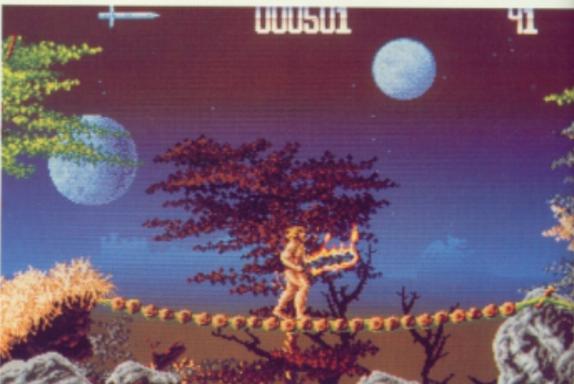
The game has nine sections in all, five of these are head-on 3D sections interlaced with four 2D parallax scrolling sections. Having two very different graphical approaches within the same game makes for some interesting and



In the 3D sequence your dragon is often dwarfed by the huge creatures that come hurtling past...

quite refreshing playing, so preventing boredom from setting in too early.

The 3D sections involve guiding the dragon which you are flying around and over a fast moving landscape while destroying as many creatures en route as possible. 'Fast' is the operative word here - the speed that the programmers have achieved is quite incredible. They have had to sacrifice some resolution to manage this however, so objects do look a little blocky when they are in the foreground. Along the way there



Our man Targan can plunge his sword in fire to make the action a little hotter...



The Parallaxed backgrounds are superbly detailed, and are complemented by well-animatd sprites in the foreground.

IS THE BEAST UNREAL?

Ubi Soft have chosen to make comparisons between their game and *Shadow of the Beast* from Psygnosis. There are indeed similarities, but in a head-to-head neither game comes out on top. *Beast's* graphics have the edge in terms of technical quality (although not in artistic quality) while *Unreal* easily scores highest on playability.

Although the programmers have chosen to make use of only two levels of parallax scrolling, as opposed to *Beast's* maximum of thirteen, this has allowed them to be more generous with detail, as well as allowing a greater interaction with objects in the game. Even if the graphic sequences are not as technically accomplished as those in *Beast*, you will immediately be taken with their beauty. The 2D sections have a strange ethereal quality about them which perfectly offsets the fast paced 3D sections.

are also bonuses to be collected, often involving some death-defying manoeuvres if you are to reach them. These give you extra fire power and other useful 'add-ons'.

The 2D sections are a lot more cerebral than the 3D shoot 'em up areas. There are a number of puzzles to be solved if you are to make progress. It is in these sections too that *Unreal's* graphics are at their best. You will be drooling each time a new screen appears - they're that good.

With it's mixture of two and three-dimensional areas and a good combination of arcade type action and problem solving, *Unreal* could very well be a monster hit. Next month we will of course bring you the definitive review of the finished game in which we decide if Ubi Soft's first hour has arrived.

● Laurence Scott

NEW! FROM ENCORE...



MIKE READ'S POP QUIZ

Spectrum Cassette £2.99
CBM 64 Cassette £2.99
Amstrad Cassette £2.99

RELEASE DATE 25th July 1990

© 1988 Elite Systems Ltd.

SUPERTRUX

Spectrum Cassette £2.99
CBM 64 Cassette £2.99
Amstrad Cassette £2.99

RELEASE DATE 11th July 1990

© 1988 Elite Systems Ltd.

WANDERER

Spectrum Cassette £2.99
CBM 64 Cassette £2.99
Amstrad Cassette £2.99

RELEASE DATE 11th July 1990

© 1988 Elite Systems Ltd.



ENCORE

A.M.C.

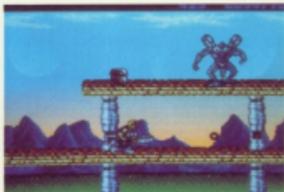
Join the Astro Marine Corps and mash aliens with DINAMIC

Deathbringers have contaminated one of the Federation's planets. So who ya gonna call? The A.M.C. It's the only outfit in the galaxy where bazooka-toting macho men actually volunteer for do-or-die missions like this.

What follows is a hair-raising jaunt through a series of horizontally scrolling levels, across hills and ruins, along the edges of bottomless pits and the fringes of man-eating plants, to the lair of the Deathbringer aliens themselves.

Shooting pickup pods reveals a selection of different equipment - anything from triple shot and energy to the electrically charged all-powerful TED (Totally Effective Discharge). A few shots and the best of the enemy army - Killer Worms, Viscous Beings, even big, mean, end-of-level aliens - are splattered all over your shoes.

Graphically, it all has a very designer look; programmers Creepsfoot are particularly proud of the size of some of their enemy sprites and the



For a life of action, adventure and foreign travel - join the A.M.C.

AMIGA

Featuring 16 in-game tunes, a huge selection of suitably ugly monster sprites and a polished horizontally scroll with an extra vertical bounce thrown in, A.M.C.'s technical merit is obvious. A lot of attention has gone into producing clear, finely drawn graphics and presenting them well: the main sprite even waits in time to the music's beat. Disappearing floors, moving platforms, pits and monsters inject a much-used game-style with extra spirit.

GRAPHICS	8	IQ FACTOR	5	ALL RATINGS	739
AUDIO	8	FUN FACTOR	7		

background's outstanding parallax. Together they add a bit of extra spice to what's essentially a slick but straightforward shoot 'em up. Carefully graded difficulty (unusual for Dynamic who have a reputation for making their software incredibly tough), polished presentation and punchy sound transform a comparatively unoriginal blaster into something well worth checking out.

● Kati Hamza

RELEASE BOX

ATARI ST	£19.95dk	IMMINENT
AMIGA	£24.95dk	OUT NOW
SPECTRUM	£9.95cs £14.95dk	IMMINENT
C64/128	£9.95cs £14.95dk	IMMINENT
AMSTRAD	£9.95cs £14.95dk	IMMINENT

No other versions planned.

PREDICTED INTEREST CURVE

Shoot 'em ups are easy to pick up and just as easy to throw down. A.M.C. is addictive enough to maintain interest in the short term but the ultimately repetitive nature of the blasting, combined with a system that puts you right back to the beginning of a level no matter how near the end you do forget that it won't last as long as some. Still, the attractive graphics and parallel scrolling should be enough to tempt you to give it another spin every now and again.

RELEASE BOX

ATARI ST	£19.99dk	IMMINENT
AMIGA	£19.99dk	OUT NOW
PC	£24.99dk	JULY

No other versions planned.

AMIGA

The objective in Wipe Out is simple, and that's what makes it so compelling. The graphics are by no means outstanding - a little jerky in places and not very colourful, but the heavy rock music and addictive gameplay more than make up for the visual drawbacks. The clinching factor is the league system - a simple one or two-player game would have grown tedious quickly with over 1000 leagues. It'll keep you playing for ages!

GRAPHICS	6	IQ FACTOR	7	ALL RATINGS	739
AUDIO	8	FUN FACTOR	8		

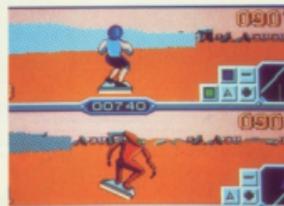
PREDICTED INTEREST CURVE

First impressions aren't favourable: the 3D is a tad jerky, and there doesn't seem to be much to do other than zoom around hoping for the best. Once you've added a few customisations and fate us to some real opponents, the game grabs you and won't let go for a long time, either as a solo league experience or a two-player one-off.

WIPEOUT

Get down to some Intergalactic Surfin' with GONZO GAMES

Gonzo Games started life as development team Viz Design, writing conversions and some original B&B product for almost four years. Wipe out is the first game on the new label and their first independent product. Their



The in-game split screen action is fast and furious - though not graphically outstanding. Winning isn't just a case of staying out of trouble - you have to take risks if you want success.

● Gordon Hughes

creative intention, in the words of Paul Smith, MD, is to provide 'original, innovative and fun products'.

Wipe Out draws inspiration from Disney's Tron, which featured two light cycles racing around an enclosed course, leaving barriers in their wake: the aim was to trap the opponent with your trail whilst making sure you didn't get trapped yourself.

Gonzo's effort is virtually the same, except you have the ability to speed up, jump, turn sharply or slightly and pick up orbs that bestow useful powers. Play is either against a human opponent or in the intergalactic hoverboard championship.

This is no small-time competition: there are over 1,000 stars in the galaxy, each with its own league, and eight different alien races, each with unique playing styles. There's even a chance to bet on races - win and you could buy yourself a new board or turbo boost! Your ultimate aim is to qualify for the All Time Greats Tournament at the centre of the Galaxy.

ATARI ST

An excellent conversion! The graphics are smooth and flicker free, and the playability hard but more of a challenge for that. A very solid and playable game, with all the flavour of the original coin-op surviving intact.

GRAPHICS 8 IQ FACTOR 4
AUDIO 7 FUN FACTOR 9

AGE RATING
8 E3

RELEASE BOX

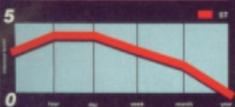
AMIGA £24.99dk IMMINENT

ATARI ST £19.99dk OUT NOW

C64 £14.99dk £9.99cs IMMINENT

no other versions planned

PREDICTED INTEREST CURVE



Certainly a much better game than I was expecting from a fledgling software house, with much to recommend it to the shoot 'em up expert. It's well hard but not impossible, tentatively balanced on the edge of driving you nuts.



End of level Guardians are quite easy to kill. You just have to have a bit of guts. Made in and keep blasting. That's what we call tactics!

TIME SOLDIERS

Plot lines for coin-op shoot 'em ups come and go, but the old whizzing your heroes through time rift never fails.

Lately the term shoot 'em up has become synonymous with something which is a waste of time. Obviously there are a lot more original genres of game around these days, but the phrase "JUST a shoot 'em up" has been used more than once in certain mags I could mention. But here is a shoot 'em up that restores your faith in the old vertically walking and shooting scenario.

In this popular SNK/Electrocoin game you take the part of two guys, Yohan and Ben (although I've only ever seen one player in this game) who must penetrate the Gyland stronghold to rescue their fellow "Seven Earth Commandos". Gyland has scattered them through time and you must guide our heroes through the many different time zones to rescue them and save the cosmos. Oh yes, and at the end you get to beat the crap out of Gyland too, if you're hard enough, that is.

The reason that some games are good and some are rubbish is down to the old playability chestnut. You have to balance all the elements of the game, to make them into an entertaining whole. And that is what Electrocoin has obviously realised when making their first forays into the dizzy world of home computer games. They know a thing or two about coin-ops, so it's understandable they'd know what's hot and what's not

Coin-op giants Electrocoin slot into the computer games market with a con-version of their own arcade smash



The more buddies you possess the more weapons they drop. It's that simple, that deadly.

when they see it.

Time Warriors was a cert for a conversion, being something of an obvious hit. But it would have been easy, as an obvious seller, to just blip it off and not bother about the quality of the game. But the quality is there, with a lot of well drawn graphics, atmospheric sound and smooth addictive play. A bit more trouble could have been taken on support graphics like for hi-score tables and such, but the lack of these doesn't take away from the game. Okay so it's not the most original game around, but it plays very well and to my mind that's much more important.

● Phil South

OFFICIAL: TIME TRAVEL NOW POSSIBLE!

Theoretical physicists have been wrestling with the problem of travelling in time for quite some, er, time. Up until now it has always been thought impossible. But a recent article in a professional science magazine has published some research done at Caltech in the USA that actually proves that time travel is possible! All you need, apparently, is a wormhole in space.

A wormhole is a tunnel through the fabric of space, a tunnel which joins two different points of the Universe, like Earth and Alpha Centauri. You hop in one end and SLURP! you're in Alpha Centauri. The time travel trick is, they say, that you can either join two different points in the universe for travelling in space or two points in the same place for travel in time. That is to say, you could dive into the wormhole and arrive back at the same spot some time before you left.

The discovery or generation of such wormholes in reality is some way off, as the energy required is enormous. For example, to keep the throat of such a tunnel open wide enough to allow a large space ship through it is something like the pressure at the core of a neutron star!

If you want to learn more about Wormholes and travelling in time, check out "Wormholes, Time Travel And Quantum Gravity" by Ian Redmond, published in New Scientist on 28th April 1990.



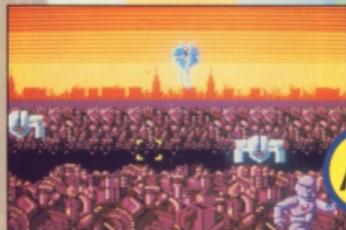
OPERATION WOLF



CHASE HQ



WORLD SOCCER



ASSAULT CITY

SEGA

FROM
Virgin



WORLD GAMES



RC GRAND PRIX



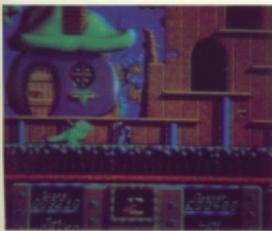
BATTLE OUTRUN



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Is he in that cave, or is that cave? Flimbo has tons of elusive appeal.

Cute platform games are a well-proven formula for success, and while they never seem to get any more original, they do get more playable by the year. System Three, with their first release independent of Activision have come up with a game, which relies on well-worn themes but knocks spots off the competition.

The hero of the piece, Flimbo, is quite a stocky little character in a baseball cap. His huge head and round eyes make him look like one of those characters from Japanese comic strips. His task is to enter the grounds of Dandruff Manor and rescue his kidnapped girlfriend, Pearly from the clutches of the wicked Von Dandruff. The evil mad scientist is planning to use Pearly in a rejuvenation experiment, leaving him young and healthy and her... well, let's hope you don't find out.

What this quest entails is hopping about between platforms shooting and avoiding aliens in a way you've seen in many other games before this one. What you haven't seen before is the attention to detail in both backgrounds and sprites, and the quality of animation. The cuteness factor of all the sprites goes right off the top of the scale, and let me tell you, some of them are weird.

The game is divided into several levels, each of which has to be conquered if you are to reach Pearly in time. Time is the operative word here. The seconds are constantly ticking away so you can't afford to wander about aimlessly. Your target on each level is to collect scrolls with the component letters of a magic word that transports you to the next level. This is done by searching for a particular type of creature indicated on the status panel at the bottom of the screen.

The scrolls must be taken back to the shop each time you find one, and here you can also spend some of the cash you have earned by shooting Von Dandruff's creatures. Extra firepower is available if you have a little cash, or, for more extravagant amounts you can buy more time, an additional letter, or even the whole magic word (although this won't particularly please Flimbo's bank manager).

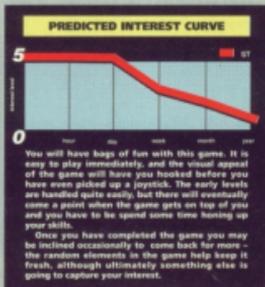
The nice thing about Flimbo's Quest is that any of these bonuses may appear randomly when you shoot a particular animal. This means that you can be desperately short of time, having acquired only a couple of letters that make up the magic word, and without warning you'll come across a bonus with the whole of the magic word, thus turning an almost hopeless situation into a very hopeful one. Bonuses can also be had in the form of hearts which, providing you have collected enough will endow you with an extra life. As with the scrolls, these are stored in the shop.

Finally, what really makes Flimbo's Quest

FLIMBO'S QUEST



System Three get cute and employ classic platform antics in their first independent release



RELEASE BOX		
AMIGA	£24.99dk	OUT NOW
ST	£24.99dk	IMMINENT
C64	£14.99dk £9.99cs	OUT NOW
CPC	£14.99dk £9.99cs	IMMINENT
SPECTRUM	£14.99dk £9.99cs	IMMINENT
no other versions planned		

AMIGA	The audio-visual aspects of the game are all superb. The detailed afforded to the backgrounds as well as the sprites, and the humorous animation is bound to capture the imaginations of a lot of game players. To top it all, it is very playable, and addictive too!			ACE RATING 890
	GRAPHICS	IQ FACTOR	ACE RATING	
	9	4	8	
	AUDIO	7	RUN FACTOR	8

C64	The game on the C64 hasn't quite got the graphical appeal of the Amiga, but considering the limitations of the hardware it is superb. All of the elements of gameplay found in the Amiga version have been retained, with the exception of the way the status panel works which is different, although not critically so. Definitely one of the best platform games to be released on this machine for some time.			ACE RATING 850
	GRAPHICS	IQ FACTOR	ACE RATING	
	8	4	8	
	AUDIO	6	RUN FACTOR	8



Flimbo on the C64 plays just the same as the game on the Amiga, but some changes to the status panel

worth recommending is it's playability. The degree of control you have over the central character is superb (an aspect of gameplay not to be underestimated - it has ruined many games before). This game is going to have an instant and universal appeal - the only platform game I've seen to date to rival it is Millennium's Kid Gloves.

● Laurence Scotland

GOING IT ALONE

System 3 began life as a publisher in 1983. Their first product was Deathstar Intercaptor, released in 1984. In 1986, with some strong titles in the offing, the company struck a deal with Activision to distribute its products. The first game to be released under this set-up was Twister, an unusual game with distinctive 3D graphics. Further hits, like The Last Ninja, followed closely. In 1989 System 3 felt the time was right to go it alone, and broke away from Activision. Flimbo's Quest is the company's first independent release since 1986. Now System 3 is set to go from strength to strength with forthcoming releases of Last Ninja 3 and International Karate Deluxe.

It's always the way, isn't it? Just when you thought it was safe to open a magazine, four thousand ads for soccer games drop into your lap. Yes, it's the soccer silly season again, and any software house with one finger and half a brain has been busily programming a super soccer hit to surprise and delight. Of course they'll all have to go some to beat every man and his dog's favourite computer footy game, Kick Off, but as David Coleman always says "footballers need hurdles". So let's look at some of the front runners, or should that be 'hurdlers', and see what they have in store for us in the coming months.

WORLD CUP SOCCER

Virgin's official attack...

World Cup Soccer is of course "The only official World Cup game" as it blarps from every ad, complete with the pukka Italia '90 licorice alsort man and ball logo. This game is a real Italian meal of graphics and sounds. There are screens for every aspect of the game, and sampled sounds (especially prominent if you have a 1 Meg Amiga) of all kinds fill the air. But y'know somehow the game itself is a trifle wooden, as compared with the likes of the agreed yardstick in these matters, Kick Off. If it ain't as smooth and playable as Kick Off, then it's not going to beat any cop.

AMIGA

Not much to this game, really, with most of the enjoyment coming from the quality of the sound and graphics. 1 Meg version includes refs whistles, crowd roars and all the flavour of the tournament.

GRAPHICS 9 IQ FACTOR 5 AGE RATING 75+
AUDIO 8 FUN FACTOR 7

PREDICTED INTEREST CURVE



Good graphics get you going, but after that not much room left for a game.

RELEASE BOX

ATARI ST £19.99dk OUT NOW

AMIGA £24.99dk OUT NOW

C64 £9.99cs £14.99dk OUT NOW

No other versions planned

In the run up to the World Cup, ACE looks at the recent rash of football games which have sprung up through the turf

It is more of a 'licensed' game than the others, so you can expect it to be more of a simulation of the spectacle rather than a really hot game. It falls into the by now typical footie format, with a scrolling overhead view and auto-player-activation, depending on who's nearest the ball. Only trouble is, unlike Kick Off, it doesn't have a mini-radar map of the whole pitch. At times this can lead to moments of panic as the computer goes onto the attack and you're not entirely sure where you are on the pitch and what you've got in the way of defence. And although you choose which team you want to play, unlike Italy 1990 you can't choose which players play in which positions.



Sales of the game are assured, however, so what else will people get for their money? A World Cup game (hopefully), plus the obligatory wall chart and potted history of the World Cup. Oh yes, and a box. The game comes on one disk on the Amiga and C64, and two on the ST to cater for 400K drive users. (You'd have thought everyone would have upgraded by now, but still, £60 is a lot of money to some people.)

The Amiga version comes in two flavours, one of which has all the sexy sampled sounds stripped out to allow the game to run in 512K machines. (Again it makes you wonder how many people still run 512K Amigas in this day and age.) For all the advertising and hype, the game remains a little slow for our taste, and the computer still doesn't play fair. The best game you'll get out of WCS'90 is in two player mode, but then that goes for every footy game ever made.



GOALS

ATARI ST

A very good, playable rendition of the game, and actually so close to the Amiga version as to be indistinguishable. Appropriate noises throughout the game and a real catchy tune too.

GRAPHICS 8 IQ FACTOR 5 AGE RATING 89+
AUDIO 6 FUN FACTOR 9

PREDICTED INTEREST CURVE



This one has a bit of staying power. It loses points for the obvious design flaw that you can't play two players for the World Cup, which cramps your style and so the computer always wins. For example, the Camerooners win a few times, which just isn't realistic.

RELEASE BOX

ATARI ST £19.99dk OUT NOW

AMIGA £24.99dk OUT NOW

C64 £14.99dk OUT NOW

No other versions planned

ITALY 1990

...and US GOLD'S unofficial defence

Although not official, US Gold have made a very playable solution to the problem of having to come up with a World Cup computer game. Although not nearly as flashy or as, well, 'official' as the Virgin game, it does make a splendid effort to be faster and more enjoyable, using the standard top-down view, auto-active-player-selection that we've seen almost everywhere else.

There's one major drawback, however — you can't play two players in the World Cup itself, only in 'friendlies', or practice games. And as we said just now, the whole point about footy games is their ability to draw two humans into the proceedings, thereby making sure that BOTH players, not just the computer, get to have a shot at goal.

Another problem is there was no real stopping for half time to rest and chew over what the first half had been doing to you. If you had a sneezing fit just before half time you could miss the division, and be shooting at your own goal for

L RUSH

TREBLE CHAMPIONS

...and CHALLENGE SOFTWARE adopt unconventional tactics

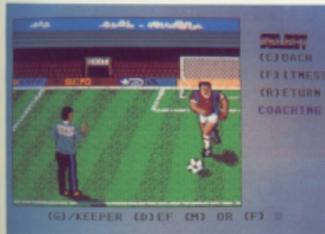


five minutes before you notice. So, it drops a few points there for really basic design slips. But what about the rest of the game itself?

The game plays quite fast, with the minimum of interruptions for support graphics. Goals, goal kicks and corners are the only times you get to see another angle and these are pretty much preset, so it's nice to have a rest. As we've pointed out with other games, the computer does seem to cheat quite a lot, and you'd have to have similarly digital reflexes to tackle the computer on its way to goal, and win! This is a real problem with computer soccer and can't be reiterated enough. They only work as two player games and that's an end to it.

Inside the box you get a rather attractive little 'File Of Facts' on the world cup, its players, groupings and prospects, plus a nice little footy trivia quiz. Isn't it clever how they made you say Fifofax using different words, eh? Anyway, this nice thick booklet gives you all kinds of interesting information, like if you read between the lines you discover the fact that Czechoslovakia is fielding more players with names ending in K, C and Y than any other squad in the games. But not bad value for 68 pages of soccer trivia.

So all things considered this is a very neat package, with lots of features, which hits the spot every time. The playing is fun, the league a challenge and the support graphics appropriate and pretty. Obviously we have to say the customary 'not as good as Kick Off bit, but then what is? Kick Off?? Check out pages 36 and 37 to find out.



This is one of the few new football management games to make an appearance in recent months, with only the shy and retring Kevin 'Addictive' Toms' Football Manager World Cup Edition for company. It focuses firmly on the managerial and financial framework behind the game rather than the actual act of playing a game of football. The matches in the tournament are shown as text on the screen, so no net-ripping goals to be found here. But this one's a grower.

After the initial grappling with the text to see what it is you're supposed to be at, you soon get buried in the game and it becomes feverishly addictive. This is one for the strategists among you, rather than players who crave a bit more action.

We can just see your face. You don't believe that a program that has no graphics could be that fab. Well, it's true. All computer games used to use text to interface with your imagination - even flight simulators used to be made this way. Okay so it's an archaic way to get a computer program to give you its data, but it's a valid one. Although not exciting to look at, Treble Champions deserves to be taken seriously.

You have control of your team in the league, being able to alter their attributes and therefore their chance of survival. You have four divisions of 20 teams plus a non league division of 20 teams, all of whom have their own attributes and player tactics. All the games on any Saturday are played at once, so you get a full results service. You get full details and attributes on over 1500 players, and not only do you have to balance the books, but you have to decide who to play and at what position. You also get to do transfers, coaching and all the other fun things that go with running a professional football club. Including paying the bank manager at the end of the month. What this is really is soccer role-playing.

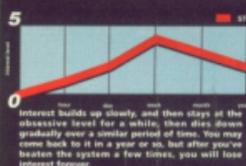
The game is light on the animated graphics, freebies and colourful inducements that the others have, but heavy on undiluted tactical variables, like training and finance. You have control of literally EVERY aspect of the team, which again makes it unsuitable for the type of person who wants to be up and running in a few minutes. If we have any crits at all, it's that more time could have been spent tarting it up, just a little bit. A few more graphic screens to sit the text on rather than this rather boring green/white/cyan affair. Otherwise, it's a good product which deserves a place in the league.

ATARI ST

Although the graphics in the game wouldn't particularly tax a Sinclair Spectrum, the strategic elements make this game a winner with the more serious player. Although there are a few sampled sounds and the odd screen of graphics, the game is mostly text based. But easy to get hooked on.

GRAPHICS 4 IQ FACTOR 8 AGE RATING 706
AUDIO 4 FUN FACTOR 6

PREDICTED INTEREST CURVE



RELEASE BOX

ATARI ST £19.99uk OUT NOW

AMIGA £19.99uk IMMINENT

No other versions planned

WORLD CUP 90 PREVIEW

Although a fully playable version wasn't available at the time of going to press, a very impressive demo version of Line's World Cup '90 was. Programmed by Genius, it's (according to the credits) the only World Cup Game written by Italians. The home team have gone for the Cinemascope approach, it seems, with graphics and sounds a mundo. Playability is hard to gauge without being able to play it, but it looks very slick, and if it plays as well as it looks then league leader Kick Off may be heading for the early berth.

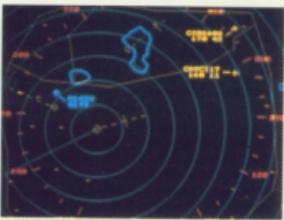


TRACON/ RAPCON

MINDSCAPE/WESSON INTERNATIONAL
bring Air Traffic Control into the home

Flight Simulators – forget it. Thanks to the efforts of Wesson International you can prove you've really got what it takes by taking responsibility for not just one aircraft, but several – simultaneously!

Tracon and Rapcon simulate civilian and military Air Traffic Control respectively. Both programs allow you to experience the strains and stresses of Terminal Radar Approach



Guiding planes around over Edwards Air Force Base in the military simulator, RAPCON

Control. This is the section of Air Traffic Control responsible for guiding aircraft in and out of airfields before handing them off to the airport's tower or surrounding centre controllers.

The job boils down to three tasks: supervising aircraft that are crossing your airspace, vectoring aircraft in to land, and clearing aircraft for take off then guiding them out of your airspace, and all the while keeping them apart.

If it sounds easy, believe me, it isn't. This is a very heavy-weight simulation of a heavy-weight job. After ten minutes of play you will begin to feel sorry for ATC operators who have to do it for real (I managed to make two airliners collide

on first playing, and even killing simulated people was quite harrowing).

The IBM's screen shows your radar scope (which can be configured to your requirements by toggling the built-in options, like the Heading Indicator), the Pending and Active flight strips, which show the flight plans of all the aircraft you are handling or about to handle, and a Communications window, which shows the dialogue between you, your charges, and the other control facilities you must deal with. Dialogue is also 'spoken' through the PC's internal speaker. This is just about intelligible, although apparently the quality is equivalent to that obtained from the headsets in a Cessna. 'God help Cessna pilots' is the only response to that claim.

Both programs give you the opportunity to adjust the running parameters before the simulation begins. This allows you to ease yourself gently into the simulation by starting with very few planes over a long period of time, in calm weather, with perfect pilots. When you get a little more adept you can increase the tempo and try out stormy weather and lousy pilots. The latter is not recommended for the faint of heart. I had to take one errant pilot round three times before he managed to land without missing the approach, and this during a particularly hectic period!

Rapcon, the military simulator, also allows you to try your hand at PAR (Precision Approach Radar). This shows the landing plane against a horizontal and vertical glidepath, and it is up to you to continually talk down the aircraft by giving positioning instructions until he can see the runway. It's quite a tricky procedure, especially since the pilot expects instructions every fifteen seconds at least or he'll abort the landing.

Rapcon also treats you to the occasional equipment failure. You've got everything under control and are quite happy when suddenly the data tags on your scope disappear, leaving nothing but indistinguishable blips. It's a nightmare, but it happens for real too!

Controlling both simulators is very simple if you have a mouse, but even if you don't the intelligent entry system makes keyboard control



TRACON showing aircraft manoeuvring over Heathrow, Gatwick, and London City Airpax

a breeze. Personally I found a combination of both methods was the best way to manipulate aircraft smoothly – use the mouse to select targets quickly and the keyboard to input accurate values. That way the speed of communication is not much slower than spoken commands would be.

These simulations go beyond being mere games – and that just might be the problem with them for some (especially younger) players. But if you want to get first hand knowledge of air traffic control, this is the safest way to do it. The programs succeed brilliantly in evoking the sheer terror of a difficult situation. Experience one near miss, and you won't want to do it again!

● Laurence Scott

RELEASE BOX

TRACON PC £34.99uk OUT NOW

RAPCON PC £34.99uk OUT NOW

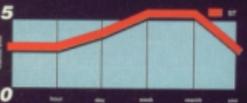
European Sector Disk for Tracon to follow

PC

Graphics in both games are fairly functional, but then so are those on a real radar scope, if you possess a VGA or EGA card then some colour is used. Otherwise the program uses the highest resolution monochrome mode that it can. Given the rather dubious quality of the PC's internal speaker, the synthesised speech is quite an achievement. It is worth buying a mouse (or a PC came to that) to experience these simulations at their best.

GRAPHICS	5	IQ FACTOR	9	ACE RATED	915
AUDIO	8	RUN FACTOR	7		

PREDICTED INTEREST CURVE



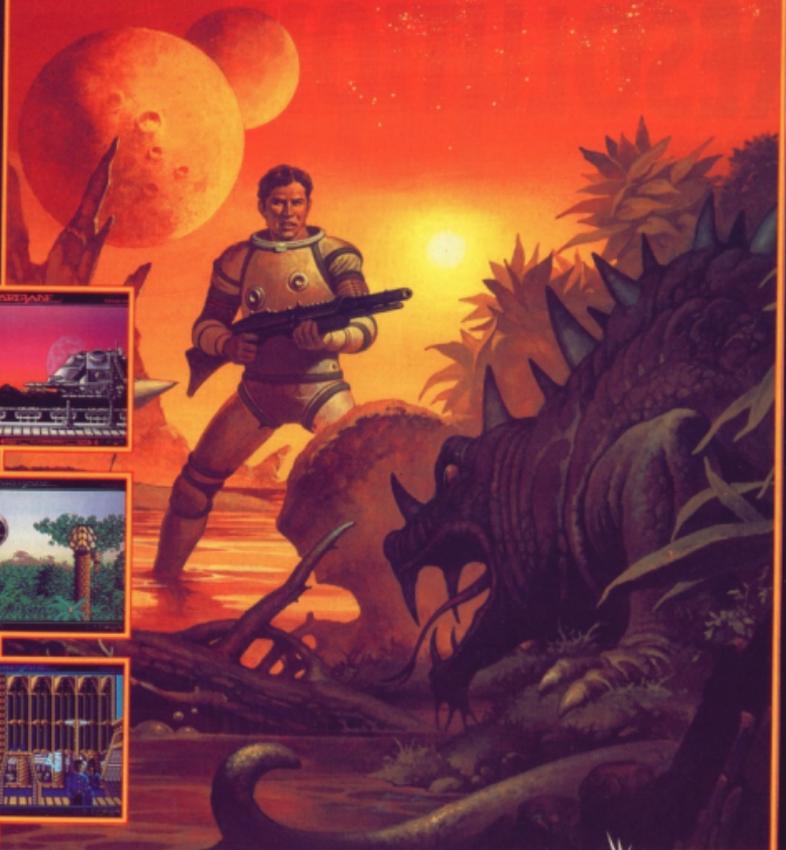
This is definitely not the sort of thing you can just pick up and play. Detailed study of the manual is essential first, even then it is best to start slowly by setting up simple, easy to control scenarios until you really get into the swing of things. A day's play should be enough to get to a basic level of proficiency, but it will be months before you become really adept at handling heavy air traffic. These are two programs you are going to come back to time and time again.

