

BRITAIN'S BEST-SELLING MAGAZINE FOR AMIGA OWNERS

AMIGA

ISSUE 10 / MAY 1990 / £2.95

FORMAT

WORK HARD

Your essential guide to getting down to business

COVER 10 TWO GREAT PLAYABLE DEMOS

10
DISK

VIVID IMAGE'S
ACTION PACKED
HAMMERFIST >

HOVERBOARD ACTION
IN WIPE OUT FROM
GONZO GAMES



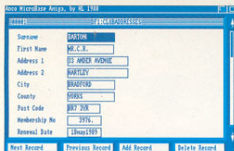
PLAY HARD

Is Rainbow Islands the game of the year?

REVIEWS: COLOUR VIDI ■ CLASS OF THE '90S
■ ULTRADESIGN TUTORIALS: DIGITISING
■ GAMES PROGRAMMING ■ COLOUR GRAPHICS



9 770957 486004



USER	FIELD	KEY FIELD	NO. NUMBER	STORAGE	ABC	ASC	DESC
					123	123	123
ALPHA	ALPHA						
BETA	BETA						
GAMMA	GAMMA						
DELTA	DELTA						
EPSILON	EPSILON						
ZETA	ZETA						
ETA	ETA						
THETA	THETA						
IOTA	IOTA						
KAPPA	KAPPA						
LAMDA	LAMDA						
MU	MU						
NU	NU						
Xi	Xi						
OMICRON	OMICRON						
PHI	PHI						
CHI	CHI						
PSI	PSI						
OMEGA	OMEGA						
ALPHA	ALPHA						



WORK HARD... DATABASES P 77



AMIGA
FORMAT
TEN
MAY
1990

EDITOR Bob Wade **PRODUCTION EDITOR** Damien Noonan **REVIEWS EDITOR** Andy Smith **TECHNICAL EDITOR** Jason Holborn **STAFF WRITER** Maff Evans **ART EDITOR** Angela Neal **DESIGN ASSISTANT** Marcus 'Dr.' Dyson **DISK EDITOR** Richard Monteiro **CONTRIBUTING EDITORS** Jon Bates (Music), Brian Larkman (Graphics) **CONTRIBUTORS** Mark Smiddy, Tim Smith, Dave Jones **CELLULOID IMAGE REALISATION** Adrian Price **ADVERTISING MANAGER** Jennie Evans **AD SALES EXECUTIVE** Paul Steer **AD PRODUCTION** Fiona Milne **AD SERVICES** James Leach **PUBLISHER** Greg Ingham **ASSISTANT PUBLISHER** Jane Nolan.

PHOTOGRAPHY Ashton James, Bradford-upon-Avon **COLOUR ORIGINATORS** Swift Graphics Ltd, Southampton **PRINTERS** Riverside Press Ltd, St Ives PLC, Gillingham **DISTRIBUTORS** SM Distribution, 6 Leigham Court Road, Streatham, London SW16.

© FUTURE PUBLISHING 1990

EDITORIAL/ADVERTISING

30 Monmouth Street, Bath, BA1 2AP = 0225 442244 FAX: 0225 446019

SUBSCRIPTIONS/MAIL ORDER

The Old Barn, Somerton, Somerset TA11 7PY = 0458 74011

COVERDISK HOTLINE

= 0225 765086 between 4pm and 6pm weekdays only

We welcome written enquiries, but regret that we cannot offer advice, guidance or information on a personal basis, either by telephone or post. We welcome contributions from readers but unfortunately cannot guarantee to return material submitted to us, nor can we enter into personal correspondence. We take great care to ensure what we publish is accurate but we cannot accept liability for any mistakes or misprints. No part of this magazine may be reproduced in any form without our permission.



PLAY HARD... SCREENPLAY P 31

THE BEAUTY OF graphics

Graphics: Using Colour P 15

Digitiser Masterclass P 21

VIDI-Chrome reviewed P 27



SPECIALS

DIGITISER MASTERCLASS	23
A SERIOUS BUSINESS	
PART 1: DATABASES	91
GAMES PROGRAMMING	
PART 4: ALIENS	85
DTP: HAND SCANNER	153

REGULARS

NEWS	7
PREVIEWS	12
GRAPHICS	17
PD UPDATE	111
MUSIC	129
WORKBENCH	139
GAME BUSTERS	157
LETTERS	169
GURU	178

SCREENPLAY

FORMAT GOLD

RAINBOW ISLANDS	36
PLAYER MANAGER	65

REVIEWED

HEREWIT THE CLUES	39
PARIS-DAKAR	39
TYPHOON THOMPSON	40
MANIC MINER	40
SHERMAN M4	43
HIGHWAY PATROL II	43
INFESTATION	47
WARHEAD	48
TV SPORTS BASKETBALL	50
BLACK TIGER	55
688 ATTACK SUB	56
ATOMIX	59
GRAND NATIONAL	59
MANCHESTER UTD	62
ITALIA '90	62
CRACKDOWN	66
SCRAMBLE SPIRITS	66
KID GLOVES	69

REVIEWS

VIDI-CHROME	29
CLASS OF THE '90S	72
TV•TEXT PRO	77
SOUND BLASTER	116
TRACKBALLS	116
ULTRADESIGN	121
DISTANT SUNS	124



Member of the Audit Bureau of Circulations
40,371 Jul-Dec 1989

DISK EXTRA

HAMMERFIST

SCHIZOPHRENIC CYBERNOIDS FROM VIVID IMAGE

WIPE OUT: Playable demo of Gonzo Games' hoverboard challenge
■ **BIRDS SAMPLER:** Real Things' latest animation pack for DPaint III
■ **PONTER ANIMATOR:** Heaps of fun with animated mouse pointers
■ **KEYBIZ:** Add typewriter sounds for that real journo feel
■ **GAMEBUSTERS:** Devious pokes for Mutant Camels II, Captain Fizz, Interceptor, Joe Blade I & II
■ **MEGA WB:** Huge scrollable Workbench screen.

103



Jumping into exploding stars is effectively the same as a smart bomb: a great way of killing off those really annoying spiders.

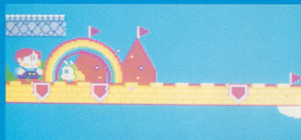
RAINBOW

OCEAN £24.99 ■ Joystick

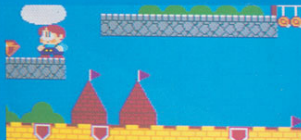
A GEM OF A WEAPON



The start of the game, and a nasty heads towards our hero...



...trap it with a rainbow and...



...jump on the rainbow to turn it into a nice gem.

After much confusion and uncertainty, this fantastic conversion of the Taito coin-op has finally arrived on the Ocean label.

The stars of this one or two player game are two characters called Bub and Bob (no relation) who you may remember from their earlier adventures in a Firebird game called *Bubble Bobble*. They were turned into bubble-blowing brontosauri by the evil Boss of Shadow and only after much struggling did they regain human form. It was then they decided to get away from it all, to live in peace and tranquility on an archipelago known as The Rainbow Islands.

Unfortunately, the Boss of Shadow found their hideout. With the help of his minions he has rounded up all the inhabitants of the islands and is holding them prisoner. Naturally, only Bub and Bob can rescue them.

There are seven islands in all (one for each colour of the rainbow) and each island is made up of four stages with an end-of-level guardian sitting at the top of the last stage. It's a vertically-scrolling platform game in which you guide your character to the top of each level. Of course it's not that easy as the BoS has loads of his minions running and flying around and contact with any of these causes you to lose one of your four lives.

To combat the baddies you're armed with - guess what? - rainbows. Hitting a baddie with a rainbow causes it to turn into a juicy lump of fruit or cream cake or flower or something of that ilk and collecting the goodies (no relation

scores you points. There's an added advantage in that every third baddie killed turns into a magical item - such as running shoes to speed up your character, or potion bottles which increase the speed and reach of your rainbows (first doubles then triples). Then there are other random items which give you a small fairy drone, and, if you're really lucky, ones that bring huge bags of points flooding from top of screen.

As well as being a weapon, your rainbows are also extremely useful as bridges, so you can shoot them out and walk across them to reach other platforms. There is a problem with the rainbows though - you can't jump onto them and they disappear after a while.

Then there are the diamonds. Occasionally a killed baddie will turn into a coloured diamond which you can collect for extra points (pick them up in the right order and secret rooms are revealed at the end of the island).

Run, jump and work your way up the screen - but don't take too long or the baddies turn red and angry and speed up. If you're really tardy, water rises from the bottom of the screen to drown you when it covers your head.

GRAPHICS	8
SOUND	6
INTELLECT	3
ADDICTION	9
OVERALL	95%

FROM THE START OF COMBAT ISLAND...



The second island and our hero has found a magic item that gives him the power of flight.



As well as acting as a weapon, these rainbow things are jolly handy for building platforms.



Fleeing a flying nasty. Collect the yellow bottle to speed up your rainbows' firing.

ISLANDS



The third island, and here's a rainbow in killing action.

