

# BLOGRUSHER FOLLOM UPTO 


NOW WITH TWICE THE ACTION, TWICE THE FUN, TWIGE THE CHALLENG7


The Hi-jack report came from a DC10 leaving Paris for Boston Arab guerillas were in control of flight 102 and had turned the aircraft towards Africa...The plane lands in hostile territory and the terrorists begin their demands ...

## USETHE LASER SICHT,

or the bulletproof vest, but watch out for AIR-TO-GROUND MISSILES!
Operation Thunderbolt the incredible Taito coin-op conversion brought NOW to your home computer.


SPECTRUM AMSTRAD 4010
COMMODORE
CASSETTE

SPECTRUM AMSTRAD DISK
COMMODORE

AMIGA 4



Editor Gary Penn；Deputy Editor Ciaran Brennan； Group Art Editor Gareth Jones；Staff Writer Gary Whitta；Art Assistant Osmond Browne； Advertisement Manager Mark Scriven；Sales Executive Kathryn Boucher；Trainee Sales Executive Ed Syivester；Magazine Assistant Paui Presley；Contributors Kelly Beswick；Kati Hamza，
Gordon Houghton，Curtis Hutchinson，Brian Nesbitt， Gordon Houghton，Curtis Hutchinson，Brian Nesbit， Phiive＇CLINT＇Pembridge；Typesetting \＆Artwork by Clive＇CLiNT Pembriage；Iypesetuing a Ariwork by Professional Reprographic Services of 53a Migh Street，Huntingdon，Cambriageshire PE18 6AQ Colour Origination by ProPrint，Channelsea Business Centre，Canning Road，London E15 Printed by Southern Print at Upton Factory，Upton Poole in Dorzet；Distributed by EMAP Frontline Ltd．

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## Telephone Numbers

Editorial \＆Advertising 012516222
Facsimile 014901095
Subscription Queries 0733555161
Newstrade Queries 0733555161

## Addresses

Editorial \＆Advertising：Priory Court，30－32 Farringdon Lane，London EC1R 3AU．
Subscriptions：PO Box 500，Leicester LE99 0AA． Back Issues：EMAP Frontline Ltd，Park House， 117 Park Road，Peterborough PE1 2TR．

Much Obliged，Squire．．．all at Digital．

# THE ONE＇S GUIDE TO PRICE，RELEASE DATE AND EVERYTHING 

You may be used to reading reams of opinionated waffle elsewhere，but here we prefer to let the games speak for themselves． Relevant scenes are shown，with informative captions used to convey the＇feel＇of the game in question．At the end of each review there are opinions highlighting any good and bad points，prices，release dates and ratings where possible．Basically，there＇s something for everyone－at best a highly detailed review， and at worst a highly detailed preview．There＇s nothing clever，just straightforward facts and ratings．Updates will follow where appropriate．
the ratings
GRAPHICS Not necessarily how colourful or well drawn they are，but how well they fit into the overall effect．
SOUND Again，not necessarily quantity or indeed quality of sound，but how well it＇s used．
PLAYABILITY How does the game feel？Is it addictive or plain uninteresting．
VALUE Essentially a reflection of lasting interest－how much game you get for your money．
OVERALL A useful point of reference essentially a summary of the preceeding ratings．

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## NEWS

A detailed guide to available software for Christmas and the New Year，including Activision＇s Die Hard（at last）， Anco＇s Player Manager， Mastertronic＇s Sidewinder II， and Logotron＇s Starblaze．

## SHOWCASE

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# STICK THIS! 

Here's your chance to tell us what tickled your fancy in '89, as we open the voting for this year's Golden Joystick awards. There are seven categories in all, each of which will receive the highly-respected gong at an awards ceremony next April. So to have your say, simply fill in each category, along with your name, address and T-shirt size (we'll come to that later) and return it to: Golden Joysticks, The One, Priory Court, 30-32 Farringdon Lane, London EC1R3AU, to arrive nolater than January 15th. As a small incentive, the first reply pulled from the mailbag after the closing date will receive software to the value of fl00 and a The One T-shirt.

BEST COIN-OP CONVERSION

BEST NON- COIN-OP LICENCE
(Film, TV, Character etc)

BEST SIMULATION

BEST ORIGINAL GAME

PROGRAMMER OF THE YEAR

SOFTWARE HOUSE OF THE YEAR

GAME OF THE YEAR

NAME.
ADDRESS

## LASER LOVER

First of all, may I be one of the first to wish you a Happy Christmas and a prosperous New Year, and I raise my brimming wine glass in a toast to continued success throughout 1990 for your merry crew. Now, the reason for my putting quill to parchment: I see that in the wake of Dragon's Lair. Don Bluth's Space Ace is about to hit the home computer market. How can any software house hope to emulate the feel and buzz you get playing a game which is centred on a laser disc? Okay, the graphics on the ST and Amiga are good (mine's an ST, by the way) but they're nowhere near the arcade machine's quality. Why should we pay more than $£ 25$ for something which doesn't even come close to the original? I remember walking into a local arcade to play Dragon's Lair at a time when I had completed 75 per cent of the adventure, and fellow players would stand aside to watch the game (nay, witness the story unfold) as I battled Dirk through Lizard Kings and Mud Monsters in his quest to slay the beastie and rescue the damsel. That's hardly likely to happen on anST. I'm sure that the same would have ultimately happened with Space Ace, but before I reached the dizzy heights of Ace Borf Basher, the machines faded into oblivion. What dappened to them? One can only assume that they lost popularity because they were fairly difficult to get into and required a modicom of thought to progress... Illegible signature, Northwich, Cheshire.

## DOG ROUGH

Dear The One,
I was disgraced and outraged when I read your latest issue and found to my dismay a comment about the dogs in Ninja Warriors having their throats slit and emitting a skin-crawling howl. I am protesting that this comment need not have been written as it is completely irrelevant and very distressing to any human being who is a dog lover (like me). I am cancelling my subscription forthwith and hope this incident will never happen again. All of youat The One are heartless, brutal, filthy swines who should be castrated and put through extreme torture for even thinking of publishing that statement! Barky The Dog, Iford.

Now hold on a minute, here at The One we're all dog lovers (except for Mr Nesbitt that is, he hates the flea-ridden mongrels). And on the subject of our four-legged friends... remember kids, puppies aren't just for Christmas - you can save some for sandwiches on Boxing Day.

## EARLY BATH

## Dear The One,

No complaints about the mag, it's fantastic! I've got every single 'One', and every 'One' is a treasure to look at, so keep up the good work! But enough of that, I've got a complaint about some software. I bought Anco's Kick Off as soon as it came out (fantastic game!), but when I got the expansion disk, it wouldn't load.

I took it back to the shop thinking that the disk was faulty, only to find that it was my original disk that was at fault. The assistant said that the disk's not compatible, but being a nice bloke he said that he would swap my old Kick Off disk for the new kind.

The question is, why have they brought out two kinds of Kick Off? - one which works with the expansion disk and one which doesn't? Also could you tell me what exactly a datalink system is, and how it works? Because I've heard about them and I'm wondering whether to get one for Stunt Car Racer. GT Wyrley, West Midlands.

4It seems that you were a victim of your own haste here. According to Anco's Anul Gupta, the first few hundred copies of Kick Off to be duplicated and distributed were defective. Apparently the copy protection is a bit dodgy, and while it's possible to play the game without any trouble, its won'taccess the Extra Time disk. Most of the defective copies were recalled as soon as the fault was found, but if you're having loading difficulties with any Anco product, call the company on (0322) $92513 / 8$. On the datalink front, we intend to cover that subject in somewhat more depth in the future. Watch this space...

## WHICH WINGS?

Dear The One,
I'm writing to ask you to rhake a choice for me. I'm about to get my hands on á flight simulator, but which one? We computer owners are spoilt for choice. I've played F-16 Combat Pilot and I'm not thrilled, so will it be Falcon, Fighter Bomber or F-29 Retaliator? While I'm at it, is MicroProse Soccer as good as Kick Off?
Nicholas Chaddock, Tadcaster, North Yorkshire.

44It isn't really appropriate for us to choose a flight simulator for you, as the current crop are so similar in so many ways and yet each has its own distinct selling point (Fighter Bomber's bombing competition and seven plane line-up for example). It's a pity that you didn't say which machine you owned though, as there's a wider variety for the PC than for the other two machines (although most PC simulators do eventually make it onto all formats). Read as much as you can about each of the available programs, ask your shopkeeper for a demonstration and go for the one with the angle that best suits your taste. With regards to your soccer question.. we're still playing Kick Off, more than six months after we reviewed it! Nuff said.

#  THE ULTIMATE IN PEST CONTROL! 



DYNAMIC DEBUGGER - Spray your way through 10 bug-infested worlds on your quest to attain the ultimate accolade from the elders of Shoggle Waggle - Licenced Dynamic Debugger! GASP at the incredible graphics - over 4,000 colours on screen in the world's first moving Hold And Modify game (Amiga only). But don't stand gawping for too long - there's a job to be done! Wipe out the insectoid pests with a variety of wild ' $n$ ' whacky weapons, including a cork-firing champagne bottle, a vacuum cleaner, a DDT gun and a baifery!


SCREEN SHOTS FROM AMIGA VERSION

## NewS

...for Christmas and early 1990. Kelly Beswick takes a look at what's on offer from the high-flyers in the software business.

## accolinde

elebrating its first Xmas on UK soil, Accolade gets into the seasonal spirit with a host of new product. The Grand Prix motorcycle racing game, The Cycles, revs into action on all formats, boasting a variety of bikes and circuits as well as undulating tracks and tunnels. A flight simulation with a difference, Blue Angels, based on the activities of the US Aeronautical Flight Formation Team, makes its debut on the PC, with the other versions following shortly. A science fiction adventure, Day Of The Viper is also imminent, along with Powerboat USA; Offshore Superboat Racing. In addition, two accessory disks for Test Drive II will be available, with Muscle Cars bringing 1950s cult cars to your screen and European Roadways providing a number of Continental routes to burn up.

## ACTIUSION

Ghostbusters II heads this line-up, with spooky spectres and fiendish phantoms running rife. The game boasts three action sequences taken directly from the film which is currently breaking box office records. Having suffered several delays, Fighter Bomber also looks set to make a December debut. Described as the definitive flight simulation, the game is based on a real life USAF bombing tournament. A Sega licence, HotRod, completes the Activision Christmas offering. A multi-player driving game, it will be initially available on the ST and Amiga, with a PC version pencilled in for some time in the new year. Meanwhile winging its way across the Atlantic for an early January release comes Die Hard on the PC. Direct from Activision US, the game claims to capture all the thrills and spills of the Bruce Willis movie.

## ALTERIATIUE

And in the Alternative corner we have Champion Boxing on the ST and Amiga (and possibly the PC, later in the new year). Out on the firm's Glove Games label, Champion Boxing is the basic boxing scenario set in the muscle-bound world of heavyweights, but packing a few extra punches. In addition, Operation Hormuz, The Munsters and Track Suit Manager are now available on the PC on the Alternative label, along with Screen 7's Steigar.


## Take a trip down memory lane courtesy of Accolade's MUSCLE CARS.




## RING NEWW

## DIICITAL MAFIC SOFTURRE

DMS' Christmas box amounts to just one title this year - the racing game Drivin' Force. Initially appearing on the Amiga, with the ST version following some time in February, the game runs at 50 frames per second, and features 30 tracks, eight pieces of music, six different vehicles and five scenes... phew! (1)

## Dinamic

The Spanish supremo's lone Christmas title, After the War, has unfortunately been postponed until January. So, you'll just have to wait until the New Year to experience this futuristic beat 'em up on ST and Amiga.

## DOMARK

Now firmly established in the world of coin-op conversions, Domark's Christmas biggie is without doubt Hard Drivin'. Yet the firm has a few strong titles lined up for the New Year, with the Tengen title Cyberball due out in January, to coincide with the American Superbowl. Also from the Tengen stable comes Escape From The Planet Of The Robot Monsters, while the Domark/Broderbund shoot 'em up, Wings Of Fury, should make an early January appearance.


Broderbund's WINGS OF FURY - set to take off first thing next decade.


Digital Magic's DRIVIN' FORCE


AFTER THE WAR.


CYBERBALL - futuristic football.

## (Month Ending December 1989)

 AMIGA1

POWER DRIFT
(Activision)

## 2



PRO TENNIS TOUR (UbiSoft)


EXTRA TIME: KICK
OFF DATA DISK (Anco)


LASER SQUAD (Blade)

5


BATTLE SQUADRON (Electronic Zoo)


HARD DRIVIN'
(Tengen/Domark)


SIM CITY (Infogrames/Maxis)


SHADOW OF THE
BEAST
(Psygnosis)
9


LIGHTFORCE
(Ocean)
10


INTERPHASE (Image Works)

Compiled exclusively for The One by SOFTWARE CIRCUS LTD. The Plaza on Oxford Street, 120 Oxford Street, LONDONWIN 9DP. Tel: 014362811.


## Guaranteed

 Window Seat.You've got the best seat at the air show - the cockpit of your F/A-18. And you're about to fly where only angels dare.


Blue Angels Formation Flight Simulation puts you wingtip-tocanopy with the acrobatic U.S. Navy aviators who've become legends of the sky. From ground school to the wild blue yonder, you'll practice and perform over 25 actual air show maneuvers.


Train with the Blue Angels in a wire-frame flight simulator. Plot the path you've flown in 3-D against the ideal pathof the maneuver.

Wow the crowd during three heavenly air shows.


You can watch all of your maneuvers from a variety of camera angles, review the performance on Instanț Replay even take a bird's-eye tour of the entire airfield in "Free Flight" mode.
If you're a blue chip Blue Angel, they'll induct you into the "Pilots Hall Of Fame." Because only the best and the brightest can take 32,000 pounds of military thrust and turn it on a dime.
Blue Angels Formation Flight Simulation. Everything you've ever experienced in flight simulation is about to take a 360 degree diamond roll

## NCCHAF <br> The best in entertainment software."

Accolade Europe Led.
Unit 14, The Lombard Business Centre,
50 Lombard Road,
London SWII 3SU.

## RING NEWS

## EDCE

In a bid to rid America of corrupt and dangerous Imafia men, The Punisher steps out of the pages of Marvel Comics and onto the ST and Amiga. Set in a network of mazes, the game sees our hero fighting his way to the chief bad guy, fending off a variety of unsavoury characters on the way. A sequel is already in the pipeline and is set to coincide with The Punisher movie, out next March starring Dolph Lundgren. The Taito coin-op conversion Darius + makes its way onto the Amiga, along with the Peanuts licence, Snoopy The Cool Computer Game. And still with cartoon characters, Garfield eats his way onto the PC in Big Fat Hairy Deal.

## ELETTRONII 200

EZ rubber stamps its recent signing of US label ECosmi, with the release of Presumed Guilty. Only the firm's second product (after Battle Squadron), this espionage game comes from the same stable as MicroProse's The President Is Missing.

## EEECTRONIC

RRTS

Nestling prominently in EA's Xmas stocking is the long-awaited PC version of Populous. However, PC owners get a head start on the martial arts title Budokan, which won't be out on the other formats until the New Year. A humourous adventure game, Keef The Thief, also makes its debut on the PC, along with John Madden Football, Fire King, and Indianapolis 500. Finally, there's Hound Of Shadow on the Amiga and ST, a role-playing adventure based on the style of cult horror writer HP Lovecraft.

## EITERTRIIIIIEIT IITERAATIONAL

Entertainment International's Empire label rules Ethe roost over Yuletide, housing four new releases as opposed to sister label Titus' single effort. Firstly, Time (ST and Amiga) leads you on a graphic adventure through the ages, meeting such key historical figures as Confucius, Julius Caesar and Florence Nightingale. On a sporting note, there's Gazza's Super Soccer, endorsed by Tottenham's fiery wonderboy Paul Gascoigne. Space Ace (see page 100) will arrive on the Amiga in time for Christmas, but the ST version won't be out until late January. The Marvel Comic licence Dr Doom's Revenge (featuring both Spiderman and Captain America), is due out on all formats. Also out on all formats is Titus' lone offering, Knight Force, in which knights in shining armour travel through time zones, rescuing damsels in distress, whilst slaying fire-breathing dragons.
 THE PUNISHER.


America's biggest paid Beagle stars in The Edge's'licence.


EA gets physical with BUDOKAN.


Journey through history in TIME and...


Take on Paul Gascoigne in GAZZA'S SUPER SOCCER.
(Month Ending December 1989) ATARI ST

(Tengen/Domark)


## NE

POWER DRIFT (Activision)

3
9 LASER SQUAD (Blade)


PRO TENNIS TOUR (UbiSoft)

(US Gold)


TV SPORTS FOOTBALL (Cinemaware/Mirrorsoft)

NE BATMAN THE MOVIE (Ocean)

8
RE FERRARI FORMULA ONE (Electronic Arts)


NE LIGHTFORCE (Ocean)


FUTURE WVARS: TIME TRAVELLÉRS (Delphine/Palace)

Compiled exclusively for The One by SOFTWARE CIRCUS LTD. The Plaza on Oxford Street, 120 Oxford Street, LONDONWIN 9DP. Tel: 014362811 .

## WHAT'S THE SCORE?

MicroProse's action games feature a depth of realism, excitement and strategy rarely seen before in computer entertainment. TWO SCORE GOLD PIECES
Pirates, played by over a quarter of a million square miles, offers unparalled gameplay and adventure on the high seas; SCORE TO SETTLE
Airborne Ranger's fast-paced action challenges your skills and reflexes over a dozen missions deep behind enemy lines.


## WHAT'S THE SCORE?

Soccer was the world's first true football simulation - from indoor league to World Cup Final, it's just like the real thing;

MicroProse, Unit 1, Hampton Road Industrial Estate, Tetbury, Glos, GL88DA.

# RING NEWW 

## CRAIDSLAII

Grandslam's major new licence Liverpool: The Football Game (a rather unnecessary suffix that, as it's hardly likely to be about anything else), will get a hefty promotional boost, with some of the team's players appearing in computer stores throughout the North West. In addition Grandslam's German affiliate label, Thalion, will release the 'gothic' platform game, Seven Gates Of Jambala, and a strategic shoot 'em up, Warp. Space Harrier II (see Work In Progress page 39) will get its first public airing around Mid January on the Amiga and ST.


