



GAME DESIGN AND HISTORY

UNIVERSITY OF WALES
TRINITY ST DAVID





Game History: Early 1990s

- Early 1990s
- The Console Wars
- Bigger Games, More Bits
- First Person Shooters
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- Timeline



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WORLD 4-1



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EARLY 1990'S



Technology was developing at a rapid rate by the beginning of the nineties.

Videogames had changed dramatically since the start of the 1980s - the power and capabilities of **home consoles** was much more than their predecessors.

Arcades were still popular, though visually the home console market was beginning to catch up.

EARLY 1990'S



1980



1990



Despite the existence of 16-bit and 32-bit consoles at this time, a significant proportion of console owners still owned and played the older 8 bit consoles.

The 8 bit machines had many releases in the early 1990s, despite a huge range of more powerful technology being made available to gamers at the time.







The *Neo Geo* was developed by SNK, a former Nintendo licensee and released in 1990.

It was based on SNK's arcade cabinets and was also the first home game console to feature a *removable memory card* for saved games.





In 1991 Sega introduced their own portable system - the *Game Gear*.

The *Game Gear* was essentially a handheld *Master System*, sharing many titles with Sega's 8-bit console — though the games were adjusted to accommodate the smaller screen size.

Master System and *Game Gear* titles were not compatible.

*Sega brought the arcade experience home.
Now they're taking it on the road.*



GAME GEAR™

- Incredible color! Displays 32 intense colors on-screen, out of a total palette of 4096!
- Back-lit, 3.2" diagonal screen is easy to see, day or night!
- Sharp 160 x 146 pixel detail!
- Stereo sound: plug in headphones and let 'er rip!
- Sleek design makes it easy to hold for hours of great play!
- Measures 8.25" by 4.5" by 1.5"!
- Has 16 kilobytes of video RAM for incredible power!
- Runs on six AA batteries, with other optional power sources!
- Games include adventure, sports, and arcade hits! Seven ready to go now, with 20 more on the way!
- Lots of exciting accessories to make the most of your Game Gear!



Portable / Handheld gaming appeared to be a rapidly growing market, as the *NEC TurboExpress* was also released at this time.





The *TurboExpress* games were compatible with the *Turbografx-16*, though NEC sold fewer consoles than Nintendo and Sega.

As a result, this additional feature did not influence sales for the system.





Atari finally discontinued the ageing **VCS/2600** and the **7800** in the early 1990s to concentrate on the **Lynx** handheld.





The *Atari 2600* was officially retired by Atari on **January 1, 1992** – making it the video game console with **the longest active lifespan** in game history.



1977 - 1992



In the early 1990s, the *Sega Mega Drive* eventually became a dominant platform particularly in the west due to healthy third party support (including a string of highly respected **EA sports titles** such as *John Madden* and *FIFA Soccer*).

This earned Sega a reputation for being a 'cool' brand as opposed to Nintendo's softer image.





By the time Nintendo responded with their own **16-bit successor to the NES** in 1991 – the **Super Famicom** (Super NES in the west), Sega had already built up a considerable lead in the market, and at release the SNES cost \$100 more than the Mega Drive.



The *Mega Drive* also had **150 titles** on the shelves by this point, compared to the SNES's 12.

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THE CONSOLE WARS



A **heated competition** was developing between these two hardware manufacturers, fuelled to an extent by an aggressive marketing campaign in the US by Sega.

GENESIS DOES WHAT NINTENDON'T.

ARCADE GAMES:



Super Monaco GP™



Michael Jackson's Moonwalker™



E-SWAT™

SPORTS GAMES:



Joe Montana Football™



Pat Riley Basketball™



James "Buster" Douglas
Knockout Boxing™

ADVENTURE GAMES:



The Sword of Vermilion™

STRATEGY GAMES:



Columns™

ACTION GAMES:



Dynamite Duke™

Get the hottest new video games going. Arcade, sports, adventure, strategy and action hits available only on the 16-bit Genesis System by Sega.

Today's latest blockbuster arcade hits like Super Monaco GP™. Climb into the cockpit of the world's fastest Grand Prix machines as you race wheel to wheel through the streets at over two-hundred miles per hour. Or take on the evil villain Mr. Big in Michael Jackson's Moonwalker™ as you use dance-kicks, hat-tricks and finally transform into a powerful robot that does it all. Or become a Cybercop in E-SWAT™ and clean up the city besieged by mad terrorists.