INGENIOUS DEVILS

The Japanese really have turned coin-op games designing into an art form and they are so devious at it! Remember Space Invaders, in which you had to hit the spaceship exactly on every 22nd shot so that you could get a guaranteed bonus of 300 points?

Well, the intricacies of game design have come a long way since those early days, but the Japanese designers are still just as devious. Recently, games like Super Mario Bros and New Zealand Story have been full of little extras for the player to discover – and Rainbow Islands is no exception.

There are warps to find, secret rooms, extra bonuses and a whole heap of sub-games to play once you really get stuck into it. Should you manage to complete the game you can then spend months trying to find all the weird and wonderful tricks that are there: but naturally you're not given any clues to how you can find them.

Just to get you started off, though, here's a little hint. Try collecting all the diamonds in the order of the colours of the rainbow – starting with red, then orange, and so on all the way to violet. Do this all on one world and you can get to the secret room.

Remember, you can determine which colour a diamond will be by killing a baddie on a certain part of the screen, i.e. kill a baddie on the far left of the screen and it'll produce a red diamond – kill one on the far right and it'll produce a violet one. All the other colours are in between the two. **Andy Smith**

GRAPHICS AND SOUND

As you'd expect, the graphics are very cute – all the nasties look harmless enough until you run into them. They're also very bright and colourful and everything has been well drawn and animated. The jaunty soundtrack is great and the occasional effects are fine. A great cutesy game that's an audio visual treat.



Every third baddie killed turns into a magic item – faster boots, here.

LASTING INTEREST

It's tough, so it will take you ages to play through the seven islands, but practice really does make perfect and once you learn where the baddies are coming from you'll be prepared for them. You'll be playing this for hours at a time and whenever you can.

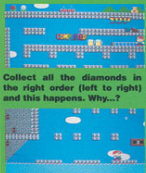


Collect that bottle to gain further-reaching rainbows...

JUDGEMENT

What a cracking game! It's supremely addictive, completely playable and thoroughly enjoyable. This is a classic game from the Super Mario Bros school of games design that will have you glued to the monitor for a very long time. There's just so much in the game it's a credit to whoever designed the coin-op, and the conversion is superb. For some light relief and solid fun you'd be a fool to pass this by.

SECRETS!



Collect all the diamonds in the right order (left to right) and this happens. Why...?

Near the end of the first island and unfortunately time is running out very quickly!



The end-of-level guardian. What's that door in the middle of the picture there for?



Kill off the spider and collect all the treasure, then go through the door to find...



A secret room with loads more treasure!

...TO THE END OF MONSTER ISLAND



Those pink Dracs can be a real pain.



Another magical item turns all your rainbows into goodies whenever you jump on them.



Dracula is the third end-of-level guardian. Believe us, he's one tough cookie to beat!



The doorman, a police plant, photographed suspects as they arrived.

HERE WITH THE CLUES

CRL £24.95 ■ Mouse

Here is a game that is out of the ordinary. It's a murder mystery based on a package presented by Dennis 'The Devil Rides Out' Wheatley. The idea of the pack is that you get a load of photographs, pieces of evidence, letters and other bumph and have to solve a murder - and once you reckon you know who did it, you open a sealed envelope and see if you've got the solution right.

So how do you play this on a computer? Well, what CRL have

done is digitise all the info from the pack and the player accesses the info by clicking on various parts of the screen which shows all the stuff laid out on a table.

The plot, then. You are the Assistant Commissioner of the anti-terrorist squad in pre-war London. A murder has just been committed in a nightclub. This proves to be messier than it at first sounds: the anti-terrorist squad has been watching the premises for a while because

some known IRA sympathisers have been using the club, which has a secret room at the rear, for their meetings.

The murdered man is one Serge Orloff, owner of the club, who's also in with the gang of 16 subversives. The problem was, Serge had been helping the police with their inquiries because he was afraid of being deported back to Russia for other crimes.

After reading the reports from your assistant, who believes the murder was committed by a member of the group, you're left with two things to do. Firstly, identify the murderer and secondly, discover which members of the group were in the secret room at the time of the murder. The second part of the task is necessary because explosives and so on were found in the secret room: so they can then be charged with 'conspiracy and complicity in the manufacture of infernal machines for felonious purposes'.

Once that's done, you'll have to get in touch with CRL who'll enter you into a competition and reveal the solution. **Andy Smith**



A shell recovered from the hallway where Orloff was shot.

GRAPHICS AND SOUND

There are a few spot sound effects, which comes as a bit of a surprise. The digitised pictures are fine although a couple are a bit dark. Looks just as good as it needs to look.



More evidence, which was found in the secret room.

LASTING INTEREST

You can really get your teeth into this. It's going to take you a while to correlate all the clues and come up with the answer so prepare yourself for some pretty heavy sleuthing.



Another photo of evidence in the case: harmless enough??

JUDGEMENT

Be prepared to put some work in and you'll have loads of fun - to save on disk - swapping a second drive is a real bonus. Well put together, a great mystery to solve and something a bit out of the ordinary: well done, CRL!

GRAPHICS	6
SOUND	5
INTELLECT	7
ADDITION	7
OVERALL	80%

PARIS-DAKAR

TOMAHAWK £24.99 ■

Joystick

French house Coktel Vision are certainly milking the Paris-Dakar licence: they released a game last year called *African Raiders* that was based on the famous race, and now they present another one.

There are three skill levels to this driving game in which

all the action is viewed from the cockpit. That means you can choose between three cars that have increasingly better performance and increasingly worse handling. It's a six stage game in which you have to finish each stage in the fastest possible time.

The start of the race - keep between the stones and go as fast as possible.



Normally the route you should take is marked out with small stones. However, stages two and four are across country, so you just head in the general direction of the finish and try not to bump into too many boulders or other big, solid obstacles along the way.

As a driving game it's not the best to have appeared and with only six stages it's not going to take long to complete: then you're just left with trying to improve your times. Far too shallow and lacking in game-play to merit much attention. **Andy Smith**

GRAPHICS 7 / SOUND 5 / INTELLECT 2 / ADDICTION 5 / OVERALL 37%



"You WILL go and be a hero... NOW!"



Oh dear! Doesn't look too happy, does he?

TYPHOON THOMPSON

BRODERBUND/DOMARK £24.99

■ Mouse and Keyboard

The year is 2124 and men have boldly gone where no man has gone before, out into the far reaches of space. Even passenger craft make trips to distant galaxies. But it pays not to be too blasé about space travel where the ocean planet of Aguar, in the Omega sector, is concerned.

Aguar was the last known location of Inter-galactic Flight 396, which left a faint signal as hope of survivors. Many trips have been made to Aguar to find the survivors, but all have been destroyed by the mischievous and deadly sea-sprites. Those that managed any communication told of a single child held prisoner by the sprites and of the strange spirit guardians that tried to help them rescue the child (without much success).

You play Typhoon Thompson (no relation), a reluctant hero who has been tricked into attempting a rescue. Riding a small JetSled and armed initially with a laser cannon, you must tempt the sprite flyers out of their islands, blast them and pick them out of the water before they can swim back to safety. Once all the sprites have been caught you can hold them hostage until the head sprite of the village gives up one of the four artifacts you need to rescue the baby. Returning the artifacts to the spirits gives you another weapon to help you defeat the sprites, such as scatter bombs, sprite magnets or freeze-bombs.

Once you have all four artifacts, you can take on the sprite-flyers of the last village before freeing the child. **Maff Evans**

GRAPHICS AND SOUND

Despite their diminutive appearance the graphics are full of character and humour. Every object and action in the game has such realistic animation, as well as a few additional touches to add a little extra polish.

The start sequences and end-of-level scenes are extremely funny, especially if your sense of humour is a bit on the silly side! The 3D motion and scrolling is also excellent, both smooth and effective, giving a true feeling of skipping over the sea's surface. The sound consists of a few warbling ditties and pings which, while fitting the game very well, won't exactly set the Amiga music enthusiasts' pulse racing.

LASTING INTEREST

Every time you play the game the animation sequences are altered, so that it's like watching an ever-changing slapstick cartoon. Once the novelty of the cute animation has worn off, you find a thoroughly playable action game which screams out for more than its fair share of attention. The game is a little easy to complete after practice, but it's such a joy to play that you'll be unable to tear yourself away from the machine until you do!



A single flyer causes problems on Level One.

JUDGEMENT

Typhoon Thompson is one of a rare breed - an original and playable arcade game. The game has more feel and atmosphere than many current coin-ops and film tie-ins - mainly because it's written with humour and entertainment in mind, rather than just trying to get you to put another 10p piece in the slot. If you'd like a change and have a fun sense of humour, then give Typhoon Thompson a 'spin'.