Gremlin's ULTIMATE GOLF.


## SEVEN GATES OF JAMBALA.

## CREIILII

Arelatively quiet period followed this company's breakaway from the US Gold fold, but it's now firmly back in the thick of things with a strong release schedule. Mindbender, based on the same lines as Deflektor, is available on the Amiga and ST, as is the multi-level beat 'em up Switchblade. The platform game cum shoot 'em up Axel's Magic Hammer also arrives on 16 -bit, along with Ultimate Golf, which claims to have taken eight man-years to develop and comes with an official thumbs-up from none other than Greg Norman.

## HEWSON

The shining star in the Hewson firmament this Christmas is the role-playing arcade adventure Onslaught. Available on the ST and Amiga, it features four original arcade sequences set in a vast hostile landscape inhabited by warrior tribes. Hewson's post-Xmas line-up includes a motor racing title, Fifth Gear. Programmed by Microwish (the Zynaps people), the game boasts panoramic aerial views and will be out on ST and Amiga in mid-January


Core Design's SWITCHBLADE.


[^0](Month Ending December 1989)

## IBM PC AND COMPATIBLES



Compiled exclusively for The One by SOFTWARE CIRCUS LTD. The Plaza on Oxford Street, I 20 Oxford Street, LONDONWIN 9DP. Tel: 014362811 .


## THE MISSION IS VITAL - THE ODDS ARE AGAINST YOU.

## F15 Strike Eagle II

F15 strike Eagle ll is a whole new concept in computer air warfare. Dogfighting is the name of the game. The air swarms with enemy aircraft. Dice with death as you light your 'bumers' and head for the skies. Success depends on making the right moves - fast. Super smooth, non-stop action takes place over 250,000 square miles of authentic terrain. Superb, solid-filled polygon based 3D graphics makes it feel as though you really are in the thick of the action. Hundreds of options, four difficulty levels and a vast amount of missions and scenarios make F15 Strike Eagle Il perfect for dogfighting veterans and novices alike.


## F-19 Stealth Fighter

MicroProse's F-19 Stealth Fighter transports you into the real world of Stealth Technology. Placed in charge of one of the USAFs most valuable and secret aircraft, you must carry out missions deemed too dangerous for normal aircraft to accomplish. Amazing three-dimensional graphics add a totally new dimension to F-19 Stealth Fighter as you fly, undetected, at 75 feet around Berlin and strike deep within Communist territory.
$\mathrm{F}-19$ is not just a flight simulation-it's an experience!


Gunship
Gunship has proved itself to be one of the truly great combat flight simulations Based on the AH-64 Apache, one of the most advanced attack helicopters in the world and developed with the help of real attack helicopter pilots, Gunship lets you loose on a high-performance helicopter that can fly low and slow, hover, sideslip, fly backwards, rotate and go into a full-blooded, 200 knot power dive through some of the hottest combat zones in the world.
 e spint of attack is all

## RING NEWW <br> IIIPRESSIOIS

This aptly-named label appears to be ignoring the festive season this year, with no product coming out until early January. Rather inappropriately greeting the coming of a new decade will be a compilation of some real golden oldies,
Renaissance. The four-game pack includes versions of Asteroids, Pacman, Centipede and - of course - Space Invaders. Available on the ST and Amiga, all the games have been completely revamped for 16 -bit. Indeed, each version has two modes, so the purists can enjoy the classic mode. whilst modernists can choose the upgraded 1990s option. On the Coktel Vision label, Asterix will make a new year appearance on all formats, along with the toboggan racing game Skidoo. Also due from Coktel is ESS, a simulation of the European Space Shuttle.

## IIFOCRAMES

Sim City has finally moved beyond the realms of the Apple Mac onto the Amiga and PC, but ST owners must continue to wait patiently until the New Year. Indeed the French firm will be celebrating the start of the 1990s with a strong batch of titles. The D\&D style game Drakkhen is scheduled to make an early January appearance, along with Full Metal Planet, based on a famous French board game. Jumping Jackson, the imitative off-spring of Jumping Jack Flash, sets out to save rock ' $n$ ' roll in a colourful arcade adventure on all formats. The French firm will also do its bit for the Green movement with Safari Guns on the ST and Amiga - this game has in fact been endorsed by the World Wide Fund For Nature, which will receive a donation from each copy sold.

## RRISPLIS

|n its biggest licence deal to date, Krisalis' Christmas kicks off with Manchester United Football Club on all formats. Management strategy and arcade action are combined in this two-disk affair, with your decisions affecting the team's progress through the full English league, including The Milk Cup and FA Cup.

## LOFOTRON

Having released most of its games in November, Logotron has just two products due out over the festive season. The none-too-subtle space shoot 'em up, Starblaze, is available on the Amiga and ST, and will quickly be followed by Bad Company, also on those formats.

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₹


Spot the difference. The original of Space Invaders and a 1990's remix in RENAISSANCE.


Build your own metropolis from scratch - and then raze it to the ground in Infogrames SIM CITY.


Logotron's long-awaited STARBLAZE..

and Steve Bak's BAD COMPANY.


TIME TRAVELLERS

"Brilliant" 90\%
ZERO Magazine
"Set to become a timeless classic" 90\% THE ONE Magazine
> "An excellent icon driven adventure ... well worth buying" $82 \%$ AMIGA ACTION Magazine

## "One hell of a game" 87\% ST FORMAT GOLD AWARD ST FORMAT Magazine



## RING NEWW <br> manDARIII ollowing its STOS Games Writer of the Year

FCompetition back in the Summer, Mandarin has put together four of the highly commended entries on a compilation. Called Games Galore, it includes: Skate Tribe, Mouth Trap, Sky Strike and Yomo. The winner, Cartoon Capers, comes out in January as a separate title on both the ST and Amiga. Mandarin is also holding back Soft Musician until the new year: priced at $f 14.95$, the product is being hyped as the cheapest MIDI device on the market
YOMO - just a quarter of GAMES GALORE.


## micROPROSE

icroprose's nest of labels has a jamboree of titles set to hit the shelves this Christmas. On the main MicroProse label there will be Samurai on the PC, an action adventure promising a distinctive Japanese feel. Meanwhile the MicroStyle label will carry four titles. Stunt Car and Xenophobe will both appear on the PC, whilst New Year releases include RVF on the PC and Pirates on the Amiga. On Firebird there's the Jaleco coin-op conversion, P-47 Thunderbolt, available on all formats, along with Oriental Games, which should make an appearance for the first week in January. Taking the lion's share of MicroProse's releases is the Rainbird label. Titles include Tower of Babel on the ST, with the Amiga version due out mid-January, Weird Dreams on the PC, First Contact and the big one, Midwinter (see Work In Progress, page 34).

## MIIDSLCRPE

Mindscape seems to be bypassing Christmas this year, (despite it being its first in the UK), with most of its product sporting a January release date. The new Origin title, Knights of Legend, is set to hit the shelves in early January on the Amiga and PC In typical Origin style, the game is set in mediaeval times, when sorcery, spells and good old-fashioned chivalry ruled the day. Sequels also play a hefty part in Mindscape's New Year release schedule, with
Ultima V coming out on the ST, and Star Trek V boldly going to the ST and Amiga. Also pencilled in for January is Chris Crawford's follow-up to
Balance of Power. Called Guns and Butter, the game delves into economic strategy and will appear on all formats. Finally, the late Bruce Lee
demonstrates martial arts from beyond the grave, in the tastelessly entitled Bruce Lee Lives, initially on the PC.


Firebird's long-awaited conversions of Jaleco's P-47 are nearing completion.


BRUCE LEE LIVES.


FIRST CONTACT.


Boldly going whereno software company has gone before - Mindscape's interpretation of the latest and last STAR TREK movie.



IT CAME FROM THE DESERT.


FTL'S CHAOS STRIKES BACK.


BARBARIAN hacks its way onto the PC.


Ocean's conversions of Jaleco's CABAL - expect to see something early in the new year.


More French frolics from Ocean, IVANHOE, a medieval beat 'em up.

## RING NEWW

## mIRRORSOFT

Mirrorsoft has a feast of new product in the pipeline, beginning with the Napoleonic warfare game, Austerlitz, due out on the PSS label. Created by Peter Turken (of Waterloo fame), the game is set in Austria and boasts impressive 3D landscapes. In a tribute to the Big Bug movies of the fifties, Cinemaware presents it Came From The Desert (see last month's review). On the Image Works label, Mirrorsoft is set to release a Bloodwych Data Disk, (which adds 25 new levels to the original program, along with numerous new monsters and additional spells) and, at long last, Dynamic Debugger, the long-awaited cartoon platform game which uses 4,096 colours simultaneously! Finally, what was originally envisaged as a few add-on levels to Dungeon Master, FTL's Chaos Strikes Back, has since become a complete game in its own right. Initially available on the ST, the Amiga version should follow some time in April.

## 1) [1]

After all the hype and pre-publicity, Ocean's releases really need little introduction. Nevertheless leading the line-up is the much-touted movie licence The Untouchables. Then comes the sequel to last years' number one, with Operation Thunderbolt being hailed as even bigger and better than Wolf. Also hotly tipped for this year's coveted Number One slot is Chase HQ, with Ocean's coin-op conversion of the driving game boasting superb 3D graphics and four scintillating levels of action. And for the serious-minded gamesplayer Ocean has the flight simulator, F-29 Retaliator stashed up its sleeve, along with the Vietnam War strategy game Lost Patrol (which could well be held back until January). Also sitting amongst the possible postponements are two titles developed Frogside: Cabal and Ivanhoe.

## PHLALE

Palace's main release is the graphic adventure Future Wars, developed by French firm Delphine Software. Available on the ST and Amiga, this should only be the first of many Delphine products to use the imaginative Cinematique animation system. For PC owners, two infamous slashers, Barbarian and Barbarian II, are also due for Christmas (the former is coupled with another Palace oldie, The Sacred Armour Of Antiriad).

## PANDORA

For the festive season, Pandora's fantasy role playing game, Galdregons' Domain moves onto the PC. Meanwhile the firm's other two Christmas releases, Debut and Xenomorph look like being postponed until the New Year, although there's still a remote possibility of them making a December debut on the 16 -Bit formats. Also lined up for early January are a couple of new additions to Pandora's $£ 4.99$ budget label Smash 16 , but as yet no decision has reached on just what titles will be getting the budget treatment.


# RING NEWW 

## PSYIIOSIS

 rather oddly entitled Never Mind. Available on all three formats, this complex puzzle game is guaranteed to stretch the grey matter with over 1,000 levels. A futuristic platform-based arcade game, Stryx, is due out on the ST and Amiga, whilst the successful Blood Money finally makes its way onto the PC. And for early January, Psygnosis has Infestation currently nearing completion.

## RIIIROW RRTS

 Unsurprisingly, Rainbow Arts' releases have a distinctly German feel, beginning with the role-playing adventure Mystery Of The Mummy. set in Hamburg in the early part of the century. Berlin, however, forms the setting for the Cold War adventure East V West - both titles are available on all formats. Rock ' $\mathbf{n}$ ' Roll becomes available for the PC in early January, whilst the firm's $£ 9.99$ budget label, Highlights, has a number of releases lined up for the Amiga and ST including Hollywood Poker Pro, Joan Of Arc and Bad Cat.

Rumbles in the jungle in System 3's elephantine TUSKER.


More puzzles than you can shake a Rubik's Cube at in NEVER MIND.


'Wice weather! We are luckv with oux holidav!', Hilhelm, the deveted
driver and conrade with the round face and the cunningiv shining eves remarks.

Rainbow Arts delves into adventure with MYSTERY OF THE MUMMY.

## THE SOFTU日RE BUSIIES5

The Huntingdon stable's list of releases seems neverending. Firstly there's the anti-gravity game Doctor Plummet's House of Flux, on the Amiga, then there's four Hanna Barbera licences: Johnny Quest, The Jetsons, Scoobie Doo and The Flintstones, all available on the Amiga and PC. Meanwhile Blade Software's inaugural release, Laser Squad, moves onto the PC, quickly followed by its second title, Lord of Chaos, on the Amiga and ST. The semi-budget label, Wicked Software, enters the world with Spy Vs Spy on the Amiga and ST, priced at $£ 9.99$. Versions two and three of the games, called Arctic Antics and Island Capers respectively, should be available in early January, also sporting a $£ 9.99$ price tag. Several original products are also in the pipeline, with a IO-game compilation, International Arcade Action, due out on the Amiga, priced at $£ 12.99$, along with a 3D shoot 'em up, Twlyght, on the 16 -Bit formats.

## SVSTEII 3

D
ecember is a quiet month on the 16 -bit front for System 3, with no product arriving until late January when Tusker roars into action. This puzzle-orientated three-load game will only be available on the ST and Amiga, with no PC plans in the immediate pipeline.



US Gold's Moonwalker


Virgin and top adventure house Magnetic Scrolls recently tying the knot. Expect to see Mag's latest product sometime in 1990.

## TYIESOFT

After protracted negotiations with Paramount, Tynesoft proudly presents one of its biggest licences to date - Beverly Hills Cop. Out on all formats, the game sticks closely to the film, following Axel Foley's somewhat unorthodox policing methods over four sections. Another American star, Elvira, completes Tynesoft's Christmas offerings. The follow-up to Personal Nightmare, Elvira Mistress Of The Dark boasts action-packed arcade adventure, unhampered by lengthy text. The game will be available on all formats around late December, early January.

## U5 5010

Rather than placing all its eggs in one basket this Christmas, Gold has several weighty titles up its sleeve in the form of Turbo OutRun, Ghouls ' $n$ ' Ghosts and Moonwalker. Turbo OutRun takes up where OutRun left off, and Gold is clearly hoping it will achieve at least some of the original's success. CapCom's Ghouls'n' Ghosts enters as the heir apparent to Ghosts'n' Goblins, whilst Moonwalker follows Michael Jackson's egocentric oddball behaviour, as seen in the movie. Gold also has a couple of very strong compilations to complement its festive offering. Winners is out on all formats, comprising Blasteroids, Thunderblade, LED Storm and Impossible Mission II. Giants on the Amiga, meanwhile, features OutRun, Gauntlet II, 1943 and Street Fighter. For the New Year you can expect to see SSI's follow-up to Heroes Of The Lance, called Dragons Of Flame, as well as the Loriciels pinball simulation Pinball Magic.

## UIRFII IMASTERTRONII

TThe Virgin Games label leads the way with two coin-op conversions. Double Dragon II takes up where the original left off, with the two brothers seeking revenge for past wrongs. The game is available on the ST, Amiga and PC. Ninja Warriors carries on the martial arts theme, and is out on the 16 -bit formats. That old party game favourite, Cluedo, makes a disguised appearance on the Leisure Genius label as Cluedo Master Detective. The grisly murder takes place in a country manner - but was it really Colonel Mustard in the conservatory who did it with the trusty lead pipe! On the budget side, I6-Blitz is to release Sidewinder II on the ST and Amiga, whilst come January. Conflict and Hunterkiller will be added to the line-up.

Ninja Warriors




## A SHOOTING STAR


lason's obviously an inventive devil, as he's provided some graphics for an imaginary game to give us an idea of his potential. It's a horizontal scrolling shoot 'em up using four layers of parallax, and as you can see from this selection of sprite animation frames and mock-up screenshots, it all looks rather impressive.


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## Software Classics

## Sensational Value




40 E E G

MASHERS I.S.GOLD
A CAME RME MO OTHER

## NO MERCY-NO SURRENDER

## A NEW 3D DUO FROM LOGOTRON ENTERTAINMENT


$T_{\text {city }}^{\text {thas As Paul }}$, IC city As Paul puts it: "Our original plan was to do a game to which we could apply what we'd work out quite like that. All the lands scaping routines had to beredone from scratch. And of course, as It's a much speedier game, the whole routine had to run at a much faster rate. Excuse me while i go and get some Anadin..."


V/ orking on a New Year's Resolution: nend.
different terrains, several shield generators for defence purposes and more powerful weaponry.

But there's no such thing as a free launch - these upgrades all cost cash, which is awarded as a 'bounty' whenever a crook is wasted. "We thought about the idea of selling stuff you've already bought back, but we'll probably drop that now. We might do a kind of 'insurance policy', which is basically buying an extra life, so that when you die you can start again with a ship configuration the same as before you snuffed it.

The criminals themselves, Astral claims, are to behave a little differently than yer average bad guy "In most 2D shoot 'em ups, bad guys are ranged that is only enemies in your own vicinity actually do something. The rest of the time they just disappear In Resolution 101, the enemies are all governed by time. They're always doing something somewhere - and if you don't get to them before their individua clocks run out, they'll go away and come back as a nastier type of alien. And so on.

Another novel feature of Res is the Trial system, which is there primarily to allow you to get a feel for your ship. There's no aliens, just a deserted city, and the whole thing is set against the clock to encourage you to learn how to control your ship at high speeds.


- ome of the criminal sprites, as seen in * mid-development. All the non-vector graphics are beling handled by freelance artist Kevin Bulmer, who in the past has lent his binary brushwork to Gauntlet II and Galaxy Force. "We like working with Kevin as he comes up with his own Ideas rather than Just doing what he's told. We don't need to describe an alien to him specifically for him to draw it. We just say 'do us something nasty and menacing' or 'a flying saucer-type thing' and he does itI'

1he hovercraft's console has an innovative energy meter. Instead of a bar or counter, the face of the crime boss you're currently after is displayed, and his expression changes in respect to the action. If his men are wiping you out, he smiles. But if you've got him cornered and start pumping him full of laser fire, he'll adopt a more sombre visage. The finished game promises four different mugshots, al digitised. Kevin Bulmer has digitised himself, Paul and lan smiling and frowning and has even added eye-patches and scars to make them look meaner!

1 ust one of the many law-breaking aliens. This one throws out mines in every direction -but it's not just the enemies themselves you need to watch out for, the mines themselves behave differently. Some are fused, timed to go off after a few seconds, while others detonate when they sense that your ship is nearby.