AUTOMATED ATC

The core routines in TRACON and RAPCON are based around a mainframe program written in 1977 by Dr Robert B. Wesson. As well as simulating the movement of air traffic and the relevant ATC systems, it also automatically resolved separation conflicts (defined as two or more aircraft coming within 3 miles horizontally and/or 1000 feet vertically). When tested by professional controllers it was judged to perform better than human ATC personnel. Dr Wesson went on to develop the AERA system, which has become an integral part of modern American ATC systems.

STARBLADE

GENOLYN IS PREGNANT AGAIN...
...AND JUST WAIT TILL YOU
MEET THE KIDS!



Silmarils

AMIGA · ATARI ST · PC

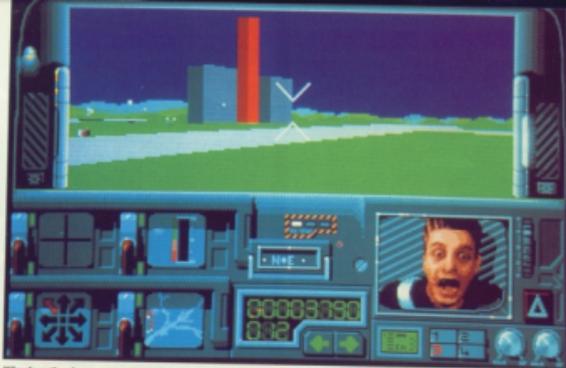
MARKETED BY



PALACE
SOFTWARE



Ribble the robot asks his revenge



Why does the character on the CRT's link look like Andy Serkis?

RESOLUTION

Los Envegas, 2038. A deadly flow of data and drugs runs through the streets of the city. Crime is in control. Warriors creating the wasteland, a powerless Government. One last hope. Fight fire with fire. Set convicted criminal against active criminal. Rez 101. A deal for the future, a chance for freedom.

Resolution 101, sub-section 1a: 'It is hereby passed as law that, from the 19th January 2038, any offender held within a State or Federally owned prison of the United States of New America, wishing to receive amnesty from the Government for any past crimes that he/she has been judged guilty of, may receive his/her amnesty through the successful application and completion of a State Sheriff's Termination Warrant. These Warrants shall only be for the termination of the most highly dangerous criminals in the United States of New America - FBI classified type 'A' only'.

They call me Crusader.

Incarcerated on a slight technicality - I'd amputated my partner's spleen with a 9mm automatic - completion of the State Sheriff's Termination Warrant would gain me an amnesty. I tasted freedom. I was hungry for more.

Raw and ruthless, I quickly terminated two major drug dealers - Toby Komazuki on the Eastside and Johnny Psychlops in the Southern Boulevards. Now I was cruising West Side in my Theta 4000 ground skimmer vehicle on search and destroy. My target, Lord Carmaine, dealt a fastlane in genetic drugs. Osaka biotech masters had created subcellular codes to transmute your DNA-binding in realtime. Spice with a slice.

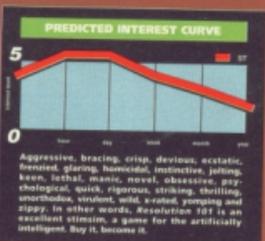
My Theta 4000 was fitted with extras. All vehicles are required by the Department of Defence to have an offensive unit fitted to their vehicle. Every citizen must be capable of defending themselves on the streets. Class One auto-magnum comes free of charge thanks to a government subsidy. If you've got the technology, you've got the edge. My edge was a Supercharged Nucleocatalysed Kevlarium Booster Pack for my turbo-thrust jet engine - 3600 horsepower takes me up to 200kph in

MILLENIUM gate crashes the 21st century

under five seconds with a terminal velocity on light hover of 650kph. Radar coverage supplied by Blade Industries' Mabel 367 Quartile. Detected as close as a Blade or your money back'. Class

RELEASE BOX		
ATARI ST	£24.99uk	OUT NOW
AMIGA	£24.99uk	IMMINENT
IBM PC	£24.99uk	IMMINENT
No other version planned.		

ATARI ST	Resolution 101 is fast, it's got the speed you need. A polygon cityscape populated by sprites in flight - fasttime during runtime. Atmosphere could have been further enhanced with the introduction of a less gaudy colour scheme and more original sprite design - bright primary colours, flying saucers and ribble robots are not 21st C. This can be forgiven, the soulless audio cannot. Jump! Junk soundtrack, white-noise splinter effects.			AGE RATING
	GRAPHICS	IQ FACTOR	FUN FACTOR	
	9	7	8	17
	AUDIO	1		



HIGHLY SPIRITED

"Resolution 101 was a nightmare from start to finish," says its creator, Paul Carruthers of Astral Software. "Making the 3D buildings link up and contract in the speed of 101, but it would have been nice to see the floor and the sprites expand and contract in real-time was very hard." The game took nine months to develop. Carruthers wrote the ST and Amiga versions of 101 for Millennium. This 28-year-old programmer from Nottingham previously created the cult ACE-Rated games Archipelago and Xor. "Everybody is drawn to the speed of 101, but it would have been nice to see more detailed and involved gameplay. For instance, the ability to explore individual buildings. I was more influenced by the code from Archipelago than the concept of cyberpunk - that's more of a marketing ploy." And what does Carruthers dislike about the Amiga industry? "The increasing number of licence games, a classic example of marketing people in it only for the money. It's becoming too corporate. Original ideas are what's needed more than anything else. The reason I like writing games is that they offer an opening for my creative talent. I can do the abstract. You can't do that with licence product." Carruthers next game will be a futuristic sports simulation utilising 101's code. Stormball (current working title) should be out in early '91. In the meantime, Carruthers will carry on watching his favourite type of films - bawdy English comedies.

Three auto-magnum, Class Two vertical spray cannon, Class One Heat Seeker Missile Launcher. Auto lock-on, unlimited ammo. Nothing to get hung about, silicon friends forever.

Turning a corner, my dashboard came alive. Vidcreens bopped to the beat of red lips. The Run Complete warning light flashed before my eyes. I rushed to the drug runner. Classic response, classic mistake. Robot spiders gave it their best shot.

I was still kicking but I'd taken some serious damage. The fibre-glass armour patch with damage sensitive membrane underlay was down to a quarter. My construct was about to destruct. And I was heading for a matt black 'death' canister at 650kph. Emergency evasive response. Jolt, flash, nothing.

My International Vehicle Insurance Corporation credit was at zero rating. Last chance. \$5000 New American Dollars would buy me the best console cowboy on the circuit, eager to hack up my credit rating on the IV Corp database. The trouble was, I didn't have \$5000.

I woke up in hospital, I couldn't move. Body-snatchers had done a job on me. Somewhere an old rich guy was walking around with my young cheap heart. I was burnt-out. Life would be hard back in the State Pen.

● Rik Haynes



REVOLUTION '76

Fed up with the Poll Tax? Why not simply declare Independence. All you need to do is wage a full scale war against the English throne...
aided and abetted by
BRITANNICA SOFTWARE

Comes on three 5.25 or 2 3.5 disks and MUST have more at least 640K, EGA, and a mouse. We aren't able to test the additional sound effects that the program promises for owners of 768K+ machines. There are some quite nice graphics but the effect is spoiled by the occasional terrible presentation of numbers and text in tabular format.

PC
GRAPHICS 8 IQ FACTOR 9 AGE RATING 830
AUDIO 3 RUN FACTOR 8

PREDICTED INTEREST CURVE



Clearer blurb on the packaging raises the interest a little more than the average strategy scenario, but even so enthusiasm takes a while to set in. Once you've marched off to war, however, you can expect to be comparing on and off for a long time.

RELEASE BOX

IBM PC £34.99uk OUT NOW

No other versions planned

Aren't colonials quaint? No sooner do they leave this green and pleasant land for some faraway, inhospitable shore, when they start getting stroppy. Well, within a hundred years or so they do, anyway.

And so the scene is set, in the Thirteen Colonies of British America, around 1770. One of the most powerful imperial countries is milking you dry, you don't get the vote and there's a rumour that something called the Poll Tax is coming in. Surely this calls for - Revolution!!!

Revolution '76 is a detailed - and therefore fairly complex - military, economic and diplomatic simulation of the American War of Independence. This shindig started around 1775 and ended with the signing of the Treaty of Paris on January 1783. Just in case you didn't know it, we lost.

Before you even get near to booting up the machine, it is necessary to read both the Historical Perspective and the Players' Reference manual. Fly into this one without the research and you haven't got a hope.

Game designer and programmer Ed Bever writes the 64 page Perspective. It's certainly the most cogent historical text I've read in many years. It gives the historical background for the reasons behind the unrest in the Americas, and a blow by blow account of the action itself. But more importantly, it explains the political background, the economics of running a revolution and how diplomacy with other European powers played a major part in the long term victory over the Brits. Reading makes you wonder why there is supposedly a "special relationship" between the UK and the US, when it was the French that bailed them out originally!

The game itself is played on a strategic level within the Thirteen Colonies of the Americas (split up into 4 areas: New England, Middle Atlantic, Chesapeake and Carolinas) with turns

lasting a whole year. You start off controlling the revolutionary fraction. So does one simply unveil one's sabre and have at it? No - this is not, repeat not anything like a simple wargame. First off you have to Organise. Set up a provisional government, raise money, recruit troops, conduct diplomacy, reform the economy - and still find time to declare independence.



One of several graphic screens that keep you updated on events. You've just freed yourself from those nasty poll tax setting Brits.

This takes careful planning and thought. The user interface for the game - mouse driven and graphically pleasing, with attractive maps, charts and bitmaps - tries to make it easy for you by leading you stage by stage through a turn, but the complexity of the thing will be offputting for some, while fascinating for others. It has to be said that the vast arrays of information that are put before you can be unattractive and a bit confusing.

If there's one myth that this game explodes to the full, it's that war is all about fighting battles. Battles are about combat and there's much more to warfare than simply slugging it out. In this game, warfare is dealt with in a strategic sense, at province level, concentrating on key towns.

But to keep the army in the field, (and the navy on the waves) you have to have the support of the people. That means a whole load of things. You have to have popular leaders. Each area and

faction has to feel it is being represented in some way.

You also need money. How do you get money? You print it! Printing too much causes inflation, so what do you have to do? Raise taxes! Raise the mortgage rate. Does this start to sound familiar!

After recruiting, the campaigning itself is a far from a doddle, with having to keep an eye on factors such as supply and morale. Remember, if you alienate a general, he may well defect - something that actually happened when Benedict Arnold did a runner and took the King's Shilling.

It has to be said, even after quite some play, I feel like I've not even scratched the surface of this title. Criticisms are few - a campaign-only option would have been nice, or an introductory level of play to get you into the basic mechanics of the thing.

Right now, I just feel a humble admiration for a designer who has set out to show what running a war is truly about and at least halfway succeeded. Yes, Revolution '76 is complex, but given the scope of its brief, the game is as manageable as it can be.

Students of this period must buy a copy - if you are into military matters and want to find a different perspective on warfare, again you should get hold of a copy. Having said that - it won't be everybody's cup of tea.

● John Cook



The main strategy screen - you're planning the next year's military campaign

SIM CITY TERRAIN EDITOR

INFOGRAMES give you a second chance to play God

God games seem to be becoming quite popular these days. With the arrival of machines with large memories, great graphics and good sound it has been possible to turn the text based management/strategy games of old into all-singing all-dancing programs in which your creations are shown in all their graphical splendour.

Programs like *Sim City*, and *Bullfrog's Populous* represent the ultimate in this type of game, although *Debut* from *Incentive* (see preview elsewhere in this issue) looks set to surpass both of them by letting you run a whole planet.

If your copy of *Sim City* has been consigned to the shelf recently then *Infogrames* are now giving you an opportunity to revive it with their *Sim City Terrain Editor*. The program allows you to shape your own terrains by placing tiles of



Building another city to view in...

cliff, dirt, water, trees, and so forth. You can also decide on the prominent form for each landscape.

Existing cities can be loaded in and modified. You can even strip them of all unnatural (ie manmade) features. If you don't want to modify an existing city, but are too lazy to create one from scratch then the program can generate a random landscape. Rather than just placing tiles willy nilly the program actually creates a feasible landscape with realistic forests, waterways, and plains.

If you are in a creative mood you can paint the tiles onto a window that shows a magnified section of the city. This initially creates a very

RELEASE BOX		
AMIGA	£14.99dk	OUT NOW
IBM PC	£14.99dk	IMMINENT
APPLE MAC	£14.99dk	IMMINENT

AMIGA Graphically the content obviously matches that in *Sim City*. It is all very colourful, even if inevitable features look a little blocky and two-dimensional. Control is very easy, because the programmers have chosen to stick with the standard Amiga DOS, menus and mouse control. Not a bad effort, just overpriced.

Update scenario disk, suitable for *Sim City* owners only.

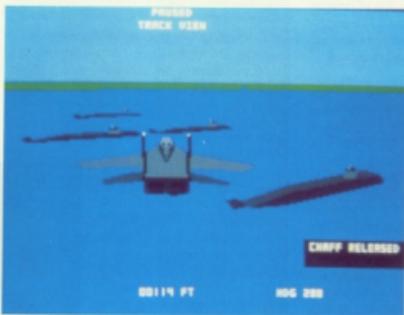
blocky looking landscape, but there is a smoothing function that rounds off the square corners, giving rivers and wooded areas a more realistic feel.

The authors have also included a set of new ready-made cities on the disk, but even with these the price is a little steep for what you get. After all, the add-on disk for *Populous* contained 500 new lands for only £9.99 (and even that was too expensive). This is still worth a look, however, if you are a major fan of *Sim City* and are beginning to exhaust all the possibilities.

● Laurence Scotland

BOMBER MISSION DISK

Activision lower your life expectancy yet further with additional missions for Bomber fans



Never come across anything like that in *Bomber*, did you?

The *Bomber Mission Disk* continues the present trend of issuing additional scenarios for existing programs. It also continues the trend of charging rather too much for them – *BMD* will set you back £14.99.

What you get for your money here is a host of extra targets, built into 16 new missions (plus a mission editor to enable you to construct your

own). The *BMD* simply replaces *Disk 2* of the original product.

Activision's intention here was to offer *Bomber* pilots not only more missions but also a greater challenge, so various minor refinements have been made to the program that, taken together, should give most bombers a stiff run for their money. In terms of the original game, *BMD* comes in at about level 8 in difficulty and includes such goodies as submarines, larger farm buildings to pot at, mobile m/c's, and

comms bases to wipe out. The *Target Recon* function has also been tweaked, so that it doesn't zoom in as close as it did before, making attack a little more difficult.

There's no doubt that *Bomber* fans will welcome this, but as with the *Sim City* add-on, there are some reservations about the price.

● Steve Cooke

RELEASE BOX		
AMIGA	£14.99dk	IMMINENT
IBM PC	£14.99dk	IMMINENT
APPLE MAC	£14.99dk	IMMINENT

AMIGA

Don't expect any changes in presentation here – apart from the new targets, the scenery and viewing options remain identical to *Bomber*. The new targets do make a welcome diversion, however, and the submarines should keep you busy!

Update scenario disk, suitable for *Bomber* owners only.

TEENAGE MUTANT NINJA TURTLES

They're here! Michaelangelo, Donatello, Raphael, and Leonardo – probably the only group of turtles every to be named after classical Italian painters, and certainly the only one's to power-up on pizza and wield ninja-style weapons.

Teenage Mutant Ninja Turtles started life as a comic strip and have become – in the States – a cultural phenomenon that almost rivals Nintendo. Now they're hitting the game scene and what do we get?

Programmed and published by Ultra in the US (and soon, almost certainly, to be licensed by someone in the UK), Ninja Turtles is a pretty standard arcade number with one big difference: you can swap turtles in mid-stride and use their different abilities to slice up the opposition. This introduces an element of strategy into the game that lifts it from the mundane to the almost special.

It's a big game, too, coming on three Amiga disks and forcing you through five levels to rescue April O'Neil from the ruthless Shredder and, in doing so, retrieve the Life Transformer Gun from the Evil One and use it to turn rat-friend Splinter back into human form.

Action takes place in a many different locations but by and large the game is a platform and ladders beat-em-up. Each turtle uses a specific weapon that has certain advantages under certain conditions. Donatello's Bo (long stick), for example, enables him to get in the first blow against enemies who – if they could approach closer – might prove more dangerous. Enemies like these would be hazardous to Leonardo and the limited reach of his Katana Blade, but then Leonardo is rather good at slashing airborne enemies from below.

This is where the strategy comes in. First, you must survey the opposition, then decide which turtle you want to throw at it. You must also balance their resources. Energy fades quickly as the foes pile up, and the only thing that restores it is pizza. Not all the sewers you battle through contain pizza, however, so you must decide which turtle is in most need of grub.

All this is made easier by the fact that sewers – after you leave them – reset themselves. If there's a bit of pizza at the end, you only have to time and reenter the sewer at that end several times to boost your turtles' energy levels right back up to where they belong.

Combine this with several above ground areas



Inside one of the buildings: you have to be quick at crouching and jumping to hurdle the crates and dice the opposition

which, due to their narrow width, enable only one enemy to approach you at once (thereby making it a simple matter with the Bo of sending them to Pizzaland) and you have a recipe for a very high-scoring game that, although very challenging in parts, is still easy enough to keep the interest up for weaker players.

The controls are simple enough. A quick stab on the fire button uses the current weapon (there are others to be found as well). A longer stab on the button sends your turtle flying into the air. Combinations of stabbing, holding, and twisting the joystick gets your turtle jumping, crouching, and slashing in mid-air with gay abandon.

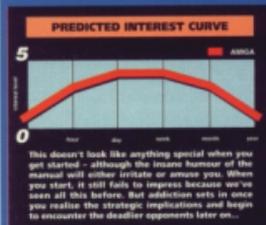
Apart from the multi-turtle approach, there's absolutely nothing new in Ninja Turtles, but as license games go, this one really slices ahead...

— Steve Cooke

(top right) The control panel enables you to select your turtle – the bars under each name show the energy remaining. Below: Out on the streets – find a sewer and get down there!



Ninja Turtle fever could hit Britain's micros any minute. ACE grabbed a copy of the game that's sweeping the States....



RELEASE BOX

AMIGA IMPORT ONLY OUT NOW

IBM PC IMPORT ONLY OUT NOW

CGA/128 IMPORT ONLY OUT NOW

Check with dealer for import price

AMIGA	Jumpy soundtrack, OK graphics, and easy controls are slightly dulled by the disk access times. 3 disks full of fun and pizza.			ACE RATING 825
	GRAPHICS	7	IQ FACTOR	
	AUDIO	6	RUN FACTOR	9

ROTOX

US GOLD's revolutionary Rotoscape game has us going round in circles

According to the designers of Rotox, space in the future will be chocobloc with weird floating structures. Not only that, but hordes of invading aliens have taken over these floating structures. Time for you to strap on your pressure suit and step out into the nothingness. The game has you playing an advanced Cybernetic creation fated to ride these puzzling structures of the infesting aliens. This can only be done by solving one plane at a time.



Each plane is made up of nine unconnected sections. The idea is to clear one section, which will then connect to another. Once all nine are connected and clear you are accelerated toward the next plane.

Clearing a section involves killing any nasties which may inhabit it, such as the enormous space snakes, which have to be destroyed section by section, or the robotic carriers which, when shot, let loose half a dozen

AMIGA

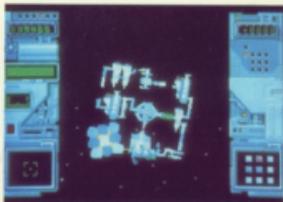
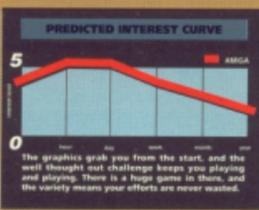
The combined use of vectors and sprites coupled with the impressive rotation system make Rotox staggering to look at, although to begin with the controls are a little too fiddly. However, like all great games, they become second nature after practice and prove that Rotox is a gem and a half. Do not miss!

GRAPHICS	9	IQ FACTOR	6	AGE RATED	905
AUDIO	7	RUN FACTOR	8		

RELEASE BOX

AMIGA	£24.99dk	JULY
ATARI ST	£19.99dk	JULY
PC	£24.99dk	JULY

no other versions planned



Your Cybernetic alter-ego falls towards the first set of structures to solve

space flies, and collecting any items that you may be lucky enough to find, such as homing missiles or a jet pack.

The last is possibly the most useful item in the game. Why? Because even though you are in space and there's no gravity, you can still fall to your death - just take a look at the screenshots on this page to see how hairy some of the situations are. When you consider that the controls allow you just to rotate and push forwards, sometimes keeping yourself on that thin little tightrope is almost impossible. The jet pack gives you limited flying ability, allowing you to step out into space without dying.

The game is very tough to play at first, but does prove to be very rewarding, and of course it's worth playing just to experience Rotoscape. Rotoscape is an extraordinary new concept in graphics systems. Through clever use of filled vectors and rotated sprites, USG have come up with a game that will make your hangover slightly less bearable. If swirling colours and flashing psychedelic blobs are your thing, then this is the game for you!

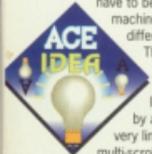
● Tony Dillon

MIRRORSOFT booked the rides, but who's buying the candy floss?

THEME PARK

Magic Canyon Park has everything your typical happy-go-lucky cheeky, quirky, All-American teenager could want - excitement, danger, and the added touch of a few fatal situations.

You begin logically, at the entrance to this fairly normal looking funfair. Normal, that is, apart from the total absence of people. In front of you are three rotating cabinets. The first is a Zoltan wishing machine. Next to that is a Bagatelle machine, and finally a Grabbing machine.



There are three sections, and hidden within these sections are a total of eight demons which have to be brought back to the Zoltan machine. Each looks and plays completely different to each other.

The first level, Dragonworld, has you as a barbaric warrior, who can leap, run, or leap and run and did I mention he could also run followed by a leap? Guide your warrior in his very limited way around the side-view multi-scrolling caverns, looking for objects to help him in his quest while avoiding obstacle and enemy alike.

Find and use the sleeping potion, and you enter Dreamworld, an unreal and incredibly



These three machines are the beginning of a Theme Park Mystery

vient chess game that you must escape from. Finally you reach Futureworld, the roller coaster of a lifetime where it is definitely a bad idea to stand up. After all, you don't want to be hit by the guided missiles do you?

Theme Park Mystery is a very intricately designed game. You can, if you wish, play it as a straight arcade game with three levels. After all, then you get three totally different games for the price of one. However, I'd consider that an insult to the designer. A fascinating and exciting game, and one that will keep you playing and playing.

● Tony Dillon

AMIGA

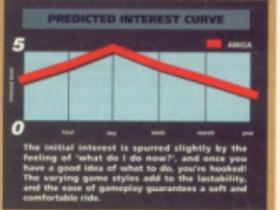
Top quality graphics and animation, mixed with some pretty weird FX make just watching Theme Park Mystery an experience. Couple this with gameplay that just doesn't tire you and a deep plot and you have a winner.

GRAPHICS	8	IQ FACTOR	8	AGE RATED	880
AUDIO	7	RUN FACTOR	8		

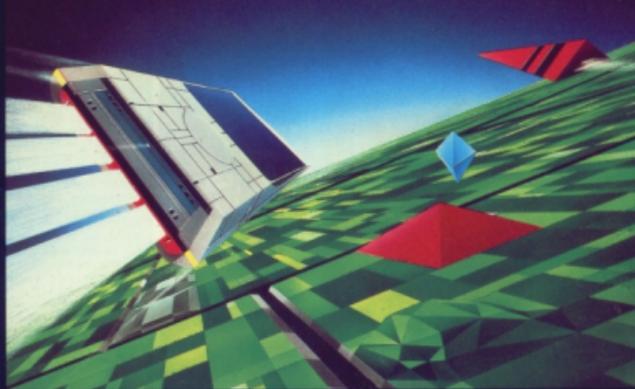
RELEASE BOX

AMIGA	£24.99dk	JULY
ATARI ST	£24.99dk	JULY

no other versions planned



THUNDERSTRIKE



IBM PC VGA SCREEN SHOTS



IN JUST 200 years the Earth is controlled by the TV networks and defence industries. The ultimate TV phenomenon is coverage of the military olympics... and the ultimate event is 'Ground Defence'. Gladiators man deadly craft, their mission to protect the communication tracks and ground installations. Their goal - and yours - is to be knighted 'Defender of the Ground'.

ThunderStrike is 3D arcade action, using solid polyhedrons and solid relief techniques to create a breathtaking contoured landscape. With super-smooth 3D scrolling the gladiator's craft hunts and attacks the enemy vessels in deadly low-flying combat. The action is tracked by a camera following close on the tail of the player's craft, whether flying along a trench or hugging the undulating contours of the ground.

- Spectacular graphics - fully light-source shaded solid 3D vectors (in 256 colours on VGA)
- Choose to pilot a variety of sleek Defender class fighters
- Heads-up display featuring radar displays and weapon indicators
- Various weapon pick-ups, shield drones and turbo-thrusters
- Watch the TV ratings go up as the action gets hotter!
- Available from the end of June 1990 for the Atari ST, Commodore Amiga (£24.99) and the IBM PC (EGA/VGA) (£29.99)

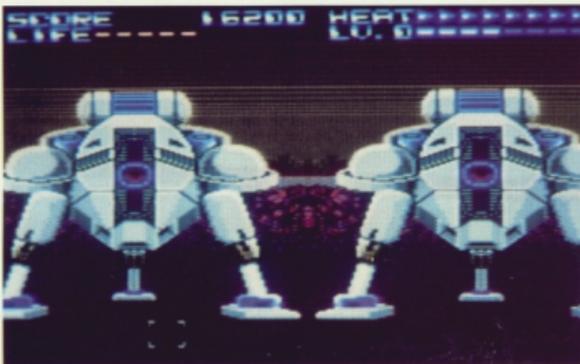
Light years ahead



MILLENNIUM

ELECTRONIC STORM!

The console software war is hotting up as new software and hardware companies enter the arena. ACE checks out the latest contenders...



The nasties at the end of level 1. Shoot 'em enough times in the right place and you'll bag 'em.

SEGA SOFTWARE STORM

The steady trickle of new Sega games is about to become a flood when a select group of European software houses offer their games to Master System owners later this year.

Likely to be first off the mark are US Gold with an impressive list of six titles ready to go on sale in September. *Paper Boy*, *Impossible Mission*, *Indiana Jones*, *Gunfitter*, *Leader Board*, and *Heroes of the Lance* are in development. ACE has seen *Impossible Mission* and *Gunfitter* and they're looking good. We'll be reviewing them closer to the release date.

Joining US Gold on the Sega label will be Virgin/Mastertronic (official UK distributors of the Sega console) with versions of their games.

The best news of all for Sega gamers, however, is the downward trend of prices. Sega are leading the pack by reducing certain games (admittedly some of the older titles) to £9.99. But the new cartridges will also move away from the near £30 price mark to the more affordable £20 mark. Sega told ACE they hoped the new price structure would "...facilitate gift and impulse buying patterns" - or, in plain English, a mad rush to the shops.

ASSAULT CITY

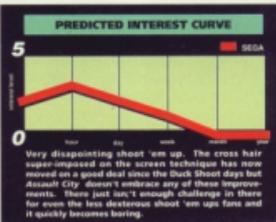
Sega's shades of Robocop

Assault City takes its inspiration from the popular sci-fi truisms that in the 21st century domestic robots will be as essential a piece of household furniture as a refrigerator or TV set.

Whether or not this is an accurate prediction for the future of Zanussi's 'appliance of science' remains to be seen but one thing is already clear. Malfunctioning droids who turn from docile slaves into homicidal bone crushers are likely to continue to dominate the computer games scene, even if this does involve flouting the first rule of robotics (as outlined by Asimov) - a droid can never harm a human being.

The Assault City droids, like so many before them, show scant regard for this seminal piece of robot brain engineering. Ho hum, here we go again, the droid's on the loose - killing anything that moves. And you thought the connection between technology and computer games might lead to a more intelligent understanding of the future. You were wrong - and have five seconds to live.

SEGA	£24.99dk	OUT NOW
GRAPHICS 6	IQ FACTOR 3	AGE RATING 480
AUDIO 4	FUN FACTOR 4	



If you do plug Assault City into your Sega before you die, you'll find it all boils down to an updating of the old fairground duck-shoot type games, so popular on early console offerings.

Your cross hair is moved around the screen and positioned over a target before it disappears - or in the case of Assault City before it strafes your hero with laser fire. A shooting gallery training mode is compulsory at the beginning of the game to determine the level of difficulty. Tiles

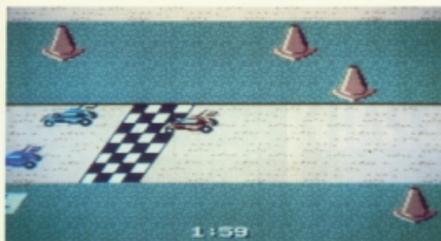
spin around to reveal the crazed droids and you have to blast them before the tiles spin back again.

In the game itself there are six levels of difficulty. Each one comes in two phases - battle mayhem and a more calculated shoot out with an end-of-level guardian. Four important barometers are positioned above the main action window keeping you posted on your life force level, heat reading, strength of power-up reading and high score reading.

At the end of each of the six levels of action is an end-of-level guardian that can only be destroyed by shooting in certain strategic places. This makes for marginally more interesting target practice but overall the game is a fairly lacklustre blast 'em up.

This type of game has been greatly improved by adding 3D animation to the targets in games like *Operation Wolf* and *Operation Thunderbolt*. Sega themselves have an excellent rendition of this new modern shooting gallery style video game in their own Rambo title - and this is greatly recommended to anyone seeking a game of this type. Unfortunately, in Assault City, sound effects, graphics, the storyline, and game play all fail to impress.

● Eugene Lacey



Racing over the chequered finishing line in third place. That will win our racer enough cash to buy a power up in the grid shop.

R.C. GRAND PRIX

Chasing the laurel garlands by remote control

The RC stands for remote control and is one of America's fastest growing sports - with many individual and racing teams receiving sponsorship to take part in grand prix's in exactly the same way as do the drivers of their larger counterparts in the Formula One Circuit.

RC races take part in large fields or car parks where the mini-tracks are laid out with all the turns and chicanes that you need to make an exciting grand prix in miniature. This Sega game simulates some of the fun and is at its best in a multiplayer format - with up to four players each controlling his or her own car. Cash prizes are awarded for placings and this money can be used at a later stage to buy extra components to soup up your racer.

The game has similar appeal to the coin-op Super Sprint, featuring a complete image of your car as it makes its way around the track - as opposed to speeding tarmac in 3D-through-the-windscreen games. The trouble with this is that the graphics are fairly basic as a result - when the game really needed some of the detail of the cars to lend it realism.

The additional equipment is a bit disappointing - offering little discernible difference to the overall performance of the car. It was a shame that Sega didn't take the opportunity to add some features that the real remote control



Slap Shot will satisfy ice hockey fans but it doesn't have quite enough about it to pull in less committed gamers. It looks like the sort of game that is destined to end up in SEGA's bargain range so if you do fancy a spot of slippery hockey hang on a bit.

SEGA	£24.99dk	OUT NOW		
GRAPHICS	6	IQ FACTOR	5	AGE RATING 610
AUDIO	5	RUN FACTOR	6	

racers don't have. A touch of the James Bond's, maybe, with machine guns, and oil slicks available at the press of a button.

The racing itself is great fun - and the challenge of negotiating a remote control vehicle around sharp bends at high speed is accurately difficult. Nevertheless it is difficult not to get the impression that RC Grand Prix represents a missed opportunity.

● Eugene Lacey

SLAP SHOT

Sega skate on thin ice

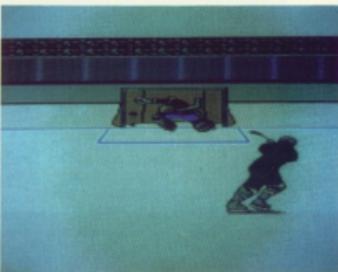
There is growing interest in pro ice hockey across Europe and the game does lend itself quite well to conversion to the small screen. How does this version score?

Most team sports sims - but basketball,

soccer, and ice hockey in particular - stand or fall on how well they perform in one category, passing. Unless this manoeuvre can be crisply carried out then the simulation is likely to collapse into a tangled mess of colliding players with the ball lost somewhere in between. The fact that this frequently happens in the real world as well is irrelevant to the creation of an entertaining video game.

Slap Shot manages passing well enough and has some nice extras to add to the fun. If two players get involved in a particularly drawn out scramble for the ball a cameo will come up showing them slugging it out. This provides a brief interlude of beat 'em up where you have to throw as many punches as you can to win the scrap.

The sport's governing body would probably not approve of this at all, but - as all fans will tell you - ice hockey wouldn't be ice hockey without the scraps. Sega also feature the now more or less standard slow motion replay when a point



Slap Shot features an excellent built-in beat 'em up screen to give you a close up of the scrap when two jacks start to slug it out on the ice.

has been scored. A choice of exhibition or international championship campaigns can be selected and the computer of course keeps score and provides the ref.