Get ready for the most action-packed sports games ever. In Joe Montana Football™, check out the defense, make the call, fake a pass and scramble for a touchdown. Or force your opponent to move inside your left hook and nail him with an uppercut that puts him on the mat in James "Buster" Douglas Knockout Boxing™. Or in Pat Riley Basketball™, get the ball with seven seconds left in the game, drive the length of the court, slam-dunk and draw the foul which you make to break the tie.

In The Sword of Vermilion™, make your way through 14 towns and 14 mazes in this adventure thriller where encounters with the evil demons are played in real time on the hand controller. And dazzle your friends with your skills on the puzzle game Columns™. Or become the ultimate commando warrior in Dynamite Duke™ as you blast the enemy from an over-your-shoulder first person view.

There's only one true 16-bit system and it's got the hottest video game hits going. You can only play these on Genesis by Sega. Genesis does what Nintendon't.



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It's not even close. The massive Sega® Genesis™ library is an insane line-up of more than 150 titles. Compared to... well, you get the picture. But we're not just talking numbers here. Genesis is going off with unreal new games like Sonic the Hedgehog™, Spider-Man™, The Last of the Mohicans™, Golden Axe II™ and Joe Montana II™. Nothing else stacks up.

SEGA
GENESIS

It's a whole lot more.



The other guys just don't stack up.



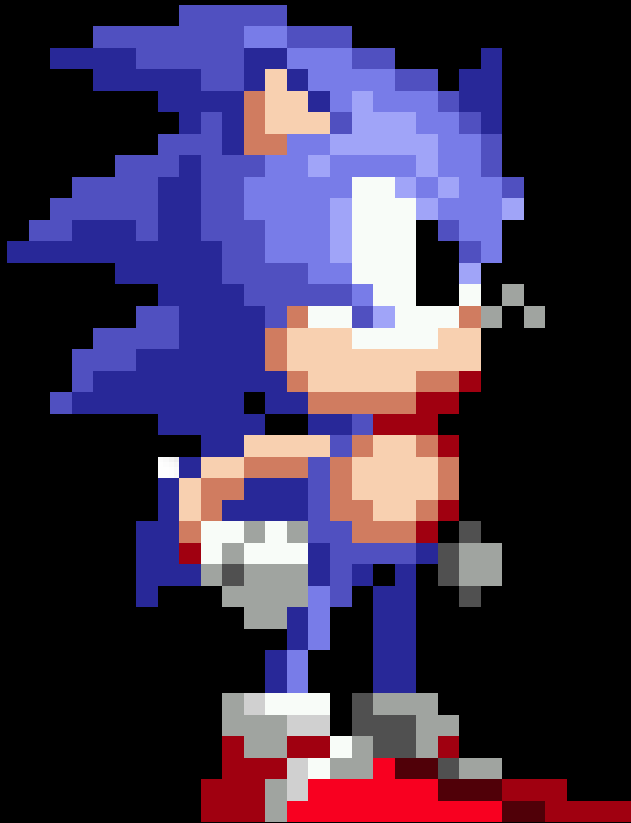
Gaming
Age

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CIRCLE #107 ON READER SERVICE CARD.



While directly competing consoles had existed through every generation of game history, this particular rivalry had a significant impact on an entire generation of game consumers.





Genesis does what Ninten-don't...





.....

Nintendo responded in a similar fashion with a similar campaign – ‘Nintendo is what Genes-isn’t’.





Sega's focus on **sports titles** and games that were distinctly different from the colourful, friendly and largely accessible image Nintendo had created for itself increased their appeal with an **older demographic**.

GENESIS DOES

WHAT NINTENDON'T.

TOMMY LASORDA BASEBALL™
All the major league plays! Moves. And strategy. From choosing your own line-up to the subtleties of shifting your infield and outfield. Only on Genesis. Whether it's the realism of the graphics or the challenge of the play, this is simply the most sophisticated baseball game to be found anywhere.

SPIDER-MAN™
You'll need to capture a special key from each of the five arch villains to disarm the secret super-weapon that threatens New York City. As you meet each challenge, choose carefully which of your super powers you will use, or you shall fail in your quest. Action and adventure only on Genesis.