ATARI ST


## AMIGA



## THE SEVEN GATES OF JAMBALA

Escape from the caves of Jambala in this fun-filled jump and run game with stunning graphics and sound.
You will face a labyrinth of caves which not surprisingly hide a host of inhabitants, good and bad, treasures, puzzles, magic spells and many hidden screens.
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## WORK IN RROGRESS

When Mike Singleton programs a new game, the world watches and waits. His Lords Of Midnight revolutionised the possibilities for 8 -bit computers, and his new game Midwinter looks set to do the same for 16 -bit. Resident ski instructor, Phil South, went to Liverpool to see it with his own ice and now snows what's what.
remember playing Mike Singleton games on the Sinclair Spectrum, and marveling at how so much could be crammed into such a small package. Lords of Midnight was one of the biggest games on any computer, let alone a machine with the appearance and memory of a rubber placemat.
Midwinter grew out of the need to hang a game on the new graphics system which he and his partners at Maelstrom Games had constructed. The new system, a part of a trend very popular at the moment in 16 -bit game design, is a 3D landscaping technique which creates and maintains very rugged landscapes. And Midwinter has a very rugged tandscape.

## THE STORY SO FAR

The scenario concerns the fact that in the not-so-distant future, around 2017 in fact, global warming witt become a very serious and pressing problem, and so ways of reducing the heat of the Earth are diseussed in highranking offices throughout the USA and Europe.
One thing which stands out as the solution is the premature dawning of a new ice age, and although this is never talked about openly the statistics are outlined in a top secret document commisioned jointly by the USA USSR and Federation Of European Nations.
According to the report, Diamond Dust (fine particles of matter high in the atmosphere) would block out the sun's rays, cooling the seas and halting the rise in their level. However the only way to get enough dust into the atmosphere is either by a major meteor strike... or a multi-megaton bomb.
Because both options were too horrible to contemplate, nothing more was said. Later, when everyone had forgotten about it, the unimaginable happens. A huge meteor hits the Earth and the diamond dust does cover the planet. And the ice age begins..

## DESIGNING THE ICE AGE

When Mike first came to MicroProse with the idea for a really rugged 3D game, the company was sceptical. If it was going to be a MicroProse game, it had to be realistic, a simulation of some real event. And so gradually over a period of months, the scenario for the game was developed jointly by Mike and Rob Davis of MicroProse.
The data for the complex scenario was gathered by talking to leading experts in the fields of climate and natural disasters at museums and universities in the UK and America. Included in the manual is a supposed top secret document covering all aspects of accelerated global cooling
(actually written by Rob), and like all MicroProse documentation it's comprehensive, and chillingly possible.
To keep up the story's realism, a location had to be found where people would survive the glaciers moving down and up from the poles. This had to be in the equatorial region, and so The Azores, slap bang in the middle of the Atlantic, sounded good. Research then had to be done to see what the map would look like if this catastrophe actually occurred apparently the sea level would drop by at least 500 feet, so contour maps of the ocean bed were traced to give a true view of the location as it would look after ice had formed and the snow had fallen
The game now began to form... with the player as leader of a band of Peace Officers, sent to this island 'Midwinter' (all of the Azores now joined together!) to root out the evil rightwing leader, Colonel Masters, and his crew. To get to them you use skis, snow buggies, hang gliders and just plain trudging about in the

## SEEING THE SIGHTS

The game has the look of a very serious piece of work, with maps, guages, and all the elements of a heavy duty 'heads down' strategy game.

Most of the game is controlled though point and click icons, which bring up status screens of information and graphics describing the people in the game, their relationships, their abilities and their hoalth and strengths.
This is what Mike calls the soap opera aspect: "There's all sorts going on. For example, Doctor Rivell's having an affair with Bob Hammond's wife. So if he tries to recruit Bob Hammond he gets a rude message in return."
There are already many people living on the Azores area map when the Peace Officers arrive, as Mike explains: "The people without constable uniforms are civilians - like the Local Doctor who's got questionable moral virtues, Virginia Caghill the Sking Instructress, Professor Christianson the Electronics Wizard, and Mr Gunn who's a Mining Engineer so he's good at sabotage and stuff like that. There are also a couple of kids, a Nurse, a Peddler, and an old lady - Mrs Rangworth. Some of the more innocent characters have a greater chance of slipping by the enemy unnoticed, whereas the members of the Peace Force get jumped on."
Other screens contain maps of the contour variety and also fractal, light-source shaded ones, to give you an idea of the terrain at any point. Mike explains the initial gameplay simply: "You play Captain Stark, and you start off with a team of one, and you must recruit other people for your task as you go along.



The map gives an overview of Midwinter, the island which used to be The Azores before the meteor hit. The map on this screen is an accurate representation of what the relief map of the area would look like. If you punch up the buttons on the right, lights indicate the locations of buildings and people. Using the map you can plan your attack and find people you need to contact.


- ach character ha's his status screen, showing you all his/her attributes and performance in the game. From this screen you can look at whether you are stitl healthy, and check detalis about your characters' personal life, just in case you run into someone hostile to you. It's like Coronation Street meets lice Station Zebra, really.





## CINEMAWARE

 PRESENTS




Cinemaware presents a special Double Bill for Amiga Users featuring IT CAME FROM THE DESERT and TV SPORTS BASKETBALL.
Experience bugs the size of Buicks. Feel the desert wind chap your parched lips. Be consumed by your worst nightmare. Witness science fiction become fact as the unimaginable become real .... in IT CAME FROM THE DESERT

Lace up your hightops and get psyched for a fast breaking, in-your-face, full court, 5-on-5 pro basketball simulation that looks exactly like a network broadcast. TV SPORTS BASKETBALL is truly the Phi Slamma Jamma of Basketball simulations.

IT CAME FROM THE DESERT is now playing for the Commodore Amiga (IMEG only) priced at $£ 29.99$. TV SPORTS BASKETBALL is a coming attraction also priced at $£ 29.99$

Cinemaware's TV Sports Football and Lords of the Rising Sun are already available for the
Commodore Amiga.

## MIRRDR

SOII

## WORK IIN <br> Grandslam has the licence, Teque has the conversion contract and Gary Whitta has the inside story on the forthcoming 16-bit versions of Space Harrier II.

wELCOME to the fantasy zone... the introduction to Sega's Space Harrier first brought the mid-eighties' gamer into a world of fast 3D graphics and hydraulically-operated roller-coasting action. The gameplay was simple, if a little surreal (the enemy included dragons and mushrooms in its ranks!), involving nothing more than simple shoot 'em up gyrations - but the incredible speed and real movement made it one of the most popular coin-ops ever.

Strictly speaking, Space Harrier Il isn't a coin-op conversion. The sequel to Sega's famous hydraulic 3D blaster was only ever released as a cartridge for Sega's own 16-bit MegaDrive console - but as it's practicatly arcade quality anyway (MegaDrive games have a habit of looking uncannily like their coin-up parents), there's virtualily no difference between converting this and a fully-blown coin guzzler.
That task has fallen to 21 year-old Teque veteran Mike Hart, who's been with the company for atmost three years. Mike's previous projects include the original arcade adventure Prison (for the company's own Chrysalis - now Krisalis - label) and, more recently, the conversions of Segars Passing Shot for Mirrorsoft.
So what's Space Harrier II's scenario, Mike? "I don't think there is one as such. It's not exactly a complete sequel, more of an extended remix of the original, with extra


The huge Robot Creatures from the original Space Harrier make a return in the sequel - the Sega MegaDrive version is pictured above (attacking poor ol' SH himself), and on the right the ST equivalent, seen in all its separate frames. Fortunately for Mike and Jason they don't animate - they just swoop into the screen fly around for a few seconds then leave.




> his alien head sprite demonstrates the way in which each frame is drawn by hand rather than calculated to create a clean and functional animation effect. With a sprite as large as this, Jason chooses to draw it one piece and a time and then join them together - the separate elements can be seen in the bottom-right portion of the screen.
graphics, monsters and levels. The basic idea is the same though... blow the \$\#lt out of everthing without getting killedाए
Mike's been working on the project for around three months now, and he anticipates another month of solid work ahead before the job's done. He admits that finding where to start on a conversion isn't easy, "t did the chequerboard floor first. That's really just a simple 3D routine, and once I'd got that moving in and out and banking left and right smoothly $t$ tackted the sprite handling:
As Mike explains, sprite handling isn't too daunting a task in most games, but in Space Harrier II it's a different story. "The sprites are huge, and there are so many of them (over 50 types), and most of them are animated." And when you've got 10 or 15 of them swirling around the screen at once, things can get a irtle heetie
"Most Sega coin-ops, Space Harrier it included, use a sprite expansion routine that recalculates the size of a sprite when it moves, " explains Mike $A$ sprite is drawn once, at minimum size, and as it gets close
it's iust blown un in size - in its larnest frame it's just a blocky mess, but it moves so fast you don't really notice and the effect is quite convincing.
Unfortunately, whereas Sega coin-ops and the MegaDrive boast hardware designed specifically for this application, the ST and the Amiga aren't so well equipped. "Sprite expansion could be software-controlled, but it'd just be so slow there's be no point in doing it.
So what's the solution? "Plather than take one sprite and expand it, Jason Wilson (the graphics man) draws each animation frame separately, from the smallest through to the largest. This way the poor old ST of Amige doesn't have to worry about manipulating an existing sprite when it moves - it just erases it and replaces it with the appropriate frame.

Ore of the main probtems with creating ar accurate conversion is making sure it plays like the original lengthy sessions on the console were therefore in order. "Sega wasn much of a help," Mike clams "op people are all very tightilipped, but think Sega is actually the worst of the lot. The people there wouldn't tell us anything!
Fortunately for Mike, all the attack waves are preset, so by videoing the entire $g$ ame from beginning to end and using that for reference, it's possible to copy them perfectly. Sound is being handled by Teque's recently aceuired Matt Furnics, whe hepes to be able to sample most of the music and effects directly from the console. Some of the most used effects, like the sampled 'Get Ready! and 'Aaaarrghhl' will definitely be included - in both versions! Matt's going to have a crack at sampled ST sound, and is confident he manage to pull it off. But only time will tell.

[^1]ach level has its own end-of-level Boss, much like those seen in the original. As in the MegaDrive version, these are built up of smaller sprites - this giant turtle, for example, is drawn piece by piece. When the time comes to include it in the game, the shell, head and fins will be joined together to create a single sprite. "Making the big Bosses move is easy," claims Jason Wilson, "you just set the movement path for the lead sprite then send all the others off shortly after it, giving them the same path. The end result is what looks like one big alien."
 surprising that the ST version is the more complete of the two. There's only one major difference expected between the two - the Amiga version should incorporate a full-screen overscan playing area. "Elite's conversion of the original managed it, so I'm going to give it a go too. It's quite easy to do, as the Amiga's specialised Blitter and Copper chips take care of all the main jobs, like shifting graphics about, so l've got a lot of processor time left over. Pete (Harrap) did an overscan version of Pac-Mania, so I think I'll borrow some of his code and.. hey presto!"

1 Ithout any aliens to get in the way, Mike can test the two fundamenta routines - the movement of the landscape and control of the main character without hindrance.



# OUT OF THIS WORLD TOWER OF BABEL 

An intricate 3D strategy game involving an interconnecting network of towers, platforms and lifts all rendered in solid 3D with innovative light and shading techniques. Take control of robot spiders and program them to solve problems and puzzles and interact with other creatures, such as Pushers, Zappers and Grabbers. Alternatively, real time control is available to you at any time for instantaneous reaction to the game's developments. For the more adventurous among you, there is a complete game designer, allowing the construction of your own series of towers, platforms and lifts. Attempt to fox your friends with your own fiendishly difficult creations. More than just a game, more than just a puzzle - Tower of Babel is a whole new concept in strategy gaming.
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Imagine yourself in a world full of nightmares with Dali-Esque creatures \& mind eating eyes. Picture yourself in an upside down landscape Alone in a weird dream \& wondering what the .
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## MASTERS OF STRATEGY A DIVISION OF MICROPROSE SOFTWARE

 MicroProse, Unit 1, Hampton Road Industrial Estate, Tetbury, Glos, GL8 8DA.



A CROWDED DC-10 AIRLINER IS HIJACKED ON ITS WAY FROM PARIS TO BOSTON.

Gary Whitta loads his mouse and begins his second tour of duty in Ocean's conversion of Taito's two-player blaster.

equels are never better than their predecessors. Well, apart from Godfather II maybe - the only sequel to ever win a Best Film Oscar. Oh, and Operation Thunderbolt of course. With a vibrating Uzi machine gun mounted on its cabinet, Operation Wolf marked a new generation of shoot 'em up. Operation Thunderbolt took things a few stages further...

Apart from a welcome simultaneous two player option, Operation Thunderbolt's most notable extra is every other section being a first-person perspective 'driving' sequence. Otherwide the gameplay is in the same simplisitc, violent and entertaining shoot 'em up vein as before.

A part from extra ammunition and rockets, available extras include body armour, two strengths of revitalising medical supplies, and a faser sight to make aiming considerably easier. Supplies are acquired either by blasting the crates frequently parachuted by HQ or by shooting some of the less obvious targets, such as eats and dogs.



THE HIJACKERS THREATEN TO KILL THE HOSTAGES IF THEIR TERRORIST COMRADES ARE NOT RELEASED FROM JAIL.


THE HIJACKED PLANE LANDS AT KAUBYA AIRPORT, AND THE HOSTAGES ARE HIDDEN IN SEVERAL LOCATIONS.

at in a stolen jeep, Roy and Hardy speed towards the first of the terrorist's hideouts. The main threat here is from enemy vehicles, but there's also an ample supply of foot-soldiers and - even worse - improved air support in the form of helicopter gunships and jet fighters. The latter fly past at supersonic speed, guns blazing, and drop bombs that roll under the jeep unless shot.



THE MILITARY AUTHORITIES CALL UPON ROY ADAMS, THE MAN WHO PERFORMED THE OPERATION WOLF MISSION ONE YEAR ACO, TO RESCUE THE HOSTAGES.


ROY COES INTO ACTION ONCE MORE, THIS TIME WITH HIS FRIEND HARDY JONES.


Vith the location of the terrorist HQ 1 established, the dynamic duo attack a nearby enemy outpost to obtain ammunition and transport. This time the enemy's backed up by tanks, armoured vehicles and more helicopters. To make matters worse, the soldiers are more vicious - they actually fire bazookas and throw a barrage of grenades and knives.


Doy and Hardy land in the target area and Menter the first level, with the objective of menter the first level, with the objective of out the location of the terrorist's base. This war-torn city is teeming with gun-toting terrorists, so tear a path through the streets and reach the church where your contact is holed up. Nothing too difficult here, just a few hundred terrorists and the odd helicopter to get you into the swing of things.

Speech and sound was sampled directly from the coin-op by means of its Test Mode which plays in sequence all of the sound from the game at the touch of a button. Aegis' AudioMaster II then converts it into a format the Amiga can understand - but can you guess the two waveforms shown here? "Made contact with intelligence agent and obtained infor mation!" is above, while "The hostages are all dead - your mission has failed!"is shown below.


A elast the enemy hideout is reached and the A hostage rescuing can begin. Distressed fernales, invalids on crutches and businessmen are released by shooting.the padlocks from the prison doors - but no-one's rescued until they make it off the screer., so ease off on the fire button for a second or two (easler sald than done with terrorists shooting at you from windows and rooftops as well as the main courtyard!)



- ake it through the terrorist hideout alive, and the hostages are bundled onto an enemy patrol boat and the getaway begins. This is really an aquatic rendition of the third section, but here the enemy attacks in greater numbers.


46


The terrorist's central HQ is located, and so Roy and Hardy stop to liberate the rest of the hostages. Resembling a large underground car park, the HQ is perhaps the most heavily defended section of all - muscle-bound M60bearing soldiers protected by body armour blaze onto the screen, and at the end of the level there's the commandant who rattles off a volley of anti-tank rockets!

The penultimate section sees the dynamic duo escorting the hostages on the road to the hijacked DC-10. Even more soldiers, tanks, armoured cars, helicopters and jet planes are thrown at you until the airliner is reached and the hostages bundled on board.


1 Inside the airliner, the situation is grave. The terrorists aren't going to give up the plane without a fight, and to make matters worse the panic-stricken hostages run around like headless chickens. The aisle to the control cabin is lined with increasingly aggressive gun and grenade-toting terrorists, and a final showdown with the terrorist commander awaits at the end. But he's holding the pilot hostage, so unless your aim is true you won't be flying the DC-10 out of Kalubya and to safety.


0peration Thunderbolt is the work of Ocean veteran John Brandwood, who's been with the company for over three years and started out developing on the humble Amstrad CPC of all things! His first project was the computer adaptation of Short Circuit, followed by two coin-op conversions: Taito's Renegade and Konami's Gryzor. John's obviously a man who sets high standards for himself - he rates his 16-bit debut, Rambo III, as "crap" and even describes Operation Thunderbolt as "alright'
Work on Thunderbolt started in May 1989, as soon as Rambo III was out of the way. Strangely enough John wasn't overly-enamoured by the coin-op, and is only too keen to cite a long list of its faults - everything from minor gameplay flaws to major cock-ups in the 3D routines.
'There aren't as many enemy soldiers in the conversion, as I thought a major flaw of the coin-op was the way you could wipe out a whole screen with just a few bursts of the trigger. Using the mouse there's a lot more skill involved, and by cutting down on the number of men on-screen, it becomes much more of a game.

Sounds like an excuse to us... "Nope," he's quick to point out. "Anyone who doesn't believe me can use the 'cheat' mode that puts MORE sprites on the screen at once than there are in the arcade and with no loss of speed!" True to his word, the 'cheat' works - and it doesn't take long to realise just how unplayable it becomes.

Size doesn't matter, as the saying goes, but John is quick to quosh that rumour... "The hardest job for me was just fitting everything in - there's over 600 K of sound alone, and God knows how much graphics. Taito sent us the original graphics which we managed to compress down to 25 disks in the end." Fortunately, John's got some nifty compression routines, and once everything has been redrawn by artist Robert Hemphill, he was able to save quite a bit of space and eventually cram it all in.

REVIEW

(1)The conversions Operation Wolf were competent for their time, but a year later they don't look quite so impressive - perhaps this is why there was some concern as to the possibility of the quality of this more involved sequel. Fortunately Ocean's in-house team has shown just what the Amiga is capable of when put to task. It's an almost perfect carbon copy of the coinop. Unlike the conversions of the original Operation Wolf, there isn't a crosshair to mark the impact point of the bullets. This is a great improvement, as it forces you to use the coin-op technique of watching the path of your bullets for targetting purposes, rather than just 'point and click'. But it's the sheer rate of the action that really impresses - no matter how busy the screen gets (and it does get very busy) there's virtually no loss of speed or smoothness. All of the original's sound is here (including the speech), and serves to further enhance the coin-op feel. The icing on the cake is the presentation - one disk swap is all that's necessary, and for that you get just about every last finishing touch, from the introductory story to the separate death scenes for each character. Gunbelievable!