Slap Shot will not disappoint sports sim fans, but it's perhaps not the best new Sega game to rush out and buy for the rest of us.

● Eugene Lacey



A high speed motor is a good investment but it might be more sensible to purchase some high grip tires first.

SEGA	£24.99dk	OUT NOW		
GRAPHICS	6	IQ FACTOR	4	AGE RATING 650
AUDIO	6	RUN FACTOR	7	



The problem with RC Grand Prix is that you can relatively quickly reach an optimum skill level beyond which it is not possible to proceed. This could have been avoided by better use of the power ups or some more random factors such as oil slicks on the road. As it stands you soon get the better of your computer opponents. This of course does not apply in two player mode where RC really comes into its own.



Golfmania offers a birds eye view of the graphically detailed course and all the important strategy options in easy to play windows.

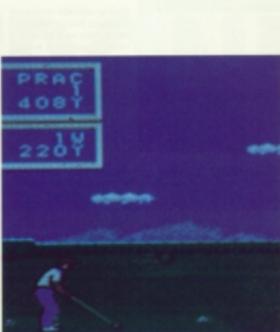
GOLFMANIA

The Nineteenth Hole is a Cartridge Slot for Sega

With the Summer golf season getting into full swing Sega has upgraded their basic golf offering for the Master System. The move is in keeping with other console manufacturers who are striving to create software choices that will appeal to older gamers. I don't know about the statistical justification that the marketers of Sega have for launching

Golfmania but it certainly is a most welcome addition to the catalogue from the gamers point of view - however long or short in the tooth. Its strength lies in its abundance of options and straightforward yet effective game play. A bit like golf itself.

The animated arcade part of the game is a simple hole-by-hole exercise involving moving a cursor with the joy pad in the direction of the hole, pressing the 'that'll do button' when an animated shot strength needle reaches the degree of 'whack' that you are happy with. Nothing could be simpler. The tricky bit is in judging just the right direction for the flight of the ball, making sure you use the right club, keeping an eye on wind speed, trajectory, and getting the



The megagauge is back. Press fire when the moving needle reaches the black bar at the centre of the strength bar for maximum power.

distance right. The leader board flashes up at the end of each hole telling you how you fared against your opponent - whether friend or Master System.

Other neat touches are the Caddy advice option. You don't need to take it of course - you are the pro after all. But then again how many times has he seen the same mistake made time over on this very same hole?

But by far the best of all the game embellishments is the save game option. Saving your position takes seconds - as does beginning again at the exact hole you left off. Just switch on your Sega and plug in your cartridge. Heat to a treat - and dead useful when you have eighteen tough holes to play, against thirty of the worlds best pros in the U S Masters.

An excellent round of computer golf.

● Eugene Lacey

BATTLE OTRUN

Sega's Ferrari fantasy runs and runs

Outrun has to be one of the most successful coin-ops of all time. It was a macho dream. An open road somewhere in California, a Ferrari Testarossa, a beautiful blonde beside you. What more could a man ask for? Well - perhaps a little more gold. Think about it - once you take away the flashy 3D graphics and the pretty-pretty scenery what are you left with? In fact the original Master System Outrun didn't even have particularly good graphics - so it is nice to see Sega dusting down the old racer, tarting up its graphics and giving the gameplay an overhaul.

Your girlfriend has been kidnapped by a criminal syndicate and you want her back. Well - you would do wouldn't you? I mean a Testarossa without a blonde in the passenger seat? Almost

PREDICTED INTEREST CURVE

5
0

1988 1989 1990 1991 1992

Battle Outrun on the Master System gives only the vaguest feeling of the coin-op. There is an attempt to add more gameplay with the rescue element but this only half works. The appeal of Battle Outrun will surely come as it lacks that basic hook to keep you interested.

SEGA	£29.99dk	OUT NOW	AGE RATING
GRAPHICS 7	IQ FACTOR 5		560
AUDIO 5	FUN FACTOR 5		



The Ferrari must run the villain. Chase HQ fashion, to win the essential points for power ups.

..AND MORE 16-BITS

Virgin have now confirmed that the Sega Megadrive will be launched in the UK later this year. The most likely venue for the unveiling of the super Sega will be the Computer Entertainment Show (CES) at Earls Court on the 13th to 16th of September.

Trade rumours abound that the show will also provide the launch pad for NEC's official European version of the PC Engine. The Japanese computer giant have so far kept the games business guessing about whether they will, or they won't, launch the Engine in the UK (Europe) this year for far too long. The word is out that they now need to give a definite yes or no, particularly with Sega coming clean and Nintendo's 16-bit console about to be launched in Tokyo (see our news story on this spread). The NEC machine is already on sale in the US (where it is called the Turbografx 16) and NEC has also confirmed that it has a fully software compatible hand-held version in the works. City sources believe that Europe is going to be increasingly important to the Big Three (Nintendo, Sega, and NEC) manufacturers in the 90's with the lucrative American and Japanese market for consoles rapidly approaching saturation.

A spokesperson for the Computer Entertainment Show would say only that 'we are in discussion with all hardware manufacturers involved both directly, and indirectly, in the computer games industry and feel confident that they will see the benefit of the unique platform we can offer them'.

as unthinkable as a Testarossa running on green petrol. So the race is on. Across America - taking in nine of its biggest cities. Chase the kidnappers through L.A., San Francisco, Chicago, New York and even Washington as you attempt to catch up with and ram their cars.

PREDICTED INTEREST CURVE

5
0

1988 1989 1990 1991 1992

Lasting appeal is guaranteed. You are always going to fancy a round of golf from time to time and Golfmania has so many options and skill levels built in that it will always provide you with a challenging game. Equal to many of the 16-bit got offerings currently available.

SEGA	£29.99dk	OUT NOW	AGE RATING
GRAPHICS 9	IQ FACTOR 7		915
AUDIO 7	FUN FACTOR 9		



Builds the mobile garage. What extras can you afford for your Porsche? Show about some fluffly dice.

The scenery is good...but not that good. The Golden Gate Bridge looks like a Lego construction model and the White House appears to be made of pitta bread. You could forgive all this if there was something to the game, but ramming cars is a pointless exercise unless you can do it sideways-on, forcing them over a cliff. Battle O'Run just repeats the Chase HQ charade where you keep ramming the bad guys' motor up the jacksie until a few sparks appear - no dents - which merely looks like someone lighting a sparkler where the 'Careful - Baby on Board' sticker should be.

The saving grace, however, is the power-up screen. Drive into an arctic where you can purchase all kinds of extras for your Ferrari - as long as you have enough dosh. Dead useful and they work as well.

Battle Outrun is certainly better than the original Master System Outrun - but that is not really saying much. The trouble is that the game design is so reliant on top-notch, state-of-the-art 3D graphics which this version fails to deliver. The conclusion must be that, incredibly, Sega still don't have a top-notch 3D racing game for the Master System.

● Eugene Lacey



PC Engine Chase HQ "the best computerized spin is on Porsche ever."

CHASE HQ

Smash and nab on the PC Engine

If you make a simple game-by-game comparison between all the popular consoles, the PC Engine is way out in front in terms of the range and quality of its race games.

Chase HQ is another welcome addition to a range that already boasts Power Drift, Motorcycle Racing, and Victory Run.

This superb rendition of the popular Taito coin-op puts you at the wheel of a throaty black Porsche Turbo 944. You receive your instructions from Police Headquarters. From what I remember of the coin-op, Nancy at HQ says something like "intercept the criminals that we kidnapped the girl". But it is difficult to tell exactly what she is saying in this version because she's speaking in Japanese. Fortunately, you are shown a photograph of the criminal vehicle so it is pretty obvious what you have got to do anyway.

The criminals are apprehended by ramming their car up to twenty times. Each successful bump is recorded by a barometer that appears on screen when you make your first smash.

The first criminals are pretty easy to catch as you soon outpace their battered old car in your gutsy Porsche. But the chases that follow become increasingly testing as the criminals are given a longer amount of get-away time and better vehicles.

You need to master the controls of the Porsche fully. Time is of the essence and if you spin off the road too often you are simply not going to bag any bad guys. The secret is to use your turbo boosters sparingly. You only have



three of them and must also learn to watch out for obvious road hazards that will slow you down.

Chase is most fun when you catch up with the criminals - ramming them as you dodge in and out of the other cars on the road with your siren blazing and red 'cherry top' flashing away on the roof of your Porsche.

The PC Engine was designed with games like Chase HQ in mind and this fact shines through in the quality of the conversion. All of the jolly tunes from the coin-op are here and the speed, colours, and quality of the animation are all remarkably similar to the coin-op original. For simple, arcade-style racing frills and spills this is as good a game as you are likely to get anywhere on a home system.

● Eugene Lacey

NINTENDO 16-BIT?

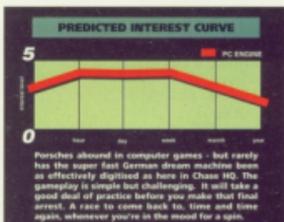
As Sega and NEC continue to plot worldwide domination with their sixteen bit consoles, Nintendo keeps mum. But rumours from Japan suggest increasingly that the console giant is preparing a sixteen bit launch in the near future.

The Nikkei Industrial Daily newspaper reports that the 'Super Famicom' is scheduled for delivery late in 1990, with software already commissioned from games giants like Konami and Hudsonsoft, together with new Nintendo titles including Super Mario Bros 4 and a new version of Legend of Zelda.

Japanese sources also suggest that Nintendo has been planning a 16-bit launch for some time. In fact, far from being the last in the 16-bit console arena, Nintendo were actually planning to be first. This, however, worked against them as the Sega Megadrive launch demonstrated a higher technical standard than Nintendo was expecting. The company were therefore forced back to the drawing board to improve the technical specification - hence the delay.

Anyway, Nintendo are currently following the typical Japanese line of refusing to commit to a launch of the Super Famicom outside Japan. If they really persist with this attitude, Sega and NEC are going to mop up the rest of the world pretty rapidly. The days of Japanese isolationism in consoles are definitely over.

PC ENGINE		E34.99dk	OUT NOW
GRAPHICS	9	IQ FACTOR	4
AUDIO	7	FUN FACTOR	8
			ACE RATING 928





FORE!

As the launch of the Amiga CD-TV brings CD based entertainment one step closer, ACE kicks off its new regular CD Reviews section with a look at the world's greatest golf game, a trip to the North Pole, and news of up and coming CD products...

Although CD still seems an aeon away for us Brits, we have to remember that it other parts of the world it is rapidly becoming a reality. Japan has the FM Towns and numerous console CD games, the USA has the NEC PC Engine CD market and will almost certainly 'go Towns' soon, and the world has the Amiga CD-TV for this autumn. And all that's without the massive launch of CD-I next year.

Hence the ACE CD Reviews section, showing you what's going on and keeping you right up to date with the best in CD Software. Along with our new console section, it means that when anything new crops up in the software entertainment world, you'll read about it here first...

3D GOLF SIMULATOR

TE SOFT and the FM Towns have taken golf into a totally new dimension. And if they can do all this with a set of clubs, a spot of grass, and a few white balls, what on earth will they do with an F19 attack fighter, the skies above, and a plane-load of heat-seeking missiles?!

There have been golf games and golf games. From the early, side-on view of Squirrel Golf (who remembers that nowadays?) to the more recent Ultimate Golf from Gremlin, the game has developed into a worthy computing pastime, though it has been largely ignored in the UK for the last four years.

But this isn't a golf game - it's a golf simulator. And that, if you'll pardon the expression, is a whole new ball game.

3DGS plonks you down at the start of the supremely prestigious Augusta National Golf Club. It shows you a mini-map of the first hole, and then takes you on a flying bird's eye view of the landscape, showing you the lie of the land, the hazards and the opportunities you'll have to exploit if you're going to hand in a healthy score



Opt! You're in the bunker. First, choose your field of view. Using the direction indicator window (top left) you can fine-tune the direction in which you wish to go to placed with accuracy.



You can even adjust the position of your feet - particularly useful for getting out of bunkers.



card at the end. As you dive and soar around the terrain, the route the camera is taking is marked up on the mini-map of the hole. It's a stunning beginning to a stunning game.

Then it's time to tee up, a spot of atmosphere as the sampled birdsong tweets out from the nearby tree, and you set yourself up for the first swing. From then on, the detail of the program is so well worked out that you could undoubtedly give a complete novice a thorough grounding in golfing practise without ever walking round a green. Stance, backspin, reading the green, putting - you name it, you'll do it in 3DGS.

Quite apart from the fidelity of the graphic reproduction (each screen is depicted in the

manual together with a real photo of the corresponding part of the course), the super incidental sound effects, and the excellent vectored landscape, the game also manages to push playability right through the roof. All game gameplay features are extremely simple to use, yet powerful in effect. There are a host of extra frills, ranging from an option that actually tracks the ball through the air during a shot to little advice panels that pop up with one of the course pros' digitised fizzes chattering away at you as he tells you how to play the shot.

There's only one drawback - 3DGS is only available for the FM Towns at present. But it's an excellent indicator of the sort of software we can expect from the new generation of CD machines that are about to hit the UK over the next year. As golfer Graeme Baxall put it, while he took us through the game's paces, 'There are no words to describe this. It's just like being there. This is the only chance I'll ever have to actually play the Augusta National'.

Many thanks to Psygnosis and Mirrosoft for their help in bringing you this article.

MUSIC DATA DISK

What happens when a company like Sony (big in CD) buys a company like CBS (big in music). The Music Data Disk, that's what. This little number, demo'd at the recent Which Computer? Show, flashes up artists' names on screen. Click on the name, and you get a screen showing full-colour reprints of the album covers issued by the artist. Click on the album and you get a list of tracks. Click on the track and...boogie on down to CD quality stereo sounds, baby. Out soon on the CD-ROM XA format and, we hope, a similar product on the Amiga CD-TV.



Now for the swing. The red force band slides round the circle, and when you hit the button, a small red spot swings to and fro down the ball on the right, allowing you to determine spin and slice.

RELEASE BOX

FM TOWNS IMPORT ONLY OUT NOW

No other versions planned

FM TOWNS

Beautifully packaged, superb use of the machine, totally authentic, great sound, nifty user interface, stunning manual - what more can you want? Apart from an FM Towns machine.

GRAPHICS	9	IQ FACTOR	7	ACE POINTS	935
AUDIO	8	FUN FACTOR	9		

Once you actually take the shot, a superbly animated figure appears and - with suitable sound effects - throws the ball away. If it hits one of those trees, you'll hear a couple of branches breaking as the ball plonks down onto the ground





FROM DOMESDAY TO TOMORROW

Laser disk technology has come a long way since the BBC Domesday project used Philips LaserVision disks and BBC computers. Virgin Interactive are typical of a new breed of company who've learnt their lessons along that road and are now ready to put them to good use with the CD-TV from Commodore - and CD4 when it appears.

"The Domesday project was a good way of creating awareness of what could be done with CD-ROM," says William Beckett of Virgin Interactive, "but it's a bit past it now. There can't be more than 1000 units still actively used in schools and we wrote the whole thing in BCPL. But the Amiga is a machine everyone knows something about and the development hardware is more accessible and cheaper."

Virgin's North Polar Expedition is the perfect example of how the evolution from LaserVision to CD-ROM to the CD-TV can effect gameplay. On LaserVision/Domesday, the ability to overlay graphics is severely limited by the BBC's graphics hardware (good for its time but hardly Amiga standard). You do, however, get full-screen video animation in the background and decent sound.

Using CD-ROM, the image quality is very slightly deteriorated (see examples on this page), but the ability to overlay decent graphics and build a larger, more complex inter-active scenario more than compensates for this. Only other drawback is that you can't pull sound and pics off the CD-ROM simultaneously.

With the Amiga CD-TV, however, you get even better graphic overlays, and you CAN interleave sound and vision. We still haven't got the full-motion video that the LaserVision provided, but the whole package is far more powerful in terms of interactivity. And Commodore are promising an FMV add-on to the CD-TV in the future. Similar benefits would be had with CD-I.

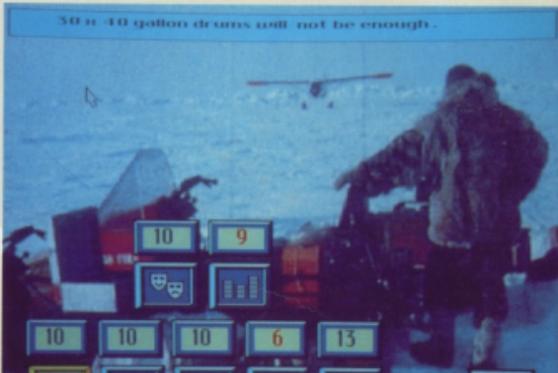
Virgin have come up with another interesting development as well... STITCH. This operating system add-on, developed by Tony Green, can be used in a CD-ROM game scenario to monitor the choices made by the player. At any one time, STITCH knows exactly which choices



The old: back on LaserVision, the same scene as we've shown on the PC, but using LaserVision video background and crude BBC graphics in the foreground. Note the appalling lack of ditheration between the video original here and the digitized VGA display on the PC screen.

in the game are currently relevant and valid for the player. In very basic terms, this means the program designer can simply build in a load of different situations and animated sequences and STITCH will keep them in meaningful array for the player throughout the game. A very powerful utility that could bring us some excellent scenarios from Virgin in the future.

"CD is the way to go," affirms William Beckett, "People in the video world are working more and more in the digital format. One day everything will be digital, and the CD computer game will be able to manipulate all the media resources you care to throw at it." The days when a CD scenario can draw from TV, film, music, literature, cartoon animation, and good old source code are not far away.



The new: North Polar Expedition, featuring the voice track and video exploits of explorer Sir Ranshup Fleming, hits the PC



The PC's memory and processing power have been combined with the storage of CD-ROM to produce a whole database of information within the North Polar program that you can access at will and navigate through using fingerpad-like buttons.

WORLD ATLAS TO HIT CD

Mindscape's World Atlas on the PC is to be converted soon to CD-ROM for the PC and may appear on other CD formats. Atlases could be big news on CD, because (as Mindscape have done) you can combine traditional atlas information (where is Tipperary?) with holiday and cultural information (what jobs do I need for Nigeria?) and airline routes. Combine all that with a trivia game, ethnic music tracks, and movie stills showing locations in different countries and you've got quite a package!



Mindscape's World Atlas, soon to hit CD. Can we expect better graphics from the new medium?



On the putting green - a topographical grid display helps you to read the lie of the land



And if you get into difficulties, there's always advice from the pro on tap

Battle Masters



A TIME of MISERY, A TIME of BLOOD

'A hero is coming from the south who will conquer the four kings of this sorely troubled land. And amidst the bloodshed and magic, the clash of shield and the glint of steel, the seeds of peace will be sown. When the battle is over a new age begins.'

FOR AS LONG AS ANYONE CAN REMEMBER, ORC, ELF, MAN AND DWARF HAVE BEEN LOCKED IN TERRIBLE COMBAT, THE LAND IS A DESOLATE WILDERNESS REEKING OF DEATH AND DECAY. BUT THE WATCHER HAS PROMISED THAT THE AGE OF CONFLICT WILL END WHEN THE CROWNS OF THE FOUR FEUDING KINGS ARE WON AND BROUGHT TO THE TOWER.

BATLEMASTER TAKES THE FANTASY ARCADE ADVENTURE INTO A TOTALLY NEW DIMENSION. SURVIVE HAIR-RAISING ENCOUNTERS WITH FEROCIOUS MONSTERS, NEGOTIATE TO BUILD UP YOUR OWN PERSONAL ARMY AND BECOME A MASTER OF THE MAGIC ARTIFACT.

FEATURING HIGHLY DETAILED MAPS, PACKED WITH PUZZLES, DRAGON AND POTIONS, AND INCORPORATING UNIQUE FIGHTING STRATEGIES, **BATLEMASTER** OFFERS THE ULTIMATE CHALLENGE.

*War creates many heroes, but there is only one **BATLEMASTER**.*



DESIGNED BY MIKE SIMON, GAME CONCEPT OF THE YEAR AND WINNER
OF THE BEST OF AWARD FOR BEST GAME, 1990. IBM PC & COMPATIBLES ONLY.
SPECIAL THANKS TO AT&T SYSTEMS FOR INSPIRATION AND FEEDBACK. CREDIT: ACHIEVE

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updates

Ace keeps you informed of the latest versions of the greatest games

AMIGA

CLOUD KINGDOMS

Milenium; £24.99

Pac Man with holes is the phrase that comes to mind. Guide your ball around the maze, collecting gems and avoiding the bad guys (in the form of black pool balls). Smooth scrolling and addictive gameplay certainly add to this game's high degree of cuteness. Not the greatest puzzle game in the world, but taxing enough to provide a good few hours of solid entertainment.

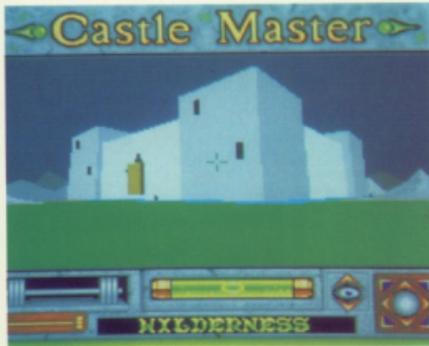
ACE RATING 730

CASTLE MASTER

Domark/Incentive; £24.99; ST Version Reviewed Issue 32; ACE Rating 835

Freescape, for all the merits of the idea, still has a long way to go before it is capable of creating a fully realistic and atmospheric game environment. Castle Master contains many more features than the previous games to use the Freespace system (which might explain the relatively sluggish screen update). Your task is to rescue your outmate from the clutches of the evil Magister. Looks much like the ST version, but sounds really great. It's good fun, as all the others in the series have been. If you liked them, then you'll like this.

ACE RATING 850



ULTIMA V

Origin/Mindscape; £29.99 PC Version Reviewed Issue 13; ACE Rating 928

"Twice as large with twice as many of everything", was how Richard Garriott aka Lord British describes what he tries to fulfil in an Ultima game. The long running adventure series has developed something of a cult following now, and the latest game, Ultima VI looks set to take the games playing world by storm (see last month's issue of ACE for a detailed review). The existing versions of number V are great so Amiga owners can rejoice that they are now able to get in on the action. The graphics and sound could be improved (marginally), but the game is so strong in gameplay and a quibble that this is little more than a quibble. Near Perfection.

ACE RATING 915

C64

FERRARI FORMULA ONE

Electronic Arts; £9.99cs; £14.99dk

For a supposedly fast action sport, this game makes Formula One racing look about as exciting as a wet Sunday afternoon spent visiting your dear Aunt Mildred. The graphics are horrendous and the road update is outrageously slow. If



you don't have a disk drive you'll have to put up with a hideous loading system as well. Totally unenjoyable.

ACE RATING: 265

X-OUT

Rainbow Arts; £9.99cs; £14.99dk; Amiga Version Reviewed Issue 29; ACE RATING 939

The C64 is a machine made for scrolling shoot 'em ups (witness the likes of *Undikum*), so why are 64 owners constantly disappointed by the unplayable efforts released by almost every softco under the sun. X-Out was amazing on the Amiga, full of original ideas perfectly executed. On 8-bit the ideas are still there, they work well, the graphics are very attractive, and the sound is as good as you could expect - problem is, it plays like mud. Shame that.

ACE RATING 470

PC

POWERDROME

Electronic Arts; £24.99; Atari ST Version Reviewed Issue 15; ACE Rating 925

EA's futuristic racing sim comes to light on the PC, and it's been well worth the wait. To my mind this version is far more playable than the Amiga and ST versions, even if you are using the keyboard, and the graphics are just as effective (it is visually identical to the other

incarnations, only a lot faster). Sound, of course, is dreadful, but just stick yello on your Walkman, and that's been taken care of.

ACE RATING: 900

CASTLE MASTER

Incentive; £24.99; ST Version Reviewed Issue 32; ACE RATING 835

Not really any different to the other versions. The graphics are nice and colourful (if you have a decent adaptor that is), and the screen update is slightly faster than the Amiga's, but only slightly. The puzzles are similar to those in previous Freespace Games, but the sheer size of this won should prevent you from completing it too easily.





ARCHIMEDES

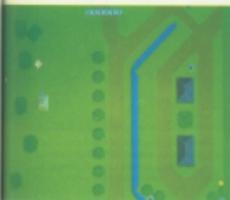
BATTLE TANK

Minerva Software; £14.95/dk

Unlike most visions of 21st century war, Minerva predict that tanks will be hardware of the future. Set in 2037, *Battle Tank* pits you against hordes of invading enemy tanks. In a rather contradictory mission, you must drive around, shooting 'beacons' in order to activate the automatic defences. Why couldn't they have had a button back at HQ (so much for automatic). The game is set over four 'landscapes', Village, City, Country and StarBase.

Each level is displayed as a very smooth, vertically-scrolling overhead view with trees, buildings and fences making up the majority of detail. Getting from one corner of the screen to the other means steering around every obstacle in your path. Blasting a pathway *Conqueror*-style just isn't possible and even little fences refuse to budge.

Tank movement is realistic in that left and right tracks are controlled independently. This can be tricky at first, but once mastered makes quick manoeuvring easy, especially when evasive action is required. Turning on the spot is just a case of moving the left track forward and the right track backwards, or vice versa.



Sound wise, your tank squeaks around the landscape with a kind of 'un-oiled' whining sound, that is not very tank-like. Shooting and explosions are far more believable with a satisfying 'kaboom' as each enemy tank is put to rest. Other tanks don't seem to make any noise except when they're taking pot-shots at each other. There's no other use made of sound which is a shame, as the game would have benefited from more creative use of the *Archimedes*' excellent sound generation facilities.

Depending on the skill level chosen (out of three), a varying number of enemy tanks are sent to attack you. Navigation-wise, they're pretty good at their job, and will home in quite rapidly. Once they've found you though, the enemy tanks will start shooting at anything that moves, and that includes themselves. If you can hide behind a clump of trees, they will happily go about their own business and wipe each other out.

As you progress through the different levels, the number of enemy tanks increases as does the fire to avoid. Once all the beacons have been found and destroyed (by you OR the enemy!), the automatic defences come in and the enemy tanks retreat to fight you in another land.

Most of the scenarios are believable with trees, houses and roads making a familiar appearance. The last level though seems a strange choice. Tanks in Space? What happened to gleaming Space ships and star fighters? The same tank sprites are used throughout the game so there aren't even any gleaming tanks.

Generally *Battle Tank* was fun to play for a while. Lasting interest didn't seem likely though, as once you've finished the four scenarios, you just get the same four with yet more enemy tanks. Graphics are

nothing special and seem a bit flat (physically) throughout the game. Nothing moves apart from you and the other tanks. Maybe the odd jeep to pick off would have livened things up. The only comparable game is *Conqueror*, which seems to do a much better job, albeit at a higher price. The *Archimedes* needs an all-out shoot-em-up that really pushes it to its limit in sound and graphics. Unfortunately *Battle Tank* comes nowhere near and I can only really recommend it for the committed tank fans and wanna-be commanders.

ACE RATING 550

MADDINGLY HALL

Minerva Software; £14.95/dk

Apart from the valiant efforts of *Magnetic Scrolls*, the *Archimedes* has been hard done by for adventure games. Minerva have therefore released their first 'non arcade game' to help redress the balance.

Maddingly Hall, puts you in the shoes of Bertie Hall, short on cash, but eager for the high life. Keen to pursue your interests, you turn to your rich Aunt for the readies and must persuade her of your worthiness. The opportunity to court your childhood sweetheart, now resident at *Maddingly Hall*, makes the visit even more of a challenge.

The game starts off in familiar 'adventure-style' surroundings. 'You find yourself on a gravel drive with paths leading off in all directions ...'

With no time to waste, you set off into the house and let your presence be known. In keeping with more recent adventures, there are a number of characters with whom you can interact.

There are certain tasks you have to carry out, in order to keep everyone at the hall happy. Most of all you must please your Aunt at all times or there's no chance of any inheritance.

The passing of time is simulated with each turn/command taking one minute and there are a number of tasks which have to be carried out on, or before a certain time. Dinner's served at seven o'clock precisely, so it's best to keep an eye on your watch.

Like all stories set in manor house, someone gets murdered, so it's up to you to pinpoint the culprit. If you can get enough evidence, the murderer will be caught, impressing your Aunt and increasing the chance of an inheritance. Fail, and the chances are that you'll end up being suspected of the murder yourself.

The game continues in a similar murder/mystery style with virtually every cliché under the sun con-

tained within. If you've played many adventure games (notably *Moonmist* from Infocom) before, don't expect anything new. Even a crusty old Butler and the Village Bobby make their obligatory appearances.

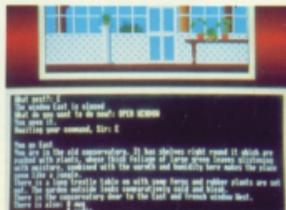
Maddingly Hall is a graphic adventure with each location being illustrated by a small picture. The graphics employed are best described as 'kit-form'. When a room is required, a wall is drawn, a door, and then a couple of chairs. Although the pictures look ok, there's no physical depth and therefore everything has a distinctly two dimensional look to it.

Perhaps the most important part of an adventure program is its parser - that is the bit that allows you to give commands to your character. *Maddingly Hall* falls into the old 'verb then noun' style which is virtually extinct nowadays.

Considering what has been achieved by other software houses (namely *Magnetic Scrolls*), it seems something of a step back. Adjectives can be used although they don't seem to particularly necessary when conveying instructions. The parser also falls down when words are left out. For example, if one was to type 'GET KEY' and the computer replied 'What one?', just typing 'IRON' would get a 'I don't know what you mean.' message. The whole instruction must therefore be repeated.

Apart from the graphics, there's nothing here that hasn't already been done on an 8-bit micro. Considering the whole program is written in Basic, it runs fast, although this is mainly due to the *Archimedes*' phenomenal speed. The Arc is capable of so much more, and really games of this type should be left to the 8-bits. On the other hand, it's a reasonable introduction to adventure games and should keep all 'Whodunnit' fans occupied for a while. At this price, *Maddingly Hall* is reasonable value. Minerva should be commended for supporting such a vastly under-rated machine as the *Archimedes*.

ACE RATING 600



That's all!
The game is now closed.
But you can't do much more.
You can't do much more.
You can't do much more.
You can't do much more.

You can't do much more.
The game is now closed.
But you can't do much more.
You can't do much more.
You can't do much more.
You can't do much more.

GROW INTO A BIG FISH IN A BIG POND...

MY LAST GAME GOT NOWHERE
BUT I JUST KNOW IT WAS
GOOD ENOUGH.



THIS TIME I'LL TAKE MY
TALENTS TO THE
PROFESSIONALS.



SOME TIME LATER ...



... WITH OCEAN

BUT FIRST THE BAIT

If you haven't heard of Ocean then you're probably not the person we're looking for, unless you've been living on another planet, in which case we'd be delighted to meet you.

Ocean Software is wild worldwide and it's producing maximum sales revenue. That means a lot of money for someone. That someone could be you!

SO, HOW DO YOU MEASURE UP?

We're looking for people who want to make their names in program coding, graphic games design, music and other related computer skills. If you have experience in the software industry, all the better - it's a distinct advantage. Ideally we'd like you to work with us here, where we can give you the training, support, equipment and advice that will help you grow, but if you prefer, you can work on a freelance basis (provided you are good enough).

And talking about freelance, we're always looking for finished software to market successfully and we can translate original programs into every relevant micro format. And because we are one of the biggest, we can guarantee fast payments - in whatever way you want, outright purchase, flat fees, royalties, payments in advance - if your work is good enough, the sky's the limit - remember, we work and publish in both 8 and 16-bit environments - worldwide - so no project is too large or too small for us to make the most of its potential.

ARE YOU HOOKED?

Then contact us today, tele, fax or letter. We promise we'll treat your correspondence in total confidence. We're waiting for you to byte (sorry about that).

Garry Bracey
Software Manager
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6 Central Street,
Manchester M2 5HS.

Telephone: 061 832 6633
Telex: 669977 OCEANS G
Fax No: 061 834 0650

ocean

Nine lucky ACE readers visited Domark and got loaded up with freebies, lunch, and even an exclusive ACE T-shirt. Here's what went on – and why YOU could be next...

Magical Mystery Tour

DOMARK DATA

Formed: 1984	
Location: Lacy Road, Putney, London	
Notable releases:	
Eureka	1984
Trivial Pursuit	1986
Pictionary	1989
Star Wars	1987
The Empire Strikes Back	1988
Return of the Jedi	1988
A View to a Kill	1985
The Living Daylights	1987
Live and Let Die	1988
Licence to Kill	1989
The Spy Who Loved Me	1990 (not yet released)
Spitting Image	1988



Escape from the Planet of the Robot Monsters – rated 880 in ACE and now submitted to the rigours of testing by the ACE Conference Review Committee

It's five minutes to noon, the first ACE Conference (at Domark) starts in half an hour, and STILL the coach from Bury St Edmunds hasn't arrived. It's a disaster!

