

RETRO

£5

VECTREX | CBM 64 | NES | AMIGA | PC ENGINE | NEO-GEO | MEGA DRIVE | SNES | SATURN

The guide to collecting classic videogames and hardware

Includes fully updated software prices for 2004

All-new NES and Amiga sections with classic software showcases

Comprehensive buyer's guide featuring exotic console prices







As pastimes go, collecting things can be rewarding. Members of the philately fraternity must surely feel a special kind of buzz when completing a limited-edition set of British Columbia stamps, and finally getting hold of a Japanese import version of 'God Saved The Queen' on coloured vinyl must prove similarly life-affirming for those dedicated to filling their living spaces with punk rock memorabilia. But surely no other pursuit in collecting circles can compete with the acquisition of videogames and the amazing hardware that has powered them since they became popularised in the '70s.

Because in physical terms a postage stamp from yesteryear is really no different from a postage stamp of today, and record vinyl certainly hasn't come on in leaps and bounds over the years. But videogames, more so than other forms of mainstream entertainment such as television programmes or movies, are distinctively products of their time.

And, importantly, this is not just about tracking down rareties from years gone by and racking them on a shelf to simply sit there and be admired across the room from time to time, it's about *interacting* with these historical artefacts. Videogames are made to be played, to be enjoyed, to be experienced. And many thousands of gamers are doing just that, making the collector's scene an important part of the videogame industry as a whole.

All of which is a roundabout way of saying welcome to the third edition of **Retro**, a celebration of videogame history and its preservation in which we're gathering together **Edge's** collector's series, filling in a few blanks, and delivering a bunch of new content besides. We're sure there'll be something here to drive your gaming habit further.

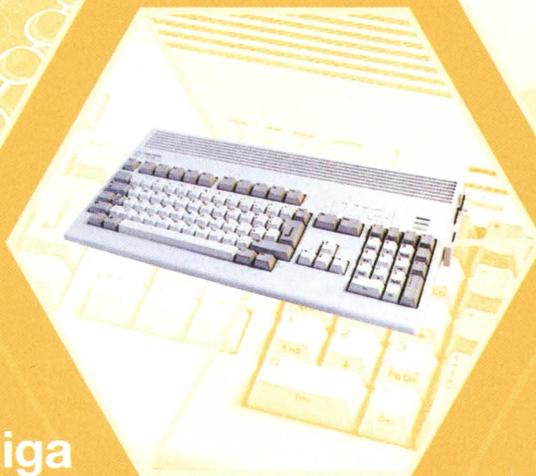
Oh, and one last thing: good luck with your eBay auctions and your plundering of car-boot sales...



006 Vectrex



046 PC Engine



016 C64



036 Amiga



058 Neo-Geo



026 Famicom

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Designer Lines

For those who grew up in an era when many videogames were limited novelties, the launch of the Vectrex console in the early-'80s proved a revelation. With its pioneering gameplay dynamics, distinctive graphics and high-quality sound, it was the first console to transport the experience of the arcade into the home

GCE's Vectrex is the only dedicated vector-based home console with a built-in-monitor. In recent times, the machine has demanded as much attention for its graphical aesthetics as for its gameplay dynamics. In terms of rivals, it has none. If it's a simplistic minimalist vector glow you want to light your living room, there's nowhere else to go.

That such a niche system, on the market for little more than two years, has endured in popularity right up until today says different things to different people. The truth is that systems born and nurtured before the great videogames crash around 1984 are usually nothing more than mantelpiece artefacts in today's market. Gameplay was still embryonic and the graphics today look like primitive cave scratchings. Yet the Vectrex has fared differently to its

pioneering brethren and, in the last few years, interest in the system has never been so high. There are several reasons for its extreme collectability some 20 years on.

Vectrex's timing couldn't have been worse as it arrived on the doorstep of an industry about to break up. As with all companies releasing videogame systems and software leading up to the bust, profit was scarce. As such, the Vectrex enjoyed only a short lifespan, with many software anomalies slipping out relatively unnoticed. The fact that so few items were released (only around 30 games made it to shop shelves) meant that the collector could feasibly complete the collection. Combine this with the scarcity of those games and it's an irresistible concoction for the hunter-gatherer. But this is a factor shared by other systems of the

time; what elevates the Vectrex to premier collectable of the early-'80s are the aesthetic qualities of the system's graphics.

Opting for white vector-line graphics (colour was introduced by plastic overlays), and using a vertically orientated Samsung 240RB40 vector monitor as seen in arcade machines such as *Space Wars*, *Asteroids*, *Battlezone* and *Tempest*, Vectrex is retro stylish in today's market. As a result, the visuals have remained fresh while its contemporary early sprite-based machines have aged badly.

Finally, the system has a vociferous home-coder following. At the end of its life the rights to the Vectrex and all related materials were returned to the original developer, Smith Engineering. SE then graciously condoned the non-profit circulation of any materials including games and



The 3D Imager is a highly sought-after piece of Vectrex hardware, selling for between £255–600. It is required to run all 363x series software. Unlike the Virtual Boy, the goggles didn't generate criticism from people complaining of headaches – because few bought them



The nature of the system's vector graphics was echoed throughout much of GCE's boastful promotional materials

Homebrew

The Vectrex is one of the most fan-supported systems ever. Aside from the usual emulators and Web pages, Smith Engineering's open-source policy has spawned some new games. Foremost among the Vectrex programmers is John Dondzila, programmer of the 1996 Vectrex game *Vector Vaders*. Dondzila has gone on to produce several more games, including *All Good Things*, *Spike Hoppin'* and *Patriots*. The height of Dondzila's fame came in 1999 when he produced the first 64K Vectrex game, *Vecmania*, containing several games all on one cartridge. Sean Kelly manufactures a Vectrex multicart, a single cartridge that contains almost the entire library of Vectrex games. The scene has also seen Vectrex versions of *Frogger*, *Galaxian* and *Lunar Lander* complete with digitised speech.

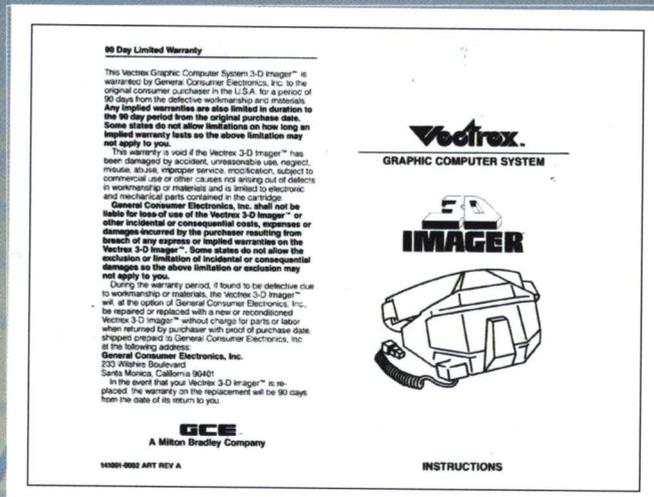
manuals allowing the Vectrex to become a haven for homebrew projects. These factors have ensured that the system has remained popular with enthusiasts the world over.

Much mystery surrounds the Vectrex's conception in 1980. Although many of the originators behind the launch and games have told their stories, time has misted these recollections and created differing versions of the same events from those involved at the time. In the early-'90s rumour had it that GCE president **Ed Krakauer** had been travelling in the east when an Asian businessman approached him. Krakauer was offered at less than cost price a warehouse of monitors that had been intended for use in cardiogram machines. Due to the boom in the videogame market, GCE was interested in entering at a more dedicated

level. Krakauer is said to have accepted the offer and commissioned a GCE engineering team to build a console around them. However, in 2000, Steven L Kent, author of 'The Ultimate History of Videogames', interviewed **Hoppe Nieman**, the former marketing director of GCE, who negated this story, saying, "The story about the monitors is not true... it was a real problem for us to get nine-inch monitors... so we made them in Hong Kong ourselves."

The issue became even further confused at a US classic gaming convention in late 2000 where **Bill Hawkins**, a programmer hired to make games for the Vectrex during the system's development, gave his version of events: "One of the guys who was a hardware designer, John Ross, was going around some surplus places and had come up with a

little one-inch CRT that I think was used in a heads-up display for aircraft. He found it in a surplus store and brought it in thinking it would be cute to make a little handheld game that would use that. Western Technologies, being primarily a development house, rather than just develop it themselves, shopped it around. Originally, I think Kenner [known for its 'Star Wars' figures] picked up the idea and said, 'Yeah, we like it, but make it a five-inch CRT.' Then they came up with a thing that looked like a Commodore PET with the CRT sitting on a little stand and the controls down there [below the CRT] and called it the Mini-Arcade. Kenner subsequently cancelled the development plans, and [Western Technologies] went and shopped it around again. GCE's Ed Krakauer said, 'We like it, but make it a nine-inch CRT.' And that's how it came about."



At the time most gamers would have preferred guarantees of 3D Imager software rather than 90-day workmanship warranties. *Crazy Coaster (3D)* wasn't enough of an incentive



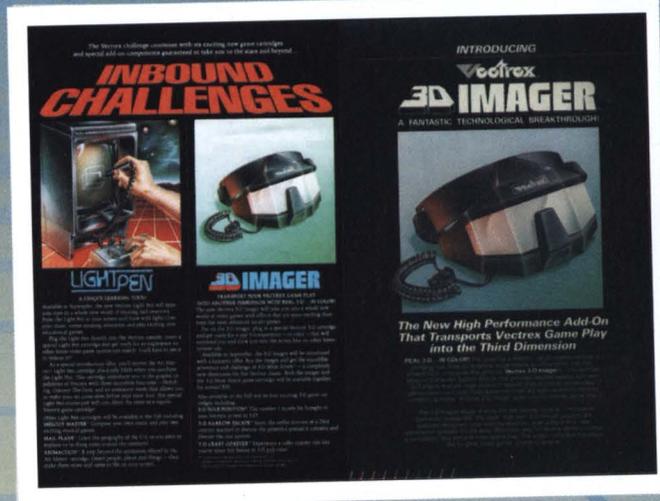
This is the extremely rare Mr Boston liquor store-branded Clean Sweep game. Two copies of the game have surfaced on eBay since 1998 and both sold for in excess of \$1,200. Unlike some other retro consoles the Vectrex is truly a thing of beauty and is increasing in value



Vectrex advertising was typical of early-'80s videogames branding but already system one-upmanship was creeping into the taglines



The Japanese Vectrex is perhaps the most desirable of the system variants. Distributed very poorly by Bandai in Japan it's duly the most valuable version



Peripheral styling was best termed 'a little bit 1980s', although their value is now high

It was only a matter of weeks between Kenner's refusal to take up the Mini-Arcade in July 1981 and GCE's decision to run with it. GCE commissioned Western Technologies to handle all the programming and design for the system. As soon as the Mini-Arcade had been taken up by GCE, Western Technologies cancelled an Atari 2600 reverse-engineering project it had started in June earlier that year and moved the key staff to start work on the new console project. By January 1982 hardware design was nearing completion and GCE was anxious to announce the new console system, but with no games in development, time was of the essence.

The next six months were a blur of activity and it's hard to decipher exactly what happened and who did what. Ed Smith, Western Technologies' manager of engineering,

recruited technology students wanting placements. Rather than looking for local students he turned his attentions to Georgia Tech College, allegedly so any potential employee would have no distractions in Los Angeles. Bill Hawkins and Chris Kong were selected due to their experience of coding games in BASIC. Duncan Muirhead joined a week or two afterwards having dropped out of a Physics PHD program at UCLA. And so a strict timetable began demanding that the first 12 games should be ready by June 1982. By April, *Scramble*, *Mine Storm*, *Berzerk*, *Rip Off* and *Star Trek* had all been completed and the system was nearing launch.

Hoping to unveil the console at the summer CES show in Chicago, GCE was anxious to get a new name. Unhappy with the term 'Mini-Arcade' the title was then shortened from

Vectron (this name even got a startup screen logo) through Vector-X to Vectrex. **Tom Sloper**, designer of the game *Bedlam* and creator of Vectrex mascot, Spike, illuminates: "We had one of those corporate brainstorming sessions with the president of GCE. We're all talking about what to call this thing. I said, 'It's a vector-based machine. Let's call it something with 'vector' in it, like Vector-X.' We made a list, put it on the whiteboard and eventually they called it Vectrex."

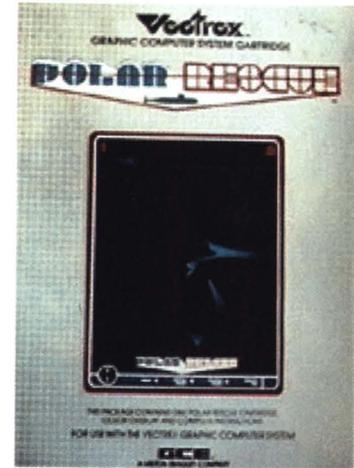
Production of Vectrex began in August 1982 and the system received critical acclaim from the videogames press of the time. Paul Newell's *Scramble* won the Arcade Award from 'Electronic Games' magazine for the best Mini-Arcade game (a category apparently founded for the Vectrex). Sales were steady despite a price point in the US of \$199 (£126).

Supermarket sweep

The Vectrex has always had a huge collectors' scene in the US, and with so many fansites it can be hard to find accurate information. One of the best fan interviews comes from **Robert Van den Heuvel**, who recalls touring the Vectrex factory in Los Angeles as a child: "I was 'awarded' a special hand-labelled version of *Minestorm* because I passed, I believe, 89 levels on the first *Minestorm*. So what I was given was really *Minestorm III*; it had several hundred levels and I was assured I'd never beat it. I was given my choice of any cartridge as a souvenir, and like a dummy I chose *Star Castle* and not *Dark Tower*, which was operational at the time. In the main offices there was a six-inch-high mini-Vectrex on the president's desk, for entertaining prospective business partners when they came to visit. I am told it cost a sheer fortune to build because of the size (small components pushing the price up). It also wasn't shaped like a traditional Vectrex, but like a shoebox, with the details hidden from view. Vectro the Alien [from 'Passport' magazine] looks an amazing amount like the company president. I am told it's not a coincidental resemblance."



In 1982 GCE provided props for the atrocious film 'Android'. Two Vectrex machines were featured, one displaying the *Star Trek* game



Package design, playing on the vector theme, was less than inspired and typical of packaging of that particular period

INTRODUCING AN ASTOUNDING BREAKTHROUGH...

Vectrex ARCADE SYSTEM

THE ONLY VIDEO GAME SYSTEM THAT BRINGS REAL ARCADE PLAY HOME

GCE
ENTERTAINING SOFTWARE SYSTEMS

ONLY Vectrex
DUPLICATES REAL ARCADE GAMES AT HOME!

Home video games have progressed remarkably in the last decade from simple, one-dimensional, joystick games to sophisticated, multi-colored, multi-screen, full-on computerized, at-home home games. Now, you can enjoy the quality, fun, and excitement of real arcade games at home. The Vectrex Arcade System is the only home video game system that brings real arcade play home. It's the only home video game system that brings real arcade play home. It's the only home video game system that brings real arcade play home.

Vectrex HAS HARD-HITTING ADVERTISING...

Attention-getting advertising...
Attention-getting advertising...
Attention-getting advertising...

ATTENTION-GETTING MERCHANDISING

...AND MUCH MORE!

As was to become standard industry practice in the following decade, the pre-release Vectrex press pack focused on the system's graphics, control system and audio

Allegedly one of the prime reasons for strong initial sales at the time was that the system, with its built-in screen, didn't require using the family TV. The console was large and stable featuring four full-size arcade buttons and a sturdy top-heavy analogue joystick (the first standard analogue console controller pre-N64) designed to fit neatly into a compartment beneath the Vectrex screen, allowing the system to remain compact and, so the advertisers promised, portable.

By the end of 1982 GCE was desperately looking for someone to buy it out. Hawkins explains: "Basically, GCE was a small company shopping to be sold. They were startup people wanting to build the company and get out."

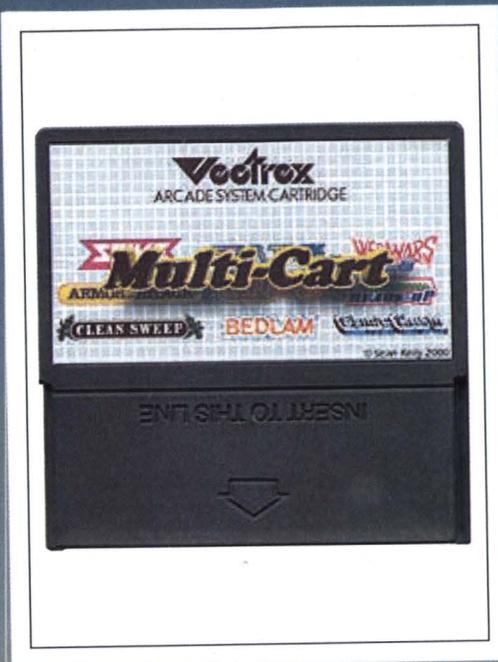
Enter Milton Bradley. From the late-'70s Milton Bradley had been looking to the videogame market and watching its

own boardgame-based profits diminish. The company stockholder reports for the early-'80s said that it was in trouble because electronic games were taking off and it was too reliant on boardgames. In March of 1983, Milton Bradley purchased GCE, thus acquiring the launched Vectrex. GCE had already booked national advertising for MB to use after the sale of the company. However, as soon as the deal was completed, MB pulled all the advertising and instead used its well-established distribution channels to expand the Vectrex's distribution overseas. By the summer, distribution had begun throughout Europe and Japan (the latter handled by Bandai).

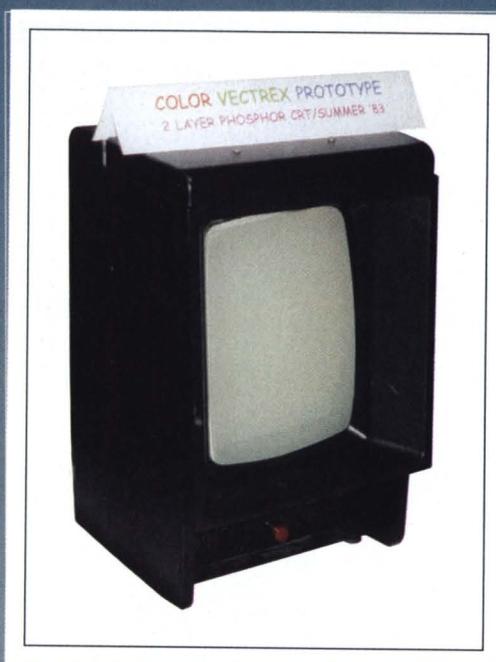
By the end of 1983 the videogame crash was in full swing. MB closed down GCE to distribute the Vectrex itself, discounting it as much as possible (first \$150, then \$100).

In March 1984, the Vectrex was discontinued in Europe and phasing out of the unit began in the US. As with most of the videogame companies in 1984, MB was stuck with a huge inventory and duly forced to unload everything to discounters who sold them at fire-sale prices throughout the remainder of 1984. The system sold for as little as \$45 (£29), with carts at \$5 to \$10 (£3-6) apiece at that time.

It has been speculated that MB washed its hands of the Vectrex like this to look more attractive to Hasbro (with whom it would merge by May of that year), which was not interested in entering any area of videogames. By the end of 1984, Vectrex was nowhere to be seen. Eventually it was alleged that MB lost around \$31.6m (£20m) due to the high cost of manufacturing Vectrex set against poor sales. At the 2000



Sean Kelly's Multi-Cart, first released in 1993, contains around 60 titles including all released games, prototypes and new fan titles



This colour Vectrex prototype surfaced recently at a classic gaming exhibition. Inevitably, it was too expensive to get off the ground



The official Vectrex magazine only ever made one issue. Its mascot, Vecto the alien, was allegedly based on the company MD. And no, there were no unofficial magazines either

SPEED 040

Classic Gaming Expo, Sloper explained what he thought was the main factor in Vectrex's death: "I think the critical factor was the timing, because at the point where MB bought GCE, it was 1983, and we had just crested the hump in the popularity of videogames. The first boom-bust cycle was very steeply up. And then, with *E.T.* and *Pac-Man*, it hit the top and came down hard; the Vectrex just went with it."

There is also more sinister evidence of a factor in Vectrex's demise. The Video Adventure store in San Jose, California recently revealed that in the early-'80s Atari sent them a notice that allegedly went to all the main independent distributors of its products in America. It stated that no Atari goods would be released to any distributor that also carried the Vectrex products. The shop owner stated: "We had to

choose between selling the innovative Vectrex system, or selling all other Atari videogames and computer systems. There was no choice. Not with us... and not with any other retailer. Overnight, Vectrex was dead."

Retro spoke to two of the key collectors of Vectrex – one English, one American. **Jason Moore**, based in Milton Keynes, is the editor of fanzine 'Retrogames' and former manager of the affiliated shop in London. **Lance J Lewis**, from San Jose in California, worked at Atari as, among other things, lead level designer for *Alien Vs Predator*, and both *Hover Strike* games for the Jaguar. He has also worked at Rocket Science Games, AOL Games and 3DO. Despite an unnerving propensity for working with doomed companies he saw the light when commissioned for "yet another *Army Men*

Vectrex trivia

- In 1982, Vectrex game programmer Mark Indictor and his family moved out of Los Angeles to write games in the seclusion of a pine forest at 5,000 feet. An NBC news crew visited and interviewed him for a news item on eccentric computer hackers and their lifestyles.

- Vectrex was the first 16bit console. Like the GBA, all-region games and peripherals were compatible with all-region Vectrex machines.

- In 1983 several efforts were made to develop a colour Vectrex. One prototype used a colour TV tube that was instantly shown to be too expensive. Another used a projection TV with three vector scan tubes. It worked well but was again commercially impractical. Yet another effort was to use two layers of colour phosphor on a black-and-white-type TV tube. Ultimately these ideas never got beyond the prototype table.

- One young Vectrex player's father worked at GCE. He recalls visiting the warehouse: "One programmer used to snort whipped cream gas all night while programming. My dad used to trip on the cans when coming in for work the next morning. There were cases of them all over the floor. GCE management apparently put up with this..."

- In one interview **Bill Hawkins** indicated that the system of development in place at Western Technologies didn't allow for much cooperation between the game developers and Miva Filosefa, the lead overlay designer: "There was a great rift with Miva and the programmers when these things first came out... overlays never really were designed with the game. They had nothing to do with the game, in fact, in a lot of cases, as programmers we didn't like them. At one point, we were thinking about putting a message up on the screen that said, 'For improved gameplay, remove the overlays'."

- The Vectrex showed up again a few years later when Abel & Associates converted the Vectrex into a text terminal for use in US malls and pizza parlours. For a quarter, you could have the machine perform the 'Luscher Colour Test' in which the player would pick colours in the order that they appealed (all on a monochrome screen). The machine would then analyse your personality. Vectrex machines have also been found converted into heart-monitoring devices.

- One of the many anomalies of the system is the elusive *Mr Boston* promotional cartridge. A modified version of the game *Clean Sweep*, it was designed as a promotion for the Mr Boston's chain of liquor stores in the eastern US. At least two copies are known to exist: one has its own screen overlay, and both contain production ROMs, indicating that the cartridges were commercially produced. The liquor company gave out a limited number of customised cartridges of *Clean Sweep*. The box had a Mr Boston sticker on it; the overlay was essentially the regular *Clean Sweep* overlay with the Mr Boston name and logo. The game itself had custom text and the player controlled a top hat rather than a vacuum. Two copies have since surfaced on eBay 1998 and both went for over \$1,200 (£760).

game," and decided to take a break from working in the industry. **Retro** wonders how two men from different cultures came to love the same system. "The first time I ever saw a Vectrex was in the early-'80s, surrounded by about 30 kids in a crowded John Lewis toy department," explains Moore. "As weary mothers dragged away their protesting children, I gradually got closer to the machine itself. Even before I got to see the machine, my imagination was captured by the sound. The very fact that I remember hearing the machine before ever seeing the graphics highlights how powerful it was for the time. It was like being in an arcade, as far removed from the bleeps and bloops of my Atari VCS as you could get. I was close to hysterical when it came to my mum's turn to pull me away. Today we are so hard to impress with new



GCE did almost everything right with early marketing. The software was quite well presented and looked nothing short of enticing

Colour was added to Vectrex games via screen overlays, although the overlay designer and game developers did not cooperate



Obviously Vectrex extras such as these are desirable to the completist. A soft cover is expected to easily fetch £150-200, while the carry case is likely to be closer to £300



The ideal Vectrex machine comes boxed with all inserts. While hardware prices have fluctuated in the last few years the mint condition setup shown will cost £200 minimum

technology, but back in 1983, it was like seeing colour TV for the first time. It took me a while to save up the money, but once seen, I had to have a Vectrex. It's a console that once you've seen, you'll never forget."

For Lewis, collecting had already become a concern at an early age: "Like most kids raised on 'Star Wars', I had an Atari VCS/2600, and that was the beginning of the obsession. When the Vectrex was released in 1982, I had to have it in my already growing collection. The built-in vector-graphic 'arcade' monitor was just the coolest thing."

Moore explains the console's popularity further: "The Vectrex is unique thanks to its single-gun vector display system; it is unlikely any other company will ever release a machine using this rather archaic technology, so the Vectrex

will always be unique. Add to this the built-in screen, the highly responsive analogue joystick, and the high-quality sound effects and you have the closest thing to an arcade machine for the home. The alternative configuration of consoles like the Vectrex and Virtual Boy provides a completely different kind of gaming experience, which in turn will always make them highly prized by collectors."

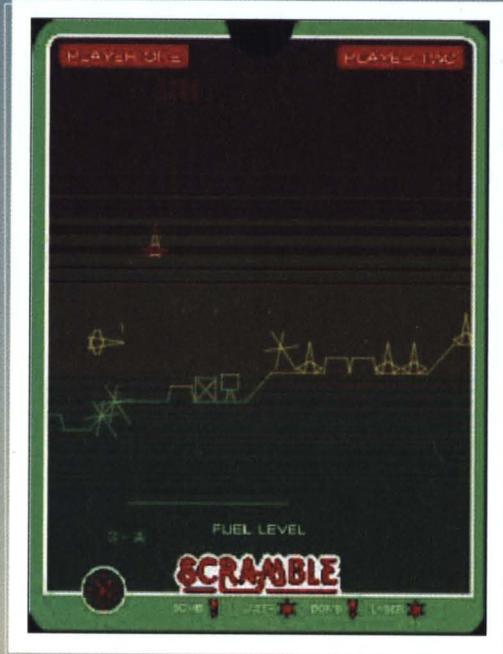
Lewis agrees: "It was the first cartridge-based home gaming console to have a built-in vector monitor. These things were really only seen in the arcades, and today they're practically non-existent. It was also one of the last consoles manufactured before the great game crash, so it didn't have much of a chance to build a user base, or its own place in pop culture. A lot of mainstream gamers have never heard of

the Vectrex, and the gamers that are familiar with it tend to feel a strong attachment to it."

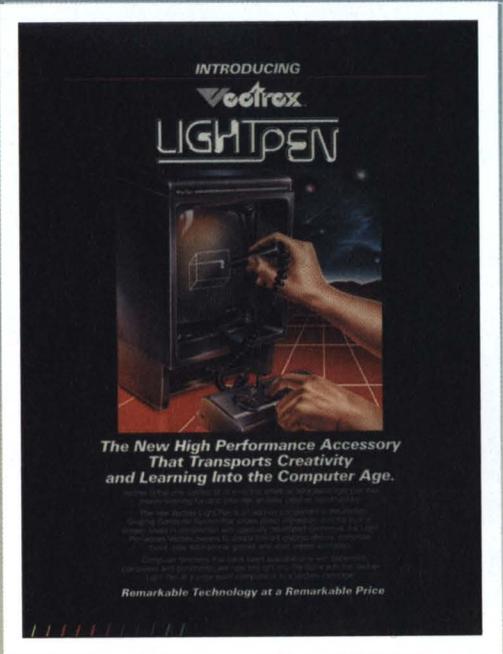
With Moore selling various Vectrex materials over the years, **Retro** ponders whether the scene has changed at all. "The price of UK Vectrex consoles has fluctuated greatly in the past eight years – it's actually lower now than back in 1995. I think this is because those that had always wanted them would buy them at whatever price, but all now own them. Persuading new gamers to love such an old format is difficult, particularly when there aren't enough machines around for them to experience them in the flesh. I actually know people who downloaded Vectrex emulators and couldn't work out what all the fuss was about. It's hard to explain the huge difference when playing the real thing.



Milton Bradley's promotional Vectrex campaigns in Europe were direct and to the point



In reality, screen overlays added very little to the experience, and most players will enjoy their games in plain vector screen glory



Not as rare as the 3D Imager but still desirable due to more compatible software, the lightpen, if boxed, can sell for up to £150

Vectrex trivia (cont'd)

- Newport Cigarettes at one point commissioned a customised version of *Web Wars*, featuring 'Newport Cigarettes Presents' on the title screen and a trophy room screen. Bill Hawkins finished the coding which was sent to Newport, but it isn't known whatever happened to it, if anything.
- The Vectrex came close to coming back from the dead in 1988, when Smith Engineering considered resurrecting the console as a handheld unit. Milton Bradley thought the \$100-plus price tag of the unit would make it unsellable, so the idea was scrapped. Nintendo's Game Boy was released the following year and enjoyed huge commercial success, but somehow the handheld Vectrex concept was never revived.
- The version of *Minestorm* that shipped with the Vectrex famously had a major bug which meant that, if you got to level 13, the game would crash. If you complained to the company, you would be sent a bug-free version of the game, known as *Minestorm II*, free of charge. Evidently nobody ever thought that any player could ever reach, let alone survive, wave 12 so data was only included for that amount of waves. The cart did not come with a manual or box.
- GCE had plans to build a computer system around the Vectrex. A prototype was shown at CES where Hope Neiman, a company official, stated the device would probably be available by 1984. The computer was featured in two computing journals at the time – 'Popular Science' in October, 1983 and 'Creative Computing' in November, 1983. When product manager Michael Cartabiano was recently interviewed about the Vectrex computer he categorically denied that it made it past the early stages of development.
- Vectrex Computer specs
 Model name: Keyboard
 Price: \$200
 RAM: 16K
 RAM maximum: 64K
 Data storage: Wafer-tape
 Modem connection: Serial
 Built-in programs: BASIC
 Display size: 2,000–4,000 vector drawn characters

The most expensive games are obviously the most rare ones. *Pole Position* and *Polar Rescue* always fetch high prices in Europe because they weren't released here. The games for the 3D Imager also fetch more money because of their rarity. You're always going to have collectors wanting to complete their set, and games for the Vectrex are just the same."

Lewis claims that the Internet has had an impact on the market: "The Internet has really enabled the collecting community in general to expand. One can instantly find someone else anywhere on the planet to ask about why his or her Vectrex only displays a white dot in the centre of the screen. Newsgroup posts can be browsed to find out about the new games that are for sale. Or even find a working Vectrex on eBay. It's a very exciting time for collectors."

But will this avenue of collecting be anything more than a short-term fad that will die? Moore is predictably adamant: "I think the whole retro collecting scene will not only be sustained but go from strength to strength. We're at the tip of the iceberg. It wouldn't surprise me if, in ten years' time, common games like *Spike* or *Fortress of Narzod* are going for £300. Simple game mechanics may be out of fashion, but hardcore gamers will always appreciate them, and they don't make a game any less challenging. I think the Vectrex will always be a major retro collectable, it's just a shame there isn't more stuff out there to collect for it. As soon as you fill in the basic gaps and complete your standard software collection, you're left with super-rare titles that you'll need to mortgage your granny to buy."

It's a sentiment echoed by Lewis: "People who grew up on PlayStation *Tekken* look at the classic systems and laugh. That's their loss. Twenty years ago, developers didn't have the luxury of pushing 50m polygons per second with bump-mapping and pixel shading all running from the hardware. They had to make games sell on the merit of being fun. Systems like the Vectrex will always be more popular with the older gamers, the people who remember when there were no videogames. Each new console, no matter how cool or powerful it is, ships with an expiration date. Unfortunately, none of us can see that date. We just play it until we tire of it, or software support no longer exists. Some consoles, such as the Vectrex, continue to fight off that expiration date, and the collectors are the ones who can help."

Continued →

The collectables

When collecting Vectrex cartridges you're looking for the box, instructions, cartridge and overlay (if there originally was one). Most games can be found relatively easily but the last few

here will cause you extreme difficulty – but perhaps that is just another one of the draws of the Vectrex collecting scene. The price guide has been produced with the help of experts Jon

Dyton and Chris Foulger who, in 1998, bought a Vectrex, spare controller, 13 games (including overlays), lightpen and official carry case from a UK car boot sale, all for £7.

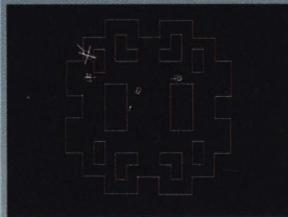
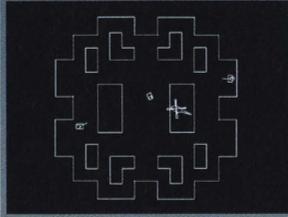
Minestorm II



Release: GCE 19
Ref: VT 3000
Value: £100–200

This was the bug-free version of *Minestorm* that was sent to players who wrote in complaining about the built-in bug on level 13.

Armor Attack



Release: GCE 1982
Ref: VT 3301
Value: £15–30

A 2D *Battlezone*-like in which the player controls a jeep in the centre of an open maze. Responsive, smooth and well thought out.

Cosmic Chasm



Release: GCE 1982
Ref: VT 3101
Value: £20–30

The first home game that GCE ported from the arcade. As with many titles, MB later released the game in Europe itself.

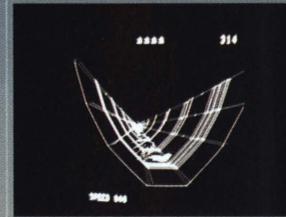
Space Wars



Release: GCE 1982
Ref: VT 3105
Value: £30–45

Its monetary value hides the historical value. The game that started it all ported to a console a fraction of the size of the original.

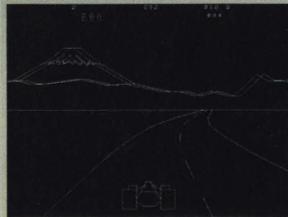
Web Wars/Web Warp



Release: GCE 1983
Ref: VT 3108
Value: £25–35

Consistently and unfairly compared to *Tempest*, *Web Wars* is a good pseudo-3D shooter with competent visuals and a twoplayer mode.

Pole Position



Release: GCE/Namco 1983
Ref: VT 3206
Value: £45–75

Rare conversion of the arcade classic. Much graphical effort was made on the player's vehicle leaving the others looking less impressive.

Fortress of Narzod



Release: GCE 1982
Ref: VT 3304
Value: £20–40

A very good *Galaga*-type shooter in which you play a wizard on a hovercraft flying through angled walls to get to get to fortress Narzod.

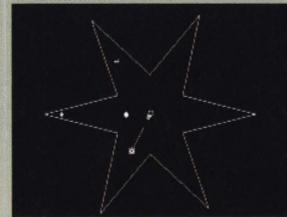
Polar Rescue



Release: GCE 1983
Ref: VT 3308
Value: £30–75

A fantastic firstperson-perspective submarine simulator, regarded by many to be the best original Vectrex game. Fetches high prices in Europe.

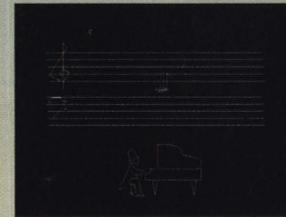
Bedlam



Release: GCE 1982
Ref: VT 3305
Value: £20–45

Often described as an inside-out *Tempest* (by the developer as much as anyone), *Bedlam* has enough original features to stand alone.

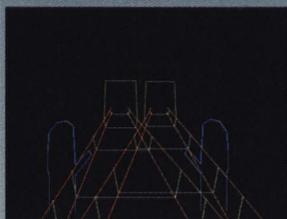
Melody Master



Release: GCE 1983
Ref: VT 3602
Value: £45–75

With lightpen functionality this standard early-'80s music game is one of the more sought-after titles to both European and US collectors.

Crazy Coaster (3-D)



Release: GCE 1983
Ref: VT 3634
Value: £45-65

One of the few (and poor) titles released for use with the 3D Imager glasses. An experience ROMs don't translate very successfully.

Scramble



Release: GCE 1982
Ref: VT 3103
Value: £15-25

A classic port of Konami's side-scrolling space shooter that would eventually evolve into *Gradius*. Very demanding and frustrating.

Berzerk



Release: GCE 1982
Ref: VT 3302
Value: £15-40

A port of Stern's first arcade hit in which the constant redrawing of images frequently slowed the game to a crawl.

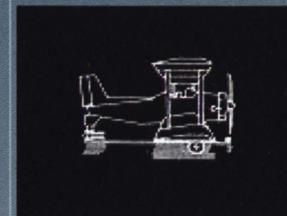
Star Castle



Release: GCE 1983
Ref: VT 31 VT 3109
Value: £50-75

One of the hardest games on the format, this is an excellent port of the Cinematronics arcade classic. The tiny graphics don't spoil an enthralling experience.

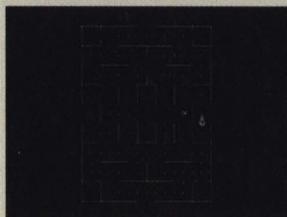
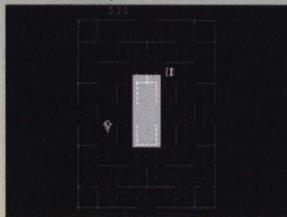
Mail Plane



Release: N/A
Ref: VT 3603
Value: £1,500

Two copies of this prototype have been verified and sourced (one by Jason Moore). Estimated value shown if another made the market.

Clean Sweep



Release: GCE 1982
Ref: VT 3303
Value: £15-25

A *Pac-Man* clone where you take the role of a vacuum cleaner in a bank. Your vacuum can hold only a certain number of pellets.

Dark Tower



Release: N/A
Ref: VT 3307
Value: £2,000

Only one prototype of this 3D adventure game has been verified. Many collectors would pay this price if another came on to the market.

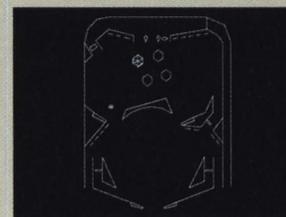
Star Trek



Release: GCE 1982
Ref: VT 3107
Value: £20-35

The aim is to find and destroy the Klingon mothership in this pacy and entertaining 'Star Trek' licence. It was released as *Star Ship* in Europe.

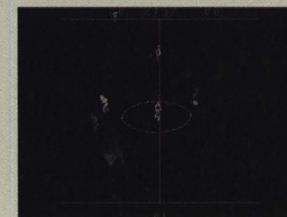
Spinball



Release: GCE 1983
Ref: VT 3204
Value: £25-40

A very good, if flickery, pinball game that, like *Polar Rescue*, was one of the first ever titles to offer a pause function.

Heads Up (Soccer Football in UK)



Release: GCE 1983
Ref: VT 3203
Value: £15-25

This footy game was ambitious and accomplished. With three-a-side play and switchable characters it is one of the grandfathers of the genre.



Once, Twice, Three Times a PC

The wonder-machine may have been reviled by vociferous Spectrum owners the length and breadth of '80s England, but at least the C64 looked like a proper computer, boasted games to match and was adored the world over.

Retro traces the retro-chic rise of the 8bit stalwart that debuted such legends as Bruce Lee and Impossible Mission

The Commodore 64 features in 'The Guinness Book of Records' for the enviable feat of selling over 17m units, which officially makes it the biggest-selling computer ever. Impressive for a machine that, despite six iterations, changed little anatomically during its ten-year reign. Its high-resolution graphics frequently equalled NES and SMS, and undoubtedly drew much of the contemporary western development community into the videogaming fold. But what of the C64's status in the collectors' market of the 21st century?

The burgeoning retro industry has attracted more than its fair share of bandwagon jumpers. Collectors and retro fans alike look with particular disdain on collector 'yuppies': people who jack the price of an unsuspecting eBay *Panzer Dragoon Saga* into the spending stratosphere, whether they own the

appropriate region host system or not, simply for peer kudos. Thankfully, the C64 largely avoids such types, instead attracting the attention of a more distinguished senior crowd – namely people who owned the system first time around. Antiquated data storage alien to the younger gamer, coupled with the demise of Commodore in 1994 (so there are no updated franchises to inspire younger retro fans to investigate series' roots), ensures that the popularity of the C64 scene remains on a more even keel than its rival systems'.

In the launch issue of **Retro**, Computer Exchange's marketing manager divided collectors into three categories: the hardcore collector (looking to complete rare series), the designer furniture lifestyler (looking to find the apartment-defining *Pong* machine) and, finally, the gamer (looking to

access childhood lost). While the first two types usually steal the column inches, the last profile accounts for the bulk of the C64 community. Although that's not to say Commodore believers aren't fanatical. The difference is that such unshakable enthusiasm isn't expressed financially. The most expensive C64 items rarely break the £100 mark, and you can count such titles on one hand.

Tapping the nostalgia market

Everyone remembers his or her first home computer with affection. The statistics say it all: if you were a PC-using westerner growing up in the '80s, then you probably owned a C64. The resurgence of '80s vogue is attracting swathes of older fans back to the system they grew up with for two

Model student

Commodore 64

This is the old model of the C64, released in 1982. Even at the time, the machine was criticised for being aesthetically blocky (it was later dubbed the 'breadbin') and not 'modern' enough. Still the preferred incarnation for the senior collector.

Commodore SX-64 – Executive Computer

Released in 1983, the Commodore SX-64 was one of the first 'portable' colour computers. The sheer weight of the machine renders the proto-laptop selling point laughable. It boasted a built-in disk drive and speakers, and an internal 5-inch colour monitor with sharp display. It had a cartridge slot on top, but no datasette interface, so playing games from tape was impossible.

Commodore 64C

The newer model of the C64, released in 1986, had a slick and (at the time) trendy cream-coloured case. A revised SID chip made sampled sound very quiet and the motherboard was smaller. Improving chip technology enabled Commodore to reduce the number of chips without affecting functionality.

Commodore 64 Gold

When one million C64 units were sold in Germany in 1986, Commodore released a limited edition Golden C64: serial numbers 1,000,000 to 1,000,199. C64 GOLD was presented to the public in the BMW museum in Germany and is now a highly sought after item.

Commodore 64GS

Released in October 1990, this was Commodore's first and final dedicated games console. Besides the fact the Amiga was already on the market, few wanted to buy what was essentially a slightly cheaper C64 stripped of all non-gaming functionality. The C64GS came with a cartridge containing *Fiendish Freddy's Big Top of Fun*, *Klax*, *International Soccer* and *Flimbo's Quest*.



Commodore's empire was built on technology such as this. While not of particular value early counting machines like this one are certainly of interest to videogame historians

IF PERSONAL COMPUTERS ARE FOR EVERYBODY, HOW COME THEY'RE PRICED FOR NOBODY?

A personal computer is supposed to be a computer for everyone. Not just wealthy persons or privileged persons.

But personal computers are expensive. All the personal computers you see in the store seem to have a price tag that says "Not for me".

But there's a way to get a high-powered home computer without paying out a second mortgage on your home.

It's the Commodore 64. We're not talking about slow processors that can barely retain a phone number. We're talking about a memory of 64K. Which means it can perform tasks most other home computers can't. Including some of those that cost a lot more. (See another look at the three computers above.)

If you want to upgrade to a capacious hard drive, you can do so by adding a full complement of Commodore peripherals. Such as disk drives, Modems and printers.

You can also play terrific games on the Commodore 64. Many of which will be far more challenging than those you could ever play on a game machine alone.

It's as great as all this sounds, what's even greater-sounding is the price. It's hundreds of dollars less than that of our nearest competitors. So while other companies are trying to take advantage of something else, their customers are getting the Commodore 64.

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Commodore COMPUTER

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Commodore's marketing campaign was nothing short of ruthless. Statements such as the one above certainly had the desired effect

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With the BODYLINK "COMET" (Computerized Muscle Exerciser and Trainer) attachment, you can build and tone the muscle groups of your stomach, chest, back, legs, and arms. COMET is an electronic muscle builder that is connected to BODYLINK and sends a message to your TV screen when it's compressed or pulsed.

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Name: _____
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Telephone: _____

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Expires: _____

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The C64 was on the market for so long that curios such as the COMET (COMputerised Muscle Exerciser and Trainer) were manufactured

key reasons. First, there's the nostalgia factor – the smell of a C64, the minimalist 16-colour screens, the clunk of a rare cartridge, the ghoulish squeal of a loading tape deck... Then there's SID, the C64's sound chipset, which still arouses a level of fanboyism unrivalled by any other videogaming aural processor. The C64 was the first personal computer with an integrated sound synthesizer chip and SID has since gone on to be esteemed as an instrument in its own right.