PRICE
£24.99
RELEASE DATE
Out Now
93\%
SOUND 91\%
PLAYAB|LITY 91\% VALUE 81\%

## OVERALL

90\%


Atari Thunderbolt won't be quite as fat or smooth and while John hopes all the inter-level sampled speech will be present, the sound effects will be of the basic AY Chip type. But never mind, it's every bit as colourful (the Amiga version only used 16 colours in the first place) and it should be out round about now at £19.99.


Ocean has no plans for an IBM-compatible version at present. But nevertheless a PC incarnation is bound to appear sooner or later, if only on the other side of the Atlantic as Taito tends to convert all its coin-ops to PC itself in the States.


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The first thing that im－ presses about Toobin is the music：it＇s bril－ technical achievements， ＇llom os awes aut spy The same goes for the graphics：car－ toony and colourful，they echo the coin－ op＇s laid－back，silly style．The sound effects are less impressive because they are more limited：an impressive ＇boing＇when the＇toob＇bumps into an obstacle，and some neat spot effects as you get punctured or pass through a gate．In one－player mode it＇s great fun： deciding which treasures to go for，and
 to nip out of the way of a laser－bolt．
 there are two of you to lob cans at obstacles，fight for treasure and esca－
pe from the croc．If you＇ve got fewer pe from the croc．If you＇ve got fewer
points than your opponent，and you＇re feeling really vindictive，you can al－ ways jostle them into the nearest tree －whoops！This is a faithful version of the coin－op without being a pixel－for－ pixel conversion：the control system has been well translated，but more
importantly， 16 －bit Toobin＇has all the importantly， 16 －bit Toobin＇has all the
fun and playability of the original． Check it out．
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\％28 77VリヨハO
e are very few dif There are very few dif－
ferences from the Am－
ga version：the action
moves slightly faster， － $\begin{aligned} & \text { moves slightly faster，} \\ & \text { but the music（though }\end{aligned}$ good）doesn＇t have quite the same
effect．Even so，it＇s worth any toober＇s effect．Even so，it＇s worth any toober＇s
time and money．

MS－DOS rubber－ringers should wing their way
down to the software down to the software
emporium now to pick up either the $31 / 2^{\prime \prime}$ or Hoddns чगчм ¥о ч7о9＇suo！sian „＂／S Tandy，Hercules，CGA and EGA
graphics modes．



River animals are a real pain．Snakes and
idragonflies are bad enough，but the worst
 sneaks up from behind and doesn＇t disappear
until you pass through a bonus gate．Let him until you pass through a bonus gate．Let him
bite your ring and you writhe around until you
sink
eople and creatures on the bank are also
quite annoying－if it isn＇t devils throwing their tridents at you，it＇s natives with blowpi－ pes，eskimos with spears or sphinxes with when they feel like it，and penguins dive in as
you wobble by．Don＇t you wish you had more you wobble by．Don＇t you wish you had more
than three lives per credit？

The most common obstacles you find on the river（after the water）is a bonus gace．and smallest gives the highest poins（largest the lowest（100）．But ide toobers beware！Bump the gate and it widens，halving

## 



The river is jam－packed with goodies to extend your ride．The most useful is an extra life patch，but others include a beach（for
（for turbo paddling power），extra cans ammunition），bonus letters and treasure
chests．As a solo player，you＇d be hard pushed chests．As a solo player，you＇d be hard pushed
to collect them all，so you better be quick to decide which is most valuable．．．


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## THIS MONTH!

## FUTURE WARS: TIME TRAVELLERS

## (Palace/Delphine)

rabbing his sonic screwdriver and extra-long scarf, Paul Presley goes back to the Future Wars to guide lost souls through Delphine's timely adventure...
YOUR quest starts here - although at this point you don't have an inkling as to what's going on. After getting a blasting from your boss, you wring out your chamois leather and start exploring. EXAMINE the scaffolding to reveal the lift control, and OPERATE the UP button to bring the cradle up to the correct level. OPEN the window that your boss appeared from and enter the building.


AINSIDE the building, your boss prevents you from exiting via the right-hand door. USE your empty water bucket with the sink to fill it, and then OPEN the toilet door. TAKE the little flag and OPEN the cupboard to your right. TAKE the insecticide, and TAKE the empty plastic bag from the trash basket. Walk over to the exit door and TAKE the key you find there. Then USE the bucket with the door your boss appears from to balance it on top, then exit. When your boss appears, the bucket falls on top of him, leaving you free to exit!


DIN THE Map Room, USE the key you just found in the cupboard to reveal a typewriter. EXAMINE the typewriter, and write down the number you find. Then OPEN the desk drawer and get the sheaf of blank paper. Walk over to the map and USE the red flag with it to open a secret passage. SAVE the game at this point and then enter.

$\triangle$ YOU HAVE to work fast to shut down the mechanical ceiling before it crushes you. OPERATE the numbered keypad and punch in the number you found on the typewriter. You can only put in one number at a time, so being quick on the draw with the mouse is the key. When the fifth digit is entered, the ceiling raises and a hidden door appears. You don't have to be told what to do next...


AYOU REALISE something is amiss when you enter here this room is hardly a normal office environment! All that seems to be normal is that photocopier in the centre. USE your sheaf of blank paper with the opening on the machine and OPERATE the green button followed by the red button. When the documents appear, TAKE them and an alarm will sound. QUICKLY leap onto the teleport pad to the right before the Crughon guard appears. After a blinding flash of light you find yourself...



FIN THE middle of a swamp in the year 1304! Before you can do anything else, you have to get yourself out of this treacherous mud hole. Make your way across to the left, walking on the green areas only - any other
part of the screen is lethal. Get as close as possible to the swarm of mosquitoes and USE the insecticide to see them off. Walk further across to the left and EXAMINE the glint of light to find a pendant. TAKE it and exit to the left.

 back to the Castle screen and enter the pub.


A WALK over to the tree by the lake, EXAMINE it and TAKE the rope you find there. USE the rope with the branch of the tree to climb up and wait there. After a while a local peasant comes along, strips off and goes for a dip in the lake. Climb down, TAKE the tunic and trousers, put them on and exit to the left.
$\nabla$ IN THE pub, USE the silver coin with the bar to buy a drink, then sit back and relax to listen to some revealing local gossip. When it's finished, exit the pub and go back to the guard... who now lets you into the castle.


AHERE, the first of your quests is explained to you by the local lord. His daughter has been kidnapped, and it's up to you to get her back. Pay special attention to what he's got to say, then leave, taking the lance from the sleeping guard as you go.

$\triangle B A C K$ at the large tree, USE the lance with the tree branch to knock down the monk's habit and put it on. Now make your way back to the lake.


A GO UP to the lake and USE the plastic bag with the water to fill it up. But don't hang about it's leaking. Rush back to the castle and exit via the bottom of the screen.
ATHIS snarling wolf blocks your path into the monastery. To put him out of commission, throw the water at him (he's an electric wolf you see!).



ATHERE are two golden rules to bear in mind inside the monastery. NEVER walk into the centre of the room and ONLY walk around the room clockwise. Break either rule and the disguised Crughons capture you. Walk around the room and enter the door to the left. After the set piece that follows, go back to the central room and go through the door on the right (apparently programmer Paul Cuisset got the idea for this section from some obscure French movie he once saw!).

$\triangle$ THE LEADER of the Crughon monks is here, and he's a tad thirsty. Do as he tells you, and leave the room before going back to the room on the left.


A WALK up to the altar and TAKE the cup, then leave and go through the door at the top.

- THE WINE Cellar. USE the cup with one of the barrels to fill it. Then leave the room and go back to the room on the right.



ATAKING the wine and guzzling it down, the Crughon leader becomes a little bit worse for drink and passes out. EXAMINE him to find a Remote contron unit which you should TAKE. Then USE it with the small cabinet found underneath the book-case to open another secret door and reveal a magnetic card. TAKE the card, and go back to the Wine Cellar.


USE THE Remote Control again, this time on one of the barrels to open yet another secret panel! Climb through and...


AYOU FIND yourself in the Crughons' space-age command centre. EXAMINE the glass case to find a gas capsule. TAKE it and then USE the magnetic card on the computer in the centre of the room toted! A jolly nice set-piece follows giri - and that's the irst and through time once more and the second quest begins $-2,000$ years into the future...

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## Gary Whitta plays noughts and crosses with Raínbow Arts' aquatic 'Xlaster.

Rainbow Arts' habit of 'borrowing' ideas and elements from famous games is one that's led them into producing some top quality stuff - but it's also had the unfortunate side-effect of plunging them into controversy due to the unmistakable resemblance to the other games that - ahem - inspired them.

Perhaps the most notable examples of this were The Great Giana Sisters (that looked just a tiny bit like Super Mario Brothers) and Katakis - such was the trouble caused by that one, due to its similarity to R-Type, it was never released in its original form, but tweaked and renamed as Denaris.

X-Out marks a bit of a change for out German mates, as it doesn't actually look like anything that's been done before - it's just about as original as a horizontally-scrolling shoot 'em up can be. There's no real plot, just eight levels of alien bashing spiced up with a liberal sprinkling of extra weaponry and - of course - a supporting cast of end-of-level Bosses.

The opening level, following on directly from the introductory sequence, takes place underwater. While the aliens aren't too difficult to deal with, there are several dangerous caverns where there's little room to manoeuvre and the backgrounds end up doing more damage than the enemy.


## REVIEW

0
Although X-Out has many of the qualities of Rainbow Arts' last shoot 'em up, Denaris, it's also managed to avoid most of its failings. Whereas Denaris was so tough it was almost unplayable, this is more easy-going. mainly thanks to your weaponry being a lot more powerful and wider-ranging. It's not particularly arcadey, mostly due to the diminutive sprites, but X Out manages to overcome the cramped feel of play with the vertical scrolling element, which also provides an extra dimension to the gameplay - because many aliens are hidden above or below the screen, you need to explore to find them all. The energy system is a welcome extra, allowing you to make mistakes without paying too high a price but it's a flawed system as virtually any collision with a background obstacle kills you immediately - very annoying. Nevertheless, X-Out is an enjoyable blast despite these minor niggles - it's by no means the best, but a worthy addition to the genre.

## PRICE

£19.99
RELEASEDATE Late January GRAPHICS 79\%
SOUND 81\%
PLAYABILITY 80\%
VALUE
??\%
OVERALL 79\%


A version is planned for sometime around February. However work isn't yet at an advanced stage, and so details concerning how it will fare in contrast to the Amiga version are a little sketchy.


Alas and alck, there's no version planned.



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## BATMAN <br> (Ocean) LEVEL ONE

The Axis Chemical Factory is patrolled by two types of guard normal hoods, who fire bullets to the left, right and diagonally downwards, and the 'Lawrences' who throw grenades. The Lawrences are the more dangerous, as the grenades they throw
travel through an arc rather than a straight line, making it difficult to determine just where they will land. Bats is most vulnerable to both kinds of attack while on the Bat-rope as he can't move properly, and so evade bullets and bombs. Try to limit your use of the rope, and before you do use it, study the movements of any nearby guards so you can climb or swing while their backs are turned.


## LEVEL FOUR

A speed of just over 100 mph is best - not too


The acid leaks are no problem to negotiate - get as close as you can and run across as soon as the farthest pipe has dripped.

slow to run out of time, and not too fast as to make it difficult to manoeuvre. To be safe, cut the ropes by clipping them with your wings rather than hitting them with the main body of the Bat-wing. If you get too close to a balloon and you are still not properly on target, get out of the way and concentrate on hitting the next one.

## LEVEL FIVE

Although the basic gameplay remains the some, the Cathedral is a
lot more dangerous than the Chemical Factory. While the factory is horizontal in shape, the Cathedral is a vertical tower, so there's a lot more rope-climbing to be done. Spikes and disappearing floors that dissolve after a few seconds make an appearance here, as do the touch-dangerous rats. To make matters worse, many areas of the ceiling are covered in stalactite-like structures which the Batrope can't grip. The best bet is to take your time (you get a generous time limit) as you work your way up most of the principles from the first level apply here.

## LEVEL TWO

4 As soon as the arrow appears, get onto the side of the road that the arrow is pointing, or at least stay in the middle of the road. While hooking the third and last lamp-post is more dangerous (miss it and you get stopped by the
police roadblock) it does rake in extra points. The most important thing to do is cover a distance of 50 (the first checkpoint) without crashing - when you crash you are only sent back halfway as opposed to all the very beginning.

## TIPS

## QUARTZ (Firebird)

P
aul Shirley's ruby-mentary tips are just the ticket for struggling shoot 'em uppers.


## THE LATTICE

-ince the Lattice forms the majority of the gameplay (it's played three times more than any other section) it's one of the most important to master. Bear in mind that the colour of the Hadrons (the large asteroids) doesn't matter: they all release three Qaurks, one of each colour, and occasionally (about once every three Hadrons), a triple-Quark which awards one Neutrino of each colour. Get an OctoGun (eight-way firepower) as soon as possible, as it allows you to take out Hadrons without having to aim at them. It's also a handy defence mechanism - even if you've got Hadrons closing in on you from all angles, a single shot should put you in the clear.

## THE ATOMIC ZONE

T
he things to avoid on this level are the rotating arms of flame running into them kills you instantly, or at best reduces your energy to practically nothing. The trick is to get past them as quickly as possible, so invest in a Speed-up or (if you feel adventurous) two. Before you get to the end of the level, buy some Grenades. When you reach the Nucleus, throw three grenades to weaken it and finish it off with laser fire. Remember to avoid the glowing debris when it explodes.



## THE VOID

uy a Flame Thrower as soon as possible to deal with the alien waves and gun installations, but don't waste ammunition trying to take out the meteorites that come out of the screen at you - they are invincible. Do your best to stay out their way, but don't worry if you do take a couple of hits - they hardly inflict any damage at all. The large spaceship has three eyes that must be destroyed systematically. Going in close with the Flame Thrower is risky, so use three Smart Bombs in quick succession instead.

## THE LAIR

E lectric storms are quite common on this level, but don't pay too much attention to them as they aren't particularly dangerous. What you DO need to worry about are the moving barriers. The Cyclops at the end is particularly disgusting festering boils on its body split open to reveal pus-monsters that spit at you. Knock these out one by one using the Flame Thrower, then hit the eye with a volley of smart bombs to finish it off.

## THE ORGANIC ZONE



Multiples are what you need here - at least two of them if you are to have any chance against the masses of aliens on this level. With so many things coming down the screen at you it's tempting to invest in Armour instead, but give that a miss - it provides very little protection. Remember - attack is the best form of defence. The large eye-monster at the end is best dealt with with the Flame Thrower. Get in as close as you can and take out each eye in turn.


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he first (and, quite logically, the easiest) level is solved in the manual, but after that things can get more than just a bit tricky. Here's a step-by-step solution...

## LEVEL TWO - THE SACRIFICIAL LAMB

ooks quite tricky this - one, but the solution is actually very simple. A

security droid is you problem here - at first there seems to be no way past him. Turn the first and second turntables UP and send KAF-E RIGHT over the pressure pad. This triggers the robot, which causes it to destroy itself AND the electrified floor that bars your way. Simple innit?

## LEVEL THREE THE <br> SWITCHBACK

etting a bit more complicated now.. When KAF-E reaches the first turntable, send her DOWN, and as soon as she reaches the turntable below, send her back UP again. Now send her RIGHT, but leave the turntable facing LEFT -
this has the effect of sending the robot off in the wrong direction when he reaches it and trapping him in the lift. Repeat this procedure for the second set of turntables. Send KAF-E LEFT at the next turntable she reaches, but leave the turntable facing RIGHT to keep the second robot in the room he starts in and so out of harm's way. The security camera must be switched off before KAF-E reaches it. When KAF-E'reaches the last turntable, send her DOWN to take her into the exit lift.

## LEVEL FOUR TIME IS OF THE S-SENSE

This floor is arranged in what's almost an 'S' shape - it looks complicated, but it isn't at al tricky as long as you work fast. As soon as you enter the level, destroy the first security camera fail to do this and a robot is activated, making the level impossible to complete. Then go about opening all the doors KAF-E hits as soon as she reaches them. Destroy any door controllers (green cubes) that you spot along the way this saves you time searching for them later. KAF-E will then make her own way to the lift.

## LEVEL FIVE EVER DECREASING CIRCLES

When KAF-E hits the first turntable, send her LEFT. Then got to the turntable in the bottom left-hand corner of the map and set it to face UP. The turntable immediately above it should also be set to UP. Then go back to KAF-E and send her LEFT at the next two turntables. Go to the turntable at the top of the map, and set it to UP, and the turntable to its right to face RIGHT. Send KAF-E UP twice, then RIGHT. The downpointing turntable below the robot should be set to

the RIGHT, before sending KAF-E RIGHT, then DOWN, then RIGHT again. Set the left-pointing turntable to face DOWN, then send KAF-E DOWN, and then UP again. Finally send her LEFT, then DOWN, and then UP into the lift.



LEVEL SIX SPLIT DECISION
F here are two ways to skin this cat - it's entirely up to you which one you choose. The righthand route is the more

difficult, as more 3D work is required. The left-hand route is easier to negotiate, but is strategically more complex - but then that doesn't matter 'cos you've got the solution!

## LEFT-HAND ROUTE

mmediately destroy the open door below KAF$E$, otherwise she runs straight into a robot. Pay a visit to the workshop, generate a clone door and replace the circuit. The next door KAF-E hits should be opened when the patrolling robot on the other side is as far away as possible. After she goes through, close the door on the left-hand side. On the small 'figure of eight' grid above this door there's a turntable facing LEFT. Set it to face RIGHT. Now go to the 'up' lift. The turntable on the right should be turned to face RIGHT into the lift. Now send KAF-E LEFT. Once the robot has gone past, repair and open the door. Now send her RIGHT twice, then LEFT then RIGHT again. Immediately reverse this last turntable to face LEFT - this stops the robot from following her. Finally send KAF-E RIGHT into the lift.