PAT RILEY'S SLAMMIN' AND JAMMIN' BASKETBALL™
Check out the size and detail of the players. Check out their moves. Slam-Bunk behind the head. Make your magic moves down the lane for a bucket. In your face. Bounces you won't believe.

ARNOLD PALMER TOURNAMENT GOLF™
You can practically feel the breeze in your face as you tee off. Careful. Account for the wind factor. Choose your clubs carefully and adjust your stance for better results. Only on Genesis.

JAMES "BUSTER" DOUGLAS KNOCKOUT BOXING™
Defend your title against top-ranked challengers in a twelve round main event. Adjust to the boxing style of your opponents in the early rounds. Get into the mid-section to slow him down. And put him against the ropes with steady combinations. Counter-punch or seal him with an upper-cut or quick left hook. Only on Genesis.

JOE MONTANA FOOTBALL™
You've never seen blocking, tackling, or open field running that looks this realistic. Call the play, take the snap and look for an open receiver. It's the game inspired by Joe himself. And it's only possible from Sega, the masters of arcade entertainment.



A Sony marketing team at the time discovered that teenage boys who owned a **SNES would not admit it in focus groups!**

GENESIS DOES

WHAT NINTENDON'T.

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All the major league plays. Moves. And strategy. From choosing your own line-up to the subtleties of shifting your infield and outfield. Only on Genesis. Whether it's the realism of the graphics or the challenge of the play, this is simply the most sophisticated baseball game to be found anywhere.
16-BIT CARTRIDGE

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16-BIT CARTRIDGE



Sega's aggressive tactics helped the company (and the Genesis/Mega Drive) **expand its consumer base** in the early nineties - at this time, Nintendo still dominated the US market with the **NES**.

"We started the aggressive advertising campaign "Genesis does what Ninten-don't". We concentrated on games that Americans would play... sports games, specifically, and some other products. And we attempted to develop a mascot character like Mario."

- Michael Katz, former CEO, Sega of America



In 1990, **Hayao Nakayama**, Sega Enterprises CEO, instructed all Sega development teams to come up with proposals for a **mascot** for the company.



開発初期の主役キャラクター・イメージ

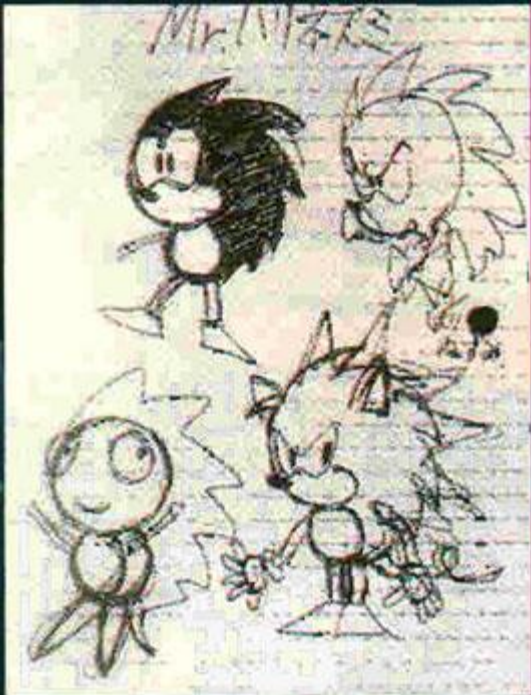


開発初期の主役キャラクター・イメージ



Naoto Oshima, part of Sega's AM8 team, submitted designs for a character that later became *Sonic The Hedgehog*.

Sonic The Hedgehog was released in June 1991 for the Genesis / Mega Drive, selling 4 million copies and going on to become iconic in early 90s videogame culture.



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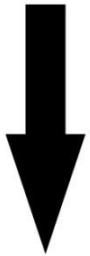
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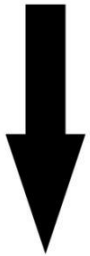
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BIGGER GAMES, MORE BITS



Before Sega and Nintendo could release successors to their 16-bit consoles, **several other competitors entered the market** with more powerful **32-bit** and **64-bit** consoles.