Compare the number of C64 fan pages to Sega Saturn's, for example, and you'll soon realise the extent of the system's popularity. However, because nostalgia rather than gameplay and specific developers attracts enthusiasts, its collectors' market remains a very different beast. Emulation, coupled with the disintegration of magnetic tape games, leaves only

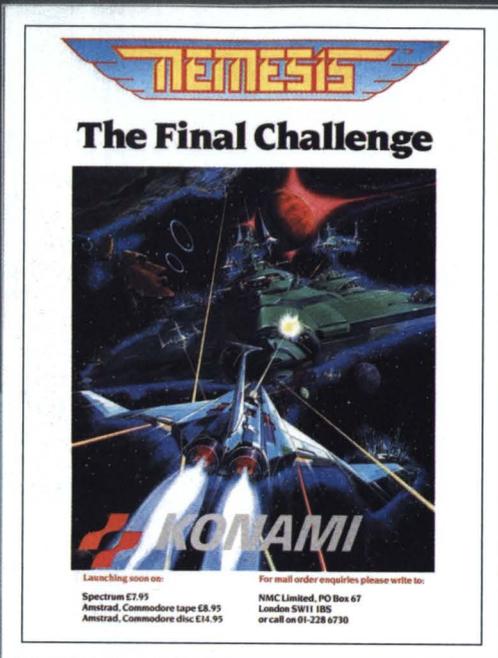
hardware and disk/cartridge-based media for product-hungry fans. Still, it's only one piece in the C64 enthusiasts' jigsaw; the C64 scene is more an enthusiasts' market than an exclusive and expensive gaming club – and Commodore's fans seem quite happy with that...

From Auschwitz to infamy

Jack Tramiel, Commodore International's founder, is undoubtedly one of the most interesting characters of the early '80s computing scene, and responsible for bringing computers into the home years before Bill Gates declared his desire to give everyone in the Third World access to a PC. A Polish Jew who had survived six years in Auschwitz, Tramiel moved to the US after the war, where he joined the army and

gained a posting at Fort Dix in New Jersey. Here he learned to repair typewriters. Commodore International was founded in 1955 after Tramiel moved to Toronto. In partnership with Ricoh, Commodore swiftly moved from building adding machines to electronics, making a deal with Casio in the '60s to put together calculators.

In 1976, Tramiel secured a deal to buy the small chip manufacturer MOS Technologies for \$800,000 (£490,000). This was a key deal – MOS was responsible for manufacturing the 6053 microprocessor that lay at the heart of both the Apple 2 and Atari 400 and 800 series computers. With the purchase, Tramiel entered the world of '80s Silicon Valley and gained renown for his often unorthodox business practices. Michael Tomczyk, former Commodore employee



Some of the earliest examples of Japanese programming can be found on the C64, eg this port of *Gradius*. At £8, they weren't cheap



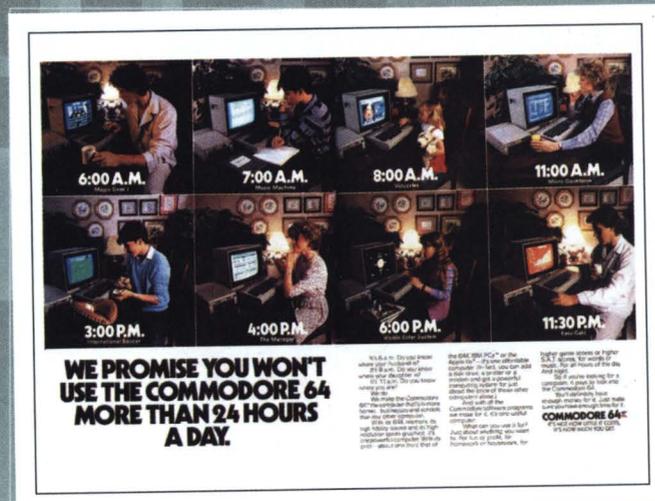
If low price point marketing wouldn't shift units then t-shirts were bound to. It's a theory Retro has begun to adopt itself

Made in Japan

Contrary to popular belief, there were a number of Japanese titles released specifically for the C64. Vic Tokai developed a couple of games in the US, including *Aigina's Prophecy* and a conversion of *Shinobi Legions*. Allegedly, many early C64 Japanese developers penned software for the system, although how many of their games were released is unknown. In addition, there's the catalogue of cartridges for the Commodore MAX machine, some of which weren't released outside of Japan (Hal Laboratories, now working with Nintendo on many titles, wrote most of these). Konami also released some of its conversions over here, such as *Nemesis* and *Jail Break*, while others, such as *Castlemania* and *The Simpsons Arcade*, only made it to the US.



Jack Tramiel (pictured third from left) was Commodore International's founder. A Polish Jew, he was originally named Idek Tramielski and his first job was repairing typewriters



Such marketing tactics may seem simply cute today, but the home computer marketplace of the early-'80s was a fiercely competitive place. All manner of spins were attempted

and Tramiel confidante, relates in his 1984 book 'The Home Computer Wars' how, in 1981, when US interest rate levels rose to 18 per cent, Tramiel simply stopped paying Commodore's bills in order to deposit all income into high interest bearing accounts. Tramiel got away with this stunt, netting a large profit, and began using the trick more often.

At Acorn is quoted in Steven L. Kent's 'Ultimate History of Videogames' describing how Commodore frequently let suppliers continue to ship product to them while neglecting to pay the bills. When the smaller company ran out of available cash, Commodore would step in and buy the supplier for a small amount, forgiving their own debt at the same time. Tramiel's eagerness to cut costs was fuelled by his desire to get home computing to as affordable a price as possible.

His favourite slogan was: "We're building computers for the masses not the classes." While bullying his R&D departments to find cheaper ways to construct the machines, he also used his other acquired factories, such as MOS Technologies, to supply components at cost price.

Launched in 1977, the Commodore's PET was the first home PC to retail for under \$1,000 (£612). In 1981, the company released the VIC-20 (originally called the MicroPET) at a cost of only \$300 (£184). The VIC-20 signalled Commodore's first involvement with the videogames scene. The machine used the VIC-I (6560) video chip, which Commodore itself had designed in 1979. Originally, the idea was to sell the chip to thirdparty manufacturers for use in videogame machines, but because no one wanted it,

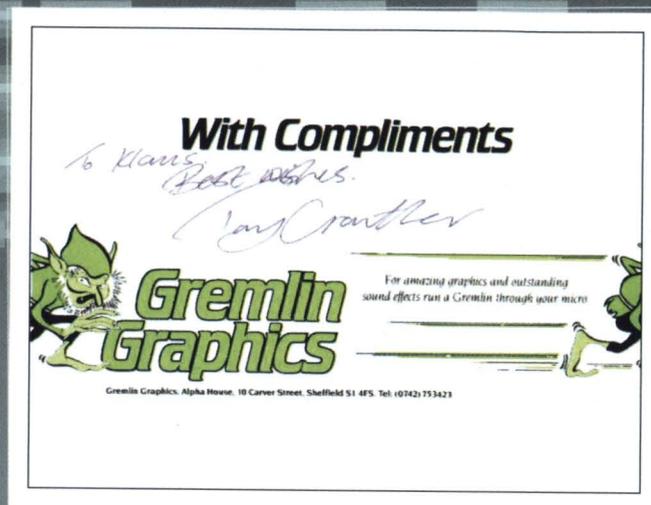
Commodore decided to manufacture its own system and recoup its losses instead.

Trojan horseplay

While the VIC-20 teams were hastily putting this first games machine together, the company's R&D was already putting together a new, far superior successor. In August 1982, Commodore launched the C64, a professional home PC marketed as a serious rival to the \$1000 Apple II, at a stunning retail price of \$595 (£364). In reality, even with 64K of memory (although 39K was reserved for BASIC, machine code could theoretically use the whole 64K), the C64 was primarily considered a games machine, thanks to its advanced sound and colour capabilities. Nevertheless, a



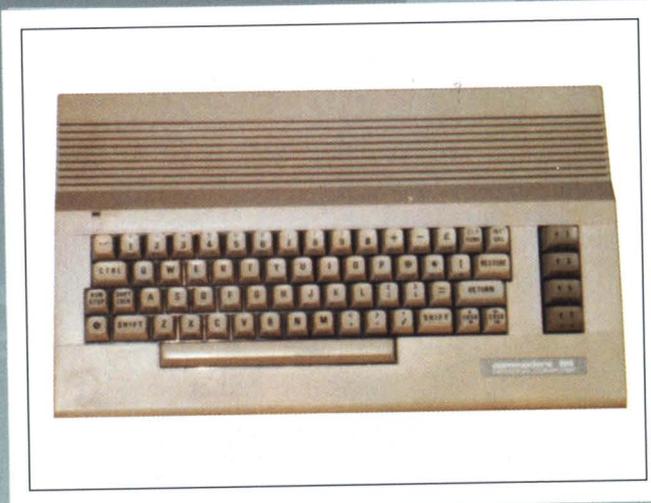
Archer Maclean's *International Karate* + was a definitive release on Commodore's machine, with super-tight gameplay and silky animation. Its Easter Eggs were also entertaining



One fansite proudly displays this signed business card from Gremlin Graphics. The tag line is, "For amazing graphics and outstanding sound effects run a gremlin through your micro"



The Rolls Royce of C64 machines was launched in the BMW museum in Germany. Numbered 1,000,000 to 1,000,199 the C64 Gold demands heavyweight prices



The classic 'breadbin' layout of the C64 was typical of the period. Similar keyboard interface designs can be seen in contemporary Amstrad and Atari machines

diverse range of word processing programs, spreadsheets, BASIC and other 'business' applications also helped to cement its reputation as a serious workstation.

The C64 operated 170K single-sided disk drives, which only used Commodore's proprietary disk format, while games came on one of three media: diskette, cartridge or cassette tape. The drives hooked up to the computer via a daisy-chain link that could include other Commodore-compatible peripherals. Disk-based games certainly comprise the lion's share of the contemporary C64 gamer's collection.

The platform proved so successful that, by January 1983, Forbes reported Commodore was shipping 25,000 units a month. As the videogames industry stared into the void of the early '80s crash, the company was having unprecedented

financial success, establishing a gaming platform all set to weather the imminent storm...

The key to Commodore's success was its incredibly low manufacturing costs and highly desirable software. It's been estimated that a C64, even in 1982, cost the company around \$135 (£83) to manufacture per unit, while it sold at retail for \$595 (£364). And costs were reduced even further to \$35-\$50 (£21-31) by 1985, when the machine was selling for \$149 (£91). Commodore was winning on every front and in 1983 became the first computer company ever to report a \$1bn (£612m) sales year, surpassing Apple for market penetration. Soon after this unprecedented announcement, Commodore reduced the price of its key consumer product to \$200 (£122).

This price point meant that owning a PC was a possibility for families across the western world. And because the C64 could be used to program games, it wasn't long before the first coding stars began to emerge in the UK and US. Magazines, influenced by Trip Hawkins' (EA's founder) policy of promoting designers, gave profile to coders and musicians such as Jeff Minter, Tony Crowther, Rob Hubbard and David Whittaker. Even the cult of the videogame magazine celebrity arose during these heady days with 'Zzap! 64' a springboard for the likes of Chris Anderson (founder of Future Publishing) and Steve Jarratt (**Edge's** launch editor).

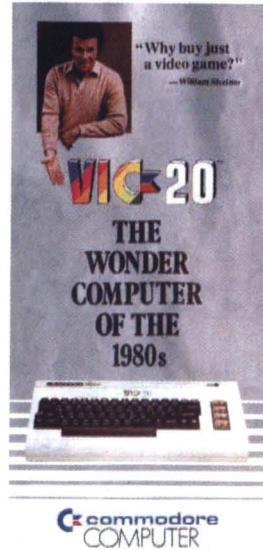
Commodore was expert in marketing the PC at just the right level, whichever country it launched in, and such a skilled approach earned swathes of loyal fans outside the US.

The lost games

Prototype games always arouse particular collector interest. Other than obvious titles that simply fell by the wayside (the cartridge version of *Last Ninja 3* springs to mind), there are a number of interesting tales of long-forgotten failures on the C64. An Ocean conversion of *Parasol Stars*, for instance, was allegedly written on a freelancer's development system stolen before the game was finished. The station was never recovered and work on the title never resumed.

The original *Who Dares Wins* was the victim of a court injunction when it was considered too similar to *Commando* for comfort. The ease with which you could pilfer sprites and maps from other games and simply change the title screens, etc., was well known. Infamous are the tales of *The Great Giana Sisters*, a *Super Mario Brothers*-like that was pulled from UK shelves after a week due to copyright infringement, and *Katakis*, similarly dumped on account of its extreme likeness to *R-Type*. The court injunction didn't stretch as far as Germany, apparently, as both titles remained on sale there.

News in 1999 of a supposedly lost Matthew Smith/Software Projects game that was found on some disks ready for the US market stunned the C64 community. The title was *Mega Tree: Jet Set Willy 3* and the story was propagated by Stuart James Fotheringham, who claimed the title featured "Matthew Smith's game design, Marc Dawson's programming and [my] own graphics." The validity of this story has yet to be proven.



William Shatner helped promote the VIC-20 in the early-'80s offering the phlegmatic soundbite, "Why buy just a videogame?" Why indeed?

Commodore 64: tech specs

Internal

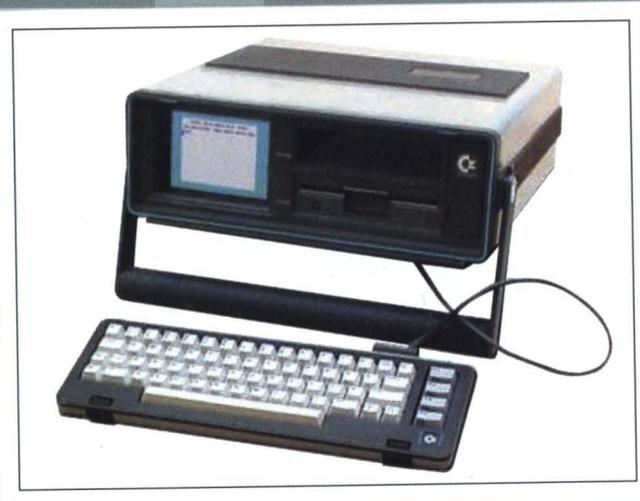
MOS 6510 processor @ 1.02MHz (PAL speed is just under 1MHz)
20K ROM
64K RAM
39K available in BASIC
Commodore BASIC version 2.0 (written by Microsoft)

Graphics

VIC II (Video Interface Chip)
40 columns x 25 rows
16 colours
256 characters, 62 graphic characters
8 hardware sprites
320x200 maximum resolution

Sound

SID 6581 (Sound Interface Device)
(8580 in the C64C and GS models)
3-channel, 8bit sound
9 octaves
4 waveforms
Programmable ADSR
Programmable filter



One of the very first 'laptops', you would have a tough job finding a suitably expensive lap to rest this workstation on. The SX-64 is, nevertheless, many a collector's favourite



C64 was never a serious music workstation but this didn't stop many a fledgling composer taking their first tenuous steps into the world of midi courtesy of Casio and Commodore

But between 1984 and 1988 the company went through some drastic changes. Tramiel resigned as CEO on January 13, 1984 and went on to buy Atari Corporation. In turn, Marshall Smith, the new CEO of Commodore, a 54-year-old finance specialist from the steel industry, bought Amiga and downsized the company, cutting payroll by more than 45 per cent. Commodore released and then doomed the Commodore 128 by cutting the cost of the C64 to \$150 (£92) at the same time. While the company at home continued to go through financial difficulties, the C64 continued to flourish, largely thanks to the undying support of customers and thirdparty hardware and software developers.

In 1990, the final iteration of the hardware, the 64GS was released to a muted reception (see 'Model student') and by

1991 both Atari (with its ST) and Amiga had overtaken the C64 in popularity. The C64 was discontinued in 1993 and on April 29, 1994, Commodore International announced that it had been unable to renegotiate the terms of its outstanding loans and was closing the business. The liquidation process lasted for months, largely due to the size of the corporation. On April 20, 1995, Commodore was sold to the German company ESCOM for approximately \$10-25m (£6-15m).

Best days of their lives

Edge has many friends who are fanatical about Commodore 64. One of the UK's most famous and influential collectors and experts of '80s videogaming is **Jonathan Dyton**, a self-confessed unreconstructed Sega and C64 fanboy. At 33,

Dyton is a typical C64 gamer – he received his first Commodore machine for Christmas in 1983, along with Imagine's *Arcadia 64*. After working for both Microdealer and Activision, an unquenchable passion for collecting and dealing led him to open a shop in Milton Keynes. Although the shop ceased trading some time ago, Dyton is recognised throughout the global scene as an expert on C64. So why does he think the Commodore 64's endured for so long?

"These days, we're used to an incredibly quick turnaround for hardware. At the time, systems endured for longer because it took longer to develop new systems. By the time the Amiga and Atari ST emerged, they were far more expensive than the C64. Remember, this was in 1985-86, when the price of a C64 had been drastically reduced, so the

Are you only using 1/10th of your brain?

It's with the same 640K Commodore 64 computer that you can do more work in less time than ever before. The computer has built-in features that make it easy to use. It's available in a variety of configurations. You can choose from a variety of options. The computer is available in a variety of configurations. You can choose from a variety of options. The computer is available in a variety of configurations. You can choose from a variety of options.

Commodore
#1000-1000

Commodore was expert at picking inspiring images to go with its campaigns but the quality of text often didn't quite match. The advert above grates especially

Commodore C64

TERMINATOR 2
JUDGMENT DAY
I'VE RETURNED

Commodore game artwork has long been an easy target for point-and-giggle design jibes but it would be foolish to argue that it didn't have the desired effect at the time

Commodore 65

Commodore was only a few months away from going into production with this super 8bitter before it dropped the project. With graphics reportedly closer to Amiga quality, a dual SID stereo sound (six voices), built-in 3.5-inch disk drive and more advanced BASIC, one can only speculate as to how this system may have changed history. After Commodore's bankruptcy, a warehouse of these prototypes was discovered, and the systems (many of which were functioning) sold. Commodore only offloaded 200 beta versions of the Commodore 65 in a special sale.

TURBOLOAD
CARTRIDGE FOR COMMODORE 64

LOADS DISKS FASTER

- Easy to install cartridge, simply plugs into your Commodore 64 or 65.
- Loads disks up to 8 times normal speed with both the 5.25 and 5.75 disk drives.
- Simplified DOS commands for loading files, formatting disks, deleting files etc.
- Stopable directory listing which does not overwrite programs in memory.
- Built in menu enable to provide a menu for each disk to simplify loading and running of programs.
- Easy listing of BASIC programs to printer.
- Test screen jump to printer.
- Reset button - ideal for magazine junks.
- One year warranty.

HOME ENTERTAINMENT SUPPLIERS

The C64 scene was a truly global one. Home Entertainment Suppliers, makers of this handy TurboLoad, hail from Australia

FREEZE MACHINE

DISTRIBUTED BY
MICRO ACCESSORIES OF S.A.

MADE IN SA
FROM SYDNEY
S.A.

Add-on hardware is rife for the C64. The collector who sets his sights on a complete hardware catalogue has a long and winding road ahead

'bang for your buck' ratio was pretty good. Once a machine has a userbase, it's hard to ignore it because people keep on writing games and the whole thing perpetuates itself. One mustn't forget that, as far as Europe was concerned, software on a C64 was a fraction of the price of the equivalent game on a console. The Mega Drive and SNES both had to drop to the price level of a C64 and have vastly superior software before they finally killed the machine off. The fact that anyone on their own could write software for the machine helped immensely.

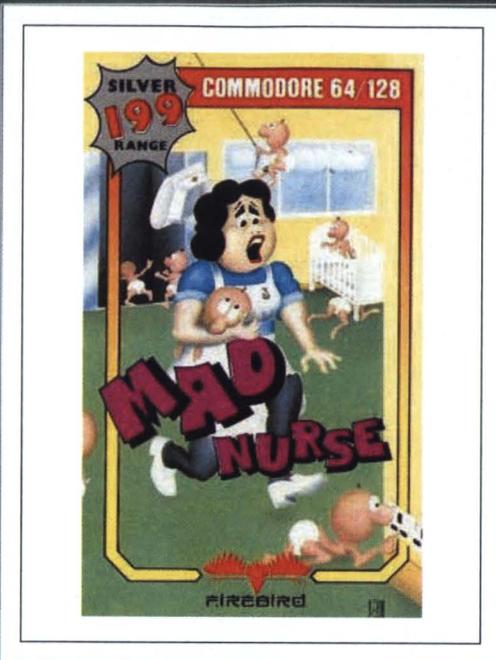
Schooldays and the social climate of the times crossed with the type of software available for the machines. If your family was cost-conscious, it tended to buy a Spectrum or maybe an Oric. If there was an academic outlook, then

possibly a BBC. But if you had a little cash kicking about, but still wanted value, then a C64 was the best option. The software was a fraction of the price of console software, and boasted more, better and cheaper games.

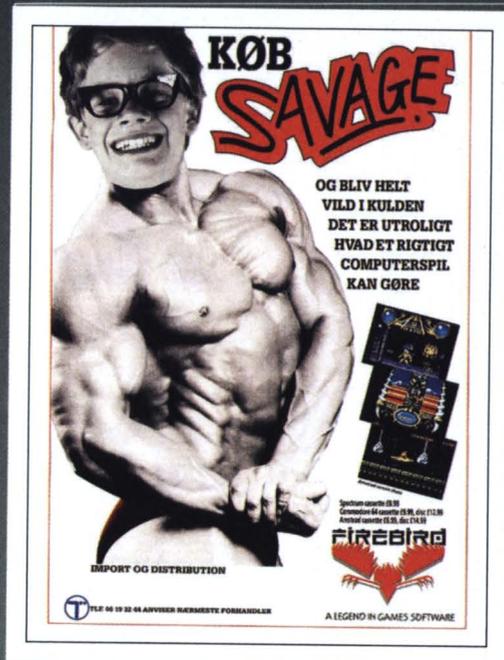
C64 software went through several different stages. The first two to three years were largely dominated by console conversions (eg ports from the Atari 2600) and arcade adaptations, thanks to the likes of Activision and Atarisoft. Ostensibly, then, the C64 of this era was a console. Dyton agrees, "The likes of *Bruce Lee*, *Beach Head*, *Bounty Bob Strikes Back*, *Paul Woakes' Encounter*! and *Raid on Bungling Bay* are pure console titles that, if it hadn't been for the videogames crash, would surely have emerged on the ColecoVision and 5200. Then you have an influx of quality

British titles, the music on those is what drives many people, I believe. Games such as *Monty on the Run*, *Crazy Comets*, *Skate or Die*, *Commando*, *Parallax*, *Last Ninja*... then came a wave of intelligent, multiplayer games."

So is the machine's popularity on the increase? "While nostalgia for the C64 is on the rise," says Dyton, "I'm sceptical that collecting has risen accordingly. There are machines out there that have far more credibility as far as collectors are concerned. There's little Japanese software on the machine the average collector is aware of and certainly little they can obtain. However it's still a newbie's dream. You can go to an image site [ROMs only apply to cartridges; disks and tapes for emulators are called images for the C64], play the games and then buy the titles you want, for under £100."



There are so many examples of great character-filled artwork from the C64 era. Many collectors buy these titles for their aesthetics now



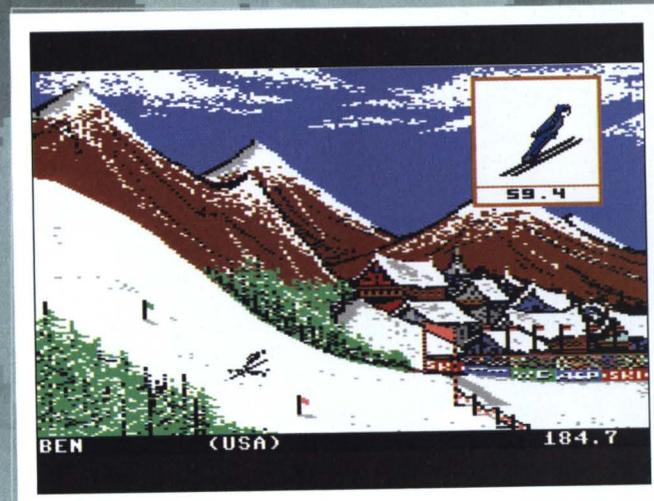
This Danish advert displays a kind of self-deprecating humour that would be great to see return in today's cynical videogames marketing

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- www.c64.org/



This C64 advert is from 1985. Much is made of Commodore's chip-making plant (to explain the low price) but until recently the history books kept quiet on how this was achieved



American developer Epyx produced some of the very best C64 games, including *Winter, Summer* and *World Games*, a series that set the bar for multiplayer action on the format

But surely the inherent perils of tape storage will deter many new collectors? "Most C64 collectors buy games for the packaging alone," explains Dyton. "Most games are downloadable as images, so media perishability isn't much of an issue. You're essentially buying packaging with the C64; something that many US titles do fantastically well. They're presented in gatefold sleeves, have cloth maps, controllers... there's a pop culture quality to it all."

Other systems are famed for specifically collectable developers, and Dyton believes the C64 is no different. "Pre-1987 Electronic Arts, Epyx, Lucasfilm, Origin and big-box era Infocom are highly sought after. UK developers are more collectable on C64 than any other system today, with the likes of System 3, Thalamus, Ultimate, and even US Gold and

Ariolasoft, becoming increasingly attractive. First, it was a console, but then a new breed of software emerged, such as *Alter Ego* from Activision. That was more sophisticated than anything else out there. The C64 is different in that it was a machine completely dominated by western game writers, so many games just oozed quality."

But why hasn't such quality translated into monetary value? "There aren't as many people attempting to buy credibility through these retro games. Owners make do with an image until the game comes up at the right price. Many people simply want to enjoy the music again and don't even need to buy the games, thanks to SIDPlayer. It's organic growth in the C64 scene, rather than boom and bust. Prices are consistent and slowly rising, but the availability of images

and the lack of a rarity-driven style otaku movement on the machine stop things from getting daft."

With this in mind, **Retro** finally asks the million-dollar question: if most retro systems survive today by virtue of being 'fun to play', does Dyton think there's a sense of nostalgia over gameplay when looking at the C64's desirability? "Personally speaking, it's half and half. I enjoy remembering times past, but many of the games are the sorts of titles that made the Game Boy such a great machine and continue to sell on the GBA. Games such as *Bruce Lee* or *Impossible Mission* are as good as anything else of that era. If they were Japanese, they'd be hailed as masterpieces, but in today's climate they're seen as part of junk culture. And that's nothing short of a tragedy."

Continued >

The collectables

As mentioned previously, Commodore 64 games come in one of three formats. Cartridges plug straight into the cartridge port (in true console style), while tapes and floppy disks require

external add-ons to run. Bargains are to be had everywhere on this system, from the local car boot sale to eBay, so remember to do a bit of research before you commit to anything.

Prices are for indication only and presume condition is excellent to collector's grade. This guide has been produced in conjunction with Jonathan Dyton and Mat Allen.

Satan



Value: £90-110
Release: 1990
Developer/Coder: Dinamic Software/Luis Mariano Garcia

While the tape and disk versions of this truly excellent side-shooter are easy to find, the cartridge-based game is one of the system's most sought after rarities.

Double Dragon



Value: £70-80
Release: 1992
Developer/Publisher: HES/Melbourne House

An Australian release of the Melbourne House version that was only sold at one computer show back in 1992.

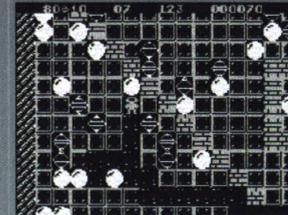
Ultima 2



Value: £100-125
Release: 1984
Developer/Publisher: Sierra

The influential series of proto-RPGs. Cloth maps, spell books and other great packaging elements put these firmly in the must-have section for serious collectors.

BoulderDash 3



Value: £20
Release: 1984
Developer/Publisher: American Action AB

An authorised but lesser-known BoulderDash sequel, developed by a Swedish company. Set in space with a bas-relief star background and a spacesuit-donning Rockford.

Gauntlet III



Value: £40-80
Release: 1992
Developer/Publisher: US Gold

The disk version of Gauntlet III hardly managed to get off the development machine before the rug was pulled. Only a few actual duplicated copies made it out.

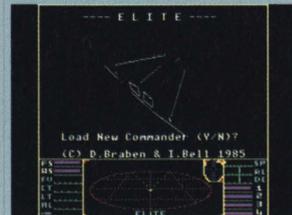
Space Gun



Value: £10-20
Release: 1992
Developer/Publisher: Ocean

The cartridge version was released by Ocean in the last dying days of the machine, and is a pretty good game to boot.

Elite



Value: £5-20
Release: 1985
Developer/Publisher: Firebird

Despite rife slowdown, this still attracts a good price (particularly on disk). The smart packaging is another plus for collectors.

Ancipital



Value: £5-10
Release: 1984
Developer/Publisher: Llamasoft

Jeff Minter takes the flick-screen arcade adventure format, adds animals and waves of things to shoot in this compelling (and original) title.

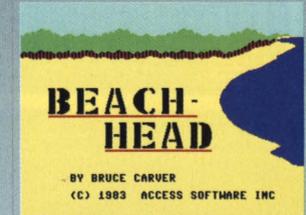
Wanted: Monty Mole



Value: £5-10
Release: 1984
Developer/Publisher: Gremlin Graphics

The Steve Crowther game that most remember. A scrolling platformer with smooth gameplay - and a social commentary on the miners' strike.

Beach Head



Value: £10
Release: 1983
Developer/Publisher: Access Software

Defined the battle action genre of multiscreen shooting games, and allegedly the first title to get to number one in the C64 charts.

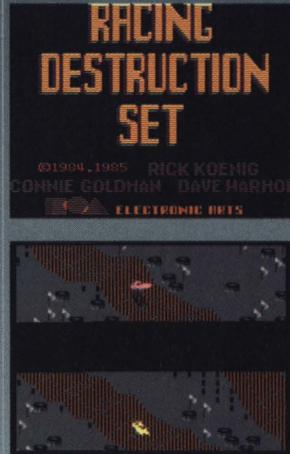
Castlevania



Value: £20-35
Release: 1990
Developer/Publisher: Konami

An extremely rare conversion (by Alan Stuart) of the *Akumajou Dracula* title, originally released in 1987.

Racing Destruction Set



Value: £10
Release: 1985
Developer/Publisher: EA

Create your own tracks and choose your own cars in this classic racing game. Avoid the near-crippled tape version and opt for the US import with its quality packaging.

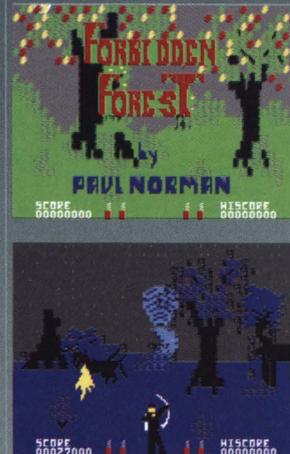
Alter Ego



Value: £5-15
Release: 1986
Developer/Publisher: Activision

A life sim created by a real psychiatrist. Available in male and female variations, and probably the game most people download when they take their first emulation step.

Forbidden Forest



Value: £5-10
Release: 1983
Developer/Publisher: Cosmi

Perhaps the original survival horror title. Waves of textbook horror film monsters and an over-the-top orchestral soundtrack add to the beast-blatting thrills.

Paradroid/Uridium



Value: £5-10
Release: 1986
Developer/Publisher: Hewson Consultants

No listing of Commodore 64 software would be complete without these. Available as a double-pack, there are rarer games out there, but few remembered with such affection.

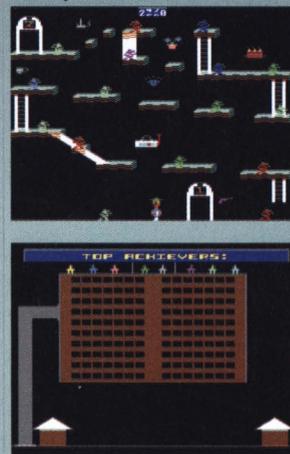
Raid on Bungeling Bay



Value: £15-20
Release: 1984
Developer/Publisher: Broderbund

This game's level maker inspired *Sim City*, as Sid Meier always enjoyed building the cities in the game more than the actual shooter.

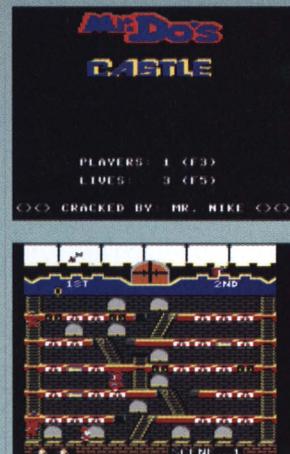
Bounty Bob Strikes Back



Value: £5-10
Release: 1985
Developer/Publisher: Big Five Software

A good example of how the C64 enhanced console titles. Hard to find, but it's a fraction of the price of the Atari 5200 version (at around £60).

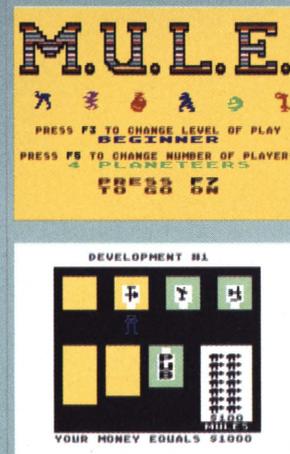
Mr Do's Castle



Value: £30
Release: 1984
Developer/Publisher: Parker Bros

Parker Bros' videogame crash-era title is a definite must-have for both the quality of the packaging and the game itself.

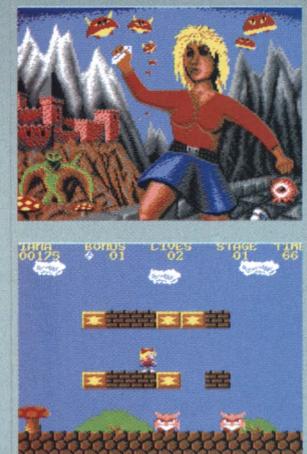
M.U.L.E.



Value: £20-50
Release: 1983
Developer/Publisher: EA/Ozark Software

Classic multiplayer trading game that in many ways defined the boundaries between arcade games and more cerebral computer pleasures.

The Great Giana Sisters



Value: £20-25
Release: 1987
Developer/Publisher: Rainbow Arts

This *Super Mario Brothers* Xerox job was ignominiously pulled from the UK shelves after a court case. But it remained on sale in Germany.



Family Values

While the console industry in the west continued to lick its wounds following the infamous crash of the early-'80s, a Japanese toy company began to work on a new gaming device for the home. **Retro** looks at the birth of one of the most important pieces of entertainment hardware ever conceived and asks what it offers now

Nintendo's first steps into the videogaming market began with children's toys – a heritage the company still struggles to distance itself from, over 30 years later. CEO **Hiroshi Yamauchi** created an R&D team headed by Gumppei Yokoi, charged with creating new exciting playthings, the first of which was a grip-extending grabber called Ultra hand, a gadget that makes an inconspicuous appearance in *Wario Ware*. After achieving success with its Color TV Game 6 and 15 systems, Nintendo settled on a Motorola 6502 derivative to be the heart of a new console capable of handling interchangeable cartridges: the Famicom. Then began the difficult task of casing design. Yamauchi's primary concern was that the machine looked like a toy, as children were the primary market. There was a dichotomy in that he also

wanted the system to be called the 'family computer' and feature expansion ports for possible future computer features and services. David Sheff in 'Game Over' quotes an engineer saying, "Yamauchi saw the incredible potential of a home computer system disguised as a toy." In the end red and white plastics were chosen and all the edges of the system rounded off, a stark contrast to Nintendo's competitors of the time. A major innovation came in the form of the controllers. Beside the fact that these were hardwired into the system, they also derived their shape and D-pad dynamics from Gumppei Yokoi's Game & Watch innovations. Looking back at its competitors Nintendo's pad design demonstrates an elegance and functionality not seen in the market at that time. The second player's pad also contained

a microphone, and both pads could be stowed away neatly in the indented plastic on the side of the system.

One of the most significant quotations from Yamauchi at the time has had its repercussions as a model for hardware manufacturers ripple down the years. In May 1983 he addressed an important wholesaler's group, the Shoshin-kai. In his speech he admitted that the sellers of the Famicom could not expect to see large profits on actual system sales. He stated, "Forgo profits on the hardware because it is just a tool to sell software. This is where we shall make our money." The significance of this at-the-time-revolutionary model cannot be overstated. It was at this particular meeting that Yamauchi announced the name of the system, dubbing it Japan's first family computer: the Famicom.

System specs

Processor: 6502 NMOS
 Processor speed: 1.79Mhz
 Display: 256x240
 Colours: 52
 Colours on screen: 16
 Max sprites: 64
 Sprites size: 8x8 or 8x16
 RAM: 2Kb
 Video RAM: 2Kb

Nintendo floppies

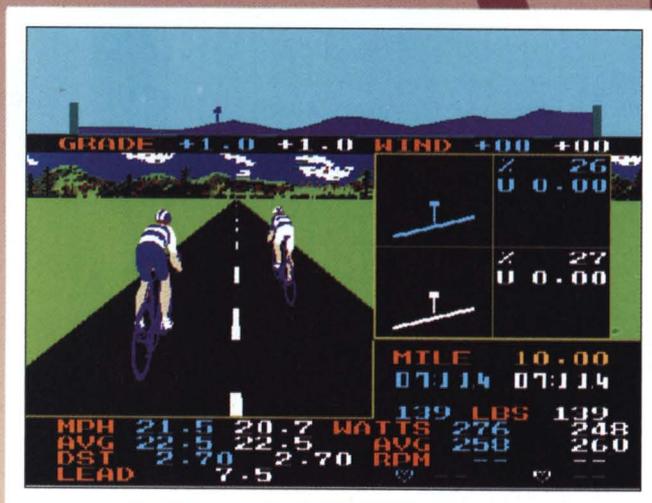
Nintendo's Famicom Disc system is something a curio to the west. Released in Japan in February 1986 in response to escalating cartridge-manufacturing prices, the add-on system retailed at ¥15,000. It allowed the Famicom to run games copied on to cheap 3-inch magnetic disks that could be taken to special toy store disk-writer kiosks to be overwritten with new games for ¥500. Unfortunately, the disks had smaller capacities than the largest cartridges and could not use the all-important game-enhancing MMC chips. The Disk System sold over four million units by 1990 thanks to its data-saving functionality. Many titles that came to the west on battery back-up or password carts were released in Japan on the FDS, including both NES *Zelda* games, as well as *Kid Icarus* and the first two *Castlevania* titles.



A rare ad for the first *Final Fantasy*. A last-ditch attempt for Square to succeed in the games market, the title was a roaring success.



Four versions of Sharp's Twin Famicom exist. Sharp was the only company to which Nintendo licensed its hardware until the Q



Racer Mate's Computrainer saw players using an exercise bike to propel their avatar in a racing game. It's a concept more recently adopted by Reebok with its *Cyber Rider*



Despite the fact finding, FDS disks in this country is relatively difficult. A boxed FDS system in this sort of condition is highly sought after by Nintendo collectors

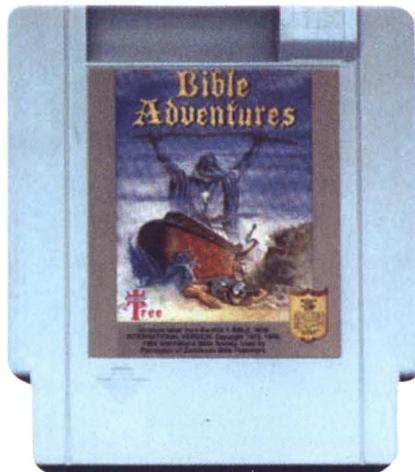
Hard wiring

Famicom was released on July 15, 1983, complete with three titles (*Donkey Kong*, *Donkey Kong Jr* and *Popeye*), and it quickly became clear that the price shaving at all stages of production was to pay great dividends. The retail price of ¥14,800 (around the price of a new game today in the UK), although not quite as low as Yamauchi had hoped for (he originally specified a goal of ¥9,800), was less than half as expensive as the emerging Japanese consoles of the time (such as Sega's SG-1000 and the Japanese Atari 2800, which sold for between ¥30–50,000). Consumers made their choice and within two months the new console had sold over half a million units. Despite the launch going smoothly, in six months disaster struck: a bad chipset in the original

design was causing a crash in certain titles. Yamauchi, in typically unconventional style, recalled every Famicom sold for repairing the fault despite the fact that it was just before the Japanese New Year holiday. Although the initial momentum of sales was lost and an all-important holiday season missed, Nintendo succeeded in protecting its name as a quality consumer-caring manufacturer.

Just as Yamauchi had promised the retailers, the Famicom was all about the games rather than the systems. Nintendo had quickly learned that software sells hardware and not vice versa. Shigeru Miyamoto was fast rising through the ranks in these early days of the Famicom. He had first come to the senior management's notice in 1980. Nintendo had created an arcade title *Radarscope* that had been a hit

in Japan but a flop in America so Yamauchi wanted to find a new game to fill the US cabinets. Miyamoto, then a creative production artist, created *Donkey Kong*, a game that would become Nintendo's first worldwide videogame hit. Two of the three games at Famicom launch were *Donkey Kong* titles and Miyamoto was made head of a new research group: R&D4. Yamauchi placed the emphasis of hiring for these R&D groups on recruiting artists rather than technicians for this stage of the console's life, stating, "An ordinary man cannot develop good games no matter how hard he tries. A handful of people in this world can develop games the everybody wants. Those are the people we want at Nintendo." R&D4 quickly established itself as the premier internal software division with *Mario Bros* and *The Legend of*



Wisdom Tree's unlicensed *Bible Adventures* is one of the few titles that Nintendo did not exert its considerable legal powers upon



The classic Japanese Famicom setup, still stylish 20 years on. Few consoles of the period can boast such aesthetic collectability today



This was the first case of Square releasing a compilation of its FF games. Fans will note the use of *Final Fantasy IV*-style artwork, as this title was released in 1994

Penny for your thoughts

Late 1985 to early 1986 saw a multitude of obscure non-videogame-related Japanese companies trying their hand at this new lucrative industry. The fact that Nintendo seemed to be making waves in America as well as dominating the Japanese industry was too appealing a proposition to pass up. Many Japanese companies created videogame divisions, obtained a licence from Nintendo and proceeded to release only one or two obscure titles over a single year or two before folding. Some still exist today, albeit in new guises: Meldac, creator of *Zombie Nation*, stills exist in Japan as a CD publisher, while Vap, which released *Isolated Warrior*, now distributes DVDs in Japan. Asmik, although still releasing the occasional Japanese videogame (such as *Lethal Skies* on the PS2), now focuses on movie distribution and was responsible for 'The Ring' under the name Asmik Ace Entertainment. FCI, which ported the poor *Hyllide*, now works as a television programmes distributor working on, among other things, 'Iron Chef' for The Food Network.

Zelda, and its success was augmented by Yokoi's R&D1, which created the likes of *Metroid*, *Kid Icarus* and *Excitebike*. The other departments were more responsible for technical innovations: R&D2 didn't release any software for the Famicom (its first title coming out in 1996) while R&D3 only dabbled, releasing the *Punch Out* series and *Pro Wrestling*.

Licence to a killing

By 1984 Nintendo was nearing a crisis. The Famicom installed user base was so huge that the demand for new games was simply not being satisfied. Retailers were reporting to Nintendo that they were having to turn away hordes of customers. Yamauchi was being forced into allowing thirdparty development – something he was loath to

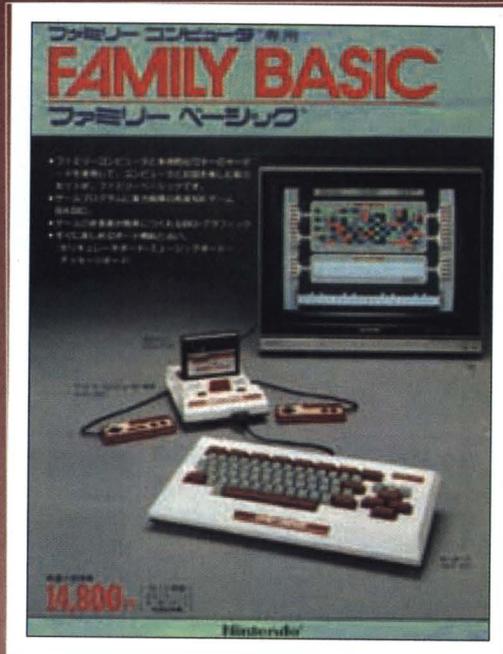
do for fear of watering down the brand with poor software. But by late 1984 he'd conceded and began distributing software licences to Taito, Capcom, Konami and Namco. Licences were sought after by developers all over the globe but were not easily granted. To become a Nintendo licensee you had to agree to unprecedented restrictions. Despite the fact that most companies were disgusted by the terms, they still signed up. The size of the potential market simply silenced all the complaints. To give an example of how lucrative a Nintendo licence could be, Hudson, one of the first two licensees along with Namco, released *Roadrunner* as its first Famicom venture. Until this release, the most it had sold per title was 10,000 copies. *Roadrunner* sold over 1m units and quadrupled Hudson's annual profit for 1984. Of

course, Nintendo also won a hefty slice of profit on every cart sold. Similarly, Konami saw its earnings post-Nintendo licence rise by 2,500% from 1989 to 1990. After the first six licences were distributed Nintendo altered the rules and deemed that licensees must place an order with for no less than 10,000 cartridges, cash in advance. Nintendo earned whether the game sold or not. It also upped its cut to ¥2,000 per cartridge – double the actual manufacturing cost it incurred. The licensee shouldered 100% of the risk and many small companies misplaced their bets and folded.