The coach, you see, was carrying Gary Brockett and Simon Brown – the first readers ever to be selected for an ACE Conference and now, it seemed, unlikely ever to make it.

Other readers were due to start arriving at Domark within twenty minutes and the Editor was on the verge of giving them up for lost.

Meanwhile, things were hotting up at Domark. Company PR supreme Clare Edgeley was having hysterics at the thought of speaking in public, let alone in front of a group of no-holds-barred, speak-our-minds, blast-the-opposition ACE readers. She consoled herself by rushing out to the nearest delicatessen and buying all the most expensive edibles she could find. It's a credit to her self-control that she didn't seek immediate oral pacification and scoff the lot herself.

But in the end the coach arrived, Clare saw that we were – for the most part – human and decided that we could be addressed in relative safety, and the first ACE Conference got under way.

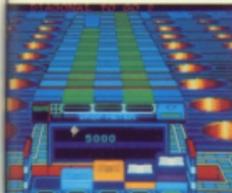
THE PAST

Domark is one of the oldest companies still launching games into the charts. Started back in 1984 by Dominic Wheatley and Mark Strachan (Do-Mark...geddit?), the company kicked off with a winner – literally. Eureka offered a £25,000 prize that made one young player very rich indeed a year later.

Not many of the ACE readers attending the Conference remembered Eureka but everyone knew about Trivial Pursuit, not to mention the Star Wars trilogy and the Bond games, though some rude words were

"Where were the girls!!? Don't they want to be represented?? An excellent day out – and well worth it to other readers..."

Anil Rhedan



Kix – rated 880 in ACE and universally admired by the Conference Attendees, who all agreed that it was just a bit harder than Tetris – and faster too



Anil Rhedan complained that there weren't any girls at the Conference – but boss Mark Strachan assure that he can turn a pretty ankle when he wants to. With him are partner Dominic Wheatley and Executive Ian Andrew – both of whom were there to speak to the team

MEET THE TEAM!

Nine readers made it to the ACE Domark Conference. Here are a few extracts from their savage critiques of the games they played.



Michael Dawson from South London: "I have computer version of Klax is very similar to the arcade version but the graphics are less colourful. It's also slow. Highly recommend all the same."



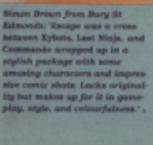
Neil Dawson from Croydon: "I love Tetris and hate it, but Klax is different - very playable."



Anil Khedun from Tottenham: "The activity gets a little hectic in Escape and you can lose your sense of what's going on. The multi-directional scrolling on the Amiga is pretty good... Plays even better with a friend."



Garry Bruckert from Bury St Edmunds: "Escape is very good graphically, but in two player mode a player can be locked off the screen until the other one arrives."



Simon Brown from Bury St Edmunds: "Escape uses a cross between Xytris, Last Ninja, and Commando wrapped up in a stylish package with some amusing characters and impressive comic shots. Looks original but makes up for it in gameplay, style, and colourfulness."



David Ng of Tottenham: "Klax? Well, it's just another puzzle game. Isn't it? I thought it was a bit hard, but that probably won't put people off."



Wafiqul Haque from North London: "Escape - what a ridiculously long title! Doesn't like the push screen scrolling as it only scrolls when you get close to the edge of the screen. This is excellent."



Garry Bruckert from Bury St Edmunds: "Escape could have benefited from a password system, like so many games. It may look similar to Tetris, but it was the differences that really made it for me."



Now pay attention, here. Editor Simon Cooke on the left tries to pick his nose without being seen. He does not succeed...

exchanged about the quality of one of the earlier Bond licences. "You're quite right," admitted Mark Strachan, "and we unreservedly apologise. Every company comes up with a turkey now and then, and we readily admit that that one was one of ours. But I hope you'll agree that the recent games have been in a different class." The assembled company did agree, though it was felt that the score was now Domark 0, ACE Readers 1. Would the company come up with the equaliser when we moved play over on to the new titles?

THE GAMES

Because that's what the conferences are all about (apart from lunch and freebies, that is) - getting the chance to see the latest games, usually before any of your friends, playing them, and telling the company what you think of their offerings.

During the afternoon, whenever they could be dragged away from the *Hard Drivin'* co-op - whichopped quite happily without a coin, needless to say - the assembled company were taken in pairs to the Domark development studio where they sat down in front of Klax and Escape from the Planet of the Robot Monsters. You can get the flavour of their reactions from the panels elsewhere in this feature. Seems by all accounts that Domark got the equaliser here.

THE FREEBIES

After lunch, the lads had a chance to meet Ian Andrew of Incentive and members of his programming team, including the genius responsible for the GAC (Graphic Adventure Creator). Ian filled in the team on details of the Freescape system and there was much chat about the excellent *Castle Master* (rated 835 in ACE issue 32). "But why do programmers share the same prehistoric haircuts?" asked Anil Khedun in a letter he wrote to us afterwards. Presumably because a good cropping discourages bugs.

At the end of the day, everyone made their escape with loads of goodies, including an abundant supply of free games and even an exclusive ACE T Shirt. And Domark had made it clear that they were not only a name to be put up amongst the Oceans and US Golds of this world, but were a very friendly bunch into the bargain. Very many thanks from all of us to those who took part.

WHY DON'T YOU COME NEXT TIME?

Each month, we'll let you know about forthcoming conferences around the country. If you think you might be interested in attending one, all you have to do is send us a postcard with your name and address clearly written, together with a daytime telephone number, if at all possible. You also need to tell us which conference you would be interested in attending (one choice only, please) and your age. We need to know how old you are so that we can ensure a good spread of age groups at each conference.

Obviously we have to limit the number of people attending each conference to 15. In addition, we have to make a nominal charge of £5.00 to help cover costs. All places are allocated on a first-come, first-served basis. There is however an exception to both these conditions: as a special offer to subscribers we are giving them priority allocations for the first five places in each conference, and they may also attend free of charge. You can find out how to become a subscriber on page 96 (and you get other benefits too - lower price, a special newsletter, and guaranteed delivery).

A couple of weeks before each conference, we'll select the lucky readers from those who have applied and inform them of the relevant details. If anyone can't attend, they'll be shortlisted for a future conference and another selection will be made for someone who can take their place.

FORTHCOMING CONFERENCES:

ACTIVISION 12.30PM THURSDAY 12TH JULY 1990 IN READING

Meet the company who've always excelled at original product, ranging from their Infocore range through classics like *Little Computer People*, *Cosmic Osmo*, and *Powerdirt*.

MICROSOFT 12.30PM THURSDAY 19TH JULY 1990 IN LONDON SE1

Meet the Babbage! and chat to the team who are leading the UK in CD game development.

Get your application in NOW!

BLADE WARRIOR™



The beast was present in the land and from tower to tower the sorcerers voice called upon him. As night encroached and set the sun to flight, so his legions made ready to conceal the tablets that would see daylight banished forever.



So, as the same last bloody light drained from east to west, the paladin came forth, ready to do battle against the legions of the night, using all his might and skill in this tale of swords and sorcery.



Screenshots from Amiga version



Atari ST, Amiga, IBM PC and compatibles.



MASTERS OF THE ARCADE CHALLENGE

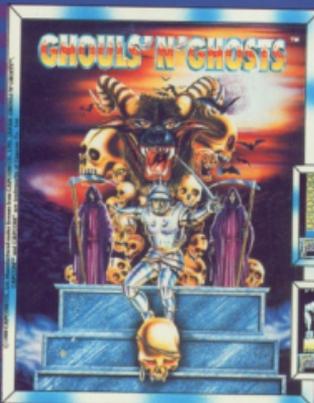


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Screen shots from various formats



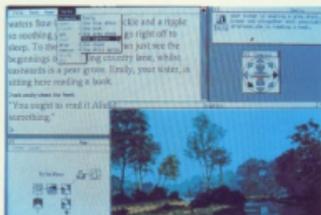
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Wonderland!

Magnetic Scrolls has come up with the ultimate multi-windowing game system. Could it introduce a new age of intelligent gaming?



Magnetic Windows gives you a powerful user-interface that is extremely flexible. Program designers are going to be making tag with this one for a long time to come...

Imagine a game system that offered full multiple window, mouse, and icon control together with superlative quality graphic screens and animation. It's totally reconfigurable so that you could design a Balance of the Planet scenario for the system just as easily as an ICOM graphic-adventure look-alike with arcade sequences. That's the Magnetic Windows system for you – and Magnetic Scrolls are about to launch the first MW game through Virgin – Alice in Wonderland.

Now hang on a moment, Mag Scrolls. That means adventures, doesn't it? And adventure games are about as sexy as a PC Internal Card Insertion Slot (down, boy!). Aren't they?

Yes, they are. But the extraordinary thing about Wonderland and MW is that the user-interface is so slick that it might just achieve the impossible and put adventure scenarios back on the map with a bang and a white rabbit. And it makes sense when you think about it. Here's why...

WONDERLANDS

Adventures actually started, believe it or not, in the same way as arcade games – it's just that the two styles developed differently. One of the first adventures, for example, was Hunt the Wampus and involved a very primitive jaunt through a number of locations. The locations had to be described in words because

the machines of that era had no video graphics facilities. This basic idea of creating a game-world with places to explore and threats to be faced is common to both traditional adventure games AND arcade games (which have increasingly been called 'arcade/adventures' in recognition of this).

Whereas arcade/adventures really made use of the increasing graphics and sound capabilities of modern machines, the traditional adventure game set itself apart by developing, instead, the art of

parsing text inputs. Parsers became more and more powerful but adventures got less and less popular. Obviously they are less superficially attractive than their arcade/adventure cousins, but few adventure programmers realised that it was the very aspect of the adventure systems that they were constantly improving – the parser – that was turning people off.

In a primitive adventure, for example, you might just type E, W, S, and N. Combine this simple one letter command format with a graphic for each screen and you're really much closer to an arcade/adventure format than you are with a super-parsing system that demands an entry like 'TAKE THE PINK CHRYSANTHEMUM AND PUT IT IN THE ROUND BUCKET'. And then says 'I DON'T UNDERSTAND 'ROUND' because you misspelled it. No wonder people went back to joysticks.

But the basic adventure formula of creating a brave new world and filling it with chance, challenge, and champions is still a winning formula. It just needs the right package. And that's what Magnetic Scrolls reckon they've come up with – a wonderland...

MAGNETIC WINDOWS

MW is a multi-window, mouse-drive system with drop down menus. All windows can be resized and moved anywhere on the screen, enabling you to configure the screen to your taste. In the Alice game, other windows include an iconic listing of your inventory, a compass, and another icon list of objects in the current location. But you could change the form and function of windows to suit any scenario. Windows are also more than simple display panels – you can drag objects in and out of them, show graphic animations in them, even interact with the sprites in them by clicking on them or controlling them with a joystick. Yup, this is a very flexoosible system.

The heart of Wonderland is the Story Window which operates like a traditional text adventure window but with tremendous ease of use, featuring command menus, scaleable fonts, and all sorts of goodies. Many commands can be entered by clicking on objects or icons so this is definitely NOT a system for typists!

Graphics windows pop up for various locations, and feature animations that are often triggered by events in the game. There's also a self-building map display and very useful tree-structured help system that you can call up if you want advice. Saving and loading uses a named game system so you can restore any saved version whenever you want. And on top of the graphics you also get great music – the reason, in fact, why the product has been delayed, since MS wanted to ensure that the sounds were as hot as possible – another welcome departure from the traditional, silent adventure.

Wonderland follows the Alice story pretty closely. You'll be getting a full review in the next issue. But remember, Wonderland is only half the story – it's the system behind it that's the real jewel and will certainly be the driving force behind many wonderlands to come. ■

"From the technical point of view, people simply aren't going to believe what we've done."

Anita Sinclair, Magnetic Scrolls



Fish from MS – one of the 'old school' type of graphic adventure that made the company famous. Note the dominant graphics – one advantage of Magnetic Windows is that you can customise your own display

COMING SOON...

BACK TO THE FUTURE II PART II



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IMAGE WORKS, Irwin House, 118 Southhawk Street, London SE1 0SN. Tel: 01-978 1454 SCREENSHOTS:

Atari ST

4 & 5 Courtesy of MCA

FAR LEFT

Armadillos everywhere. Just some examples of these fascinating creatures in Bruno Bonnell's collection

This nasty looking fellow is an example of Infogrames' new technique for integrating sequences of filmed action into video games



Where the Armadillos are...

There is an entertainment software company with a turnover just short of \$US 9 Million, sixty employees with an average age of twenty-six, a host of International awards for its products, a brave policy for producing innovative as well as mainstream products, a release schedule of seven major titles a year, and a dynamic president at the helm only thirty-one years old. No, it's not Ocean, nor US Gold, in fact it's not a British company at all. It is Infogrames, the largest producer of entertainment software in France, and one of the major European players in the industry.

When I was invited to visit Infogrames at their offices in Villeurbanne, Lyon, I snapped up the chance to find out what this expanding company has planned for the coming months. What I discovered were some very exciting developments.

I was greeted at the airport by the charming Christine Gesler, Infogrames' pretty PR person. She chauffeured me to a large office block in Rue du 1^{er} Mars 1943 (what a delightful name for a street), in which Infogrames occupy a veritable warren of offices and workrooms on the sixth and seventh floors.

Lyon, the second largest city in France is a delightful city which straddles the two rivers of the Saône and the Rhône. The centre of the city is dominated by tall pink and orange stucco-covered buildings interspersed by many, many trees, making this one of the greenest cities I've seen. It is no wonder that, given such an atmospheric working environment, all the employees of Infogrames look happy.

Before getting down to business I was dragged off to sample some real French cuisine (I was even tempted to sample a little fromage frais). Unlike the British who have something of a Phillistine attitude to food, the French really know how to enjoy eating! (My apologies to all the English culinary geniuses reading.)

Back at the office I am shown Infogrames' latest

license, and one they are particularly proud of, *Welltris*, the much-awaited sequel to the chart-topping Soviet puzzle game, *Tetris*. The game, also programmed by Russian mathematician Alexei Pajitnov, is like *Tetris* but played in three dimensions rather than two. The game has all the addictive appeal of it's forerunner, but the added complexity makes it just that little bit harder to master. *Welltris* is due to be released this month, so keep 'em peeled.

The Russian game is far from being Infogrames' only major product in the pipeline. It is the first part of a special trilogy of highly innovative games to be released during the course of this year as *The Crystal Collection*. On the basis of what I saw on my visit, the collection is set to further reinforce the company's reputation for quality original software.

Tucked away in one of the development rooms on the sixth floor I came across 24 year old programmer, Frederik Raynal. He is currently working on the second game in *The Crystal Collection*. It is based closely around the American theory of Brain Building. The theory states that certain coordinated patterns of light and sound can be used to reduce rapid Beta Waves (normal brain emissions) to slower Alpha Waves (a far healthier and more relaxed brain state). The game is called *Alpha Waves* after these.

The game is set in 256 rooms which represent the brain. These are mapped out with some of the fastest solid vector graphics I've seen. In fact they are so fast that I thought the demonstration I was watching had to be running on a 385 PC. It turned out to be running on an ancient 8086!

Your objective is to guide a marker around and over the objects

Continuing our Electric Europe round-up, Laurence Scottford visited a Gallic Company responsible not only for a host of top quality original games, but also for the largest group of Armadillos this side of the Med!



Bruno Bonnell, Infogrames President, together with a concrete Armadillo - the company's symbol. The sculpture had originally had pride of place on his office desk, until the desk broke under the weight and the armadillo had to be found a more stable home

in the room to reach one of the exits. Each room presents the player with a unique challenge. Pick certain routes through this artificial brain and you will come across one of sixteen rooms with a special effect designed to provoke Alpha Waves. Furthermore, the game can operate in one of three modes: the standard Alpha Wave inducing mode, an opposite mode to increase Beta Waves for rapid thinking, and a third mode specially designed to increase the player's capacity for learning.

The third game in *The Crystal Collection*, called *Corridor* is the creation of programmer Vincent Pouxieux. It is another 3D game, but in this instance you are looking down a long straight corridor full of blocking walls of various shapes and designs, some static and some moving. Using a transparent racquet you must keep a bouncing ball moving down the corridor - if it bounces back past you you lose a life. Every so often you will encounter a special challenge sector for bonus points.

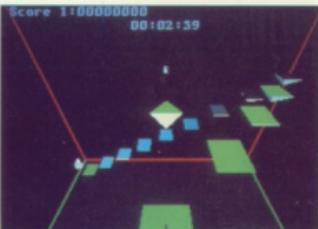
I was privileged enough to be treated a sneak preview of the game and within a minute I was hooked. The game is quite as compulsive as all-time greats like *Tetris*, *Breakout*, and *Pipermania*, and once again proves that you can't beat a simple idea. With 100 levels this looks like it is going to generate happy for quite some time.

Of course, even the best programmers need a good back-up team, and one of things Infogrames prides itself on is the high standard of the company's graphic artists and musicians. I talked to Josyane Girard who is currently putting together the ST graphics for another forthcoming game, *Alcatraz*. This sequel to *Hostages* has your two-man team performing a raid on the deserted prison island, which is being used as a base by a major criminal.

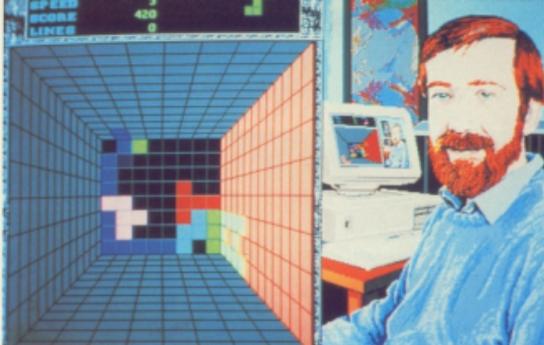
Josyane has gone to great lengths to get the graphics right. She first produced an accurate hand drawn map of the prison which was then used to create the backgrounds for the game. Muybridge's famous photographic sequences were used as a basis for the sprites in the game, with French comic art providing the inspiration. The sprites were drawn and animated with Infogrames' home grown graphics software, *Anim ST*.

Home grown software is something that the company takes very seriously - at the moment veteran programmer William Hennobis is working on an advanced synthesiser and editor which will allow sounds to be synthesised directly on the target machine rather than being sampled.

Infogrames' policy has always been to look to the future, so I was delighted to see evidence of a new software technique in use, as well as a new machine. Programmer Michel Royer is using a technique which allows him to overlay features from grabbed video frames with graphics generated in a standard way.



Alpha Waves, the intriguing new program from Infogrames that actually helps you to relax and relieve stress.



Witless is the three-dimensional successor to Tetris. The guy on screen is Vincent Pouxieux, the game's creator.



Sketches are produced for all the artwork in a game by hand. Then the graphics team get to work on them. These are all for Infogrames' surprise success, *North and South*.

"CD-I requires a totally new development approach if it is to work - it is the first truly interactive media"

Bruno Bonnell
President of Infogrames

ON LIBRARIES & SCHOOLKIDS

Infogrames' in-house programmers all work on PCs linked to the house network. Most of the work is a mixture of the target machine's assembly language and compiled C. Rather than work in isolation, writing the code for each project from scratch, the programmers here make use of a special library of routines which has been built up and continually improved since the company's creation. In the spirit of mutual support and encouragement that is prevalent among the company's staff all the programmers make an effort to contribute their own routines to the library for everybody to use.

Budding computer geniuses also get a chance to get in on the act every Wednesday afternoon when local schoolkids are invited round to playtest the latest Opuses - something that the company sees as an important part of the production process.

The advantage of the new technique is that it is very quick and uses comparatively tiny chunks of memory. I saw a demonstration showing an animated skeleton swinging a sword, and very impressive it looked too. This technique should allow a greater integration of movie techniques and computer programs in future productions.

Together with 23 year old Laurent Salmereon, Michel is also working on conversions for the new FM Towns machine. *Drakkhen* is in the pipeline at the moment, but original titles are planned for the near future. This is just one area in which Infogrames are moving in on the Japanese market. They have also managed to interest the major console manufacturers in conversion rights to many of their recent titles.

A further example of Infogrames' ability and willingness to constantly embrace new methods of getting their product across to the consumer can be seen in their first video production. Finding that their recent board game conversion, *Full Metal Planete*, was proving a little complex they decided to make a video which discussed the rules and tactics of the game. Unfortunately only the French version of the video was available for viewing, but it looks good. Look out for an English version soon.

With all it's current developments and projects in the pipeline like a series of French based around H.P. Lovecraft and the *Chinlo* books, Infogrames seems to be going from strength to strength. President Bruno Bonnell sees great things ahead. He has identified the need for the industry to become more clearly defined in the future and for companies to venture towards a total marketing method similar to that championed by the likes of Nintendo. Bruno and his colleagues have already successfully experimented with TV Advertising - just one step towards further establishing Infogrames as a force to be reckoned with.

Leaving suitably impressed, I was chauffeured to the *Hotel des Artistes*, a place populated by French actors appearing at the nearby *Théâtre des Célestins*, then it was time to head out and sample the delights Lyon has to offer to the tired, hungry Englishman on a warm spring evening.

Place de Bellecour is the centre of Lyon in the largest Place in Europe. On top of the hill is the magnificent cathedral of Fourvière which overlooks the statue of Louis XIV in the centre.



KICK OFF 2

**BLISTERING PACE –
PIXEL PERFECT
PASSING – SUPERB
TACTICAL GAME
PLAY**

KICK OFF 2 greatly enhances the game play of KICK OFF, winner of THE GAME OF THE YEAR award in U.K. and similar awards right across Europe. A host of new features have been added to the ones that enthralled the players the world over.

Full size multi directional scrolling pitch with the players, markings etc. in correct proportion.

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9 types of corner kicks with full control of shot power. Long and short Throw In.

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Kit design – 6 styles and 32 colours. (Amiga & ST only)
Facility to load Player Manager teams for a single league or league game.

Load your own designed Tactics from Player Manager. Red & Yellow cards, 16 different referees, Injury time and host of features to create the atmosphere for a game which is a real fun to play.

Special Events provision to load Data Discs or Cassettes for events like World Cup, European Cup etc...

Restricted features on IBM and 8 bit machines.



AMIGA SCREENSHOT 5

ANCO



Satan on ST: "We like people to sweat over our games," says Victor Bello, Director de Desarrollo at Dinamic

No Hablo Español

Good taste sets to the side as Rik Haynes goes mad in Madrid...

Espanol!

"Haga el favor de incluir el seguro a todo riesgo."

Please include full insurance coverage



Obscenities sometimes offend sensibilities. The following account is censored version V3.7 transcribed from my real-time voice recordings. Truth is often stranger than fiction. It's all in the edit.

DINAMIC DILEMMA

Madrid reminded me of Paris. Street cafes, shopping chic. Devious women, dangerous men. Carefree culture to the core. The most famous Spanish software house, Dinamic, is situated in the town's centre.

Dinamic awareness arrived in the UK back in '87 after a license deal with Ocean for *Army Moves*, *Game Over*, *Freddy Hardest* and *Basketball Master*. Awareness turned into notoriety after a bare nipple was part-shown in the *Game Over* advert. The offending piece of anatomy was quickly airbrushed out in successive ads.

Michel Angstadt, Dinamic's International Manager, confirms, "The deal with Ocean was a very good one. It got us known in Europe". Unfortunately the next non-Oceanic Dinamic releases, *Game Over II* and *Navy Moves* - released through Electronic Arts - attracted variable success. "The EA deal was more interesting in terms of experience rather than turnover," states Angstadt, "The UK response to our games isn't as good as we expected. It's much better in Continental Europe. Maybe our type of game isn't best suited to UK tastes."

Angstadt is probably right. Dinamic games are both acclaimed for their graphical excellence and criticised for their lack of originality in the UK press. Angstadt agrees, "We've been criticised for doing the same type of game over and over again. We're seen as outsiders. There's a rejection in the UK against foreign product unless it's American". And Dinamic's forthcoming releases, *Satan* and *Arctic Moves*, are unlikely

to change this view as they're similar in style to previous Dinamic games. The other main title under development, *Mega Fenix*, is an enhanced version of the classic coin-op, *Phoenix*.

The Dinamic guys are very enthusiastic, but this isn't always enough. While UK software companies decide on resource allocation between console and compact disc development, Dinamic is about to launch its first Amstrad PCW game. The firm is in danger of being left behind. Interactive entertainment is a global market with global demands. Success in Spain is fine, but if Dinamic wants worldwide success it must fast forward into the game technologies of tomorrow. History's for the taking.

MEETING THE MADRILENOS

After visiting Dinamic I lay sunbathing in the nearby park on Plaza De Espanol. An attractive Spanish girl in her early teens sat next to me. She rolled and lit a spliff. I looked up. Our eyes met. She smiled. I reciprocated. She offered me a smoke. I declined. The only trip I was taking was the one back to England. I fell asleep and dreamt I was a cannibal. The Spanish authorities have a more relaxed attitude to artificial additives. Possession is legal, dealing isn't. Presumably this discourages small-time drug entrepreneurs.

I woke and walked back to my hotel. Crutches are the "in" accessory for the successful Madrid street beggar, I passed two in as many minutes. There was no sign of ACE on the sidewalk magazine stands, I was told they immediately sell out. At least sister EMAP Images publications were on sale. *Micro Mania* is the most popular indigenous Spanish games magazine.

The air-conditioning in my room wasn't working so I stuck my head in the refrigerated mini-bar. Bad mistake. 15 minutes later I was out of vodka and all the mixers. It got worse, I was still thirsty. I switched on

the sat-TV. A German-dubbed episode of Neighbours beamed in. I decided to go shopping.

Gamegear is sold almost anywhere in Madrid, from DIY store to market stall. The most popular micros in Spain are the Spectrum and Amstrad CPC - taking a whopping 50% market share. Then comes the PC, MSX, Amiga, ST, Sega and Nintendo consoles. A Console Nintendo costs 17900ptas, a Sega Master console 19900ptas and a STFM Power Pack 68000ptas. Amstrad dominates the Spanish hardware scene with its Spectrum, CPC, PC and PCW micros.

Games software is cheap in Spain. A typical Spectrum cassette costs 1200ptas, a Sega cart 1990ptas. UK software is very popular. Highly competitive Spanish distributors license the games from their British creators. These distributors duplicate, package and sell the titles in Spain - paying the UK software companies a royalty on each sale. Keeping the price of software down is the Spanish solution to stopping piracy.

Dynamic and the other Spanish software companies also produce idiosyncratic titles tailored for their home market like Drazen Petrovic Basketball-sim by Toposoft and Emilio Sanchez Vicario Grand-slam tennis-sim from Zigurat.

COIN-OPERATED, CLUB-ORIENTATED

Darkness descended and Madrid went on-line. 25pts bought me a short-time slice of silicon in Salon Recreativo. I played Jaleco's Valtic while a Spanish youth circled me like a hungry Tiger shark. The game was similar to Xenon. Madrid is full of archaic arcades filled with the usual array of Thunderblade, Galaxians and Robocop coin-ops, despite the Spanish being more interested in slot-machine gambling. Low-tech, low-life. All but the dedicated coin-ops are housed in strange Sonic cabinets giving them a bootlegged look. Sega seems to pick up the Spanish license from other

"Llaman a un medico, rapidamente!"

Get a doctor quickly!



Michel "the MSX is a pain in the ass" Angelstadt

"Donde esta la embajada sudafricana?"

Where's the South African embassy?

Japanese coin-op manufacturers because its copyright message sits alongside theirs on every machine.

I was hungry. Time to explore. Every so often, just when you think you've discovered the real Madrid, you get a reassuring signpost leading you to the nearest McDonalds. I turned down a side-street and stumbled upon a Chinese restaurant packed to the max with locals. Must be good, I scanned the menu in eager anticipation. Top of the list came Cazuela de Raper al este tlo Chino 1225ptas. The English translation read "Rape, Oriental Style". It looked like I'd be eating a Big Mac after all.

I surveyed the street below Hotel ***** (name withheld on legal advice). Perception hit perversion. Skin on sale. New wave sex slaves for corporate clients. I drank my Euro-fizz in disgust. 24 hours was a long time in Madrid. I was down £175 on miscellaneous expenses. I was talking in a street-speak synthesis of Spanish and English. I was physically wrecked. Only one thing left for me to do... Llaman a un medico, rapidamente! ■

Spectrum Soft: Dynamic also has a Adventures AD division writing "conversational adventures". So far releases have been restricted to Spain, with titles including Don Quixote, Los Pajaros de Bangkok and Jaboto. The first UK release will be Consumed in the autumn

The original Game Over advert caused quite a stir. The forthcoming Arctic Monks is based around the opening ski-chase sequence in the James Bond movie. The Appy Who Lead Me



Dynamic games are best known for their gorgeous graphics. The crafty company uses a cartoon artist, Ricardo Machado, to pencil draw every frame of animation. These paper sketches are then digitised into the ST and touched up using EA's Degas Elite art program



WIPE-OUT



- the story so far
- The World's first Intergalactic Hoverboard Challenge.
- Fast, addictive 3-D action
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- Over 1,100 stars - each with its own local league and prizes.
- More than 77,340 possible opponents - each with its own individual characteristics.
- Form your own Interplanetary League
- Great rocking music - neck breaking speed!
- Can you survive the Death or Glory chicken-run challenge? Can you handle the Futon Flip?
- Qualify for the once-in-a-millennium All Time Great Tournament.
- Have you slimed an Arnebsid today?

There really is no feeling quite like turbo-boosting past your hapless opponent, hanging a wickedly fast 180 degree turn and sliming across his path before he's realised what's happening. Be warned - WIPE OUT may be the only game you'll want to play for some time.



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from Lunar Lander

to G-Loc

THE HISTORY OF 3D IN THE ARCADES

John Cook takes a nostalgic look back to how it used to be and reports on the latest development in the area, with Sega's long awaited follow-up to Afterburner, G-Loc.



Isometric view revived with *Escape from the Planet of the Robot Monsters*

Metal Blank - sprite expansion and compression, *Atari*



Polygon technology from Atari Games with *STUN Runner*



In the beginning, coin-ops were flat. Flat as a pancake. Flat as a June Witfield sit-com. Flat as a week old pint of lager. That's not to say that many of those old games were bad. Some, such as *Defender* and *Pacman* released back in 1980, are still acknowledged as true classics, but by and large, the processing power necessary to produce that extra dimension just wasn't there. The number of D's was, strictly, two.

How the names trip off the tongue as the memories of flood back - *Lunar Lander*, 2-D vectors in glorious black and white, where you had to land a space craft on the surface of the moon with very limited amounts of fuel. One of the first games with player selectable difficulty levels and well worth a sequel a decade on, surely? *Scramble*, *Mr Do* - still knocking around some very plush arcades - *Asteroids*, *Sprint*, *Lunar Rescue*....but even then, back in the dark ages, developers were still trying to create that extra dimension in gaming - surprisingly well considering the technology at their disposal.

PUTTING ON THE D'S

There are three ways that developers can create the illusion of real space in a game. Firstly you can construct a world using vector style graphics, or you can simply draw the game graphics from a shifted isometric perspective, or you can expand/reduce sprites to give the feel of moving in/out of the screen. You can also cheat by using cartoons or video for the main playfield, overlaying sprites on top. All four techniques were used early on - but have been taken to their limits in recent times by the latest crop of releases.



Power Drift - Sega spritz technology at its best but see the G-Loc panel elsewhere on this spread

What was the first vector style game? *Battlezone*? Nope - nice try but no banana. The very first, although it barely appeared in the UK, was something called *Tailgunner*, that had you firing a machine gun into great blackness, at enemy fighters. That was in early 1980. Later that year saw the release of *Battlezone*, the game that made green cool, and what a classic that was.

A combination of good controls (two levers rather than a joystick) and the fact that the game made you peer through periscope-like eyepieces to look at the screen in first person perspective, made you feel, well, as if you were really driving a tank. You ducked when the missiles started flying. You cringed when you were hit and the screen "cracked up". It was, and still is, superb. I wonder why the follow up, *Red Baron*, never did as well?

The modern day version of this technique has to be, say, *Stun Runner* from Atari Games (who produced the first filled poly game - the deeply weird *I Robot*), or even better, the best poly game in the arcades to date, *Winged Run* from Namco. Now the polys are filled, and shaded in multi-colour, but the basic techniques are very similar.