The technology offered by these new machines provided a massive increase in storage capacity with **CD-ROM**.



Cartridges on 16-bit machines would contain roughly **1 to 2 megabytes (MB)** of content.

With the introduction of CD-ROM platforms and more powerful processors, games could now be expanded to around **600 megabytes**.



Sega announced the *Mega CD* (called the *Sega CD* in the US) in 1992.

This was not a new console in its own right, but an *extension of the Mega Drive* that allowed it to play CD-ROM games, potentially extending the console's lifespan.

Many of the Mega-CD's titles were *FMV* (Full Motion Video) games.



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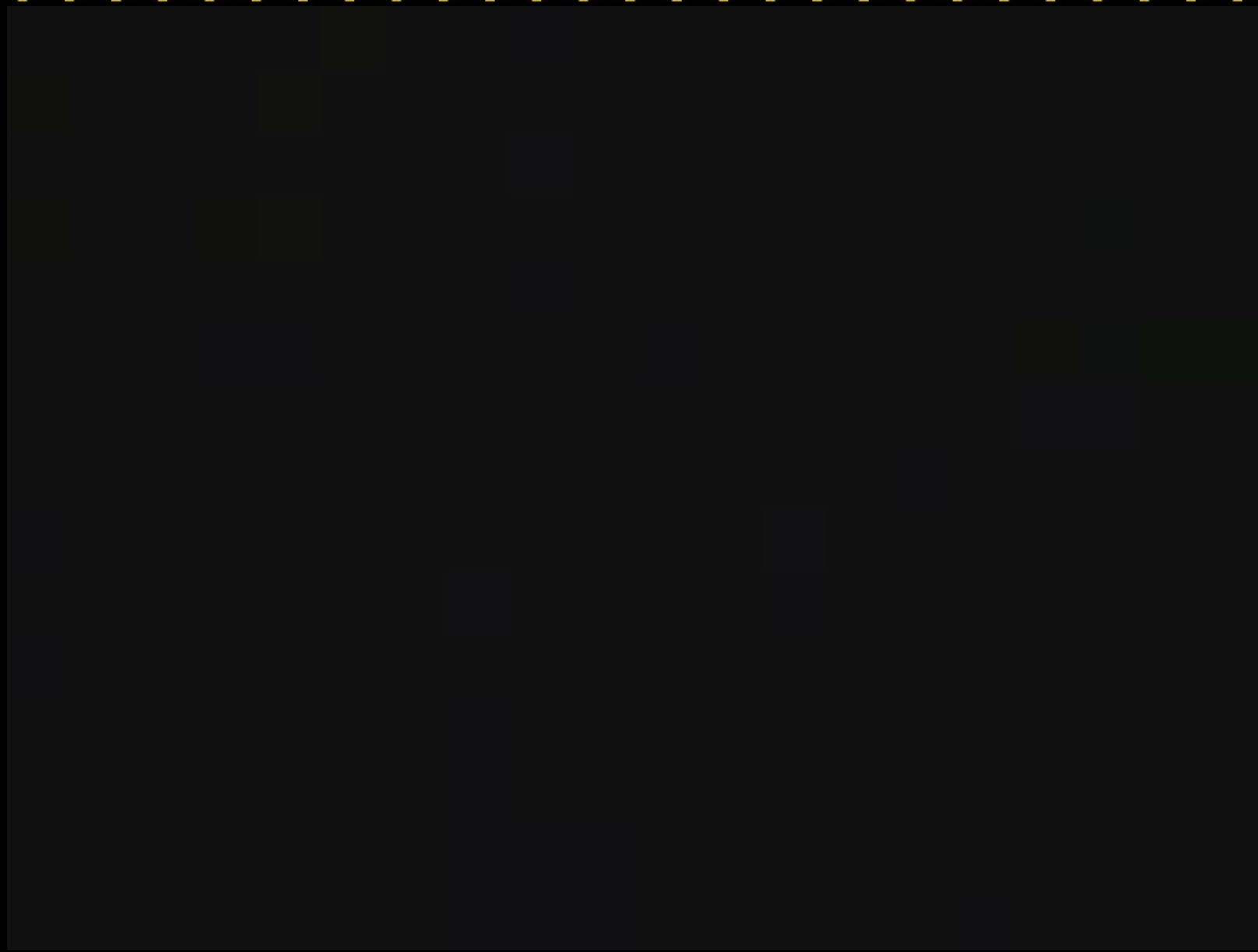


Press RESET to open the CD tray.