The Famicom's journey to the west was not without drama. The crash of the early-'80s had left America, and Europe to a far lesser extent, in a state of crisis. Retailers no longer trusted videogames as so many had been burned

Sneak previews

Nintendo's arcade development all but stopped as the Famicom's popularity soared through the '80s. In terms of the west just one key cabinet maintained an arcade presence: the PlayChoice-10. Similar to the Neo-Geo MVS in theory the PlayChoice-10 was a Famicom cabinet that could hold ten specially fitted PC-10 cartridges based on the home iterations. The games could be switched between with a single button à la MVS but the real innovation was that money bought time rather than credits. Nintendo used the systems to run its upcoming titles before they debuted on the home system, so players would buy time to play these titles at the arcade. *Super Mario Bros 3* proved to be the most popular pre-release arcade title and *The Goonies* was only available to play on the PC-10, never securing a home release. These systems are extremely collectable today for the reason that the graphics chip used in the PC-10 can be grafted on to an NES motherboard to output crystal-clear RGB video.



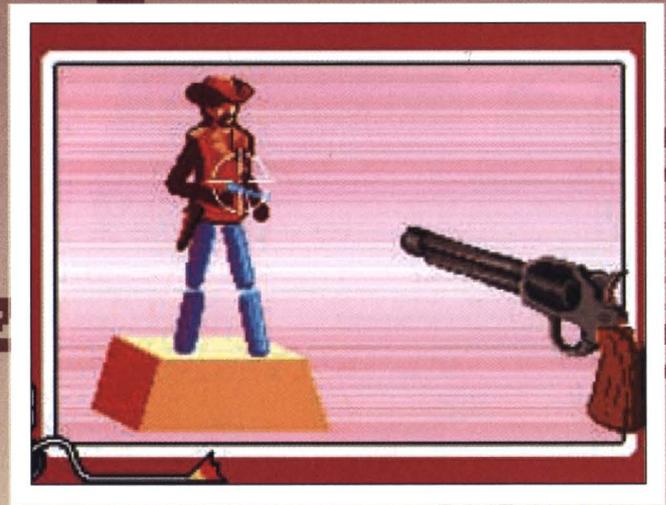
Family BASIC saw Japanese enthusiasts using the console for coding. The release was a one-off, with no subsequent support



Nintendo's Powerglove was poor as an interface. However, it's currently popular among PC users, who modify the hardware



TV Game 15 and Color TV Racing were two of Nintendo's best sellers pre-Famicom. Dedicated machines like these were abandoned once cart technology was pioneered



Wild Gunmen, one of Nintendo's first videogames, can be sampled along with many other of the company's earliest inventions in the Wario Ware series on GBA and GameCube

through over-saturation of the market and the majority of publishers had closed their doors by the end of 1984. The hobbyist gaming press disappeared and news reports ran on how the videogaming bubble had burst, never to return. There could not have been a more hostile climate in which to attempt to release a new foreign gaming system. Yamauchi had learned from attempts to break into the US arcade market that success in Japan would not necessarily translate into America. With no inroads into the American retail market the obvious solution was to find a partner, but an alliance with Atari failed after a *Donkey Kong* licensing disagreement.

Nintendo of America man **Minoru Arakawa** was given the task of making the console work in the States. Eventually the machine's physical appearance was completely revised

to lose the toy-like looks of the Japanese system. Nintendo was desperately trying to distance its product from the failed consoles of 1983 and so the redesigned Famicom was dubbed the AVS (Advanced Video System), and looked extremely futuristic. Arakawa requested that NCL create computer-like peripherals such as a keyboard, a three-octave music keyboard, and a tape drive. The plan was to make the system look like a home computer. It was at this point that Nintendo introduced the lockout system so that only genuine carts could play on its new system. As well as ensuring that no counterfeit games were released, it also put an end to cross-region gaming. The AVS was demonstrated at the January CES show in Las Vegas 1985 but buyers reacted badly to the keyboard and wireless functionality and,

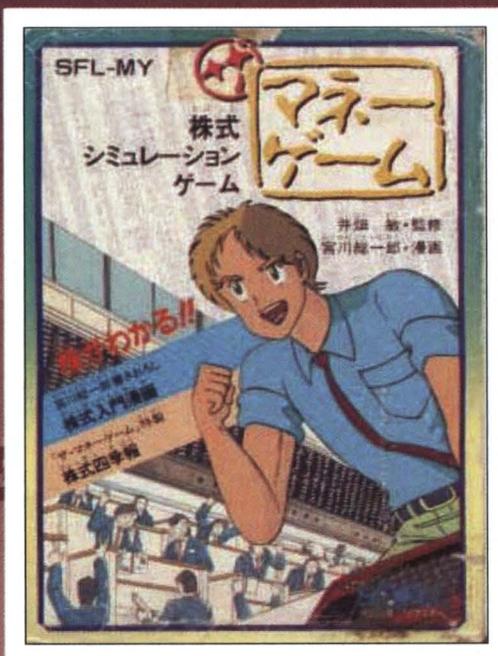
in Arakawa's words, "everyone thought we were crazy or dumb." No one placed an order. Arakawa actually phoned Yamauchi and suggested giving up but Yamauchi insisted that he quickly make changes to the system. The look of the system secured an overhaul, the computer peripherals dropped and replaced with a robot and lightgun and the name changed to the Nintendo Entertainment System. An extra sound channel was integrated and built-in composite output boosted image quality. Detachable controllers were the final big change.

And... success

The revised and renamed system was shown at the June 1985 CES show in Chicago, just four short months after the



Nintendo's R.O.B. has undeniable contemporary kitsch but as a serious toy it failed to satisfy even ten-year-old children in the '80s



The Famicom era arguably spawned more innovative titles than any console today, this stock trading game being a prime example

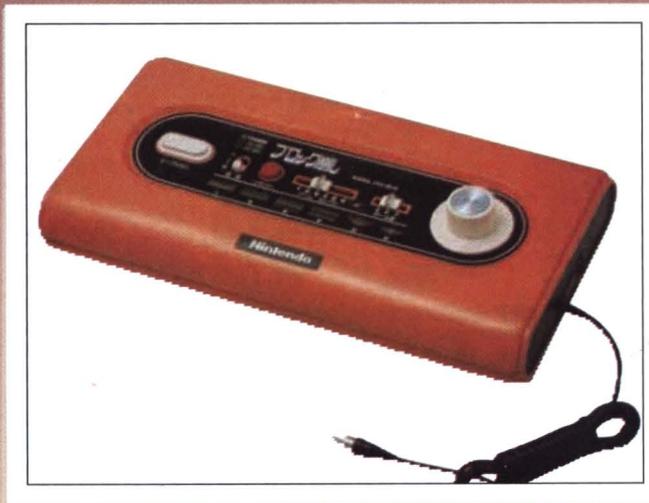
No one to dance with

Although the Famicom played host to less peripherals than, say, PS1, it certainly had some interesting and daring additions. The most prophetic of its add-ons is a common sight in living rooms around the country today, albeit for an altogether different use. Licensee Bandai released the Family Trainer, a large plastic pad designed to promote exercise in gamers by offering a way to play and exercise at the same time. The mat was known as Family Fun Fitness and used the exceedingly rare *Stadium* events game. Both were taken off the shelves after a very short period of time but made a return in late 1988 with the mat renamed the Power Pad and the game *World Class Track Meet* as the peripheral's pack-in title. A handful of other games such as *Dance Aerobics* and *Short Order/Eggplode!* (a two-in-one cart) were also released for the peripheral but no one saw the dancing potential. The irony of Konami's recent Japanese aerobics revolution will not be lost on **Retro** readers.

As will the fact that Bandai also released *Karaoke Studio* in Japan. The game came packed with a microphone and played Japanese '80s pop hits using the Famicom's limited sound capabilities. The unit itself plugs into the Famicom's cartridge slot and players follow the lyrics on screen. Bandai sold additional carts with new songs on them that plugged directly into the *Karaoke Studio* unit much like Konami's more recent Japanese append mixes. These carts are much smaller than a typical Famicom cartridge.



The AV Famicom superseded the original design all through the '80s as the iteration of choice for Japanese consumers. It's the one to go for if you want to play games in the UK



The Blockbuster was Nintendo's third stab at a console after the successful TV Game 6 and 15. By those machines' standards it was a failure, but it remains a collector's item

AVS debuted. Retailers were cautious but enthusiastic and a release date was set for the late summer. NOA purchased a warehouse in New Jersey and began phoning to try to get retailers to pick up the NES. Demos were set up in shopping malls, and NOA employees worked day and night to ensure the NES's smooth launch. Pre-orders were extremely poor so Arakawa decided to try some of the huge risk-taking his father-in-law was famed for. Retailers were faced with this proposition: Nintendo would deliver its goods and set up window displays in the stores for free. After 90 days, retailers would have to pay Nintendo for what was sold, and could return anything else. This offer was against the wishes of Yamauchi but Arakawa went ahead. It was to be the offer that broke down barriers and a slew of major retailers agreed

to take stock. The NES launched throughout New York in October 1985, reaching just over 500 stores. Fifteen cartridges were available, including *Super Mario Bros.*, and by the end of the holiday season Nintendo had sold about half of the 100,000 systems it had brought in from Japan. It went on to sell around one million NES units in that first year, and it would sell three million more by October 1987 as Nintendo kept the software coming, porting over some of the best Japanese Famicom games, and consumer confidence in videogames once again grew.

By 1990 Nintendo owned a 90% market share of all videogames in the west. The following year saw Nintendo's Famicom push the company past Toyota into becoming the most successful company in Japan. By 1991 Nintendo was

earning an average \$1.5m per employee. In 1991 it earned \$400m more than Sony. By the turn of the millennium, 35 of the top 100 best-selling games of all time were on the NES platform, all of which sold over a million copies.

Retro spoke to **Barry Hitchings**, a 28-year-old Famicom aficionado who will be known to collectors for his time running the Retro X dedicated collector shop in Shepherd's Bush, London. "I began by wanting to collect all the games from the anime series 'Urusei Yatsura'. It wasn't long before I found myself buying other classic games like *Super Mario Bros.*, *Rodland*, *Star Force* and *Gradius*. The fact that unboxed games can be picked up for a few dollars and you can pick up a mint *Super Mario Bros* for less than ten is so enticing. I loved the Famicom as it really was better than the

Bootleg camp

The Famicom has played host to an incredible range of bootlegs over the years. The most infamous titles came from a Japanese software company, Hacker International. This small publisher didn't have the necessary capital to obtain a Nintendo licence and didn't expect to be granted one given the dubiously titillating nature of its software. Yamauchi would not allow hentai games as he felt it would tarnish the brand. However, Hacker's technicians managed to reverse-engineer the Famicom and create their own cartridges. They then went on to sell their titles via mail order, circumventing Nintendo's lock on distribution rights. When the upstart company cheekily placed adverts in 'Family Computer magazine', the biggest dedicated Famicom publication in Japan, Yamauchi came down like a ton of bricks on the editors. The top five managers of Takuma Shoten, the magazine's publisher, were rushed Nintendo's headquarters to apologise in person. Ironically some versions of Hacker's games were repackaged in clean form for America. *Idol Shinsen Mah Jong*, a strip puzzle game, was published in the US as *Tiles of Fate* from American Video Entertainment. The infamous Panesian Company released several of Hacker's games in the US, and these are some of the rarest NES carts around, with *Bubble Bath Babes* being the most famous release. This title was also available on Famicom from Hacker under the title *Soap Panic* or in squeaky-clean format on the NES from AVE by the moniker *Mermaids of Atlantis*.



TV Game 6 was Nintendo's first internally developed piece of gaming hardware for the home. It played six variations of the popular *Pong*



This is what the western NES (AVS at the time) first looked like. The transformation from this strangely forward-looking device to the NES took only a few short months



The 3D goggles were unsurprisingly a simple distraction rather than a revolution but, as with the Vectrex's equivalent, a mint boxed pair can fetch astronomical prices

blocky graphics of the Commodore 64 or the colour-clash block-scrolling graphics of the MSX and Colecovision. It was the PlayStation of its time, moving the goalposts of gaming several miles down the pitch." **Retro** asks Hitchings his professional opinion on why the Famicom collector's scene is so small. "It has always been a very niche machine when compared to the likes of PC Engine and Mega Drive. I would say that it's probably the most collected out of all the Japanese 8bit machines, but that's only probably because finding a Sega Mark 3 or a Epoch Cassettevision is a lot tougher. In the small collecting circles, it's collectable for a small range of games and the fact that you can still pick up the Famicom Plus system new very easily indeed. The bigger systems do overshadow it in terms of collectability but with

so many playable games that can be picked up cheap and a lot of games that many have not played, it has grown to be a more collectable machine."

Retro wonders where the majority of collectors are based and why. "Most collectors are Japanese. In Japan the Famicom is the best-selling home console and it probably has the largest amount of playable games on any machine. Although it was passed in total software sales by the PS1, SNES, PS2 and even the Saturn the amount of must-have games is still relatively huge. There was never the import culture that surrounded the PC Engine so starting on the Japanese side of Famicom collecting is much harder than with most systems." So what is the Famicom's primary legacy for today? "It would have to be the *Super Mario Bros*

series. *SMB* is still the largest-selling game in Japan ever with over six million units sold. Only *Pokémon*, *Dragon Quest VII* and *Final Fantasy VII* come anywhere close, with around three to four million sales each. The Famicom has more million-selling games in Japan than any other console. In terms of games for us today, yes, there are some very poor titles that haven't aged well, but many titles provide quality gaming experiences today. Nintendo's in-house titles still provide the best value for today's NES players. They made most of the most desirable games."

Finally, **Retro** asks where the scene will be at the format's 25th anniversary, bearing in mind that it's just celebrated its 20th. "About the same place I see it now, a niche market stocked full of classic games".

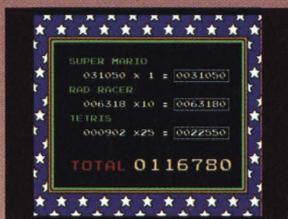


The collectables

Compiling a list of collectables for the Famicom is harder than most. There are many extremely rare titles that simply aren't valuable or even particularly collectable in the west due to the small market and limited interest. Here **Retro** lists ten very collectable titles – although this is by no

means a definitive list. These are simply titles that demand consistently high prices. Also included are ten important titles that every gamer should play. The price guide has been compiled in conjunction with Barry Hitchings and Paul Hogger (<http://simplynes.emucamp.com>).

Nintendo World Championship Cart



US gold cart value: £4,000–5,000
US grey cart value: £400–1000
Release: N/A/1990
Developer: Various

The cart used in the 1990 Nintendo world championship comprises excerpts from *SMB*, *Rad Racer II* and *Tetris*. A total of 116 carts were given away to finalists: 90 grey and 26 gold.

Tengen Tetris



US value: £130–250
Release: 17/05/89
Developer: Tengen

This illegal version of *Tetris* from Tengen was removed from shelves by a furious Nintendo. It is unknown how many copies are now in existence. Falling in value.

Final Fantasy 1&2 combo



Japanese value: £30–45
Release: 27/02/94
Developer: Squaresoft

This combination of both the earliest *FF* games was the first indicator to Square that re-releases could pay dividends. Highly collectable but less so than 18 months ago.

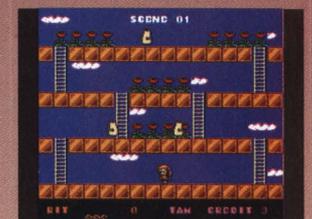
Cheetah Men II



Value: £90–140
Release: 1992
Developer: Active Enterprises

A very poor unlicensed western title that was a sequel to a game on the infamous 52-in-1 cart. Very few were produced and Active went bust almost immediately after release.

Rodland (Yousei Monogatari RodLand)



PAL value: £100–150
Release: 11/12/92
Developer: Jaleco

Perhaps the rarest of the PAL NES released games. The NES version is the only console iteration of what is a highly underrated platformer.

Alzadic: Summer Carnival 92



Japanese value: £100–150
Release: 17/07/92
Developer: NaxatSoft

This stunning shooter impresses with its sheer speed and playability even today. This is one of the finest 8bit shooters on the market.

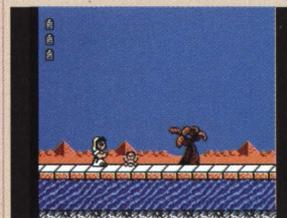
Stadium Events



Value: £160–200
Release: 1987
Developer: Bandai

This extremely rare title for use with Bandai's exercise mat peripheral was later repackaged and released as *World Class Track Meet*.

Bible Adventures



Value: £30–60
Release: 1990
Developer: Wisdom Tree

One of the few unlicensed games that NOA didn't crush, probably for fear of offending Middle America. A poor game but relatively rare.

Gold Punch Out



Japanese value: £180–250
Release: 10/09/87
Developer: Nintendo

Only 10,000 copies of this Japanese gold cart version of *Mike Tyson's Punch Out!!* exist, originally won by playing an FDS golf game.

Mike Tyson's Intergalactic Power Punch



US Value: £200–300
Release: N/A
Developer: American Softworks

This game was completed just prior to Mike Tyson's rape conviction. The game changed titles to *Power Punch 2*. A few prototypes exist.

Ten important titles

Condensing Famicom's sprawling line-up of classic genre-defining games into a short list of ten is an impossible task. You will decry the omission of some in **Retro's** choices here just as we'd decry the omission of others had you compiled the list. Nevertheless, the titles here are included

because they are extremely important, or kooky, or fun, or because not enough people have played them, or because they are genre defining. Hunt them down and enjoy the distilled gameplay. It's not retro: it's just gaming.

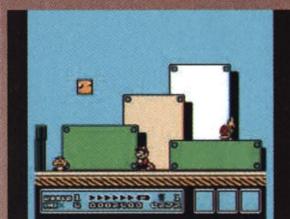
Super Mario Bros



Release: 13/09/85
Developer: Nintendo (R&D4)

Perhaps the best reason to invest in an NES all these years later. One of the most important games of all time.

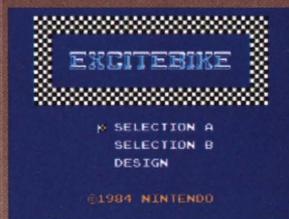
Super Mario Brothers 3



Release: 23/10/88
Developer: Nintendo (R&D4)

After the enjoyable but uncharacteristic second game, this was the title that really propelled Nintendo to the forefront of gaming in the west.

Excitebike



Release: 30/11/84
Developer: Nintendo (R&D1)

A simplistic but oddly charismatic motorcycling game with strong addictive qualities.

River City Ransom



Release: 25/04/89
Developer: Technos Japan

One of only a few games in Technos' long-running *Kunio* series to reach the west. This *Double Dragon*-inspired take-off is humorous and commands wide-ranging fanboyism.

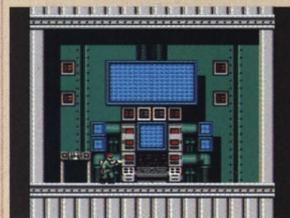
Metroid



Release: 06/08/86
Developer: Nintendo (R&D1)

Originally for the FDS this title was released in the US and PAL regions on cartridge. Stunning music, atmosphere and gameplay that is still enticing 18 years later.

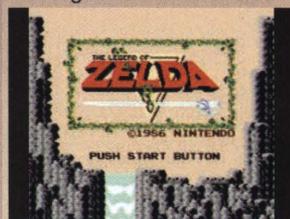
Hitler no Fukkatsu (Bionic Commando)



Release: 20/07/88
Developer: Capcom

One of the few cases where the home conversion was significantly different to its arcade counterpart. An old but good non-jumping platformer.

The Legend of Zelda



Release: 19/02/84
Developer: Nintendo (R&D4)

When Miyamoto's other series first came out it set Japan alight and trailblazed battery-backed saves in the western territories.

Akumajou Special: Boku Dracula-kun



Release: 19/10/90
Developer: Konami

Similar in concept to *Parodius*, this *Castlevania* take-off has obvious appeal for *Dracula* fans, with fast and open-ended gameplay.

Contra



Release: 09/02/88
Developer: Konami

Another key first that enthralled gamers at the time and through to today. The first *Contra* is significantly better than its two sequels on NES.

Highway Star/Rad Racer



Release: 01/10/87
Developer: Squaresoft

With no realistic racing game NOA decided to port Square's title and secured an important hit for the NES. Could be used with 3D glasses.



KOREA

FORGOTTEN CONFLICT



"Korea: *Forgotten Conflict* looks good, it plays well and it'll keep you in front of the screen for hours on end"

Icontigames

"KOREA: *FORGOTTEN CONFLICT* will restore your faith in a flagging genre and give a certain Commandos III a few sleepless nights."

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Amiga amigos

When the Amiga burst into the 16bit world in 1985, a few months after its arch rival the Atari ST, the scene was set for a titanic struggle of epic proportions. It was Commodore's machine, however, that would emerge the victor. **Retro** hunts through the archives to track the ascendancy of this wedge-shaped beige star

As the last of the non-PC home computers, the Commodore Amiga's place in history is assured. The preceding wave of largely 8bit machines may have taken computing into the mainstream, but it was the multitasking, multi-talented Amiga that really paved the way for the now-ubiquitous PC. Some even believed it would have offered its rival platform serious competition had Commodore not collapsed in 1994, but the truth was the Amiga, lacking the open-ended architecture of the PC, was always destined to enjoy a limited lifespan.

Its age, status as a breeding ground for some of the finest programmers and game concepts, and the size of its user base in the late-'80s and early-'90s mark it out as the ideal platform for game collectors. Yet most games change

hands for very little money, and the computer itself has little worth on the secondhand market. Collectors do exist, however, and tend to be of a particularly dedicated breed.

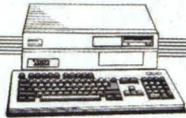
As their numbers continue to swell, and titles appear for sale less frequently, then prices can only get higher and the Amiga's standing as a key platform for collectors should rise.

Although it became Commodore's flagship 16bit home computer, the Amiga was originally conceived in 1980 by Jay Miner, then an employee of Atari. Bored with development work for 8bit systems, Miner was keen to put together a new system based around Motorola's then state-of-the-art 68000 processor. With Atari showing no interest in his ideas, a frustrated Miner left to work on chips for pacemakers at Zimast, until a call in 1982 from ex-Atari

colleague and Activision founder Larry Kaplan brought him back into the fray. In fact all Miner initially did was to put Kaplan in touch with a trio of dentists looking to invest in his old friend's new games company, Hi-Torro. But when Kaplan departed shortly thereafter, it was Miner who stepped into his shoes. Once there, he finally had the chance to pursue his vision of a 68000-based computer.

Hi-Torro's first move was to split into two distinct groups, the Atari Peripheral Group focusing on games and controllers for the Atari 2600 console, and the Computer Development Group starting work on a prototype computer codenamed Lorraine. The intention was to attract game content from established companies such as Imagitec and Activision, both of which had found success developing for

Commodore
AMIGA 2000



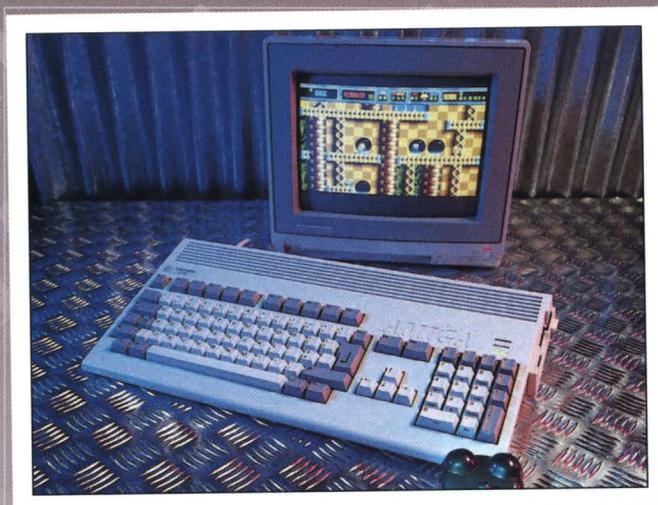
AMIGA 2000 VS THE COMPETITION

FEATURE	Amiga 2000	Macintosh Plus	IBM PC-AT
PROCESSOR	68040	68030	80386
WORD LENGTH	16/32 bit	16/32 bit	16/32 bit
RAM	standard expand to	1 megabyte no	512K 15 megabytes
MULTITASKING	yes	no	no
VIDEO DISPLAY	available colours Maximum resolution Interlaced video Sprites Graphics co-processor	monochrome 512x512 no no no	16 of 64 (EGA) 16 (CGA) 640x500 (EGA) not supported by DOS no no
SOUND	built-in speech yes	4 voice: 1 channel output no	Receiver no
EXPANSION SLOTS	7	0	8
INTERFACES/PORTS	Serial Communications Lightpen Video RGB analog RGB digital Composite Catalock	yes yes no no no no no no	yes yes no no yes (EGA) no no
COMPATIBILITY	IBM PC-XT	external option	yes
STANDARD SYSTEM	CPU drive Keyboard Monitor Mouse	CPU (incl. monitor drive) Keyboard Mouse	CPU drive Keyboard Monitor

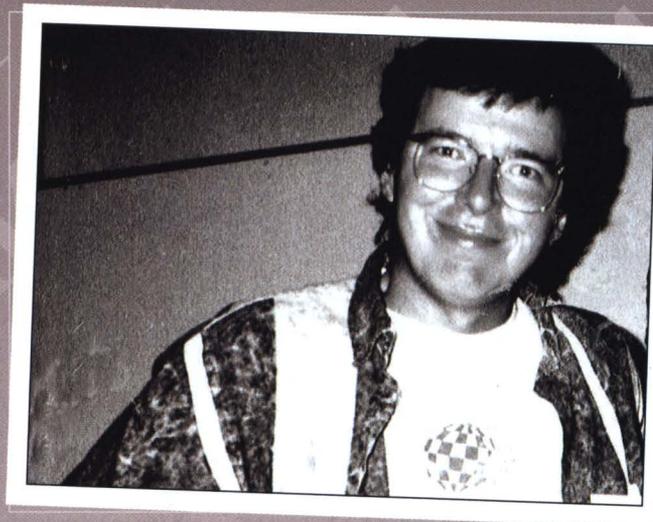
A low-grade brochure for the Amiga A2000 pitches the high-end machine against the PC and Macintosh models of the time



This once-ubiquitous digital incarnation of King Tut was used to demonstrate the capabilities of EA's seminal *Deluxe Paint* series



The A1200 revived interest in the Amiga brand for gaming while consoles invaded the UK



Visionary engineer Carl Sassenrath came up with the idea for the Amiga's multitasking

Lorraine prototype, although several of the improvements, including more memory, more colours and better video output, were also useful for its secondary role as a games machine. Launched on July 23 1985 at a New York-based event featuring Andy Warhol and Debbie Harry, the Amiga went on sale that October for \$1,500 – a modest price in comparison to the PCs of the day, but twice that of Atari's hastily launched ST computer.

For the following two years, the Amiga would trail behind the ST, selling fewer units and also receiving less support from game developers. All this would change when Commodore repositioned the launch machine at the centre of a three model line-up in 1987. With the A2000 designed to target the multimedia market, the A500 was designed as

a direct competitor to the ST, although at £599 (later reduced to £360) it was still more expensive than its rival.

It was soon recognised as the superior machine and, one by one, key developers began to choose the Amiga as the launch platform for their games.

Reign in Spain

The Amiga's reign would last for half a decade, during which time the careers of many of today's leading industry figures were launched, and many new gaming genres developed.

Just as the Amiga's architecture made it accessible as a computer while being accomplished as a games machine, so the Amiga development scene found a balance between the club-like and the corporate. Lone programmers crafting

games in their bedroom were a far rarer occurrence than during the heyday of the ZX Spectrum and Commodore 64, but small, enthusiastic teams unencumbered by too many publisher pressures developed many of the best games. With development costs generally well below £100,000 and even niche titles achieving healthy sales, publishers could afford to take a few risks.

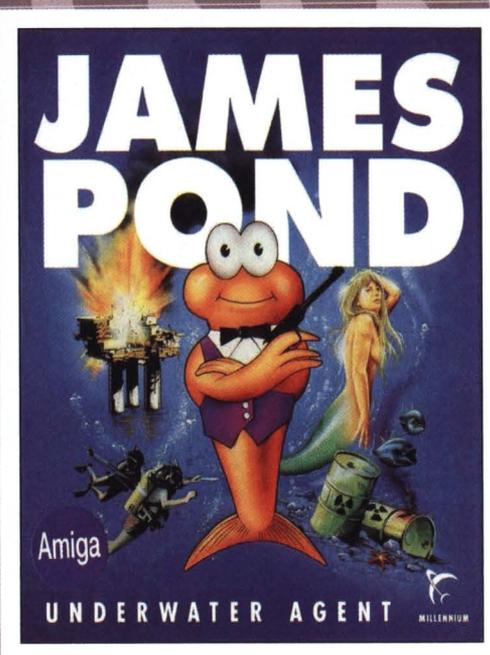
For programmers, the appeal of the Amiga was obvious. While relatively easy to code for, those custom chips provided the power to facilitate coin-op-quality gaming, something that early release *Marble Madness* proved handsomely. Using the hold-and-modify mode it was possible to put up to 4,096 colours on the screen, while Agnus' Blitter co-processor made light work of sprite-based

Amiga 500: tech specs

Internal
Motorola MC 68000 central processor
Agnus, Denise and Paula co-processors
256Kb ROM
512Kb RAM
Workbench 1.2 operating system
3.5" 800Kb floppy disc drive
RS232 bus, mouse port, joystick port, RGB
and composite outputs, external audio output

Graphics (for PAL editions)
320x256 and 320x512 resolutions up to 64 colours
640x256 and 640x512 resolutions up to 16 colours
4,096 colours available using Hold And Modify

Audio
Four voice 8bit PCM



Even during the reign of the Amiga, computer game packaging was often amateurish, albeit in a mildly endearing manner

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- PROGRAMMABLE POWER for high speed drill and more. Offer quality text and high resolution graphics.
- MICROPROCESSOR with memory and cache.
- SPREADSHEET with powerful business and financial calculation and formatting functions.
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- 12 MONTHS FREE hardware and software support.
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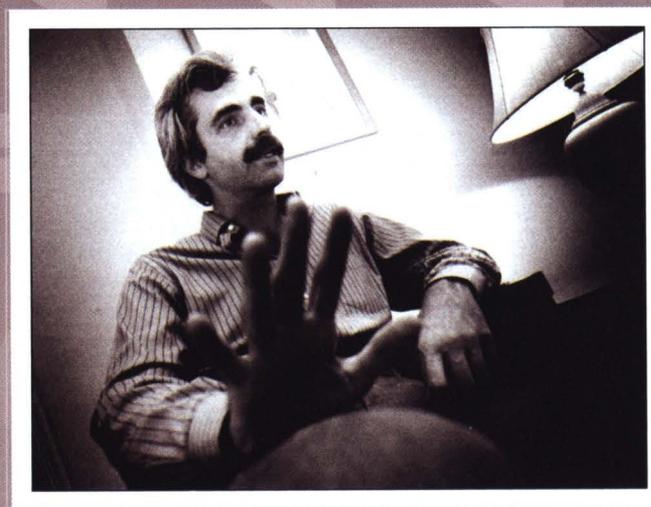
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Commodore

Even after the launch of the A500, Commodore still tended to pitch its format as a serious multimedia computer system



Commodore's Amiga was an early proponent of CDs as a storage medium via the ill-fated CDTV multimedia device and the A570, a CD-ROM drive add-on for the A500



One of the best-known figures from the original Amiga team, R J Mical was responsible for the Intuition part of the machine's OS. He went on to work on Atari's Lynx handheld

graphics. The machine also proved adept at smooth multi-layered scrolling (something that even modern PCs struggle with), while the four-channel 8bit stereo synthesiser took audio quality above and beyond the computer's peers.

Even the inclusion of a mouse had an impact, promoting point-and-click control and thus making the system ideal for strategy games and graphic adventures.

The Amiga's idiosyncratic architecture strengthened its position against the Atari ST and PC by making it very difficult to port software to the other formats. Thus, many of the best titles were exclusively available on the Amiga, or else considered highly inferior on other platforms. By 1990, with hardware and software sales strong and creativity at an all-time high, the Amiga (in the UK and Europe at least) had

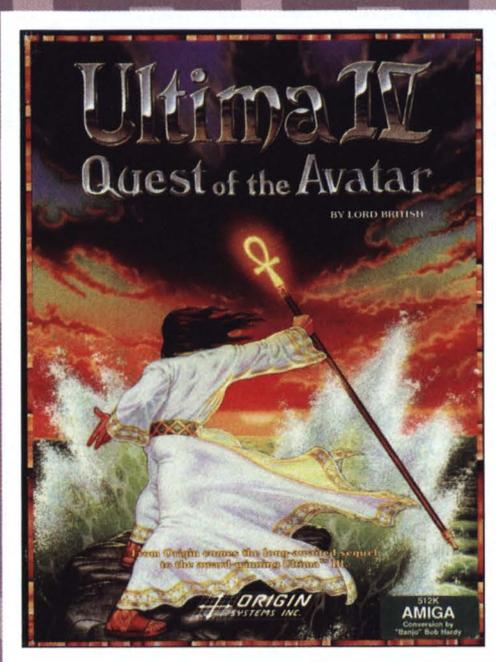
blossomed into the must-have games machine. It is, however, worth noting that the user base pales compared to that enjoyed by today's best-selling consoles. Even as late as 1993, 'Amiga Format' magazine estimated the users worldwide at just under five million, with one and a half million owners in the UK, and just half that figure in the US.

By this time, the Amiga had clearly peaked. The recently arrived SNES and Mega Drive consoles held greater appeal for younger gamers, and the PC had finally come into its own as a viable gaming platform. The standard Amiga just couldn't replicate the splendours of the PC's texture-mapped 3D titles such as *Wolfenstein 3D* and *Ultima Underworld*, and even then it was clear such games would come to dominate the gaming landscape. Commodore itself had

been stumbling along for some time, but its tactic of bundling bestsellers with the Amiga to increase sales in the UK proved masterful. Christmas 1990's A500 Batman pack, in particular, was crucial to establishing the Amiga as a family favourite. But as far back as 1987 there was trouble in the boardroom and on the American side of the business, while in the marketplace additions to the range such as the A3000 and CDTV were ill-judged. Even the launch of the A500+ was mishandled – the machine simply appeared in stores in place of the original model without prior warning, and was then quickly superseded with the badly received A600. The A1200 and A4000 models were better designed, but losses were mounting – something yet another model, the CD32, did nothing to halt. A lawsuit from Cadtrac, relating to



A French ad for the A500 addresses the gaming potential of the system, albeit with an image from a non-existent 'Star Wars' game



The cloth maps, carefully printed manuals, and other trinkets issued with Origin's *Ultima* games makes them a safe bet for collectors



The A2000 succeeded the A1000 as the Amiga for the serious user. Its 1Mb of RAM and enhanced expansion options helped it to become quite popular in the United States



The classic Amiga 500 – a regular sight in UK households in the mid- to late-'80s. The machine had a certain style (and its mouse didn't seem quite as ugly back then)

copyright infringement of bitmap manipulation technologies, did further damage and, on April 29 1994, Commodore International finally filed for liquidation. David Pleasance of Commodore UK attempted a management buyout to keep the business afloat in this country but failed to secure funding, leaving Dell and Escrom to fight for the leftovers. Escrom won, but also filed for liquidation just two years later. Ownership then passed to Gateway, from whom Amino Development Corporation licensed the technology in 2000, with a view to further developing the platform. Today the Amiga is still alive, albeit barely.

Slow fade

It's this very survival that has hampered its validity as a retro

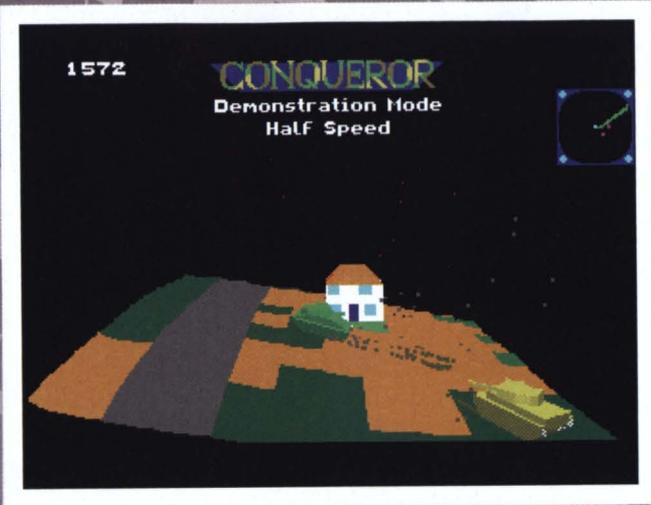
platform. For the Amiga to return as a collector's machine it needs to disappear in the first place, something its small but determined user base is quite naturally trying to prevent.

"It just isn't dead enough yet," agrees **Marc Machenheimer**, an Amiga fan with a collection of several hundred classic and rare titles. "It's going to take another couple of years before it's regarded as a real classic."

István Fábán, author of Amiga games *Abandoned Places 1 and 2*, believes the hardcore user base sometimes actively discourages would-be collectors. "Because the Amiga's history after Commodore's bankruptcy is rather turbulent, full of promises, high hopes and hard falls, and because events are still taking place a decade later, the user base is understandably very sensitive about the platform,

and tries to protect it, or keep the machine pretty much like a cult," he explains. "Get involved with the wrong people, those that are generally the most vocal ones, and you can have a very unpleasant and offputting first encounter."

Emulation, or lack of it, has also left the Amiga lagging behind other retro platforms. The ability to play old titles via an emulator can provide an immense boost for the credibility and popularity of an old platform, yet the sheer complexity of the Amiga meant emulators began appearing far later than those for the ZX Spectrum, Commodore 64 and so on. With WinUAE now well established, more people are doubtless re-evaluating the machine's status as a classic games platform. Fábán is himself actively involved in Amiga games collection, having founded the Classic Amiga Preservation



Solid 3D titles were rare. The Amiga excelled at rapidly moving blocks of screen data, but lacked the number crunching or pixel addressing capabilities to support complex 3D

YOU'RE LOOKING AT
4096 COLORS
4-CHANNEL STEREO
32 INSTRUMENTS
8 SPRITES
3-D ANIMATION
25 DMA CHANNELS
A BIT BLITTER
AND
A MALE AND FEMALE VOICE.

ONLY AMIGA GIVES YOU ALL THIS AND A 68000 PROCESSOR, TOO.

These custom VLSI chips work in combination with the most powerful Amiga graphics bundle, providing pixel clarity and animation skill.

And there's more: Amiga is the only computer with a multi-tasking operating system built into hardware.

All these capabilities are easy to tap because Amiga open architecture provides you with access to the 68000 microbus in addition to the serial, parallel and floppy disk connections. Complete technical manuals enable you to take full advantage of the custom chips and the software support routines in this window control shell on the Microsoft® disk that comes with every Amiga computer.

And you access these resources in a number of development languages, including Amiga Assembly™, Amiga C, Amiga Basic, Pascal™, Basic for the Amiga®, Amiga Pascal and even Amiga Lisp.

So Amiga not only gives you more creativity, it gives you creative new ways to use it.

Amiga by Commodore.

GIVES YOU A CREATIVE EDGE.

The overtly technical hard sell is employed in lieu of fancy visuals in an ad for the original-model Commodore Amiga A1000

ZEEWOLF

TAKE HELICOPTER COMBAT TO A NEW DIMENSION!

One of the last full-price games developed for the Amiga, Zeewolf, with its Zarch-like landscapes, is now regarded as one of the best

countries because of the violence it depicted, and so goes for a lot of money on eBay, despite not it not being a very good game," says Wilkinson. "Great Giana Sisters is another, having being pulled after just two weeks on sale because of legal threats from Nintendo. A CAPS member paid 70 euros for a copy of it last year."

Distribution discrepancies in various countries can also affect current game value. Many war-related titles were originally banned in Germany, for example, and so command a high price there. The aforementioned Infocom titles were rare outside of the US even in the '80s.

"Completely different titles are rare or common depending on which part of the world you are living, and importing costs can be prohibitive, like \$100 shipping

charges from the US to EU," says Fábíán. As ever, there are two types of collector: one who wishes to play the games, and one who collects for the sport. The latter is likely to pay a premium for games still in their shrinkwrap, and will never take the game from its box.

"Personally, I prefer the physical material over game data," admits Machenheimer. "I'd rather have a game box containing a non-readable original disc than a working game without the poster or sticker in the box."

Amiga game boxes were famously large and flimsy, so the condition of the packaging can make a huge difference to a game's value.

A title such as *Winter Games* is valuable simply by virtue of its easily damaged box. Similarly, games that shipped with

Amiga 3000T	1991
The A3000T was a tower-based version of the A3000 with a 68882 maths co-processor and 2Mb of 32bit RAM.	
Amiga 500+	1991
On sale for just six months, and in fact released in place of the A500 without any forewarning, the A500+ was the first low-end machine to utilise Commodore's ECS (Enhanced Chip Set). It shipped with Workbench 2.0.	
Amiga 600	1992
A physically shrunken replacement for the short-lived A500+, this model ditched the numeric keypad, but added a PCMCIA slot. It was to be the last Amiga for mainstream users.	
Amiga 4000	1992
Featuring 6Mb of RAM as standard, Workbench 3, and an AGA (Advanced Graphical Architecture) chipset that dumped Denise and Agnus in favour of Alice and Lisa, the A4000 was a replacement for the A3000 models, even though it was never originally designed as a production machine.	
Amiga 1200	1992
Just as the A500 provided a mainstream version of the A1000, so the A1200 took the A4000 design as its starting point. With the AGA chipset, 2Mb of RAM and a PCMCIA slot, it cost just £400.	
CD32	1993
The second machine based around a CD-ROM drive, the CD32 received a warmer reception than the CDTV, but Commodore was blocked from selling it in the USA because of existing debts. The firm filed for bankruptcy just seven months after its launch.	
Amiga 4000T	1996
Launched just prior to Escom's collapse, the A4000T reworks the familiar A4000 configuration for a tower-based design, adding two video slots and utilising a 50Mhz 68060 CPU.	
With thanks to http://amiga.emugaming.com	

added extras command a high resale value. A copy of *Shadow Of The Beast* without its garish T-shirt is a shadow of its former self. That the game was never considered to be much more than a graphical showcase for the platform is irrelevant to its collectability.

This speaks volumes about the current state of the Amiga game collection scene. For now, at least, it's invariably a title's rarity rather than playability that determines the resale prices.

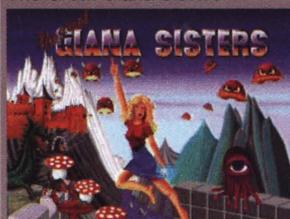
And as wrong-headed as that might seem to anyone but the dedicated collector, **Retro** notes that it does at least mean those delving back into the Amiga's back catalogue purely for the love of the games can do so with little outlay. This, at least, has to be a good thing.

The collectables

Many of the games listed here were later re-released or published on budget labels. Naturally these have little resale value. Note that prices here should be considered an

indication only. This guide has been produced with help from the CAPS Project (www.caps-project.org), with images kindly supplied by the Hall of Light (<http://hol.abime.net>).

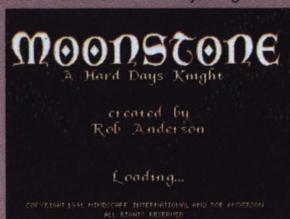
The Great Giana Sisters



Value: £45–£100
Release: 1988
Developer: Time Warp
Publisher: Rainbow Arts

Modelled on the original C64 version, itself an audacious clone of Nintendo's *Super Mario Bros.*, this version was also pulled from release shortly after launch.

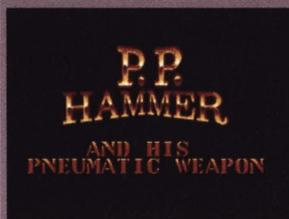
Moonstone: A Hard Days Knight



Value: £15–£30
Release: 1991
Developer: Rob Anderson
Publisher: Mindscape

A hack 'em up with so much emphasis on the hacking it was banned in Germany, and condemned by the media in several other countries, not least the US.

P.P. Hammer And His Pneumatic Weapon



Value: £10–15
Release: 1991
Developer: Travelling Bits
Publisher: Demonware

Initially entertaining but ultimately flawed and frustrating platformer, whose Viz-esque moniker would be all but forgotten were it not for the poster and sticker in the box.

Shadow of the Beast



Value: £25 (with T-shirt; less than £3 without)
Release: 1989
Developer: Reflections
Publisher: Psygnosis

After stimulating Atari ST sales with *Brattacus*, Psygnosis provided *SOTB* as a poster boy for the Amiga. Style wins over substance, but the T-shirt means this no longer matters.

Little Computer People



Value: £15–20
Release: 1986
Developer: Activision
Publisher: Activision

A fine game from a key early Amiga publisher, original versions of this are far more difficult to find than their C64 counterparts. A non-collectable re-release was published in 1991.