## LEVEL SEVEN THE ONLY WAYIS UP

he first thing to do is set the turntables between all the rooms to face UP. Send KAF-E UP, then reverse the turntable as soon as she has left it, or else a robot will take her from behind (snortl). Repeat this procedure, reversing the turntables as you go, until KAF-E reaches the turntable at the top. Set the turntable outside the 'up' lift to face DOWN to trap the two robots in it. When they are both grouped in together, release them by turning the turntable back UP again, then send KAF-E DOWN the left-hand arm of the loop to bypass them and allow them into the lift.




Catamarans are the basic 'stock' aerial fighter, and are pumped out in large numbers by generator plants. Fortunately they're not too bright, and aft they do is slt on your tail, firing occasionally. They can be easily outrun, and destroyed with missiles and lasers alike.


The Tank is a more formidable opponent. It appears around Level Four and is - as you'd expect - a ground-based enemy. It's slow, and so not too difficult to hit (although only missiles will damage it) but if it hits you you're in trouble - it's one of the game's most powerful aliens.


The Bird looks harmiess, but while it's not too dangerous, it's a nippy little beast and so difficult to nail down. Lasers don't harm it, and it outruns a regular missile. The way to stop it is to lock it down with the tractor beam (it's easy to do as it flies in a predictable circular pattern) to stop it getting away before hitting it with a missile.


Another ground-based alien, this time it's a Spinning Top which runs around the floor in a random direction, ricocheting off objects. It doesn't have any weaponry, but ramming into it isn't too good for your energy, so stay high up if possible.


This isn't just a pretty face. It's one of the most dangerous aliens of the lot, and one of the most difficult to destroy into the bargain. It's fast enough to outrun a missile, and so you'll find the only way to kill it is to fly backwards at top speed while facing it, then launch a missile straight at it, hoping it hits it dead on. If it misses on the first pass and has to turn round to follow it, forget it.


Level Three sees the arrival of this wacky helicopter. It's quite slow (which means that although it tries to follow you it's not very good at it), but it is quite powerfut, with its shots causing a lot of damage. Fortunately it can be killed with laser fire.



The infamous Unicycling Frog is slow, ground-based and hard as nails. They're not difficult to kill (lasers do the trick) but they are constantly regenerated.


Right - this is the one you want to watch out for. It may look like a tadpole, but it's the smartest enemy ir the whole game. Whenever you Iock NAVCOM onto an object, the tadpole-thingy detects this and heads straight for that object. When it gets there it circles the object, firing like crazy to protect it. It can be destroyed with missiles, but it's a risky procedure as any discrepancy in the locking procedure could mean the object and not the tadpole gets destroyed. To sort him out, set up a 'dummy' NAVCOM - lock onto an object far away from the place you want to get to send the tadpole off on a wild goose chase. Then NAVCOM onto and head for the genuine object and you'll get there first.

This Zebedee-type character bounces around the landscape at random, and so it's both a ground-based AND airborne enemy. It doesn't fire anything, but since it's constantly changing aftitude when it bounces, it can be easily bumped into by accident. Laser fire won't help, so hit it with a missile. Or, better still, stay out of Its way altogether.



# INDIANA JONES AND THE LAST CRUSADE: THE GRAPHIC ADVENTURE (us Gold/Lucastilm) 

This edge-of-the-seat matinee classic nears its thrilling conclusion with the third and penultimate part of the complete solution...

$\triangle$ BEFORE you can go any further you need to go undercover. Make your way to the cloakroom and USE the servant's uniform to slip into something more comfortable


AWITH your new disguise on, take a stroll down the hallway to be confronted by this guard. Rather than trying to talk your way past him, OFFER him the painting you took from your dad's house. That gets rid of him. Shortly after you are shown a 'film' of the guard giving the painting to his art-mad commander. Watch this sequence very closely...


AONCE past the guzrd, proceed to this room, OPEN the chest and LOOK inside to find an officer's uniform. Unfortunately it doesn't fit, but take a closer LOOK to get hold of a useful item. Then change back into your Indywear (TM) and take the stairs back down to the first level.
VUSE THE brass key in the lock to get into this room, and PICK UP the Nazi uniform. Go back up to the room with the chest on Level Two and USE it to put it on.


## TIPS



NOW YOU are dressed as a Nazi officer you are free to travel up the stairs to the third level. If you're unlucky you come across another guard on the way, in which case pretend to be a Nazi commander - you can frighten him away quite easily.
$\nabla$ THE FIRST guard you meet on level three is dealt with in much the same way as the last. "Soldier! Your pants are wrinkled," is a good start, and if you keep criticising his dress he's only to keen to let you pass when you tell him.


## TIPS

V IN THE commander's room, GIVE the roast boar to the dog to get him out of the way, then PICK UP the trophy. OPEN the filing cabinet, step aside so that you can see it, then PICK UP the pass and LOOK at it. Then go back to the cloakroom on Level Two and change into your Indywear (TM). Pay one last visit to the kitchen to fill the trophy with beer from the keg. Then go back up to Level Two.



ATHE FINAL guard is easy to get past - tell him that you're on official business, and that you've just been transferred here today. When he asks for more details, ask him if he has top-secret clearance, and he lets you pass.


ATAKE theisilver key hanging from the candelabra in one of the first rooms on this level, and then search all the other doors until you find one with wires leading out from under it. USE the silver key in that door. Going in you find good ol' Sean - erm, DAD! But before you can escape, the alarm sounds and the Nazis appear in force - you're immediately captured of course. When confronted by the German officer, say "Not on your life, Nazi scum!"
7 AFTER the film sequence you find yourself tied up with your dad back on Level One. To get out of this rather compromising position, PULL the chair over to the right-hand side of the room to the suit of armour. Position the chair so the back of it is EXACTLY in line with the mark you made with the battleaxe earlier and PUSH the suit of armour (it's a good idea to save the game before you do this as it's a very tricky procedure). If you positioned yourself correctly, the battleaxe falls down and cuts through your bonds! PUSH the statue next to the fireplace and leave through the secret door.



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The Companions must move swiftly through this wartorn land, cautious of strangers but seeking compatriots and ever alert to the rapid advance of the
Draconian forces. The courageous elves will finally fall, but there is one last chance to free the loyal slaves held in Pax Tharkas and join together to recover the long-lost sword Wrymslayer in what could be the vital rallying point in rekindling resistance to the plague of darkness sweeping over Krynn.

A DRAGONLANCE ${ }^{\text {Tu }} A C T I O N$ GAME


C
ur hero is armed with an extending mace (a bit like a very hard yo-yo) and laser tions.

= is kTiger's infernal quest takes him - rough eight multi-directional scrolling lev , s, each split into two sections. There's nothing subtle or tricky in the gameplay, you just shoot everything in sight while leaping from platform to platform and occasionally climbing the barbed columns. There's a strict time limit, but the helpful directional arrows should go some way towards helping you beat this.

## REVIEW

## Resident pussy <br> cat

 Brian Nesbitt gets his teeth around Gold's latest CanCom conversion and finds it's earned its stripes.You are about to enter a place where many have ventured but none have returned.
You are here to defeat the Guardians of Darkness - three dragons, each half a screen in size, lurking at the end of the third, sixth and eighth levels.

You are the land's only hope of freedom from eternal torment.

You are Black Tiger - mean, lean and an all-round fightin' machine.


There are 15 types of adversay, including two types of hatchet men, fireballthrowing fire demons, blue and orange blobs that leap about, plants that shoot from the ground, snakes which wrap around columns, bats and leaping blocks. Some creatures, such as the plants and snakes, are poisonous - the strange brew they spit stops you throwing daggers and requires a speedy antidote.


# REVIEW <br>  



Although it's not exactly the best-known of CapCom's coin-ops, Black Tiger is very much in the Ghosts ' $n$ ' Goblins mould - and very playable with it. And the good news is that this conversion feels surprisingly close to the coin-op - nothing mentally taxing, just good clean blasting, avoiding, collecting and exploring fun. There are no major criticisms really: the graphics are well drawn and smoothly animated, and the sound is good and appears in all the right places. It's not easy, but then saving lands from torment never is
PRICE
£19.99
RELEASE DATE MidFebruary GRAPHICS 87\% SOUND 80\% PLAYABILITY 88\% VALUE

80\%


86\%


This looks identical to the ST, which is no bad thing: "We could do a 32-colour version," programmer Gaham Lilley revels, "but it would mean redrawing the graphics from scratch which would take ages. If we'd done the Amiga version first then we'd probably have used 32 colours and cut them down to $\mathbf{1 6}$ for the ST - it's something we're bearing in mind for the future." Anyway, it's due to appear at the same time as its Atari counterpart, but only on one disk and at the increased cost of e24.99.


There are currently no plans for an MS-DOS Black Tiger, but that's not to say it won't happen eventually (other
CapCom conversions have made it to the PC in recent months - namely Strider and Forgotten Worlds). If some thing was to happen on this front, you could expect to see a result in the middle of 1990.
humble 16 -bit home machine). Strangely enough, the coin-op's screen is only 256 pixels square - so Graham's made his conversions the same.

Sound-wise, most of the noises were sampled straight from the coin-op, although Graham's lost the tune during play because it's far too annoying.

So is Black Tiger Graham's cup of tea? " quite like arcade games," he reveals, "but I prefer games that require a bit of thought. I like simulations, especially flight. That's the sort of product which last longer as you're always trying to better yourself."

Com's own currency, Zennies (which so added to the gameply in Forgotten Won,es), appear when you destroy denizens or pots. Ranging in value.from five to 1,000 , these come in useful in ... you've guessed it, the shop sequence.


Its are opened to reveal hidden bonuses: me release firetraps, some potions, som money - but no matter how strong you think your punch is, these treasures are only released on the production of the correct key.



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## ACTION FIGHTER

(Firebird)

Core Design comes to the aid of those struggling to restore freedom to the world with this treasure trove of t'riffic tricks.

YOU MIGHT be more vuinerable while on the bike, but it does have one advantage - the helicopter won't attack it. If you're in the car and the chopper threatens to drop its load on you (honk!), change back to the bike and it flies off without attacking!


IN THE air you should try to intercept any enemy fighters as soon as they appear, so as not to give them time to open fire. The best place to stay is in the centre of the screen - from here you can move in all eight directions to avoid ehemies, so avoiding any


WHILE on the bike, speed is all-important. For optimum safety you need to be travelling just a little faster than the other traffic on the road - any slower and you're liable to get run over from behind, any faster and you will more than likely go flying off the road!

IN THE car, you can afford to be more flexible with your speed - you can crawl along at a snail's pace if you like as you're not vulnerable to hits from other cars. You can still crash into road barriers though, so don't go mad with the accelerator.

## IN GENERAL

- Stay in the middle of the road as often as possible to reduce the risk of being knocked into the roadside barriers by other cars. - Your Radar (represented by a road sign above the play area) is a useful gadget. The road sign displayed indicates
the way the road is going to turn next - but it only appears a second or so beforehand, so keep 'em peeled. It's invaluable on later levels, where the roads become narrower and have more severe bends.
- Collect all six A-F bonuses without dying, and a plane flies up the screen to award you an extra bonus.


## BONUSES

Apart from the extra weapons, bonuses are awarded when certain alien waves are destroyed:

S - Speed-up (Once Only) P-Extra Points I- Limited Invuinerability E-Extra Life T - Extra Time
B - Smart Bomb

## THE BIG BOYS



U-BOATS. Double Fire Bombs are the weapons you want to take out these babies, as they allow you to knock them out twice as quickly. Time your shots so that they detonate when the U-Boats are surfaced - hits on the subs don't count if

HOVER TANKS. Concentrate all your hits on one tank until it's destroyed and then move onto the next. Double Fire is again a boon here allowing to finish the job in half the time. Don't follow the tanks - wait for them to drift into your line of fire, and stay as central as possible.


HELICOPTERS. These little blighters sweep from one side of the screen to the other as they fire at you, so try to stay out of their line try to stay out they're on the move. Again Double Fire is the most effective weapon.

SUPER TANKS. Stay right at the back of the screen, and take out one of the side tanks with Double Bombs first, then take out the one on the other side For one on the other side. For he most effective results, drop your bombs just in
front of the tanks.


GROUND ENEMIES
from behind and get too
close for comfort. Shoot it
at long range four times for
a lovely 150 points.

The heavy car is just that tough, hard and dangerous. tough, har it has no effect. Bumping it has no effect do the trick. Scores 200 do the
points.


The Motorcycie can either be shot or bumped off the road by ramming it from the side. It takes four hits and scores a measly 50 points.


DON'T get alongside the motorcycle and sidecar - it fires horizontally at you. A single hit destroys it and awards 700 points.


This car, which looks identical to yours except in colour takes three hits to kill and scores 100 points.


The Racing Car takes four hits to destroy. There's 300 points on offer for this one.


The sl-o-0-0-w car does nothing but get in your way. Bump it off the road or shoot it once for 400 points.

## AIRBORNE ENEMIES



Helicopters usually attack in waves of four, firing standard bullets. Two shots finish them off and award 200 points.


The Super Guided Missile homes in on you at an alarming rate - it takes two hits to destroy and is worth 200 points.


The Fast Missile is a turbocharged version of the charged version of the Super Guided Missile. yike the SGM it homes in on you,
but this one can outrun youl but this one can outrun you Two hits destroy
score of 300 points.


Jet Fighters fire regular bullets and attack in squadrons. Two hits destroy each one, and award 150 points.

Dagger Fighters don't fire, which makes them easy game. They each take two hits to destroy and are worth 150 points.


Tanks are worth 300 points and fire bullets in eight directions, one at a time in an anti-clockwise path. A single bomb hit destroys them.


Fortresses fire laser beams, take five hits to destroy and score 200 points.


The Air Balloon fires spray of bullets and requires multiple hits. It's worth 1,000 points.


NEXT MONTH

Look out, Beverly Hills Here comes Axel Foley !
The hero of "Beverly Hills Cop" and "Beverly Hills Cop II" is back in Beverly Hills - and this time he's working on a case that's a real stumper! He's going to stop the crime of the year, unless an army of trigger-happy gunmen stop him first !
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## REVIEW



They're tough, they're fast and they wear clothes that make Crockett and Tubbs look like they shop at Mister Byrite. They're Tony Gibson and Raymond Brody, two street-wise supercops from New York with a love of sports cars.

They're both assigned to Chase Special Investigation Headquarters, a division of the NYPD that specialises in all manner of car-related felonies, from jaywalkers and joyriders to escaping convicts and drug-crazed serial killers.

Armed with the division's pride and joy, the Porsche TA-2000 (a state-of-the-art armoured sports car), Gibson and Brody earn their wages by indulging in high-speed car chases with all manner of law-breaking speed freaks with the objective of bring them to justice - by fair means or foul.

# Chas 

It's high-speed Miami Vice-style action all the way with Ocean's conversions of the game that put the chase into the race genre. Gary Whitta dons designer suit and puts pedal to the metal.

## THIS IS NANCY...



- ony and Ray's relaxing afternoon is interrupted as the radio comes to live with a message on the emergency channel. It's Nancy, the Chase Headquarters co-ordinator. Carlos, the New York armed robber is fleeing towards the city limits in a white British sports car, and it's up to you to stop him... Nancy radios in a description of the suspect car for each of the five missions, and keeps in contact throughout the pursuit.

In each race the criminal has a good head start - you get 60 seconds to catch up. But before you even get to put the hammer down, one of three snippets of sampled speech from the coin-op is played to get you in the mood (well, it does in the Amiga version).


LET'S CO MISTER DRIVER!

LET＇S GET＇EM！

| HIGH SEDFE 51590 |  | ［ $\left.\Gamma_{r}\right]$ E | DISTANCE |
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The time limit is short，and an extra burst of speed alwáys comes in handy．Fortunately you are awarded three in the form of a nitrous－ oxide turbo fuel injector that pushes the car to over 350 kmh for a few seconds．While it＇s an invaluable aid for catching up with a fleeing crook，it must be used with caution－hit it just before you go around a sharp corner and you＇re not likely to get round in one piece．

Visual contact is established（it＇s not difficult to spot－it＇s got a whacking great CRIMI－ NALS HERE！marker suspended over it），the time limit is refreshed and the real fun begins． Joe Chummy isn＇t going to pull over voluntari－ ly，so it＇s necessary to force him into surrender by ramming his car until the engine blows．As you plough into the back and side of the car， smoke begins to bellow from the boot and eventually the whole rear bursts into flames．A damage meter provides a more accurate in－ dication of how many more hits are required to total the car．

YOU＇RE UNDER ARREST！

## REVIEW

## HOLD ON MAN!



Eorks in the road crop up frequently, with an arrow appearing a few seconds beforehand to help you get into the right lane in time. Either route can be used (despite what the arrow says), and choosing the right one can save crucial seconds.

ight falls and wheels grind in the perilous fourth stage. The road has a tendency to narrow and widen on all the levels, but here the changes are even more acute - the driving area can change from a multi-lane freeway to a narrow dirt-track in seconds!


#### Abstract

acquires a motor cycle and challenges bad boy David Soul to a mediaeval style joust on the flight deck of an aircraft carrier. But it was Clint's latest (and perhaps last) Harry movie, The Dead Pool (1989), that provided the most original cinematic car chase to date. In this, Callahan is once again chased through the streets of Frisco - by a tiny radio-controlled Porsche rigged up to explode under his car! Some incredible scenes follow as Eastwood and the mini-car weave their way through traffic and pedestrians alike, and the ending has to be seen to be believed!

Having long before taken a terminal dip in the Pacific, David Soul metamorphosed a couple of years later in Starsky And Hutch, a series that helped make car chases a fashionable part of any TV cop show. The formula was later copied by Cagney And Lacey and later proved useful visuals for the soundtrack sequences of Miami Vice.

Meanwhile, back on the big screen, the most notable recent efforts come from Eddie Murphy in the original Beverly Hills Cop (1984), where Axel is hot on the heels of the


bad guys in the back of a runaway articulated lorry; The Presidio, which again featured those photogenic streets of you-know-where; Red Heat, which saw Jim Belushi and Arnold Shwarzenegger chasing a Russian drug smuggler in double-decker buses (!) and laying waste to Chicago, and Robert De Niro's seedy bounty hunter frantically burning rubber in Midnight Run.
And let's not forget, of course, the films that dedicated themselves to car chases, car chases - and more car chases. Set in a postapocalyptic Australia, where cars and gasoline are the only currency, Mad Max and its two sequels were not a lot more than a series of end-to-end high-speed pursuits with a line or two of dialogue in between.