Namco's Pole Position - a long way from Buttonzone

SHRINK THAT SPRITE

The first game to exploit the sprite expansion/compression properly was *Turbo* from Sega - back in early '82. And the boys at Sega have been bashing away at this technique ever since, through *Buck Rogers*, to *After Burner*, to *Galaxy Force*, *Super Monaco Grand Prix*, the astonishing *Power Drift* and the latest and greatest yet, *G-Loc*.

This technique, more than any other, does rely heavily on processing power and memory. So the old games look like crap and the new ones are nothing short of stunning. Older machines simply have ROM's chock full of pre-shifted sprites, while the more recent have hardware routines to do this kind of manipulation realtime.

The other company that has had consistent success trying its hand at this style of game successfully is Namco. From the beginnings with the excellent *Pole Position* (early '83) to the more recent *Final Lap* - arguably still the best two player game on current release.

Namco has also made more programmers pull out hair than anyone else, with *Assault* and *Metal Hawk*, by rotating a screen full of sprites realtime, as well as expanding and compressing. Ask your local programming genius to do that on an ST if you want to shut them up fast.

The final technique, that of isometric view, has been sparingly used in the arcades, simple because they are difficult to play, rather than any major technical problems. It's been used more in home computer games, as the thing doesn't have to be quite as immediate there. In an arcade, if it doesn't grab you in five seconds, a game is dead.

Zaxxon - remember that? It has to be the first isometric view that made everyone sit up and take notice. Revolutionary in its time - *Zaxxon* is another classic, even though it was pretty unplayable. At the time of release, however, (March '82), it just blew everything else away. The style did not, by and large, catch on. *Q*Bert* used similar techniques, but apart from the odd release, like *Crystal Castles*, isometrics have never really caught on.

The most recent attempt, the graphically excellent *Escape from the Planet of the Robot Monsters* from Atari Games, works fine as a game, but has failed to capture the imagination of the game playing public. But it does look good on the telly.

Again, like everything in life - (all this and philosophy too, boys!) - if at first you don't succeed, cheat. That's what some people have tried to do with games such as *Astron Belt* and *Firefox* (Laser disc shoot'em ups) and *Dragon's Lair*. This video technique is the most unexploited area in the arcades right now, and expect it to reappear in a couple of years time when the technology gets geared up properly.

GLORIOUS G-LOC

Sega can do things with sprites that consistently astonish. And now, with the long awaited sequel to *After Burner*, *G-Loc*, the company has proved that its 300 odd team of engineers really do earn their Yen.

Mixing 3-D poly techniques with its established sprite technology, the game is a technical tour-de-force which has you, the player, at the controls of an advance jet fighter. The effortless speed, the amazing effects - all this and a decent game too. Play it and weep.



The latest in sprite technology - G-Loc from Sega



All those sprites - and poly too - clever stuff from Sega in G-Loc

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ACE NEW WORLDS

Pat Winstanley checks out the beautiful *Chronoquest II* and the disappointing *ST* and *Amiga* versions of *The Third Courier*...plus hints, tips, and the *ACE* RPG Charter – are we being ripped off by RPG??

This month sees a strongly worded protest on behalf of all *ACE* RPG and adventure fans – the *ACE* RPG charter. We're fed up with being inundated in so-called RPG products, only to find that they're about as RPG as my mother's bedrooms slippers. So we've produced the *ACE* RPG Charter – you can check it out over the page. And now, as we're a bit short of space this issue, straight onto the games....

CHRONOQUEST II

PSYGNOSIS go time-travelling again...

So you thought you'd completed your task in *Chronoquest*, found your father's murderer and the whole episode could now be put behind you? Well, think again! About to take your trusty time machine back to the chateau, a temporal disorder causes the engine to overheat, using up too much of your precious metal fuel. So now you must start all over again in *Chronoquest II* – your task this time to find enough metal objects to use as fuel and take you home.

The game consists of thirteen levels, each representing a different era. Metal objects such as swords, shields, goblets etc each have their own radioactive value which in turn dictates the direction and distance of travel. In fact, much of the puzzle element of the game consists of working out the correct sequence for using the fuel so as to hop between eras without getting stranded.

Another complication is that some metal objects are also used to solve conventional puzzles, such as levering a rock to expose another exit. Movement on each level is restricted to "advance" and "retreat", caution and regular saving being the watchword for advancing as several locations are "sudden death" with absolutely no warning.

I fail to see why such situations are necessary, particularly in landscape locations, as anyone with a modicum of observation would in reality

look before leaping. A fantasy world still needs its own laws and rules of logic – something that too many game designers overlook.

Together with the normal TAKE, DROP, EXAMINE and USE commands is a separate icon menu which appears when you encounter a character with whom you can converse. This allows you to talk or listen to a character or give them an object. Talking consists of choosing one of two possible responses to the other character's questions – get it wrong and you won't live to apologise – it's simply a matter of reload and try something else until the correct response is discovered. Since conversations can

synthesised version (not very good) of encountered characters' speech. With a second drive this disc can be left available at all times, but with a single drive you need to swap discs just to listen. Thankfully the speech synthesis option can be turned off at will. However, with another disc again for your saves (only one per disc) a tremendous amount of swapping is involved to progress.

If you enjoyed *Chronoquest* and have plenty of time and patience *CII* will probably appeal to you. Despite all the messing about with a single drive it has me intrigued enough to get me back to the keyboard.



All at sea in *Chronoquest II*

last for several rounds the permutations rapidly become vast and tedious.

As with *CII*'s predecessor, finding objects in the locations takes patience at times. Although some objects are in full view, others simply don't exist visually so examining a location is a pixel by pixel job. Since the "examine" icon must be clicked between each look you'll need the patience of a saint to cover all the available ground.

The game is spread over four discs, although one is only used if you want to listen to a



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THE THIRD COURIER

ELECTRONIC ARTS produce *ST* and *Amiga* versions of their spy-thriller set in Berlin

This little number has already been reviewed in *ACE* on the PC, where it failed to impress. Now, however, the *ST* and *Amiga* versions are here and the first question we had was whether the gameplay – which had serious shortcomings on the PC – had been improved. Here's the run-down if you missed the last review...

The action is set in Berlin and revolves around three couriers who went missing while heading

LANDSCAPE.....7.5
Pretty graphics but not too many locations. Novel method of controlling level switching.

ENCOUNTERS.....5.0
Not many of them and the trial & error approach rapidly becomes boring. Some amusing responses though.

CHALLENGE.....7.5
The puzzles aren't too difficult, but applying solutions can be.

SYSTEM.....6.5
Far too much disk swapping (particularly during saving and loading) breaks the flow of the game causing unnecessary frustration.

ACE RATING 675

If you can put with the system, it's worth a look...but the beautiful screens don't make up for the frustrations



Your starting point in *The Third Courier*—almost identical to the PC version.

for a top-secret conference in Brussels. Each courier was carrying vital components of NATO's defence plans—now two are dead, one has vanished, and it's up to you to find the components before they fall into the wrong hands.

I must admit that my knowledge of spy thrillers dates back to a few James Bond books read years ago so I was pleasantly surprised to find myself drawn into the game with a minimum of confusion.

The game is played by yourself as the sole character and as usual starts by generating statistics. Rather than a dice roll you choose a personality such as what type of urban/rural background you have, your preferred pastimes and your civilian occupation. Thus you could choose a rural background, racing as a hobby and research scientist as a job. On the other hand you could be a jet-setting, partying type from the inner city. Whatever you choose will affect your strengths. You are also allocated various other attributes—mine were poor vision and an unattractive appearance (Ha!).

The game is played in a similar manner to many other so-called RPGs. The streets of Berlin are portrayed in 3D perspective, movement being by clicking on a directional compass. As you move through the streets you are likely to come across drunks, hooligans, assassins and panhandlers (beggars) in addition to both East and West German police.

Combat is necessary to acquire experience

points and the options are run, fight, chat and threaten.

Running simply dumps you in another part of the city while threatening sometimes scares your assailant away. If you decide to fight this will take place with whatever weapon you are armed. Weapons range from bare hands through switchblades, small arms, rifles and sub-machine guns.

Some weapons can be acquired from the bodies of your victims while others are available from the Mission

Support Supply in the city. Here too are other gizmos without which no self respecting spy would venture out. Bomb sniffers, lock-picks, bug finders and bullet-proof vests are just a few of the available items.

All pretty standard stuff, but how does the game play? The atmosphere is well maintained by touches such as the police demanding your papers if you stop to chat, the sausage vendor asking for a West German passport to get his relative out of the East and even the inevitable can-toting drunken football hooligan in the park. Only thing is—as in the PC version—the encounters are repetitive and, after a while, hardly exciting.

Although the Berlin Wall is now no more, the game gives a rare opportunity to experience the frustrations which must have occurred daily for Berliners until last year. Unfortunately, it's also just one of many opportunities to experience other frustrations—constant disk access, repetitive graphic locations, repetitive encounters, and a rather low-grade search-and-solve puzzle structure. If you think living in an oppressed society is romantic and exciting, you probably deserve to play this game.

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HINTS AND TIPS

Can you help? I'm always on the lookout for short hints and tips (rather than full solutions) for any adventures or RPGs. Offerings please to ACE NEW WORLDS at the usual address.

Need some help? A gentleman with the unlikely name of "Flakie" offers help on a wide range of adventures (too many to list). If you get in touch please don't forget the rules: State exact problem, no SAE—no reply, no unsocial phone calls. Contact him on 091 258 3919 or write to Flakie, Belvedere House, 27 Linkin's Terrace, North Shields, NE30 2EL.

MANIAC MANSION (Scott Jones, Newmarket)
To get the chandelier key (to open dungeon) find loose panel in library, open and get cassette tape. Get fruit drinks and bowl of wax fruit and head them to green tentacle. Get record from attic then use the vitrola to play disk while recording it on cassette tape. Then play your new tape in the chandelier room and bingo!

CHRONOQUEST (D. G. Lyndon, Portsmouth)

THE CHATEAU—1922 AD

HALL—look lid of urn, get punch card.

STUDY—get sphere

HALL—use sphere on banister

LANDING—get key from foot of statue, use on bureau, get gloves from drawer, get punch card under rug.

FATHER'S—get grapple and rope under bed and punch card under pillow.

Get combination from drawer.

KITCHEN—look cupboard, use combination on safe, drop combination, get bottle, drop wine

HALL—go NE then light lighter

CHAPEL—look left of photo, get candles and light them then lighter off, look book then get punchcard.

LIBRARY—drop photo, letter & bottle, look glass then push switch.

HALL—pick up then drop sphere.

LIBRARY—get fuses from drawer then drop candle.

MACHINE—push lever up, use fuses on fuse box, push lever down, push switch, use fourth from left card in slot.

PREHISTORY—here we come!

LANDSCAPE.....75

Atmospheric graphics—monotony is, after all, something we rightly or wrongly associate with Eastern Europe—add to the realism, as does a city map with actual place names.

ENCOUNTERS.....65

Bribable bar staff, honky-tonky operators, stiff necked police and aggressive down-and-outers all react in a thoroughly believable manner. But they all tend to do the same sort of thing.

CHALLENGE.....70

Relying mainly on combat and exploration, the game is for the explorer rather than the puzzle solver.

SYSTEM.....60

Lots of disc swapping on the ST version and movement around the city can be slow with much disc access on both machines.

ACE RATING 655

Standard fare cleverly dressed in new clothes, but it's a pity that the new versions didn't improve on the PC original

RPG RIP OFFS!

More and more games are boasting elements of "RPG" in their scenario blurbs. Like "All Natural Ingredients", we think this sort of claim should be subject to some sort of legislation!

The fact is that simply giving a character attributes at the beginning of a game is hardly RPG. And if those attributes have an effect on gameplay that can only be discerned by those with at least sixteen unnatural senses, it's even less RPG. And if the structure of the scenario is the same for all created characters regardless of attributes, where's the "role-playing" element??

Even more serious, many of these games—*The Third Courier* is just one example—simply give you a single player character and do not allow you to create a team or party with varying attributes, so the "character co-operation" effect goes out of the window. *The Third Courier* at least lets you save Agents for future re-activation, but many games don't even do that.

The fact is that the way things are going, you'll soon be able to say that any old "lead-emp-up" is...yup, an RPG, folks! Your axe-wielding sprite comes with a special strength attribute (when it runs down, you're dead) and a special ability-to-reincarnate attribute (you get three lives).

We think there should be an RPG Charter. This would say that any game which calls itself RPG, should have at the very least the following features:

1. The ability to create a party of at least three characters.
 2. All characters to have at least four attributes, plus sex and user-supplied name.
 3. Attributes to have a noticeable effect on gameplay and game structure.
 4. Save character(s) to disk option.
 5. Characters should ideally have separate graphical appearances.
 6. There should be at least three different classes of character (e.g. assassins, politicians, and bankers—or magic users, fighters, and vicars) and different races.
- All programmers contemplating an RPG game should be made to sign this charter, or face a boycott by all gamemasters seriously concerned about the future of RPG. Stand up and be counted—and let us know if you have any other points you'd like to add to the list.

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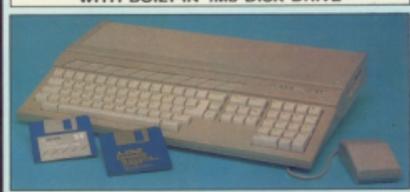
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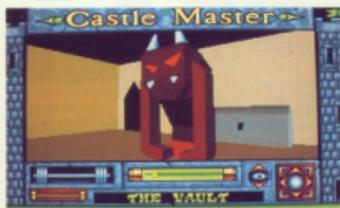


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CASTLE MASTER

To begin with this month we have some starting hints for the 16-bit versions of the latest Freescape game, *Castle Master*, courtesy of Incentive.

To summarise the information in the manual. Choose whether you're the Prince or the Princess, then shoot the spirits on your way to rescue your sibling.

The Big Bad spirit (Magister) who guards the cell in which your twin is incarcerated, can only be destroyed when all the other spirits have been dispatched, so the route to your goal involves finding them all. Your way is barred by various puzzles, some of which must be solved in a particular order, and by locked doors, which may only be opened once you've found the appropriate key.

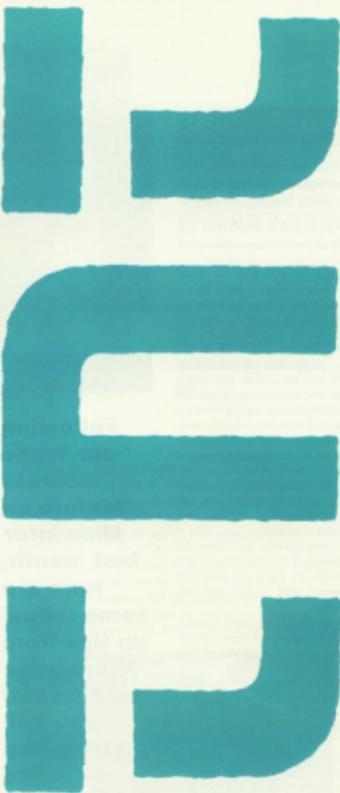
Some rooms contain spirits. You can tell when there's a spirit in the room because the screen will jump around or flash in an alarming (some would say lunch-retrieving)

fashion. A spirit can attack you either by sapping your strength with its presence or by flying/crawling through you. Either way your strength (as indicated by the number of weights on the bar) goes down. If it drops below one full weight each end, you can no longer run; if it falls below half a weight you can only crawl; no weights and you're dead. Spirits can be destroyed by throwing a rock at them. Use the mouse or the keyboard to move the fire-action sight (that's the double-line sight, as opposed to the single-line centre-sight) then the left mouse button or appropriate key to throw. Some spirits need more than one hit. When you kill a spirit the 'spirit-level' bubble moves left a little. As time proceeds the remaining spirits increase in power and the bubble moves to the right. If it gets to the far right, the spirits have overcome you and your quest is lost. Be sure to keep an eye on the level and find some spirits if it gets too high.

An initial reconce of the castle surrounds (don't fall in the moat!) You never paid proper attention to swimming lessons as a child... reveals a shut drawbridge and no other obvious way in. Round the corner huddles the Wizard's Hut - walk into the doorway to get inside.

Turning to your left you see something on the table. It's a piece of cheese! (There are several kinds of food in the game, but cheese seems to be a bit of a favourite with the castle's inhabitants). As you try and move around you find you keep bumping into things. Try walking ('W') or crawling ('C') instead of running ('R'). Running is useful in open spaces or long corridors, and if you run past something you can always run backwards a little.

Now you're a little nearer the cheese, aim the sight on it and press the right mouse button or the 'A' key to perform an action: in this case the obvious action is 'eat', the cheese disappears to



happy chomping sounds and your strength increases.

Take a look around you. There's a table with a large seat, there's a mat on the floor, and there's what looks like a picture on the wall. Go up and take a close look at it (action on it). It's a clue! So that's how to open the drawbridge.

Once you've opened it and gone into the gatehouse, turn immediately right and go through the doorway into the Right Atrium, then ahead into 5 East Tower. Turning a little to your left, you see a plain door. Go up to it and action it to open. Go in to the Kitchen (hmm, that fireplace looks interesting, maybe we'll have a closer inspection later). Take a step forward and turn round to find a key - action on the key to collect it. Go to the information screen (either press 'I' or click on the "Castle Master" banner at the top of the screen) and then click on the key hanging on your key rack. It's 'Igor's Room Key'. Click on "Game" to continue.

Go back outside, turn to the right (it's a good idea to close the Kitchen door by acting on it) and go to the next door along. This has a keyhole, implying the door is locked. If you action the door it will tell you where it leads. If you action the keyhole, you will unlock the door (provided you have the appropriate key).

After you've finished tangling with Igor (hint - he has a thick hide) continue around to the tower corner. Ahead of you is a simple puzzle, consisting of a gate and some buttons on the wall. There are more complex puzzles further in the game, but they all rely on actioning, shooting, or shouldering (running in to something, or positioning yourself using the contents of the room, or a combination of these).

After you've solved the puzzle (c'mon, what would you usually do with a button?) go through the doorway to your left into the East Passage (hmm, what's that hole in the ceiling?



Maybe it'll become significant later... then ahead to the N. East Tower. I wonder what's behind that door? Maybe the clue will help. For the time being, let's press on round.

After grabbing the chess someone carelessly left lying around, and climbing in and out the window a few times to convince yourself you can, walk carefully over the paving slabs someone's kindly placed

over that rather dangerous looking hole in the floor. That's a curious little crawlway to our right, I wonder if there's anything useful behind it? Maybe later – for now we'll go through the left doorway into the North Passage.

What's this step halfway along? Doesn't seem trapped: perhaps we'll find out what it's for later. Meanwhile, over it and onward to the N. West Tower. Open that door slightly to your left and go in. Shoot the spirit! Now things are quieter let's have a look around. That door ahead looks rather heavy. Actuating on it reveals the contents, while actuating on the handle reveals that we need ten pentacles (what's a pentacle? maybe we need a dictionary...)

Turning round we find another key, and ten flashing five sided things. Hmm, maybe we don't need a dictionary after all. Actuating on each of them reveals the location of each pentacle. That'll take quite a while; I wonder if it's worth it?

Back into the tower, turn right, close the door and follow the tower round (another of those ominous looking holes in the ceiling...) This door looks interesting – it's got a sign next to it that looks like steps. Shame it doesn't seem to open from this side – maybe there's another way down.

Here's another of those button puzzles, a little more complex this time, but not too tricky. Ouch! Bumped your head – better crouch under. This door on the right seems to be padlocked. You don't have a key for it – maybe you can shoot it off...

In to the Guard Room (luckily, the guards seem to have deserted along with the rest of the human occupants of the castle) and by pressing your nose against the grating you can see what's inside the Pentacle Vault. Maybe it's worth looking for the pentacles after all...

Back out, then through the doorway to your right. Ignoring the side doorway for now, through the doorway ahead into the S. West Tower. Here's another die, but how do we get over this obstruction? Maybe the roof is a bit too low to walk over the top step...

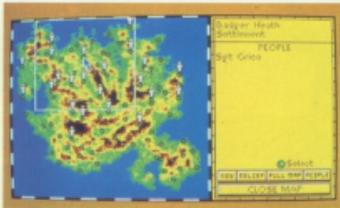
Round the corner there are some double doors. Somebody must have oiled them lately, as they're easy to open. In to the Great Hall (here's another spirit!). Now, where could something be hidden in here?

Back out in the tower, there's a doorway to the right into the Left Atrium, which leads to the Gatehouse again. Go underneath the large block, taking care with your timing to avoid being crushed (saving the game is a good idea at this point. Go on the information screen and click on SAVE or press 'S', then give a filename. If you manage to get yourself splatted, you can load it back.)

In the Courtyard you may want to run as it's quite large. Taking a look down the well we find another key. I wonder if there's anything else interesting down the well?

Further questions: why is there a wooden horse in the stables, what's being guarded in the hay barn, where's the door for the smithy, what's the secret of the flag, why is there a hole in the chapel roof, and what happened to the last guy to give a sermon?

Take your time – there is more to this game than meets the eye ■



MIDWINTER

Following our Trade Secrets feature on Midwinter last month, here are some follow up tips from Microprose for those of you still struggling to get to grips with the game.

When the game starts, you are in control of Captain Stark, alone on patrol and likely to be in the wilderness. Armed with only a rifle and a clutch of grenades, you'll soon be under attack from an enemy convoy with the upperhand in military hardware and manoeuvrability, or shelled as the spotter planes get a fix on your position. Be certain to have checked the map thoroughly, down to the maximum magnification, before starting to ski. Initially, look for two things;

- 1) The nearest place of safety.
- 2) The nearest garage.

Secondly, look at the relative positions of your colleagues awaiting recruitment. If you are undecided as to which building to choose, let your choice be influenced by the direction of resupply (check your manual biographies!) convoys.

If you have to stay on skis for any length of time at the start of the game, you're likely to meet more trouble than you can handle. You need wheels! (or whatever snow-buggies run on...), so get moving to the nearest garage.

When you encounter an enemy convoy whilst skiing, you should attempt to reach a hill or plateau from which you can see a fair distance in all directions. This doesn't necessarily mean heading for the mountains. You can often see further in valleys with small elevated ridges. When you are in control of Stark, provided that his arms are unharmed and he has plenty of energy, sniping is relatively easy. You must shoot vehicles early, i.e. before they spot you. If you are lucky, you may find a whole string of vehicles travelling in convoy. As you shoot one, another will appear over the horizon from the same direction. If you find that vehicles are attacking from different directions, try to ski on to safety, as sniping may take up a lot of time – remember that you are looking to recruit people quickly.

If you are controlling a good skier, try 'swinging' down hills at enemy convoys. When you are within a few yards, launch a grenade and swerve sharply to avoid the vehicle as it explodes, careering out of control.

The enemy planes which attack you will always appear directly ahead of you. From the time they appear to the time they bomb you is usually long enough to get a good shot in with your rifle. Out-skiing planes is difficult, but use the time in between plane attacks wisely. As soon as you have shot one, ski on a little further. If another appears, and you are at walking pace, shoot it, if you are skiing quickly, press on until the plane is circling overhead.

On reaching a settlement, go to the decisions display. Select the enter building icon to confirm which buildings are present, and which, if any, are occupied by potential recruits. Check your character's level of Muscle Power, Energy, and Alertness. Also note whether the character has dynamite with him, and check the time remaining before the next situation report is due.

You now have to make a judgement as to which building to enter, according to the state of the character and the time remaining. Do you need to eat, rest, or sleep? Do you need supplies? Will you over-run the Situation Report time, thereby restricting your ability to move on? Always attempt to recruit any team members first, and, if there is a garage present, always leave enough time to enter it and get a snow buggy. ■ 89



If you want to keep any recruited characters together, access the companions display and select methods of movement from there. By referring to the Personality Displays of characters whom you wish to move together, find the best driver, and make him/her the party leader.

Driving is much easier if you stick to the valleys. If you have to travel over elevated ground to reach a character by snow-buggy (e.g. Kristiansen), refer constantly to the map, making use of "Relief" mode to analyse the best path. However, there is no substitute for driving slowly (about 40 m.p.h.) and looking at where you are going through the main window! Keep an eye out for the trees and steep ridges (the latter being identifiable as they are usually much darker than the gentle slopes), and watch the skies for patrolling planes. Unless a surface-to-air missile is early as possible, but ensure that you can see the plane in the centre of the window.

Early in the game, you will notice that the majority of enemy units are concentrated in the south-east of the island, near Shining Hollow. Five or six will make incursions across the island, and will always stick to the valleys. Once you have recruited a few members, and before synchronising watches too many times, it is often useful to send one character in a buggy to "pick off" the lead units. You do not have to shoot every vehicle in the convoy. You may get lucky and kill the command vehicle; you may be able to kill off half the convoy quickly; in either case the remaining vehicles will desert, giving you valuable time whilst the other convoys travel from the Shining Hollow area.

The speed at which the convoys travel, and the regularity with which they fire depend on the number of "re-stocking" buildings they have captured nearby. Destroying Synthess Plants, Factories, and Warehouses will slow them down and make life easier for your team. However, sabotaging buildings can be time consuming. Make sure that you use a character with above average ability to perform such tasks.

Spending some time at the start of the game deciding which characters to recruit first is a must. Kristiansen is a valuable, but difficult, member to recruit. He is surrounded by steep hills in Diamond Valley and will only join if asked by certain civilians. If Stark starts the game in the centre of the island, try to recruit Davy first. Stark should take the boy in a snow buggy to Kristiansen to recruit the professor. Then send Stark and Kristiansen down to Snowstorm Valley to the radio station. Caygli can be recruited there by Stark whilst the electronics expert enters the radio station and uses his radio knowledge to recruit four other members at random.

Meanwhile Davy can either travel west to recruit Rudel, as the only person who can persuade the hunter to join the struggle, or go to liberate nearby Peace

Officers recruited by Kristiansen's message, who are captured by the enemy. Civilians can enter enemy held buildings and free the officers. Then, by using the Companions display to exit the buildings, the civilians can take prisoners with them.

With luck, Kristiansen will recruit someone in the north-west of the island. Use the person you enlist to recruit others in a south-easterly direction. Once one is recruited, find him or her a snow-buggy and split up. Employ a "pyramid effect" so that one becomes

SO YOU WANT TO LIVE FOREVER?

The idea behind the TNT survival guide has been to enlighten those of you who want to know a little more about the art of hacking and cracking. Over the next few issues, master programmer Jon will be talking us through the intricacies of hacking on the C64. This month he introduces us to the art of hacking with a general method for finding infinite lives. Next month he will explain how he cracked *Bombuzal*.

Have you ever wished for the programming skills necessary to write your own pokes? And do the very words "machine code" fill you with fear and confusion? If so, read on:

This information is specific to the Commodore 64 but forms the basis for cheating on all computers. First of all you will need to buy a cartridge with a machine code monitor (perhaps you already have one.) Now carefully and precisely follow these instructions:

- 1) Load the game on which you wish to cheat in the normal way.
- 2) Start the game, making a note of how many lives you have left and enter the machine code monitor.
- 3) Search all memory for the number \$CE, (the dollar sign means the number is in hex - if you don't understand it, ignore it). This is the machine code instruction



for 'Decrement location X' and is written 'DEC'.

- 4) Make a list of all the numbers displayed (I know, there are a lot of them!)
- 5) Disassemble the first address in the list, e.g. If the first address is 01CE type 'D 01CE'.
- 6) Disassemble the first address after the mnemonic 'DEC', e.g. if you get something like '> 01CE CE FD 0 DEC \$D0CF' type 'D \$D0CF'.
- 7) If the first two figure number at the address you have disassembled is equal to the number of lives you have left, then start a new

list and jot down the address that held the "DEC" command (in my example this would be 01CE).

- 8) Go on to the next address in the list you made earlier, disassemble it and go back to my sixth instruction. If you have no more addresses in your old list then go on to instruction nine. ← 90

two, two becomes four, four becomes eight and so on.

This will probably leave you with two 'waves' of recruits. One in the north-west, and one to the southern-central part of the island. Getting to the Shining Hollow can be achieved in a number of ways. Driving head first towards the enemy can prove disastrous, but with a little luck you may succeed in blasting a path through to General Masters HQ. Hang-Gliding there takes skill but can be quick and effective. Sometimes the most direct route is not the most effective. Try sneaking behind the enemy with the help of two sisters!

And finally, if skiing, driving, and hang-gliding to all your comrades seems like a little too much effort, destroying all enemy held radio stations will allow you the freedom of the airwaves to perform a massive recruitment drive across the whole island. There is no easy way to win *Midwinter*, as no two games are alike. If you succeed, try again from a different starting position. If you don't, buy some ear-muffs. Your team members will be executed, and Masters' gun-shots will be ringing in your ears for a long time to come. ■



<p>Countable Harvey Pringle Peace Officer Age 20 years Current Location In the White Horse Valley</p> <p>Lady Lulu is Harvey Pringle's best friend and she has a love for the white cow rearing it. He regards Malcolm and Pipin as good friends but, in truth, they love him less for his Pringle money. Countable Pringle has a wife and two children and seems to have the same intentions.</p>	<p>QUANTITIES AND SKILLS</p> <table border="0"> <tr> <td>Marble</td> <td>Excellent</td> </tr> <tr> <td>Energy</td> <td>Excellent</td> </tr> <tr> <td>Alertness</td> <td>Excellent</td> </tr> <tr> <td>Endurance</td> <td>Excellent</td> </tr> <tr> <td>Stamina</td> <td>Good</td> </tr> <tr> <td>Cybernetic</td> <td>Good</td> </tr> <tr> <td>Strength</td> <td>Good</td> </tr> <tr> <td>Stealth</td> <td>Advanced</td> </tr> <tr> <td>Shyness</td> <td>Advanced</td> </tr> <tr> <td>Skills</td> <td>Fairly Good</td> </tr> <tr> <td>Gliding</td> <td>Fairly Good</td> </tr> <tr> <td>Driving</td> <td>Average</td> </tr> <tr> <td>Sneaking</td> <td>Below Par</td> </tr> <tr> <td>Subterfuge</td> <td>Below Par</td> </tr> </table>	Marble	Excellent	Energy	Excellent	Alertness	Excellent	Endurance	Excellent	Stamina	Good	Cybernetic	Good	Strength	Good	Stealth	Advanced	Shyness	Advanced	Skills	Fairly Good	Gliding	Fairly Good	Driving	Average	Sneaking	Below Par	Subterfuge	Below Par
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9) You will now have another list. If you disassemble all the locations in your newest list and they all decrement the same location, e.g. they all contain the instruction 'DEC \$2C59' then change all the 'DECs' (SCEs) to LDAs (\$ADs) and go on to instruction ten. If not then reenter the game, lose a life, re-enter the monitor (remember you now have only one life) and go back to my fifth instruction.

10) You will probably now have infinite lives. If you haven't, go back to the title screen and start a new game. Now go back to instruction two but read \$C6 instead of \$CE and \$A5 instead of \$AD.

There are a few games which are protected against this kind of cheat. Some games use a different way to decrement your lives. I only have room here to leave you with some clues:

Hunting for the string of bytes 38 E9 01 will list all occurrences of code that subtracts one from (rather than decrements) various locations. A possible 'life byte' will immediately follow this code after an 'STA' command.

If, as in *Armalyte*, the game does not work after you install the cheat, and the 'DEC' command is at location \$E9F3, there might be a bit of code that checks to make sure that location \$E9F3 is always SCE, (e.g. LDA \$E9F3, CMP #\$AD). In this case re-load the game and change the code to make sure the value is always \$AD (i.e. LDA \$E9F3, CMP



#\$AD). Install the cheat and restart, and the game should now work properly with infinite lives. In my example you would hunt for the string of bytes AD F3 E9 C9 CE. If you are one of the many people that have just rooted out their *Armalyte* disks, then try typing 'D A194' in the cartridge's monitor and change the bytes 20 30 E0 to 4C 97 A1, now re-enter the game by typing 'G A000' and you can't die.

Some games have protection directly against cartridges, it would require a complete machine code course to overcome it and I am not at liberty to divulge that kind of information anyway (so tough luck).

A word of warning: writing cheat codes when you are not very good at it can seriously bore your friends to death, only attempt it if they have something else to amuse themselves with!

For comparison I took me eighteen seconds to install the *Bombuz!* infinite lives cheat without using any cheat-aiding software! You will soon learn the short-cuts.

Happy Cheating! ■

CONSOLE CORNER

tnt

This month we continue with tips from Jojo Cicero and Mark Hook, the console cracking crew from Wales with more tips for the Sega Master System.

BLACK BELT - THE BOSSES

Boss 1, RYU

Jump over him, face him in mid-air and on landing punch him then quickly kick him. Chase him into the corner then, as he runs back past you, repeat the aforementioned routine.

Boss 2, HAWK

Jump his projectile then, as you land, kick him. Keep advancing and kicking him whenever possible.

Boss 3, GONTA

Make him walk toward you with his hands outstretched. Run into him, punching rapidly. If he jumps at you, back off. Don't get too far away or he'll run at you.