Marble Madness



Value: £15–20
Release: 1986
Developer: Larry Read
Publisher: Electronic Arts

Probably the first home computer game to look and feel almost the same as its coin-op parent. Sales were low, and its value is now high.

Sword of Sodan



Value: £10–15
Release: 1988
Developer: Discovery Software
Publisher: Discovery Software

Amiga game of the year in one magazine, *Sword Of Sodan* is pretty but tiresome. Its obscure publisher and reputation justify its desirability.

Katakis



Value: £15–20
Release: 1988
Developer: Factor 5
Publisher: Rainbow Arts

An *R-Type* clone. Activision had yet to release its own Amiga *R-Type*, and *Katakis* was pulled. Activision signed up Factor 5 for the official version.

Archon



Value: £10–15
Release: 1987
Developer: Free Fall Associates
Publisher: Electronic Arts

Based on an old Atari XL title which updated chess with fantasy-themed pieces and spells. It is now known as something of a classic.

Defender of the Crown



Value: £15
Release: 1986
Developer: Cinemaware
Publisher: Cinemaware

The arrival of the interactive movie was heralded by Cinemaware's richly packaged debut. The lush visuals masked an absence of playability.



Value: £10-£15
Release: 1990
Developer: Ordilogic Systems
Publisher: Electronic Arts/Ubisoft

Not the *Quake* rival, but a highly accomplished shoot 'em up split into side scrolling and *Space Harrier*-style 3D. Released only in the US, the EA edition is the hardest to find.



Value: £10-20
Release: 1989
Developer: LucasArts
Publisher: LucasArts

LucasArts went on to produce far more entertaining adventures, but *Maniac Mansion* provides a fascinating, and now rare glimpse of a genre in the making.



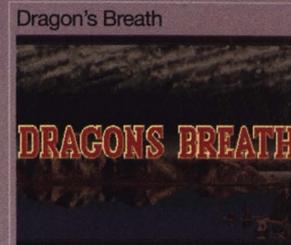
Value: £20-40
Release: 1987
Developer: Canvas Software
Publisher: US Gold

Quite why this is so hard to come by is a mystery. Perhaps nobody realised the value in holding on to such a seemingly visually dull and badly conceived roleplaying game.



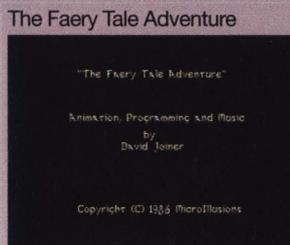
Value: £10
Release: 1988
Developer: Palace Software
Publisher: Palace Software

More famous for its cover, featuring an oiled-up 'Gladiators' regular and scantily clad Maria Whittaker, than the game itself. Not to be confused with the Psygnosis game *Barbarian*.



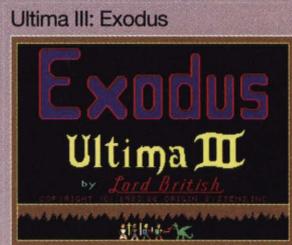
Value: £20-40 (for English version only)
Release: 1990
Developer: Outlaw
Publisher: Palace Software

Also known as *Dragon Lord*, this curio gave an opportunity to play the bad guy. Due to the demise of Palace Software, the original English edition is remarkably hard to track down.



Value: £15
Release: 1986
Developer: David Joiner
Publisher: MicroIllusions

Highly collectable as one of the first games released for the platform, this was considered exotic at the time. Now it looks like a poor *Ultima* clone.



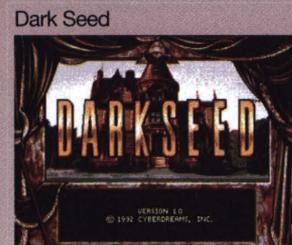
Value: £20-30
Release: 1986
Developer: Lord British
Publisher: Origin

The *Ultima* series' Amiga debut. As with all *Ultima* titles, only those with the original map, reference card and manuals have any real worth.



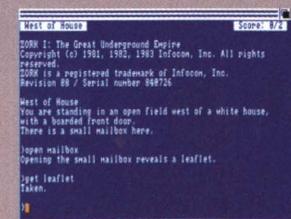
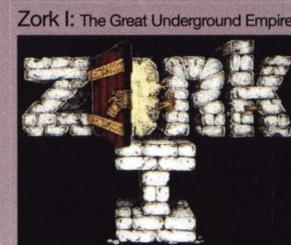
Value: £10-15
Release: 1989
Developer: Steve Bak
Publisher: Elite

As with so many other war-themed games of the era, this was banned in Germany so remains highly prized in that territory.



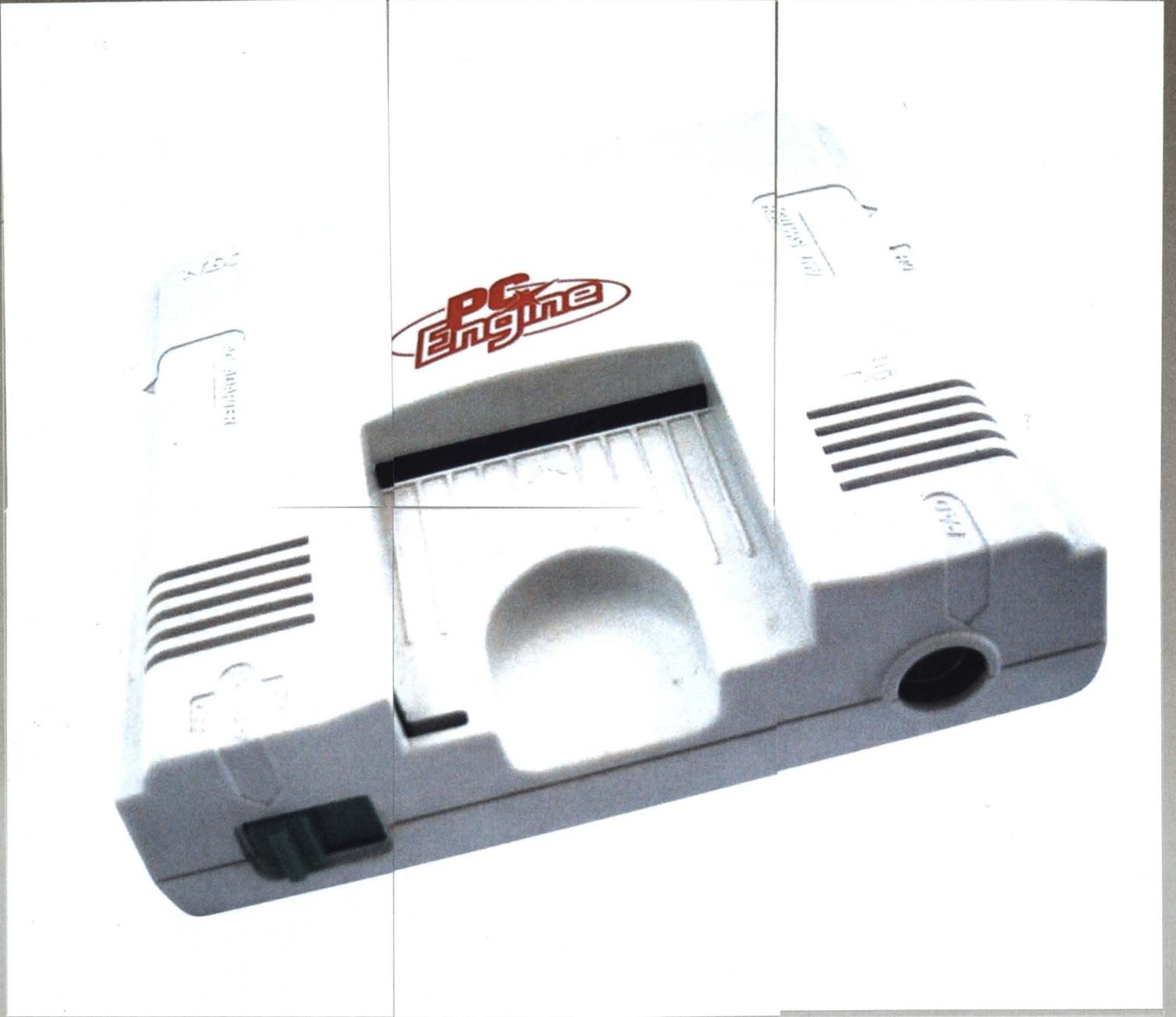
Value: £15-25
Release: 1993
Developer: Cyberdreams
Publisher: Cyberdreams

Featuring artwork from HR Giger, this game has a famously strange but fragile box design that makes well-preserved copies a real find.



Value: £25-40
Release: 1986
Developer: Infocom
Publisher: Infocom

Retro has selected Infocom's first and most famous adventure, but any first editions of its early adventures are well worth seeking out.



Search Engines

A stunningly powerful system stocked with the finest Japan-centric programming of the late-'80s and early-'90s, the PC Engine and its various incarnations nevertheless remained curios to the unwitting PAL mainstream.

Retro charts the history of the console that almost knocked Nintendo and Sega from their lofty perches

Stop hyperventilating. **Retro** knows the complex, multi-threaded history of the PC Engine can induce fear into the heart of even the most dedicated collector. With over a dozen tweaked versions of the machine existing across the globe under a variety of names, just getting hold of the right console is a Herculean task, which is why many confident retro fetishists run back to their Famicom collections. But take a deep breath: some of the finest shooters and arcade conversions ever produced for a home system exist here and here alone, and while the machine lurks in the back of many gamers' minds as a great undiscovered continent, those who dare investigate are in for a treat.

Still, it's difficult to know where to begin and information is hard to come by. NEC was recently asked by a Japanese

magazine to provide a full history of all the hardware, software and add-ons ever produced for the system. The manufacturers records, though, were as sketchy as anyone's, and it soon passed the magazine on to a collector, who provided images and information for the journalists. That goes some way to demonstrating just how poorly documented the history of the PC Engine is, something **Retro** intends to rectify here. After all, it's arguably one of the greatest systems in gaming, and yet there's barely anyone in the west who understands it.

Of course, 'greatest' doesn't mean 'perfect', but while the Engine has its faults, it enjoys the same kind of allure as the Japanese Saturn and Neo-Geo. At launch, in 1987, the machine had a graphical power leagues above anything seen

on previous home systems, and it continued to hold its own well into the next-generation wars of the early-'90s. Debate rages among those who care about these sorts of things as to whether the machine can be classed as the first true 16bit system, or whether it was just an exceptionally powerful 8bit machine, thanks to its curious internal architecture which offered a hybrid of 8bit and 16bit graphics technologies. Similarly, many argue about the PC Engine's significance within videogaming's canon; evangelists pointing out the innovation in its HuCard and CD technologies, sceptics citing the machine's failure in the west. One thing is certain, however: the PC Engine plays host to some of the most important, kooky and genre-defining Japanese titles of the period.

System specs (basic PC Engine)

CPU: Hu6280 (8bit)
CPU speed: 7.16MHz (1.5m instructions per second [MIPS])
Resolution: 400 x 270
Colours available: 512
Colours onscreen: 256
Maximum sprites: 64
Sprite size: 16 x 16, 32 x 64

State of play

Although not the first console to be featured in the movies, the PC Engine found fame in the 1998 film 'Enemy of the State' when the TurboExpress was used as a playback device for video captured onto a PCMCIA card. The TurboExpress was not shown working, but it made an appearance in several scenes throughout the film.

House of cards

The final system card add-on for the PC Engine was the incredible Arcade Card, which came out in Pro and Duo flavours. Arcade Card games featured more detailed graphics and effects, better sounds, and bigger and better cutscenes and were designed specifically to host Neo-Geo ports as well as some of the system's best games such as *Sapphire*. The factory producing the Arcade Cards caught fire shortly before the planned release of the add-on, delaying the release by some months. Some Engine fans cite this as a reason that the card was not supported as well as it might have been.

Engine upgrades

PC Engine has one of the most confusing hardware catalogues because there were simply so many iterations released. Here is the definitive **Retro** collector list of titles and descriptions of differences to clear things up for you once and for all.

NEC PC Engine/NEC TurboGrafx-16

The very first and most basic incarnation released in Japan on October 30, 1987, was a design triumph. The NEC TurboGrafx-16 (the basic Japanese PC Engine with only a few minor internal modifications) was billed as the first 16bit system to be released in the US, causing advertising and playground wars across the country.

NEC PC Engine CD-ROM2

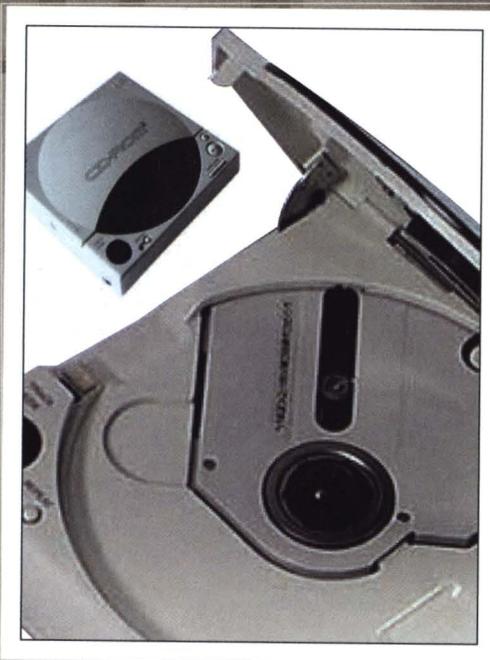
The CD-ROM2 unit for the PC Engine made the machine the very first console to utilise widespread CD-ROM data storage. The drive unit attached to the PC Engine via the Interface Unit, which also served as a carrying case.

PC Engine Super CD-ROM2

Released on December 31, 1991, this CD-ROM add-on allowed players to play the new Super CD format games that NEC was releasing on SuperGrafx. This upgrade unit could be used on the original PC Engine, CoreGrafx, CoreGrafx II and even the SuperGrafx system itself.

And, for collectors, the PC Engine is close to the ideal system. The games are of a generally high quality and come from many of the industry's formative heavyweights; Capcom, Taito, Irem, Namco and Hudson all developed excellent titles for the system. Prices vary across the collector's financial spectrum, ranging from the cheapest, most widely available titles to some of videogaming's most collectable objets d'art. And the system's heavy arcade bias, its success in Japan influencing the range of software as much as its failure in the west, means it offers some unique delights for those prepared to investigate.

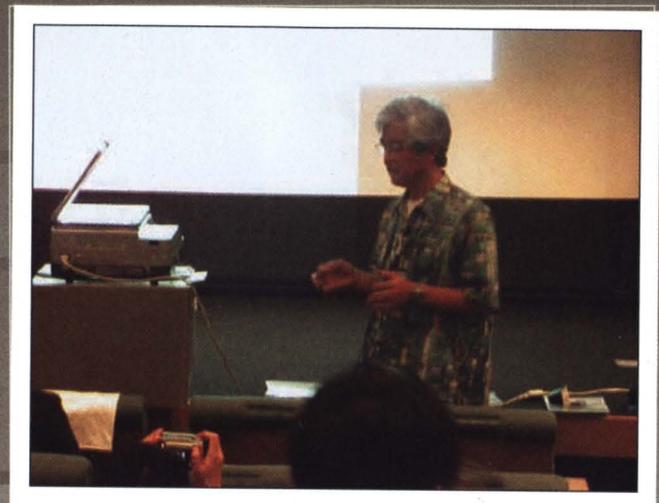
In 1986 Japan's videogaming market was continuing to go from strength to strength. Having avoided the crash that crippled the US market, Nintendo's Famicom and Sega's



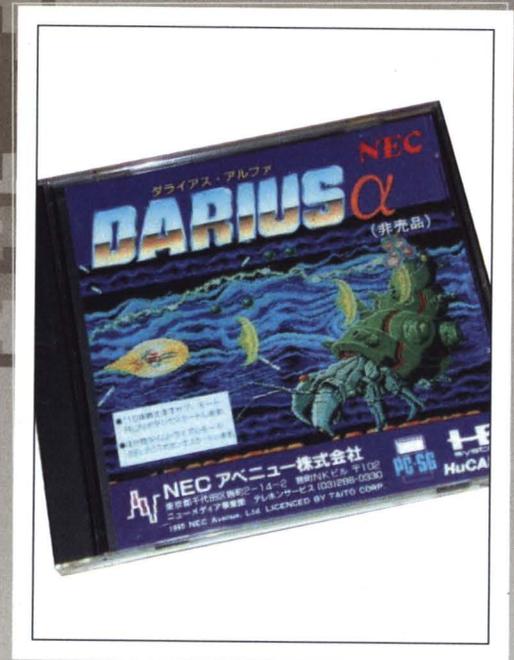
The CD-ROM2 was the first CD-ROM attachment for a Japanese console and helped start the FMV revolution

Mark 3 (the west's Master System) were selling well, albeit starting to look technically basic. PC manufacturing giant NEC Home Electronics had been looking at the console market with keen interest and, noticing the decline in chip manufacturing costs, commissioned one of its R&D teams to come up with a console design that could incorporate the technologies and lessons learned in the PC market with console gaming. Tomio Gotoh, one of NEC's top semiconductor engineers, was charged with steering the project, a project that insiders rather naively believed could lead to Nintendo's demise.

Gotoh-san had been responsible for some of the very first DOS machines (having retired from NEC at 55, he is now a contemporary video media artist) and his machine couldn't be



Tomio Gotoh, the man responsible for some of the very first DOS machines and the basic PC Engine, retired from NEC at 55 to become a contemporary video media artist



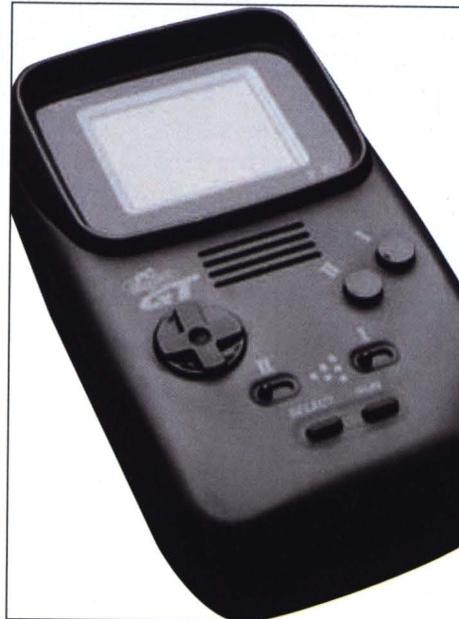
Magazines such as 'PC Engine Gekken' and 'Marakatsu' gave away this game as prizes. But one sold on eBay last year for \$1,400 (£876)

faulted, technically. But NEC's problem was a lack of experience in the console arena. What was needed was input from an established industry player, but NEC obviously couldn't take counsel from any of the rival hardware manufacturers. So Gotoh-san approached high-profile developer Hudson, a prolific thirdparty software company that had also been eyeing up the hardware market. Hudson was bitterly aware of the the kind of firstparty profits Nintendo was netting, and its engineers had even got as far as designing their own high-performance chipset.

But Hudson didn't have the necessary capital to get an entire hardware operation set up, so it decided to combine forces with NEC, splitting both the work and the risk. Although it's not known what percentage of effort and capital



The first PC Engine hardware iteration measures in at dimensions of 135 x 130 x 35mm, making it the smallest home console ever



The TV tuner for the GT is very collectable. It was streets ahead of the Game Boy and used the same HuCard as the parent system

NEC PC Engine GT/NEC TurboExpress

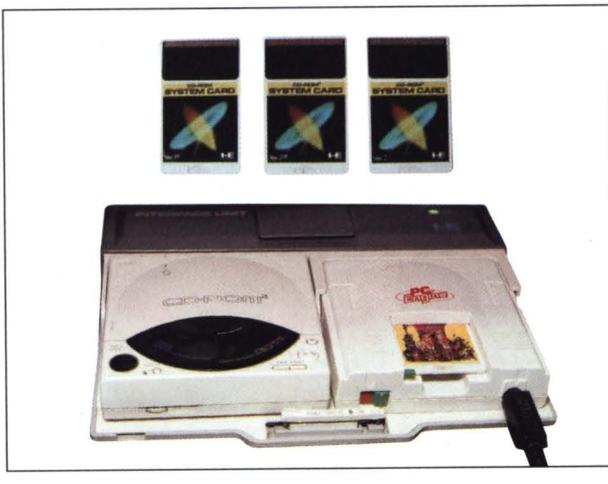
With the growing success of Nintendo's Game Boy, NEC again broke new ground by providing the market with the first handheld console to mirror its home-based parent. The games on both the home and portable systems were interchangeable. The unit had many accessories such as a TV tuner and the TurboLink, which allowed two users to play against each other.

NEC PC Engine CoreGrafx

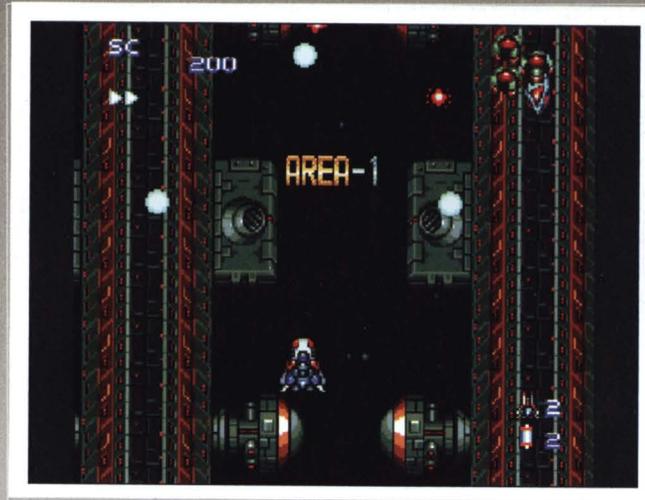
As PC Engine grew and grew in homeland popularity, NEC decided to release a tweaked version of the system for fans called the CoreGrafx complete with cosmetic changes and the addition of AV outputs.

NEC PC Engine CoreGrafx II

This is where it gets hard to keep up for the novice collector. Inexplicably NEC released the CoreGrafx II into the market just a very short time after the already tweaked original appended console had debuted.



In many respects this is the dream setup for the PC Engine enthusiast. The simple aesthetics of this system alone make it extremely desirable for the serious collector



The PC Engine hosts some of the best pre-Saturn shoot 'em ups. *Gunhed*, which was known as *Blazing Lasers* in the US, is a fine early example from 1989

each company put into the development and marketing, it's clear that both staked a lot on the venture, as their commitment to the system and each other never faltered throughout the nine years they were involved in the console hardware business.

For the first time in the Japanese videogame market, as much time, effort and money was spent on getting the design of the new console as right as the insides. NEC wanted a sleek, small, modern look to the machine, something that would resemble a portable Walkman rather than a bulky console. The casing's dimensions were finally settled on at a slender 135 x 130 x 35mm, making it the smallest home console ever. Games were produced on HuCards, each of which had a massive (for the time) maximum capacity of

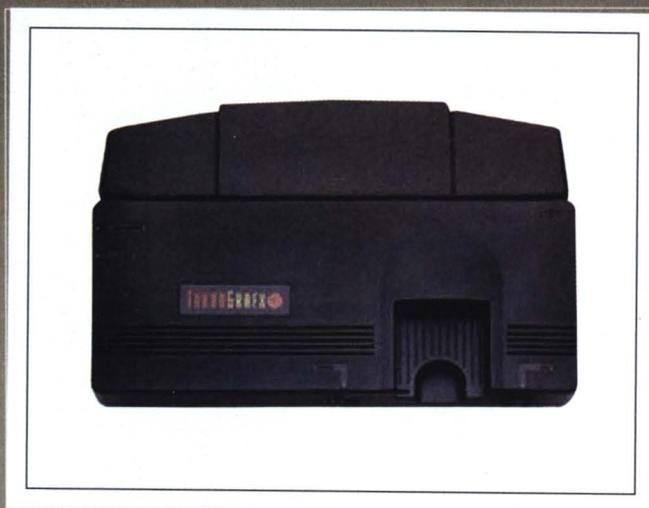
512Kb, while remaining about the size of a credit card. Everything screamed modern and new to the Japanese videogame consumer, and that goes some way to explaining the system's success in the territory.

But it was also down to the power of the system. Internally the PC Engine had a fearsome set of system specs; the powerful architecture was based on a custom version of the 6502 processor, the 7.16MHz Hu6280, along with 64Kb of VRAM. In addition, the system included four coprocessors in charge of sound and graphics allowing for an unprecedented 64 simultaneous sprites. With a variable resolution of 256 x 224 in most games (up to 384 x 256 in *R-Type*) and a potential of 256 onscreen colours from a palette bank of 512, graphics were clearly the

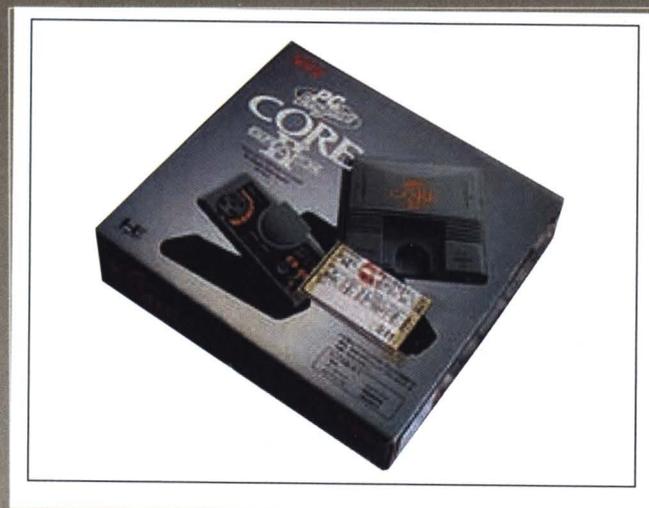
machine's appeal when set against the limited visuals of the Famicom and Mark 3.

Indeed, the PC Engine's 16bit graphics processor helped it move sprites like no other machine outside of SNK's (yet-to-be-released) Neo-Geo. Arguably that went some way to scuppering the doomed (Japanese) Mega Drive's chances before it was even released, as it sported a higher colour palette and more channels of sound than Sega's true 16bit machine. Curiously, it even featured several legitimate conversions of Sega's hit arcade titles such as *After Burner II* and *OutRun*.

Indeed, *OutRun*, *Thunder Blade* and *After Burner II* all gave a far better impression of super-scaler technology than the Mega Drive could manage. The other side of the coin was



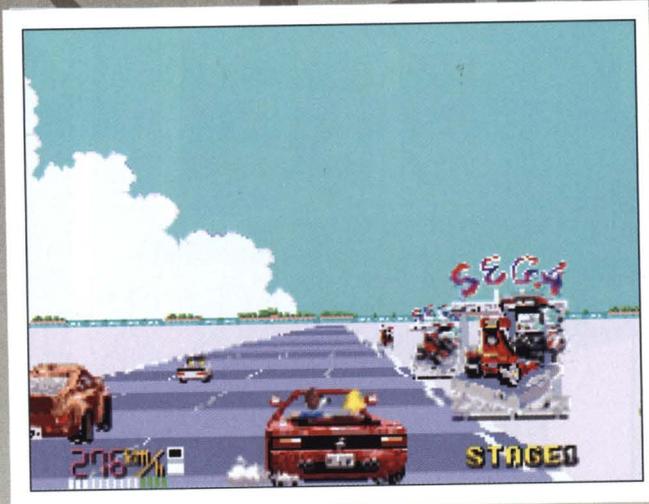
In contrast to the sleek white design of the Japanese PC Engine, the US TurboGrafx-16 used cheaper black plastic and was blocky in the style of the time



NEC's packaging for the American market (its machines never officially made it out in Europe) had about as much charisma as the system's name in the west (ie, not a lot)



Even more so than with other consoles, Japan saw a wide range of PC Engine system add-ons, such as the wireless multi-tap controller pictured here



Conversions of Sega arcade classics such as *OutRun* managed to find their way on to the Japanese iteration of the PC Engine and were often superior to Sega's own console ports

Golden Axe, which suffered a conversion so bad that the Mark 3 version is considered superior. Unsubstantiated Internet rumour, the gamers' equivalent of the urban legend, states that a financial incentive was offered to the game's programmers to make sure that their conversion was inferior to the one on Sega's machine.

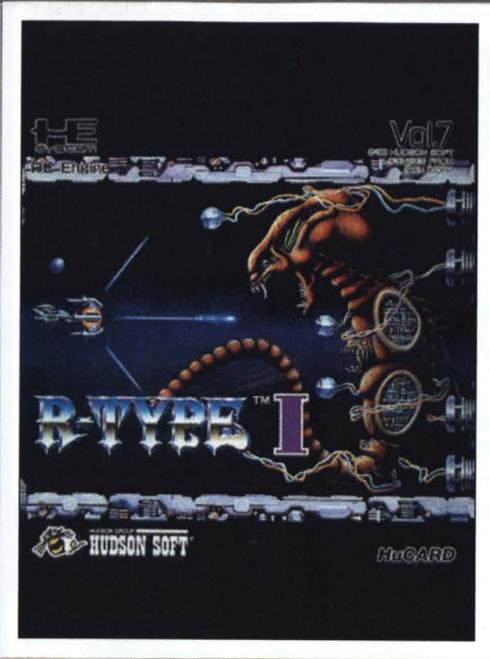
But the most important factor in the PC Engine's Japanese success was not the thrill of the new, or the powerful system specifications, but the speed with which top-quality thirdparties jumped aboard the project. Irem, Taito, Namco, Human and Naxat Software all produced titles which went some way to wooing Japanese consumer support. With Hudson as a parent to the hardware, videogaming enthusiasts who might otherwise have been sceptical at

NEC's lack of console credibility were able to pledge loyalty to the system without fear. Indeed, Saturn fans looking for a slightly earlier system to investigate would do well to turn to the PC Engine, with around 80 per cent of the system's software catalogue made up of shoot 'em ups and RPGs.

The marketing for the system was carefully planned, positioning the machine as a centre for a much larger entertainment system, with hardware add-ons to follow. NEC's original plan was to have the PC Engine forming the heart of a setup incorporating keyboard, disk drive, printer and CD player, but when the PC Engine launched on October 30, 1987, market research showed that Japanese consumers were confused and wanted a simple out-of-the-box console. Within months NEC had shelved most of the

add-on plans, and concentrated on promoting the system as a standalone console. The change in direction was so successful that by the close of 1988 more Japanese consumers had purchased PC Engines than any other piece of hardware that year. Until the Super Famicom was released it continued to be the second best selling console in Japan.

And when NEC did release an add-on, in the shape of a CD-ROM drive in December '89, the PC Engine looked to be unstoppable. The CD-ROM unit hooked up to the original console transforming the machine into the world's first dedicated CD console. The increase in storage allowed the first streamed soundtracks to be added into games, as well as bringing the first true FMV sequences to be seen on a home console. The two machines were attached with a



The PC Engine version of *R-Type I* featured a new boss in stage six. Many 1980s conversions of Irem's game exist, but this is the best



Cosmetic changes were apparent between the first and second CoreGrafx. The two systems were released very close to each other

NEC PC Engine Shuttle

Marketed as a designer model of the console, the Shuttle had no ports for a CD attachment making it a HuCard-only system. As such this is a system for completist collectors only. The unit was not as widely available as the CoreGrafx or CoreGrafx II systems, and so is worth more for that reason. The Shuttle did not have a way to back up its games since it didn't hook up to any of the CD-ROM attachments NEC released, so a backup unit was released for data storage.

NEC PC Engine Duo/TTI Turbo Duo

With so many systems that required linking together NEC at last decided to bring out a series of combined systems, the first of which was simply monickered the Duo and was released on September 21, 1991. Essentially a PC Engine and CD-ROM2 system in one case with extra memory for the new Super CD format, the system also had the option of being portable with an optional Duo Battery Pack.

NEC and Hudson had combined to form a new company, TTI, to market the PC Engine in the US. The Duo was released under its marketing and came packaged with software worth over \$250 (£157) and other items, retailing for \$299 (£188). Because the Duo was one single unit, access time was cut down on most of the games.

The portable monitor from NEC was released only in Japan for the PC Engine. Because of the original high price (around ¥85,000 (£450)) and short availability window, this unit only made it into a small fraction of homes. It is now one of the many PC Engine related items that are very hard to find.



The addition of AV outputs on the CoreGrafx attracts some collectors to its charms. Only completists will bother owning both the CoreGrafx and the CoreGrafx II, however



For ¥14,800 (£74) you could purchase the Virtual Cushion and feel your way through the games. Retro has only come across one or two more ridiculous peripherals since

docking bay interface which locked them together, and it even came with a protective cover to make the console easily portable. Yet the system had a hard road to travel as far as the US was concerned.

NEC's plans to bring the PC Engine to the US began early. The NES was the number one system at the time, just like in Japan; games were no longer being made for Atari's 7800 and the Sega Master System had failed to win over the majority of US gamers. But the increasing gulf between NES games and what was being seen in arcades had created the perfect gap for a new system to step into. Indeed, with NEC's huge popularity in Japan, the climate looked perfect for PC Engine to enter – and, eventually, dominate – the US. But Sega had other ideas.

Shortly after NEC announced its intention to bring the PC Engine, renamed the TurboGrafx-16 (TG-16), to the US, Sega announced that its Mega Drive system would also be arriving in the west. Its system had been failing in Japan thanks to PC Engine's huge installed userbase, and it was determined to fashion a different result abroad. In its favour, NEC wasn't a household name in the US, and neither was Hudson, yet to make its name on the back of *Bomberman* (a game which, predictably, has one of its finest versions on the PC Engine). The battle for hearts and minds was on.

Sega's renamed Genesis was released six months after the TG-16, and the marketing budget for both machines was huge, ensuring a quick burst of sales. However, NEC's US wing soon began to make some grave mistakes.

The Genesis came bundled with *Altered Beast* which, while mediocre, was significantly superior to the TG-16's pack-in game, *Keith Courage in Alpha Zones*. And catty Sega soon highlighted the fact that the TG-16's 8bit CPU meant it wasn't a true 16bit system. Meaningless, maybe, but NEC failed to counter the criticism and its machine, originally so rooted in the thrill of the new, began to give off a scent of the old.

But that wasn't the end of the errors. Hudson kicked its console advertising off with a series of commercials that barely featured the system, causing many gamers to think the games on offer were for Nintendo systems. Some critics also cite the change of name from PC Engine to TurboGrafx as confusing for those who had been following the system's Japanese success, although anyone dedicated enough to



The Shuttle system's sleek design meant it was marketed as a designer system in Japan. The inexplicable lack of CD compatibility ports render it a HuCard-only system

NEC PC Engine SuperGrafx

Right at the height of PC Engine's success in 1990, NEC nearly spoiled everything by releasing this curious system specifically for show against Nintendo's Super Famicom. The console was more graphically advanced than the original, using a 68516 processor and offering twice as much video memory, but after just a short time on the market NEC stopped production. The machine can play PC Engine titles as well as the scant SG catalogue (only five native titles made it to release). In fact, with the right add-ons this is the only PC Engine that can play every PC Engine game and for this reason it is a collectable system both in Japan and the west.

NEC PC Engine Duo-R

Almost three years after the PC Engine Duo first found success, NEC released this less expensive white-coloured system on March 25, 1993. For once the changes were significant with the headphone jack on the side of the system being removed, as well as the battery pack option. The case was changed to a more streamlined design and feels more sturdy when compared to the original black plastic Duo.



NEC had one more stab at the console market after the demise of the PC Engine, with its PC-FX console tower. It died a quiet death



The special version of *Soldier Blade* only ran for three minutes as it was intended for competition play at computer shows in Japan

follow the progress of a machine in Japan would probably be aware of something as simple as a piece of rebranding. But those same people wouldn't have been happy at the redesign, cosmetic changes taking the internals from Japan's sleek, diminutive unit and bundling them in an ugly big block of plastic.

And if all that wasn't enough, the pricing of the systems appeared to be some way off competitiveness, too. The standard HuCard unit debuted at \$200 (£125), but the CD attachment, which arrived in 1990, went for \$400 (£250). At \$600 (£375), you could own a Neo-Geo home system for the same price. The PCE GT portable (NEC's answer to the Game Boy – see 'Engine upgrades') also made its way over in 1991 as the TurboExpress, but at a disastrous

\$300 (£188), it was never going to be anything more than a curio to most western gamers.

NEC was also exceptionally slow at bringing its Japanese titles over to the US, while Sega stormed ahead with slick precision. Despite its policy of releasing only the 'best of the best' Japanese games (such as the *Bonk* series and *Military Madness*), NEC made some exceptionally poor decisions in picking up certain titles and ignoring others. Nintendo's exclusive licensing policy hurt the company, too, as any titles that were already available on NES were barred from being released on any other game system. This infamous policy was quickly ruled illegal, but the ruling came after the most important formative stages of the TG-16's development, and affected it in a way that was very close to home.

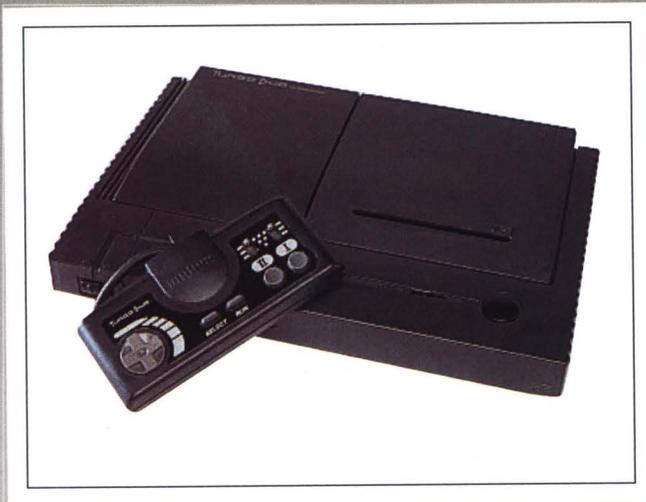
Prior to PC Engine, Hudson had been most famous for its hugely successfully Famicom titles and the fact that the company couldn't release its most popular games on its own system was devastating. Not only that, but the company couldn't afford to only release new titles on PC Engine/TG-16 by this point, as it needed the huge NES userbase to bring in the profits. Software for the CD add-on was in short supply, too: although there were hundreds of CD-ROM titles in Japan, it took a substantial amount of time and effort to translate them, and since time was the one thing the now-struggling system didn't have, many of the great PC Engine RPGs were passed over. So while western gamers saw the likes of *Ys* and *Lords of Thunder*, magical titles such as *Far East of Eden*, *Spriggan*, *Snatcher* and the pinnacle of



Very hard to find, the PC Engine Duo monitor sold for around ¥85,000 (£450) and was only available for a short time on Japanese shelves



The LT was marketed as 'portable' but it couldn't run off batteries. It could be added to the CD-ROM2 unit for a behemoth of a 'handheld'



As the first of the PC Engine superconsoles containing all the hardware of the HuCard and CD-ROM units in one machine, there is no need for system cards with the Duo



The SuperGrafx's release came as a complete shock in 1990. The six specific games for the system are *Aldynes*, *Battle Ace*, *Darius Plus*, *1941*, *Granzort* and *Ghouls 'n Ghosts*

Konami's pre-32-bit era, *Castlevania* title *Dracula X*, were sadly left behind.

While NEC's chances in the US looked to be over, the opposite was true in Japan where on September 21, 1991, the company released the PC Engine Duo. Essentially a PC Engine and CD-ROM2 system in one case, with extra memory for the new Super CD format, the release of the system was timed to perfection, capitalising on PC Engine's growing popularity and library of triple-A titles. NEC and Hudson decided that this new system would give them one last chance to break the US and Europe (where the system had been virtually ignored). NEC attempted to start afresh, and created a subsidiary, TTI (Turbo Technologies Inc) made up of staff from both NEC and HudsonSoft. TTI was charged

with the task of distributing the new Duo system, which had quickly become a smash hit in Japan.

With the increased memory capacity of the built-in System Card 3.0, which allowed the TG-16+CD to play the newer, Duo CD games, and a reduced the price point to \$200 (£125), TTI began an aggressive advertising campaign for the Duo. The comic-style ads featured 'Johnny Turbo', a freelance crime fighter who was determined to crush the evil forces of 'Feka'. The adverts were thinly veiled attacks on Sega which was about to launch the Sega CD add-on. NEC was arguing that the Duo was the only true all-in-one card/CD gaming system as the Sega CD required the Mega Drive to work. Johnny Turbo leapt to the rescue, eliminating the Feka baddies and spreading the word that the Turbo Duo

was the world's only complete CD gaming system. However, next to Sega's famous 'scream' ad campaign, TTI's marketing strategy looked petty and misguided, tarnishing this new company's image not because of a lack of quality software but rather through playground-style taunting.

And all of this cross-continent multi-company lineage means that building a vast knowledge of PC Engine games and collectables is far harder than with most systems. **Retro** spoke to **Hani Ghattas**, a 26-year-old barrister based in Los Angeles, and one of America's most knowledgeable collectors of the system. Originally a Mega Drive aficionado, the extreme competition between the systems in the early-'90s led to Ghattas investigating the PC Engine. Recently, he's begun to build up a vast collection, the sort only an

NEC PC Engine Duo-RX

The very last of the PC Engine systems based on the original 1987 technologies came shortly after the Duo-R on June 24, 1994. It had all the same features as the Duo-R, with the addition of a six-button controller (very similar to the later PC-FX control pad), and a few cosmetic changes to the case.

NEC PC Engine LT

Often referred to as the Rolls Royce of all handheld consoles, the LT is in fact the most desirable of all the PC Engine hardware iterations. Released on the same day as the Duo the LT is the largest cartridge/CD portable system ever made. The LT alone is a fully functional HuCard unit with a four-inch screen, built-in speakers and CD support. Recently, the systems were reduced in price for clearance in Japan, explaining the sudden influx of machines into the market over the last couple of years.



NEC's original print advertising campaign for its PC Engine played up the futuristic specs of the console. Albeit in a rather dodgy manner



The karaoke system fits perfectly under the interface. The set came with two speakers and a mixer but the microphone was separate



The Arcade Pro card was released very late into the system's life to give it a power boost in the light of the newer consoles being delivered by Sega and Nintendo



The Duo-R system was a stripped-down version of the Duo designed to cut production costs, and is therefore somewhat less desirable than the earlier iteration

attorney's salary could allow. **Retro** begins by asking how his obsession has developed.

"Videogame collecting is like an addiction," says Ghattas, "And just like any other addiction, it starts slowly. I began reading up on the PC Engine to know what system I wanted and which games to start with. As I began to expand my collection I scoured the globe for dealers who could feed the PC Engine monster I was becoming. I found the few hardcore TurboGrafx/PC Engine fan sites and joined the boards, sharing information on the system. As time went on I bought every PC Engine game I could get my hands on using my contacts in Japan, Hong Kong, England, and other places to secure games for resale. The advent of eBay has obviously helped feed the PC Engine craze."

Retro wonders what in Ghattas' view kept the system on the Japanese market for so long? "Quality. The PC Engine was a triumph of gameplay over graphics. During the early-'90s console graphics weren't really that advanced so by necessity gameplay sold the game. There also wasn't the big licence industry influence on gaming that there is today. To date, no ninja game has approached the sheer brilliance of *Kaze Kiri*, save perhaps *Revenge of Shinobi* on the Mega Drive. Brilliant shooters like *Nexrz*, *Sapphire*, *Cotton* and the *Star Soldier* series will satiate any shooter fan. Roleplaying brought us the classic *Ys* series, *Cosmic Fantasy* and the like. Platform games include the now legendary *Valis* series that took advantage of CD power, and *Shubibinman 3*. Last but not least are the action games – *Kaze Kiri Ninja Action*,

Iga Ninden Gaou and *Double Dragon II* kept me and legions of gamers enthralled for hours."

In the light of these gameplay successes **Retro** asks Ghattas to offer his opinion on why the system bombed in the west. "It was a combination of two factors: the marketing incompetence of NEC and the mindset of western gamers. The PC Engine simply never gained the market penetration of Sega and Nintendo consoles. To compete with mascots Mario for Nintendo and Sonic for Sega, NEC rolled out Bonk, a hero with a tumour for a head. The promise of quality games coming to America went largely unfulfilled as numerous grade-A titles never made it to western shores, perhaps the most egregious example being *Dracula X*, a triple-A title which wasn't localised due to some asinine



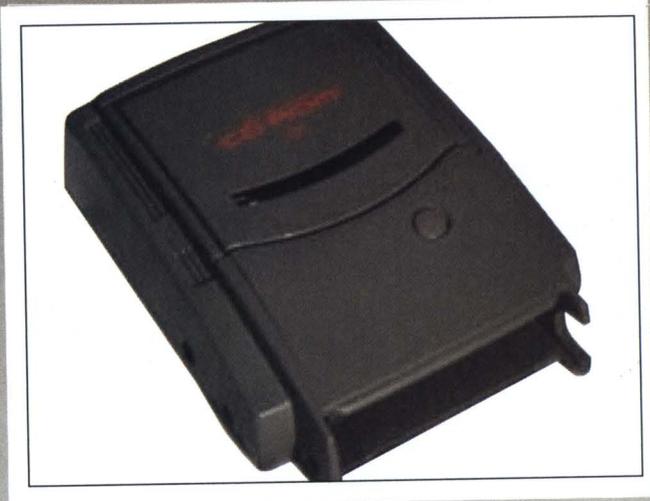
Often referred to as the forgotten *Street Fighter*, the PC Engine release competently holds its own against the more famous SNES and Mega Drive versions



A host of official and unofficial pads are available to the Japanese collector. This official *Street Fighter II* pad complements Capcom's game wonderfully



The final PC Engine Duo, the Duo-RX, comes complete with a six-button pad almost identical to that seen in NEC's Japan-only PC-FX console



The Super CD-ROM2 is the most versatile of the PC Engine's CD-based peripherals as, unlike its precursor, it works with all the linkable systems

dispute between TTI and Konami. Finally, and perhaps most importantly, was the lack of thirdparty support in the US, which killed the viability of the system in the eyes of western gamers. While US gamers were playing *Mortal Kombat*, EA Sports titles refreshed yearly, and *Street Fighter II*, Duo owners got to party down with *World Class Tennis* and *Riot Zone*. The US PC Engine saw a release of a total of 138 games over its lifespan, many times less than the Genesis or the Super Nintendo."