The best of the bunch though has to be Lethal Weapon II, where the hapless Danny Glover sees his wife's stationwagon repeatedly thrashed by Mel Gibson. If nothing else, the film proved that just as many thrills could be generated by a boring old family car as a top of the range Porsche or Ferrari - a neat antidote to the glitzy materialism of Miami Vice.

AWith a coin-op as beefy as Chase HQ , the programmers could have made the mistake of trying to emulate exactly the look of the original, thus producing something that's superficially coin-op perfect but subsequently gets overtaken by milk floats and BMXs. Fortunately though, Pete Hickinson and Bill Caunt made playability top priority, and the result is a conversion that, while noticeably slower, feels and plays uncannily like the coinop, right down to the criminal carcrunching. There are plenty of nice touches, like the squeal of tyres that accompanies a gear change, the highpitched hiss of the turbo injector and the blaring siren that comes into action when the crook is sighted. And of course a generous helping of sampled dialogue as supplied by Nancy and your partner. An impressive selection of the coin-op's music during the attract and introductory sequence gets the pulse racing, but unfortunately there's nothing so impressive during the game the original Miami Vice-style music has been replaced by slower piece that plods along in stark contrast to the high-speed action. But that's only a minor quibble - capturing the thrills of the original is what counts, and Ocean's conversion has done that admirably.

PRICE
£24.99
RELEASE DATE
Out Now GRAPHICS 84\%

## SOUND

 89\%PLAYABILITY 87\% VALUE

78\%

## OVERALL

85\%


As you might expect, the sound isn't quite so 'solid' - a lack of sampled sound effects or a 'hard' soundtrack means there is some loss of atmosphere, but apart from that. Teque's somehow managed to cram it all into one disk, and fortunately there's no loss of speed.


At the moment there are no firm plans for an IBM-compatible Chase, but it's a possibility for the future. If Ocean does give the thumbs up, expect to see something by mid or late 1990 - and there is already talk of VGA and Roland MT-32 compatability.

# THE GYHIES 

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Screen shots from IBM P.C. version.


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# REVIEW 

Gordon
Houghton

## T <br> ower

## Of Babel



This is where it all begins. Aside from the main viewing screen (which can be altered to provide a view from behind the active spider) the bank of controls also facilitates an option to program the arachnids up to eight moves in advance. You can switch from one spider to another at any time -if the screen is fuzzy, that spider is dead or inactive during the current game. The mission usually (but not always) involves collecting Klondikes - the green trapezoids in the distance.
rabber does all the Klondike-collecting, but has several other functions besides. When connected to a Force Up or Force Down module, it moves unoccupied lifts accordingly. and when interfaced with a Freezer, it temporarily halts enemy movement. It also activates Wipers and swaps positions with Exchangers.


I p to three spiders are available for each tower: they can only move forwards or backwards, and so have to be rotated to change direction. Kitted out with a laser cannon, this model, Zapper, is capable of blasting enemy robots and some objects including other spiders.

may not have the gift of tongues, but he's heading for the top with Rainbird.

Set in a world which knows no good storylines, Tower of Babel concerns three Zantorian robots. Left behind on Earth by their benevolent masters, these spider-like creatures helped a race called the Shinarians to construct a huge tower, so that the Earthlings might get closer to God.

Unfortunately, the spiders began to get homesick. Fearing that they might be left to finish the tower alone, some humans became jealous and, using the advanced technological knowledge imparted to them by the Zantorians, built guardians and defence systems to prevent the metal arachnids getting any further up.
Discovering this dastardly plot, the spiders promptly roasted the evil Shinarians and decided it was time to leave. As a good human chum to the aliens, it's your job to make sure they get home safely - otherwise the Zantorians will descend from the heavens and wreak havoc on Earth.

There's no 'life' system as such: completing a tower rewards you with 100 points, and abandoning, losing or running out of time on a tower deducts five points from your total (high scores can be saved to disk). Games can be saved and loaded at any time, which is particularly useful, as there are over 100 levels ahead.

If you don't fancy going straight in, there's a tutorial option to teach you some of the finer points - like how to avoid being killed. And just in case you've got plenty of friends who like being tortured by 3D puzzles, Tower Of Babel comes complete with its own comprehensive construction set.
ou can usually get around just by using the floors and lifts. However, there's no quicker way of travelling than activating an Exchanger and swapping positions with it. This can only be done once, since the Exchanger explodes in transit.




## REVIEW

Gary Whitta takes a spin in Electronic Arts' new high-speed driving simulation.

Motor Racing is big business all over the world, but no more so than in the USA, where the annual Indianapolis 500 is one of the sport's most respected and glamorous events.

Held every year since 1911 at the Indianapolis Motor Speedway in Indiana, the '500' matches 33 top drivers in a series of gruelling races held over the four weekends in May. With each year's winner taking home in excess of a million dollars, it's hardly surprising so many young up-and-coming drivers are keen to enter.
Electronics Arts' simulation of the big event gives you the chance to bask in the glory of victory and soak everybody in champagne, without running the risk of having your body burnt and managed beyond recognition in a 200 mph pile-up with six other cars. Ouch..
rashes with other cars are generally not happy experiences - but they do produce very nice action replays. One option allows you to make your car invincible for practice purposes, but even the slightest collision can blow a tyre and put you out of the real race.

all up an instant action replay of the last 20 Seconds' action and relive your all-time favourite moments (normally metal-crunching crashes) time and time again. But it's not just a pretty (and impressive) frill - it's the opportunity to learn from your mistakes. The action can be viewed at normal speed, or in fast forward or rewind modes, with six different views available.


N CAR shows the action from a video camera directly behind your seat - a driver'seye view.

- EHIND gives a close-up view of your car - (drive aginst the traffic for a view from in front) - the place to be for the most explicit bone-crunching review of the action.




THE BOY RACERS
The Papyrus Design Group was formed in the summer of 1987 by American programmer David Kaemmer, who - until founding the company - had spent his career designing educational software for schools. Indianapolis 500 is almost as old as the company that produced it, as its development began almost immediately after Papyrus was formed.

Why a racing simulation? "For a number of reasons," reveals David. "For a start, nothing like that had really been done over here before. At the time the market was being flooded with flight simulators, but when it came to driving games, all there was were arcadey Pole Position-style games."
"l've always been a racing fan. I grew up in Indiana, just a few miles from the Speedway in fact, and when I was a kid I spent every May listening to the Indy on the radio. That's why I decided to base the game on the Indy. And anyway, if you're going to simulate a race, you've got to simulate the greatest race in the world!"

David wanted to make his game as technically accurate as possible, and so before he even went near a PC, he got stuck into some serious research. "A lot of the information I got came from books - there are a lot about the Indy and motor racing in general that came in useful. I also made use of
hoose from a Cosworth, Buick or Chevrolet before you take to the track. While these don't differ too greatly in terms of performance, some dashboards are easier to read at a glance - the Chevrolet comes equipped with a flashy LCD digital readout, while the other two feature the more familiar guages and meters.

some reference books on engineering and car handling to get the technical aspects of the game as true-to-life as possible. We tried to get the course as accurate as possible too, so we used course maps to get the track layout correct, and watched sports videos of past Indies to get the architecture of the speedway right."

Strangely enough, despite David's fascination, he'd never visited the track itself until he came to research the game: "I went twice," he explains, "the first time was in December' 87 to take a look round the track. The Motor Speedway people organise a guided tour of the track, and even allow you to drive round! I paid another visit in May the next year while the races were on so I could get a feel for the atmosphere."

David doesn't cite any influences for Indy after all, as he said there were hardly any games of the type around at that time. But when it comes to his fave raves, he's a flyboy at heart. "I like the two Lucasfilm flight simulations - Battlehawks 1942 and Battle Of Britain in particular."

So what's next? "I'm not sure. We'll probably be doing some ports of Indy to other machines, but after that who knows? We've got a few ideas - there's a possibility of an even bigger and better race game - but nothing certain as yet. We'll just have to wait and see."

TRACK RECORD
The Indianapolis Motor Speedway was built in 1909, and was originally covered with crushed stone and tar. A few races and several hundred ripped tyres later, it was decided that this wasn't was recovered with red bricks (enough to fill 500 railroad cars apparently) and affectionately dubbed 'The Brickyard'.
In 1937 asphalt was introduced, and used to pave the track, but it wasn't until 1962 that the entire track and pit areas were resurfaced. To this day, one yard of the original red-brick surface still remains over the start/finish line as a reminder of the track's humble beginnings.
Winners of the Indy are, unsurprisingly, well rewarded. After the winning car is pushed up to the Winner's Circle, the driver is awarded a wreath, the Borg-Warner trophy and bottle of milk (which after three hours of non-stop driving is probably the most welcome reward of the lot!).
The Borg-Warner trophy has been presented to every Indy winner since 1936. It's made entirely of sterling silver, stands over four feet tall and weighs a whacking great 80 pounds hardly surprising that it's insured at over $\mathbf{1 5 0 , 0 0 0}$ dollars. As an additional bonus, the winner driver's bust is carved into the trophy to accompany the pictures of every winner since the event began.


Just about every 'serious' race game to date has lacked two important qualities to make it succeed - a proper feeling of speed and exhilaration, and a realistic environment in which to race. Indianapolis 500 more than adequately fills both gaps - it's without doubt the fastest and smoothest $3 D$ race game yet, and also one of the most convincing - the illusion of a real circuit is generated, with spectator-packed grandstands either side instead of a bland road in the middle of a large field with a scrolling mountain range in the distance. More importantly, the car behaves just how you think it should something that's much more important than hard-nosed technical accuracy. The sound is worth a special mention with a normal PC squeaker it's the usual blip blip stuff, but beef it up with a Roland sound board and you have some of the most effective and atmospheric sound every heard (courtesy of musical maestro Rob Hubbard, now resident in the US and workong on all of EA's projects). The replay mode adds to the fun, acting as the racing equivalent to a flight simulator's impressive exterior views. One word of warning however - the most impressive effect is only really generated with a fast 386 PC with a sound board attached. Indy 500 does support slow machines and CGA, the game jerks along so slowly that most of the effect is lost. But for those with a PC bigger than their fridge-freezer, it's an experience not to be missed. PRICE
RELEASE DATE .

January
GRAPHICS 93\%
SOUND 95\%
PLAYABILITY 90\%
VALUE 80\%

OVERALL 89\%


Plans do exist for a
Commodore version, and it seems likely that the Papyrus Design Group will carry out the conversion. Unfortunately, this will almost certainly be slower than on a fast PC.
Atari boy racers will
have to find some-
where else to get their
racing kicks, as there
are no plans for an ST
Indy. Mind you, an ST Ferrari Formula
One eventually appeared... have to find somewhere else to get their racing kicks, as there are no plans for an ST Indy. Mind you, an ST Ferrari Formula One eventually appeared...


$n$ the middle of 1989, quality Amiga shoot 'em ups were few
and far between. Apart from the and far between. Apart from the

 rocks off on - until Hybris, that is.
Programmed by the unknown Martin Programmed by the unknown Martin ery Software's US import was one of the classiest blasts seen to date. So successful was it that a sequel seemed


 both in the documentation and the
game itself. The time is the future
 Star Fleet has been battling it out with the dark forces of the evil Barrax

But just when the good guys seem to


 of nox of dn s.a! 'se!ן ans pue 子очs әч7 storm their well defended stronghold. Hybris was great for its
time, but it did have a
 lot of flaws that became apparent after extensive play's. ciently varied, so it eventually seemed as though you were flying over the same area, fighting the same enemies - something that served to shorten the game's lasting appeal. The weapons,

supply，and worst of all there was no
real motiviation．Playing it actually real motiviation．playing it actually ment－almost the computer game equivalent of stripping wallpaper．But Battle Squadron isn＇t so much a full－
blown sequel（not in the way that blown sequel（not in the way that
Xenon 2 was at least），it＇s more a $12^{\prime \prime}$
 at that．Unfortunately it still suffers from many of Hybris＇flaws－but not to such a great extent．The graphics are
varied（particularly in the subterra－ varied（particularly in the subterra－
nean sections），with the indigenous aliens adding to the overall effect．The gameplay，however，hasn＇t been im－ proved so greatly．The side－to－side scrolling helps make the play area less
claustrophobic，but all the same the
 701 e 7ou s，ajeч7 as！fear nok se a！！чM $\forall$－sualle 70045 पeप7 12470 op of asjo proper variety of extra weapons would
have provided some extra interest，but have provided some extra interest，but
they＇re all pretty much the same as

 real sense of progression as in，say， Xenon 2．As is the case with most
games，the two－player mode is a lot more enjoyable－and it lasts a lot longer．But due to the lack of variety，
 66 ＇bटF pua a47 of 7no＋！ $746 y$ of pat Montino 3ノ甘のヨs＊ヨา3y
 \％62 Alilizvavid
\％ 28

OVERALL 80\％ $\qquad$ done successfully．doesn＇t believe it can be



 version is planned．
Weaponry comes thick and

 upgradeable weapon．When a
weapon－yielding enemy is shot，






 screen．The initial weapon isn＇t
too powerful，but once it＇s
powered－up it kills practically powered－up it kills practically
everything in front of it．











## 



 harmiess at first but as you go in cioser they
strip away their outer skin to reveal deadly
Venus Flytrap－like heads！ One area of Hybris that hasn＇t been drasti－ cally changed in the psuedo－sequel is the As usual a continuous volley of laser fire does the business but some of the nastier bosses
have to be taken apart piece by piece in the



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Unlike Readysoft's previous laser disc conversion, Dragon's Lair (which, you may remember, occupied six disks and only worked on expanded Amigas), Space Ace is spread over four disks for either ST or Amiga, features a greater variety of scenes, and the facility to save and load your progress.

Another major difference, this time between coin-ops and conversion, is the absence of the Ace Button - used to transform Dexter to Ace at opportune moments during play.

Otherwise, the gameplay is much the same as before, ie: you control Dester or Ace's reactions to events as the mini-movie unfolds. Five options are open to you (namely move right, move left, up or down, and fire), and selecting the correct move at the right time is of the essence. Points are awarded for completing scenes, and an extra life is given when 10,000 points are secured.

Brian Nesbitt's doubt is cast aside as he attempts to save the universe, his missus and most importantly his manhood from interstellar evil in Readysoft's conversion of the pseudo sequel to Dragon's Lair..


$D_{t}^{e}$
exter makes a break for his spaceship, only to find a crazed floating robot pounding the path. The dextral Dexer attempts to dodge the mechanical maniac's limbs.



Eollowing an unsuccessful attack from the floating fiend's laser-firing freinds, Dex reaches his ship and launches at Borf's Space Station... only to find that he's going too fast and a fatal collision is a certainty unless he moves fast.


Dexter's miraculously transformed into Ace on his arrival at the station. But trouble's already brewing and he has to move fast to avoid getting gobbled by a huge green much monster.


Qut before he has time to clean the gook - from his boots, a massive stomping arm threatens to smash the bridge on which Ace (now Dexter) stands. It takes well-timed leaps from platform to platform to avoid a crushing defeat.


- aving negotiated a second chasm via a moving piston-like platform, Dexter's not the only one to find himself on a rock path There's only one thing to do in a situation like this - run for it!

Dexter's flighty feet save him from a second unwelcome dinner date, but it looks like his goose is cooked with this third encounter. Or maybe it's Dex who's frying tonight?


$D_{s}^{r}$
ropped onto a rock ridge, the centre of the station is in sight. But how will our hero get past this pair of purple beast? Kamikaze cats appear and make Dexter's decision for him when they attempt to take him over the edge.



Inside the space station, the hunt is on - only it's Dex who's become the hunted! Borf has unleashed his pack of alien guard dogs, leaving Dex no choice but to make like a fox ... He hot-foots it through two intersections and down a narrow corridor, and much to his surprise the rodent-like rascals are roasted by energy conduits on either side.


But this is no time. As Dexter turns into Ace, Bhis problems grow with him. Two security driods have their guns trained on our hapless hero, and unless he moves fast he's likely to get fried.


A ce makes his way down the stronghold's 4 maze-like arrangement of corridors. But the energy conduits that saved his bacon earlier now threaten to cook it, so he runs for all he's worth (which must be plenty as everyone seems to want him), making swift decisions as to which direction to take, for one mistake and he will bake.



A rmed with his master weapon the Infanto Ray, Borf is once again on the attack, and unless ACe works fast he's going to be reduced to a bawling toddler. Leaping for his life as Borf takes potshots at him, Ace eventually espies a row of large mirrors and, on reflection, resolves the situation to complete his mission.


## THE MAN WHO WOULD BE ACE

Veteran cartoon animator Don Bluth has been in the business for over 30 years. He's worked on some of the most well-known and highly regarded cartoon feature films (mostly during his time at Disney Studios) Sleeping Beauty, Robin Hood, Winnie the Pooh, The Rescuers and Pete's Dragon are all Bluth's handiwork. Bluth resigned from Disney in 1979 (along with nearly all of the other company's top animators) after a dispute over creative quality.
After producing and directing a series of short animated films and the epic The Secret Of Nimh in 1982, Bluth began to delve into the still-unexplored realms of computerised animation. "It was the next logical step in the progression toward the future," he said. "Computers are here to stay and they have much tu give us if we help them."
Acting on this, Bluth got together with a number of fellow animators to form Magicom, where work began on producing the 22 minutes of animation for Dragon's Lair, the world's first laser disc coin-op. Released in 1983, Dragon's Lair went on to win an achievement award from thé Minneapolis Comic Convention. Bluth produced Space Ace the following year, handling the design and producing all 25 minutes of animation himself.
Of Space Ace, Bluth says: "In the 25 minutes of animation we've put on this laser disc, a very good player will get through to the end in about eight or 10 minutes. During that time, we've got to hit him with every kind of threat possible - and at rapid fire speed."
During the last two years, Bluth has returned to the mainstream, by collaborating with Steven Spielberg to produce two more full-length features - An American Tail and more recently, The Land Before Time. But there's a definite possibility of more laser disc ventures in the future, just wait and see


The $\mathbf{2 5}$ minutes of animation for Space Ace were drawn up in the time-honoured tradition, using pencil and paper. Hi-tech gadgetry doesn't come in until much later.