Boss 4, ONI

Stay in the left corner of screen. When ONI is less than an inch away kick. He will duck and punch you. As he rises, kick him. Repeat the routine. Don't worry about losing energy, he dies with one energy block left!

Boss 5, RITA

Use the following routine on her: KICK, PUNCH, DOWN PUNCH, DOWN KICK, REPEAT EXACTLY and the FLY KICK to finish.

Boss 6, WANG

You're on your own here!

CAPTAIN SILVER

To annihilate-

...Boss 1, WITCH

Just before the Witch appears, jump and fire at her entrance spot. If you fire very rapidly, she will be half dead by the time she has flown over. Now face left and as soon as she is within reach, jump and blast her!

...Boss 2, NAPOLEON

Fire like mad at him (obviously). When his knife gets within approximately 1 centimetre of your vicinity, run back. After gaining a little distance, turn and fire. Whenever he jumps, run back then let rip with the outlast.

...Boss 3, CYCLOPS

Repeatedly fire at him. Stay very close to him though, just in case he throws a low stone, but be ready to move away in case he moves quickly.

...Boss 4, DRAGON

Stay at the left of the screen. Whenever he fires a bolt it is easily jumped. Hit him, then run back. Repeat.

...Boss 5, VILLAGE CHIEF

Not much here, just to observe that when he pulls back his arm, he throws his chain above you (luck). When he doesn't move his arm, he throws his chain at your feet (luck).

...Boss 6, CAPTAIN SILVER

When he jumps, run underneath him, not stopping until his arrow hits the ground. Then run round and let rip. When he jumps again, repeat routine.

NB. Bosses 3, 4, 5 and 6 can only be killed with the blade, not the stars.

To continue - Press button 2 and up when 'game over' is displayed.

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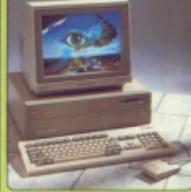
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MICRO WIMBLEDON

Anyone for tennis? Eugene Lacey serves a few aces and puts you in the right court...

Tennis ought to be a fairly simple sport to simulate. Two players bat a ball back and forth to each other across a net in a rectangular court. The first 'Pong' computer games were practically doing this nearly fifteen years ago!

In 1990, however, the simpler the game the greater the expectation that the graphical representation of the sport will be close to the real thing. Tennis suddenly begins to look a lot less simple. Practically every muscle in the body is involved as the player throws the ball in the air, swings the racquet above the head and brings it down through the air, twisting and bending the whole body at the same time, as the ball flies towards the opponent's chalk.

And that's just serving!

The Tennis ACE's presented on these pages are in our view the best games around. We have looked for games that try to push the frontiers of presentation but also those which are – first and foremost – strong on playability. Go for that ace...

PC ENGINE £29.99dk OUT NOW



INTERNATIONAL TENNIS

The PC Engine serves a scorcher

No doubt about it. PC Engine International Tennis is the standard that should be looked at before all new tennis games are embarked on. Programmer beware. PC Engine owner, rejoice. The rest of us, look on and wonder.

PCIT performs brilliantly in the four key areas that make the difference between good and bad computer tennis. The first category is the essential one of 3D graphics – the movement of the ball is totally believable as it pursues its 3D trajectory towards your opponent from whatever position you strike it.

Secondly, the method of hitting the ball is simple to master but also totally plausible as the computer animation reflects the decision you make with your keypad. The net result (sorry) of this is that great, flowing rallies can be enjoyed by the participants.

The third key category is options and here again PCIT points the way. Spin, force of shot,

positioning, four player doubles – the player has many possibilities at his/her fingertips at all times.

The fourth essential is extras. There must always be a gloss for a sports game. It may be TV style commentaries as you get in Cinemaware games, or a completely separate arcade adventure as you get here in PCIT – your progress dependent on your performance on the centre court. A seminal piece of sports simulation programming.

● Eugene Lacey

ST/AMIGA £19.99dk IMMINENT

C64 £8.99dk OUT NOW

SPECTRUM £8.99dk OUT NOW



3D INTERNATIONAL TENNIS

Total 3D experience from Palace

Here Palace up the stakes with a revolutionary new system which rotates and tilts the court as you make your shots.

There is a price to be paid for this enhancement, however – the players turn out to be wire-frame stick-people of indeterminate sex.

But the benefits more than outweigh the limitations. It enables you to have much more control over the ball – including top spin and back spin – and to get into and enjoy those rallies to a much greater extent.

The game features lots of other options and

extra's – as you would expect from programmers Sensible Software (Microprose Soccer, Wizball). There are four skill levels to play against an opponent, or the computer: Amateur, Semi-Pro, Pro and Ace. Ace is where all game play options are switched on – it's also quicker, with a greater variety of shots at your disposal and – most importantly – you are also playing for money.

The money side of things provides for a sub game of some merit. You have to decide which tournaments to compete in and work out your likelihood of taking home a cash prize if all of the serious money is riding on the winner and runner up.

3D International Tennis represents the most innovative approach to computer tennis for years. This is praiseworthy in itself but what is even better is that all of its radical ideas are made to work. Highly playable and addictive.

● Eugene Lacey

ST/AMIGA £24.99dk OUT NOW



TENNIS CUP

Split screen smash from Loricels/ U S Gold

Split screen presentation and stacks of stroke options are the key distinguishing features here. The game requires some effort from the player to master the six different types of serve and thirty possible strokes available to you (depending on your position on the court) and the return your opponent has just made. But once you're up and running you can begin to enjoy some sterling rallies.

The whole play area scrolls sideways in both





directions as the rally flows. The limitation of this type of presentation is that it does not allow players to attack the net. However, apart from the limited nature of the 3D presentation, Tennis Cup has lots of visual treats and the overall standard of graphics is very high. Particularly neat are the variety and detail of faces in the crowd – so much more convincing than the usual row of footballs.

The game lets you play on grass, clay, hard court, or indoors. Three or five set games can be selected against a friend, the computer, or you and a friend against the computer in a game of doubles.

Tennis Cup is more of a game based on tennis than a simulation of the sport as represented by 3D International Tennis. But this compromise is made for good, sensible reasons of game design and hardware limitations and is as playable as any of the games on this page – and a good deal prettier than most of them.

● Eugene Lacey

ST	£19.99dk	OUT NOW
AMIGA	£24.99dk	OUT NOW
SPECTRUM	£9.99dk	OUT NOW

PRO-TENNIS TOUR

Thrash Becker and Lendl – thanks to Ubisoft

Pro-Tennis Tour brings you up against the top players on the world tennis circuit – Lendl, Becker, they are all here as you seek to up your own personal world ranking.

Ubisoft opt for a fairly straightforward presentation of the court with the action viewed from your end of the court throughout. No split screens or three dimensional rotation here. Game controls are simplicity itself. To serve, you throw the ball in the air and then move a cross hair to determine the direction you want it to

BALLS UP!

Here's the ACE Tennis Rating System:

3 BALLS Better than Boris Becker's Becker
 2 BALLS Jimba Connors' Standard - it's good, but it ain't gainin' to win Wimbledon this year
 1 BALL You cannot be serious
 NO BALLS Exactly.

travel.

Returning shots is equally simple. All you have to do is press fire – the computer works out for you whether to use a backhand or forearm return depending on your position on the court. This simplicity does facilitate some excellent rallies, but you can't move and swing at the same time. The bat seems to take forever to make the swing before it connects with the ball and this means your positioning has to be spot-on, arriving at the position where the ball will be returned just before it gets there. This doesn't spoil the rallies exactly, it just makes them slightly unrealistic.

Pro-Tennis Tour has excellent sound and graphics. Worthy of particular mention are the landmark shots at the start of various tournaments. The Tower of London never looked so good in pixels, and the Statue of Liberty isn't bad either.

● Eugene Lacey



ST/AMIGA	£24.99dk	OUT NOW
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PASSING SHOT

Coin-op conversion from Sega / Image Works

Image Works last year launched one of the few conversions of a coin-op tennis game ever. Unfortunately, like its arcade big brother, the home versions of Passing Shot failed to make much impact on the games scene.

The trouble is, it suffers from a very odd overhead perspective. The ball flies skywards everytime a rally gets going and to make matters even worse it only shows part of the court whilst the ball is in motion. It does scroll vertically to show you the rest of the court eventually, but this is little compensation. It is therefore difficult to predict where the ball is going to arrive back in your court – the very essence of tennis, surely.

Thankfully, it switches to a 3D perspective for serving (server's view) and this aspect of the game works fine. But just as TV tennis fans find it a complete bore to see a match won on service alone so the same applies to Passing Shot.

Within Passing Shot's very unrealistic parameters it is possible to enjoy it. You can have decent rallies, however antennis-like. ACE is sure that Sega – the industry's leaders in coin-op 3D – could do better if they were to make another attempt.

● Eugene Lacey

PAST, PRESENT, FUTURE

Tennis has failed to capture the imagination of gamers in the same way as sports like football (both American and Anglican), golf, or even basketball. The earliest rallies took place on Spectrum's and ZX81's thanks to a game called Pasion Tennis - from the same company that now produce the yuppy (does that word still exist?) Fifafax with chips in - the Organiser. Although Pasion may now be a little embarrassed about their video game origins they do deserve to be given credit for having 3D graphics well ahead of its time.

As Pasion grasped nearly ten years ago, 3D remains central to the success or otherwise of tennis games. CD-I and Multimedia are unlikely to offer any breakthroughs for the tennis game in the near and medium term future. These technologies will offer the possibility of linking footage of real games with some of the top players as long as the legalities of doing so can be sorted. They will facilitate good computerised strategy games and even training programs for the real thing.

But what these technologies won't do is facilitate a better computer graphics simulation of tennis in an arcade style. That is wholly dependent on the development of faster and more powerful processors, capable of performing the complicated three dimensional calculations required to simulate tennis properly on a single display window. All of these processors exist, the programming know-how is in place, the will is there to do it, the economics of using these processors to produce tennis games isn't. Not yet.



ST/AMIGA	£26.99dk	OUT NOW
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TENNIS

Take the set out to play with Nintendo's Gameboy

Gameboy Tennis offers the best game you can get on any of the handhelds so far. This statement is a bit unfair as the Lynx doesn't have a tennis game as yet and the PC Engine handheld is still under development by NEC. But not that unfair either, when you consider that it offers a better game than many of the computer versions that are available. No mean achievement considering the black and white graphics on a tiny LCD monitor that the Gameboy has to work with.

But these limitations do not stop Gameboy Tennis offering superb rallies, great control over the ball in serves and returns, a convincing 3D ball trajectory and, best of all, a two player link where two Gameboy owners can play head-to-head, each enjoying a full 3D players view of the court from his own end.

● Eugene Lacey

Radar can't detect it –

F-19

STEALTH FIGHTER
but it's coming..



The Biggest,
Fastest and Smoothest Flight Simulation ever seen.

You're flying on high octane adrenalin

F-19

STEALTH FIGHTER

Forget about other flights of fancy - This is the Real World.



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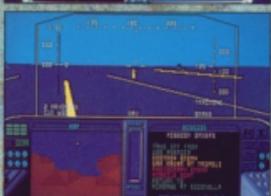
Cold, limited or conventional war.

Four grades of opponent.

Four real-world scenarios.



All the action you can handle - and always a new challenge waiting.



Graphical detail and depth of gameplay are claims made by others - here they are reality.



Plans into the ground are proved to be hazardous to your health.

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YOUR ATARI ST AND
COMMODORE
AMIGA.
MICROPROSE**



IBM Screen photo shows. Actual screens may vary.

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*Attendance limited. See page 68.

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to subscribers**

ACE CONFERENCES

ACE isn't just a magazine – it's also a communications link between you, the readers, and software houses. We've set up a series of ACE conferences in which subscribers to the magazine are given the opportunity to meet software houses and talk to them about their games (and you don't have to be polite either!) on an informal basis. Lunch is supplied and admission is free to subscribers, who will also receive priority allocation – a valuable bonus since space at conferences is strictly limited. Each event is fully covered in the magazine, so you could get your mug in the mag as a bonus! If you want to know more – see the panel opposite and the article on pages 67/68.

InterFACE

Subscribers will receive, completely free of charge, a special quarterly newsletter put together exclusively for them by the ACE Team. This will bring you details of some of the topics that we can't, for reasons of space or secrecy (!), mention in the magazine itself. Subscribers will have the chance to contribute to it if they wish. With ACE every month, and InterFACE every three months, you'll really be at the cutting edge of the computer entertainment revolution.

THE ACE

The future of electronic entertainment has never looked better – and neither has the magazine that's universally acknowledged as THE most authoritative magazine covering games technology. People who read ACE regularly know that they will always be kept right on the cutting edge of the entertainment revolution. If you haven't been getting the mag regularly, here's what you've been missing – and this is just the last four issues!

EXCLUSIVE COVERAGE

CD-I Batman, Ultima VI, the revolutionary Microprose arcade flight simulator, hypergames, Sid Meier's superbly playable Railroad Tycoon, location reports from US companies, Centurion – the successor to Defender of the Crown, and much more – all covered FIRST in ACE.

IN-DEPTH REVIEWS

The ACE PIC curve system is unique – no other



Batman on CD-I – you saw it here first!

THE FUTURE

Boy, have we got some goodies lined up for you! Next month, we're putting together the issue of a lifetime as we explore the relationship between Hollywood and the games business. You'll hear straight from the offices of Industrial Light and Magic – Lucasfilm's special effects movie production unit, and win yourself the trip of a lifetime.

Then it's a wild romp from West to East as we bring you another industry first – a full location report from Russia on Soviet Gamemasters, including exclusive news of the source of the Tetris revolution. And just in case you don't fancy

E CLUB



Constitution — Electronic Arts' Roman conquest scenario, from the designer of *Defender of the Crown* and exclusively in-depth previewed in ACE

reviewing system tells you more about the games you're going to play. What's more, unlike many other magazines, ACE ONLY reviews the finished versions of games, not demo or preproduction samples. If it's reviewed here, it's exactly what you'll buy — not what they'll say you'll buy. And from this month, the reviews section is better than ever. Check it out and see for yourself.

GREAT FEATURES

Exclusive on-the-spot reports from parts of the games world that other magazines simply cannot reach. Where else would you find a location report from George 'Star Wars' Lucas' Skywalker Ranch programming house, or the castle of Lord 'Ultima' British, or the Hollywood offices of AIM's Interactive Entertainment project? Not to mention reports from Paris, Baltimore, and Japan — and you can see what's up-and-coming in THE FUTURE panel below.

GREAT PRIZES!

You could have won a fabulous FM Towns CD-ROM computer, a Video Cassette Recorder, an all-expenses paid trip to Paris' Science City, a CD Walkman, and EEE's of free software. And if that's not enough for you, check out the incredible prizes we're offering over the next few months in the Win! Win! Win! panel on the right.

spending the summer in Siberia, we've also arranged a stunning competition that could take you to the heart of Texas as the personal guest of Lord British at a special Halloween party. These parties, organised by LB himself at vast expense, have become legendary in the American games world and this will be the first time ever that a UK reader has been given the opportunity of joining in.

In the October Issue, due out in September, you'll receive exclusive coverage of the world's biggest games-only show as ACE prepares to take you into the future — literally. We'll be putting together the most ambitious exhibit ever, Living Room 2001AD, which will present tomorrow's working technology today for you to see, hear, and play.



FM Towns — exclusively covered in ACE, and an exclusive chance to own one!

WIN! WIN! WIN!

Want to go places? Want to grab loads of free software? Here's a couple of great competitions ACE readers can enter over the next few months...



Richard Garnett — Lord British — has built his own private observatory at the top of his house in Texas. You could be gazing at the skies here this Halloween if you're stars are lucky!

HOLLYWOOD HUNK!

Nope, not an infocom game — but a stunning chance to win a ticket to Universal Studios in Hollywood courtesy of Mirrosoft. There you'll be taken round some of the sets of recent blockbusting movies, including *Back to the Future II AND III*, plus a secret visit to a new movie location currently being filmed and licensed by Mirrosoft. Your ticket application will be on next month's cover — don't miss it!

TEXAS CHAINSAW MASSACRE!

Well, not quite. At least we hope not. But a visit to Lord British's renowned Halloween party at his palatial abode in Austin, Texas is bound to be full of surprises. Not only will you get to meet all the Origin gang and see their latest games in development, but you'll also be a VIP guest at the party of a lifetime as LB and his friends stage a massive Halloween spectacular featuring all sorts of special effects and wizardry. Thanks to Origin and Mindscape, you'll be there — and you'll never forget it!

SPEAK OUT!

As an ACE Reader you also get the opportunity to apply for a place on the ACE Conferences. For just £5 (FREE if you're a subscriber) you get to visit some of Britain's top software houses, a free lunch, bags of freebies (including software, T-shirts, and other goodies), and — most important of all — the chance to meet the people who produce the games you play. You'll be given the opportunity to play some of the new games under development, and to tell the programmers and publishers what you think of them. They'll listen. And you'll have a great time.

"An excellent day out and well worth it to other readers."

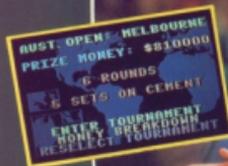
From a letter sent to us by a recent attendee at an ACE Conference



At the ACE Domark Conference — future trips include Mirrosoft (meet the Bérnaps) and Activision. See pages 67/68.

INTERNATIONAL 3D TENNIS

INTERNATIONAL 3D TENNIS IS A REVOLUTIONARY NEW TENNIS SIMULATION. THE INNOVATIVE USE OF VECTOR GRAPHICS HAS CREATED A GAME WITH UNRIVALLED PLAYABILITY AND AN UNPARALLED NUMBER OF FEATURES.



Screenshots various systems.



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- Learn to play topspin and backspin balls.
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- 4 court surfaces – grass, clay, carpet and cement – each affecting game play.
- Digitised pictures (ST and Amiga)
- Digitised voice of real Wimbledon umpire (ST and Amiga).
- Choose which 22 tournaments to play in a full tennis season, against world class competition and aim to earn a million dollars!

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C&VG 94% C&VG HIT

"It's smashing, ace and beats the competition...Immense fun, demanding for novice and expert alike, the best sports game for ages."

ZZAP! 94% ZZAP! SIZZLER

• C64 • C64 DISK • SPECTRUM • AMSTRAD • AMSTRAD DISK • ST • AMIGA •

PALACE

IN THE PINK

THE ACE CHARTS AND STOCKMARKET100

The only place in Britain where you can find out – instantly – which games have been getting the top marks from reviewers all over the country. Then you can decide which games to buy and – if you fancy a real challenge – you can try to predict next month's winners and win yourself a prize. The ACE Charts – the only charts that go by objective opinion and not hyped sales.

HOT OFF THE SHELF124

Every month magazines review dozens of games, but once they've been reviewed they don't always get mentioned again in future issues. But the games often stay on the shelves at your local store for three months or more, this section tells you which games have been highly rated in recent ACE issues and are still likely to be available – so you can make your choice without having to go through all the back issues.

CD-I UPDATE103

Just as this issue went to press, we received this report on the Philips UK announcement of CD-I, including news of software titles, games, availability, and pricing. Only trouble is, will the Commodore CD-TV pip CD-I at the post? See The Blitter End on page 130 for more comment.

ACE READERS PAGES126

Everything from pen pals to second hand machines in the ACE market place.

THE ACE PRIZE PUZZLE105

Only geniuses stand a chance of winning a prize here – but that's just what you are, aren't you?

THE ACE PRIZE CROSSWORD105

Years of frustration for idiots, hours of fun for the rest of us.

THE ACE DIARY117

The definitive checklist of product launches in June and July, plus details of other notable events including, of course, the World Cup. Also dates for the 16-bit Computer Fair and the All-Formats Computer Fair – good places to pick up a bargain.

ACE DEALS108

Every month dealers across the country plan to give away freebies, run competitions, and make special offers to their customers. If you're planning a software purchase, check here first to see whether your local store can make your money go further.

THE ACE HARDWARE GUIDE119

Which console does what? Find out here....

WIN WIN WIN!116

Grab yourself one of twenty free copies of Corporation from new kids on the software block – CORE.

THE ACE STOCK MARKET

NOTHING LESS THAN THE BEST CHARTS IN THE BUSINESS – BECAUSE THEY WIN YOU PRIZES AND THEY'RE BASED ON THE AUTHORITATIVE OPINIONS OF GAMES EXPERTS AND REVIEWERS ACROSS THE COUNTRY. IF A GAME HITS THE HIGH SPOTS ON THESE PAGES, YOU KNOW IT BELONGS IN YOUR COLLECTION.

Where else can you find out which games are getting the best reviews in ALL the magazines (and therefore which games you ought to consider buying), which software houses are producing the hottest properties, and – as a bonus – win prizes by predicting who'll be top next month. The ACE Stockmarket is all that – the most

accurate charts, the best buying guide, and the biggest challenge around. Check it out every month and you too could strike rich.

Top Ten Console Sales compiled by Shekhana Computers, 2 Gladstone House, High Road, Wood Green, London N22. Tel: 081-689 9412, Fax: 081-689 9413 and at 221 Tottenham Court Road, London, W1 Tel: 071-631 4627

THE STOCKMARKET

The ACE Stockmarket gets its name from the fact that each month we list the top software companies together with a 'share price' for each one. The Stockmarket tells you which software houses are currently producing the most successful titles. Each company has a THIS MONTH rating, which is calculated according to the reviews its games have received during the current month. A company whose games are all rated highly will have a high THIS MONTH score.

The next rating in the company counter is the SHARE PRICE. This simply tells you how well a company is doing relative to its past performance. If a company gets worse reviews this month than last month, its price will drop. If it gets better reviews, the price rises. Companies who get no reviews at all have their price decreased each month until they get reviewed again.

Associated with the share price is the +/- rating, which simply tells you how much that company's share price has risen or fallen this month.

Finally, there's the company's INDEX RATING. This shows how well a company's games have done this month compared to the average score gained by all the other games reviewed. It's this rating that determines the position of a company in the charts. The average score for ALL games reviewed each month is called the SOFTWARE INDEX and it's printed at the top of the Stockmarket. For example, this month reviews of System 3's titles have scored a staggering 18.89 points above the average review mark for all games.

All figures in the Stockmarket are derived from as many magazines as we can lay our hands on each month.

THE WINNERS: ROUNDS SIX AND SEVEN

The Stockmarket winners have now been brought fully up to date this month as we publish the winners for the current round. That means that from now on you'll be able to find out whether you've won each month by checking the next issue of the magazine, and not by having to wait a couple of issues until the results are printed.

There have also been some delays in sending out prizes, for which we humbly apologise. We have had to set up a special software buying system to provide the many prizes we give away in the magazine each month and it has taken rather longer than we had hoped. However, all should now be running smoothly and prizes are now on their way.

As most readers are aware, we now run a slightly different system for selecting winners. You only have to nominate one title in each category and where more than one person gets it right, there is a random selection to pick the winner. This makes it easier to submit an entry with a chance of winning in at least one category. For those geniuses who were consistently getting nearly all entries right in the various categories, however, it makes it slightly more difficult to win since there's likely to be more competition. Eggheads will, of course, still be able to score big wins in the Jackpot Category if they get all five entries right and if they get more than one individual entry correct in the other sections they do get included in the draw for each section, thus boosting their chances. This month, Phil Maxfield missed the Jackpot in Round Six by only one game on the PC (he got *Blood Money* in fourth place instead of Gunbot).

Round Six winners: Nick Brewer of Bedford was one of six people to get *Rainbow Islands* as number one for the Spectrum; Amarendra Swarup of Golders Green was one of ten to nominate *Vendetta* for the C64, and Jay Noble was one of 16 to guess *E-Motion* for the PC. No one guessed *Space Rogue* on the Amiga, *Myth* on the CPC, or *Klax* on the ST. Shame on you!

Round Seven winners: Emrys Jones of Llanrwst got *Tower of Babel* on the Amiga; Regan Atkinson was one of ten to get *Hammerfest* on the Spectrum; Richard Mather was one of three to get *Midwinter* on the ST; Adam Shapiro was one of six who got *Turman* on the C64; and Kazif Quraishi of Hayes was one of twelve to get *Ultima VI* on the PC.

THE 16 BIT CHART

Title	Publisher	Format	Rating
Midwinter	Rainbird	ST	93.27
Tower of Babel	Rainbird	Amiga	92.92
Their Finest Hour	US Gold	Amiga	90
Warhead	Activision	Amiga, ST	90.13
Castle Master	Domark	Amiga, ST	88.49
LHX Attack Chopper	Electronic Arts	PC	88.47
Escape/Robot Monsters	Domark	Amiga, ST	87.88
F29 Retaliator	Ocean	Amiga, ST	87.84
Hammerfest	Activision	Amiga	87.63
Player Manager	Anco	Amiga, ST	86.88
Archeads	Cinemaware	Amiga, ST	86.85

Bubbling under: *Dragon's Breath* (Palace) on Amiga and ST; *Xenomorph* (Pandora) on Amiga and ST; *Klax* (Domark) on ST.

THE 8-BIT CHART

Title	Publisher	Format	Rating
Turman	Rainbow Arts	Comm64	94.25
Castle Master	Domark	C64, Sp	89.38
Hammerfest	Activision	C64, CPC, Sp	88.92
X-Out	Rainbow Arts	Comm64	86.5
Pipermania	Empire	Sp	86.25
Ninja Spirits	Activision	Comm64	84.5
E-Motion	US Gold	C64, Sp	83.94
Cloud Kingdoms	Millennium	Comm64	83.67
Fiendish Freddy	Mindscape	CPC, C64, Sp	83.11
Oriental Games	Micro Style	Sp	82

Bubbling under: *Starflight* (Electronic Arts) on Commodore 64; *Crackdown* (US Gold) on Commodore 64 and Spectrum; *Overlander* (Encore) on Spectrum.

THE MACHINE CHARTS

AMIGA RATINGS

Tower of Babel	Rainbird	92.92
Their Finest Hour	US Gold	90
F29 Retailator	Ocean	89.67
Player Manager	Anco	89
Escape/Robot Monsters	Domark	89

Player Manager makes its second appearance in the Amiga top five, on the format which consistently features the highest ratings. Despite the other lot of football games coming out in time for the World Cup, Anco's Player Manager is the only soccer game to make it into the top five, on any format.

AMSTRAD CPC RATINGS

Fiendish Freddy	Mindscape	83
Psycho Hopper	Mastertronic	76.25
Raider Runner	Mastertronic	66.25
Dr Doom's Revenge	Empire	64.17
Hopping Mad	Encore	59.75

Not a vintage time for buying CPC games; it seems fairly clear where your money should go this month.

IBM PC AND COMPATIBLE RATINGS

Ultima VI	Origin	88.5
LHX Attack Chopper	Electronic Arts	88.47
Loom	US Gold	81.5
Gunboat	Accolade	79.5
Mindroll	Thalamus	79.5

Ultima VI is getting glowing reviews everywhere; expect to hear more on Loom in the future. Having two fantasy titles in the top five must say something about PC owners - though exactly what, we can't say!

SPECTRUM RATINGS

Hammerfest	Activision	90.25
Castle Master	Domark	87.25
E-Motion	US Gold	84.88
Oriental Games	Micro Style	82
Fiendish Freddy	Mindscape	78.33

Hammerfest makes it two months' running in the Spectrum top five, albeit with a slightly lower mark. Also, these are all full-price games, unusually these days on 8-bit formats.

ATARI ST RATINGS

Midwinter	Rainbird	93.54
Castle Master	Domark	88.58
Escape/Robot Monsters	Domark	86.75
Xenomorph	Pandora	86.5
Dragon's Breath	Palace	86.33

The two Domark titles have switched places from last month, with Midwinter, suffering from delays in the shops, topping the lot on the reviewers lists.

COMMODORE 64 RATINGS

Turrican	Rainbow Arts	94.25
Flimbo's Quest	System 3	93.5
Castle Master	Domark	91.5
Hammerfest	Activision	88.5
Fiendish Freddy	Mindscape	88
TV Sports Football	Cinemaware	88

These are the best scores for the Commodore 64 for ages; a breath of fresh air for 64 owners who were beginning to get neglected, with three titles here consistently scoring over 90%.

TOP CONSOLE GAME SALES IN MARCH 1990

These are the console games that are selling the most copies at Shekhana's London outlets...

No change at all on the Megadrive, but a host of new titles on the PC Engine including Splatter House which takes pole position. On the Gameboy the all-conquering Tetris has been hit for six by Batman and Soccer Boy kicks Golf right out of the chart. Finally, the ever-popular Gauntlet shakes up the Lynx chart and topples Blue Lightning out of the top five. More new titles next month.

SEGA MEGADRIVE TOP 10

1	GOLDEN AXE
2	GHOULS 'N' GHOSTS
3	SUPER SHINOBII
4	FINAL BLOW
5	LAST BATTLE (North Star)
6	RAMBO III
7	FORGOTTEN WORLDS
8	SUPER REAL BASKETBALL
9	ASSAULT SUIT LEYNOS
10	TATSUJIN

PC ENGINE TOP 10

1	SPLATTER HOUSE
---	----------------

2 POWER DRIFT

3	CITY HUNTER
4	PARANOIA
5	CHASE HQ
6	NEW ZEALAND STORY
7	PSYCHO CHASER
8	TIGER ROAD
9	CYBER CORE
10	SUPER VOLLEYBALL

GAME BOY TOP 10

1	BATMAN
2	TETRIS
3	SOCCER BOY

4 TENNIS

5	LAST BATTLE (North Star)
6	SUPER MARIO LAND
7	SPACE INVADERS ORIGINAL
8	PARANOIA
9	TRUMP BOY
10	FLAPPY SPECIAL

LYNX TOP 5

1	CALIFORNIA GAMES
2	GAUNTLET
3	CHIPS CHALLENGE
4	GATES OF ZENODOON
5	ELECTROPOP

THE ACE STOCKMARKET - THE TOP 25 SOFTCO'S

There are four columns of ratings for companies each month in the ACE Stock Market. The first shows the overall score for this month only, statistically calculated from hundreds of reviews in magazines during the current month. The second shows the amount of change - up or down - from the previous month. The third is the share price: the company's rating relative to its past performance, while the final column shows how highly each company's titles have scored compared to the software index rating for that month.

The software index rating is the overall average mark given by magazine reviewers over all titles. Although we only print the top 25 companies in the Stock Market, all other companies' performances continue to be monitored.

THIS MONTH'S SOFTWARE INDEX RATING:

73.86

UP NEARLY HALF A POINT!

Companies rating 100 and marked * are 'new entries'. They haven't featured in the Company Counter before, and a company's launch share price is always 100.

There's just one new entry this month: Gonzo Games just sneaks into the top 25 with Wipe Out, its novel space age skateboarding game.

The Software Index continues its steady climb: at 73.86 this month, it's up nearly half a point again. Are games improving all the time, or are reviewers becoming more generous?

System 3's flying high, while Anco is basking in the glory of Player Manager and Kick Off 2. Regulars such as Microprose, Image Works and its American associate Cinemaware, which all pride themselves on the high quality of their releases, are finding the reviewers in agreement.

Publisher	Rating	+ or -	Shares	Index	Golath Games	96.01	n/a	108.71	12.75	Blade	82.5	n/a	114.58	8.64
System 3	92.75	+21.17	129.58	18.89	Rainbow Arts	85.5	+4.12	105	12.64	SSI/US Gold	82.33	-3.55	95.87	8.47
Anco	91.59	+9.42	111.46	17.73	Pandora	86	n/a	149.57	12.14	Rainbird	82.2	-6.6	92.57	8.34
Audiogenic	90.83	+6.83	106.13	16.97	Interceptor	84.75	-2.25	97.41	10.89	Ocean	80.91	+4.15	105.41	7.05
Microprose	90	n/a	112.56	16.14	Micro Style	84	n/a	87.5	10.14	CDS	80	n/a	144.14	6.14
Image Works	87.75	n/a	93.35	13.89	Domark	83.61	-1.24	98.54	9.75	Mindscape	79.56	n/a	95.47	5.7
Cinemaware	86.93	+22.43	134.78	13.07	Palace	83.07	n/a	94.4	9.21	Gramlin	79.38	-4.62	94.5	5.52
Electronic Zoo	86.75	n/a	100	12.89	Bethesda	83	n/a	112.16	9.14	US/Soft	78.86	-6.36	92.54	5
					Millennium	82.87	+7.97	110.64	9.01	Gonzo Games	78.75	n/a	100*	4.89

CD-I UPDATE

At a recent convocation of UK developers and trade parties, Philips announced its plans for CD-I in the UK. Here's a quick checklist of the schedules and the software we can expect to see when the system appears in 1991.