So which are the rarest titles in Ghattas' experience? "*Darius Alpha* is by far the rarest 'commercial' release for the PC Engine. Only 800 copies of this game were put in the hands of Japanese consumers who purchased the Turbo Duo game *Super Darius* and the hybrid SuperGrafx/PC

Engine HuCard *Darius Plus* and sent in the UPCs from both games. An additional number of copies, numbering not more than 200, were given away as promotional items in Japan. Unfortunately, the west didn't see much in the way of collectable items outside of limited print games like *Magical Chase* and *Bonk III* on CD [which is currently selling for up to £400]. On the hardware side the most collectable items are the PAL PC Engine, the PC Engine *R-Type* bundle console, and the Kisado converter (which allows you to play Japanese HuCards on a US system). The most famous prototype is the rumoured 2-3 stage *Strider* on the SuperGrafx."

The appeal of PC Engine collecting is partly based on the underdog mentality surrounding the system in the west, but

it's also somewhat rooted in the excitement of archaeology. To date, outside of cover scans or names a large portion of the PC Engine library remains undiscovered. It is the challenge of finding these hidden gems that makes PC Engine collecting so enjoyable. Adding to the challenge is that even the better-known games are quite difficult and often near impossible to find in mint and complete condition. It's an elite class within a class. You want *Psychic Assassin Taromaru* on the Saturn? You could get it within the week if you can pay the price. But games like *Rayxanber III*, *Nexzr* or *Iga Ninden Gao* are among the most hardest to obtain on any format. You can start hyperventilating again now, but save your biggest gasps for when you start collecting and see your next credit card bill.



Continued >

The collectables

Here **Retro** has listed the best playable collectables. There are many other rare but unplayable titles that fetch high prices from those involved in the hardcore area of the collecting scene.

Pricing is based upon mint and complete copies with spine card, registration card and any applicable inserts. The guide has been produced with the help of Hani Ghattas and Chris Foulger.

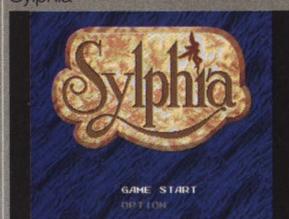
Darius Alpha



Value: £500–600+
Release: 1990
Developer/Publisher: Taito

The rarest non-prototype release (see main text). A *Darius* take on the boss-battle-after-boss-battle mentality of *Alien Soldier*. The pride of any collector's library.

Sylphiea



Value: £175
Release: 22/10/93
Developer/Publisher: Tonkin House

A brilliant shooter that takes the standard Compile formula seen in *Aleste* and *Spriggan* while adding a refreshing mythological theme and tight gameplay. Exceedingly rare.

Dracula X (Akumajo Dracula X: Chi No Rondo)



Value: £80–100
Release: 29/10/93
Developer/Publisher: Konami

Astounding graphics and classic gameplay make this an experience that any *Castlevania* fan cannot miss. Not rare but demand in Japan and abroad keeps the price high.

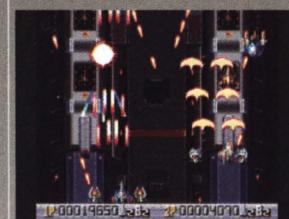
Kaze Kiri: Ninja Action



Value: £100
Release: 28/04/94
Developer/Publisher: Naxat

Ninja action at its best and a serious threat to *Revenge of Shinobi*. Tight control and a plethora of moves is iced by a series of fantastic bosses.

Ginga Fukei Densetsu Sapphire



Value: £300–350
Release: 24/11/95
Developer/Publisher: Hudson

A technical marvel, it wasn't released commercially but handed out at a game show. The release was later canned due to the demise of the PC Engine. Beware counterfeits.

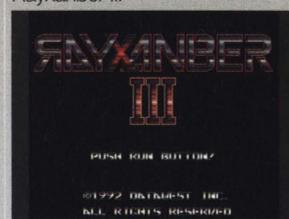
Steam Heart's: the Crying Game



Value: £100–110
Release: 22/03/96
Developer/Publisher: TGL

Much maligned, this hentai title was heavily edited (the PC version reveals the pilot to have an appendage normally foreign to the female body).

Rayxanber III



Value: £100–120
Release: 26/06/92
Developer/Publisher: Data West

Nothing like its disappointing prequel, *Rayxanber III* is rare and features great control, lush graphics, and is great fun for any shooter fan.

Nexzr



Value: £40–60
Release: 11/12/92
Developer/Publisher: Naxat

Existing both as a regular version and a *Summer Carnival '93* release (adding in Time and Boss Attack modes), this is extremely challenging.

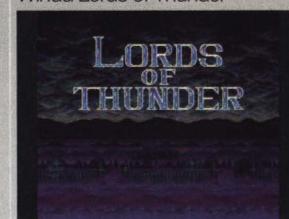
1941



Value: £100–120
Release: 23/08/91
Developer/Publisher: Hudson

The definitive home conversion of the classic shooter. Also one of the hardest PC Engine games to get in mint condition.

Winds/Lords of Thunder



Value: £25–40
Release: 23/04/93
Developer/Publisher: Hudson

Superior in almost every way to its predecessor, *Gate of Thunder*, *Lords of Thunder* is a pleasure to play and boasts an excellent rock soundtrack.

Ys I & II



Value: £14-25
Release: 21/12/89
Developer/Publisher: Hudson

The best of the reasonably priced rarities. One of the classic roleplaying games, albeit derivative, with innovative action and a stunning CD soundtrack.

Shubibinman 2



Value: £35-50
Release: 27/04/91
Developer/Publisher: NCS

Old-fashioned platforming action at its finest. Along with *Valis IV*, it doesn't often get much better than this on the PCE.

Star Parodia



Value: £45-55
Release: 24/04/92
Developer/Publisher: Hudson

Ostensibly a humour-filled vertical-scrolling shooter, the game features player craft from *Bomberman*, *Star Soldier* and even a PC Engine.

Ninja Gaiden



Value: £40-70
Release: 24/01/92
Developer/Publisher: Hudson

A conversion of the NES, and not the arcade, game. The same tight control found in the NES version, but with superior graphics and a ramped-up difficulty level.

Soldier Blade



Value: £40-55
Release: 10/07/92
Developer/Publisher: Hudson

This finale of the *Star Soldier* series, programmed by noted dev house Red, unbelievably runs on a HuCard. This game takes the series out on a victorious high note.

Macross 2036



Value: £35-50
Release: 03/04/92
Developer/Publisher: NCS

While many collectors dislike some of the *Macross* titles, this is a clear exception. An essential part of any self-respecting gamer's collection.

Ghouls 'n Ghosts (Daimakimura)



Value: £25-40
Release: 27/07/90
Developer/Publisher: NEC

The SuperGrafx premiere home conversion of this classic platformer is even better than the outstanding Mega Drive revision.

Splatterhouse



Value: £35-50
Release: 03/04/90
Developer/Publisher: Namco

The best conversion (outside of the rare Marty version) of this legendary game. The Japanese version features all the gore of the arcade game.

Spriggan



Value: £50-70
Release: 12/07/91
Developer/Publisher: Compile

Compile magic at its finest. Takes the basic *Aleste* formula and adds some interesting and enjoyable weapon ideas.

Magical Chase



Value: £70-110
Release: 15/11/91
Developer/Publisher: Palssoft/Quest

Help Ripple the witch apprentice recapture demons she accidentally released into the world, or she'll be turned into a frog by her teacher.



Out with the old, in with the Neo

A mythical, untouchable creature for most in the 16bit era, SNK's Neo-Geo Advanced Entertainment System was largely forgotten in the 3D revolution. But the most powerful dedicated 2D platform has lived on through three console wars and has now become the most collectable format ever. Welcome to 2D Eden, the colourful Neo-world order...

If the birth of eloquence does indeed mark the death of passion then **Retro** must write with care. For when approaching the Neo-Geo Advanced Entertainment System (AES), a format so fit to burst with contagious developer and consumer passion, it is all too easy to solloquise

"Prohibitively expensive, shockingly powerful and still as sleek as it was 12 years ago, the Neo-Geo plays host to some of the finest 2D games"

dismissively about fanboys. Especially since the console has been so criminally ignored by western critics throughout its existence. It seems that the love, care and esteem that the 2D coding craftsmen held for this machine has been only matched by the passion kindled, occasionally blind but

frequently justified, in the hearts of numerous generations of videogame connoisseurs.

The Neo-Geo home system was, is and looks to always be the most exclusive club off the high street of gaming. Prohibitively expensive, shockingly powerful and still as

designer sleek as the day it rolled off the production line some 12 years ago, the Neo-Geo plays host to some of the finest slices of 2D design money will ever buy. And money is what you will need – followed by almost as much dedication for seeking out that elusive needle in a global haystack.

There have only been around 130 games released for the system since its inception but with prices constantly rising it is going to take some treasure hunting to finish the collection. And you have some rich and determined competition. For, like all exclusive clubs, members guard its exclusivity and its existence with their wallets.

Unbelievably, this story is far from over. When the arcade giant Playmore purchased SNK's intellectual property, hopes that the brand would emerge from financial ruin were kindled. In fact, much of the SNK staff remained intact.

Dedicated independent developers have sprung up all over the east and new titles continue to be produced. Sure, it's only a small amount of games in the grand scheme of things, when when they include sequels to the legendary



One of the system's most enjoyable series is also its most collectable, with certain instalments, in particular guises, commanding thousands of dollars at auction

Metal Slug and *King of Fighters* series, those who know sit up and pay attention. The system has evaded all the pitfalls and cycles of the mainstream by constantly swimming fervently in the opposite direction. And while the world regards 2D as something as primitive as cave painting compared to 3D's rendered curves, more and more players are realising that there is a place in this world for such a stylistic medium. Especially when it can play so well. The Neo-Geo home cart system has now become the longest-running videogame system ever (including Game Boy) and one of the strangest enigmas our history will ever see. In the last three years the number of Neo-Geo buyers has risen dramatically and it is currently attracting discerning players and financially solvent collectors the world over.

The king of fighters

In the current industry climate of identikit home machines it's difficult to comprehend quite what a bombshell the Neo-Geo was – a machine so powerful it brought the Japanese arcade home, pixel for frame, a full decade before Dreamcast was a

"Fatal Fury was released in the same year as Street Fighter II and even then boasted innovative features such as front and rear planes and a coop mode"

twinkle in Naomi's eye. In 1989, SNK entered the home system market with the Neo-Geo, originally intending the machine to be a Japanese home rental system boasting the exact workings of its successful arcade MVS system (see 'SNK and its history'). The home cart system soon took root



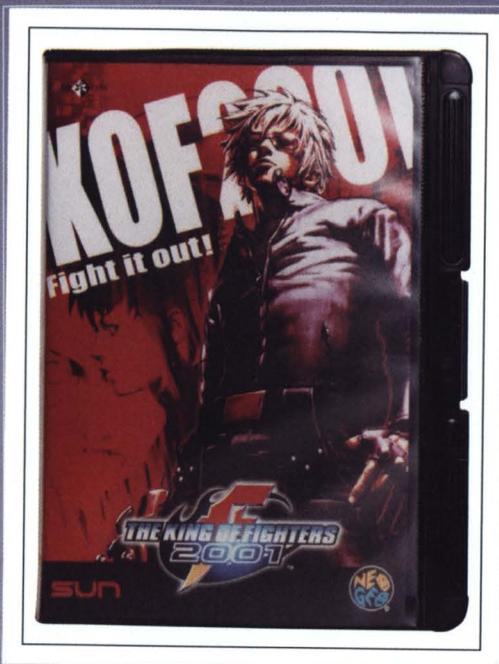
SNK's fighting games were often simultaneously released alongside in-depth guide books detailing moves for the home and the arcade. *Fatal Fury* is a common example



One of the beauties of the *Slug* series is, simply, its beauty: this is bitmapped art at its most elaborate. Crucially, the game elements are animated with great attention to detail

in its homeland mainly due to word of mouth emanating from the arcade scene. To the typical Japanese arcade fanatic the thought of owning the actual coding on a format that would fit into a space-starved Tokyo bedsit was too good to be true. Especially when the software was so very refined.

SNK's brand was to soon become synonymous with the fighting genre. This was mainly thanks to Takashi Nishiyama, who had previously worked on the original *Street Fighter* at Capcom. He was poached by SNK and helped launch its own rival to Capcom's best: SNK's *Fatal Fury*. *Fatal Fury* was



SNK games, especially fighters, were released into 2000 and beyond



The original Neo-Geo console was built with arcade sensibilities in mind, its legendary controllers almost as large as the machine itself



Official (Neo-Geo World) and unofficial (such as Neo-Geo Land, pictured above) SNK-themed entertainment centres sprang up over Japan. Many still operate today



With the CD-based Neo-Geo SNK recognised that, although joysticks gave arcade authenticity, joypads were becoming firmly ensconced in gamers' playing habits

released in the same year as *Street Fighter II* and even then boasted innovative features such as front and rear planes and a two-player cooperative mode. Nishiyama-san went on to launch and refine such legendary and diverse series as *Samurai Shodown*, *King of Fighters* and *Metal Slug*.

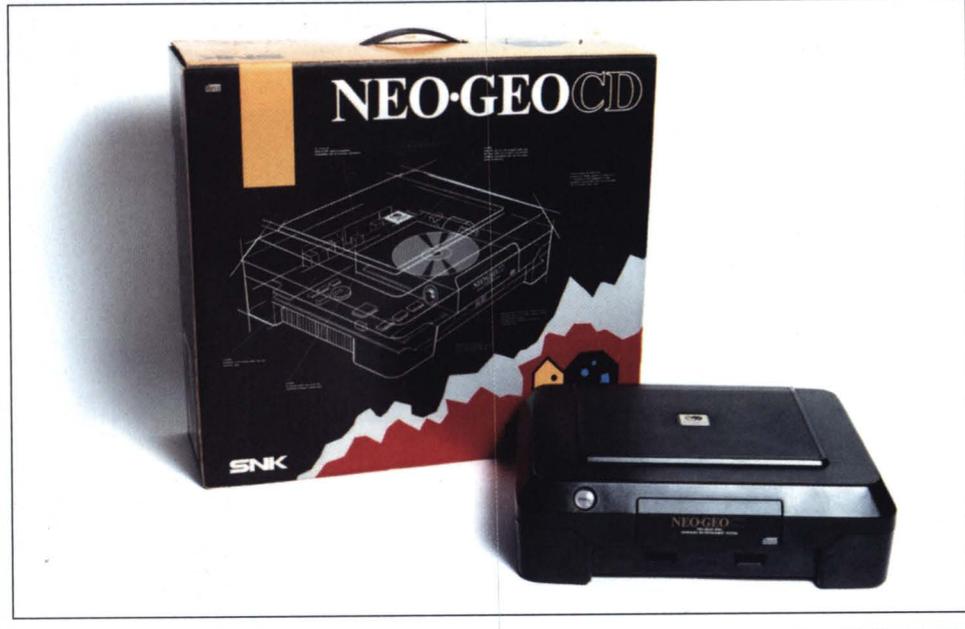
While Capcom played within fairly set boundaries with its fighting games, SNK pushed the genre in all kinds of directions. *Kizuna Encounter* explored the tag team angle, *Art of Fighting* the technical *Virtua Fighter* style, *Last Blade* the fast, sword-based fighter. All the time the *King of Fighters* and *Fatal Fury* series ran alongside each other providing gamers with the tweaked updates they required. However, unlike the orthodox two-minute fix of the traditional arcade game these games took the spectator element of the Capcom games

and implemented a new depth of gameplay, allowing mastery unseen before. This fed the home market with players seeking to master characters in privacy and then display their skills in public. A new breed of professional Japanese arcade player was born. It is testimony to the depth of these games that high-profile national tournaments are still held across the globe today.

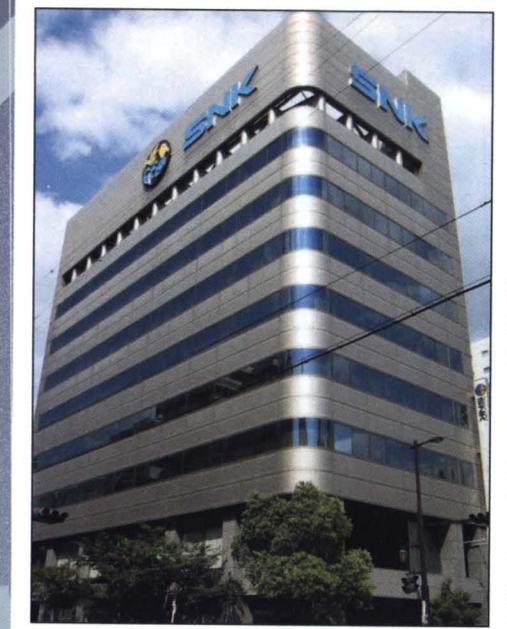
The American dream

Initial expectations were so high worldwide as a result of good import reviews that SNK's system secured a release in both the American and European territories. However, despite sales pushes of the Neo-Geo utilising 'Penthouse' magazine ads, game leaflets, and large information packets, the

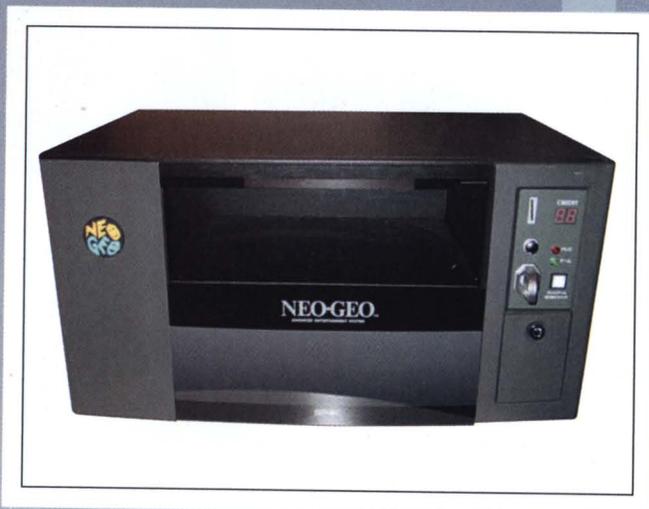
overseas sales the company dreamt of never materialised. Gamers at school in the early '90s will recall huddled rumours of an ubermachine more powerful than Sega and Nintendo's best and more expensive than their education. Indeed, cost was the taproot of the Neo's problems and almost sealed its fate before it hit the shelves. No parent in their right mind was likely to shell out the \$600 asking price for this machine followed by a \$250 game when for the same price they could secure a SNES and its mascot and still have enough change left over for a used car. Indeed, some videogame magazine publishers at the time could scarcely afford the machine, let alone the software for review. So the Neo-Geo sank into relative obscurity – a legend gamers would always dream of rather than play with.



Two CD-based variations of the AES were released for the gamer on a budget. Their lengthy loading times were hard to stomach, though



SNK's huge offices in Osaka still stand proud and tall. New incumbent Playmore has left the gigantic logo untouched



Variants of the AES system such as this MVS/AES hybrid – used in Japanese hotels – fetch extraordinary prices when they surface. This is genuine collector's territory



Famously, Neo-Geo carts wear their sizes boldly on their sleeves. Where once games bore '26 MEGS' tags, a newer title such as *Mark of the Wolves* weighs in at a hefty 688

With the advent of 3D and Suzuki-san's *Virtua Fighter* series the world's eyes turned to polygonal pastures and SNK was left perfecting 2D genres, with only a niche home audience and arcade lovers to applaud. But those who did keep their eyes on the Neo's slowly growing canon of material would be treated to some of the most inspired 2D programming ever seen. More and more players have woken up to this fact, which has resulted in the most active collecting niche in the videogame world.

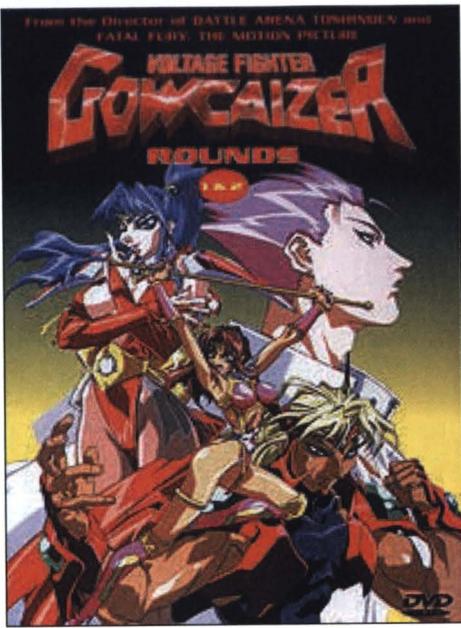
One ring to rule them all

Shawn McCleskey, 26, lives and works from offices in Memphis where he is responsible for the distribution of new English home carts through his internationally acclaimed Web

site, Neo-Geo.com. *King of Fighters 2002*, released in December 2002, was the sixth release from a thriving and growing community which has fast become Mecca for all Neo-Geo collectors. The Neo Store attracts collectors the world over and there is a trading forum that operates like a frenzied auction house for SNK's wunderkind.

McCleskey began collecting at the age of 16 in 1993 and has seen the scene explode: "From the time I began collecting right up until 1999 a high-end title such as *Metal Slug 1* (either version) could be had for \$500. In recent times the Neo Store has sold two copies of *Metal Slug*: one for \$2,450 (English) and another for \$2,250 (Japanese). Simone D'Amico, our price guide analyst, estimates a mint copy will soon approach the \$3,000 mark." This

extraordinary rise in value is almost unprecedented in any area of product sales let alone the secondhand game market. McCleskey explains some of the factors that have led to this situation: "Many Neo-Geo home carts have experienced a sharp, steady gain in prices over the past two years. This mainly applies to the rare home carts, and even more so for the rare English home carts. There are many factors involved here. Before the Internet, Neo-Geo home carts could only be found through ads in gaming magazines, or from used videogame stores. Now the world is much smaller, so to speak – brought closer together thanks to the Internet. Consumer awareness is higher than ever, and Neo-Geo games that were never heard of in the western world are now available on the secondary market. At the most basic



Cult Neo-Geo titles have spawned numerous Japanese animation specials – some of which will no doubt be more familiar than others



These are the two rarest Neo-Geo carts in existence today. You can expect to pay in the region of \$2,500 for a European version of *Ultimate 11* (also known as *Super Sidekicks 4*)



Many Neo-Geo favourites made the transition to Sega's Dreamcast hardware. Needless to say, the value of these disc-based titles does not rival that of Neo-Geo cart originals

level what we have here is a product with limited supply combined with a healthy demand. Unlike other home systems, these games start anywhere from \$250 to the current \$325 when purchased new at release. Some games can escalate as high as triple during the first year of release,

“The Neo Store has sold an English copy of *Metal Slug* for \$2,450. Our price guide analyst estimates a mint copy will soon approach \$3,000”

such as *Mark of the Wolves*, which went as high as \$800 only several months after its release.”

Irreplaceable silicon

In addition to the issues of increased general collector interest

in the system, McClesky highlights the fact that a lot of these games are virtually irreplaceable. Normally, collectors do not want to part with home carts from their personal collection unless they are trading for another game. Even a significant profit may not be sufficient enough to

persuade a hardcore collector from selling out. He realises just how hard it can be to replace top items. This means that very few of the rare titles ever become available. The site has its own famous price guide which most of the global collecting community now use as a basis for their prices;

“Some even say that Neo-Geo.com is to blame for the spike in prices,” suggests McClesky. “The public price guides we maintain promote buyer and seller awareness. The forums bring traffic and interest. The collection gallery promotes collecting. For those who enjoy collecting, strong prices can be interpreted as a direct reflection of the strong interest that exists, and a growing interest at that. Keep in mind that the Internet is still growing, and with this growth we experience a constant influx of new collectors and gamers.”

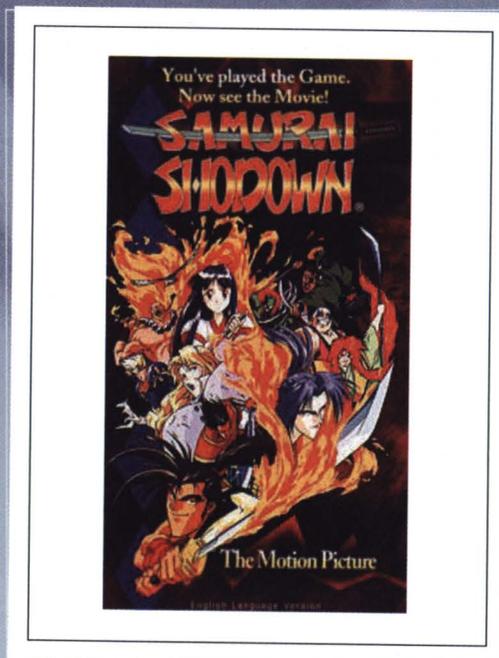
Some fear that the bottom is set to fall out of the market and that games will lose their value as quickly as they gained. McClesky is adamant: “If a Pez dispenser can reach \$90,000 on eBay and still not have met the reserve, I would expect the Neo-Geo market to easily maintain its current price level. The



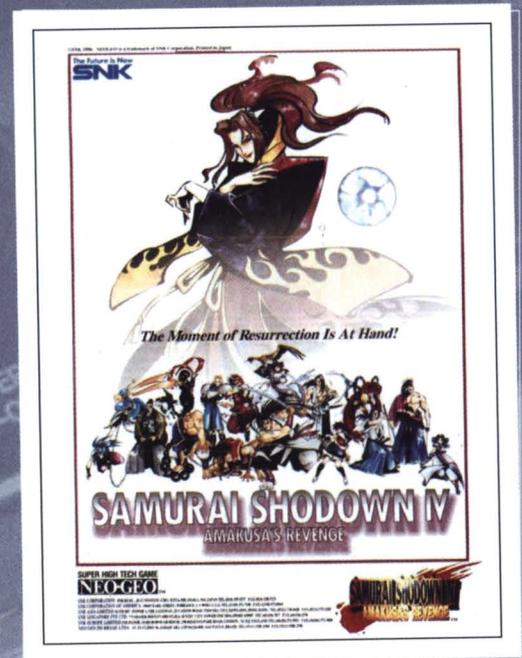
TSS and Chibi Quiz are both popular with collectors. However, actually playing these games, rather than simply acquiring them for raw value, is another matter entirely...



Although all games were compatible with all systems (region lockouts simply did not exist), some, such as *Samurai Shodown*, were censored for blood and partial nudity



Though not as polished as, say, the 'Street Fighter' OAV, the likes of 'Samurai Shodown' make interesting viewing for the true fan



Few games on mainstream hardware make it to a fourth iteration, but players' appetite for the *Shodown* series has seen it do just that

new releases only attract more gamers and gamers entering the Neo scene soon become collectors." eBay examples such as the Pez dispenser give some perspective to what the deserters call an overpriced market.

The Holy Grail

If every collecting niche has its untouchable artifacts, what is the Neo follower's Holy Grail? McClesky, unsurprisingly, holds the cup: "My most prized home cartridge, the European release of *Kizuna Encounter*, was obtained shortly after I began collecting. Of all things, I traded a *Super Dodgeball* conversion (currently worth \$350) as an even trade for the seemingly irreplaceable Euro *Kizuna*. There are only two copies in confirmed existence. I own one copy,

which I purchased from a French collector. To find other copies in the world I have offered \$200 just for a picture of the game. Only one other copy surfaced (the owner confirmed manual text, etc), but this collector wishes to remain anonymous. During 1996 the European offices used to

"I'm willing to pay \$3,000+ for an authentic *Kizuna Encounter*. If I had to estimate, I would say it would have a \$5,000 ending price at auction"

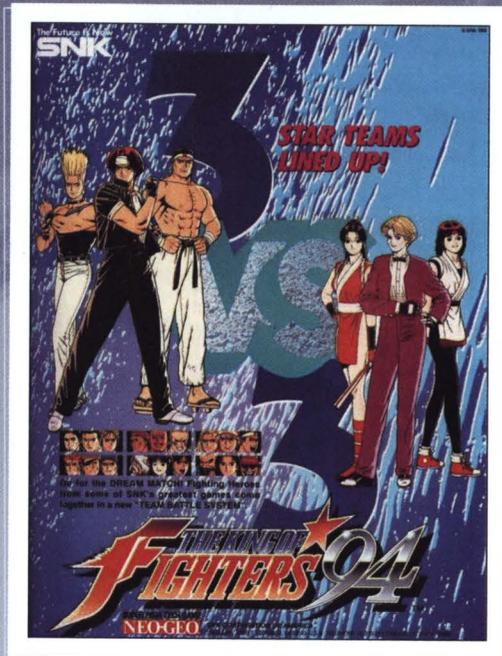
release anything up to 1,000 carts of any particular game. What happened to the other carts is unknown. We have many reports of sightings in various shops through the years but no one has come forward to collect the \$200 reward for simply owning a genuine copy. It's extremely

difficult to price European *Kizuna* because it never seems to leave a collector's possession. Put it this way: I'm willing to pay \$3,000+ for an authentic *Kizuna*. If I had to estimate, I would say it would have around a \$5,000 ending price. The highest auction to date for a single AES home cart was

\$2,800 for a mint English *Metal Slug*. In 1999, the Neo-Geo collecting community was still learning about the various versions of home carts that existed around the world. Games like European *Double Dragon* and *Ultimate 11* were just beginning to surface as fresh overseas contacts entered



Even though the Neo-Geo CD variants are always inferior, they can still fetch high prices. *Last Blade 2* will set you back up to £60, for example



The *King of Fighters* series remains a firm fan favourite. Its creators are ex-Capcomites, and that influence shines through strongly

the scene. Years have passed, and pretty much all of the known home cartridge variants have been accounted for and can be seen in John Thacker's Master List, which is hosted on Neo-Geo.com."

Collectors are renowned for completing the set and moving on. **Retro** wonders: where next for the scene? "The age of Neo-Geo.com membership ranges from 15 to 40s, the average age being mid-20s. We are not children and I do not anticipate that we will outgrow our common interests anytime soon," says McClesky. "I often hear of people living on ramen noodle diets to conserve money for purchases then selling off their collections for a quick buck but they seemingly always regret and buy back again at the new higher price." The AES endures because the MVS still has life. The MVS is

NEO•GEO
HERE ARE THE FACTS!

SYSTEM	NEO•GEO	GENESIS	Super NES	Messahive CD-ROM	32-bit
Processor	68000+z80a	68000	65816 Custom	MC68000	Possible
Speed	12.5 mhz	7.6 mhz	3.58 mhz	12.5 mhz	32-bit
Sound Channels	15	10	8	18 (10 + 8)	Computer
Colors Displayed	4096	64	256	64	Systems
Available Maximum Sprites	65,536	512	32,768	512	
Sprite Size	380	80	128	80	
Retail Price	\$649	\$149	\$199	\$145-\$500-\$549	\$5 per k

At a time when sprite, colour and sound-channel counts were fair measures of a console's power, SNK proudly trumpeted its figures

still popular on a global scale and is booming in South America and the non-Japanese eastern countries. With this in mind, the MVS market still has a bright short-term future, which will generate more interest in the AES market.

King of Fighters '02 was released last year as a coin-op, and *SNK vs Capcom* (an arcade update of the great NGPC interpretation) was perhaps the most anticipated game in the history of the Neo-Geo. It was released in 2003 and breathed an amount of new life into the format.

In issue 80, **Edge** offered this simple test as to whether you are a hardcore gamer: have you ever owned a piece of hardware with an SNK logo on it? So, is it the ultimate gamer's status symbol? Perhaps. Eden for original 2D perfection? Without question.

SNK and its history

Shin Nihon Kikaku, or 'New Japan Project', began operations on July 22 1978, releasing its first *Breakout*-style game *Maikon Kit* and then moving into other genres with titles such as *Vanguard* (1981), an acclaimed scrolling shooter. Diverse titles such as *Lasso* (1982), *Mad Crasher* (1984), *Gladiator 1984* (1984), *Arian Mission* (1985), *Athena* (1986) and *Psycho Soldier* (1986) all helped build SNK's popularity in the arcades. In 1986 the company formally changed its name to SNK Corporation and signed a thirdparty licence deal allowing it to develop games for various machines, resulting in classics such as *Baseball Stars*, *Ikari Warriors* (Famicom) and *Funny Field* (Game Boy). But although working as a licensee for Nintendo was lucrative at first, SNK's management felt that it was about to slip into thirdparty obscurity.

In 1989 SNK made its first break from the mainstream and decided to return to its arcade roots and invigorate an industry diversely affected by the success of the home console market. The idea was revolutionary: to manufacture the interchangeable game carts seen in the home market for an arcade system. Prior to this invention arcade operators either had to physically implement a fragile new PCB into a cabinet or simply settle for a dedicated cabinet for just one game. SNK's modular setup was christened the Multi Videogame System (MVS).

Then, in an unprecedented move, SNK released the exact inner workings of its MVS cabinet in a home console format. Originally released as a rental-only system, after just two months SNK pulled the system from the rental market realising that gamers were desperate to buy the hardware. Although identical in content, the cartridges for the home (AES) and arcade (MVS) systems were physically different, originally in an effort to prevent arcade operators using the then-cheaper home versions at their arcades. However, SNK often interchanged two versions to reflect market demands, taking the innards from one version and placing it in its counterpart plastic.

After the release of the AES and MVS systems, SNK proceeded to build a fan empire, releasing all the game paraphernalia a Japanese enthusiast would expect and more, ranging from bath towels to movies. Even dedicated Neo-Geo arcades were created. SNK was full of ideas way ahead of its time. From the memory card interchangeability on the MVS and AES machines to *Minnasanno Okagesamadesu*, one of the mah jong cartridge games for Neo developed (in prototype form) with a built-in modem, for the 'Neo-Geo Online Network'. However, SNK's business ideals always seemed slightly unprofessional at many levels, especially with regard to foreign territories.

The relationship between SNK of Japan and SNK of America was never strong. **Chad Okada**, the customer service manager who left SNK for Sony pastures in late 1994, went on record saying: "SNK Japan did not share information with SNK of the US. We would often have to go out and purchase European imported products to find out what in the pipeline." **Tony Gonzalez** of the tech department in Torrance highlights the breakdown within SNK America between staff and management: "Marty Kitazawa was up on the second floor, president of the operation. We never talked to him much."

In SNK's final years, following the Japanese tradition of entrusting families to run businesses, the Barone clan were enlisted to manage the US headquarters in San Jose. SNK Japan hired the Barone family to control SNK US. This proved another disaster. Under their misguided leadership, the Barone family ignored the niche US home cart market, completely botched the launch of the Neo-Geo Pocket Color, and did nothing to further arcade sales of the MVS or SNK Photo Systems (which were both awarded to Apple Photo Systems after SNK USA's demise).

SNK's history is as colourful and interesting as a game historian could hope for. Messed-up hardware launches, failed CD add-ons (1992), extreme niche systems (Neo-Geo CDZ/Hyper 64/Crystal System), shady buyouts in Osaka, recurring bankruptcy and eventual blossoming... and so it goes on. This is a tale yet to be fully told.

The collectables

All prices listed here are in US dollars. This is a global market and you are most likely to get the best deal buying directly from an American or Japanese source. Go into a British high street

retro/collectors shop and expect to pay a higher premium. Bear in mind most players collect Japanese titles, which are easier to find. Only the most dedicated will attempt to collect

the US/Euro release set. Although the games listed here demand very high prices you can obtain many Neo-Geo games for less than a new PS2 title.

The most desirable titles

These are 15 of the most collectable Neo-Geo games.

Metal Slug



US Release: \$2,000-2,850+
Japanese release: \$1,300-1,800+
Genre: action shoot 'em up
Original release: 24/05/96
Developer: Nazca

The original *Metal Slug* was an unexpected hit, hence its low production numbers and subsequent huge value.

Quiz Chibi Maruko-Chan



Japanese release only: \$1,000-1,800+
US Release: N/A
Genre: party game
Original release: 26/01/96
Developer: Takara

An extremely rare, if unplayable, title that forms the focal point of any Japanese collection.

Twinkle Star Sprites



Japanese release only: \$600-700
Genre: shooting puzzle
Original release: 31/01/97
Developer: ADK

Twinkle Star Sprites was ADK's last game on the Neo. At manufacture ADK ran out of instruction books, so the remainder were supplied with simple photocopies.

Ninja Masters



US release: \$900-1,100
Japanese release: \$550-650
Genre: 2D fighting
Original release: 28/06/96
Developer: ADK

An extremely sought-after title. Originally released in the wake of *Last Blade*, it attracted little attention due to its similar sword-based ancient Japanese themes.

Blazing Star



Japanese release only: \$650-800
US release: N/A
Genre: scrolling shoot 'em up
Original release: 26/02/98
Developer: Yumekobo

A Japanese-only title that is considered by many to be the best Neo-specific shooter.

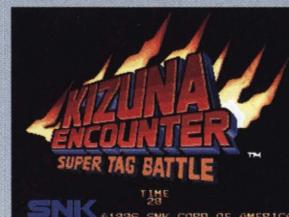
Pulstar



Japanese release only: \$550-\$580
Genre: scrolling shoot 'em up
Original release: 29/09/95
Developer: Aicom

An *R-Type*-like that has come down in value in recent times.

Kizuna Encounter



Euro release: \$11,000 (estimate)
Japanese release: \$550-650
Genre: 2D tag fighting
Original release: 08/11/96
Developer: SNK

See main article for details.

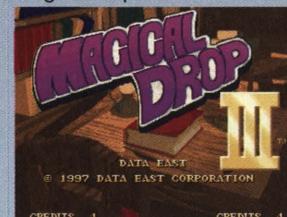
Waku Waku 7



Japanese release only: \$390-420
Genre: 2D fighter
Original release: 27/12/96
Developer: Sunsoft

The sequel to Sunsoft's *Galaxy Fight* has wonderful music, animation and style. A very sought-after title.

Magical Drop 3



Japanese release only: \$420-500
Genre: puzzle
Original Release: 25/04/97
Developer: Data East

This excellent *Tetris/Puzzle Bobble* hybrid released in small Japanese quantities is very desirable.

Metal Slug 2



US Value: \$550-700
Japanese release: \$300-350
Genre: action shoot 'em up
Original release: 02/04/98
Developer: SNK

Despite the superior slowdown-free update that is *Metal Slug X*, the original still fetches very high prices for US collectors.

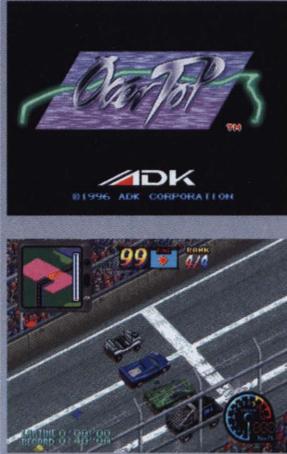
Ultimate 11/Super Sidekicks 4



Euro release: \$3,500–4,000
Japanese release: \$475–550
Genre: football
Original Release: 20/12/96
Developer: SNK

Almost as rare as *Kizuna Encounter*, only a handful of this European release survive.

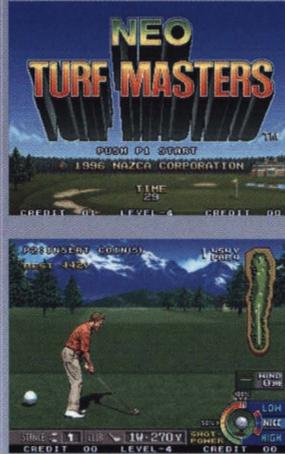
Over Top



Japanese release only: \$400–520
Genre: racing
Original Release: 07/06/96
Developer: ADK

An ADK update of its disappointing 1991 top-down racer, *Thrash Rally*. A huge graphical improvement, the game kept the playability of its predecessor – warts and all.

Neo Turf Masters



US release: \$750–900
Japanese release: \$650–800
Genre: golf
Original Release: 01/03/96
Developer: Nasca

Released by Nazca very close to *Metal Slug*, this title was largely overlooked until word spread concerning how great it is.

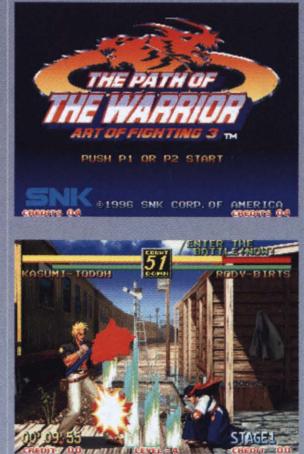
Double Dragon



European release: \$500–650
Japanese release: \$130–170
Genre: 2D fighter
Original release: 31/03/95
Developer: Technos

The recent confirmation of the Euro version's existence only combined with the recent release of Evoga's *Rage of the Dragons* to keep this cart's value in the stratosphere.

Art of Fighting 3



US release: \$360–450
Japanese release: \$200–240
Genre: tactical 2D fighter
Original Release: 26/04/96
Developer: SNK

Despite a recent tailing off in value, this remains a collectable game. The huge characters, distinct backdrops and realistic fighting mechanics are not to everyone's tastes, though.

Five of the best-value games

Here are five of the best and most reasonably priced titles any Neo-Geo buyer simply must obtain. As per usual, you'll pay far less for the Japanese version (prices below are all in pounds).

The Last Blade 2



Japanese version: £170–250
Genre: sword-based fighter
Original release: 28/01/99
Developer: SNK

Despite comparisons of the DC port of this game to Sammy's *Guilty Gear X*, the original remains enthralling on the Neo, with deep gameplay.

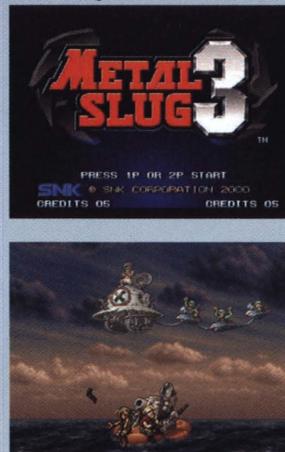
Garou: Mark of the Wolves



Japanese version: £250–300
Genre: 2D fighter
Original Release: 25/02/00
Developer: SNK

The final instalment of the *Fatal Fury* series is undeniably the best. Debate continues to rage as to whether it is the best Neo fighter of all.

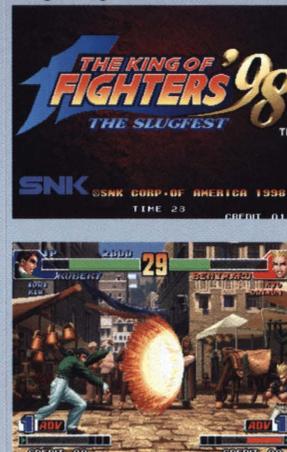
Metal Slug 3



Japanese version: £150–220
Genre: Action shoot 'em up
Original release: 01/06/00
Developer: SNK

The biggest, most visually impressive – and cheapest – of the *Metal Slugs*. Shortly to be ported to PS2.

King of Fighters '98



Japanese version: £80–120
Genre: 2D fighter
Original release: 23/09/98
Developer: SNK

The fan's classic. Probably the largest percentage of players rate this as the best of the series so far.

Samurai Shodown II



Japanese version: £25–40
Genre: sword-based fighter
Original release: 02/12/94
Developer: SNK

To many, this game was the first real display of SNK's talent. It is testament to this fact that the game is still highly enjoyable today.



Closer to the Heart

Blighted by a legacy of disastrous hardware, many gave up on Sega years ago. Once, however, it ruled the roost.

Retro delves into the history of the Mega Drive, examines the facts and finds itself in a time when the gaming seesaw tipped heavily in favour of golden software, pirate TV and an unforgettable blue mascot...

Prejudice is defined as 'an irrational attitude of hostility directed against an individual or group'. There will undoubtedly be those to whom such a statement applies. Those who still feel the burn from the Mega-CD, 32X or even Saturn. But to love the Mega Drive – to understand its role – is to accept these errors, erase them from the mind and realise that, had Sega failed to take the US and never come to realise its famous blue mascot, the current videogame pantheon would be very different. Backwards compatibility, online play, analogue controllers, simultaneous global releases, urban chic and a remarkable brand strength – all came out of Sega (albeit with varying levels of success).