GRAPHICS	7
SOUND	4
INTELLECT	3
ADDICTION	7
OVERALL	80%

MANIC MINER

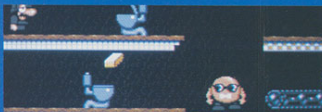
SOFTWARE PROJECTS £9.99

■ Joystick

One day the poor but happy Miner Willy discovered a long-lost mine under his back garden. With pound signs in his eyes, he ventured into the mines to see what treasures he could find. Unfortunately he took a wrong turn: now he has to collect enough objects to make the trip worthwhile and negotiate the twenty treacherous caverns that lie between him and safety. The caverns are inhabited by auto-

mated creatures that have long since given up their tasks and march up and down in long worn tracks. Miner Willy must avoid these creatures otherwise it's off to the big coal-face in the sky!

The Amiga version of Manic Miner features a direct clone (!) of the original 8-bit game along with a 16-bit upgrade. The upgrade features scrolling screens and colourful animated sprites in place of the single-



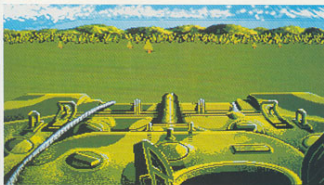
Time waits for no man, and neither does the toilet.

screen single-colour originals. Unfortunately the scrolling means that you have to be pretty au fait with the original to get anywhere, since you can't see what's coming or plan your routes accordingly.

Timing is the essence of the game, but as the speed-up version's sprites trundle out of view frequently it gives the mining novice quite a challenge to get this right. Fans of the original are

in for a disappointment: the feel has been warped to extremes. The timings are off, the methods barely work and the conveyor belts don't act as in the original, so that screens like 'Miner Willy Meets the Kong Beast' are now virtually impossible.

It would have been nice to play Manic Miner again just for a bit of nostalgia, but this version has none of the spark that made the original fun. **Maff Evans**



Moving out from base camp.

SHERMAN M4

LORICIELS £19.99 ■
Joystick and Mouse

The American Sherman tank and all its variants did sterling service for the allies during World War II, so for all those of you who've dreamt of getting to grips with one of the ugly brutes, here's your chance.

It's a one player game containing three scenarios based on actual battles and campaigns in which Shermans played an impor-

tant part. The first is The Normandy Landings, in which the Sherman is in an aggressive role: five single scenarios can be played individually in any order or all five can be played one after the other to form a sort of campaign game. The other scenarios are The Ardennes, where Hitler launched a massive tank offensive, so your role is far more defensive;

and North Africa, where things are much more strategic.

Once you've decided which to play, you can alter the game's parameters to suit; that is, alter the enemy's difficulty levels and so on. Do all that and you then get your instructions from the Sarge before setting off.

Playing the game involves managing four tanks and achieving the specified objective. The first Normandy mission requires you to knock out a couple of enemy bunkers and then take control of an enemy camp. A map of the location is provided - giving orders to the tanks is simplicity itself. Simply select the destination and the tank goes trundling towards it - once all four are away you can jump into the command seat of any one of them simply by pressing a key. Then you can take control if you wish and fight the enemy yourself or just sit and watch. The autopilot can be switched back on just as easily.

Remember when playing the campaign game that you only have four tanks with which to complete the game and once one tank is out of action, it's out of action for good. That's not a problem if you play the scenarios one after the other however, because you're given four at the start of each regardless of how well you did in the last scenario. **Andy Smith**

GRAPHICS AND SOUND

The graphics really are very good - very fast filled 3D with options for other views as well as the usual driver's eye view. The sound isn't so hot, but it's adequate. Fast and well animated - a good looker.

LASTING INTEREST

With 15 missions and the ability to 'limit set' yourself by bumping up the enemy's difficulty ratings, prepare yourself for some long playing sessions. You don't have to play for hours on end, though, because some of the scenarios can be played quickly.

JUDGEMENT

It's not going to have seasoned strategists running out to the shops because it's too limited in the strategy department and is a bit too close to a 3D Battlezone. Arcade fans who like to think occasionally will be pleased with it. Good fun.

GRAPHICS	8
SOUND	6
INTELLECT	6
ADDICTION	7
OVERALL	77%



The usual driver's view. That's one of your knocked-out tanks up ahead.



The map at the start of a scenario. You're in C12 and must take the camp in C14.



A close-up of a Jagdpanzer (this is about as close as you want to get to it!)

HIGHWAY PATROL

INFOGRAMES £19.99 ■
Joystick

Criminals are tough to catch in a high-speed car, even through the leafy lanes of sleepy England, just imagine the work the Americans have to do in deserted places like Arizona where the roads are long and straight and go on for ever.

Reckon you could fare better than the average cop? Well, now's your chance to find out.

Highway Patrol II (who knows what happened to HP I?) plunks you firmly in the open spaces of one such American state. Your desk is full of 'Wanted' sheets, so select who

you would like to go after and jump in your car.

At the top of the screen the map coordinates of the crims and yourself are displayed. Drive as fast as you can towards the criminals, remembering to fill up with petrol if necessary along the way, and

once you've caught up with them convince them to pull over so you can book 'em.

It looks fine but most of the time it's just a case of steering left-right, which becomes very boring after a while. Far too little to do to keep you very interested. **Andy Smith**



GRAPHICS 8 / SOUND 4 / INTELLECT 2 / ADDICTION 5 / OVERALL 48%



A '57 fighter pilot's day starts with a read of the orders.



Then it's time for another mission.



...the automatic docking computer takes over.



Line yourself up with the centre of Solbase and when you're close enough...



Once the sun's over it's time to dock again.

LOADING ORDNANCE



Load up with some weapons and you're almost ready to go.

WARHEAD

ACTIVISION £24.99 ■

Mouse

The Future, Earth has suffered a severe attack from a group of insect-like aliens from the nearby star system Sirius. Reasons for the attack are totally unknown. The resulting nuclear winter has caused terrible suffering and so the remaining peoples of the Earth have banded together in self-defence to form the Fist Of Earth World Government.

The alien enemy was more technologically advanced than were we, so work had to be started quickly and now, at last, Earth has an answer: the FOE-57 attack spacecraft.

A space station called Solbase has been set up in the Sun's orbit and will be your home for the next few months as you help the Fist Of Earth defend the motherland from these six-legged aggressors.

A typical day in the life of a '57 fighter pilot starts with the reading of the day's orders. The first couple of missions are designed to get you used to flying

the ship and to practice docking. With that under your belt you're ready to take on proper missions, which usually involve 'Quad Jumping', a sort of hyperspace travel, to a different star system and then flying around using standard motors.

You view all the action through the ship's front window. To start with, flying around is very confusing - especially at high speeds. Fortunately there are a number of automatic pilots to help you (though things still look very con-



Call up the star system and planet you wish to travel to and lock the navigation computer on. Launch from the base and you're only a Quad Jump away from your destination.



And there he goes! Dead!



In your ship in Solbase: PMS means Proceed With Sortie.



Launch yourself away from the base...

GRAPHICS AND SOUND

There's a very atmospheric intro soundtrack and the in-game effects are great too. The filled 3D used throughout is well done and everything moves swiftly and smoothly. All the information screens (star systems, planet orbits and so on) are also very good. The overall impression of Warhead is that it's a highly polished game which, though it doesn't rely on the graphics, has nevertheless been well designed with obvious attention to detail.

LASTING INTEREST

None of the missions take hours to complete, but some do take a while and you'll be lucky to finish them all first time. More missions would be nice, but the ones there are will not disappoint.

JUDGEMENT

Imagine all the special missions taken out of *Elite* and plunked into one game, and that will give you some idea of what Warhead's all about. Each mission isn't as deep and won't take as long to complete as an *Elite* mission, but the number makes up for that. A great game: not brilliant but near enough to merit a good look.

fused at times), and these include auto pilots that lock on to your primary target (which doesn't have to be the enemy) and ones that point you in the direction of travel - this may sound silly, but the laws of physics apply in space and you may not always be going in the direction you thought you were. There are also artificial head-up displays just to prove you're moving and weapon status displays.

The missions range in complexity from simple patrols to runs after smugglers and encounters with fleets of the enemy. It's not long into the game, though, that you meet one of the nastiest creations ever to wander the galaxy:

The Berzerker, an alien ship that seems to hate all organic life, your enemies and yourself alike. Dealing with him takes some fine flying and devious thinking but he can be destroyed, and you'll have to discover just how it's done for yourself. A '57 pilot's lot is not a happy one, but it sure is exciting.

Andy Smith

GRAPHICS	8
SOUND	7
INTELLECT	6
ADDICTION	8
OVERALL	88%



... and now you know what sort of ship it is and what weapons you'll need to employ to destroy it.



...and switch on your HUD which gives you an indication of motion in the vastness of space.



Here come the six-legged devils.



You've selected a primary target, but you still don't know precisely which type of craft it is.



Launch a Data Gathering Missile first...

INFESTATION

PSYGNOSIS £24.95 ■
Keyboard and Joystick



Scanning the surface at the start of the quest; and something's closing in!



About to enter the transporter, so fire up the HUD to check on atmospheric conditions.



Main Picture: Kal Solar hits the surface of Xelox, kitted out and all ready for action.