Philips has officially launched CD-I in the UK - although we still won't be able to buy the finished product in this country until 1991. What is available now are specific CD-I development toolkits, as Philips Interactive Media Services (IMS) now has a year to attract British publishers, software companies, record companies, etc., into working on CD-I products. Most CD-I work is currently taking place in the US and Japan - Europe has some catching up to do. (C)The launch also gave Philips the opportunity to explain where it hopes to sell to sell the systems, and the heartening news for ACE readers is that CD-I is intended primarily for home entertainment use, to become as much part of your living room furniture as the TV, VCR and hi-fi. (C)The system, when commercially available, will look exactly

like a rather fat CD audio player and will hook up to your hi-fi and television - helping to keep the cost of buying a fully-featured CD-I system down. Philips says that the cost of the CD-I player will definitely be under \$1,000 when it is launched in the US next year, and when it arrives in the UK about three months later we can expect a price tag of around £750. After that, you can expect the price to fall in much the same way as prices of video recorders and CD-audio players did five or six years ago. (C)Nor will the disks themselves be particularly expensive. A basic interactive cartoon on CD-I is likely to cost around £15-£20, going up to perhaps £200 for a full multimedia encyclopaedia. Hardly an impulse buy, but certainly compares favourably to the cost of a 20 volume set of the Encyclopaedia Britannica! AIM's Treasures

of the Smithsonian, for example (see ACE 32) will retail at \$49.95 (around £40), which is cheaper than the 'coffee table' book of pictures of exhibits currently available. (C)Philips hopes that around 30-35 titles will be available in the UK at launch, which doesn't sound very many at all, until you remember that a single CD-I title will be far bigger in terms of content than a disk-based computer game, plus the fact that there are around 75 titles in development in the US alone. (C)There are a good 40 titles in development in the US which are being kept under wraps, since the companies concerned don't want competitors jumping on their bandwagon before the official launch date. "These are in various stages of production and some have non-disclosure agreements attached to them due to competition in the publishers' markets," said Julie Davies of Philips IMS. (C)Over 30 however, can be named, and come from companies as diverse as book and encyclopaedia publishers, such as Harcourt Brace Jovanovich and Britannica, through AIM, to software houses such as Icom. (C)The atmospheric strategy/adventure games *Deja Vu* and *Uninvited* are both being developed for CD-I, as is *Sargon Chess* - which was released in the UK many years ago on Atari's XL 8-bit machines. The American Rand McNally Road Atlas is a natural for translation to CD-I, as is the *Grolier Encyclopaedia*, which has already been demonstrated at many exhibitions in its CD-ROM format. Philatelists will be able to browse through the *Stamps* disk, while those who like a flutter will be able

to experience Caesar's *World of Gambling* - without losing their shirts. (C)AIM is overseeing ABC Sports *Golf*, *Treasures of the Smithsonian* and the CD-I versions of the children's TV series *Sesame Street*, *Sesame Street Numbers* and *Sesame Street Letters*. Other children's titles include the *Cartoon Jukebox*, *Children's Musical Theatre*, a disk of *Bible stories* retold for kids and a *colouring book*. (C)A number of the products in development in the UK follow on from titles nearing completion in the US. ACE, issue 32, looked at several CD-I products in development at Philips/Polygram subsidiary AIM. For AIM's *Palm Springs Golf*, read *St Andrew's: the Royal and Ancient Golf Club* is talking to Philips about the possibility of doing something with CD-I. The company is also actively encouraging cartoonists to feature well-known cartoon characters in games and 'educational' disks, since much of the cartoon-based development so far is based in Japan, and thus featuring characters unknown in the West. (C)One product demonstrated at the launch was *The Listening Booth* from EMG/Microwave. While designed for the home leisure enthusiast, *Listening Booth* isn't a disk you can buy to take home with you, but it could revolutionise the way you buy records or audio CDs, and is being piloted in the US at the moment. (C)Listening Booth is in effect a CD jukebox, designed to be installed in record shops. With you can choose to listen to songs from an album, or a selection from a particular artist, or more broadly a selection from a specific

type of music. At the same time, you'll see the accompanying video on screen, and at any time during the 'performance' you can stop it and choose to listen to something else. After listening to your selection, you'll be asked to rate what you've heard - a useful piece of market research for the record companies. The day can't be too far away before all your music-only CDs become redundant as artists release the record plus video on a single CD-I format. (C)This analogy is continued in the *Cartoon Jukebox* disk, aimed at young children. Here the care that Philips is taking with making CD-I suitable for mass use is apparent. While the system will be mouse-compatible, and have a mouse port built-in, the main way of controlling CD-I programs will be from the comfort of your armchair, with an infra-red remote control similar to the one you use with TV/video. But Philips is also developing a child's version, a larger remote control with rounded edges and bigger buttons more suitable for small fingers. (C)Potential CD-I developers who buy one of the authoring units also buy into an impressive support system based around Philips' multimedia studios in Surrey. Technical advice, training courses, newsletters are all available, as is practical help with integrating data on disparate formats (video, computer graphics, audiotape, etc) on to the compact disk. The company is determined to make life as easy as possible for CD-I authors to ensure the maximum number of projects come to fruition in time for 1991.

CAN THEY PULL IT OFF?

Philips have repeatedly delayed the launch of CD-I ever since the product was first announced three years ago. With the launch of the CD-TV the market has moved on a step, and Philips may well be left marching out of line.

The problem lies with the technical specification of CD-I. However good its handling of video images is intended to be (and the system STILL doesn't have full motion video, although we're assured it will) the hardware lacks the computer graphics handling capacity of the Amiga, which forms the heart of the CD-TV. Processing power is going to be vital if the new video/audio/computer standards like CD-I and DVI are going to be able to make maximum use of the three media they command.

Commodore may pull off a coup with CD-TV - and Philips may be soon be kicking themselves.

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PINK PUZZLES

SOLUTION TO MAY '90 PRIZE CROSSWORD



Winner of the May '90 Crossword is: **Steve Wood, of Wolverhampton.**

SOLUTION TO MAY '90 PRIZE PUZZLE

The next date that all five of them will be present is Monday 25 March 1996 (Our Review Editor's 30th Birthday!)

Solution: The listing given counts off the dates on the calendar, starting at Easter Sunday 1990, and checks each date in turn to determine if each of the men will be present. The number of days in each calendar month is first read into the array M(12) at lines 100 to 110, the values themselves being held in the DATA line (1000). Line 120 sets the initial date (year, month and day) together with the day of the week (W) and a count of the number of days elapsed (E).

The extra day in February of leap years is set by line 200 - this becoming 29 whenever the year value is exactly divisible by 4. Lines 210 to 250 check on the attendance of each of the five men, rejecting any date as soon as a single non-attendance is discovered. For example, Arnold does not attend during the 6th, 7th, 9th, 10th, 11th, or 12th months (June, July, September, October, November and December do not contain an 'A'). Similarly, the number of days elapsed is tested to determine if it is a multiple of 13 (line 250), as this will determine if Eric is present.

Any dates which pass all five tests are printed out. Lines 300 to 330 increment the various components of the calendar, E being the number of days elapsed (line 300), W the day of the week (line 310), and D the day of the month (line 320). Note that this value is compared with the number of days in the current month, as held in the array. When this is exceeded the date is reset to 1 and the month value incremented by 1. The month value is also checked and is reset

JULY '90 PRIZE PUZZLE ENTRY FORM

<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				

NAME:.....

ADDRESS:.....

JULY '90 PRIZE PUZZLE

Set By Archie Medes

Illustrated in the figure below are four rows of four dice. The three lower rows are obtained by turning over each of the dice in turn, starting with the penultimate die and moving to the left (as indicated by the arrows).

The four numbers so formed are 5623, 5653, 5153 and 2153. All of these values are found to be prime numbers - that is, they have no whole-number divisors except for themselves and 1.

The competition this month is to repeat the procedure using the group of dice printed on the entry form, which have been left empty for you to fill in. Here you will notice that there are five dice in each row and five rows in all. Once again, the dice are turned starting at the penultimate die and moving towards the left (as indicated by the arrows). Each of the five numbers represented by these rows of dice must be a prime.

(Note that by 'turning' a die we mean turning it over so that the value formerly face down is now uppermost. If you haven't any dice to hand you will find it useful to know that the opposite faces of any die always add up to 7).

Send your completed entry form to:

July '90 Prize Puzzle
ACE Magazine,
Priory Court,
30-32 Farringdon Lane,
LONDON. EC1R 3AU.

To arrive not later than 5th July 1990.

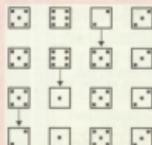
to 1 when it exceeds 12. The year variable is increased when this occurs.

```

100 DIM M(12)
110 FOR M=1 TO 12:READ
    Z:M(M)-Z:NEHT
120 Y=1990:M=4:D=15:W=1:E=0
200 IF Y/4=INT(Y/4) THEN M(12)=29
    ELSE M(12)=28
210 IF M=6 OR M=7 OR M=8 THEN
    300:REM Arnold
220 IF D/2=INT(D/2) THEN 300:REM
    Basil
230 IF W=3 OR W=5 OR W=6 OR W=7
    THEN 300:REM Charles
240 IF D/5<INT(D/5) THEN 300:REM
    Duncan
250 IF E/13<INT(E/13) THEN
    300:REM Eric
260 PRINT "Year: ";Y: "Month: ";
    M: "Date: ";D: "Day: ";W:
    "Elapsed: ";E
300 E=E+1
310 W=W+1:IF W=8 THEN W=1
320 D=D+1:IF D>M(M) THEN
    D=1:M=M+1
330 IF M=13 THEN Y=Y+1:M=1
340 GOTO 200
1000 DATA 31, 28, 31, 30, 31, 30, 31,
    31, 30, 31, 30, 31
  
```

JULY '90
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PUZZLE

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F16 FALCON	16.49	16.49	KINGS QUEST 27	21.49	21.49
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FIRST WORD PLUS	8.99	8.99	KINGS QUEST 29	21.49	21.49
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FOOTBALL MANAGER 2	12.99	12.99	KINGS QUEST 31	21.49	21.49
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FOOTBALL MANAGER 2 EXP	10.99	10.99	KINGS QUEST 33	21.49	21.49
FOOTBALL MANAGER 2 EXP	10.99	10.99	KINGS QUEST 34	21.49	21.49
FOOTBALL MANAGER 2 EXP	10.99	10.99	KINGS QUEST 35	21.49	21.49
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FOOTBALL MANAGER 2 EXP	10.99	10.99	KINGS QUEST 38	21.49	21.49
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FOOTBALL MANAGER 2 EXP	10.99	10.99	KINGS QUEST 41	21.49	21.49
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FOOT					

ACE DEALS

Every month, dozens of shops round the country offer freebies and competitions if you slide your hard-earned pennies over the counter. If you're planning a software purchase, it makes sense to check this page first to see whether one of your local dealers is offering a little bit extra for your money...

World Cup fever will continue in the stores this month as the tournament reaches its climax and around 20 related computer games finally hit the streets.

The Software Superstore chain is preparing for an onslaught of World Cup material – posters, footballs, T-shirts – you name it, they'll be there, either to be given away with purchases, or in the case of the footballs, as competition prizes. These promotions will be concentrated on the games many people see as the main contenders for computing's own World Cup – Virgin's *Italia 90* game complete with official matchstick man mascot, and US Gold's *Italy 90*.

Official FIFA footballs are also up for grabs from all outlets of Computer Stores, based in Yorkshire (details below).

There's one football to be won per shop, and you don't

even need to make a purchase to enter the competition.

Various World Cup paraphernalia can also be won at Microbyte, which has just opened a new store at 20, Cleveland Street, Doncaster, on the site which was previously Microgamer.

Microbyte's Collect'n'Scheme voucher scheme (see previous issues for details) towards purchases is still running, and in the second week of June, the stores are offering double rations of stamps with your buys, making it a bit easier to save up for your free goodies. Local Microbyte outlets have details of the latest prize lists available.

Still thinking of splashing out on Rainbird's excellent *Midwinter*? Buy it at any Microbyte store and pick up a free dust cover for your computer at the same time.

Virgin Games Centres are turning their attention to

other promotions. Artist Roger Dean, whose work is featured heavily on all Psygnosis's packaging, among others, will be making a personal appearance in-store at 100, Oxford Street, London W1, on Saturday, June 8 to sign autographs, etc. So if you have any Roger Dean inspired posters and artwork, take it along to the Virgin Games Centre in Oxford Street, and have it signed by the man himself.

Not to be outdone by its neighbour, the Games Centre at Marble Arch will be holding a tennis competition centred around *Ubisoft's Pro Tennis Tour*, and timed to coincide with Wimbledon. Full details are available from the staff at the Marble Arch Virgin Games Centre. Sharpen up your *Pro Tennis Tour* skills, and give it a go.

In the north east, the Computershops/Byteware chain has a BMX bike and a skateboard to give away as prizes in a competition based on Gremlin's new title, *Skidz*. Anyone buying any software product from any of Computershops and Byteware's nine outlets will get a free entry to the competition. This particular competition is also running in all Microbyte shops.

A BMX bike is also the main prize being offered to buyers of *Skidz* throughout the Computer Store chain. Once you've bought *Skidz*, you'll be asked to answer

three questions about Gremlin, the publisher, and the game. Get them correct and the bike could be yours.

Summer wardrobe looking a bit thin? Computershops in Leeds and Nottingham have hundreds of T-shirts which they're just dying to give away. So much so, that any full price 16-bit purchase comes complete with a free T-shirt throughout June – or at least as long as stocks last.

You can find Computer Shop outlets in the Arndale Centre, Manchester; Newcastle, Leeds, Preston, Sunderland, Stockton and Nottingham. Also part of the Computer Shop chain are the two Games Store outlets in Carlisle and Middlesbrough, which stock role-playing games as well as computer software.

Virgin has its Games Centre outlets on London's Oxford Street (at Marble Arch, within the Megastore, and at no 1001 and Bristol, and also in Megastores in Birmingham, Brighton, Dublin, Edinburgh, Glasgow (at Union St and Argyle St), Leeds, and Nottingham.

Software Superstore has outlets at Hanley, Stoke-on-

Trent, The Waingate, Sheffield, Little Underbank in Stockport and the centre of St Helen's.

The Computer Store chain is based in Yorkshire, with shops at Printing Office St, Doncaster; Iwgate, Bradford; Trinity St Arcade, Leeds; Market Place, Huddersfield; Westmoreland St, Wakefield; St Sampson's Square, York; The Woolshops, Halifax; Market St, Barnsley; and also at High Street, Scunthorpe.

There are Microbyte stores in the Arndale Centre, Manchester; the Broadmarsh Centre, Nottingham; Kirkgate, Wakefield; the Metro Centre, Gateshead; the Greenmarket, Newcastle Upon Tyne; the Kirkgate Centre, Bradford; the Bull Ring Centre, Birmingham; the County Arcade, Leeds; Pasture Road, Goole; and Cleveland Street, Doncaster.

All offers and promotions are subject to availability of stock. Although we do our best to ensure our dealer promotion information is accurate at the time of going to press, ACE cannot take any responsibility for changes or cancellations to dealers' plans.

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LOMBARD





Your games checklist for June/July

Saturday 9 All Formats Computer
Far opens at the new Royal Horticultural Hall, London SW8. Good value for bargain hunting on the software, hardware peripherals and accessories front. (Ticket enquiries to 0457 875229). Roger Dean will be signing posters, etc., at Virgin's Games Centre at 100, Oxford Street (see ACE Great Deals section for details).

Sunday 10 All Formats Computer
Far - second and final day.

Monday 11 First matches for
England, Scotland and Republic of Ireland in the World. England face Ireland in Sandia, starting at 8.00pm, while at 4.00pm Scotland take on Costa Rica.

Tuesday 12 National Day,
Philippines.

Saturday 16 England and Scotland
in action again in the World Cup. England play Holland in Sicily, Scotland play Sweden in Geneva. Both matches kick off at 8.00pm.

Sunday 17 National Day, Ireland
Father's Day Republic of Ireland vs Egypt, kick off 4.00pm.

Week's releases at a glance

Electronic Arts: Imperson ST, Amiga, £24.99. Survive at all costs in 2Dist century setting. Centurian PC, £24.99. Avert the decline and fall of the Roman Empire by mastering grand tactical tournaments, chariot races and the Roman army. Chuck

Yeager's Advanced Flight Trainer (ST, Amiga, £24.99). Latest version of the flight sim endorsed by the man who first flew at supersonic speed, who was killed in 1947. Flood! ST, Amiga, £24.99. Labnet game from Populous developers published. **Mandarin:** Amos the Creator (Amiga, £49.95). Amiga games creator, instigated by Britain's successful STOS for the year. PC user (details above). Big match for Scotland tonight when they take on Brazil in their final first round World Cup match. And after the tournament results against Argentina, Poland, and, ahem, Egypt, who's taking any bets?

Thursday 21 Officially the first day
of summer, and the longest day of the year, with the sun rising at around 4.45am and setting just before 9.30pm. Last day of the PC user show (details above). World Cup Group F will be decided tonight with England playing Egypt and Ireland playing Holland. Only one team gets drops out after this stage so with any luck, we'll see both England and Ireland in the second round, which begins on Saturday.

Saturday 23 National Day,
Luxembourg.

Sunday 24 Summer Day.

Week's releases at a glance
Electronic Arts: PGA Tour Golf (PC, £24.99). Another golf game/simulation for beginners to mail order games for quality. **Sh or Die** (ST, Amiga, £19.99). Impressive. **Brach 2** (Amiga, ST, PC, £24.99).

Activation: Galaxy Force (CGA, £9.99 take, £14.99 disk) V41 Total PC (ST, £18.99). **Amiga:** The Great Senna/Activation: Henry's Quest (ST, £34.99). **Hoyle's Book of Games** (Amiga, £34.99). **Sokaine, Gun Rummy, Crazy**

8x, Old Man, Cribbage, and Hearts

against the computer. **Leisure ST:** Larry makes a guest appearance as one of the computer players. **Leisure Sat Larry** (ST). Help Larry pull the beds in this title, billed as the original game for yuppies.

Psygnosis: Killing Game Show (ST, £24.99). Part part in a game show with a difference - where the object is to stay alive. **Freestone (Amiga, £24.99).** **Psygnosis:** Mainz Thunderbolt (PC, ST, £19.99). Arcade action meets oriente-style board game. **Ocean:** The Break (Amiga, ST, £24.99). **CGA, £29.99 take, £14.99 disk.** **Firebird:** P47 Thunderbolt (PC, £24.99). Doughty's aplenty in aerial arcade game. **Titus:** Dark Century (PC, £24.99). Real simulator set on alien planet (ACE review p.60).

Monday 25 The AB-England tennis championship opens at Wimbledon, if you don't like sport, go on holiday now. It's going to be well-fought tennis and football for the rest of the fortnight.

Thursday 28 The 16-bit Computer Fair opens at the Royal Liverpool Hall, London SW1. Like the All Formats Fair held earlier this month at the same venue, this is an event for those who want to pick up hardware and software cheaply. For Amiga, STs and PCs only. (Ticket enquiries to Westminster Exhibitors, 081 549 3444).

Friday 29 16-bit Computer Fair continues.

Saturday 30 Birthday of boxer Mike Tyson 1965. 16-bit Computer Fair.

Week's releases at a glance

Electronic Arts: Dragon Wars (Amiga, £24.99). **Neurocrancer (Amiga, £24.99)** Intertelray (based on books by William Gibson. **Image Works:** Blade Warrior (Amiga, ST, PC,

£24.99). **Millemans:** Thunderstrike (Amiga, ST, PC, £24.99). **Raiders:** Career General (Amiga, ST, PC, £34.99). **Simulation/Strategy/Action:** action with some very impressive graphics. **Psygnosis:** Chronoquest (PC, £24.99). P47 your wars and engines against historical and mythological characters in this game of time travel. **The Keep (Amiga, ST, £24.99).** **FTL/Mirrorsoft:** Dungeon Master (PC, £39.99). Role playing adventure.

July

Monday 3 National Day, Canada. **British** television begins regular colour transmissions (see p.2). 15th Fourth and final day of the 16-bit Computer Fair.

Tuesday 3 World Cup first semi-final. Kick off 7.00pm.

Wednesday 4 Independence Day, USA. World Cup second semi-final. Kick off 7.00pm.

Thursday 5 National Day, Venezuela.

Friday 6 National Day, Malawi. **World Cup:** World Cup third place playoff. Kick off 7.00pm. **Sunday 8** World Cup final. Kick off 8.00pm. Wimbledon tennis final, begins 2.00pm.

Week's releases at a glance

Accolade: Jack Nicklaus Unlimited Golf & Course Design (PC and Amiga). £29.99. Course designer for the Jack Nicklaus golf series. Owners of previous Jack Nicklaus games should check with Accolade - you may be able to get a cheap upgrade.

Psygnosis: Anarchy (Amiga, ST, £19.99). **Image Works:** Settler (Amiga, PC, £29.99). **ST, £24.99.**

System 3: Let's Neo (Amiga, ST, PC, £24.99). Sequel to the highly successful punch arts game. This time kick and march your way through Muffinman.

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THE ACE HARDWARE GUIDE (CONSOLES)

Want to splash out on a games machine? Check out this month's console guide for full details of the machines currently available. Next month, we'll be listing 16 bit computers - we hoped to include that section this month, but we're still updating the information to ensure that it is 100% accurate and comprehensive. Catch the 16-bit guide next month, and many apologies for the delay.

Supplier telephone numbers are their own unless PR agencies are available. As a general rule, however, your local dealer should be the first place to start asking questions.

ATARI LYNX

Package:	Lynx with California Games pack
Memory:	64K
Processor:	6502
Price:	£149.95
Contact:	Atari 0753 333344

IN BRIEF

The Lynx was designed by a team including RJ Mical one of the men behind the Amiga. If that doesn't convince you consider it runs a fast 6502, has 8Mb of game storage on its cards and supports multi-player games. The graphics hardware has built in hardware scrolling and image scaling. Software is a little thin at the moment but bound to increase during 1990. Although not officially available yet in the UK, the Lynx is widely available from distributors.

GRAPHICS AND SOUND

Resolution:	160 x 102
Palette:	4096
Colours:	16
TV:	No
Monitor Output:	No
Monitor Supplied:	Yes - 3.5 inch backlit colour LCD
Monitor Options:	None
Sprites:	Special graphics hardware effectively treats ALL screen objects as sprites!
Speed:	... Fast
Speaker Quality:	Very good
MIDI:	No
Stereo Output:	Yes
Performance:	4 channel, 5 octave stereo sound has to be heard to be believed.

HARDWARE AND SOFTWARE

Hardware Format:	8Mb ROM
Cartridge Price:	N/A
Joystick:	4 way joystick.
Ports:	Cartridge port; multi-player port; miniature stereo headphone jack.
Existing Software Base:	Very small.
Current Releases:	California Games is a great freebie.
Prospects:	Very good.
Software Loading:	Almost instant.

BUYLINES

Best Buy Price:	As RRP
Second Hand Availability:	Very few
Maintenance:	One year's guarantee.

STAR RATINGS

Graphics:	****
Sound:	****
Expansion:	..
Overall:	****

ATARI VCS

Package:	TBA
Memory:	N/A
Processor:	6507 (2600)/6502 (7800)
Recommended Retail Price:	VCS2600 \$39.99; VCS7800 \$79.99
Contact:	Atari 0753 333344

IN BRIEF

The VCS2600 is a reborn version of the original Atari games console which until a couple of years ago remained the best selling home video games system of all time. The VCS7800 is a revamped version of the VCS2600 with a faster processor, slightly better sound and vastly improved graphics.

GRAPHICS AND SOUND

Resolution:	192 x 160 (2600) 320 x 242 (7800)
Palette:	16 (2600)/256 (7800)
Colours:	4 (2600)/16 (7800)
TV:	Yes
Monitor Output:	No
Monitor Supplied:	No
Monitor Options:	No
Sprites:	N/A/64
Speed:	... Slow
Speaker Quality:	Depends on TV
MIDI:	No
Stereo Output:	No
Performance:	Limited to 1 channel on 2600 and two on 7800.

HARDWARE AND SOFTWARE

Joystick:	Supplied
Ports:	2 x 9 pin D for joysticks; TV; cartridge port.
Existing Software Base:	Small
Current Releases:	Rare
Games:	A few
Prospects:	Ussure in the light of new competition from Japan.
Software Loading:	Instant

BUYLINES

Best Buy Price:	As RRP
Second Hand Availability:	Worth looking
Maintenance:	One year's guarantee.

STAR RATINGS

Graphics:	2600	7800
Sound:
Expansion:	None	None
Overall:

KONIX

Package:	Multi-system plus joystick and Bikers.
Memory:	256K + 512K expansion.
Processor:	8086 + 12MHz custom RISC chip
Price:	£229
Contact:	Michael Baxter 0273 675500

IN BRIEF

Since its exclusive unveiling in ACE, the Konix has suffered from the changing fortunes of its manufacturer. A pity because it had the makings of a champion. For the first time, a games console has the option of changing between a joystick yoke, steering wheel and a handle bar - depending on the game being played. The multi-system was going to be THE machine when it appears...but whether it will ever make it now seems doubtful. If you see one, buy it for the rarity value, not for the prospects.

GRAPHICS AND SOUND

Resolution:	256 x 200 to 512 x 200 (software programmable)
Palette:	4096
Colours:	512 available at low resolutions; 16 in hi-res.
TV:	Yes
Monitor Output:	Yes
Monitor Supplied:	No
Monitor Options:	Analogue RGB + sound; composite

Sprites:	No
Multi-system uses four hardware screen planes (like Amiga's dual-playfield). The blitter is capable of 12 million pixels per second. In other words, over 50 frames per second.	
Speed:	Very fast
Speaker Quality:	Depends on TV/monitor.
MIDI:	No
Stereo Output:	3.5mm jack to headphones
Performance:	Digital Signal Processor could produce up to 40 channels of sampled sound. If you want a game as well this drops to a 8 channels (4 left, 4 right) over 9 octaves - better than the Amiga!

HARDWARE AND SOFTWARE

Disk Format:	3.5in - 880K
Disk Price:	Applies to developers only.
Disk Performance:	Fast + reliable
Keyboard:	No
Joystick/Mouse:	3 proportional channels built in.
Ports:	Joystick; Sound 3.5mm jack; 8 pin DIN RGB; expansion port for light gun and Power Chair.
Existing Software Base:	Minuscule.
Current Releases:	Last Ninja II, Bikers; Mutant Carnies '90; Hammerfest; Star Ray...
Games:	All likely to be arcade titles.
Prospects:	Now very poor, but we live in hope.

BUYLINES

Best Buy Price:	As RRP
Second Hand Availability:	Not on sale yet - so no S/H market.
Maintenance:	Expect one year's guarantee with normal return procedures.

STAR RATINGS

Graphics:	****
Sound:	****
Expansion:	****
Overall:	****

NINTENDO ENTERTAINMENT SOFTWARE

Standard version - console, plus game controllers plus 1 game (Super Mario Brothers); Deluxe version - console, game controller, light gun, ROB Robot, 2 games.
Recommended Retail Price: Standard

pink pages

model 099; Deluxe model 0149

Contact: Deighton PR 01-836 2973

IN BRIEF

The World's largest selling console, largely because of the playability of some of its games rather than its hardware specification, which is 8-bit average. Better supported now in the UK than it used to be.

GRAPHICS AND SOUND

Resolution: 256 x 240
Palette: 52
Colours: 16
TV: Yes
Monitor Output: No
Monitor Supplied: No
Monitor Options: None
Sprites: N/A
Speed: *** Average

Speaker Quality: N/A
Stereo Output: No
Performance: Average

HARDWARE AND SOFTWARE

Joystick/Mouse: 2 dedicated controllers supplied. IR wireless controllers with 30ft range now available for 039.95.

Existing Software Base: Around 50 titles available here. Many more available in Japan but these require a converter to run.

Current Releases: Nintendo predict about 2-3 titles per month.

Prospects: In the UK, improving due to increased support - but this is yesterday's technology.

Software Loading: Instant

BUYLINES

Best Buy Price: As RRP.
Second Hand Availability: A few.
Maintenance: One year's guarantee. Faulty machines return to dealer.

STAR RATINGS

Graphics: ***
Sound: ***
Expansion: ***
Overall: ***

NINTENDO GAMEBOY

Package: Main unit + 1 game (Tetris)
Memory: 64Kbit (8K bytes)
Processor: Custom 8 bit
Price: Not yet released in the UK. US price is around \$89. Expect to pay £79 when officially launched in September.
Contact: Deighton PR 01-836 2973

IN BRIEF

Nintendo were the first company to produce a dedicated handheld console and now it seems everyone wants to get in on the act. On reflection even the Game Boy was a long time coming since the technology employed by the display is starting to look dated.

GRAPHICS AND SOUND

Resolution: N/A
Colours: 2 (monochrome)
Monitor Supplied: Yes - LCD display is lit by ambient light.
Sprites: Information not available.
Speed: Fast for what it is.

Speaker Quality: Depends on head phones.
Stereo Output: Yes
Performance: Plays a lot better than it looks.

HARDWARE AND SOFTWARE

Keyboard: Select and Start + 2 option buttons.
Joystick: Single 8 way controller.
Ports: Headphone socket; dual-machine interface.

Existing Software Base: Growing rapidly - check with your local dealer.

Current Releases: Increasing Games: Arcade and puzzle-type.

Prospects: Not due for UK release until at least September. Game Boy - on technological grounds - ought to be hard pressed to beat the Lynx, but it's cheaper and the games play very well.

Software Loading: Instant

BUYLINES

Best Buy Price: Only available through grey imports as yet.
Second Hand Availability: None.
Maintenance: Watch out - grey imported machines rarely have any real warranty.

STAR RATINGS

Graphics: ***
Sound: ***
Expansion: Dual machine interface has lots of potential.
Overall: ****

NEC PC ENGINE

Package: PC Engine + controller and 1 game
Memory: 64K internal + 8K video; 2-128K internal 32K video
Processor: 8 bit custom
Price: N/A (US price around \$199)
Contact: Local dealers

IN BRIEF

There are now very firm indications that this machine will be released in the UK in September. It's CD-ROM add-on drive is now the largest selling CD unit on the market and is responsible for much of the recent increase in CD development. There's also a sixteen bit version, vastly more powerful, called the Turbographics, but this is only rarely available through importers and at a price - usually around £300. NEC are also working on a handheld version of the Engine which will be software compatible with its larger brother.

GRAPHICS AND SOUND

Resolution: 256 x 216
Palette: 512 (Tlx. - 1024)
Colours: 32-16 background

and 16 shared by sprites.

TV: Yes
Monitor Output: N/A
Monitor Supplied: No
Monitor Options: N/A
Sprites: 64 (Tlx. - 128)
Speed: Very fast considering this is an 8 bit

Speaker Quality: Depends on monitor.
MIDI: No
Stereo Output: Yes
Performance: 6 channel stereo

HARDWARE AND SOFTWARE

Disk Format: CD ROM at extra cost.
Disk Price: Read-only so N/A
Disk Performance: Superb - the CD ROM adds a new dimension.
Joystick: Supplied with dedicated controller.

Existing Software Base: Large
Current Releases: Increasing.
Games: Almost exclusively arcade.
Prospects: Good.
Software Loading: Cartridge is instant; CD OK.

BUYLINES

Best Buy Price: Currently grey import.
Second Hand Availability: V Rare
Maintenance: Watch out - grey imported machines rarely have any real warranty.

STAR RATINGS

Graphics: ****
Sound: ****
Expansion: ****
Overall: ****

SEGA MASTER SYSTEM

Package: Console using cartridge or smart card plus game controller and 1 game (Hang On)
Recommended Retail Price: £79.95; 099.95 (+light gun); 0129.95 (+light gun and 3D glasses).
Contact: Virgin Mastertronic 01-727 8070

IN BRIEF

Japanese software base is not as good as Nintendo's but more titles reach UK. Mastertronic have given good support to the machine so the prospects look good. Like the Nintendo, however, this 8-bit machine uses established but dated technology.

GRAPHICS AND SOUND

Resolution: 256 x 192
Palette: 64
Colours: 16
TV: Yes
Monitor: No

Speaker Quality: Depends on TV
Performance: 3 channels.

HARDWARE AND SOFTWARE

Joystick: Game controller supplied.

Existing Software Base: Very good.

Current Releases:

Games: All arcade
Prospects: As good as any 8-bit console.
Software Loading: Instant.

BUYLINES

Best Buy Price: As RRP
Second Hand Availability: Some
Maintenance: One year's guarantee. Faulty machines return to dealer.

STAR RATINGS

Graphics: ***
Sound: ***
Expansion: ***
Overall: ****

SEGA MEGADRIVE

Package: Megadrive, controller, one game.

Memory: 74K main + 64K video
Processor: 68000 + 280B
Price: Under 0200 when it appears.
Contact: Virgin Mastertronic 01-727 8070

IN BRIEF

Excellent example of the new 16-bit console technologies. Although still not officially available, grey importers are laughing all the way to the bank. All will cease when Virgin Mastertronic start importing the official UK in September likely to be the first decent 16-bit console to receive official support in the UK.