Of course, the real factors are hardware and, more importantly, software. And, arguably, this is where the

industry peaked, as the finest titles by the greatest developers are all products of the 16bit era. Where the current crop of game mongers spill out their wares based on technical infallibility or photorealistic accuracy, the late-'80s and early-'90s came to represent the domain of the imagination and of a careful balance between arcade immediacy and armchair depth. But it was a slow start.

In 1987, Nintendo's NES was in its fourth year, alleged to be in one in every three US homes and with 90 per cent of the market share. Sega's own 8bit unit, the Mark III/Master System, was trailing badly, with sales of 230,000 in Europe and a virtual shunning in Japan and the US. Despite its technical superiority over the NES, a lack of thirdparty support ensured that Sega would remain the underdog.

By the end of the year NEC's PC Engine had launched in Japan, and during 1988 it would go on to sell more units than any other console. Despite being part misnomer – the machine's 16bit GPU still ran under the command of an 8bit Hu6280 CPU – the Engine's specification put it leagues ahead of the NES, introducing the first notions of a true-to-life arcade experience for the home. Sega CEO **Hayou Nakayama** took the potential for accurate arcade ports one step further and the decision to develop a domestic System 16 – Sega's then coin-operated technology – was cemented. Within weeks of the PC Engine arriving in Japan, Sega unveiled its successor to the Mark III/Master System, codenamed MK-1601, complete with a launch slot of autumn 1988. Where Nintendo had triumphed by being the first to



From top-right, clockwise: EA's standard oversized cartridge, with useless yellow tab; a UK example, the standard 'mushroom' shape; a Japanese cart, with rounded edges and cutaway; and Sega's *Sonic & Knuckles*, with its connector for mounting any other *Sonic* title



There's collecting Mega Drive paraphernalia, and then there's collecting Mega Drive paraphernalia. Stopping eager parents throwing this stuff out must be some challenge

Digital necromancy

Many people credit Sony with being responsible for the first backward-compatible hardware, namely PlayStation2. Not so. Sega specifically included a Mark III/Master System emulator in Mega Drive, known as VDP Mode 4. Once the Power Base converter was attached to the Mega Drive, the latter would download the Mark III/Master System boot ROM, reset, then, having detected the new boot code, run itself as a Mark III/Master System. This ensured that Mark III/Master System owners would not be forced to scrap their entire games collection should they (hopefully) step up to 16bit technology.

Far more curiously, rumours indicate that Yuji Naka produced an NES emulator for Mega Drive, but admitted it was poor and supported only the *Mario Bros.* games. **Retro** suspects it was a pet project and, as expected, it never materialised.

Finally, there are two known Mega Drive emulators for Dreamcast, both modified from Steve Snake's Gensyst emulator for PC. Both support around 400 ROMs, but the latter is better organised. Those in possession may also want to highlight the *Sonic* ROM and press Y.



Long before Nintendo's N64 effort came the AX-1E Analogue Pad, complete with variable-rate triggers and thumbsticks. A very similar looking pad was later released for Sega's Saturn console

enthusiasm, believing instead that NEC would win the upcoming console race, as the PC Engine (renamed the TurboGrafx-16) was due to hit the shelves during the same month. The atmosphere was of complete damnation, one retailer opining that NEC was "... going to blow you [Sega] out the water." It couldn't have been more wrong.

Pay dirt

Come August 14, Sega shipped a limited quantity of consoles to stores in New York and Los Angeles, priced at \$199.99 (£125). By September 15, the rest of the country received its allocations, complete with a \$10 price drop. The twinning of *Arnold Palmer Tournament Golf* and *Tommy Lasorda Baseball* with arcade behemoths *Golden Axe* and

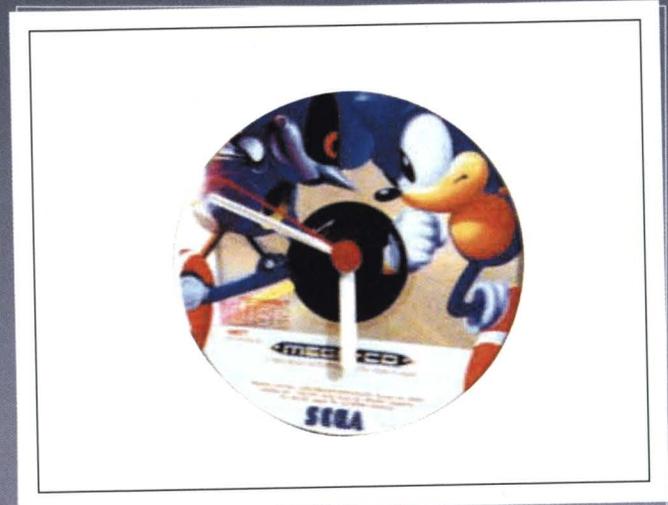
Altered Beast hit pay dirt and within one week, with industry figures quoting Sega as owning 65 per cent of market share. As an import gamer, Mallabar admits that, "Once I finally got started, there was no stopping me – I fell in love with the machine and spent all my money on games. A friend and I felt that everyone was completely overcharging for their games, so we started our own company. Nothing really happened until our advert in 'C&VG', but when it hit the stands, everything went mental."

It was all NEC could do to stay in the game. Then-executive vice president, **Keith Shaefer**, offers as the cause of the Genesis' success "... inferior hardware, but [with] a superior selection of software that was Americanised for the [sic] American consumer." Indeed, there were those who

claimed the PC Engine still delivered greater graphics. Certainly, few would contest the excellence par none of titles such as *Gun Hed*, *Ys Books I & II* and *R-Type*, but it was these titles' inherent Japanese qualities that kept the US gameplaying public at a comparative arm's length. A slow and misguided release schedule, stiff prices, unsportsmanlike advertising and an unquestionably ugly shell did no favours for the TurboGrafx-16, while Sega had the world's first true 16bit games console, and tweaked its name, image and software for the US customer. Christmas of that year saw Sega achieve 90 per cent market share for console sales, propelling it to the overall number two slot, but Nintendo still had the greater overall user base and calmly claimed to be working on a successor for the NES. Foulger offers his take



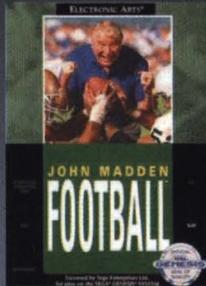
The J-Cart, Codemasters' ingenious sidestepping of the limitations of two joypad ports. By plugging extra pads into the cartridge, the player count could effectively be doubled



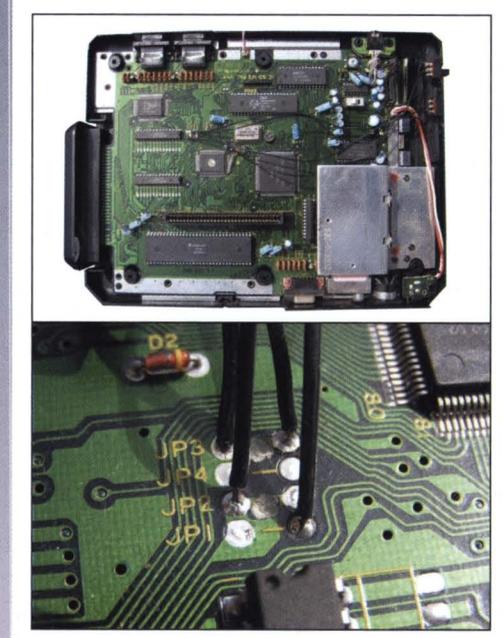
Sonic famously made it on to pyjamas, lunchboxes, duvet covers, pillows – the lot. At the more obscure end of the spectrum, however, can be found a *Sonic CD* clock

A sporting chance

Substantial sales of Genesis were galvanised in no small part by the marriage of the Genesis to Trip Hawkins' (below) Electronics Arts; more specifically, its range of officially licensed sports games, namely *John Madden*, *NHL Hockey* and *PGA Tour Golf*. Originally, EA had intended to reverse-engineer Sega's cartridges, but the threat of legal action ended with an unlikely alliance, EA being awarded the position of official thirdparty developer for Sega. Neil West refers to it as a "sweetheart deal" before going on to say that it "paid off big time, especially in the US with *John Madden Football*." And that's an understatement.



A demonstration of the gulf between UK and Japanese artwork. Cover art was tailored to the tastes of the region, reinforcing the notion that Europe is almost an afterthought in the release schedules



Two pathway cuts, four wires and two single-pole, double-throw switches. At ten minutes' work, this UK MD conversion opens up a plethora of Japanese software and is well worth the effort

on the situation: "Sega was the king of the arcade and quickly became a major player in the home market, too. The timing of the launch in the US couldn't have been any better, as Sega was working with a clean sheet. The Master System was popular and the backwards compatibility of the Mega Drive provided a clear upgrade path." Sega was now most definitely on the way up.

The next year saw Sega achieve substantial sales with Genesis software, with titles such as *Michael Jackson's Moonwalker*, *Joe Montana Sports Talk Football* and *ToeJam and Earl* proving popular by virtue of their cross-age appeal. An advertising campaign claiming 'Sega does what Nintendo'n't' constantly reminded the US public that Genesis offered a more applicable and up-to-date software catalogue.

During this time, SNK unveiled its monumental Arcade Entertainment System for US consumption. However, arcade-perfect versions of triple-A titles were never going to justify a \$600 (£379) price tag and the machine quickly fell into the realms of the luxurious curio – a status it still enjoys 13 years later. With NEC's PC Engine and add-on Super CD-ROM 2 still under-performing, the real threat was from Nintendo. Inevitably, the Kyoto giant countered Sega's front with the announcement that it would release a 16bit replacement for the NES in November of 1990. Things were starting to pick up speed.

Eager to expand on its US success, Sega pushed the Genesis into Europe, returning the console to its original Japanese name, Mega Drive. November of 1990 saw the UK

release at £190 with *Altered Beast* and some 30,000 units arriving at the larger retail chains – Dixons, Toys 'R' Us, Rumbelows and the like. Sales were good and the steady arrival of thirdparty developers, such as Acclaim, helped clarify the name of Mega Drive as the brightest new star in the videogame heavens. *Mickey's Castle of Illusion*, *Strider*, *Revenge of Shinobi*, *Populous* – the list of games goes on. Great software was becoming greater.

Neil West, ex-editor of 'Mega' (Future Publishing's Mega Drive magazine), highlights the importance of the Sega phenomenon: "The Mega Drive was new, sexy and foreign. Personally, it was a great time for us on the console magazines. We were surfing on the front of a huge wave, having been lucky enough to be at the right place, at



The Japanese version of the Mega Modem, boxed and in mint condition. A true rarity and somewhat slow by today's broadband standards, clocking in at a mere 12.2Kbps



Each of the four iterations (Mega Drive I and II and Mega-CD I and II) can be bolted together, but are unwieldy in anything other than the native pairing

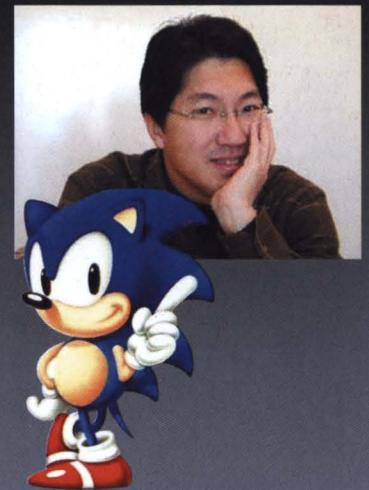


Some of the more popular and not-so-popular Mega Drive magazines of the day. Retro is thankful 'Sega Power' had stopped putting men in leather on the cover by this point

Blue's journey

Hard evidence proving the birth of Sonic being scant, two theories bob to the surface: the entry by Maoto Oshima to an in-house competition to design a new character, and a drawing sent to Sega by a female fan featuring the then-unknown insectivore dancing with Madonna. However the arrival, none could deny that creating the blue hedgehog with red boots was a design masterstroke.

The first internal rolling demos were enough for Sega to realise it was on to something big, and the company duly decided to keep the project under wraps – even though there was a prime opportunity to show the demos at the 1990 CES in Chicago. Within a short month, the character had a name and an in-house development team (headed by a young Yuji Naka, right), having been charged with creating a game to rival *Mario*. Massive sales across the globe tell the rest admirably and Sonic Team would go on to guide the blue mascot (internally and externally) through approaching 90 different iterations, including the forthcoming *Sonic Heroes*. For all its success, Sony – much less Microsoft – has yet to realise such a strong brand representative, so have we seen the end of the console mascot? That's a discussion for another time...



the right time. We earned fuck-all money, but all of a sudden, people were flying us all over the world and asking us to appear on TV. We were lucky young men."

By November of 1990, Nintendo's 16bit console, Super Nintendo Entertainment System, finally arrived in Japan to a borderline-hysterical public – rumours of muggings, mass sick leave and gross under-supply go some way to back up the sentiment that Sega was never going to beat Nintendo at its own game in Japan. Meagre sales of the Mega Drive were ample proof of this, so Sega concentrated all its efforts on smashing the enemy in the US. With a window of just one year, the Stateside D-Day was set for September 1, 1991. But the US wing of Sega needed rallying and no one was more matched for task than former Mattel saviour, **Tom**

Kalinske. Legend has it that he was pressganged into joining Sega at the instruction of Hayou Nakayama, particularly after the former's rescue of Matchbox Toys from bankruptcy. A short stay in Hawaii and Tom Kalinske was on a plane back to America, the fresh blood that Sega needed to face Nintendo.

Price reduction

Within weeks of joining the company, the newly appointed CEO was on the offensive, making several changes to Genesis, in particular removing *Altered Beast* from the bundle, which allowed a reduction in price to \$130 (£82). Kalinske's suggested reasoning that "... it looked like devil worship in the Mid-West" may have been valid, but it was the

\$50 saving that became incredibly attractive to those gamers on the brink of a purchase. Kalinske also green-lit the construction of US-based Sega codeshops, a previously unheard-of tactic that would raise Nakayama-san's temperature considerably. The ageing CEO summoned Kalinske to Japan and after an hour of negotiations, surprisingly agreed to support the US campaign in any way Kalinske saw fit. "It is why I hired you," conceded Nakayama-san. Sega of America was officially on the warpath.

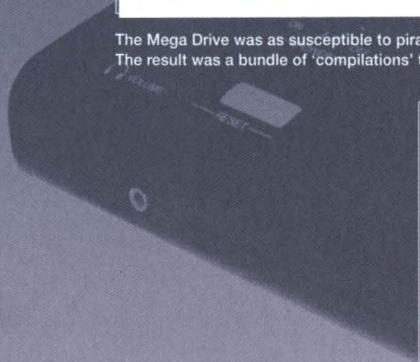
Yet despite Genesis' mounting popularity and a stay of execution before SNES arrived, Sega still had nothing with which to defend against the Goliath-like stature of Nintendo's forthcoming *Super Mario World*. The rapidly rising heat of 1991 required something stronger, something more



The Mega Drive was as susceptible to piracy from Hong Kong as any other console. The result was a bundle of 'compilations' that joined Sega's official multi-game carts



Sega's first comic strip proved very popular – so much so that it still exists today, published in the UK by Egmont Fleetway Editions. Never underestimate the children's market

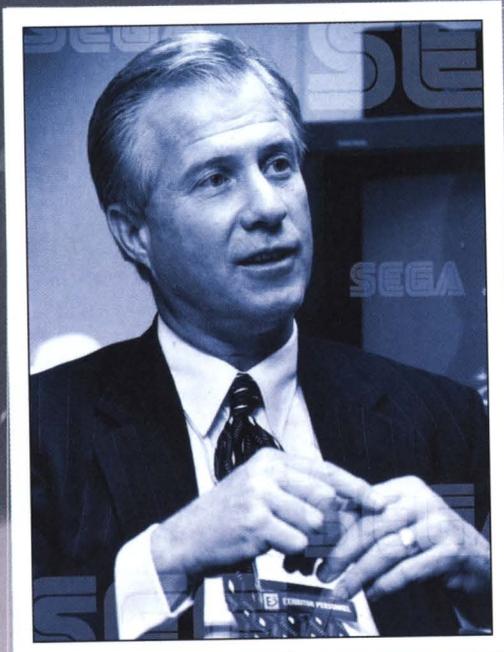


System specification

CPU	Motorola M68000 16bit processor @ 7.67MHz
Co-Processor	Z80a @ 3.58MHz
Total System RAM	192Kb
Main sound chip	Yamaha YM2612 six-channel FM processor
Additional sound chip	Four-channel PSG
Colour palette	512
Onscreen colours	64
Maximum onscreen sprites	80
Resolution	320 x 224 pixels



One of the lesser-known war sims for Mega Drive and possibly most polemic, with an intro containing digitised footage of Adolf Hitler orating to Nazi crowds. Predictably, it never saw daylight in Europe



The man who propelled Sega to pole position during the early-'90s, Kalinske also created the Sega Foundation, a charity that aids children with severe learning difficulties through music

charismatic to act as mascot for Sega's dark powerhouse. That something was *Sonic The Hedgehog*.

There are several stories covering the inception of the character, but the upshot is that, upon its release on July 26, 1991, *Sonic The Hedgehog* became a success beyond the wildest dreams of Sega – with the subsequent hardware bundle leading the company to what many consider its halcyon days. West remembers the arrival of Sonic in no uncertain terms: "Sonic changed everything. Sega's UK marketing department takes too much of the credit for the Mega Drive's success. It was *Sonic* that did it. Everyone who saw Sonic wanted to play it and everyone who wanted to play it could; it was just run left, run right, or jump. Girls liked it, it even sounded great. All of a sudden the Nintendo looked

like a kid's toy and the home computers became the domain of geeks. Sega had all the attention." Foulger adds that "Sega made gaming cool. Sony used the same technique by associating the PlayStation with the clubland generation and, wrongly, gets the credit for creating this approach."

Bitter pill

Indeed, in the US, Genesis was selling furiously, often outnumbering the recently launched SNES at a factor of 2:1, notching up sales of 7.5m units, compared to 1991's 1.6m. For Nintendo president Hiroshi Yamauchi this was a bitter pill to swallow – one publication had quoted a particularly spiteful retort of his claiming that "Sega is nothing." Kalinske's decision to pin a copy of the phrase on every door in the

Sega offices had the desired effect. Numerous merchandising tie-ins, from sports sponsorship to spaghetti hoops, evolved and, within a year, Sega's biggest coup emerged with the release of *Sonic The Hedgehog 2*. The first title to be shipped simultaneously around the world, Sega built up massive expectation with the now-famous 'Sonic 2's day' campaign, the launch date marked for Tuesday, November 24, 1992. *Sonic 2* was a triumph, reaching the height of 'best-selling videogame ever'. West confirms the popularity of the mascot: "A character like Sonic has to be a fluke, you can't plan the creation of a killer character. So Sega got a little lucky. But the gameplay came from its vast wealth of arcade experience and intimate knowledge of the Mega Drive's hardware. You've got to give Sega credit for that."



The *Thunderforce* series, a significant trio of games from a time when the shoot 'em up was king. While *Thunderforce III* was more of a landmark, the fourth instalment is superior in every respect, arguably ranking among the top three 2D shooters of all time



Sega of America's *X-Men*, with its brilliant example of how to 'fry' host hardware. At the climax of the game, the screen fills with the word 'reset'. Nothing happens until the player presses the reset button – not unexpectedly, many have never seen beyond this point



From Toaplan's horizontal blaster, *Zero Wing*, the screen that jump-started 2001's 'All Your Base Are Belong To Us' internet phenomenon. Those not having witnessed this comical example of a 'Japlisch' game intro owe it to themselves to hunt it down

Fifty-seven varieties of black

Aside from the three different base units, the internal workings of the Mega Drive found itself in a choice of guises, including Wondermega/Xeye (JVC's combined Mega Drive and Mega-CD with karaoke functions), Multimega (a portable Mega Drive and Mega-CD), Nomad (a handheld Mega Drive), Megajet (a handheld unit for the Japanese airlines that plugged into headrest monitors), Mega PC/Terra Drive (Amstrad's PC/Mega Drive hybrid), Laseractive (Pioneer's Laserdisk/Mega Drive hybrid), Megatech (an eight-way arcade cabinet that played Mega Drive games), Mega-play (a JAMMA-compatible arcade cabinet with Mega Drive software on proprietary boards, similar to SNK's MVS), CSD-GM1 (Aiwa's portable CD player, tuner and tape player with facilities for running Mega Drive and Mega-CD games) and the bizarre MSX AX330 and AX990 built for release in Arabic countries, one with a cartridge slot, the other a built-in 50-strong collection of games. Overindulgence? **Retro** has its opinions.



But 1992 also saw a dip in corporate fortunes, as several ill-received peripherals for Mega Drive saw the light of day. Menacer, a customisable infra-red lightgun supplied with an atrocious six-game cartridge, died almost instantly, racking up a total of nine games – including the cart's six. Most memorable, however, was the Sony-manufactured Mega-CD, which had debuted in Japan during October of '91, then both the US and UK, the latter with its horrific £270 price tag and mostly poor software (*Lunar*, *Sonic CD*, *Thunderhawk*, *Final Fight CD* and Hideo Kojima's *Snatcher* excluded). The machine was a dismal failure and, understandably, memories of it would plague Sega through the following two generations. Foulger sums up the debacle aptly: "The Mega-CD is a worthless waste of space."

Ironically, as sales levelled out, 1993 and 1994 saw the appearance of some of the Mega Drive's greatest releases, including the eventual porting of Capcom's *Street Fighter II: Special Championship Edition*. Konami entered the fray with its excellent *Probotector* and *Castlevania: The New Generation* and there was a re-branded, remoulded Mega Drive II and the SVP-powered, Toshihiro Nagoshi-directed *Virtua Racing* cartridge, with all its resplendent polygon power and heinous price-tagger.

The arrival of Mars, which became the disastrous 32X add-on with only a couple of decent games (*Virtua Racing* and *Doom*), plus the never-to-be-released Neptune added more doubt and confusion to even the most stalwart of Sega aficionados, shortly before Saturn debuted in Japan during

November, 1994. The Mega Drive was officially superseded, but would manage to eke out an existence through a third US-only incarnation in 1997, before the terminal game release of *Madden NFL '98*.

In spite of the eventual slide from its zenith, the importance of Sega's Mega Drive can't be over-emphasised. The first console to offer true 16bit hardware in the home, it played host to some of the grandest games to date and went on to secure the premier position in Europe and the US, a status Nintendo would never achieve. The record might be tarnished, but those willing to spit and polish, those who can still sense the excitement of seeing the blue blur for the first time, will know the Mega Drive for what it is: a pivotal slice of an important videogaming zeitgeist.



Continued >

The collectables

Retro met **Martin Bean**, owner of the Video Game Centre, Bournemouth, and **Simon Hales**, a Mega Drive collector of 15 years, to talk classic games. Bean states that: "Anything can be collectable to the right person, but in my case the Mega Drive is the most collectable because it was such a great console. The artwork for Japanese games was superb and I was thankful they were in plastic cases." Hales agrees: "Cardboard boxes

are a collector's nightmare, but it's almost impossible to damage a Mega Drive box through normal handling." In terms of the actual software, he goes on to explain that "there are those really rare games pressed in very limited numbers. These don't exist on machines like the Super Famicom. Perhaps the rarest and most expensive game being *Rendering Ranger* at £120. This is nothing in Mega Drive terms."

Lee Mallabar speaks about the machine specifically: "The most obvious reason [for collectability] is because the Mega Drive was relatively unsuccessful in Japan, a distant third to the PC Engine and Super Famicom. In fact, Nintendo's 16bit machine is nowhere near as collectable as the Mega Drive. If you look at the £100+ games, there are far more for Sega's machine than any other – bar, perhaps, the Neo Geo AES."

The Ooze



Japanese version: £250+
Release: 1995
Developer/Publisher: Sega
Genre: Overhead action/adventure

One of the final MD games to be released, *The Ooze* just made it to Japan in late 1995 and in ridiculously low numbers. PAL and US NTSC versions are worthless.

Comix Zone



Japanese version: £250+
Release: 1995
Developer/Publisher: Sega
Genre: Side-scrolling action/adventure

Again, with low a low print run, the Japanese incarnation squashes the PAL and US NTSC versions in the collectability stakes, even without the accompanying PAL CD soundtrack.

Snow Bros - Nick & Tom



Japanese version: £170-£300
Release: 1994
Developer/Publisher: Toaplan/Tengen
Genre: Arcade actioner

All Tengen software for Mega Drive is limited, but this *Pop 'N' Tumble* clone is the rarest, having only 2,000 copies. Blame legal wrangles with Sega for many copies being pulled.

Panorama Cotton



Japanese version: £190-£320
(including tea cup)
Release: 1994
Developer/Publisher: Success/Sunsoft
Genre: Pseudo-3D shooter

The tea cup was claimed by sending in a registration card, before being entered into a random draw. The game is rare, but the cup is almost unattainable since only 300 exist.

Alien Soldier



Japanese version: £100-£120
Release: 1994
Developer/Publisher: Treasure/Sega
Genre: Scrolling platform blaster

The final game from the Treasure stable to be released for the MD and a typically low print run contributed to *Alien Soldier's* relative scarcity. The PAL version is almost as rare.

Slap Fight



Japanese version: £150
Release: 1994
Developer/Publisher: Toaplan/Tengen
Genre: Vertical shooter

More output from Tengen and a solid conversion complete with remixed MD version of the arcade game. Suffered the same fate as *Snow Bros*.

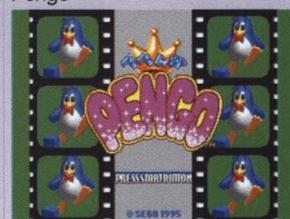
Akumajo Dracula – Vampire Killer



Japanese version: £150-£180
Release: 1994
Developer/Publisher: Konami
Genre: Platform hack 'n' slash

KCEJ eventually released *Vampire Killer* (*Castlevania: The New Generation* in the UK) in pitiful numbers. But the lower the print run, the more desirable the game.

Pengo



Japanese version: £130-£160
Release: 1995
Developer/Publisher: Sega
Genre: Overhead action/puzzler

The arcade original and a remixed version appeared on this conversion to the home system. Japanese only and small numbers drive its price up.

Eliminate Down



Japanese version: £80-£200
Release: 1993
Developer/Publisher: Soft Vision/Sega
Genre: Horizontal shooter

Soft Vision was a small developer, producing only a handful of titles. Being a horizontal scroller, this little-known title defies many collectors.

Phantasy Star



Japanese version: £150-£200
Release: 1994
Developer/Publisher: Sega
Genre: Overhead RPG

Essentially, this is the Mark III/ Master System code running on Mega Drive without the need for the Power Base converter.

Ten most important titles

Arriving at a clutch of definitive titles for any console will always test the readership. There will be those who decry the omission of *Phantasy Star IV* (the best RPG on the system), *Strider* (an astonishing port of Capcom's powerhouse coin-cruncher) or *Road Rash II* (a seminal dom of sheer arcade and home durability). Those who really know their history will seethe at *Virtua Racing's* absence – without doubt, there is far worse

software present in the selected ten. **Retro** welcomes all of this. As West puts it: "These are the games that kept the MD in the fight against Shigeru Miyamoto's output and *Street Fighter II*." Quality, technical achievement, aesthetics or sales figures may not necessarily play a part in the importance of any chosen title. But that's not to say these factors won't feature, as *Sonic The Hedgehog* alone proves. Hales quantifies the attraction of the

Mega Drive in no uncertain terms: "Not everyone wants to sit through drab cinematics and dull storylines. Old school is more about 'pick-up-and-play' and completing a game in an hour. The Mega Drive more than holds its own here and is host to the purest arcade conversions ever." It may not be incredibly relevant today, but it was the very crux of the matter in 1990 – as the majority on the list will verify.

Sonic The Hedgehog



Release: 1991
Developer/Publisher: SonicTeam/Sega
Genre: Platformer

Space Harrier II



Release: 1988
Developer/Publisher: AM2/Sega
Genre: Pseudo-3D Shooter

Super Shinobi



Release: 1989
Developer/Publisher: Sega
Genre: Platform hack 'n' slash

Castle of Illusion



Release: 1990
Developer/Publisher: Sega
Genre: Platformer

Thunderforce III



Release: 1990
Developer/Publisher: Technosoft
Genre: Horizontal shooter

The sequel was technically better, had a twoplayer mode and sold more copies, but nothing did as much for the Mega Drive than Sonic Team's dazzling original outing.

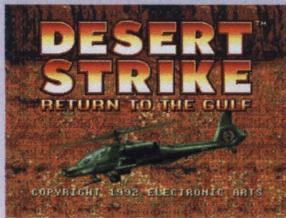
Along with *Altered Beast*, the title that convinced Japanese gamers of the power of the black box. Ironically, one of AM2's worst games, but still a consistent attraction to MD virgins.

Proof that nothing has equalled Sega's sharp-edged series, *Super Shinobi* was a title that demonstrated the ability of the Mega Drive to exceed its arcade counterparts.

After a slew of arcade conversions, Sega broadened its reach with this gorgeous platformer. It remains one of the most enchanting examples of the genre, even today.

Thunderforce III did everything with visceral perfection. It was so popular, Technosoft eventually ported it from console to arcade, then back to Saturn as *Thunderforce AC*.

Desert Strike



Release: 1992
Developer/Publisher: Electronic Arts
Genre: Isometric strategic shooter

Desert Strike struck a sublime balance of action, strategy, control and longevity, cementing a reputation for the decade to come.

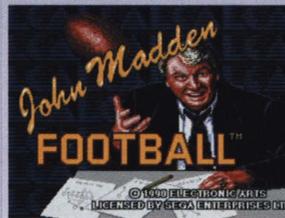
Gunstar Heroes



Release: 1992
Developer/Publisher: Treasure/Sega
Genre: Platformer shooter

Undeniably Treasure's pièce de résistance and – no arguments, please – one of the most intoxicating videogames ever.

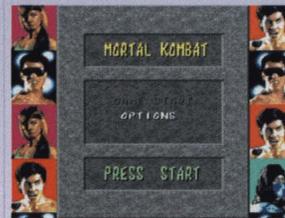
John Madden Football



Release: 1990
Developer/Publisher: Electronic Arts
Genre: Sports simulation

The game that sold Mega Drive to the US public. The impact of EA's patriotic and promotional tie-in with the NFL cannot be exaggerated.

Mortal Kombat



Release: 1992
Developer/Publisher: Probe/Acclaim
Genre: Beat 'em up

No game so clearly demonstrated the difference between Sega and Nintendo, whose port washed away the only reason to buy the game.

Streets of Rage II



Release: 1992
Developer/Publisher: Sega
Genre: Scrolling beat 'em up

The greatest scrolling beat 'em up for Sega's 16bit machine. Graphics, gameplay and music met to make software of the highest calibre.



Drinking from the Mainstream

Devoid of club culture pretence or urban cool, Super Nintendo plays host to some of the most unassuming morsels of primary colour gameplay one can enjoy. Yet at the collector's party, Super Nintendo does little more than lurk in the corner clutching its dusty well-displayed trophies. **Retro** looks at the history of the system and examines how such a mainstream success story has spawned the relative niche that is Super Nintendo collecting

Retro must warn you now. Just as a multitude of fanatics will bemoan the exclusion of *NIGHTS* from the Saturn section, any article looking at the collector's scene revolving around the SNES will not feature *Super Mario World*. Nor, necessarily, *Zelda: A Link to the Past*. While these are titles that any self-respecting games library should have in pride of place, they are of little significance to the collector's scene as they lazily fatten many a UK retailer's 'rare' retro section and can be purchased for little more than loose change. Although this series of articles is not simply about monetary value, it is inevitable that the most desirable titles fetch the highest prices.

Collectability (expressed in monetary value) measures the three-way combination of desirability, rarity and quality of any

particular game and it is mainly titles that score highly in all three of these categories that are featured in this series. The SNES throws up a problem in that the majority of games that score highly in quality were never rare. The SNES is mainstream and as such, sorry tales of excellent titles slipping past the great unwashed are few and far between. If there was a great game to be played, Nintendo had the platform, power and prestige to get it to the masses. So, ironically, the SNES, the epitome of mainstream success, remains niche and embryonic in terms of its collector's scene.

As with all Nintendo's past exploits, the history of the Super Nintendo has been well documented in print. It's one of the less interesting parts of Nintendo's history because, in actuality, the company did almost everything right, or at

least competently. There were no glaring managerial errors that endangered the future of videogames and, predictably, Nintendo had fantastic games that ran beautifully on well-branded safe hardware. Super Nintendo was a breeding ground for new franchises, and perhaps more than any other system, played host to the most successful updates of the famous series ever.

Shigeru Miyamoto had mastered his 2D craft and the 2D power and aesthetic completeness of the hardware precipitated games that, today, feel comfortable and self-assured in contrast to the 32bit revolution's shaky, faltering early offerings. In a sense Super Nintendo, especially in Japan, represented the mainstream culmination of the 2D way of coding. In the next step of evolution, games and the



SNES prototype carts are exceedingly difficult to find. Many are not labelled as to the contents either, so if you do stumble across one make sure to hold your breath before slotting it into your machine. A *Mario 3D* prototype would be almost priceless



Boxart for the Japanese games is, predictably, excellent, and many people collect the Japanese versions of Miyamoto-san's greatest hits for this reason alone



With a 10MHz clock frequency and rate of 100-120 polygons per second (with 16 colours) the Super FX chip allowed 3D manoeuvring not thought possible on the 16bit hardware

Prototypes

There were a number of prototypes for the Super Famicom, many of them made by Nintendo itself. Probably the most famous of them was an early *Mario* game rendered in 3D using Mode 7. Miyamoto-san later stated that this was scrapped due to the hardware limitations and went on to become *Mario 64*. It's widely known there is a 99 per cent finished *Star Fox 2* in existence that was never released, not least because it was shown at a US games exhibition where a fan attempted to steal the cart (he was caught and charged). The game was of particular significance as it was the only title to use the Super FX 2 chip. There are a few EPROM carts in existence but it is unlikely that they'll ever appear on the market.

way they were perceived and played were to change dramatically almost beyond recognition. Super Nintendo was the final landmark in 20 years of Japanese 2D evolution.

In a sense, Super Famicom was the first major hardware sequel the country had seen and the choice of games, while

"One fan, who'd failed to bag a copy of *A Link to the Past* on the day, took revenge on a friend who had by torching his house. To the ground"

still dwarfing today's western equivalents, was much smaller than today's bulging Japanese schedules. As such, quality games were hugely anticipated and fought for at launch. Former **Edge** editor **Jason Brookes**, speaking at the time in 'Arcade' magazine, compared the comparatively sedate

launch of N64 *Zelda Ocarina of Time* with 1991's *A Link to the Past* seven years earlier, "One hapless fan, who'd failed to bag a copy of *A Link to the Past* on the day, took revenge on a friend who had by torching his house. To the ground. Also, in 1992, when the fifth instalment in the *Dragon Quest* saga

was released, a queue of 12,000 fans waited patiently outside one department store, the line waving its way through Ikebukuro's streets for an astounding five kilometres. It's difficult to see Nintendo commanding such insanity again no matter how good the game."

Part of the problem for today's collector is Miyamoto-san. The diminutive originator had such worldwide fame and prestige that all of Nintendo's greatest in-house games were the most hotly anticipated videogames of all time, and Nintendo pushed them with all its financial weight. If Neo-Geo is known for its 2D fighters and Saturn for its shooters, then Super Famicom is ostensibly all about Miyamoto-san. But there were no limited release *Super Mario Worlds*. Even collectable titles such as *Chrono Trigger* sold over a million copies in Japan. So, if quality is rarely matched by scarcity, where does the collector go?

A launch to remember

A 16bit Nintendo system had been an on-going concern of



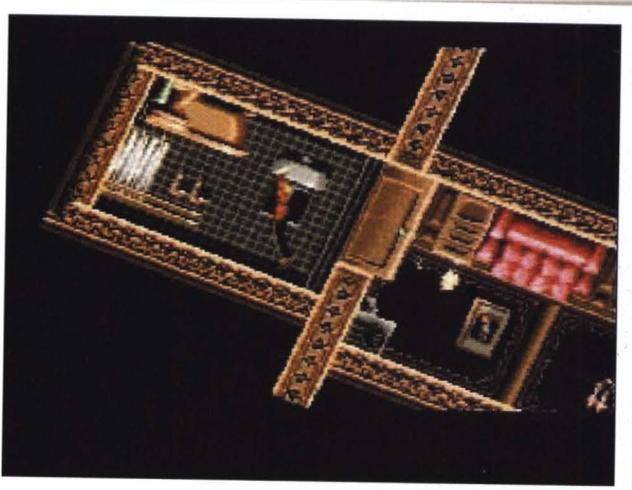
The Super Famicom, identical in design to the UK system. The use of an adapter allowed PAL gamers to bypass the region lockout



During the SNES years Nintendo's HQ was located on the outskirts of Kyoto. Now the company is comfortably positioned in the centre of the city in a seven-storey structure



After the success of *Donkey Kong*, *Donkey Kong Jr* and *Super Mario Bros*, Shigeru Miyamoto became a celebrity. During the '90s Nintendo used his status to push the SNES



The hardware's Mode 7 was commonly used to create tracks in racing games, although occasionally its nuances were exploited more creatively, as in *Septentrion* (aka SOS)

Hiroshi Yamauchi (NCL's president) ever since he had to reduce the original Famicom to 8bit due to component costs. He had commissioned Masayuki Uemura and his R&D Division 2 team at some time in the late-'80s to begin work on the successor to the extraordinarily successful Famicom. One early prophetic concern of Yamauchi-san was that the system be backwards compatible. This was before the days when the consumer expected sequential hardware upgrades every five years. Nintendo's overbearing dominance and huge market share with Famicom filled Yamauchi-san with fear over a backlash should the new system not be able to play the previous games parents had invested in.

Uemura-san never managed to get the backwards compatibility to an affordable proposition, estimating at least

\$75 (£48) would be added to the basic manufacture cost of each unit, but the theory directly inspired Sony some years later. Uemura-san's focus was on generating as many colours as possible. The well-documented 32,000 colour palette (many of these hues were barely distinguishable on a standard television) of the Super Nintendo was frequently set against the Mega Drive's paltry 512, and provided much advertising fodder. For a central processor the unit used the Motorola 65816 chip and had two customised graphics chips nicknamed ppu-1 and ppu-2.

It is hard for us to understand the Japanese anticipation for the system (Super Famicom in Japan) in 1990. After seven years of videogame market definition and dominance, the release of the Super Famicom on November 21, 1990 literally

brought Japan to a standstill. Nintendo had left the official announcement of the launch date very late and so pre-orders ran out as everyone panicked. Some stores required customers pay the full ¥32,000 (£169) in advance to secure a system while others simply ran a lottery system. The Osaka-based Hankyu department store announced it would accept reservations on November 3, but by November 8 had stopped taking orders.

Nintendo shipped only 300,000 consoles in what was called "Operation Midnight." This was a plan in which 100 ten-ton oversized trucks each carrying 3,000 units were used to quietly collect the stock from various secret warehouses from midnight on November 19 around Japan and make their deliveries in the early hours of the morning. The secrecy was



Cleaning teeth has never been so enjoyable... or has it? Raya's edutainment games were desperately poor proving once and for all that dentists don't make great programmers



Although some may contest the educational value of placing our children in roleplay as 'experimental surgeons', the value to the SNES completist is obvious

Edutainment

Although collectable only to the alternative disposition Raya System's health edutainment titles are certainly some of the most interesting western SNES curios. All these games were officially licensed by Nintendo, and in fact, had a glowing endorsement. Some were available at retail while others worked in a library-lending scheme from clinics. Essentially tools to help children learn about their peculiar illnesses the titles include *Bronkie the Brontosaurus* (asthma), *Captain Novolin* (diabetes), *Packy and Marlon Health Hero* (diabetes) and *Rex Ronan: Experimental Surgeon* (anti-smoking info). Raya Systems has since changed its name and is now known as the Health Hero Network. The games could still be ordered until recently for the European-esque price of \$70 (£44) each.



Nintendo was keen to attract the Game Boy demographic into investing in its more expensive parent hardware and Super Game Boy helped to do just that

employed to thwart a leaked plan that a Yakuza ring was to hijack two of the trucks and sell off the systems themselves. As a result all the 300,000 systems were at the retailers the day before the official launch.

It was clear that high drama was part of Nintendo's launch plan but much of what happened did not come from the minds of the marketing men. One store closed at 11.30am as it feared a riot. There were clearly too few units to go around and later figures released show that there were over 1.5m pre-orders for the 300,000 units. Four out of five customers went without a system including many who had already paid in full. David Sheff in his Nintendo tome 'Game Over' describes one toy store on the main street near Shakujji Koen train station in Tokyo as receiving only six units. The

elderly storeowner was both frightened and embarrassed by the meagre allocation and so, instead of opening, simply posted a sign saying the family had taken a trip. Adults called in sick at work and, as a result of the traffic problems, the government asked that in future new hardware systems were only launched on weekends.

From Genesis to revelation

Within six months, 2m Super Famicom systems had been sold in Japan and over 4m were in homes within a year. The US launch was less ecstatic. Unlike the market in Japan, Sega's 16bit system had taken root and Super Nintendo's launch on September 1, 1991, despite a \$25m (£16m) marketing plan, was a far more muted affair. 'Fortune'

magazine reported that by the close of 1992 the Genesis (Mega Drive's US title) had sold a million systems compared to the SNES's 700,000.

In the US the Super Nintendo would slowly but surely catch up with the Mega Drive and then overtake it. In 1992 Nintendo sold 5.6m SNES systems. This was largely thanks to companies such as Rare, who was looking to capitalise on Nintendo's raw processing power as demonstrated in the 9m-seller *Donkey Kong Country*, then the second biggest selling game since *Super Mario Bros. 3*. Game Boy, with its large western installed user base inspired many more sales when the Super Game Boy add-on was released. Further successful factors included Capcom with its (initially) Nintendo exclusive *Street Fighter* games, the introduction of the Super



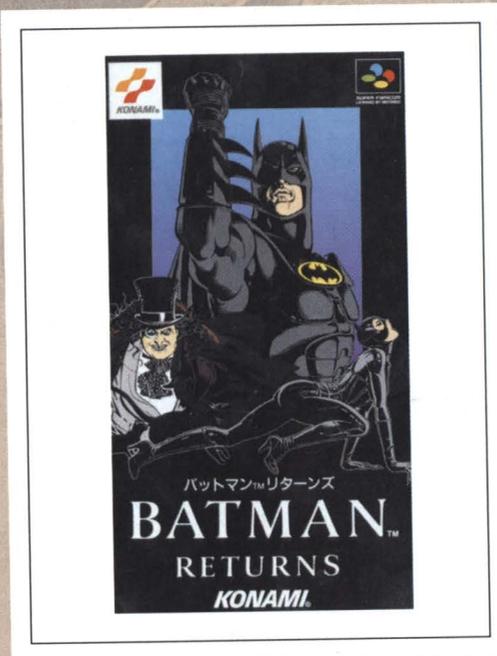
Importers who had mastered the *Starwing* competition cart were able to sail through the competitions in England and justify the outrageous prices they had paid for the privilege



SMB3 sold so fast on NES that it made the 'Guinness Book of Records'. Never shy of repackaging classics, Nintendo brought it back in *Mario All-Stars* for SNES in 1993



The sequel to *Star Fox* has been in ROM form on the Internet for some time now. The game was very close to being finished in 1995



Konami was one of the most prolific publishers on the SFC/SNES, and scrolling beat 'em up *Batman Returns* was a firm genre favourite

FX chip in 1993 (as demonstrated in *Star Fox*), a huge price drop to \$149 (£95) and the underground success story that was Squaresoft.

Playing an important role

SNES collectors can conceivably be split into two groups: those who collect RPGs and those who don't. In fact, the SNES scene today would be virtually insignificant were it not for Squaresoft and its stablemates. The 16bit era was the heyday of the 2D RPG form and the hardware limitations meant innovation and good scripting were the keys to success rather than lavish FMV non-interactive set-pieces.

The history of the Japanese RPG is interesting and significant. In 1976, Henk Rogers, a Dutch US immigrant and

graduate, moved from a safe job with the US military in California to study Japanese in Yokohama. In between teaching English and working for his father's gem business, Rogers had found time to code his own unique version of US campus favourite 'Dungeons and Dragons' on his PC. He named his title *Black Onyx* as he intended to sell the game to the Japanese for a small fortune.

Rogers found an interested publisher, who then, at the point of signing, tried to pay less than previously agreed for the software. Rogers decided instead to market and sell the game himself and so took out advertisements in the Japanese videogames press and waited, with his wife acting as a secretary, for the calls. With only three calls in three months, Rogers realised he needed to actively educate the

Japanese as to what an RPG entailed. Marching into one of the main offices of a leading videogames magazine, he set up his game on the editor's PC and explained the concept to the staff. Rogers' contagious enthusiasm caught and as the writers got to grips with levelling up their onscreen representations, he left satisfied that his game had received a fair airing.