Ever since *Aliens* hit the scene there has been a whole host of games featuring races of Extra-Terrestrial beings that hatch from eggs to take over the universe. Even those that don't stick to the original plot have graphics inspired by Giger's eldritch creations. *Infestation* draws its inspiration from the film in both claustrophobic atmosphere and storyline, telling of research station Alpha II on the moon of Xelos.

Recent transmissions from the station have become garbled and unintelligible. The only thread running through the messages tells of a violent life form that has been laying eggs all over the complex – eggs that hatch into deadly insectoid warriors. The diminishing crew has tried to eliminate as many of the eggs as possible, but there are simply too many for them to handle with the meagre equipment they have to hand.

Enter your character – Kal Solar, mercenary soldier, trouble shooter and all-round hero. The

game takes place in a filled-3D environment, commencing with Kal being dropped onto the barren surface of Xelos, armed with a handful of Cyanide cartridges with which to dispose of the eggs, a pressure suit, a Manned Manoeuvring Unit (MMU) which allows him to hover above the moon's surface and a pulse rifle for disposing of the occasional enemy-controlled drone.

You must find your way into the complex and travel around dropping cyanide cartridges in the proximity of the alien eggs. Easy enough? Not with alien-controlled droids out to kill you, not to mention the condition of the complex itself: blacked-out corridors, radiation leaks and areas of zero pressure. All around the complex you may find discarded items of technology, which will undoubtedly come in useful at some point.

But take care: you mustn't fail! The safety of the universe is in your hands... now where have we heard that before? **Maff Evans**

GRAPHICS AND SOUND

Polygon-constructed 3D is by no means a new technique, but it's still effective if properly used. *Infestation* combines a nicely bitmapped console with solid and flicker-free 3D to produce a tense, claustrophobic-feeling game. The attention to detail is superb, even down to the company names on the title screen! The eerie breathing effects and intro music cap off the scene perfectly, producing more of an atmospheric interactive science fiction story rather than a straight 'hunt and kill' video game – in other words, exactly what an arcade adventure should be!



Helmet off, look up, and... AARGH! What's that??

handy, since the 'save game' feature is bound to be used a lot in the weeks that you spend playing the game. And the pencil and paper? Well, without a map you won't last five minutes, never mind weeks!



Well, you've managed to get inside the complex: what now?

JUDGEMENT

Infestation is obviously going to be a huge turn-off for fans of quick, ten-minute shoot-em-ups, but those willing to apply a little use of the old grey matter will find it extremely rewarding. The actual complex is a huge place, with a number of dangers to avoid and problems to overcome, but once you start the ball rolling, the search for alien eggs is extremely absorbing. The massive array of controls is also initially off-putting, but soon becomes second nature and seems as casual as operating a stereo. Anyone who has fancied themselves as Hicks or Ripley in *Aliens* can live out their fantasy.



Confusion sets in inside the network: why not try that door over there, to see if that will take you any further?

LASTING INTEREST

As you would expect, there is no way that you can just pick up *Infestation* and rack up a considerable score straight away. It takes time, observation and more than a little thought merely to find your way off the moon's surface and into the complex! Using the terminals for orientation and guidance is essential, and soon becomes a natural part of the gameplay. Keep a blank disk, pencil and plenty of paper

GRAPHICS	8
SOUND	7
ADDITION	7
ADDITION	8
OVERALL	89%



A well-timed jump is needed to gain possession at the tip-off.

TV SPORTS BASKETBALL

CINEMAWARE £29.99 ■
Joystick and Keys

Taking a rest from their usual style, 1940s serial-orientated games, Cinemaware have once again turned to the US TV sports channels to bring us a second sports sim, TV Sports Basketball.

Following in the same vein as their previous sports releases, TV Sports Football, the game places you as a player or manager (or even both, should you be so inclined) in an American basketball league. You can either opt to play as an established US league team complete with its own set of players, or perhaps design your own team from scratch.

Those not wishing to take up any exercise – be it computerised or otherwise – can just

watch their team carry out the set tactics and shuffle the figures around depending on the results.

If you feel left out of the action you can always jump in and start controlling the team directly. If, on the other hand, you feel like putting yourself in the shoes of a single player and following him through his career then you can select the 'role playing' section.

The pattern of play in the league follows very closely the pattern of the actual American basketball league, the top teams from each division qualifying for the play-offs, which may even lead to playing in the World Series – but only if you're good enough! **Maff Evans**



Oh dear, looks as if the Marauders aren't coping at all well with the New York offense.



Cinemaware carry on the humour with some rather dubious-looking promoters!



No TV show would be complete without a wittering frontman.



Now then, let's look at the team statistics and see who's most likely to be fired.

GRAPHICS AND SOUND

As you would expect, Cinemaware have done the business in the presentation department. The intro screens are humorous, the animation is superb and the music is atmospheric. All the usual touches such as the wacky promoters and charismatic TV presenter have been included, as well as extra features like cleaners sweeping up pieces of broken backboard in the distance. The overall feel is very much in the American TV mould – even the programming credits read like the end credits of a TV show!

LASTING INTEREST

The wealth of options initially presented to the player makes it seem as though there is a good deal to keep you playing, but unless you have a large supply of friends to play against in the league or you prefer watching the computer plays the games for you then you'll soon wander off to find something else to lavish your attention on.

The whole thing is rather like watching a cartoon of a game of basketball rather than actively taking part – the computer does far too much, which prevents the player from getting seriously involved. Only dedicated 'manager' fans will find the game enthralling enough to capture their attention for more than a few hours.



Choosing the players who will actually appear on the court is a precise affair.



The week's games: can the Marauders shine through? It's extremely doubtful!



The tactical screen. This is the part of the game where players are positioned on the court.

JUDGEMENT

The dividing line between an accurate simulation and a playable action game is often considered a narrow one. Unfortunately, Cinemaware's latest offering falls the wrong side of the line. TV Sports Basketball is packed with information to make it one of the most stunningly accurate sports simulations ever, but the actual game sections are severely lacking in gameplay. Stopping the opposite team from storming past your players and scoring every time is virtually impossible – a task which isn't helped by the unruly and badly-implemented control system.

It's hard to believe that the team that brought us the superbly-presented and wonderfully playable TV Sports Football can have come up with a product that's enough to put people off the game of basketball for life. Nice graphics, a myriad of setting and options and slick presentation are all very well, but look a little deeper and all that is left is nothing more than an expensive and frustrating basketball manager game.

GRAPHICS	8
SOUND	7
INTELLECT	6
ADDICTION	4
OVERALL	51%



These stone heads lie in wait at the end of a stage.

GRAPHICS AND SOUND

Black Tiger might not appeal to the more quality-conscious Amiga owner. The playing area is quite small, and the intrusive jerky background scroll makes play less than fluid.

But there's some nice animation as the enemy creatures as they explode and breath fire, although things can get a little confusing in the heat of battle.

Spot effect and soundtrack do their respective tasks, but are nothing to shout about.



Making like Chris Bonington and climbing a vertical column.

BLACK TIGER

US GOLD £19.99 ■ Joystick

Surfing in on the waves of success from US Gold's *Strider* and *Ghouls and Ghosts*, comes *Black Tiger*, the latest conversion from the Capcom stable.

The *Black Tiger* of the title is the character you control: a legendary warrior of heroic status, known more for his powers of destruction than diplomacy. But there's no point being a hero without a quest to fulfil, and *Black Tiger*'s is a corker: three fearsome dragons have risen from the depths of hell, bringing torment upon the world. BT must despatch these creatures and restore civilisation to a more even keel...

The mission takes the form of a platform shoot-em-up, as you

guide BT through six levels of subterranean fantasy settings, spread over many screens scrolling both vertically and horizontally.

Mr Tiger walks along ledges, and can be made to jump across gaps in the scenery and straight up to climb vertical columns of rock. Arrows show the route that needs to be taken to locate the exit, although interesting items and places can be found by moving off the signposted trail.

Each underworld scene plays host to hordes of diabolical creatures, all of whom are out for Black's blood. Successful attacks deprive BT of chunks from his precious energy meter, until eventually his current life comes to an

end. However, Black can defend himself by throwing knives and a particularly vicious blade-on-a-chain device which is launched at the enemy, yo-yo fashion.

On the enemy's demise, a 'Zenny' cash token is left which can be pocketed. Whenever Black comes across one of the numerous stone men, they spring to life offering some sort of assistance, and occasionally providing the opportunity to buy extra equipment with the Zenny coins: arms and armour, extra energy and time, plus keys are all up for grabs. The keys can then be used to open the locked chest which litter the caverns for whatever reward – beneficial or harmful – which wait inside.

On reaching the end of each stage, the inevitable end-of-level guardian (or indeed guardians) must be defeated in order to pass through to the next. *Black Tiger* has a limited time within which to escape from each level, and the mission continues until *Black Tiger* has defeated the dragons, or his remaining lives have all been senselessly wasted in pursuit of his quest. **Steve Jarratt**

LASTING INTEREST

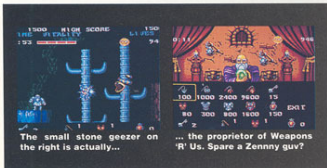
Three continue options help to sustain the offensive, and the sheer size of the task is enough to keep most players bashing away for some time. The 'explore and discover' nature of the gameplay is quite captivating, and certainly helps to maintain its appeal.