GAME DESIGN
AND HISTORY

BIGGER GAMES, MORE BITS





3DO, a company formed by **Trip Hawkins** (founder of EA) collaborated with electronics company Panasonic (and later, Sanyo and Goldstar) to produce one of the first 32-bit machines in 1993, the **3DO Interactive Player** – essentially a multimedia machine with gaming capabilities.



The 3DO originally retailed at **\$699!**





Commodore, the manufacturer of the Amiga Computer, decided to jump on to the CD-based games console bandwagon with the Amiga CD32 in 1993.



Unlike the 3DO, the Amiga CD32 had a large amount of software titles available due to the console being compatible with Commodore's nearly defunct CDTV multimedia system, launched two years earlier.





Philips also entered the market with a similar multimedia machine – the *CDi* – while Atari made a surprising return to hardware manufacturing with a dedicated games console, the *Jaguar*, also in 1993.

The *Jaguar* was a 64-bit cartridge-based machine (though its graphics chip was only 32-bit and its CPU was 16-bit).







However, it was not a happy return to the market for Atari, as the **Jaguar suffered from a lack of 3rd party software support** as well as heavy competition from **3DO, existing games consoles**, and eventually the release of the **next generation** of 32-bit systems.

Despite being the first platforms to offer modern-style **3D graphics**, neither 3DO, Phillips, nor Atari received much success.



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FIRST PERSON SHOOTERS



Meanwhile, PC gaming was also beginning to evolve.

ID Software released *Wolfenstein 3D* in 1992 and *DOOM* in 1993.





These fast-paced **FPS (First-Person Shooter)** games became incredibly popular, with many other similar titles being produced throughout the nineties.



First Person Shooters are still an incredibly popular genre nearly 30 years later. Initially considered to be more suited to PC gaming due to peripherals and hardware, FPS games would later find a large following on consoles in future generations.

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SONY ENTERS THE GAME



During the early nineties, **Nintendo** and **Sony** entered into talks to create a **CD-based system** to succeed the 16-bit generation.

The **ND Drive** was originally planned to be an add-on for the SNES, in a similar fashion to Sega's **Mega-CD**.

PRODUCTION SUPER NES CD-ROM SPECS REVEALED!

In order to allow game developers sufficient time to have new CD-ROM software available for the early 1994 launch of the Super NES CD-ROM peripheral, Nintendo of Japan wrapped up the development work on their Super NES ND (Nintendo Disc) Drive last December. EGM has been able to get the final specs and system configuration from Japan and this peripheral really looks hot!

ND SYSTEM PACKAGE

The Super NES ND Drive (the official U.S. name hasn't been decided yet) when it comes out will



Last December, Nintendo finalized the specs for their Super NES ND (Nintendo Disc) Drive.

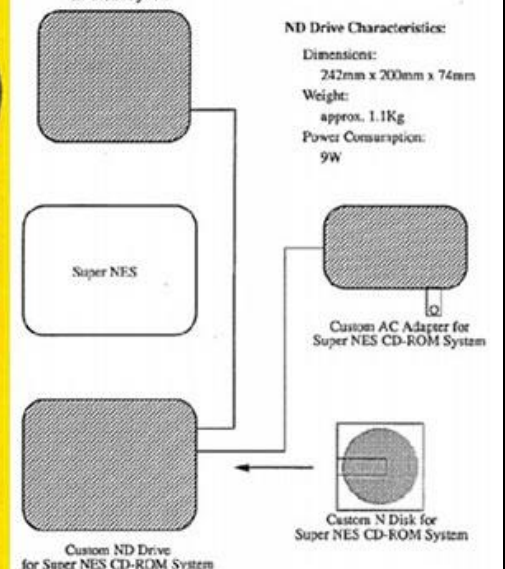
will be XA compatible (playable on Phillips CD-I machines).

What is new, is that there will be an additional 4 megabit of supplemental D-RAM memory built in.