The magazine reviewed *Black Onyx* with a glowing appraisal and Rogers sold 100,000 copies in 1980. Bullet Proof software, the company Rogers set up, was the originator of the RPG revolution in Japan. By the time of the Super Famicom, the Japanese had, in typical fashion, taken the concept from Rogers (itself a bastardised Tolkien-esque concept), made it their own and mastered the creation



Terranigma is highly sought after by collectors and RPG aficionados alike. The quality combined with rarity and demand have pushed the price of the cart above the rarer *Whirly*



Gumpei Yokoi's *Metroid* series has never sold well in Japan. Two years ago Retro found an Akihabara store selling four new, boxed copies of *Super Metroid* for just ¥1,100 (£6)



The blocky design of the US hardware eschewed the curves and design subtlety of the Japanese and PAL releases. However, US machines are desirable as the 'tabs' inside the cart slot can be broken and Japanese games freely played: a trait shared by the N64



Konami's super-cute Japanese games helped make the SNES more popular among otaku wannabes than Sega's 16bit machine

process better than anyone else in the world. RPGs were where the big money was in Japan and in many ways they were responsible for attracting a far wider Japanese demographic than Mario ever would.

Squaresoft's *Final Fantasy* series had fast been gathering momentum since the first instalment in 1987. Despite meagre sales of the first game (just over 12,000 copies according to 'Weekly Famitsu') the second and third games had sold increasingly well and were attracting many of Enix's *Dragon Quest* fanatics. In 1990 the *Dragon Quest* sequels had netted several hundred million dollars a piece in Japan but had no market share in the US. In 1990, three years after initial release, Squaresoft launched the first *Final Fantasy* game for the NES in the States. The second and third games for

the NES never secured release in the US and so the US *Final Fantasy II* for Super Nintendo was actually a port of *Final Fantasy IV* in Japan.

US Squaresoft executives were unsure as to how consumers would react to these 'complicated' adventure games (ironic as they basically originated from the US) and so commissioned their own staff to come up with an RPG-lite *Final Fantasy* game: *Mystic Quest*. The game was a disaster in every way and it is testament to the strength of titles such as *Final Fantasy III*, *Secret of Mana* and *Chrono Trigger* that Squaresoft's branding was not damaged irreparably.

Europe was not so lucky. These were the days before *Final Fantasy VII* (see p108) blew open the cultural export/import that was the Japanese RPG to Europe.

This un-asserted marketability coupled with the age-old problems of diverse languages in the European continent meant that all but one of Squaresoft's finest 16bit outings were left in the US (*Seiken Densetsu 2/Secret of Mana*). As a result, these titles easily fetch the most out of the general release (ie non-prototype/competition carts) in today's UK collectors market and have been responsible for attracting huge swathes of collectors to the scene.

Squaresoft's US office apparently never learned its lesson from *Mystic Quest* and reportedly decided to pull the port of *Seiken Densetsu 3*, the sequel to *Secret of Mana*, despite a near complete translation from the critically acclaimed Japanese original. Instead it again commissioned its teams (reportedly to get its coders on the map) with designing a US-

Translating the classics

Collectors of SNES RPGs will be well aware of the burgeoning fan translation scene. For many years now fans have been translating leftfield Japanese anime hits too financially risky for western publishers to bother with and it's a phenomenon that's stretched to SNES titles. With the advent of excellent SNES emulators combined with knowledgeable bilingual 16bit RPG fans, subtitled Squaresoft and Enix gems are available to the less linguistically educated. The most famous of the fan translations is undoubtedly the excellent *Seiken Densetsu 3* (the sequel to *Secret of Mana*) where the care and skill demonstrated in communicating plot subtleties rivals Ted Woosley's original *Final Fantasy VI* work. More recently translations of *Bahamut Lagoon*, *Front Mission* and the early *Dragon Quest* games have all been completed opening up valuable avenues of videogaming history previously unexplored for the inquisitive. Google away.



The explosion of the anime scene into children's prime time has driven up the values of most tie-in games across all platforms



ASCCII pad variations have been on the Japanese market for many years and the SFC is home to some of the most interesting examples



Without the SNES, the Game Boy Advance would not have half of its best games, including *Yoshi's Island* (or 'Yossy Island' as its Japanese packaging termed it)



Super Mario RPG was perhaps the only time Squaresoft will ever develop a title hand in hand with Nintendo. This US version signed by Miyamoto-san would fetch a very high price

titles on eBay. Having said that, I'd rather view a game like *Yoshi's Island* as the second best 2D platform game ever made, than a potential £30."

Retro wonders which machine wins the 16bit race in today's collector market. "Well, I don't believe the Mega Drive has overtaken the Super Famicom in collector's terms," says Paton. "I don't think it ever needed to. The Mega Drive has always been collected more due to the basic fact that it is a Sega machine. Just look at eBay. Constantly in the top ten most popular searches is Dreamcast, not bad for such a so-called failed piece of hardware. I think Sega is more popular for collectors due to their consoles' (Mega Drive, Saturn, DC) arcade roots. And now of course with Nintendo's continuing success, and Sega's demise, in the

home hardware market, this points to an even bigger demand for Sega's systems and software."

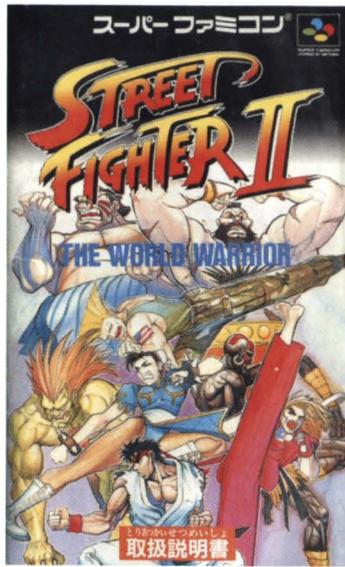
But why is the SNES the weapon of choice for some collectors today? "As people get older they reminisce about games from their past. With old-style gameplay scarcely

"As people get older they reminisce about games. With old-style gameplay scarcely produced today, the SFC is the ideal place for people to find it"

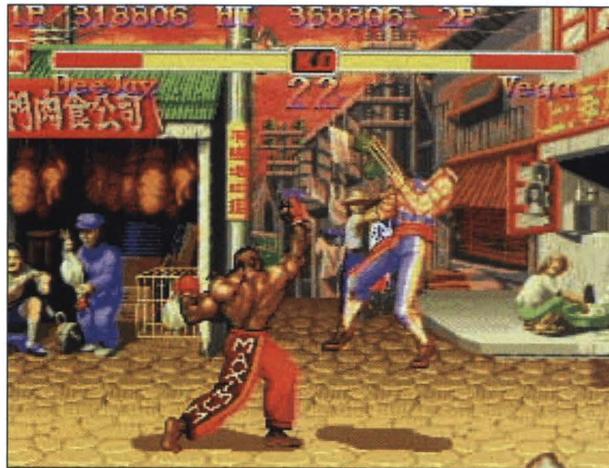
produced today, it means the Super Famicom is the ideal place for people to find it. Being such a popular machine at the time, lots of the games and the hardware is still available cheaply, so it is not difficult for someone to get started. It is only once you want to own the rarer items that you begin to

talk about serious money. For all the advancements in graphics and sound, gameplay is still the most important ingredient. Add to that the fact that many of today's top games series were actually born on the Super Famicom players want to go back and own/play the originals."

Anderson is in agreement, "As a gaming platform, the SNES/Super Famicom saw many videogame creators hitting a high that has yet to be matched. Romantic nostalgia? Some might say so, but there are countless mid-20 to early-30-year-old gamers who would agree that the SNES versions



Street Fighter II was one of the most expensive videogames ever. Import prices were laughable at the time, often pushing over £100



The stunning conversion opened up the world of 2D fighting to the west and proved to the masses that you didn't need SNK-branded hardware to enjoy arcade-quality fighting



In 1996 Bandai struck a deal with Nintendo to produce its own add-on for the SFC. The cart adapter allowed Bandai's own Turbo carts to be used with the SFC as the base



This dedicated pachinko controller will still fetch very high prices in Japan and is understandably far more collectable there than for the western importer

of Mario Kart and Star Fox and Street Fighter II, for example, are the superior iterations. I do think the system has increased in popularity, probably due to people who had it first time round rediscovering the system and latecomers to the videogame scene wanting to educate/inform themselves of what came before (in around a 70/30 ratio).

So which are the titles that the Super Famicom collectors want the most? Both collectors have many examples each occupying its own niche, "In America, anime and manga tie-in games are becoming increasingly popular. This is one of the reasons that the Dragonball Z, as well as other manga-based games, are so highly sought after. Prices for manga-based games in good condition have increased in value greatly in a short period of time recently," says Paton.

"Of course there is also the RPG. The Super Famicom has so many stunning RPGs that this has become an area that some collectors solely focus on. RPGs that never saw English translation are always desirable for the hardened collector who wants rarity, but RPGs that did translate and sold well are also very collectable both in translated and Japanese forms as people want to own the game in its original release format. The Final Fantasy and Mana series are also hugely collectable and can demand high sale prices, so definitely it has to be RPGs that are the hot western items."

Special releases

As with all collectable consoles, special release versions of the hardware are sought after. "On the hardware front it has

to be the Bandai Satellaview and of course the more cart games you can get hold of, the better. After all, there is no other way of playing things like F-Zero 2, BS Zelda (new dungeons) Excitebike and many others. The Sufami Turbo by Bandai is also sought after, not for its quality but more for its small distribution and lack of released games, plus being able to link to carts together seems to intrigue people.

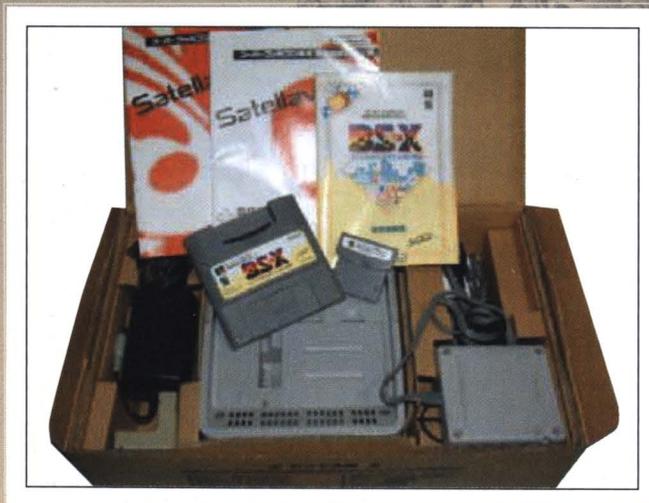
"Finally there are the limited releases that the hardened Nintendo collectors are after. People will pay a lot of money for titles like the last official game released, Fire Emblem 776 (September 1, 1999) The standard version is rare and sells for around £60-70, but there was also a limited edition box set released in small numbers which is hugely sought after. In Japan there were also a few unofficial releases, not pirate

Super Nintendo: tech specs

Processor: 16bit 65c816
Processor speed: 1.79, 2.68 or 3.58Mhz
RAM memory: 128K
Video RAM: 64K
Resolution: 512 x 448 pixels
Colours: 32,768
Colours onscreen: 256
Max Sprites: 128
Sprite size: 8 x 8 to 63 x 64
Sound chip: 8bit Sony SPC 700
Sound channels: 8
Controller response time: 16m/s



Released in March 1995 the Satellaview is one of videogaming's most interesting add-ons. Using a Japanese satellite system 'St GIGA' to get its information you could download and save in a 1Mb RAM Cartridge updates of new games between 4pm and 7pm



Finding a mint boxed Satellaview in this condition is a very hard exercise. For those who have to have one – bear in mind it is useless today. A museum piece if ever there was one



Stunt Race FX was one of the first SNES titles to use the Super FX chip. While it may look primitive by today's standards, the game's vibrant 3D universe was a selling point in 1993

copies of games but actual games produced by small companies that knew they wouldn't get Nintendo's approval for release, so they released the games themselves.

Most of these titles were hentai games and do fetch quite a lot of money when up for sale (they do come with boxes and instructions, but most of them are in black and white with no artwork). The strange thing about collecting Super Famicom games, is that the more obscure, and therefore lesser imported, Japanese titles, in general are not worth much at all, but the most popular games such as *Secret of Mana*, that no doubt sold lots more copies seem to be rarer and more sought after. That is the opposite, in my experience, of collecting many of the other systems.

Retro wonders if the Super Famicom scene is set to

blossom or simply fade away? Anderson is undecided, "That depends on how many of the up and coming gamers are interested in discovering the Super Famicom. As the older players complete their collections or get mortgages (yes, the two are mutually incompatible), that part of the market vanishes. Whether sufficient interest will remain after that is anyone's guess. To be honest I hope so, but suspect not."

Paton takes the polar opposite line, "At the moment Super Famicom collecting is still a small area of the games market, but it has been growing steadily over the last two years. The release of GameCube actually boosted the popularity of the Super Famicom. Watching prices and listening to demand has shown me that the Super Famicom is a classic home console from the golden age of

videogaming and will always hold a healthy corner of the collector's market. The system will definitely remain collectable due to the sheer size of the game catalogue and merchandise available. The fact is that the original Famicom is still highly collectable now and is seven years older than the Super Famicom. I don't see the passing of years relegating the system any further. The system itself broke too much ground and had too many special games simply to be swept up and lost in time."

At the most recent count the Super Nintendo system had sold over 46m units worldwide. After the final release in 1999 it was reported that 377.5m games had been sold (not including secondhand titles) with *Super Mario World* selling over 18m of these.

The collectables

The SNES collector's scene is more transient than most. While stalwarts such as *Final Fantasy III* and *Secret of Mana* command stale prices, most of the rare Japanese titles vary massively in ending price from auction to auction. Rare and excellent titles such as *Actraiser 2*, *Whirly* and *Metal Warriors* can be bought for very little if you pick the right week. Towards the end of the Super Famicom's life titles were sold for a large

amount at retail in Japan and so profit for original importers is scarce (eg *Seiken Denstu 3* retailed at ¥11,400 (£60)). It is worth noting that some chains (CEX included) are prohibited from selling all imported Nintendo stock from GameCube right back to Famicom. As always the best deals are to be had on the Internet buying directly from US or Japanese suppliers. The prices quoted below are an indication only.

Chrono Trigger



US version: £70-100
Japanese version: £15-25
Original release: 11/03/95
Developer/Publisher: Square/Squaresoft

While the Japanese version sold over a million copies, the US conversion is relatively rare, of a high quality and highly sought after.

Final Fantasy II



US version: £80-100
Japanese version: (easy-type) £30-40
Original release: 19/07/91
Developer/Publisher: Square/Squaresoft

The US conversion of the Japanese *Final Fantasy IV* was dumbed down and censored and is very hard to find in good condition with all maps, etc.

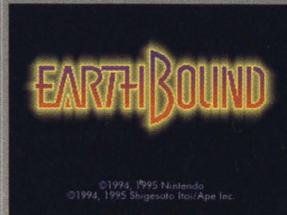
Final Fantasy III



US version: £70-100
Japanese version: £30-40
Original release: 02/04/94
Developer/Publisher: Square/Squaresoft

Unboxed this will be worth a fraction of this price, but in mint condition Square's best pre-32bit epic is a jewel in any crown (*FFVI* in Japan).

Earthbound/Mother 2



US version: £40-60
Japanese version: £20-40
Original release: 27/08/94
Developer/Publisher: Ape Studios/Nintendo

The dry self-deprecating parody of Japanese RPGs in *Earthbound* is lost on many young Americans (see gamefaqs) but it is both hilarious and polished.

Super Mario RPG



US version: £50-80
Japanese version: £15-25
Original release: 09/03/96
Developer/Publisher: Square/Nintendo

This was the only time the two great companies collaborated in coding. And the rip-roaring story has lost none of its shine.

Dragonball Z Hyper Dimension



European version: £45-60
Japanese version: £35-45
Original release: 29/03/96
Developer/Publisher: Bandai

For once an expensive *Dragonball* game that plays well. Regarded by many as the best videogame iteration from the franchise.

Akamajou Dracula XX



Japanese version: £50-80
Original release: 21/07/95
Developer/Publisher: Konami

A rare port of the PC Engine version this game was panned by fans. It's still one of the most highly sought after *Castlevania* games, however.

Kikikaikai/Pocky and Rocky



US/UK version: £15-25
Japanese version: £35-50
Original release: 22/12/92
Developer/Publisher: Natsume/Nintendo

All the titles in the *Kikikaikai* stable are brilliant 2D fun and this is best in twoplayer mode. The Japanese version is always collectable.

Yoshi's Island



US/UK version: £15-20
Japanese version: £30-40
Original release: 05/08/95
Developer/Publisher: Nintendo

Miyamoto-san's directional change for the *Mario* series provided a last slice of beautiful 2D coding before the world went 64bit.

Terranigma



UK version: £55-100
Japanese version: £25-35
Original release: 20/10/95
Developer/Publisher: Enix

At last: a rare quality RPG title the Europeans got that the US didn't. Finding a complete version of Enix's game on ebay will prove difficult.

Continued >

Rendering Ranger R2



Japanese version: £90–120
Original release: 17/11/95
Developer/Publisher: Rainbow Arts/Virgin

Multidirectional scrolling action shooter. Five upgradeable weapons and a varied level system make for a sought after title that rivals Treasure's finest.

Final Fight Tough



Japanese version: £40–55
Original release: 22/12/95
Developer/Publisher: Capcom

The third and final 2D *Final Fight* game on SNES is perhaps the most controversial. Fans either love or hate it but it still attracts high prices.

UFO Kamen Yakisoban



Japanese version: £35–45
Original release: 14/10/94
Developer/Publisher: Den 'Z

This cart was only available by saving up stickers on packages of Nissin Foods' UFO Yakisoba. You'll encounter Chopstick Woman, Mister Fork and the Pie Men.

Fire Emblem 5 Tracchia 776



Japanese limited edition: £90–130
Original release: 01/09/99
Developer/Publisher: Intelligent Systems

The limited edition of the last official SNES game is popular for obvious reasons. It's a tribute to Gunpei Yokoi's team that the series remains so compelling after his death.

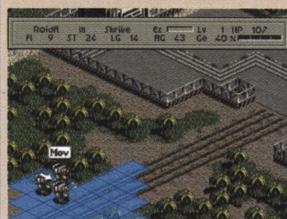
Bahamut Lagoon



Japanese version: £35–50
Original release: 09/02/96
Developer/Publisher: Squaresoft

One of Square's best strategy RPGs this can even hold a candle to *Final Fantasy Tactics*. The dragon feeding elements were innovative and the story compelling.

Front Mission



Japanese version: £30–50
Original release: 24/02/95
Developer/Publisher: Square/Squaresoft

The first in the series is considered by many to be the best. Playable in Japanese format and collectable thanks to Amano artwork.

Secret of Mana/Seiken Densetsu 2



US/UK version: £50–70
Japanese version: £20–30
Original release: 06/08/93
Developer/Publisher: Square/Squaresoft

One of the few quality RPGs to make it to the UK in the SNES era this is the 16bit action RPG as it should be: quirky, slick and full of character.

Super Metroid



US/UK version: £20–35
Japanese version: £35–45
Original release: 19/03/94
Developer/Publisher: Nintendo

The English language option, quality packaging and poor homeland sales make the Japanese version the most desirable. Rising in price since *Prime*.

R-Type III



Japanese version: £30–45
Original release: 10/12/93
Developer/Publisher: Irem

A stunning Super Nintendo-only update for Irem's horizontal flagship and a beautifully tough and crafted experience.

Harvest Moon/Bokujou Monogatari



US/UK release: £40–55
Japanese version: £15–25
Original release: 09/08/96
Developer/Publisher: Pack-In-Video

This RPG/dating/farm 'em up started the roller rolling for many who had never before considered growing carrots before.

RETROGAMES

Some Games are Better than SEX

We've all been there, first you get a craving for it, then you invest time, money and effort getting hold of it, but after only a few minutes of wildly jabbing your joystick you've had enough. The only thing which will get you interested again is maybe a completely different game, with better graphics or a bigger box! Such is the current state of mainstream gaming.

I've started taking an inhaler into my local games shop, in preparation of an apathy attack. Sure, there have always been bad games; I had a particularly nasty experience with Spawn of evil back in 1983, but enough of my trouser habits. Why are there now so many dull games, and sequels to dull games? Is it any wonder that hardcore gamers are returning to their gaming roots? To times when playing for points really counted, and games could be completed quicker than they took to load.

There are several distinct types of retro gamer. First there's the **nostalgic**, intent on buying everything they owned when they were a child, and then everything they wanted to own when they were a child. This gamer still wears a digital watch, and will eventually fill his house with arcade machines he played once on holiday.

Next is the **Player**, this cool gamer is an expert at playing games, the one with the six deep crowd around him on the Dance Dance Revolution machine. He can finish Strider with one life, though only if someone is watching. He knows the names of all the characters in Ninja Gaiden, and can physically show you the extra special moves in Super Street Fighter 2. He'll argue that the Saturn is better than the Playstation to the point of death.

How about the **Completest**, this gamer wants every game for the formats he collects for. If he already has them all, he wants them boxed complete, if they already are, he wants the original receipts. His insatiable appetite for games is balanced by his complete lack of interest in playing them. He doesn't like animals, and his favourite food is anything shrink wrapped.

Next up is the **Hobbyist**, this gamer likes thinking games and has been known to play The Sentinel wearing a blindfold. He fashions himself on Sir Clive Sinclair and hand built a replacement power supply for his BBC Model B. He preferred the Gobots to Transformers, and longs to have a best friend who's a robot called Dave, and one day he'll get round to building him.

Then there's the **Puritan**, this gamer sees games as art. He prefers to play Robotron and Alter Ego to Final Fight or R-Type, and pretends to know Jeff Minter personally. He spends evenings with friends showing them games without actually playing them, and despises anyone who plays Rez without the rumble pack strapped to their belly. In private he straps the rumble pack onto his cat's belly.

Finally, the **Dabbler**. Persuaded by friends and magazines, he dabbles on the fringes of the retro scene. He tinkers with emulation, and dreams of Mame on the Xbox. He's on the cusp of buying a Commodore 64, but doesn't think it will go with his carpets. He thinks he's got a better life outside of gaming but searches in vain for a girlfriend who knows how to cast spells in Dungeon Master without looking in the book.

Of course, most of us are a subtle blend of all the above. Just because we enjoy games well past their sell by date, doesn't mean we don't enjoy the best of what's new. My definition of a retrogamer (though I prefer Adult Gamer) is someone who's long history in the world of videogames prevents the sparkle of new technology hiding a lack of gameplay.

And a brief word for those publishers who've burnt the toe they dipped into the retrogaming pond. Ouch!! Trying to improve on the past just doesn't work, just look at Terminator 3. If you re-make a classic videogame, for example Defender, it has to be better than the original to attract the adult gamer. To bridge the gap to the mainstream gamer, it's got to be a revolution. And no, Defender 2000 wasn't it. Why set your sights so high? Instead of trying to exploit old games, research what makes them so good, and use the knowledge to come up with something even better. For example, Tetris, saviour of the Gameboy and the number one game with Mums, proves the size of the market for truly original games.

The adult gamer's thirst for original electronic experiences inevitably leads back to retrogaming, but wouldn't it be great if the diverse range of gaming which existed in the eighties could be born again. Western gamers will be looking enviously at the Japanese release schedules for some time, but how long before even their ingenious concepts are watered down for the mass market. Hopefully not before the release of Konami's PS2 vibrating underpants attachment. Dance Pants Revoluthong anyone? I told you, some games are better than sex.

So, same old message then, retrogaming is growing because unlike the past, our current games industry refuses to allow the many talented developers a free reign with design, they are quite literally eradicating originality. Long live Retrogaming!

Jace

Jason Moore is the founder of Retrogames, author of the Retrogames Magazine, and a self confessed retrogaming nerd. He's also written for many games magazines including Edge, C&VG and PC Zone. Check his regular Rant on the website.

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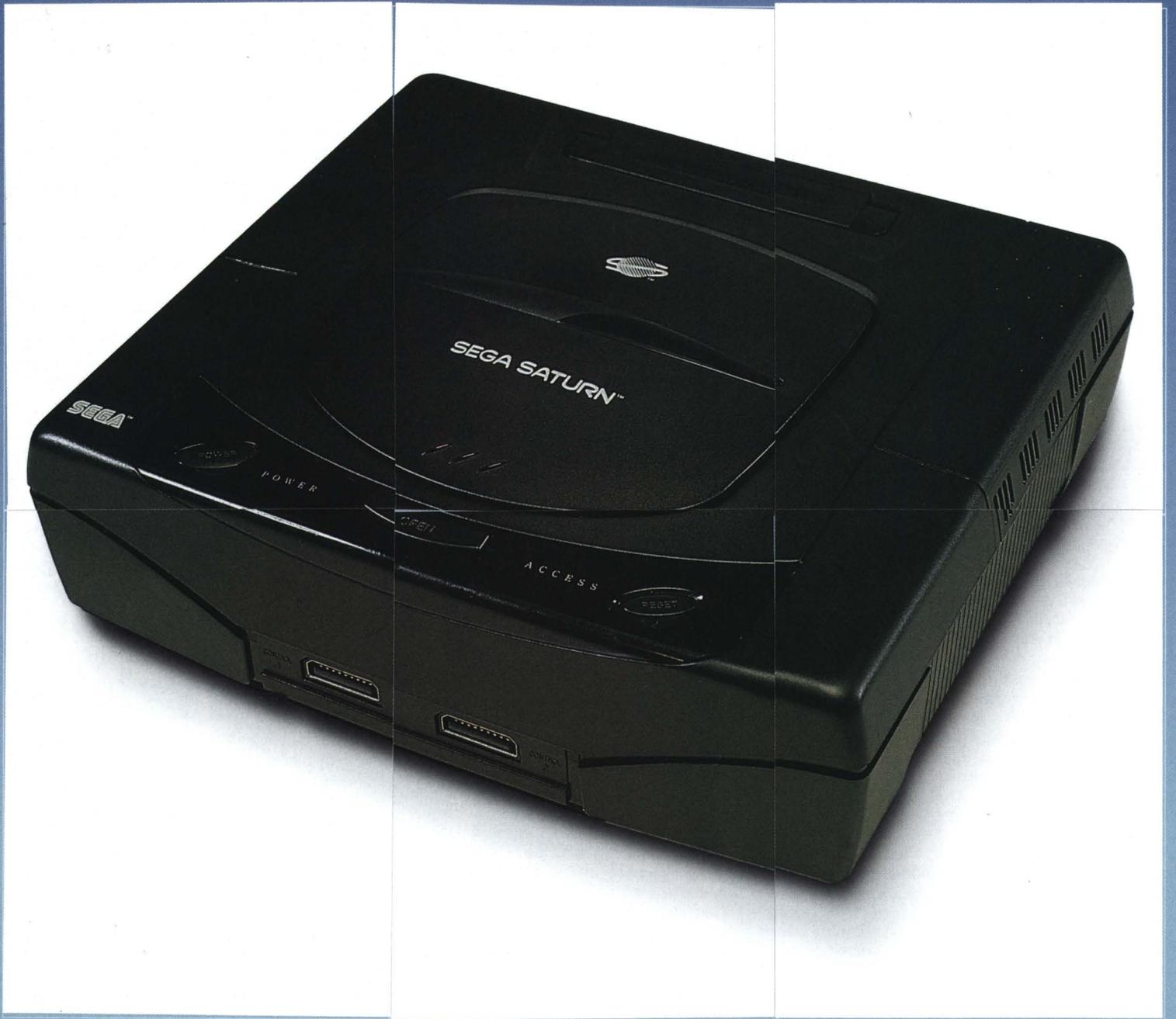
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A Twist in the Tale

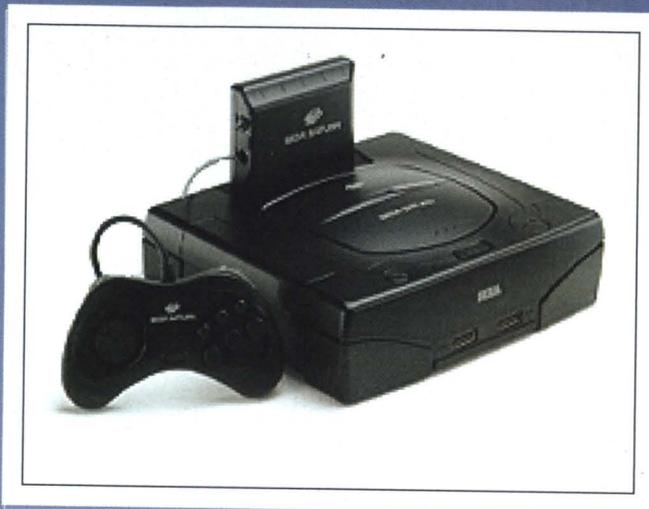
Sega's Saturn has scarcely been mentioned without the various prefixes 'ill-fated', 'misconceived' and even 'abortive'. But there has always been a contingent that has looked eastward, seen through the 3D fog and discovered Saturn's jewels of great worth. Although Sega still has cause for embarrassment, the Saturn system, in one sense, may have had the last laugh at the 32bit post mortem

Edge has always attracted the conspiracy theorists. At one time or another it has been accused by significant numbers of videogame consumers of being anti just about every system one cares to mention. But perhaps never more so than in the midst of the last console wars when there was a deluge of letters laying the blame for Saturn's failure in the west firmly at **Edge's** fingertips. The truth is **Edge** lives for great videogames and, although logos often give an indication of what lies beneath, they rarely affect great gameplay one way or the other. **Edge** staff past and present, as with all self-respecting mature gamers, will proudly place and play the Saturn's finest coding next to the more popular machines. And as more gamers begin to mature, so interest in Sega's prodigal returns.

Just as the advent and subsequent popularity of photography inspired the Impressionist movement, so the 3D games revolution has inspired its defectors. These are the people and innovators for whom a mainstream stampede towards something new provides the perfect excuse and space to go and examine what's going on in the other direction.

Retro's view now has scarcely changed since this appraisal in 1997, "The automatic assumption, that the advent of machines capable of shifting large quantities of polygons has marked the flatlining of the 2D advancement curve, is mistaken. In Japan, where 2D beat 'em ups are still enormously popular and sprite-based RPGs are forever in demand the situation is different; the Saturn is held in much

higher regard than in Europe and the USA. Releases from Capcom, SNK and Treasure, among others, are eagerly awaited; many Japanese otaku would find the almost exclusive obsession western gamers have with 3D surprising, even nerdish." But obsess over the 3D revolution our corner of the globe did, and still does. The fact remains that while Saturn excelled in 2D visuals, she barely finished the polygonal race. So the Saturn comes to bear all the trademarks of an irresistibly collectable system for the enlightened western gameplay junkie. A huge popularity and user base in the east led to highly respected titles from highly respected thirdparty developers not to mention Sega's own prodigies. The failure to establish a lasting foothold in the west meant Sony-eyed publishers overlooked many of these titles.



Sega's Net link was the parent of the Dreamcast's online capabilities and enjoyed mild success in Japan. The world league table of *Radiant Silvergun* scores is sorely missed



Victor's Saturn is a desirable item for collectors. The Panasonic GameCube is a current example of a thirdparty manufacturer being granted hardware production rights



Virtua Fighter 2 should have been one of the system's key titles to combat the simpler *Tekken*. However, playing the game now demonstrates how the 32bit era 3D medium has unfavourably aged compared to many of the system's 2D titles

That, in Japan, the system became synonymous with classic 2D shooting titles, eminently playable for the monolingual player, has helped turn the console into something of an importer's dream. The classic combination of excellent titles, scarce availability and huge demand (many Saturn titles are

"The classic combination of excellent titles, scarce availability and huge demand has helped drive prices up, and with good reason"

just as collectable in Japan as on ebay) has helped drive prices up, and with good reason. But how did a company whose Mega Drive had failed to be a profit in its hometown yet ruled in America bear a child who was to succeed in Japan but spectacularly fail elsewhere?

May 11, 1995 – 8.30am

Following a recent press release announcing the launch of Sega's new system on September 2, dubbed Saturn Saturday, Tom Kalinske, president of Sega gives a keynote presentation at E3. Building expectancy with talk of Sega's

past arcade success Kalinske casually announces the dangerously high launch price of \$399 (£249). To add silver lining to the pricing cloud he follows with the punch line: the console has already shipped. 30,000 systems that day had been distributed amongst just four US retailers: Toys 'R' Us,

Babbages, Software Etc and Electronics Boutique. Sony, in a pattern that was to become familiar, trampled upon what should have been Sega's moment. Steve Race was called to stage by Sony president, Olaf Olafsson, to announce a PlayStation launch price of \$299 (£186).

Sega had made several key errors in its supposed marketing brainwave. By limiting the distribution of systems to just four retailers for the first four months, some of the most loyal Sega outlets had been seemingly ignored. As a result more than one dropped Sega from its shelves altogether. The surprise launch was not backed up by triple-A software. Many publishers missed out on the all important launch period to establish their titles. The timing of the surprise launch was appalling too: the US summer videogames period



Light-sourcing and transparency were relatively difficult effects to achieve on the system for all but the most competent programmer (such as Treasure)



As always, collectable titles often depend as much on the developer's reputation as on the gameplay they offer. Raizing titles attract particular attention from the savvy fan



Treasure's *Silhouette Mirage* typifies the company's leftfield coding prowess. Needless to say the Saturn copes with the demands of this game far better than the PSone port



Two classy Saturn releases sharing a common use of the Saturn hardware: oddies of sprite scaling. Clearly this graphical routine is used to achieve different goals, however...

has always been notoriously dry. Finally the price point was too high for the intended market. The UK and European magazines looked on this Sega US camaraderie in horror and relayed all the painful details to an awaiting third territory public. That such elemental errors have been squarely blamed on Tom Kalinske and the US offices is not entirely fair. To explore the systematics behind the thinking we must go back to the extraordinarily successful Japanese launch.

November 22, 1994

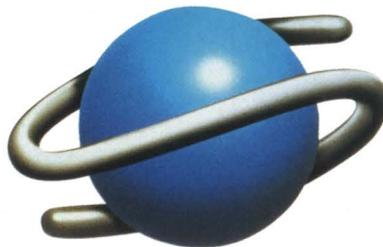
The Japanese anticipation for Saturn was in stark contrast to the limited success its recent forefathers had enjoyed. Sega shipped 200,000 consoles at a huge price of ¥44,800 (£234), their most expensive hardware ever. But comprehensive pre-

orders on stock at most stores had been completed months in advance so good sales were assured. As a result 120,000 pre-ordered and 50,000 off-the-shelf machines were sold on the first day. The Japanese press reported how, at one store, over 500 people had queued for two days. **Yu Suzuki's** groundbreaking *Virtua Fighter* had wowed the arcade goers by demonstrating that there was more to the fighting genre than SNK and Capcom. That the system came bundled with no software at such a high price and yet the fact the expensive *Virtua Fighter* disk (¥7,800 – £41) sold at a ratio of nearly 1:1 with the console is testament to its importance.

In the run up to Christmas, Sega was selling an astonishing average of 17,241 machines per day. Sega's marketing men earned their money by holding off Saturn's

restocks until December 3, 1994, the day of the PlayStation launch. PlayStation's birth looked inconsequential by comparison and the Saturn outsold it by a ratio of 2:1. By Christmas Day Sega had sold 500,000 units, a full 60 per cent more than Sony had managed (to put this figure in perspective note that it took Sega until 1997 to shift 500,000 in the US). A more successful birth one can scarcely imagine.

At least, this is what we've always been led to believe. A few discerning American industry watchers noted how Sega was using the industry practice of counting the number of consoles sold to retailers as the basis for its purported launch success. Although there is nothing fundamentally wrong with this it did mean that only the very observant saw that Saturn, though maintaining excellent shelf space, was not finding its



Tom Kalinske and Hayao Nakayama: the two key men presiding over Saturn's fate are either scorned or pitied by the history books



Konami's *Parodius* franchise found itself heavily milked on the Saturn. *Sexy* is the most competent, complete with added titillation



SNK ported many of its best titles to the system including the last two *Samurai Shodown* games. The box sets complete with extra RAM cart are the more desirable



The more violent sword-based fighter titles further evaded western release by featuring US-unfriendly red blood combined with traditional Japanese themes

way into quite as many homes as Sega would have us believe. So while Sony released figures demonstrating that as many as 97 per cent of the PlayStations that were being distributed to vendors were winding up in the living space of Japanese consumers, Sega hid the fact that 25 per cent of Saturns remained with the retailer. The reason behind this was simple: *Virtua Fighter* was the only triple-A game in the Saturn launch line-up for the Japanese buyer. The production delays *Panzer Dragoon* and *Daytona USA* were experiencing fostered consumer frustration which helped boost PlayStation sales. Other than helping Sony sales these delays screamed silently of one thing: hardware issues.

Crucially, Sega CEO, Hayao Nakayama overlooked these points. The fact so many systems had been sold was all that

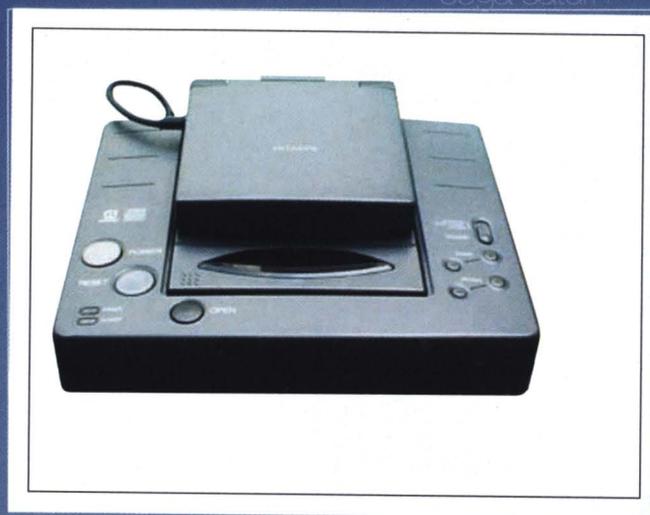
mattered to the desperate leader at this stage; that the money had come from retailers and not consumers was apparently of little consequence to him at this stage. Nakayama-san believed his own PR department's hype and this in turn resulted in the disastrous western launch. Gradually deteriorating relations with Tom Kalinske meant Nakayama-san and the executive board decided to take Sega US matters into eastern hands.

Before the release of Saturn, Sega had been suffering financial losses by supporting the myriad platforms it had on the western shelves: Mega Drive, GameGear, Nomad, Mega-CD, Mars (32X), Pico and 32X CD. While Kalinske had followed the traditional American axiom of spending your way into profit with the Mega Drive and 32X, Nakayama-san

followed traditional conservative Japanese business practice and decided Kalinske's maverick tactics were to be overruled for the launch and development of the new machine. He ordered Kalinske to drop all the previous Sega hardware (at the time doing surprisingly well in the US but failing resolutely in Japan) and concentrate solely on Saturn. Crucially, with this gesture Japan was effectively neutering Kalinske and his previously successful US team. If Nakayama-san had heeded Kalinske's warning and kept Sega's 16bit software ventures going for one more year, leasing out hardware to the interested thirdparties, the potential earnings would have gone a long way towards making up the huge operating deficits that Saturn was already incurring on Sega. Instead, Nintendo got the 16bit



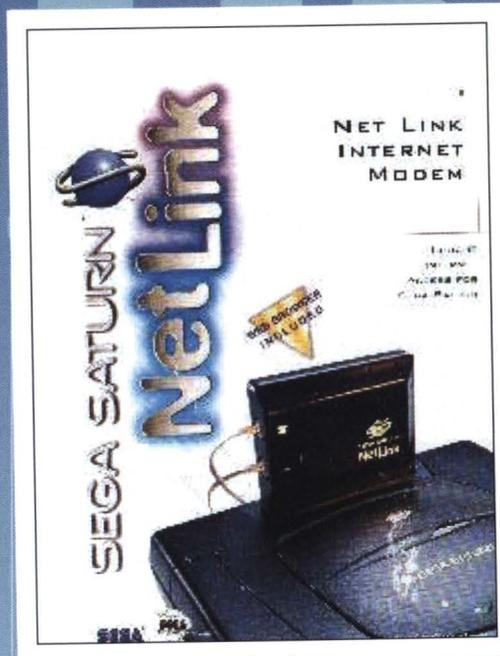
Boxart for the Pal releases, although undoubtedly a poor reflection of the Japanese originals is arguably superior to the heavy-handed American approach



Hitachi's Hi-Saturn came with hundreds of add-ons (see Directions in the stars). The compact screen peripheral is reminiscent of the PC Engine LT's extravagant design



Working Designs was lined up to release the bravest and best of Japanese titles before the company got fed up with Sega and left



Sega was pioneering Internet console play before Dreamcast was even a sketch on a piece of paper. It didn't really catch on, though

market all to itself for another year and outsold both Sega and Sony by the end of 1996. The decision to cut off support for all systems other than Saturn was at once the best decision Nakayama-san could have made for the Japanese market and the worst decision he could have made for the west.

The Saturn's confusing maze of circuitry has been well documented but it is, ironically and indirectly, the way the system was built that alienated the western mainstream back in the day and yet now is attracting so many collectors. Debate still rages over whether Saturn was ever more than an exclusively 2D console with 3D afterthought.

The truth is, as ever, more complicated. Sega's plans for the machine began in 1992 albeit under the codename, GigaDrive. The system was given CD-Rom based storage

and was specifically designed to better the 3DO, the only other 32bit console available at the time, by modelling itself on Sega's Model 1 arcade hardware. Like almost all of Sega's arcade and console systems, Hideki Sato and his Sega engineering teams developed GigaDrive. A number of working GigaDrive prototypes were built during 1993 and as the system reached the latter stages of testing the name was changed to Saturn. But this GigaDrive was a very different machine to the Saturn that launched two years later.

In December 1993 Sony announced the system specs of Ken Kutaragi's new PlayStation. Importantly, it alluded to 3D graphics that were as good as or better than anything that Sega's arcade offerings or high-end PCs had to offer boasting the ability to do both complex 2D and 3D processing.

Legend has it that when Nakayama-san obtained a copy of the design specs for Sony's new PlayStation and compared them to Sega's own Saturn, he called his entire R&D department to Sega headquarters for an emergency meeting. One Sega staff member at the meeting recalled Nakayama-san "was the maddest I have ever seen him." The original specifications of the Saturn were designed around the 16MHz NEC V60, a traditional CISC-type CPU that had been the first 32bit microprocessor widely available in Japan. In contrast, the PlayStation was built around a 33MHz MIPS R3000A, a faster and improved version of the R2000 RISC-type microprocessor that Silicon Graphics had been using in its SGI workstations for years. Sony had long been working with and manufacturing MIPS processors, so its engineers



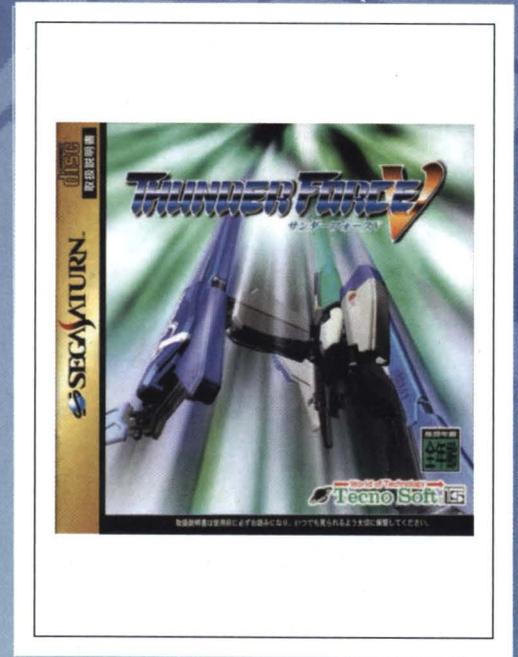
'The ultimate gaming system'? The packaging would have you believe so. Pride of place in many Saturn owners' line-ups was *NIGHTS*, which was also bundled with a joypad



Out of the *Bomberman* titles released in Japan only *Saturn Bomberman* has the tenplayer option. There was even a themed *Bomberman* multitap and controller released to coincide



Atlus was responsible for publishing many of the system's finest unknown treasures. ESP gamers and collectors alike can be thankful to these broad-minded publishers for helping to release definitive titles in dying genres from independent developers



The last in Technosoft's underrated *Thunder Force* series narrowly missed out on a western release from Working Designs

were fully aware of both what the R3000A could do and how it could do it. This knowledge allowed Sony's public relations department to hype the console's theoretical limits sky-high. As given, these PR figures (66m instructions per second with a theoretical maximum of 1.5m flat-shaded triangular polygons and 500,000 texture-mapped and light-sourced polygons per second) were more than double the maximum capability of Sega's vaunted Model 1 arcade board, and so dwarfed the prototype Saturn specs.

The result of Nakayama-san's emergency meeting was a commission to fix the Saturn so it could compete with Sony in less than a year. Hideki Sato handpicked a team of 27 Sega engineers, known as the 'Away Team', to immediately begin work on creating a redesigned Saturn. There was no

time to commission new chips and parts and so Sega had to look to existing components. It was this set of circumstances that led to the team opting for the dual processor. By using the two cheaper chips the team intended to quickly attain 32bit power in an affordable manner. Strangely Nakayama-san himself chose the parallel Hitachi SH-2s, it later being rumoured this was a favour to an old golfing buddy.

Rarely has a pair of processors been the subject of so much playground discussion as the Saturn's. Importantly, these choices were in direct opposition to the wishes of Kalinske who had already submitted a proposal. They had contacted Silicon Graphics, one of the companies behind the PlayStation's 3D graphics capabilities, and had come up with an alternative: a single-chip simplistic design that they were

convinced could compete with Sony. To their surprise, Nakayama-san overruled them in favour of the Away Team.