Believe it or not, your character is in the middle of this m et e!

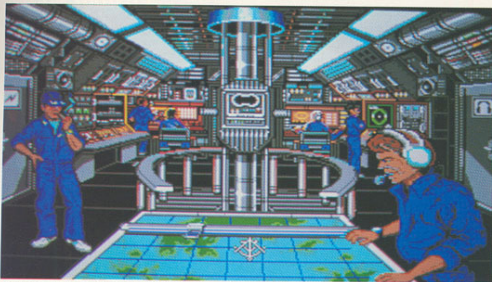
JUDGEMENT

Control of the main character is fiddly at first, with a one-strength jump which cannot be controlled in mid-air. However, *Black Tiger* bears enough of a resemblance to its coin-op parent to content most devotees, and although this unashamed ST port-over is a far cry from the class of US Gold's previous Capcom conversions, it still manages to entertain to a reasonable degree.



The small stone geezer on the right is actually...

GRAPHICS	4
SOUND	4
INTELLIGENCE	2
ADDITION	7
OVERALL	71%



The main game screen. Select your various crew members here to access different parts of the sub. The chap in the foreground is in charge of navigation.

688 ATTACK SUB

ELECTRONIC ARTS £24.99 ■

Mouse and Keyboard

MicroProse have had things to themselves for a long time in the submarine simulation market: their aged game *Silent Service* gave the player a chance to experience the thrills and spills of captaining a World War II sub. Now Electronic Arts bring things right up to date with a simulation of the latest range of American and Soviet subs.

It's mainly a one player game, but on some missions two players can play head-to-head via modem, each controlling a different side's sub. There are 10 missions in total (although the first is merely a practice mission) which may not sound

like much but, as anyone who's played this sort of game will know, one mission can last a very long time. Moreover, once you have played them in the American sub you can play them again in the Soviet one, effectively doubling the number of missions.

The whole game is played and controlled from a main screen depicting the inside of your sub. By moving the mouse over certain members of your crew and clicking, you reveal different areas of the sub. The areas include the radio room where orders are sent and received, the navigation room where waypoints and so on are

set, the engine room, torpedo control, damage control, the sonar room and the periscope. Obviously the options available in each room vary, but the act of switching between rooms simply involves hitting a function key.

Once you've got your orders and have decided on a strategy the first thing to do is jump from room to room and complete all the necessary tasks. Then you can switch on all the latest gadgetry (things like the contour computer, which gives you a constantly updated image of the surrounding sea bed) and settle back for some nail-biting tension. **Andy Smith**

GRAPHICS AND SOUND

Well, you can't expect brilliant sound, can you? The few spot effects that are there are fine. The graphics are much better and everything has been well drawn: the few little bits that are animated, are animated well.

LASTING INTEREST

The missions are timed, which some will see as a good thing and others as bad. With about 20 missions for the solo player there's plenty to keep you busy.



The first place to visit is the radio room, which is where your orders come through.

JUDGEMENT

You have to be a certain kind of person to enjoy a sub sim: someone who likes to think about their actions and doesn't mind waiting a few minutes for things to happen. Sub sims rely on building tension and 688 does it beautifully. A great example of the genre and a brilliant game to play with a remote friend via a cable link.

GRAPHICS	8
SOUND	5
INTELLECT	6
ADDICTION	7
OVERALL	86%



Well into a mission and there's something up ahead. The active sonar pings are a dead giveaway and so is the speed - an enemy torp is closing in rapidly. Now you face a few frantic minutes of action as you try to fox it and convince it you're not really there.



Some rooms present you with a digitised picture of a crew member. Note the message window at the base of the screen: here's where all important things are brought to your attention.



There's only one possible place to build this molecule - but where is it?



The first bonus screen - the principles are the same, but you arrange bottles from empty to full.

ATOMIX

THALION/GRANDSLAM

£19.99 ■ Joystick

Just because you're relatively new to the scene doesn't mean you have to produce something radical, does it? German new boys Thalion don't think so.

In fact, simple puzzle games seem to be making something of a come back, what with *Pipe Mania* last month and *Atomix* this month. And like *Pipe Mania*, *Atomix* takes a couple of ideas from previous games and modifies them to suit. The game is made up of 30 levels and on each level the objective is to manipulate a set number of atoms into a molecule: for example, the first level sees you moving

two hydrogen atoms onto an oxygen atom to make water.

Unfortunately, the atoms can't just be plonked any old how - they have to fit together properly, as shown in a picture on the bottom left of the screen. The other problem is that once you've picked up an atom with the square cursor you can't move it around as you wish. Push the joystick in a direction and the atom will move in that direction until it runs into either a wall or another atom.

Sounds like you could live with the problem? It's trickier than you'd imagine. And as if that weren't

enough, there's also a murderous time limit to compete against. Fail to complete a level and it's game over - and there are no passwords to enable you to restart at the last level. There is, however, a second chance in the form of a trade-in where you can 'spend' 10,000 points in return for another stab at the last level.

As you'd imagine, the chemicals to be built become more complex as you go on, the mazes become more awkward to manoeuvre around (often you're left with only one possible place in which to actually build the thing) and the time limit never gets easier. **Andy Smith**



The start of the game and you have only three atoms to move.

LASTING INTEREST

Even with 30 levels to play through, it's too easy to complete and once you've cracked a level it becomes routine every subsequent time you play it, which is a tad annoying.

GRAPHICS AND SOUND

Everything looks fine and is well drawn and animated. It's not a stunner but then it was never designed to be. As for the sound: well the copy we reviewed had none although Thalion assured us just some gentle background music would be added. This will only enhance the game.

GRAPHICS	7
SOUND	N/A
INTELLECT	7
ADDICTION	8
OVERALL	61%

JUDGEMENT

Neat, simple, highly addictive and very playable. A great little game that fans of *Xor* and *Pipe Mania* will love. All it really needs is more levels, because once you get into it you'll find it far too simple to complete.



At this stage things are starting to get decidedly tricky.

GRAND NATIONAL

ELITE £19.99 ■ Joystick



And they're off!

Here's a novelty. Take part in the Grand National! This simple viewed-from-above race-em-up puts you in the saddle of a National runner with 30 fences to jump.

First, though, you have to decide whether you'd like a three, five or ten year game and spend the £10,000 you're given on a horse. Any remaining monies after the purchase can be gambled on the race (betting on your own horse is a good idea). The idea then is to work your way up through the pack by going faster than the other horses but without exhausting your horse. Speed and energy indicators are on opposite sides of the screen

and the game really revolves around keeping these two balanced until you can go flat out for the line a few fences from the finish.

To keep you on your toes as you race round, you have to hit the firebutton at the correct time to force your horse to jump and clear the fences. Finish a race in the top four and you'll earn some money. At the end of the game you'll want to have amassed as much of the green stuff as possible.

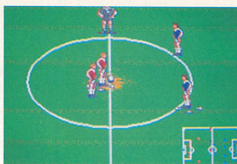
This is very simple stuff. There's almost no depth to the game and although it's quite playable it's not likely to keep you interested for much more than an hour. **Andy Smith**

GRAPHICS 5 / SOUND 5 / INTELLECT 3 / ADDICTION 6 / OVERALL 30%

AMIGA FORMAT

Team Training Diary		
Jim Leighton		
PASSING	67	YES NORMAL
TACKLING	49	NO
FINISHING	19	NO
MARKING	64	NO
TACTICS	78	YES NORMAL
FITNESS	98	YES NORMAL
SET PIECES	82	YES NORMAL

The scanner at the base of the screen will move to another corner if the action starts happening there, just to avoid confusion.



Every player has to keep fit by being put through his paces in training, even the goalie. If he doesn't train, a player becomes susceptible to injuries.

MANCHESTER UNITED

KRISALIS £24.95 ■ Joystick and Mouse

The heavyweights of the First Division have leant their name to this one or two player simulation of their club - can Anco's Kick Off hold off this challenge and keep its place at the top or will Man Utd steal the crown?

To kick off, it's a game of two halves - arcade and management. In the arcade game things take the standard form - you control the player nearest the ball and by passing to other players and shooting attempt to put the ball past their goalie. The player first selects his team from his pool of players (goalkeeper in goal, strikers up front and so on is a good idea). Then once the length of each half has been decided it's time to play the game, which features a side-on view of the action.

Should you decide to play the full management simulation, though, you not only have to look after your team, but also guide them through a complete

season including Littlewoods and FA Cup matches. Looking after your team involves overseeing the training programmes of each squad member and arranging for the transfer and acquisition of old and new players.

Once you've checked that everything is in order you can launch into a game and sit back to watch your team go about their business. Should things take a turn for the worse you can always join in with a quick press of the fire button and take over and try to get things back on an even keel.