A ce comes under attack from the deadly 4 Space Pups in the coin-op original. Your actions in the next few seconds decide the outcome of the film.


The laser disc technology found inside Space Ace and Dragon's Lair machines is almost exactly the same as you would find inside an modern-day CD Player. The original animation is filmed (as it would be for a normal feature film) before being transferred to videotape and programmed directly onto the surface of the disc (around the size of a standard LP). The laser reading the information from the disc moves form sector to sector so quickly that it's possible for the next scene (decided by your actions) to be found and played almost immediately, givng the illusion of a 'real' cartoon - only with you in control.


©Despite its shortcomings, Space Ace is a curiously addictive affair - just like the laser disc original on which it's based, really. The stop-start cartoon-quality sequences are extremely well directed and action-packed, but unfortunately not so much where playability is concerned. It's a game of revelation and presentation - you play to find out what's next, but only really so you can show someone else. The facility to save and load games helps where this is concerned, but it does spoil the overall enjoyment somewhat - sure, it's a little unfair to have to play virtually all the way through only to make one mistake and have to start from scratch, but there's less pressure to succeed as you can easily begin from a healthy positon rather than play from scratch. The presence of less disks but more scenes is welcome, thanks to the fact that the action loads as you play - it looks like Readysoft's taken a leaf out of Software Projects' book here. Unfortunately, Space Ace's flaws are inherent from its arcade parent. Some of the action has been lost in translation from laser disk to floppy disk, but otherwise this is a first-class adaptation. Readysoft has made some improvements over its first laser disc conversion, and there is some fun to be had here, but essentially it's more of the same with the same faults as its predecessor - which means little more than expensive short-term entertainment at the end of the day.
PRICE
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RELEASE DATE , Out Now GRAPHICS 92\%
SOUND 88\%
PLAYABILITY 50\% VALUE 32\%

## OVERALL

64\%

What's said of the Amiga conversion is also true here, although owners of STs with single-sided drives lose out a bit as they get to play less scenes (less disk space see).


Surprisingly, once again the machine best suited to this sort of game has been neglected. Despite a huge PC user-base, large memory and hard disk storage possibilities, there's still no sign of an MS-DOS Dragon's Lair, let alone Space Ace. More news when we have it.

In 1989 the WJall crackeo. in 1948 a nation crackeo...


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## (Well, everything released in one year from Electronic Arts, anyway)

Y
ES! WE ARE SERIOUS! This ONCE IN A LIFETIME offer will NEVER BE REPEATED!
This is YOUR chance to win MORE SOFTWARE than you can shake a joystick at. Electronic Arts is offering EVERY GAME that it's released over the last year - and it could all be YOURS!

## CHOOSE FROM THIS GLITTERING ARRAY OF PRIZES!

EVERYTHING released for your machine throughout 1989 by the Slough-based Yanks. This sizzling selection includes Populous, The Promised Lands, Battle Chess,

Fusion, Powerdrome, Zany Golf, John Madden Football, Deluxe Paint III, Neuromancer... the list goes on.
OR! EVERYTHING to be released by Electronic Arts for machine throughout the coming year. This pristine plethora of prizes promises to include Jez San's Hawk, the two new Bullfrog games currently in development, Hound Of Shadow, Indianapolis 500, Skate Or Die, Budokan, Keef The Thief.. this list could go on even longer than the last!
And all you have to do to become the proud owner of the most comprehensive collection of software in the Western World is answer these three unfeasibly easy questions. Completed entry forms should be stuck on a postcard or sealed envelope and returned to THE ONE, EMAP, PRIORY COURT, 30-32 FARRINGDON LANE, LONDON EC1R 3AU, to arrive no later than January 26th 1990.



AFTERBURNER -
You've played the arcade smash - now experience the whiteknuckled realism of a supersonic dogfight at home!
Using your heat-seeking missiles and laser anti-air craft fire, can vou be top gun craft fire, can you be top gu
against supersonic swarm? AFTERBURNERTM SEGA are trade
marks of SEGA ENTERPRISES LTD.


YOU CAN'T beat a leisurely stroll down memory lane every now again - and Mike \& The Mechanic's double-edged offering is certainly that. Two classic TV programmes of yesteryear, Batman and Gerry Anderson's UFO (which was featured here last month, when The Zone Troopers had a crack at it) both get the treatment, with digitised scenes and mugshots accompanying lengthy sampled renditions of the soundtracks. Classic 60's show The Prisoner also gets the once-over. The Skunk and The Cookie Monster have put together an uninspired image from the show and backed it up with a sample of the soundtrack. How about something similar for Land of The Giants, currently getting a well-deserved airing on Channel 4 of a Sunday lunchtime? In a more recent vein, Star Trek: The Next Generation has also been chopped up and cut down to size. An arrangement of 17 mug-shots from different episodes form a novel menu system, and selecting one triggers an appropriate sample - anything from a phaser blast to the Cap'n ordering "Warp speed now!". Trek-ceptional. More extravagant, but considerably less interesting, is The Right Answers Group's computerisation of the opening sequence from The Real Ghostbusters. The lack of sound doesn't help things, and since the whole things takes longer to load than it does to play... Compensation is almost provided by another looping sequence on the same disk entitled Hungry Hoss. Supposedly digitised from some obscure cartoon or another, it shows a poor horse having the wind knocked out of


The Ghostbusters are starting
to look a bit drawn...


6 © 0 the Bat polls, Robin!"


DEMOS? Yes. demos. Demonstrations of what programmers or machines are capable of achieving. Demonstrations oftalent musical. visual or fechnical. A means of expression or promotion. An entertaining alternative... Each month The One features a selection of software available on the Public Domain network. But we also want to see your pictures and animations and hear your sounds. Send anything vaguely interesting to: DEMOS. The One. Priory Court. 30-32 Farringdon Lane. LONDON ECIR 3AU Please note: we can 't guarantee to return your disks unless a suitable stamped, selfaddressed envelope is supplied.


C6 am not a number, I am a free man!"

$S^{\text {tar }}$ Trek - the sampled generation.



## THE DEEPEST GAME EVER

bring you an inter-active arcade adventure written in the spirit of 1940's cinema heroes, taking place deep under The Ocean in a maze of underwater caverns and then in the Fabled City of Atlantis. Surmount the perils of the deep with a clever strategy and slick joystick control ... the underwater ord could be yours.


## STUNT CAR RACER

＂The tracks are superbly designed starting with a fairly straightforward but lumpy oval and progres－ sing to such delights complete with massive（ $\&$ I mean MASSIVE）jump \＆roller coaster track which has enough hills to turn the stomach of the hardest drivers．＂－C \＆VG
＂Quite simply Stunt Car is the best racing game yet seen on a home computer－check it out．＂－C \＆VG ＂Stunt Car is utterly brilliant and offers adrenaline pumping gut wrenching high speed action that will keep you engrossed for months－C \＆VG
＂An action packed game that had us on the edge of our seats．＂－TGM

## RVF



The motor bike simulator of the Honda 750 RVF．Race on Clubman and world famous tracks．
＂A near perfect blend of simulation \＆action＂－ACE ＂Amazing graphics＂－CU
＂If this，as MicroProse maintain is the shape of the Amiga games to come then everybody should buy an Amiga now＂－CU




The world is so full of dimensions, all three of them. So how do you transfer them to a two dimensional monitor screen? Grafix Guru Phil South explains.

f you want to get a 3D object looking really solid, why not digitise different views and then draw over them with an art package? Not only does this ensure you get the perspective right, but you can get the basic shapes of different views down easily easily and quickly (see note about Rotoscoping in the Animation Panel). This 'next generation' Enterprise was a model lying on its back. I just flipped the picture, separated the object from the background and drew over it from there.


The illusion of three dimensions in demos or games is just that, an illusion. With the exception of the likes of Vektor Grafix's Bomber and Electronic Arts' Hawk, which is actual 3D representation of objects, most games give you is the effect of 3D by the use of programming and animation tricks.

If you animate an object or sprite on the screen, it's easy to create the feeling of a three dimensional object. This is not often so apparent with a shoot 'em up, but in anything where the sprites go 'into' the screen, like racing games etc, then the effect is quite pronounced. Check out OutRun and the Batmobile section in Batman, where cars and the like must appear to have more than one side, especially on turns.
In demos, by way of another example, you will be familiar with the concept of sprites being used to create 'worms' or rows which undulate to portray a 3D string of balls, say. This is a more popular art-form on the Amiga than on the PC or ST, and exactly why this is isn't due to any hardware deficiency on the part of the PC or ST. In fact it's just a matter of history, and more people did it with Blitters.

But all of this isn't real 3D, and so to redress this balance l'll be going deeper into this important area next month, as we step into the world of polygons and real lightsource shading.

## ANIMATED ANTICS

f you want things to have a perspective in a more complex piece of ánimation then once again the best cheat by far is to digitise a sequence and then redraw it. Animators have done this for years, and they call it 'rotoscoping'. The rotoscope is an archaic device which enables you to view the frames of a previously shot live action film, and trace a character frame by frame. This technique was used by Walt Disney studios in most of their really famous features (including Sleeping Beauty) and also by Ralph Bakshi when he designed and directed Lord Of The Rings. To get the full effect of the animation, make a flickbook by pasting the frames on the ends of rectangles of thin card (playing cards are good), then bind the ends of the card with an elastic band.



## straight

## turn right

bviously you only have to draw the two views of the car, due to the fact it looks the same on both sides. So you draw it from one perspective and the other side is just a vertical reflection. They do this on most versions of OutRun: Notice how the horse on the back of the Ferrarri flips back and forth as you turn around corners!


A nother well-used and very simple rules-based 3D technique is that of isometric projection. This method was first made popular on the 8 -bits on games like Alien 8 and Knightlore, and latterly on 16-bit with Populous, where you view the action from the corner of a room. The term comes from technical drawing, and it means 'having the three dimensional axis equally inclined' or joined together like a figure Y. You can do isometric projections too. It's as simple as turning on your 'grid' control on your graphics package.

## TEQUE A CHANCE ON ME

T eque's programmers are no strangers to the concept of making things look three dimensional when they're not. They've been doing a lot of work recently on racing game conversions like Continental Circus and Chase HQ, and so what they don't know about cheating 3D isn't worth knowing. Mark Edwards is the man with the golden mouse, so I asked him how he makes three dimensions go into two.
"Most of the time, like with Circus and Chase, the programmers get the arcade machine and just rip the graphics out of it. Which is great if they can can do that. But that's usually only the beginning, because I then have to make them the right size and shape for the computers. You sometimes get unlucky and have to draw them from scratch."
And what happens then? You cheat, right?
"Well actually, you usually sit next to the machine and copy what happens, and that takes ages."


So what if you have to do these things from scratch?
"We have a meeting where the programmers say what they want and I tell 'em what they can have, in terms of graphics and space in the computer. I tell 'em off, basically, because they've got no idea... Anyway, as far as all the other 3D stuff goes, up until Circus I had to draw all the different sized sprites by hand, about 10 for each car. Then after Circus the programming boys came up with a scalting program which means I only have to do one. It's not perfect though, so sometimes I have to tweak them up a bit and give them back."

What about roads and things?
"Roads are a programming problem. I draw the scale of it, to let them know where it should be and what it should look like, but they create the actual graphics through a program technique. The backgrounds are pre-set by the arcade machines, so deciding where everything pops up is just copled from there."


## ARCADES

Violence from Vietnam, a futuristic racer from the people who brought you Hard Drivin' and a couple of Tetris clones are what greeted Brian Nesbitt when he raided The One's petty cash box and headed for Soho.


PPass over a turbo 'hot spot' and the S.T.U.N. practically disappears into a blur. Other objects to be driven over include red stars, which are collected for bonus points.


The laser can be fired at any angle from directly forward to straight upwards, depending on the angle of the handilebars. Unfortunately, even the meaty Shock Wave weapon isn't enough to take care of this baby.



At the end of each level, the craft is upgraded according to your budget. This pair of turbo boosters should make the whole shooting match go even quicker... coo!



SETAS. Cal 50 is based on a cult Japanese comic set during the conflict in Vietnam in the early 1970's, Calibre 5. Its violent panels are not for the squeamish - and neither is this coin-op that carries its name.
The action is best described in two words - Ikari and Warriors - with the similarities to that classic extending as far as to include a swivel-headed joystick system.
However, unlike the SNK romp, this method of control is what makes Cal 50 so rewarding to play, so how home conversions would fare remains to be seen.


Not the best of landings - but you don't have time to dwell on your mistakes as the Viet Cong are closing in rapidly. Grab your gun, shout at your (optional) co-pilot and head for cover.

What's this? Another plane! Unfortunately for that nest of gooks, they tried to stop you commandeering it - but at least they were good enough to leave a pile of spare ammunition for you to add to your collection.


Ance inside the plane, the computer takes the controls, leaving you free to indulge in a little lead-based deforestation. The swivel-head joystick system really comes into its own here, allowing mass destruction on a scale of $\mathbf{3 6 0}$ degrees.

Coming back down to Earth, the destruction continues - and the extra weapons come in thick and fast. The flamethrower is by far the most effective, but its use is limited by a small fuel supply.


IN THE beginning there was Tetris, an odd little Russian blockbuster which took the games world by storm. Now, with more than a million copies of the GameBoy version in the eager hands of Japanese fanatics, the coin-op industry has begun to sit up and take notice. The result is a rash of Tetris clones appearing.
The first two, California Dreams' Block Out and Konami's Block Hole, are a three dimensional tunnel-style affair and a variation on the shoot 'em up principle respectively.
Both are split-screen, two-player affairs sporting completely unnecessary scenarios: the former involves the hacking of a futuristic computer, while the latter has something to do with a 'block hole' exploding (this phenomenon is either a clever pun, or a translation cockup of Donkey Kong pro-

## Came bump

cane oumpioe


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no space LE:
ToD mant Le
1

## A Load Of Blocks




# OKAY TENNIS ACE NOW'S YOUR CHANCE TO COMPETE WITH THE BEST. 

## Pro Tennis Tour - The Ultimate Tennis Simulation ranks you $64^{\text {th }}$ amongst the best tennis players in the world. <br> Set your sights on such championships as the Australian Open, Roland Garros, Wimbledon, and the US Open. <br> Step into center court, tighten your grip and prepare to serve up your best shot - Pro Tennis Tour is about to begin.



Blue Byte

Rush the net with confidence, knowing you can strategically place your next return. Feel the excitement build as you challenge your next opponent and make your way to the top!


UBI SOFT
1, voie Félix Eboué 94021 CRETEIL CEDEX Tếl. 33148989900
 D art man, part machine, all cop. The hero of Paul Verhoeven's film, Ocean's best-selling game and the up and coming RoboCop il, ill ustrates just how hard it is to recreate come hes to speech, sight and overall borrowing spare parts from the original prototype. So fow wher, many experts believe that it won't be long (maybe only 50 years) before current research pr
come up with walking, talking, real-life RoboCops.

G (2) iven ernough
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ul pesn ode
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 neurocomputer canable of recognising all
26 letters of the alphabet, regardless of a
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interfacing neurons with light transmitted
nhrough photodiodes and LEDs.

 ol oınquұuos ןe senoura jeuosiod pue $\ddagger \mathrm{sed}$ way to roduce this over several generatior of computers would be to fit first－
 incorporated in a new robot models when the
 networks are designed to do－and a recently developed chip looks set to make the process a whole lot faster．A learning process similar to how real brain cells learn is initiated by
weakening and strengthening the chip＇s weakening and strengthening the chip＇s examples for the chip to learn and start producing answers to relatively simple
 step in the right direction．

## THE FUTURE

Amoebae evolved into multi－cellular


 ity in
 Moravec anticipates that scientists will master synthetic neural technology within the
next 50 years．The products of all this won＇t just be robots capable of serving the human race，but highly sensitive machines with
 example，take a basic tree－like structure several steps further．Instead of 10 fingers， they have billions．This enables them to hold a


 and replace it with an electronic substitute． Electronic data doesn＇t decay，nor is it bound
 would be possible for minds to download
themselves via telephone lines or transfer
 very good at calculus but know somebody else who is，you might bargain with them for

 downloading，you＇d just refer to one of the
aiding their human counterparts in routine surgery within the next 20 years． Long－distance space－flights might hevan brain capacity and bodies able to withstand the ravages of time and intense changes in heat，atmospheric pressure and light conditions might make up a crew more no man has gone before．

All this may sound like idle speculation，and it＇s true，we don＇t have all the tedidn＇t have much of a space programme either．

## BRANBOTS（THE <br> ARTIFICIAL BRAIN）

However efficiently it may negotiate eight－ त
 significant contribution to the future．But what actually makes a human mind human and how
 magination，no intuitive understanding of the way the world works，so they are incapable of

 imaginative design．The human reasoning to so！jes e u！payग！u！ue s！sseวoノd complicated mathematical equations．If you иo иоиешшо，



 to most people：the knowledge for example，



EMOTION：Despite all the movie hype， neural networks haven＇t got to the



 personalities．If you really wanted one，you


MEMORY：Computers already have much
 way beyond computers．Cultural memory，a

## THE LAW

 any other form of humanoid or artificial creature．However，in the 1940s by which all future robots would be judged．The laws are： a． such orders would conflict with the First Law． 3）A robot must protect its own existence as long as such protection does not conflict with the first or Second Law．

## TERMINOLOGY

ANDROIDs are robots buit
CYBORGs（CYBernetic ORGanisms）are humans who have been can also be robots with human brains－Doctor Who＇s Cybermen are a good example．
DROIDs are robots governed by the Three Laws Of Robotics，powered form．Many of the robots currently working in Japanese factories fit this description．


르듣
intendo＇s ROB，the closest you can get at the moment
playing a game with a moving non－human．ROB＇s actualy quite picky and only plays a small selection of Nintendo games． and interacts with your telly by performing different arm movements．


# LEASURE SOFTWARE THE FIRST TEN YEARS 

# A-B 

AARDVARK. The legendary Nik Pelling's software publishing arm was a big hit with all Acorn aficionados thanks to Zalaga and Frak! Firetrack (through Electric Dreams), an NTSC conversion of Hang-On (for ED) and 3D Pool (for Firebird) are his recent releases.

ACETRONIC. Who could forget the MPU 1000 console, supposed rival to the fabled Atari. Erm, we have...