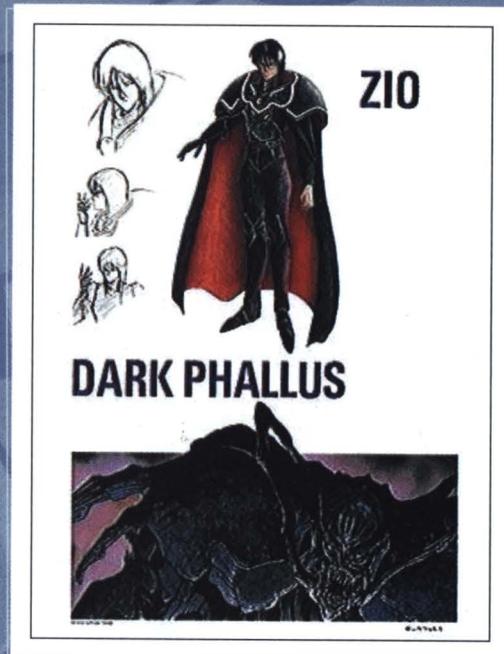
Such technobabble may sit at odds in a feature concerning the Saturn's collectability, but the way the chips work is of utmost importance to understanding why Saturn was so good at 2D and mostly failed with 3D. The VDP 1 chip is primarily responsible for sprite generation – the building blocks of 2D graphic creation. Polygon generation could only be accomplished through manipulation of the sprite engine. The VDP 2 serves as the Saturn's background processor. Certain special effects such as texture transparency and playfield rotation are handled here. Where the Saturn does have trouble, is in the generation of these effects in a 3D environment.



Sega's recent port of the first three *Phantasy Star* titles to the Game Boy Advance has highlighted the fact that this could have been a success in the west



Saturn was so successful in its home territory that new gems are still being discovered by the import hungry. *Princess Crown* is a fine example



One wonders quite which thesaurus Reiko Kodama and the *Phantasy Star* art team were using for the *Collection* release



Everything should have been better for this port of the PlayStation classic. Even though Konami's commissioning of one of its less experienced teams may have resulted in this inferior offering, the game still demands high prices for the extras it holds

Along with lightsourcing, 3D transparency must be generated through software code. This is not a problem if the developer is familiar with writing Saturn software or was provided with the necessary programming libraries. But while Sega was one of the few players outside of academia who had experience with working with parallel processing this was not so for the rest of the videogame industry.

Many developers would eventually content themselves with mainly using one of the chips, limiting the system resources and gaming possibilities. Steve Palmer, creator of *NBA Jam*, summed up the juxtaposition between the Sega and Sony approach to the developers, "To learn to program the Saturn was to learn the machine. To learn to program the PlayStation was to learn C. Learning C is much easier than

learning the hardware of a new machine, and with the Saturn, there was a lot of hardware to learn. The same would have been true of the PlayStation, except you didn't need to learn how to talk to the [hardware]. The libraries took care of that. Sega's approach was to release hardware documentation for every aspect of the Saturn. That was understandable – it was what programmers were used to, but the industry had changed: the 'big boys' had moved in and time is money."

Yu Suzuki famously commented, "One very fast central processor would be preferable. I don't think that all programmers have the ability to program two CPUs – most can only get about one-and-a-half times the speed you can get from one SH-2. I think only one out of 100 programmers is good enough to get that kind of speed out of the Saturn."

So in terms of western developers, western 3D consumer tastes and western retailers, the Saturn was dead in the water before the end of the first year. Only no one knew it yet.

E3 – May 18, 1996

Sony now commanded 80 per cent of the new console market. Sega spokeswoman Angela Edwards was carrying signs trumpeting Sega's \$300 (£187) price adjustment for the Saturn when a Sony employee approached her. He looked at her sign and sighed, "You are pathetic." That day Sony executive vice president Jim Whims announced that the price of the PlayStation would be reduced to a mere \$200 (£124). Sega could absolutely not afford to match that price but had no choice. Twelve days later Sega of America officially sacked



Capcom plodded on releasing titles long after the Saturn had stopped breathing. The fact that these titles are often stunning and can easily hold a candle to the later DC ports is testament to both Capcom's in-house programming skills and Saturn's raw underhood power



The Saturn port is the one to go for if Neo-Geo prices make your bank manager chuckle. Slick loading and accurate sprite rendition make this the CD-based version to buy



Like the Dreamcast after it, Sega continued to release special edition versions of the hardware right up to the end. The smoky 'This is Cool' Saturn is particularly attractive

the marketing firm of Goodby, Berlin, and Silverstein – creators of Sega's famous 'Sega scream' ad campaign – on the direct orders of Sega CEO Hayao Nakayama. Little over a month after that, on July 15, Sega of America president Tom Kalinske officially tendered his resignation. When company founder David Rosen followed suit the next day in support of Kalinske, resigning his long-time chairmanship of Sega of America, Nakayama-san resigned his own position as co-chairman of Sega of America. The heads of the company had come crashing down and the wreckage had crushed the Saturn everywhere but in its homeland.

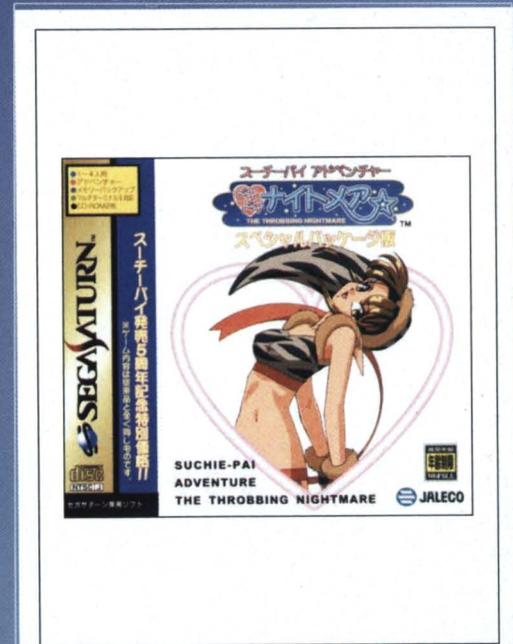
The significance of this abbreviated history to the collector's scene is that it demonstrates how the conditions were laid for the system to attract such interest today.

Nakayama-san's abandonment of all the 16bit machines in Japan in late 1994 allowed the full resources of the company to be ploughed into Saturn ensuring its silver medal in the hardware race in Japan. This, in turn, meant the system played host to a slew of excellent titles late in its life which may not have come to be had Sega Japan spread itself too thinly. The dedicated 2D architecture meant the shoot 'em up genre was advanced long after it had gone out of fashion on other systems. In terms of the west, the neutering of Kalinske and puppetry of the Japanese executives resulted in the stillbirth of the machine in the face of Sony – meaning all the late great titles never made the journey from the land of the rising sun. All the conditions for Saturn's collectability in current times were being laid eight years ago.

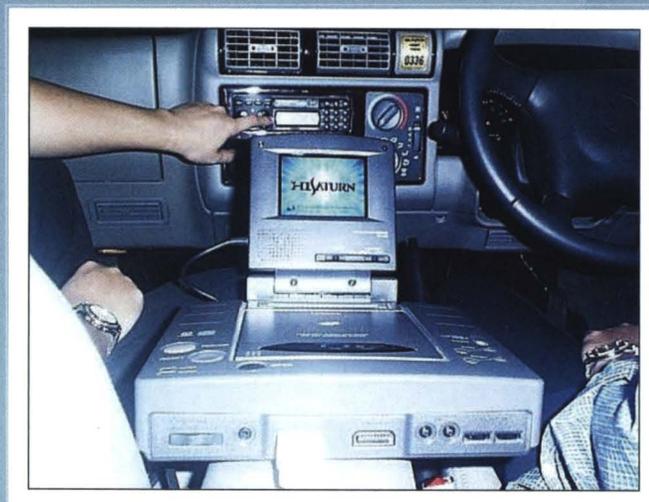
Lee Mallabar, 27, has been working as a buyer for videogameimports.com for nearly 12 years now and has been collecting Saturn since its Japanese launch. As Saturn is one of the store's most popular systems Mallabar is well placed to view its market trends. **Retro** picks his brains regarding the theory behind the collecting twist in the Saturn's tale. "I have been collecting Saturn as long as any man. Travelling to Japan for the Saturn's launch in an attempt to buy as many units as possible was a fantastic experience I'll never forget. Just seeing *Virtua Fighter* running on the screens outside the Japanese stores was very exciting. There was such a buzz about the system and it's great to feel some of that fervency surrounding the machine return in recent times, albeit in the collecting form. There's currently a lack of



Psykyo's 32bit shoot 'em up games are almost invariably of the horizontal scrolling variety providing respite from the multitude of vertical arcade ports on the Saturn. The bonus disk included with *Sengoku Blade* features a welcome inventory of all its games ever released



The level of nudity in the hentai titles is expressed in the colour rating system. *The Throbbing Nightmare* hits the yellow 'danger' level



Something of a holy grail for Saturn hardware collectors, this in-car curio can fetch prices in the thousands when it occasionally surfaces (see Directions in the stars)

Directions in the stars

Sega licensed the Saturn specifications out to the principal component manufacturers so they could build their own clones of the Saturn hardware. Japanese licences were given to JVC Victor, Hitachi and Yamaha. This was not the first time Sega used this marketing model, as clones of the Mega Drive and Mega-CD hardware were also produced previously.

Other than the original grey Japanese Saturn there were: two versions of the white Saturn; the Hi-Saturn (Hitachi manufactured with an MPEG card added); two versions of the V-Saturn (JVC-Victor manufactured); the Skeleton Saturn (with 'This is cool' logo - 50,000 produced) and the Blue Skeleton Saturn (released on March 25, 1999 in a promotional tie-in with ASCII's *Derby Stallion* Saturn game - 20,000 produced).

The Rolls Royce of the Saturn hardware versions is undoubtedly the Hi-Saturn Navi (left). Also made by Hitachi, this model had a low, square and completely flat profile, and came with an add-on LCD monitor. What made the system so interesting was that it included a modem and a GPS receiver for use as a navigation device in luxury cars through a joint deal with Nissan. The system is as rare and desirable as they come.

old-style genre games. People still want and love these games, even if they seem to be hiding in the closet. By word of mouth, through the Internet, they begin to learn about the Saturn, and slowly realise it wasn't the pathetic loser they thought it was at the time. Saturn, in my opinion, has now

"There's currently a lack of old-style genre games. People still want and love these games, even if they seem to be hiding in the closet"

become popular because of the shooters. This genre doesn't get represented anywhere near as frequently these days.

"Towards the end of the Saturn's life shooters were becoming an exception on the release schedule, whereas for many years before this period, it was probably the most

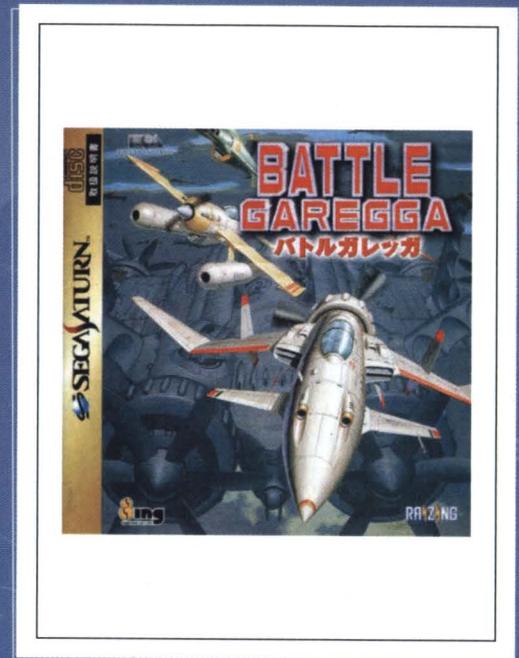
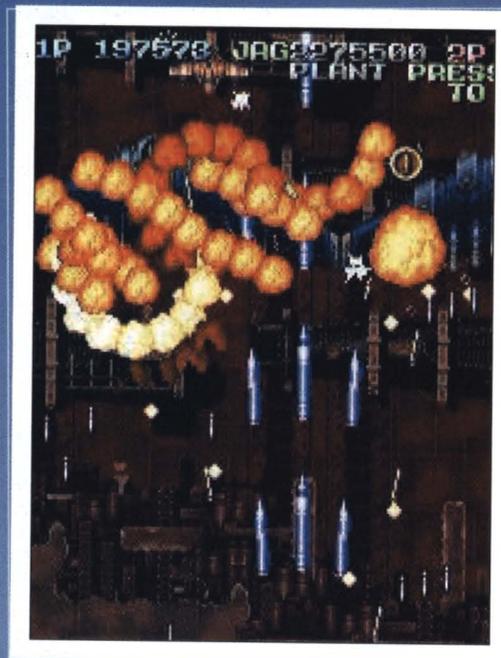
supported genre. There are a lot of people out there who love 2D shooters and always will. Shooters are loved because they are so pure, and gamers can lose themselves in simple gameplay, which relies so much on reflexes.

"As to why Saturn is the weapon of choice for collectors

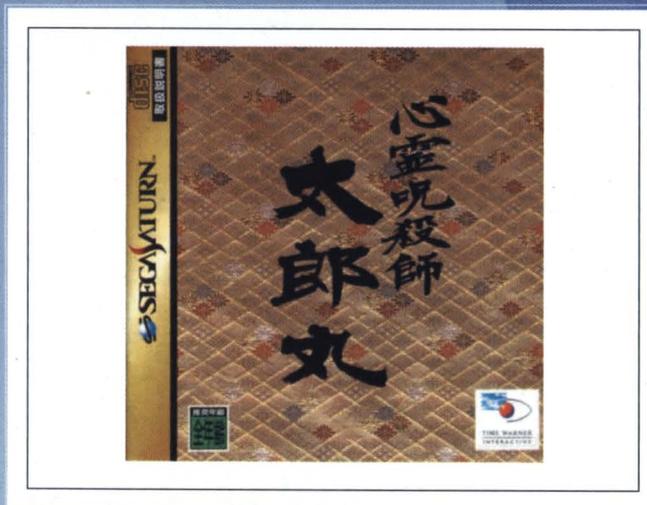
looking for these genres, I'd say that generally it offers lots of different styles of retro gaming in its most advanced and impressive form. In that sense, as a console, it really only has the Neo-Geo as a competitor. PSone, Dreamcast and PS2 offer tastes of all of this stuff, but you can get it all in

abundance with the Saturn. By that I'm not putting down older consoles like the PC Engine and Mega Drive, but shooters on Saturn usually look better, possibly sound better, and often involve more intricate and intense gameplay. The intensity of *Battle Garegga*, for instance, could never have been produced on the 16bit systems."

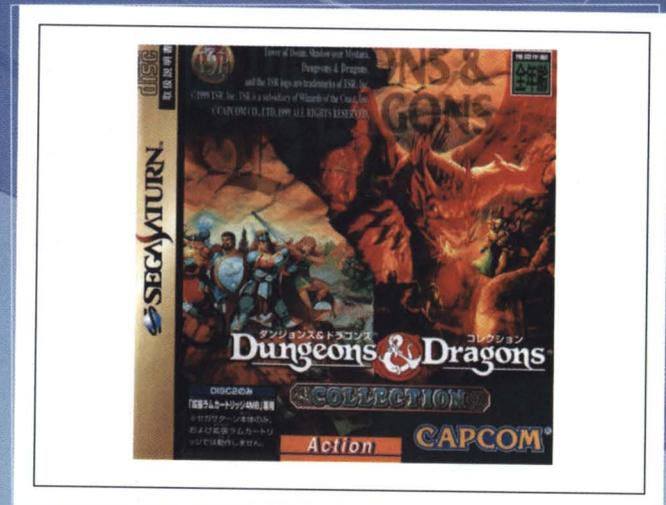
There has been a noticeable rise in the sale of import Saturn titles over the last three years. **Retro** wonders if this is still on the rise. "To be honest I think it peaked somewhere over the last 12 months. Lots of people got very obsessive collecting Saturn games over the last few years, and the fact that specialist retailers and, obviously ebay, offered such a huge range of titles, meant that people with a lot of money have been able to actually finish their collections. Of course,



The demo of *Battle Garegga* supplied on the re-release of *Soukyugurentai* enticed many to hunt down this lovely title



Taromaru is possibly the rarest title on the system. Next to *Stellar Assault* it demands the most consistently high prices – mostly because there are only 5,000 copies to go around



D&D's monetary worth perhaps obscures its actual value in terms of gameplay. Even at the time of release these ports felt outdated and the loading times are unforgivable

there are always new people coming into the scene, but not quite as many as there were 12 months ago.

"Having said that, the winter period is traditionally slow for retro games as there are normally so many new titles being released for the current systems. In terms of whether the bottom is set to fall out, personally, I don't see why the prices won't steadily rise over the years. Because of eBay, some prices have risen faster than they otherwise would have. Right now, the demand is lower than usual and there's been over supply pretty much all year, but when the dust settles, the system will still be collectable and in demand".

Retro ponders whether there is a discrepancy between the title that is most often asked for and the title that is actually hardest for a collector to obtain. "Traditionally, and

predictably, I am asked to supply *Radiant Silvergun* most often. In 2001, we sold over 50 copies of that game which, at the price of a GameCube, is no mean feat. Demand for that title has slowed now, mainly because of the demand over the last couple of years and the intensity of eBay auctions has pushed up the price. Even some Japanese retail stores are charging 50–100 per cent more for the game now than they were two years ago, which means that we have to charge more for it that we used to, and so sales have slowed down.

"In terms of the hardest to locate title, probably *Shinrei Jusatsushi Taromaru*, a game Time Warner released just before it closed its Japanese operation. It was directed by one of the Treasure staff so holds interest for many collectors. I think there were only 5,000 copies produced which naturally

drives up prices. In my opinion there are far rarer titles such as *Stellar Assault*. The difference is that *Taromaru* has a reputation and so is sought after, while hardly anybody owns *Stellar*, so the word doesn't get spread.

"High prices are based on the simplest of value principles: supply and demand. If *Taromaru* had sold a million copies in Japan, it would be selling for under £20 now. In the same way, if *Panzer Dragoon Zwei* had only sold 5,000 copies, it would be worth over £100 today. I'd say *Radiant* and *Taromaru* are two of the titles we make the least profit on. They're so hard to get in Japan now, and with *Radiant* especially, they can sell in five minutes of being on a store shelf in Japan. Even if one only makes £10 on a sought after game like that it helps to make any seller look good."



The DC and GC releases of *Ikaruga* have done little to dampen the soaring prices or eminent enjoyability of *Radiant Silvergun*. Still the traditionalist's weapon of choice



Stellar Assault is one Saturn title that is as collectable in its homeland as it is abroad. Released in extremely limited quantities you can expect this game to bring out all the snipers if and when it finds its way onto eBay

Retro wonders where the retailers see the Saturn collector's niche in five years' time. "Well there won't be the frenzy like there has been over the last year or so, but overall I see it being similar to the way it is now. However, Japan is going to run dry of these in-demand games one day, so it's inevitable the average prices will have risen significantly by then. Unlike the Neo-Geo scene which is highly evolved in terms of western collector knowledge the Saturn has so many titles that it's hard to know what had the smallest production run or what is most valuable. The scene is still discovering games we've never seen before and so there is a lot to attract the curious."

The last official figures regarding the market performance of the Sega Saturn were released on September 10, 1998.

Sega had sold approximately 10m consoles worldwide – about 1m in Europe, about 2m in North America, and the rest in Japan and Asia. Sega Europe suffered the least casualties in the aftermath, but Saturn's roots were the shallowest here. From 1993 (year of greatest profit) to 1997, Sega had gone from a net yearly profit of about \$230m (£143m) to a net loss of about \$389m (£242m). In **E51 Edge** prophetically summed things up for today, "The Saturn, casualty of the second-generation 32bit console war, is neither 3DO or Jaguar. It boasts arcade conversions that Namco rivals but rarely beats, classy RPGs and support from offbeat developers such as Treasure. It is, in short, the hardcore gamer's machine of the '90s. In this sense, Sega's failure is also its greatest triumph."

Continued >

What they think now

"You can have the best games in the world, you can have the best machine on the market, but unless you roll the two together with solid marketing and add to it a wide range of creative software from a varied mix of talented developers, you won't succeed."

Mark Hartley, former marketing director of Sega Europe

"I think the key to success in videogames nowadays is how quickly and firmly you form the business model and how the manufacturer is obliged to launch hardware at the right price, with the right timing, and with the right marketing. This encourages the thirdparty community to develop games for the platform. Thirdparty games follow after the initial launch. Then, we must appeal to the right user, and we also must review the price point of the hardware. We also need games to appeal to the right users and various publishers, and then also we need an overall marketing strategy. I think Sega didn't make this business model in the right way. This is the reason we've been behind our competitors... I think they thought our business model was not attractive enough to them for making a huge investment... maybe because of our huge success with 16bit machines, we paid less attention to the importance of the reliance on thirdparty publishers."

Kazutoshi Miyake, former chief operating officer of Sega Europe

"We have lost some credibility among our Saturn users – even in Japan – because they have seen the PlayStation become the dominant force [in the worldwide videogame market]. In the past, I think that Sega has maybe been arrogant."

Sega CEO Shoichiro Irimajiri successor to Nakayama-san

"I really think Saturn's failure was a combination of things. Bad timing, high price, launch software that didn't sell the hardware, no Sonic at launch, limited retail distribution, and [the] 32X didn't help out our position at retail, with the consumer or with the developer/publisher community. I don't think any one thing was the issue – it was the layering effect that these things had on the business. Remember, no launch has ever been perfect for anyone. You can hide a lot of mistakes by overcompensating in different areas."

Bernie Stolar, successor to Tom Kalinske

"The bottom line is that Sega was too loose with its money. No matter what I told Nakayama-san, he just brushed me off, saying, 'Okawa-san, you do not know the gaming business.' What I do know is business. [Nakayama-san] may have known games, but he did not know business."

"As a result, Sega kept going after profit/loss and did not consider its balance sheets. They did not think about cash flow at all. The business management [of Sega] left me totally dumbfounded. One of the basics of business is that you hand over the product to buyers and receive money in return. Unfortunately, our management personnel did not even seem to know this basic fact. That is why their attitude was so nonchalant, even if Sega was accumulating debt. They had no concept of production schedules or product management on their minds. They thought neither of balance sheets nor cash flow. They knew a lot about games, but they didn't know how to run the company."

Sega chairman Isao Okawa

"Actually this may sound unfair, but I do blame **Edge** in part: I feel that its constant talk of Saturn's apparent underpower filtered down to other supposedly lesser-informed media. But I don't expect to see that view in this feature."

Lee Mallabar, buyer, videogameimports.com

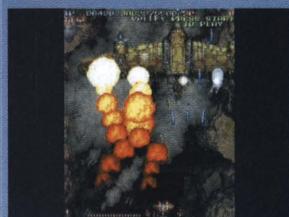
The collectables: shoot 'em ups

The genre the Saturn is most famous for among collectors. Many of the greatest arcade shooters appeared on the Saturn-based Titan (ST-V) arcade board so the ports just kept coming, ensuring the system is the place to go for all 2D shooter fans.

Incidentally Working Designs was originally due to release some of the best games in the west. Managing director Victor Ireland, explains, "Soukyugurentai, Thunder Force 5, Thunder Force Gold Pack 1&2, Hyper Duel, Blast Wind and Sengoku Blade were all

licensed and ready to be announced when it became obvious that Mr Stolar and Co. were out to trash the Saturn. We canned all deals." In truth there are many more titles we could mention here, but here are ten of the finest...

Battle Garegga



Japanese version only: £35-50
Original release: 26/02/98
Developer/Publisher:
Raizing/ Electronic Arts

Recently has become one of the most popular examples of the genre, especially for the relative newcomer who already owns *Radiant Silvergun*. Expect its value to steadily rise.

Radiant Silvergun



Japanese version only: £70-110
Original release: 23/07/98
Developer/Publisher: Treasure/ESP

The legendary progressive shooter. A sprawling game that showcases the best Saturn programming ever seen. Perhaps the import title most wanted by the most people.

Kingdom Grandprix



Japanese version only: £20-35
Original release: 14/06/96
Developer/Publisher: Raizing

Stunning and rare vertical shooting/racing hybrid. That Raizing is the developer increases the desirability to the knowledgeable.

Soukyugurentai



Japanese version only: £20-35
Original release: 07/02/97
Developer/Publisher:
Victor/Electronic Arts

Another rising star this shooter is more conventional in its space thematic.

Dodonpachi



Japanese version only: £25-40
Original release: 18/09/97
Developer/Publisher: Cave/Atlus

Sequel to Cave's Arcade to Saturn 1996 shooter *Donpachi*. With huge power-ups and frantic onscreen action, the game is highly esteemed by many connoisseurs.

Thunder Force V



Japanese version only: £30-45
Original release: 11/07/97
Developer/Publisher: Technosoft

Technosoft has always had a vociferous following with the *Thunder Force* series. The special pack version is especially desirable.

Strikers 1945 Part 2



Japanese version only: £25-45
Original release: 10/22/98
Developer/Publisher: Psikyo/Atlus

The arcade stalwart *Strikers* series reaches its zenith with this Saturn port. A lovely item for the many Psikyo collectors and players alike.

Sengoku Blade



Japanese version only: £35-60
Original release: 22/11/96
Developer/Publisher: Psikyo/Atlus

Using the same engine as *Strikers 1945 Part 2* this game is the sequel to the arcade exclusive *Sengoku Ace* (1993).

Sexy Parodius



Japanese version only: £20-35
Original release: 01/11/96
Developer/Publisher: Konami

Konami's very own parody of *Gradius* reaches its zenith in this beautifully animated iteration.

Stellar Assault SS



Japanese version only: £70-120
Original release: 26/02/98
Developer/Publisher: Sims

An update of the 3D 32X *Shadow Squadron* and perhaps the rarest of all the Japanese shooters.

The collectables: fighters

Capcom's long-standing support of the Saturn ensured some of the greatest ports of the '90s found their way onto the system – albeit often requiring the 4Mb RAM upgrade cart. If this list seems dominated by Capcom's children, that's

because the company ruled the fighting genre roost throughout the system's life. Where a RAM cart is indicated the price approximation is for the RAM cart boxed version of the game...

Marvel Vs Street Fighter (+4Mb RAM)



Japanese version only: £20–35
Original release: 22/10/98
Developer/Publisher: Capcom

The last of the Vs titles to appear on the Saturn. Loading times are so short you'd be forgiven for thinking this was a cartridge-based port.

Street Fighter Alpha 3 (+4Mb RAM)



Japanese version only: £35–50
Original Release: 06/08/99
Developer/Publisher: Capcom

Those who have tried them all generally consider this version of SFA3 the best. No loading times and the Saturn pad/stick enhance an already distinguished port.

Pocket Fighter



Japanese version only: £15–30
Original release: 09/07/98
Developer/Publisher: Capcom

An amusing offshoot to the grown-up series, Capcom took the character models from *Super Puzzle Fighter 2* and made a fighting game out of it. Great, if limited, fun.

Virtua Fighter CG Portrait Collection: The final



Japanese version only: around £50
Original release: n/a (1996/GS-9073)
Developer/Publisher: Sega

Very rare gold disk which was mailed to people who could prove that they had bought the entire *Virtua Fighter CG Portrait Collection* – all ten disks.

Groove on Fight (+1Mb RAM)



Japanese version only: £20–35
Original release: 16/05/97
Developer/Publisher: Atlus

Poor framerate, long loading times and derivative mechanics hamper but don't stop this title from being a relatively enjoyable alternative to Capcom's output.

Waku Waku 7 (+1Mb RAM)



Japanese version only: £20–40
Original release: 20/06/97
Developer/Publisher: Sunsoft

The sequel to the tired *Galaxy Fight* is simply fantastic. Although the Neo-Geo iteration soundly trumps this, there is still much fun to be had here.

Dungeons & Dragons Collection (+4Mb RAM)



Japanese version only: £50–70
Original release: 04/03/99
Developer/Publisher: Capcom

This two-in-one package showcases two of Capcom's Japanese-only action RPG arcade games from the early-'90s.

Samurai Shodown 4 (+1Mb RAM)



Japanese version only: £15–25
Original release: 02/10/97
Developer/Publisher: SNK

Debate rages on between over which SS game holds the crown. In truth, to all but the hardcore the gameplay tweaks will seem petty.

Metal Slug (+1Mb RAM)



Japanese version only: £45–70
Original release: 04/04/97
Developer: Nasca/SNK

This port of the extremely sought after MVS game is highly superior to that of the PlayStation due to the 2D capabilities of the machine.

Dracula X



Japanese release only: £30–45
Original release: 25/06/98
Developer/Publisher: KCE Nagoya/Konami

A disappointment despite delivering an extra playable character, new areas to explore and many weapons not seen in the PlayStation version.

The collectables: RPGs

Another blow to the Saturn offensive was the lack of a *Final Fantasy VII* rival, although with both Square and Enix battling for the other side this was always going to be too much pressure

for GameArt's meagre shoulders. Sega compounded matters by failing to port many of the games it did have. Those few that leaked across the seas are generally sought after titles...

Panzer Dragoon Saga



US/UK version: £45-65
Japanese version: £10-20
Original release: 29/01/98
Developer/Publisher: Team Andromeda/Sega

Too little too late in terms of this title's wider significance to Sega's Saturn it is nevertheless a thrilling example of how skilled teams could draw the best from the machine.

Dragonforce



US/UK version: £35-45
Japanese version: £8-15
Original release: 29/03/96
Developer/Publisher: SoJ/Sega

A strategy RPG to rival *Final Fantasy Tactics*. Multiple storylines and excellent execution even resulted in a successful eastern sequel criminally left behind for the rest of the world.

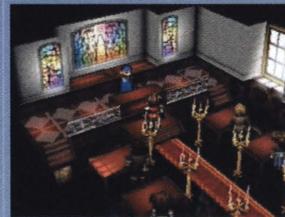
Guardian Heroes



US/UK version: £25-35
Japanese version: £15-30
Original release: 26/01/96
Developer/Publisher: Treasure/ESP

Treasure's charming action RPG is one of the true bargains one can now find. For the prophetic this was the first clear confirmation of how the Saturn could deliver wonderful 2D.

Shining Force 3 Premium



Japanese version only: £40-60
Original Release: n/a
Developer/Publisher: Camelot/Sega

The *Shining Force* series was continued in three instalments for the Saturn. *Shining Force Premium* was given free to people who bought all three parts and wrote to Camelot.

Phantasy Star Collection



Japanese version only: £40-60
Original release: 02/04/98
Developer: SoJ/Sega

Collecting all four *Phantasy Star* games in one package and adding bonuses of original television adverts and artwork, Sega sought an answer to Square's *Final Fantasy Anthology*.

Five of the most collectable games

Here are five of the best and most reasonably priced titles any Saturn buyer simply must obtain.

Shinrei Jusaishi Taromaru



Japanese version only: £90-150
Original release: 17/01/97
Developer: Time Warner Interactive

A stunning action game, released in extremely low quantities, this is probably the most desirable title for all Saturn collectors worldwide.

Prikura Daisakusen



Japanese version only: £30-45
Original release: 15/11/96
Developer: Atlus

An isometric action shooter released early in the Saturn's life. This game demands only mid-range prices that conceal its extreme rarity.

Saturn Bomberman



US/UK version: £15-30
Japanese version: £15-30
Original release: 19/07/96
Developer/Publisher: Hudson/Sega

Relatively cheap, it will probably cost you considerably more to source ten increasingly rare Saturn pads.

Silhouette Mirage



Japanese version only: £25-40
Original release: 11/09/97
Developer: Treasure/ESP

Treasure once again demonstrates the Saturn's superior 2D capabilities. Not the codeshop's best title but enjoyable nonetheless.

Princess Crown



Japanese version only: £35-50
Original release: 11/12/97
Develop/Publisher: Atlus

A highly enjoyable action RPG. A shame that this game was never translated but it's still extremely playable to the importer.

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Hardware price guide

The mainstay monthly pub and (rather more commonly, for some reason) Internet debates on **Edge** scores lost a few subscribers when each instalment of the collector's series inspired its own procrastination over printed values.

While it has been made clear throughout the series that prices are for guide only and that nothing should be taken as gospel, none of the prices were simply plucked from the air. The aim is not to 'price-jack' or artificially balloon the market.

All the prices **Edge** has printed in this series are taken from a variety of market sources with the low value indicating a possible bargain you might uncover on a specialist Internet forum or on a lucky eBay auction and the high value demonstrating an actual pricepoint at a dedicated UK shop. Congratulations if you happen to discover an item for cheaper than this printed guide. Have your brag, but more importantly remember why you hopefully made the purchase

in the first place and go and enjoy your gaming investment. The same ideology remains for this hardware guide where **Retro** examines the current hardware values for the various iterations featured in this magazine.

All prices presume the item is boxed and in good to mint condition. Unless otherwise stated, the price is for the Japanese version of the hardware. Unboxed hardware may sell for a comparative pittance.

Neo-Geo Home Entertainment System (AES)	Jap/US £160-250 PAL £140-200	The lack of region lockout means that the AES is the most import-friendly of all systems. However, the borders on the PAL iteration and the chip removal of red blood and the infamous bouncing breasts in the US make a Japanese machine the most desirable out-of-box model. System prices are fairly volatile which is why there is a relatively large price bracket here. However, it is unlikely that prices will drop any time soon. The very late serial numbers often sell for more.	
Neo-Geo CD System (top loader)	£60-120	The most basic of all the Neo-Geo CD machines is a poor choice for a player looking to explore SNK's greatest titles. The huge loading times in between rounds on your favourite <i>King of Fighters</i> produce a staccato gameplay experience that will put most people off. The systems are nonetheless still sought after.	
Neo-Geo CD System (front loader)	£90-170	This, the more desirable of the generally undesirable CD Neo options, is listed after for its front-loading disc tray. It has one of the most volatile of price fluctuations displayed here.	
Neo-Geo CDZ system	£145-230	While widely advertised that this version plays discs at twice the speed, hence halving the loading times, the reality is more like a 1.5x faster access time - still debilitating on most Neo-Geo titles. The CDZ is the most collectable of the CD-based SNK systems.	
Hotel MVS/AES hybrid	£1,000-2,500	When one of these extremely rare units designed for hotel use infrequently surfaces, news spreads throughout the SNK collector's world extremely fast. The couple that have been on eBay have seen some of the most heavyweight videogame investors battling it out, pushing prices very high.	
Sega Saturn	US/PAL £15-40 Jap (grey) £30-50	The original Saturn is easy to come across in all three territories priced here. Many buy PAL Saturns for specific 50/60Hz chippings or to use the shells for other homebrew hardware modification projects. As with nearly all the Saturns listed here there are two versions available: the earlier with oval buttons and later with circular.	
White Saturn	£40-80	Two versions of the white Saturn are available but the general pricing of each is the same. The white Saturn has been a popular choice for UK buyers this year although their prices have tailed off in the last three months.	
V-Saturn	£120-140	Victor (the Japanese name for JVC) supplied the CD-ROM drive for the Saturn and secured an agreement allowing release of a Victor-branded console. Two iterations are available, one with oval and one with round buttons.	
Skeleton Saturn	£120-145	Fifty thousand of these machines were produced featuring a 'This Is Cool' logo on the lid. Microsoft mimicked the see-through casing with its initial Japanese limited-edition Xbox.	

Hi-Saturn	£110–150	Hitachi's Saturn is slimmer than the standard console and comes with an MPEG card as standard. It still plays second fiddle to Hitachi's far more desirable Navi system (see below).	
Derby Stallion Saturn	£135–150	Released as a promotional tie-in with ASCII's <i>Derby Stallion</i> in 1999 this was the last of the Saturn hardware flavours. Only 20,000 were produced making it more desirable to collectors than the arguably better-looking Skeleton Saturn.	
Hi-Saturn Navi	£900–1,500	The Holy Grail for all Saturn collectors. Released only a year after the original Saturn the launch price of Hitachi's super computer was ¥150,000 (around about £900 at the time) with another ¥45,000 for the in-car LCD screen. Allegedly only 2,000 units made it off the production line making this the rarest of all the hardware iterations covered in this guide.	
Vectrex	UK £100–180 US £70–130	Boxed machines sell for a considerable amount more than unboxed, more so than most other hardware here: an unboxed system may sell as low as £30. European machines also sell for more than US models, as the Vectrex collector's market is not nearly so extensive in the States.	
Bandai Vectrex	£250–400	The poor distribution of Bandai's Vectrex makes it one of the rarest Japanese incarnations of a western console. This system holds pride of place in collections and commands very high prices.	
Super Famicom/SNES	PAL £10–25 US £30–60 Jap £30–70	PAL SNES machines have been easily attainable for very cheap prices for a long time now. However, US machines are particularly sought after simply because the tabs in the cartridge slot can be broken, allowing Japanese games to be played. Good-condition boxed Japanese machines with no yellowing continue to demand steady prices although emulation has hit the SNES collector's scene harder than most this year.	
Super Famicom Junior	£70–90	The new-look Super Famicom can still be purchased in Japan and is very popular for its sleek lines and diminutive design.	
Sharp Famicom TV	N/A	This unit is a standard 19-inch television (large by Japanese standards of the day) which comes with a Famicom inside the TV. Highly sought after, not least for the two special-edition games that came bundled with the set. These titles can fetch over ¥50,000 alone.	
Sharp Super Famicom Television	N/A	As far as Retro knows this has never been sold on the collector's market in the west. After licensing its hardware to Sharp in the Famicom era Nintendo allegedly allowed its previous bedfellow to create this television set with built-in Super Famicom cartridge slot and controller ports.	
BS Satellaview	£80–180	Using the Japanese satellite system St GIGA, the Satellaview performed many functions, offering news, reviews, tips demos and exclusive downloadable games, which could be saved on to a RAM cart. As a piece of history it is interesting but nonetheless relatively useless today.	
PC Engine	£50–100	The very first and most basic incarnation released in Japan in 1987. The tiny white design of the original Japanese machine is still hailed as a console design classic and it remains popular to this day.	
PC Engine CD-ROM2	£50–90	The CD-ROM2 unit for the PC Engine made the machine the very first console to utilise widespread compact-disc data storage.	
PC Engine Super CD-ROM2	£90–140	The superior super CD-ROM add-on allowed players to play the new Super CD format games that NEC was releasing on SuperGrafx. This upgrade unit can be used on the original PC Engine, CoreGrafx, CoreGrafx II and even the SuperGrafx system itself.	

PC Engine GT/ TurboExpress	£100-190	With the growing success of Nintendo's Game Boy NEC again broke new ground by providing the market with the first handheld console to mirror its home-based parent. The games on both the home and portable systems were interchangeable. A perennial collectable.	
PC Engine CoreGrafx	Grafx £70-140 Grafx II £80-140	As PC Engine grew and grew in homeland popularity NEC decided to release a tweaked version of the system for fans called the CoreGrafx, complete with cosmetic changes and the addition of AV outputs.	
PC Engine Shuttle	£120-180	Marketed as a designer model of the console, the Shuttle had no ports for a CD attachment, making it a HuCard-only system. As such this is a machine for completist collectors only.	
PC Engine Duo/ TTi Turbo Duo	£100-160	With so many systems that required linking together NEC at last decided to bring out a series of combined systems. Essentially a PC Engine and CD-ROM2 system in one case, with extra memory for the new Super CD format, the system also had the option of being portable with an optional Duo Battery Pack.	
PC Engine SuperGrafx	£100-150	This console is more graphically advanced than the original, using a 68516 processor and with twice as much video memory but after just a short time on the market NEC stopped production. The machine can play PC Engine titles as well as the scant SG catalogue (only five native titles made it to release). In fact, with the right add-ons this is the only PC Engine that can play every PC Engine game and for this reason it is a collectable system both in Japan and the west.	
PC Engine Duo-R	£170-230	Almost three years after the PC Engine Duo first found success, NEC released this less-expensive white-coloured system in 1993. For once the changes were significant with the headphone jack to the side of the system being removed, as well as the battery pack option. The case is more streamlined.	
PC Engine Duo-RX	£170-240	The very last of the PC Engine systems based on the original 1987 technologies came shortly after the Duo-R on June 24, 1994. It had all the same features as the Duo-R, with the addition of a six-button controller (very similar to the later PC-FX control pad), and a few cosmetic changes to the case.	
PC Engine LT	£500-700 (unboxed machines as low as £300)	Often referred to as the Rolls Royce of all handheld consoles, the LT is in fact the most desirable of all the PC Engine hardware iterations. Released on the same day as the Duo the LT is the largest cartridge/CD portable system ever made. The LT alone is a fully functional HuCard unit with a four-inch screen, built-in speakers and CD support.	
Sega Mega Drive	PAL/US £15-30 Jap £35-60	Like the SNES, Sega's Mega Drive occupies many a cash converter's shelves although a good-condition boxed model will take a bit more searching. Japanese (not Asian) models still command high prices.	
Hong Kong Mega Drive	£40-80	This gold-labelled original Mega Drive plays all Japanese games, UK games, and US Genesis games on a UK TV without any alterations/adaptors. Its desirability is obvious.	
Mega Drive 2	PAL/US £15-30 Jap £40-80	Sega's revised hardware design costs around the same as the original machine in good boxed condition.	
Genesis 3	US £25-60	The smallest of the standard Mega Drive hardware revisions is also the most sought after. Production runs were much smaller than the first and second iterations and the futuristic 'Knight Rider' look still entices grown boys.	
Sega Nomad	£70-140	Sega's US handheld Mega Drive eats batteries unless you can find the sought-after socket adaptor, but is very collectable nonetheless, due to it being compatible with all US Genesis games, Japanese games and some PAL games. The rule of thumb is that games from before 1991 and after 1994 work but this is general advice, and trial and error is the only way of knowing for sure.	

WonderMega	£200–300	Two versions of Sega's extremely desirable Mega Drive and Mega CD combo exist. The first is arguably slightly more desirable due to karaoke functions but both systems demand very high prices and are great systems. The second iteration has a remote-control six-button joystick as well as two regular ports on the back of the machine. The WonderMega is also the only 16bit Sega system with an S-Video output.	
MultiMega	£80–150	The PAL version of the WonderMega looks considerably different to its Japanese cousin and lost a few of its functions. This is still the most desirable of Sega's PAL Mega Drive hardware. Boxed systems (listed price) sell for a lot more.	
Sega Megajet	£80–180	Putting the infamous mass syndicate purchase of Edge's old forumites from a Japanese airline to one side, the Megajet still commands a high price. The Sega Megajet is a handheld Mega Drive which plugs into a TV, the player using the actual system as the controller. It was designed for use in Japanese aircraft.	
Commodore 64	UK £40–100	While an unboxed machine may sell for a few pence at the market, a good-condition boxed machine commands higher prices among aficionados. Expect to add on up to another £50 for a disk drive combo.	
Commodore 64C	UK £40–80	This 1986 model boasts an altered cream-cased design and fewer chips, but the revised SID chip makes sampled sound too quiet for some.	
Commodore SX-64	UK £50–120	Again, the unboxed version of this portable 1983 C64 may sell for far less than the stated price. A good-condition boxed machine will exchange hands between collectors for more but the lack of data cassette interface turns off many game buyers.	
Commodore 64 Gold	N/A	Only 199 of these gold units exist, serial numbers 1,000,000 to 1,000,199. They were presented to the public in the BMW museum in Germany. Retro cannot remember seeing one come on the market and printed value would be pure speculation.	
Commodore 64GS	UK £25–50	A C64 stripped of all computing functionality, the 64GS was a dedicated 'console' that sold relatively poorly. It is still a collector's curio and sits well next to other consoles of the time in a collection.	
Famicom/NES	PAL/US £8–25 Jap £30–60	The PAL and US versions are blocky and aesthetically cumbersome while the original Famicom is useless to all but those with an imported Japanese television. Nonetheless many people still buy the original Japanese machine (both here and in Japan) for its looks, historical significance and wow factor.	
AV Famicom Jnr	£70–100	This is the weapon of choice for the Famicom importer looking to actually play games on the console as the AV compatibility make the system displayable on British televisions. A similar system was released in the US but the AV compatibility was removed and the picture quality is actually worse than on an original US machine. Production of the AV Famicom stopped only this year so prices are still low.	
Famicom Disk System	£50–100	Released by Nintendo to help combat rising cartridge prices in the '80s, the FDS is a Nintendo oddity that still attracts much attention for its design and games. The original styling that fits in with the original Famicom looks fantastic and boxed machines can fetch high eBay prices on the right week.	
Sharp Famicom Twin	£80–200	Sharp was the only company that Nintendo ever granted rights to create hardware. Three versions were released, a black, a two-tone and the sought-after devil-red machine. Containing both the Famicom and FDS hardware, the console's disk trays are notoriously flimsy and often need replacing. Nevertheless the combo system is high on many collectors' priority for historical reasons. Very hard to find in boxed mint condition.	
Sharp Famicom Titler	£250–400	An extremely rare iteration that Retro has only ever seen sold in the west on one occasion. This unit is a combination Famicom and video titler with this extremely interesting functionality alone adding a great deal to the price. The serial number is AN-510 (for the doubters).	

UFO

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