Fortunately, there's a host of options to make your life easier if you're finding things tough, such as the opposition rating - where you can decide just how good the opposition's goalie, attack and defence are going to be - and the game save feature which means you don't have to play the whole season through in one sitting.

Andy Smith

GRAPHICS AND SOUND

The ball moves like it's full of lead, not air, but the animation is not the smoothest ever seen. Then there are the digitised pics of real TV footage every time a goal is scored - this (almost impossible to see) clip would be a nice touch if it was anything like the goal you or your opponent had just scored, but it isn't. The sound is poor, being limited to a one second loop of almost crowd-like white

noise and a few bumps as the ball moves around. Second Division quality in both these departments.

LASTING INTEREST

Better, especially if you're a fan. Completing a season will take some time and it's tough especially if you play against a half-competent human opponent or have the opposition set to 100% when playing the computer. The lack of depth in the game, though, kills off its overall lasting interest.

JUDGEMENT

The arcade game is not bad, it's just not brilliant. The biggest let-down is the management game which is far too limited. Man Utd falls down where every other arcade/management game has fallen down - the arcade side is not as good as it could be in gameplay terms and the management side is far too limited to stand up on its own.

GRAPHICS	7
SOUND	4
INTELLECT	3
ADDICTION	5
OVERALL	62%



The first choice to be made is selecting the formation of the team from five options...



...then choose who plays in which position and you're then ready for kick off.

ITALIA '90

CODEMASTERS £4.99 ■ Joystick or Keyboard

There are bound to be more of these in the run up to the World Cup, so get used to them. This one offers up to four players the chance to take part in the finals as well as having a bash at some

circuit training and indulging in some outdoor skill practice.

The actual match section is viewed from almost above and allows the player control of the nearest team member to the ball - you can switch to

another player by hitting the fire button. The game looks all right but plays awfully badly. The sluggishness you can live with and you can even put up with the weird scroll, which sometimes lags far behind the action - but what really screws the game up is the inability to alter the direction of your player once you've pressed the fire button for a shot.

Spend a few minutes learning how to get round that, though, and the three matches you play in solo mode become ridiculously easy to win. Even with a couple of mates playing, it's really not up to much.

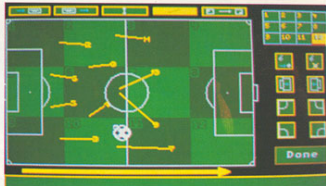


It's Russia to kick off, can they pull it back?

The circuit training and the skill practice do little to redeem the game, which is also a shame. The nicest thing to be said is that Codemasters have not, at least, overcharged for the game. **Andy Smith**



The main menu from which all the game areas are accessed.



The tactics screen: alter the gameplay to your heart's content.

PLAYER MANAGER



ANCO £19.95 ■ Mouse and Joystick

So what can you do to improve what is already the best football game ever to have appeared? Even Anco, publishers of *Kick Off*, tripped themselves up when they tried to enhance the excellent original (Amiga Format Gold Award, Issue One) with an expansion disk called *Extra Time*. That went down like a lead balloon because, to quote our review; "it's almost like you can take all the good bits out of *Kick Off* and play a very average football game". But now there's *Player Manager*.

There are two very major differences between *KO* and *PM*. *Kick Off* is the best one or two player arcade footy game whereas *PM* is for the solo player and contains not only an enhanced version of *KO*, but a whole management game as well.

The management side first. Starting the season as the newly-

appointed manager of a division three club (called whatever you like) the long-term aim of the game is to take your bunch of hopefuls to the top of the first and win several cups along the way. Each season is made up of 24 matches and doing well involves not only juggling your players and picking the best side for each match, but also overseeing the training, scouting for new players, putting players you're not happy with on the transfer list and the all-important on-field tactics.

There's a whole section of the game that lets you decide where players should be on the pitch at any one time: during corners, in attack and so on. All the player-designed tactics and modifications can be saved to disk so your team really can play as you want them to. And statistics freaks will be pleased to know there are reams

GRAPHICS	8
SOUND	5
INTELLECT	5
ADDICTION	9
OVERALL	93%

of them to wade through should you so wish.

The arcade side of things is in two main parts. You can play properly, as one man in one position, or you can control the whole team just like the old days. Do the latter, however, and your team will suffer a slight loss of form. The matches are in the classic viewed-from-above style and each lasts three minutes each way.

Play the matches, deal with the problems, enjoy the victories and remember to save your position when you've had enough for one day. **Andy Smith**

GRAPHICS AND SOUND

There's not much to listen to, just the occasional whistle blow and crowd noise during the match. The graphics though are much better as every *Kick Off* veteran will know. They're smooth, quick and well animated. During the management section, too, all the menus and windows are big and bright so it's not easy to make a mistake.

LASTING INTEREST

You'll be playing this for months to come: there's so much to do!

JUDGMENT

After the disappointment of *Extra Time*, this is cracking stuff. The mix between management and arcade is the best to have appeared in any football game, making it enthralling and addictive. There's a whole mess of extra options and choices that, added together, make this a worthy upgrade to *Kick Off*. If you own *KO* already and are fed up with having to play the computer the whole time this is a must. If you don't own *Kick Off*, *Player Manager* should be near the top of your shopping list.

The version we played did contain the odd bug, however, (the corner-kick one from *Kick Off* is still there) and it did crash occasionally so make sure you save your position often.



Six games in and you're safely in the middle of the division.

You've splashed out on a new signing so your wallet's empty.

Here are your hopefuls: two are injured, two want transfers.

The Coach

Morale is very good.

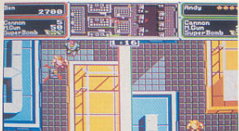
Team Ability: 8/10
 Defenders: 10/10
 Midfielders: 7/10
 Forwards: 6/10

A quick bit of training...

Select Team

...and it's time to pick the team that will play on the day.

Then kick off and see how well your team performs.



In two player mode, Andy's dropped a bomb but has run into trouble with a baddie.



The start of another level - Ben gets as close to the wall as possible to avoid the enemy gunfire.

CRACKDOWN

US GOLD £24.99 ■ Joystick

Andy Attacker and Ben Breaker are unlikely names at the best of times, but it's even harder to believe both of them are FBI agents. Then again, when you're designing a coin-op machine's scenario you are allowed some poetic licence.

It's a one or two player game converted from the original Sega machine in which Andy and Ben are out to destroy the nefarious Dr K. The action is viewed from above and takes place in the 16 levels of Dr K's fortress, which is infested with his army of biogenetically-engineered humanoid.

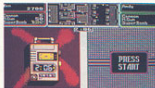
The agent's job is to destroy each level of the fortress by dropping three special explosives per level - the exact positions the bombs have to be dropped at are

marked out by large red crosses. Finding the places to drop the bombs involves wandering through the mazes that make up each level and constant referral to the map at the top of the screen.

Finding the crosses is much easier than dealing with the baddies who patrol the levels and come popping out of concealed exits, but there are two ways of dealing with the baddies. The first way is to dodge them, pressing yourself tight up against walls; don't rush too much and this proves to be a good way of avoiding them, as a lot of the baddies follow set patrol patterns. The other way to destroy them is by shooting them with your machine gun and rocket launcher. The limited ammo supplies of each of

these weapons can be replenished by walking over extra ammo boxes, which can be found lying around each level.

Plant the bombs and find the exit before the time limit expires and any remaining time is converted into bonus points: then you are ready to move onto the next, harder, level. **Andy Smith**



That's the second bomb dropped which leaves you just over two minutes to drop the last one and get the hell out of there.

GRAPHICS AND SOUND

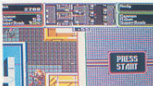
Crackdown looks just like its arcade parent: well drawn and well animated. The music and effects are fine too. Software houses are really getting to grips with these arcade conversions, especially in the cosmetics dept.



Andy runs over an ammo symbol and collects some more bullets.

LASTING INTEREST

In one player mode it burns out much faster than it should. In two player mode it's better but even then it's not going to have you playing for months.



X marks the spot: drop the bomb.

JUDGEMENT

It's far too repetitive as a one player game - this is no fault of the conversion but a fault of the original game. In two player mode it's a lot more fun but it's still not breaking any new ground and won't win any awards for originality or gameplay.

GRAPHICS	8
SOUND	6
INTELLECT	2
ADDICTION	6
OVERALL	67%

SCRAMBLE SPIRITS

GRANDSLAM £19.99 ■

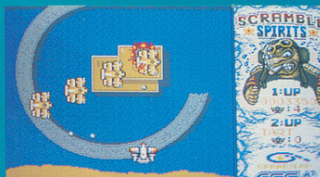
Joystick

Here's a one or two player vertically-scrolling shoot-em-up that sees the player flying through six levels of frantic action, bombing and blasting the enemy.

There are flying baddies and ground installations to destroy and extra weapons to pick up in the shape of up to

two small drone planes that accompany you. Once you have a drone you can make it strafe the ground while you concentrate on the wave after wave of flying aliens.