ACORN. In today's world of imports, isn't it comforting to know that Britain is still great at something. Well, pretty good. The Cambridgebased company's following started with the release of the Atom (2K RAM and in kit form for the real enthusiast), but the name only really became a household when it was commissioned to produce a home computer for the BBC to endorse. Its latest marvel, the Archimedes, is the rich-kids current choice, but us plebs probably won't ever get to own one as they cost so bloody much.
ACTIVISION. Started life producing innovative cartridge-based games for consoles, from which came its first home computer software releases. Classic creations includes River Raid (by Carol Shaw - one of the few games to be written by the fairer sex), Pastfinder, Zenji (what ever happened to programmer Kevin Ngo?), Park Patrol, HERO (and where's David Van Ryzin?), Toy Bizarre, Future Ball, Master Of The Lamps, Rock 'n'Bolt and Web Dimension (the last three more notable for their outstanding sounds, as composed by Russell Leiblich - what's he doing these days?). Other exceptional innovations include the 'Game Of Life' Alter Ego and the first ever binary book - Portal. Sadly, Activision seems to have been a little quite on the innovative front of late.

ADAMS, SCOTT. The Grandfather Of Adventure Games, or some such tosh, Scott wrote one of the first ever text adventure games - Adventureland, which appeared on virtually every format in the world apart. He then went on to create the Questprobe series, starring all manner of Marvel superheroes - like The Incredible Hulk, Spiderman and The Fantastic Four. We couldn'tbe bothered to find out what he's up tonow, as none of us were very great fans of his work.

ADDICTIVE GAMES. Well, only one of them seemed to be - perennial favourite Football Manager, which has been around since the software industry began and has appeared on more formats than there really are. Big Cheese Kevin Toms (who's fizzog appeared not only in all of the company's adverts but along with his missus' in one of those magazines you can't quite reach in the newsagents but you get the idea of the content from the cover) tried to do the double by later releasing a software publishing-orientated clone of FM entitled Software Star - and a genuine sequel entitled Football Manager II, but neither scored as much with the punters. Since Addictive was bought by Prism Leisure, Kevin seems to have been out of the limelight and no-one's really sure what he's up to at the moment (maybe he will expose himself soon...) Following the impressive arcade adventure The Kristal and it's new Aquanaut - it's last release as the company's due to disappear in the near future.

AIRWOLF. The game of the (then) popular television series was advertised by both Ocean and Elite, both claiming to be based on the helicopter's hijinx. But only Elite's version ever made it - and it wasn't too bad, either.

ALLIGATA. Sadly no longer in existence, but it produced some good software in its time, thanks to two titanic talents - Tony Crowther and Steve. Evans. And who can forget its attempt at a budget label... Budgie.

AMSTRAD. Alan Michael Sugar TRADing. Old Al used to flog car aerials until he done good and became chairman of his own company. Entered the computer market in 1986 with the 'everything you need in one box'CPCSeries, which went down very well in France. After buying Sinclair, the company repackaged the Spectrum (ho hum) and was rumoured to be producing an Amiga-compatible machine, but it launched a (very) low-end Sinclair PC-compatible instead. But what's the bearded barrow boy done good wonder up to these days?

ANDROMEDA. A development house responsible for many an 'alternative' piece of software, including such classic entities as Mirrorsoft's Caesar The Cat, Ocean's Chinese Juggler and plenty more besides. It was also responsible for the ST conversion of International Karate for System 3. But where are they now?

A 'N' F. Gave hours of pleasure to chicken fanciers everywhere with that infuriatingly addictive platform game, Chuckie Egg (available on nearly every format but 16 -bit). Its second-rate sequel Chuckie Egg II didn't fare quite so well, but the company managed to impress a second time with the future sport Xeno (essentially a version of that old Christmas favourite Crossfire). But what did the A and the F stand for?

ANIROG. The company that produced dozens of subtle variations of popular themes, like Skramble, Kong, Time Pilot, Cybertron... the list goes on and on. Then Anirog became Anco and produced more variations of popular themes, including the sports game of the decade: Kick Off.
ARIOLASOFT. The German distributor's English software appendage didn't last too long over here. It used to distribute Electronic Arts and Broderbund software, and even managed to come up with a few original gems of its own - like the spooky Scarabaeus and the innovative criminal simulator They Stole A Million. Ariolasoft also helped out some of the older programmers who had fallen by hard times, distributing Jeff Minter's brilliant Battlyx and using Tony Crowther to write a computer version of Challenge Of The Gobots (Ross Goodley, who worked with our Tone on this and many other projects, eg: Bombuzal, is just finishing Gravity for ImageWorks).
ARTIC. A silly-looking lorry logo adorned its wares and ads. Lucky the software wasn't so daft. Computing Adventure A, B, C, D, E etc entertained all Sinclair text adventurers, and the company's arcade antics included Bear Bovver and Mutant Monty - a pastiche of popular game characters of the time.

ATARI. The American giant kept most of us very happy throughout the decade with the Atari range of consoles and computers, including the 2600, 400, 600,800 , the recently re-released 7800 (which never actually appeared over here in the first place), and of course now the ST range. On the arcade side the company has continued to innovate, and its list of firsts and successes is asimpressive as it is long... Pole Position (arguably the first racing game to utilise a second person perspective view-point, ie: directly behind the car), Time Pilot (one of the first multi-directional scrolling shoot 'em ups), Missile Command, Gravitar (which inspired Thrust), Qix, Centipede, I Robot, Star Wars, The Empire Strikes Back, Return Of The Jedi, Xevious (officially the first


#### Abstract

Not only is this the end of a year but of a decade. But not any decade. This was the decade which saw the birth of the leisure software industry. And what a decade. The home computer changed from the early slo-o-ow, memory starved, tape-based days of the Sinclair ZX80 to faster than light, byte abundant compact-disc-based systems.

Gameplay ideas haven't improved as such, only the means to express them. But the more things change, the more they stay the same. Basically, the quality of entertainment software hasn't actually improved a great deal. The visual and aural side of things is vastly superior in terms of resolution, but not necessarily in effect. In fact things don't seem to be as much fun as they used to be...

Gone are the days when computer games looked like computer games, and entertainment software had delightfully simple ideals and titles - like Invaders, Rhino, Fire, Worms, Vermin, Ball, Dungeons Of Death, and Captain Sticky's Treasure (eh?). A lot was left to the imagination, but it conjured up images of FUN. Nowadays it seems that everyone's trying to be too realistic for their own good.

Still, here's the first installment of a by no means definitive but mildly affectionate look back at what went into making entertainment software what it is today...


real vertical scrolling game, with over half an hour of different scenery), Tempest, Marble Madness (completely off the wall and quite incredible - why no sequel?), Paperboy, Gauntlet (the first real multi-player game), Hard Drivin' (the first vector graphic driving game), S.T.U.N. Runner... the list will undoubtedly continue togo on andon. And quite rightly so.

AUDIOGENIC. Made VIC 20 owners' days with a range of cartridges, including Renaissance (Othello) and Spiders Of Mars (Defender-ish), but never appealed to the Commodore 64 clan in quite the same way with product like Alice In Videoland, Graham Gooch's Test Cricket and Psycastria (ho ho). Come to think of it, the company hasn't exactly set the 16 -bit scene alight, with only an interesting variation on the platform theme - Helter Skelter (written by the same guy who did Xenon 2 for the Bitmap Brothers and Pipeline for Entertainment International).

AUTOMATA. Formed earlier in the 80s by industry personality Mel Croucher and someone else with such tasteful, slightly risque wares as Can Of Worms, Love \& Death and The Bible for the ZX81. Made up for these early efforts and gained cult credibility with its Pi-Man series, then earned immense respect with the very alternative Deus Ex Machina - more an experience than a computer game, and arguably a vision of CD-ROM style games to come. Having left Automata, Nunkie Mel was rumoured to be working on an innovative adventure game using nothing but colour and sound to create a truly unique experience. But nothing ever materialised.

BABIES. What a great game. A riotous hand-held romp featuring a burning building full of suicidal babies and two ambulance men armed with a stretcher. Bounce the babies intothe ambulance for points. Laugh till you cry when you keep missing them.

BAK, STEVE. Hercules and Gods And Heroes number among Steve Bak's many early efforts for the Commodore 64. The two inventive platform games looked like a nightmare but played like a dream. In fact, despite his many technical achievements on 16 -bit, Steve has yet to match the sheer frustrating fun of these two minority classics.

BALLY/MIDWAY. No longer in existence, but something to do with Nolan Bushnell, the man who effectively invented the first arcade game. Bally's
claim to fame is that it produced (in conjunction with Sente) the first Space Invaders (which rapidly spawned many imitations), but it was also responsible for those other classics: Galaxians and Frogger. The company's only other notable releases that spring to mind are a game based on the film Tron, and that Bond-esque vertical scrolling shoot ' $n$ ' bump 'em up Spy Hunter. Sadly, one of the last things Bally ever did was an arcade version of Rainbird's (or Jez San's if you are Jez San) Starglider.

BEYOND. Used to be owned by our publisher, EMAP, which was obviously handy for its own magazines' reviews - that's to say, early review copies. Beyond was the company that kicked off with rubbish like Goodness Gracious but eventually became associated with the likes of Psytron (yawn), Shadowfire (one of the first icon-driven adventures) and the excellent Lords Of Midnight saga. Former Commodore 64 owners may also remember the remarkably atmospheric Psy Warrior. Come to think of it, whatever happened to the guys who wrote it?

BIG K. Comic producer IPC's (2000AD, Battle etc) answer to the then intense interest in computer games and associated publications. Arguably it shot now-legendary journalists Tony Takoushi and Gary Liddon to fame. Maybe it should have shot them elsewhere.

BRABEN, DAVID. The ardent and sickeningly rich) Acorn programmer was bathed in lime-light when he teamed up with lan Bell and produced that space trading classic Elite. With IB off doing his own thing, Dave The Rave wrote a tidy tank-orientated shoot 'em up (which was never published), and with the advent of the bath-water-tastic Archimedes machine, David wrote the undeniably unbelievably outstanding Zarch (Virus on the ST, Amiga and PC). He's currently writing Elite II (which he's supposed to have been doing for around a couple of years), and he's rumoured to be writing Elite for the Nintendo.

BRAYBROOK, ANDREW. One of those programmers who should be immortalised in marble like those naked Michaelangelo models.

BRENNAN, CIARAN. The big balding bad boy of the computer magazine journalist world. He's worked on virtually every publication going, including The Tallaght Echo, Crash, ZZAP!, Amtix, LM, The Games Machine, Your Sinclair, Video Trade Weekly, C+VG, ACE, and of course now The One. His fun-est games ever include Head Over Heels, The Sentinel, Rocket Ranger, Kick Off, TV Sports Football, Nebulus, Leaderboard, Oids, Lunar Lander, Rocola's Star Castle, Silkworm, Asteroids, F/A-18 Interceptor, and the Atari 2600 console classic Star Raiders (but only with the keypad). At the moment Ciaran would be grateful if anyone could flog him an MG MGB GT for around a grand.
BRODERBUND. This American publisher is undoubtedly one of the most innovative around. In its time we have been fortunate enough to play with a very varied and vibrant array of quality games, like Choplifter, Spelunker, Whistler's Brother, and Raid On Bungleing Bay (apparently the author, Will Wright, also wrote Maxis' Sim City). Not forgetting that pinball magic in the form of David's Midnight Magic and Night Mission, the interactive martial arts movie Karateka, Lode Runner (which became a coin-op and is now found on Nintendo's GameBoy) and more recently Typhoon Thompson And The Search For The Sea Child.

BUBBLEBUS. Used to be a very nice company with a very nice Public Relations Person called Anne Lovejoy, but unfortunately disappeared after years of quality releases like Exterminator (Centipede) and two Steve Crow classics: Wizard's Lair and Starquake.

BUG BYTE. Famous for releasing that platform classic Manic Miner and little else. Reappeared as a budget label a few years back but largely forgotten.

BUTLER, CHRIS. Wrote a multi-directional scrolling shoot 'em up called $Z$ for the now non-existent Rino label, and had the unfortunate task of converting Space Harrier to the 64. Has since converted other Sega superstars to 8 -bit, arguably with more success than their 16 -bit counterparts. Has yet to make the jump to 16 -bit, but who knows - 1990 could be our lucky year.

## Next Month our blast from the past continues with the rest of the alphabet...

## \%כAGSPACE

Undeniably one of the most successful software companies around is Manchesterbased Ocean. It currently has the largest single slice of the software industry pie, with nearly a third of the market share.
Today's vast Ocean swelled from the single raindrop of a mail order company called Spectrum Games run by David Ward. Sir Clive's Sinclair Research outfit was less than delighted with the name though, and so after some wrangling and rumbling, Ward's outfit changed its titte.
Chairman Ward set up Ocean with former Mancunian wine bar owner Jon Woods (now Managing Director), and Imagine's Paul Finnegan, who now heads development team Special FX.
The company's first title was Armageddon for the Spectrum, but the company didn'treally made a splash until the arrival of its conversions of the cult arcade hit Hunchback, which is also generally credited with being the first legitimate coin-op licence.

This licensing trend has continued almost since the company's inception, and now Ocean is one of the industry's leading licencees, with subjects as diverse and as famous as Run The Gauntlet and Batman.

Does the fact that Ocean's now the biggest publisher in the leisure software market mean that there's extra pressure to keep ahead?

It's always more difficult to sustain something than to build it in the first place. Take football for example - although Liverpool have managed to stay on top for quite some time, so why shouldn't we? But then again, in any fashion industry it's difficult to know what people expect, after all, tastes change.

So you see this as a fashion industry?
Yes, of course it is - it's like music, or the width of trouser legs, or anything else that's constantly changing. It's no goodus developing product for the market's current position. Like all good developers, we need to have the ability to predict taste up to a year ahead - especially as it can take up to three months to acquire a product and then another nine to develop it over all formats. It's no good us just guessing what the public wants and then blaming them for not buying it like some other software companies do.

Why is Amiga software more expensive than the same product for the ST?

Originally this came about because there weren' as many Amigas around and therefore there weren't as many units of Amiga software sold, which is a part of the determination of any product's price. This situation existed right up until the middle of this year, but it is starting to change as, in Europe, the Amiga and ST are now neck and neck. Another factor is that people now demand the best use of their own computer, so each version is designed and written on its target machine and each game becomes a number of separate projects. It's not necessarily our objective to release all 16 -bit versions at the same price, although $\mathbf{F}$-29 will cost the same on ST and Amiga. Essentially Ocean doesn'thave a fixed pricing policy - each product is judged on its own merits (taking into account development costs and so on) and priced accordingly.

Why is it that UK packaging appears lacklustre in comparison with most American wares? What nonsense! How many more accolades could we receive for our packaging? It's unfair to compare our packaging with the US stuff, as American product is aimed at different consumers. We have a wider and more eclectic consumer base in Europe,

> As Manchester giant Ocean celebrates the coming of the 90 s by becoming undisputably the largest publisher in the business, Chairman David Ward shares his thoughts with Ciarán Brennan.
which needs more stimulating (if not necessarily aesthetically beautiful) packaging. Anyhow, the nature of the entertainment on offer is different and I feel that our packaging hits the mark perfectly.

How much does piracy affect software prices?
Take it to its extreme - look at an industry that's died - education. The great white hope of producing a computer literate public failed because it didn't provide enough profit... all due to piracy. Consider that with a basically non-copyable media such as console cartridges, a top title can reach anything up to 20 per cent of the user base, whereas you'd be over the moon if the same game achieved 10 per cent in the home computer market. How much it actually affects sales is something that no-one knows for sure, but it's certainly significant.

Ocean releasing a title without a licence or tie-in is about as rare as hen's teeth - is there no longer any room for original product in the marketplace? Considering your position in the business, should you not innovate as well as churn out licensed wares?

A lot of this depends on what your definition of original is - after all, Shakespeare has already written all the plays... there are no more. Anyhow, most of our 16-bit-only product is already 'original', and we're moving towards a future where more than 50 per cent of all our product will meet this criteria. The way we currently work, about one-third of our releases are licensed - Chase HQ and the like - one-third has a marketing influence, but is still original as such - The Untouchables for example

- and one-third is completely original - how about F-29?

Now that we are at the threshold of the '90s... how do you see this business developing over the next decade with regards to new technology (CD-ROM etc)?

This is a very exciting time, as video, satellite television, laser discs and computers are all becoming linked via technology. As for where this business will fit in when they all eventually come together... I believe that the level of creativity will grow with the industry's revenues, we will be able to afford larger projects and more creative people. On the other side of the coin, the skills which our developers have attained will be just as needed in other industries such as the movies. I think that you'll be amazed by how far ahead we've moved by the turn of the century.

Ocean has recently made an extraordinarily successful move into the 8 -bit budget market, is there any possibility that you might try the same for the bigger machines?

As long as the hardware continues to move quickly, then it's not really necessary: I must confess that I never saw the point of selling games for $£ 1.99$ when sales of the Spectrum were still constantly doubling. By the way, I don't think that $£ 9.99$ is a budget price - $£ 1.99$ is a disposable amount, it's pennies - but you still have to make a strong purchase decision to pay out 10 pounds. I don't see a strong 16 -bit budget market developing in the foreseeable future.


- David Ward (left) shows the kind of form that's taken Ocean to the top in a brief encounter with Gremlin boss lan Stewart.


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## IF GHOSTS 'N' GOBLINS SCARED YOU OUT OF YOUR MIND... THISIL SCARE YOU OUT OF YOUR SKIN!

Arthur returns! The fearless knight is back in this stunning sequel to Ghosts ' $n$ ' Goblins (voted among the top 10 games of 1986). Three years have passed since the evil ones came to do their dirty work. Now they're back and they've captured Princess Hus, but our valiant knight Arthur is charging to the rescue against a
Atari ST, Amigat
Spectrum Cassette
Amstrad Cassette and Disk CBM 64/128 Cassette and Disk


[^0]:    Hewson's ONSLAUGHT. Worth the wait?

[^1]:    4 Il the frames for the central Space - Harrier sprite, as drawn by Jason Wilson on Art Studio. He's already drawn half of the graphics, with around another 20 still to go: "We took the Sega cartridge broke it open and put it through a ROMreader that we use in our coin-op conversions to suck the graphics out. We use the initial sprite as a reference and draw the rest of the frames from that."