GRAPHICS AND SOUND

Resolution: 320 x 224
Palette: 512
Colours: 64
TV: Yes
Monitor: No
Sprites: 80
Speed: *** Very fast

Speaker Quality: N/A
MIDI: No
Stereo Output: Yes
Performance: 12 channel stereo sound is produced by a custom FM chip and sounds fantastic.

HARDWARE AND SOFTWARE

Joystick: Dedicated controller supplied.

Existing Software Base: Poor
Current Releases: Few in UK at present
Games: All arcade
Prospects: Very good.
Software Loading: Instant

BUYLINES Best Buy Price: Only available through grey imports as yet
Second Hand Availability: N/A
Maintenance: Watch out - grey imported machines rarely have any real warranty.

STAR RATINGS

Graphics: ****
Sound: ****
Expansion: ****
Overall: ****

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HOT OFF THE SHELF

OK, SO SUMMER IS HERE. THE LAST THING YOU WANT TO BE DOING IS SITTING INDOORS GETTING ALL HOT AND STICKY OVER A COMPUTER GAME. NO, YOU WANT TO BE OUT THERE ON THE BEACH, GETTING A TAN, STRUTTING AROUND IN YOUR TOM CRUISE SHORTS, OR YOUR ROLL-DOWN BIKINI, GENERALLY LOOKING COOL AND HAVING A GOOD TIME. BUT, WE ALL KNOW WHAT SUMMERS CAN BE LIKE DON'T WE? JUST AS YOU'VE GIVEN YOURSELF A HERNIA STRUGGLING INTO LAST YEARS BATHING COSSIE (NOW TWO SIZES TOO SMALL), THERE IS A TINY PITTER-PATTER, EVERYTHING GOES GREY, AND DOWN IT COMES (NOT THE BATHING COSSIE STUPID!), SO JUST IN CASE THE DREADED RAIN STRIKES AGAIN YOU HAD BETTER GET STOCKED UP ON A FEW GOOD GAMES, AND OUR ACE GUIDE TO THE LATEST AND GREATEST IS THE PLACE TO START LOOKING...

ANTHEADS

Cinemaware/Mirrorsoft • Amiga £14.99dk
For all those who loved it Came From The Desert here is more of the same in the shape of a handy bolt-on scenario. It's fiftes style Sci-Fi again, and this time some very strange things are happening to the inhabitants of the tiny Mid-West American town of Lizard's Breath. You play 'Brick' Nash, an ex-fighter pilot determined to solve the riddle of the Antheads. If you enjoy puzzle solving with great graphics and sound, then you can't go far wrong with this number, and if you haven't played it Came From The Desert then why not give that a try first?
★ ACE RATING 902

BATMAN

US Gold • Atari ST £19.99dk • Amiga £24.99dk • Spectrum £9.99cs £14.99dk • C64 £9.99cs £14.99dk
The game of the movie. Michael Keaton put up a pretty good show as the caped crusader in the film, and his digital counterpart isn't too bad either. There are no less than five sections to the game. The first, Axis Chemical Plant, and last, Gotham City Cathedral, are superb 2D platform games in which our hero has to swing around on his batrope bumping off the villains before they get him. There is also a brain game in the Batcave and two excellent 3D games set in the Batmobile and Batwing respectively. A must for all DC comic fans.
★ ACE RATING 922

BOMBER

Activation • Atari ST £24.99dk • Amiga £24.99dk • Spectrum £14.99cs £19.99dk • Amstrad £14.99cs £19.99dk • C64 £14.99cs £19.99dk • PC £34.99dk
A flight sim employing fast solid vector graphics with more bells and whistles than most similar programs. There are a total of fourteen fighter bombers from around the world featured in the program. If you get bored of the standard forward cockpit view then it is possible to select one of a variety of out of cockpit views. The PC version is an experience not to be missed (providing you have a 286 or 386 machine with EGA or VGA), but for all the other versions - try before you buy!
★ ACE RATING 925

CHAOS STRIKES BACK

FTL/Mirrorsoft • Atari ST £24.99 • Amiga TBA
The long awaited sequel to Dungeon Master. If you have already played through the first program you can use your existing characters, otherwise there is another hall of mirrors you can select from. Chaos has a similar feel to Dungeon Master, but is much tougher. There are also some new features thrown in, like a character editor and help oracle (very handy). If you haven't played Dungeon Master then play that first before making a definite date with this game.
★ ACE RATING 945

CONQUEROR

Rainbow Arts • Atari ST £19.99dk • Amiga £24.99dk • PC £24.99dk
An arcade style tank sim which makes use of a 3D graphics system based around the one David Braben developed for Zarch. There are three types of game available: arcade, attrition, and strategy. All three are best played with two joysticks Battlezone style, but there are enough control options to suit every set-up. A definite buy for tank buffs.
★ ACE RATING 925

DAMOCLES

Novagen • Atari ST £24.95dk • Amiga £24.95dk • PC TBA
This unusual combination of flight sim and adventure game, and sequel to the well-received Mercenary, has been in development for a couple of years now, but the resulting game has been worth the wait. The wireframe graphics of the original game have been replaced by solid 3D vector graphics, but they are just as fast. There are now nine planets to explore instead of one city, so there is plenty of long term challenge here.
★ ACE RATING 935

FUTURE WARS

Palace • Atari ST £24.99dk • Amiga £24.99dk • PC TBA
A totally mouse-driven graphic adventure from French developers Delphine. You are cast as a mid-mannered office window cleaner who gets caught up in an alien plot to conquer Earth in the 43rd century. The graphics and

background music are very striking and the game is made very accessible by the lack of text entry. There is enough of a challenge here to keep most adventurers happy for some time. A delightful game.
★ ACE RATING 910

GRAVITY

Imageworks • Atari ST £24.95dk • Amiga £24.95dk • PC TBA
Deep space strategy unlike anything you've ever seen before. The universe is being invaded by the alien outies who are attempting to turn all the suns in the universe into black holes. Meanwhile you must create as many inhabitable systems as possible. The game makes use of the principle of Einstein-Minkowski four-space - this makes for some very unusual graphics. When you add programmable drones and travel via black holes you have yourself a highly original and compelling game.
★ ACE RATING 930

HARD DRIVIN'

Domark • Atari ST £19.99dk • Amiga £19.99dk • Spectrum £9.99cs £14.99dk • Amstrad £9.99cs £14.99dk • C64 £9.99cs £12.99dk • PC £24.99dk • Archimedes £30.00dk
A very competent conversion of the Tengen coin-op. Drive your Ferrari round either a speed track or a stunt track complete with a loop and open bridge to leap. The coin-op scored on its super fast solid vector graphics, and these have been faithfully reproduced in

the computer versions. A must buy.
★ ACE RATING 937

HARPOON

Mirrorsoft/PSS • PC £29.99dk
Quite simply the best naval simulation to be released for the General Public. The battleset that comes with the game deals with East-West conflict in the North Sea, but other battlesets will be available soon. A clever system of three map types is used to effectively manage each mission. The nice thing about Harpoon is that the computer takes care of all the boring mechanics, allowing you to concentrate on broad tactics. A must buy for anyone interested in modern naval warfare.
★ ACE RATING 940

INDIANAPOLIS 500

Electronic Arts • PC £24.95
The ultimate racing game. Indy 500 uses state of the art solid vector graphics which really add something to the high speed action. As in Activision's Bomber there are a variety of out-of-cockpit views to select from, the realistic handling of the cars will have you coming back to this game time and time again.
★ ACE RATING 935

INTERPHASE

Imageworks • Atari ST £24.99dk • Amiga £24.99dk • PC £24.99dk
A 3D extravaganza supposedly inspired by William Gibson's novel *Neuromancer*. It is set in a hi-tech future. Your task is to guide the female saboteur to the heart of the Dreamtrack

Corporation by interacting with a strange 3D environment. The game is very weird and very compelling. It is also very hard - don't expect to get through this one in a hurry.
★ ACE RATING 915

KNIGHTS OF LEGEND
Origin/Mindscape • PC
£29.99dk

Role Playing at its best. An expandable game set in the land of Ashtelarea. There are twenty-four quests to complete, or you can simply enjoy exploring. The program stands out because of its attention to detail. There are no less than forty different algorithms to decide how and when an enemy retreats for instance. Impressive stuff.
★ ACE RATING 945

KNIGHTS OF THE CRYSTALLION

US Gold • Amiga £29.99dk
including musicassettes of soundtrack

The most original game that US Gold has released in a long time. It has been marketed as a 'culture simulator', but that doesn't really say much about the game. You play a member of a futuristic community, and your task is to rise to the highest possible status within that culture. This involves playing through several distinct sub-games. The whole is a highly unusual experience with distinct graphics and a superb soundtrack. This certainly won't be to everybody's taste, but if you are looking for something a little different - try this.
★ ACE RATING 935

M1 TANK PLATOON

Microprose • PC £39.95dk
The ultimate tank sim. Not only are there realistic 3D vector graphic sequences with a hell of a lot of atmosphere, but you also have to think carefully about choice of platoons, men, and the way you tackle each scenario. Microprose had to call on the Freedom of Information Act to get all the information that they needed for the game. The result is one of the most

frighteningly accurate tank sims we've seen.
★ ACE RATING 926

MIDWINTER

Microprose • Atari ST
£29.99dk

The latest mega hit from top programmer Mike Singleton, creator of *Lords of Midnight*. The game is set on a frozen island in the future. Your task is to recruit members of the Peace Force to fight off General Masters' invasion force. This is done by managing people and resources via a series of Fractal Maps and menus. The game has disappointing sound, but nice 3D graphics, and enough solid gameplay to keep you going for months.
★ ACE RATING 948

MYTH

System 3 • C64 £9.99cs
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The game that pushes the C64 and Spectrum further than they have ever been before. Fight your way through several time zones to reach the ultimate confrontation with the god Dameron. The game is captivating not only because of its size and depth but also because of the superbly animated sprites and sheer playability.
★ ACE RATING 925

OPERATION THUNDERBOLT

Ocean • Atari ST £19.99dk
• Amiga £24.99dk •
Spectrum £9.99cs •
Amstrad £9.99cs • C64
£9.99cs

Eminently successful conversion of the hot coin-op hit *Operation Wolf*. Grab your Uz1 and shoot your way through hordes of terrorists to rescue the luckless hostages. There are new 3D scenarios this time to add to the frantic lead splitting of the original. Best played with a light gun, but a mouse will suffice if you don't have one. Joystick or keyboard controls don't really cope however.
★ ACE RATING 927

PIPEMANIA

Entertainment International
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£9.95cs £14.95dk

The game that proves plumbing can be fun. You must construct a continuous length of pipe from several sections before the floor escapes. The action is just as compelling as that in games like *Tetris* and will have you burning the midnight oil in an attempt to beat the odds. It is available for practically every machine, so there is no excuse for not owning a copy.
★ ACE RATING 910

PLAYER MANAGER

Anco • Atari ST £19.95dk •
Amiga £19.95dk •
Spectrum £9.95cs
£14.95dk • C64 £9.95cs
£14.95dk • Amstrad
£9.95cs £14.95dk

Kick Off with a management/strategy element. The game is completely icon driven, making it easy to get into. The management detail is superb, right down to planning in-match tactics. And for the match you can either watch from the sidelines or join in with the Kick Off style fun.
★ ACE RATING 920

PRO TENNIS TOUR

UBI Soft/Blue Byte • Atari
ST £24.99dk • Amiga
£24.99dk • Spectrum
£9.99cs £14.99dk • C64
£12.99cs £16.99dk •
Amstrad £9.99cs £16.99dk
• PC £29.99dk

One of the best tennis games yet. The control method works really well, although the standard of the computer players is good, so you'll have to put in a lot of practice. There is a choice of grass, concrete, clay, and indoor courts, as well as comprehensive practice options. A good way of spending a few hours while you are waiting for Wimbledon.
★ ACE RATING 900

THEIR FINEST HOUR: THE BATTLE OF BRITAIN

Lucasfilm • Atari ST
£24.99dk • Amiga
£24.99dk • PC £24.99dk
World War II air combat
revisited in this superlative
flight sim. You have the
opportunity to fly a variety
of WWI craft from the
Spitefire to the Hurricane. A
neat option is the camera
which records your flight
and can be replayed to
assess your performance.
★ ACE RATING 933

TOWER OF BABEL

Microprose • Atari ST
£24.99 • Amiga £24.99
An imaginative 3D puzzler
from Pete Cooke - the man
who brought you *Tau Ceti*.
You control three robots, a
zapper, a grabber, and a
pusher. They must be used
to complete a specific task
on a number of futuristic
levels of a tower. This
involves working your way
past various nasty
obstructions deliberately
designed to impede your
progress. This game will
have you burning the
midnight oil as you attempt
to get past a particularly
tricky level.
★ ACE RATING 930

ULTIMA VI

Origin/Mindscape • Atari ST
TBA • Amiga TBA • PC
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The ultimate rôle playing
game. Sixteen thousand
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fifty characters, unlimited
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and graphics better than you'll
see on any other game of
this type. The *Ultima* series
of RPGs go from strength
to strength. Join forces with
Lord British and once more
enter the fray... unbeatable
stuff!
★ ACE RATING 950

★ ACE RATING 920

VENDETTA

System 3 • C64 £9.99cs
£12.99dk

A great arcade adventure
that really pushes the C64
to its limits. You must fight
your way past the terrorists
to defuse a bomb, and
rescue the professor and
his daughter. But while you
are on the terrorist's tails

the police are on yours. Most of the action takes place against an isometric 3D background, but there is also an excellent driving section to rival many full-scale driving games.
★ ACE RATING 912

VETTES

Mirrorsoft/Spectrum
Hobolyte • Atari ST TBA •
Amiga TBA • PC £29.99
High speed racing round the
streets of San Francisco in
one of four Corvettes on
offer. The superb 3D colour
graphics in the game give a
great sense of the wind in
your hair as you roar down
precisely steep streets
desperately trying to avoid
pedestrians and other
vehicles. Realistic and lots
of fun, this game, from the
people who brought you
Falcon, will have you
hooked.
★ ACE RATING 926

WARHEAD

Activision • Atari ST
£24.99dk • Amiga
£24.99dk

Veteran programmer Glynn
Williams' latest masterpiece
is set in deep space. Earth
is under threat from a horde
of nasty extra-terrestrial
insects. The only hope is the
FOE-57, an advanced craft
absolutely loaded down with
weaponry. Fast solid vector
graphics and rapid action
make this a winner. Work
your way up through the
training missions and you'll
soon be zapping away quite
happily.
★ ACE RATING 920

X-OUT

Rainbow Arts • Atari ST
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Possibly the best
horizontally scrolling shoot
'em up ever written. There's
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speed, a bagful of weaponry
for the taking,
loadsabonuses, and plenty
of challenge - What more
could you want?
★ ACE RATING 939

ACE READERS' PAGES

FOR SALE

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PAL MEGADRIIVE, 4 months old, boxed, excellent condition, guaranteed. 2 joystick + 2 Games (Ghosts and Ghosts and Space Harrier) £1200.00. Tel: 0762 342884. after 6pm. Ask for Michael.

PAL PC ENGINE, 4 games, R-Type 1, R-Type 2, Tale of monster path, Space Harrier, Worth £350. Sell for £195. Commodore version. Tel: 0222 552406.

SELLING ENGLISH AND HONG KONG Nintendo with 15 games and Japanese Converter for £350. Contact Ben on 315-9683. After 7pm.

PC ENGINE, Pad, joystick, 7 games inc. Vigilante, Space Harrier, R-Type etc. Worth £430. Sell £190. Bargain! Tel: 0709 544815.

C64, Disc Drive, Joystick, £800 Games, Mags, Cassette boxes all new, 4 months old £2500. Tel: 01-965-9670 after 4pm.

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AMIGA 2000 two Drives, the Works, D-Print, Various other games, Commodore Monitor, VGC plus any ten games. Contact Fred on 01-773-2206.

AMIGA Originals for sale £8 each, write to 17 Clutterden Way, Hale, L.Post.

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AMSTRAD PC 1512 for sale. £500 one. Various bits - 50 blank disks + £400 worth of software. Tel: 0703 613386

PENPALS

ST and Amiga contacts wanted. 100% reply. Write to: Don, 20 Parkstone Close, Brickhill, Bedford, MK41 8BD.

ATARI ST Contacts wanted worldwide. All replies answered. Mike Duncan, PC Box 293 Wemyss, WA Australia, 6014.

AMIGA CONTACTS wanted worldwide. Write to: Warren PO Box 377, Attercliffe, NSW 2477, Australia.

IBM PC/8 Compatible contacts wanted all over the world to swap solutions, hint books and more! (100% reply) any one is welcome. Write to Muhammad Janin, PO Box 211733 Amman, Jordan

WANTED: IBM Contacts. 100% reply! Send disks and lists to: Bart Vanhoof, Duinweg, 282, 840 Middelkerke, Belgium.

PC MSDOCS Contacts wanted from all over the world. 100% reply. Please send list to: Alfonso Bottarri, Via Savioia 15, 04100 Sassari, Italy

AMIGA Contacts wanted 100% reply. Anyone welcome. Send lists to: Carl, 85 Finching Field Av., Woodford Green, Essex

AMIGA CONTACTS wanted. 100% reply. Send Disks and lists to: Max, 16 Broadford Crescent, Balfourie, Dublin 16, Ireland.

AMIGA Contacts wanted send lists to: Kevin Lane, 66 Durling Rd, Bridgewater, Somerset. 100% reply Guaranteed (promptly) Amiga contacts wanted. 100% reply. Write to: 31 Belfast Rd, Whitehead, Co Antrim. Write now!

OTHER

If anyone has ordered goods from a company by the name of Merton Technical Services, and have not received their goods please contact Alan Williams, 50 Ashgrove Rd, Axford, Middx. Tel: 0764 255456.

Please could someone teach me how to use Amiga and hard Drive. Pay £5 ph. Dagenham area. Tel: 01-984-0967. NO WASTERS

SOFTWARE EXCHANGE Services Alert/Amiga/PC fully computerised service. SAE for registration form: SES 29 Naurton Crescent, Gloucester, GL50 7BD.

CHEAT Disk issue 4 for Amiga £3.50 or send issue 3 Disk Plus £1.50. JS Smith, 45 Magpiecroft Crescent, Sheffield S9 1DN.

HELPLINE

Help needed. Flight Sim. Two and three. Writing to post good price. Contact Ben Cruise on 0241-420035. (For Alan ST)

WORLDWICH MAPS - £5 Bloodworthy Data maps £5 SAE required state Game! 96 St Marys St, Southampton, SO1 1PB.

HELP wanted with master Sound Stripper on ST. Contact Gary Ogden, 8 Barmen Rd, Beazon-Side, Stafford, ST16 3JJ.

CAN anyone help me with Football Manager. I seem to be doing well until level of difficulty changes, please help. Anything like ultimate money or changing skill level of Players to Nine! Thankyou.

DRAGON NINJA Cheat needed for Amiga. Help much appreciated. Mr. Culp, 123 Sadler Rd, Coventry, CV8 2LL. Tel: 0203-333214.

DUNGEON MASTER hints and tips urgently required. Spells etc. Have got to Level 9. Sell 19 New Inn Av, Bromley, Kent. S.Barnes.

DESPERATE, to sell one C64. I have over £200 worth of games, joystick, paddles, lightpen, a mouse and much more for the willing buyer. It's a bargain at £1500.00. Tel: Malton Moorway 64386 ask for Matthew

Please can anyone out there help me with Spelceizer for the SAGA. A Map would be much appreciated for the Pyramid section. Tel: 311620 or write to: K. Irvine, 67 Woodlands Av, Irvine, Ayrshire, Scotland.

Can anyone help me with tips or cheats for these games on the Amiga. Eagles nest, Lindum, HATE, POW, Black Shadow, Lancelot, Magic Manion, Side Winder 2, Will refund postage Etc. DC Moore, 9 Edinburgh Way, Dersingham, Kings Lynn, PE31 6JJ

SOFTWARE EXCHANGE service for Amiga/ST/C64/Spectrum/PC/Amstrad CPC/Saga/Nintendo. 50p registration fee. £2 for swap. Send list to: CRB, 22 Roman Rd, Beardon, Glasgow

HELP urgently needed. Amiga sample disks required. Will send demos for every good disk. Tim, 8 Tom-Riggs, Shskine, Anran. KA27 8BD.

HELP wanted. Can anyone out there supply a cheat or saved game for F22 on the Atari ST Plus ST and VHS contacts required. Send lists to: A McCreath 65 Kempshorn Cr, Pollock, Glasgow. G53 9SX. Any

saved game Disks sent will be returned.

PLEASE help with Future Wars. I can't get anywhere after collecting the Bio Challenge card. Tel: 895141 Julian. HELP me please. I desperately need to sell my Sega system. It has a light Phaser two joystick, 1saega joystick and 12 games including R-Type, Curran, California games and Gunbar Raid. All this worth £400 will sell for £250. Tel: Paul 0992-442514

HELP ME! Pokes for Platoon. Last Ninja needed badly. Write to: MRL, Sully, Crosshill Rd, Eaton-Forest, St Neots, Cambs. PE14 4AA.

AMIGA Contacts urgently needed. Write to: Greg, 195 Old Rd, Chesterfield, Derby, SO4 3QH. Also need cheats for all games.

HELP I am a programmer in CIMB Amiga but I just can't do the graphics, backgrounds, Sprites. If you can do high quality graphics on Amiga and live in the W.Mids area (you will get paid). Contact J. Adams, 8 Swanage Rd, Small Heath, Birmingham, B10 9EL.

HELP needed in Monaco. Mission and Amiga contacts wanted. Tel: Mark 0342-3240129 or write to 22 Tudor Close, East Grinstead, West Sussex.

HELP Gladly appreciate any clues hints or maps for Twin Kingdom Valley or Pirate Adventure. Please write to: S.Warwick, 2 Rialton St, Lee Mill, Bacup, Lancs.

Is there anyone who can help me solve Borussia Time, and Maniac Manion. Please write to: Ernest Zonneveld, Zoeweg 32, 1971 HG Ymuiden, The Netherlands. Tel: Holland 02550-15877.

HELP or Cheat wanted for Amstrad PCW version of head over heels. Ring Jack on 0622 22068 if you can help.

FOR help on any Lucasfilm games: Zak McKracken, Marston Mansion and Indy, write to Gary Deler, 75 Racecourse Rd, Rimeux Crk, Victoria, Australia, 3431. (Painpaia wanted around the world) 054 286529.

NOTICE!
DO YOU WANT TO BE IN OUR READERS PAGES? YES? THEN GO TO PG.120 AND FILL IN THE ENTRY FORM AND STICK IT IN THE POST!

ACE WINNERS

Yes, it's that time of the month again. Sit back, relax, and discover who is about to be launched into a life of fame and fortune by becoming a winner of an ACE competition. Who knows, it could be you...

CRAZY CAPTIONS #1

Remember that most romantic scene we printed in last month's Bitter End - a modern business woman communing happily with her friendly laptop computer. We asked you for suitable

captions, and you came up with some corkers.

Our vote goes to **Mr. B.**

Short with this witticism:

'Have you got a light Mac?'

No, but I've got a dark

brown Apricot!

!

CRAZY CAPTIONS #2

Then there was that ominous blacked out photo on page 10. Just what was going on behind all that black ink?

Thirteen year old **David Cuesta** came up with the

best suggestion. Over to David: 'The black picture on page ten is a close up of a man dressed up in a bin liner. He is drunk and has just wandered in from the fancy dress party next door. The reason for the close up is that he is doing something indescribably rude with a male hedgehog.'

Hmmm... things have obviously changed a lot since I was thirteen!

SEEDY CDs

The screenshots in our CD competition were, of course, modern versions of Galaxians, Asteroids, and Space Invaders. Shame on those of you who didn't know.

The three winners, who all receive a SONY D22 CD Walkman, and a copy of Impression's game Renaissance are: **Andrew Lockwood, South Yorkshire; Steven Mudie, Eastleigh, Hants; and Angela Knight, West Sussex.**

Twenty second prizes of copies of Renaissance, and Impressions T-Shirts go to:

Robert Mellor, West Yorkshire; Jamie Rogers, Cheshire; George Noble, Aberdeenshire; Steven Flood, Hants; David Dawson, Liverpool; Kris, Norfolk; Norman Driskell, W.Yorks; David McCollum, N.Ireland; Scott Byrne-Fraser, Lancs; Mr.Neil Offiler, Nottingham; Mr.J. Bevis, Hants; Mark Beck, East Grinstead, West Sussex; Nick Chew, Merseyside; Mr.D.R.J. Welsford, Northampton; Peter Nelson, Kent; Mr. G. Ogdon, Stafford; David B. Richardson, Notts; Mike Sekowski, Nottingham; Jonathan Livingstone, Glasgow; Calum Lowrie, Scotland.

Thirty more runners up will win a copy of Hyperation and a poster. Th...Th...That's all folks!

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INVITATION TO TENDER FOR SOFTWARE DEVELOPMENT CONTRACTS

Elite Systems Ltd would be pleased to receive, from interested individuals, firms and/or companies requests for further information in connection with Software Development Contracts which Elite is currently seeking to place.

Initially four development contracts are available for the conversion of video games to 8-bit home computer formats.

It is anticipated that subject to the satisfactory completion of one or more of the above contracts, following successful tender, further contracts will be available for consideration.

Further written information on available contracts can be obtained from:

Peter Cook, Product Analyst
Elite Systems Ltd
Anchor House,
Anchor Road,
Aldridge
Walsall WS9 8PW
West Midlands England

Tel: 0922 55852

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THE ACE STOCKMARKET ENTRY FORM

WHAT YOU HAVE TO DO

NAME: Telephone Number:

ADDRESS:

My predictions for the TOP TITLE in next month's charts are as follows:

THE TOP GAME FOR THE AMIGA WILL BE:

THE TOP GAME FOR THE SPECTRUM WILL BE:

THE TOP GAME FOR THE AMSTRAD CPC'S WILL BE:

THE TOP GAME FOR THE C64 WILL BE:

THE TOP GAME FOR THE PC WILL BE:

THE TOP GAME FOR THE ATARI ST WILL BE:

THE TOP COMPANY IN THE STOCKMARKET (COMPANY COUNTER) WILL BE:

You can also submit a JACKPOT ENTRY: choose any ONE of the following categories and enter your prediction for the TOP FIVE ENTRIES in next month's charts for that category.

My JACKPOT CATEGORY is (tick one only):

- ST GAMES
 AMIGA GAMES
 PC GAMES
 C64 GAMES
 SPECTRUM GAMES
 STOCKMARKET (COMPANIES)
 CPC GAMES

My five predicted top entries for my Jackpot Category are:

1.
 2.
 3.
 4.
 5.

Rules:

All entries must be received by the closing date for this round of June 21st 1990.

No employees of EMAP, or of any company involved in the production, distribution, or sale of ACE Magazine are eligible for entry.

Only one entry per household.

The decision of the judges is final and correspondence cannot be entered into.

Enter your choice for next month's number one entry in each category on the form. You can also choose to go for the Jackpot by trying to predict the top five entries in any one category.

All correct entries will be put into a draw and a random selection made to determine a winner for each of the six categories. There's £25,000 worth of software for your machine waiting for you if you win. If anyone gets ALL five entries for their Jackpot Category right, they win a JACKPOT PRIZE of £150 worth of software for their machine.

A photocopy of this form (or a neatly laid out postcard) is acceptable, but please remember to include the round number (8).

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All you have to do is send off the form below, together with your payment;
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- The maximum is 20 words except for Helpline. (Helpline entries can be extended to 100 words max – use another sheet of paper if necessary).
- The service is NOT open to trade advertisers.
- We will print your advertisement in the first available issue.
- Entries which could be interpreted as encouraging software piracy will not be accepted.

ENTRY FORM

POST TO: ACE Readers Page,
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The BLITTER END

CD-I - Too little, too late?

Philips recently held a product launch for CD-I in the UK, giving details of software, release schedules, and approximate prices. You can check out the details in this month's Pink Pages (page 103).

The editor swears that the placing of the CD-I article at the back of the magazine and the prominent position of the piece on the Amiga CD-TV at the front was due solely to the timing of the arrival of the two articles. That may be so, but it strikes Blitter as being rather prophetic.

The fact is that, if Commodore live up to their claim of delivering a full motion video adaptor for the CD-TV, CD-I is going to look very sick indeed. The CD-TV can draw upon the existing base of Amiga software. There are dozens of programming houses around the world with Amiga expertise. Development systems are cheap. And the CD-TV is promised for this Christmas.

CD-I, on the other hand, is likely to have very few titles available at launch. Development systems cost a fortune. Comparatively few programmers have the OS9 experience necessary to program it (and even fewer combine that expertise with knowledge of games programming). The hardware spec, on the computing side, is not as exciting as the Amiga - particularly where graphics are concerned. And CD-I is not due to arrive until a year after CD-TV.

These can't be entirely pleasant pills for Philips to swallow right now. Even more alarming is the rumour that Sony have badged the CD-TV for distribution in Japan, attacking a market that Philips - via their Sony connections - might have liked to keep to themselves. If this rumour is true, the path for CD-I looks even rockier.

Ironically, it's Philips and Sony who have created this opportunity for Commodore, by generating an awareness of the potential of multimedia and its entertainment applications. The industry is alive with CD activity - ranging from the FM Towns to the PC Engine CD-ROM - and CD-I was going to tie all the threads together. It looks now as if it may be Commodore who will be tightening the knot. If they don't mess it up, they may pull off the biggest coup in electronic entertainment since Sir Cive launched the Spectrum. And Philips may end up taking a very cold bath.

*

Is software getting better? The ACE Stockmarket results certainly seem to suggest that this is the case. I took rather a lot of persuading that the Stockmarket was anything other than a load of incomprehensible figures, but I'm beginning to get the hang of it, and it's the Software Index that intrigues me most of all. Basically, this gives you the average mark received by ALL games

reviewed by ALL magazines (or as many as the compilers can get their hands on) each month. And each month, the Index figure has been rising.

Now, either this means that the games are getting better, or the reviewers are getting kinder. Blitter thinks that a process of natural selection is at work here. Magazines get inundated with product every month, but there is far more going on in the market these days than just games. As more and more pages get devoted to console news, CD news, graphics, and music, there's less and less left for straight game reviews. Consequently, more and more games head for the office wastepaper basket if they can't cut the crumpet. Result, fewer hostile reviews and higher software index.

Finally, Blitter is intrigued that Kick Off 2 (reviewed in this issue of ACE, but not rated) should have scored so well in the Stockmarket this month. Other magazines must have rave reviewed and rated it, which is strange because the game is still not finished.

• Blit Blit!

CAPTION COMPO WINNERS



We were inundated with entries for this lighthearted little caption compo. Among the suggestions sent in by Mr B Short of Dover were 'He loves me SPACE, he loves me not RETURN', the obscure 'You're nothing like your father', and the obscure 'So I'll use my Awayday Blue Saver Weekend Return travelling after 3am on Any Tuesday during Easter and save enough money for my ACE subscription.' In the end, however, we plumped for 'Have you got a light Mac? No, but I've got a dark brown Apple.'

Then there was the matter of the black square on page 10, which Mr Short - in rather bad taste - suggested might be Stevie Wonder's latest painting. The answer, of course, was - as David Guesta of London pointed out - a close-up of a man dressed up as a black bin liner. £25 of software to each of the winners.

SILVER SCREEN ISSUE!

Next month ACE really gets it all in the can with a stunning Hollywood competition that could send two very lucky people across the Atlantic to California. There they'll be hosted by representatives of Mirrorsoft on an exclusive visit to Hollywood and a tour round Universal Studios, including a visit to the set of Back to the Future and - we hope - a special pass to visit the set of a feature film actually in production.

Not only that, but by collecting a special voucher (found either in the Mirrorsoft game linked to the competition - see next month - or in the following issue of ACE) you could grab yourself £500 of spending money for the trip. ACE goes to Hollywood next month - don't miss it!

Oops!

Aha! This month we've surpassed ourselves and managed to catch the Oops! in THIS issue! Chronquest II and The Third Courier (reviewed on pages 83-84) had their release details omitted and, even worse, TTC was credited to Electronic Arts when it is, of course, published by Acolade. Our sincere apologies to both companies and to our readers. Meanwhile, here are the release details for both games:

Chronquest II is out on the Amiga and ST at £29.99 with a PC version planned. The Third Courier is out on PC, ST, and Amiga at £24.99.

THE SKIES ARE YOUR HUNTING GROUND

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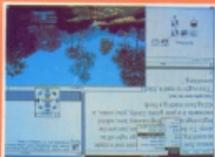
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