You have five lives to start with plus a few continue credits, so you can get quite far into the game even on the first

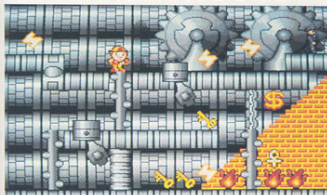


Avoid the enemy fire, destroy the enemy planes... and keep doing it.

sitting. It's not at all bad, but it's very standard fare. This again is no fault of the conversion, which is good, but a fault

of the original game design. There are much better shoot-em-ups about if you really need another one. **Andy Smith**

GRAPHICS 7 / SOUND 5 / INTELLECT 1 / ADDICTION 5 / OVERALL 54%



London in the Industrial Revolution: collect four anks to get extra lives, collect keys to open barriers, and try to avoid the pistons.

KID GLOVES

MILLENNIUM £24.99 ■
Joystick and Keyboard

How often have you wished you were somewhere else when boring relatives come to visit? Well take pity on Kid, because his great uncle Indiana Stallone was one of the most boring relatives anyone could have.

Every Sunday, Kid's family were treated to ridiculously unbelievable anecdotes from the old man, about how he fought off savages in the Amazon jungle, tripped out on the West Coast (California, that is, not Blackpool), visited the Ice Age and fought Gladiators in Egypt. Uncle Indiana was old, but the Ice Age? And were there Gladiators in Egypt? This was 'all too much for Kid, so one Sunday he scurried out of the room and took refuge in his uncle's study.

Nosing through the junk he found an old dusty pair of boxing gloves and decided to try them on. Admiring himself in a Raging

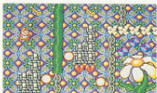
Bull pose in the mirror, he noticed the gloves sparking. Thinking that this shouldn't be happening, he tried to take them off, but as soon as they touched there was a bright flash of light and Kid found himself standing in a jungle with a rather unfriendly looking native approaching. Maybe he should have stuck with the boring stories!

In Kid Gloves, you take control of Kid in his attempt to return home. You must fight your way through five time zones, starting in a prehistoric jungle and continuing through ancient Egypt, the Ice Age, London gripped by the industrial revolution and the psychedelic West Coast.

Each zone is split into ten screens, each containing a variety of monsters to avoid, obstacles to negotiate and items to collect. Kid can collect keys to open doors barring his way, money to spend in



A Megalaser would be handy - but just look at the price!!



Wow, man! Like, look at the psychedelic freaky flowers.



Way back in Ancient Egypt - but what is a gladiator doing here?

the shops and food for bonus points. The monsters can be dispatched with a shot from Kid's weapon. This is initially a catapult with two reusable magic coins, but extra weapons such as fire bombs, bouncing 'deathstars' and a powerful laser can be bought from shops found on the way - if Kid has picked up enough money!

Occasionally, tricky situations can be overcome by using a little magic from Kid's limited supply of spells. Using magic causes a random spell to be cast ranging from Sesame, which opens doors, through Safety which causes dangerous obstacles to be rendered harmless, to Frozen, which stops monsters in their tracks.

Once Kid has made his way through all the screens in the five zones, the gloves can transport him back to home and Uncle Indiana's not-so-boring stories. **Maff Evans**

GRAPHICS AND SOUND

The graphics of Kid Gloves have obviously been designed with cuteness and colour in mind, but instead of cute the sprites are just small and the use of colour is a little over the top at times. The backgrounds on the Egyptian and Californian levels are so gaudy that it's extremely difficult to see where the walls and floors are supposed to be.

The sound is all right, with some jolly sampled effects, but the music sounds more like a C64 tune circa 1985 rather than

'90s Amiga. Generally the tone is of a half-hearted attempt, which in this day and age isn't quite good enough.

LASTING INTEREST

Initially, Kid Gloves is great fun to play. Watching Kid in his oversized sportswear jump around making strange noises is most amusing. However, much in the same way as 'classic' (in other words, 'old') platform games worked, the game depends on the player learning patterns and timing for completing of the levels. This is fair enough when you first start playing, but once you've learnt the patterns it becomes incredibly easy to waltz straight through from screen 1 to screen 50 in no time at all.

There just isn't enough variety involved from game to game, so once you are proficient at the levels every turn could play just like the last. Not even the most hardened platform fans are going to be happy with a game that loses its appeal too quickly, nor are they likely to return to a game that doesn't provide any challenge after they've seen the different screens.

JUDGEMENT

Nowadays, a game set in a familiar world must try to include that extra spark that pushes it ahead of all the others in the genre. Despite a humorous plot and an attempt to create a cute 'small boy' hero for players to identify with, Kid Gloves is just a basic 'progress from screen to screen' platform game like so many seen in the past. The sound and graphics are acceptable without being special, the gameplay overly simple and the addition short lived. Even those new to computing and not old enough to remember the original Manic Miner can see the Amiga version to realise how much the format has aged, and sadly Kid Gloves just follows the tradition without providing much interest to leave its mark on the History Book of Software.



Get across the water in the Ice Age - but watch out for that penguin!

GRAPHICS	6
SOUND	5
INTELLECT	3
ADDICTION	5
OVERALL	61%



THE WHOLE TRUTH ABOUT games programming PART 4



aliens

DAVE JONES, the ace coder behind Psygnosis' hits *Menace* and *Blood Money*, spills more secrets.



In this and next month's articles I will detail the largest part of the *Menace* code: namely, the alien movement and control routines. There will be no source with this month's instalment because I will only be describing WHAT the routines accomplish - next month will cover HOW they are accomplished, along with the source.

Movement is Life

So, we want to have aliens flying about the screen in nice patterns, attacking your ship, launching missiles at you, tracking your movements and doing all the other things that aliens do best. All the basic ingredients of a good shoot-em-up. What should spring to mind to control all of the movements is a decent data structure. As I have said before, there is no substitute for sitting down with a pen and paper and having a good think about what has to be accomplished. The best idea is to start off with the basic data that would have to be stored about an alien flying about on screen. This would probably be the following:

Alien number
Alien X coordinate
Alien Y coordinate
Alien speed

There will also have to be some way of telling the alien what to do. The simplest form would be a coordinate for it to move to. Once it gets there it would need another coordinate to go to. It would do this repeatedly until we tell it to stop, or until it has been destroyed. First, then, we will define the basic structure to describe a particular alien

```
rsreset      ; reset the rs counter
X.Pos       rs.w 1 ; one word for the alien's x coord
```

```
Y.Pos       rs.w 1 ; one word for the alien's y coord
Sprite.Num  rs.b 1 ; a byte to hold the alien number
Speed       rs.b 1 ; a byte to hold the alien speed
```

Following this in memory would be a table of x,y coordinates for the alien to move to in sequence. An example piece of source that moves an alien from left to right and back again could be defined as follows:

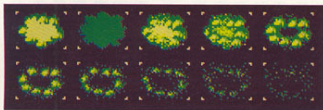
```
dc.w= 0,100 ; start alien at x=0, y=100
dc.b 6,2 ; use alien number 6 with a speed of 2

dc.w 320,100,0,100,$7fff ; move to 320,100 then to 0,100
; the $7fff is an end marker
```

This basic structure will provide only limited control of an alien, so it's time to add a few more features. Most of the aliens are animated (Figure One, overleaf, shows an eight-animation *Menace* alien) so as well as defining the alien number, we also have to define its current animation number. Note that in games an animated object is usually given a number that relates simply to the base address of that alien. The number of animations it actually has is stored separately. This makes changing the number of animation frames very simple, because the alien numbers all remain exactly the same. So we will also have to store the number of animations the alien contains somewhere in the structure as well as its current animation number:

```
Anim.Num    rs.b 1 ; a byte to hold the current animation
Num.Anims   rs.b 1 ; a byte to hold the maximum anims
```

The basic idea, then, is that for each game cycle we increment the



**FIGURE ONE:
AN EIGHT-ANIMATION
MENACE ALIEN**

Anim.Num (0,1,2,3,...) until it hits the value in Num_Anims when we would reset it back to zero. Straight away a small problem crops up in that we may not want to animate an alien every game cycle (1/25th of a second for *Menace*). In fact very few of the aliens animate every game cycle as this is a little fast, so we will also have to introduce an animation delay into the structure:

```
Anim_Delay      rs.b 1      ; a byte to hold the animation delay
```

The method of incrementing the Anim.Num until it hits a maximum then resetting it to zero is termed a **WRAP** animation as it wraps around to zero. In some cases we may want the animation numbers to increase to a maximum and then decrease to zero; this is termed an **UPDOWN** animation. To indicate whether or not to use a wrap or updown type of animation requires us to store a single bit of information. There are many occasions in the controlling of an alien that only requires a simple on/off definition. These tend to be grouped together in the data structure and called a **MODE** word or byte. This is simply a collection of bits used for general-purpose description of simple on/off controls. This is now added to the structure:

```
Mode            rs.b 1      ; single byte to hold eight flags
```

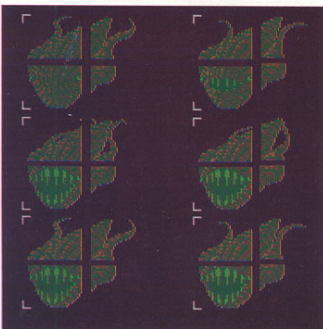
```
UpDownequ     1<<3      ; define the updown flag as bit 3
```

Note the equate of which bit in the control byte reflects the animation type. NEVER use 'magic numbers' in your source such as the statement

```
bst #3,Mode
```

This in no way tells you what bit 3 signifies: you may remember as you are working on the project, but what about in a year's time when you

**FIGURE TWO:
FOUR SPRITES MAKE ONE
LARGE SPRITE**



come back to re-use some of this source? The above should have been written as

```
bst #UpDown,Mode
```

which is very clear and has the advantage that to change the actual bit number that the UpDown flag is set at requires only the EQU statement above to be changed. Always make the assembler do as much work for you as possible. Right, lecture mode OFF, let's introduce the next element into the structure.