There also will be a new CD-ROM decoder, code named HANDS (Hyper Advanced Nintendo Data transfer System). HANDS is a custom chip which basically consists of another processor - a 65C02 (which will run at 4.295 MHz). The reason for HANDS is that it will allow the main memory (8 Mbit of D-RAM) to be read without having to stop the work the co-processor is doing. It's kind of like



Custom Nintendo Disc (ND) System Cartridge for Super NES CD-ROM System





SNES owners at the time who wondered if they should have bought a *Mega Drive* were happy to hear that Nintendo were developing a **CD-ROM** system.

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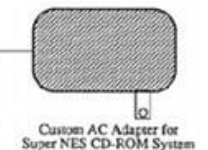
Custom Nintendo Disc (ND) System Cartridge for Super NES CD-ROM System



Custom ND Drive for Super NES CD-ROM System

ND Drive Characteristics:

Dimensions:
242mm x 200mm x 74mm
Weight:
approx. 1.1Kg
Power Consumption:
9W





However, Nintendo announced in September 1993 that it was teaming up with **Silicon Graphics**, a world-leading visual computer technology company, to create a new **64-bit** machine code-named *Project Reality*.

With the company focusing on development of the new console, the **ND Drive was dropped**, and the Sony-Nintendo relationship was severed for good.

PROJECT REALITY ... SOON?

Everyone has been wondering about Nintendo's powerhouse Project Reality; if and when it will come out. Our Head Ed decided to go straight to the horse's mouth and get the news directly from Nintendo.

According to Nintendo, several titles are already in the works. And although development systems have yet to go out to licensees, Project Reality is based upon a CI architecture, to allow programmers to hop right into production.

And one big question is whether or not there will be a CD-ROM.

sumer or themselves. What's the point of a CD system if you can't deliver the type of games you'd like to?

The price is also on everyone's mind. Nintendo expects the price to be kept low, because of the efficient chip configurations, and the fact that there is no need for a thousand dollar drive system or other things needed for use of the industrial SGI machines.

Nintendo feels that sound is a key part of the gaming experience. While Project Reality only has stereo sound, expansion ports leave doors open to features like Dolby Surround, SR5, and other 3-D sound systems.

The arcade format of Project Reality will come out this year, and a refined home version will appear next year. Nintendo is serious about this one.



EGM found some of the answers to the most common Project Reality questions.

Unexpectedly, Nintendo officials have stated that Project Reality will be a \$250 cartridge-only medium, but there will be an expansion port in the system which will allow PR to connect to a future CD-ROM machine when CD-ROM technology is a viable medium. Nintendo wants to create virtual worlds for the player rather than limit themselves with footage from recorded video, which is what current CD-ROM games are limited to.

Nintendo feels that such a restriction would not be cost effective for the con-

PIONEER LD IN 3-D

Pioneer will be releasing a new Laseractive title called 3-D Museum for both Mega LD (February) and LD-ROM2 (March) systems. This soft is a collection of 3-D images, some requiring the viewer to stare cross-eyed at the screen and others requiring the use of special glasses (the cheap kind with tinted cellophane lenses). There are also others for which special (expensive) goggles with high speed LCD shutters are necessary.

The special goggles will be available concurrently with 3-D Museum. The goggles alone cost ¥10,000 (\$95). Furthermore, they require an adapter—



Having been incensed by Nintendo's actions, the head of the initial Nintendo project - **Ken Kutaragi** - was supported by **Norio Ohga**, the Sony CEO at the time, to begin work on Sony's own CD-based system.

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A few years later, this would drastically change the balance of power in the global games industry.



INSERT COIN TO CONTINUE



1990 -

Nintendo releases *Super Mario Bros. 3* - the most successful non-bundled game cartridge of all time.

SNK Brings 24-Bit *Neo Geo* console to the US.

1991 -

Nintendo of America releases the SNES.

Sega releases *Sonic the Hedgehog*.

1992 -

Genesis takes control of the US market, outselling the SNES.

Sega releases the *Mega-CD*.



1993 -

Panasonic begins marketing the 32-Bit 3DO.

Atari launches the 64-Bit Jaguar.

Id Software produces Doom for PC.

Senators Joseph Liberman and Herb Kohl launch Senate hearings on video game violence.



Hardware examples:

- Sega Mega-CD
- Nintendo SNES
- Philips CD-i
- Sega Game Gear



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