Reason for Living is Dying

Most aliens' sole purpose for existing in a shoot-em-up is to be blasted. Do we want them to die after being hit once, though? For most, I think not. We will have to introduce a variable to define how many times we can fill an alien with laser shot before it explodes:

```
Hits_Num rs.b 1      ; number of shots an alien can take
          ; Sff for infinite
```

As you can see a certain value has been introduced that makes some aliens indestructible. This is not used very often but is handy, say for some asteroids tumbling across the screen that you simply have to dodge and cannot destroy (anybody who reached Level 6 of *Menace* will know exactly what I mean)

As far as describing the alien, that is about it. I have made no mention of the size of the alien in the structure as in *Menace* all aliens were 32 x 24 pixels in size. To make larger ones simply meant moving a few about as though they were joined together (see Figure Two). It certainly makes life simpler handling only one size of alien, though you do lose out a little on flexibility.

Back to Motion

Now back to the movement of the aliens. The basic GOTO command was implemented simply by defining pairs of x,y coordinates for the aliens to head for - they continued until they were destroyed or until a special coordinate value told them to stop.

This is very inflexible for performing, say, a small circle movement. We would have to define goto points for many points on the circumference of the circle. This may take quite a while to work out, and would have to be recalculated for any other aliens at different x,y coordinates on the screen that wanted to perform a similar circle.

One simple way of overcoming this problem is to use a relative coordinate system whereby rather than interpreting the x,y values as goto coordinates, they are simply offsets that are added to the present x,y coordinate. This allows us to define a shape as a set of offsets from a base point, the base point being arbitrary. This should be able to be used in conjunction with the goto points so we can switch freely between absolute and relative movement at any time.

It is apparent that some form of control data has to be added into the coordinate list to switch between relative and absolute or one may be mistaken for the other. What basically happens in *Menace* is that movement always starts off in absolute mode, but at any time we can switch to and from relative mode by making one of the coordinate values a control word. For example to goto the middle of the screen, then move in a triangle shape, then return again may look something like:

```
dc.w 160,100      ; goto 160,100
dc.w OffsetMode  ; switch to offset mode
dc.w 2,2          ; move 2 along and 2 down a few times
dc.w 2,2
dc.w 2,2
dc.w -2,0         ; move 2 back a few times
dc.w -2,0
dc.w -2,0
dc.w 2,2         ; move 2 along and 2 up a few times
dc.w 2,2
dc.w 2,2
dc.w OffsetMode  ; toggle back to absolute mode
dc.w 0,100       ; back to the start x,y
```

Control words have certain bits set that distinguish them from a goto coordinate (not much point in, say, having 32768 as a coordinate with a screen width of 352 pixels). What we end up with is a small language that describes the path aliens follow. We can go on adding control features

that make the path data more compact yet more powerful. The offset mode will set a bit in the MODE byte to indicate when it is in offset mode.

Memory Economy

To cut down the amount of data required to describe a complex path (like a large ellipse formed from offsets) it would be ideal to be able to branch to some other path data, and then return after executing so many of its commands. The triangle path above, for instance, requires 40 bytes for the offset data. If we required 12 aliens to perform the triangle movement, but at different coordinates on the screen, we only want to define the offset data once, and have the rest of the aliens branch off to that data inbetween executing their own path data. Menace has a GOSUB command in the path data for this purpose. The gosub command passes over to the new offset data, then at the end of the data is the equivalent of a RETURN command which returns control back to original path data. The above could be written as:

```
dc.w 160,100 ; goto 160,100
dc.w Gosub,Newpath* ; branch to some new data
dc.w 0,100 ; back to the start x,y
```

```
Newdata dc.w OffsetMode ; switch to offset mode
dc.w 2,2 ; move 2 along and 2 down a few times
dc.w 2,2
dc.w 2,2
dc.w -2,0 ; move 2 back a few times
dc.w -2,0
dc.w -2,0
dc.w 2,-2 ; move 2 along and 2 up a few times
dc.w 2,-2
dc.w 2,-2
dc.w OffsetMode ; toggle back to absolute mode
dc.w Return
```

If we had 12 similar paths to the above the memory required would now be drastically reduced.

More Memory Economy

Another useful memory saver is a FOR type construct that allows any part of the path data to be repeated a set number of times. Imagine trying to move a series of aliens in a 'stepping' motion whereby they move, say, along 16 pixels then down 16 pixels, achieved by:

```
dc.w OffsetMode
dc.w 4,0
dc.w 4,0
dc.w 4,0
dc.w 4,0
dc.w 0,4
dc.w 0,4
dc.w 0,4
dc.w 0,4
```

The above performs one step, but if we wanted to repeat this 10 times, it would normally mean repeating the data 10 times or using many GOTO statements - but, yes you've guessed it, a loop function was implemented: simply appending the command

```
dc.w DoLoop
```

to the end of the data will cause the last xx bytes of path data to be repeated so many times. This caused two new items to be added to the alien structure, namely

```
Loop_Offset rs.b 1 ; the number of bytes to loop back
Loop_Count rs.b 1 ; how many loops to perform
```

This limits the loop command to only allowing one size of loop in each individual path, although this restriction was not noticed as multiple loops were never required.

Other Tweaks

A PAUSE function was added that allowed an alien to pause at a specific point for any length of time. A simple function but used quite often:

```
dc.w Pause,PauseValue ; the Pause value is in 1/25 seconds
```

A SEEK mode was added that allowed an alien, at any time, to start to track your ship and try to collide with it to reduce your shield. This is worked similarly to the pause function with a count specifying how long to seek your ship before carrying on with the rest of the path data:

```
dc.w Seek,SeekCount ; seek ship for 1/25 * SeekCount secs.
```

Related to the seek command above is the FIRESEEK command which allowed one alien to start another path. This was used to allow aliens to fire missiles that used the seek mode:

```
dc.w FireSeek,SeekCount ; start a seek path from this alien
```

To finish off the command set some additional simple commands that came in useful were added. These are:

ChangeSprite - allowed you to change the sprite number at any time. Useful for transforming aliens into other types.

ChangeSpeed - quite obvious this one. Slow moving sprites can be given a quick turbo boost to attack the ship.

ChangeAnim - allows manual changing of the animation number. Used to mimic, say, turning a corner at any point on the screen

And that, basically, is that. Table 1, below, lists the full data structure for an alien path. Hopefully you can see the benefit of designing such a control system for moving objects about. It need not necessarily only be used in a shoot-em-up style game but can relate to many styles of game. It soon becomes quite simple to add more powerful commands to the code, which results in the code being useful in many more projects.

Now you know what the commands do - next month I will present the source and explain how they are accomplished. ■

TABLE 1
FULL DATA STRUCTURE

rreset			
Next.Path	RS.W	1	offset to the next path
X.Pos	RS.W	1	current x position
Y.Pos	RS.W	1	current y position
Kills.What	RS.W	1	kills others aliens if dead (0-11)
Table.Offset	RS.W	1	the current table offset
Sprite.Num	RS.B	1	sprite number
Anim.Num	RS.B	1	animation number
Anim.Delay	RS.B	1	delay in 1/25th secs, dynamic copy
Anim.Delay2	RS.B	1	static copy to refresh the above
Speed	RS.B	1	speed in pixels
Pause.Count	RS.B	1	dynamic pause counter
Mode	RS.B	1	flags, see blow
Loop.Offset	RS.B	1	loop offset in bytes (-ve)
Loop.Count	RS.B	1	dynamic loop count
Hits.Num	RS.B	1	number of hits to kill
Num.Anims	RS.B	1	number of animations
Seek.Count	RS.B	1	dynamic seek count
Table.Size	RS.B	0	

* This is followed by x,y bytes to move to (always even) with command

* codes inserted to alter the control and movement.

Mode bits			
Offset.Mode	equ	1<<0	set when in offset mode
Seek.Mode	equ	1<<1	set when in seek mode
UpDown	equ	1<<3	set when updown animation
AnimUpDown	equ	1<<4	set to animate up, reset down
HeatSeekPath	equ	1<<5	set to signify a heatseeker