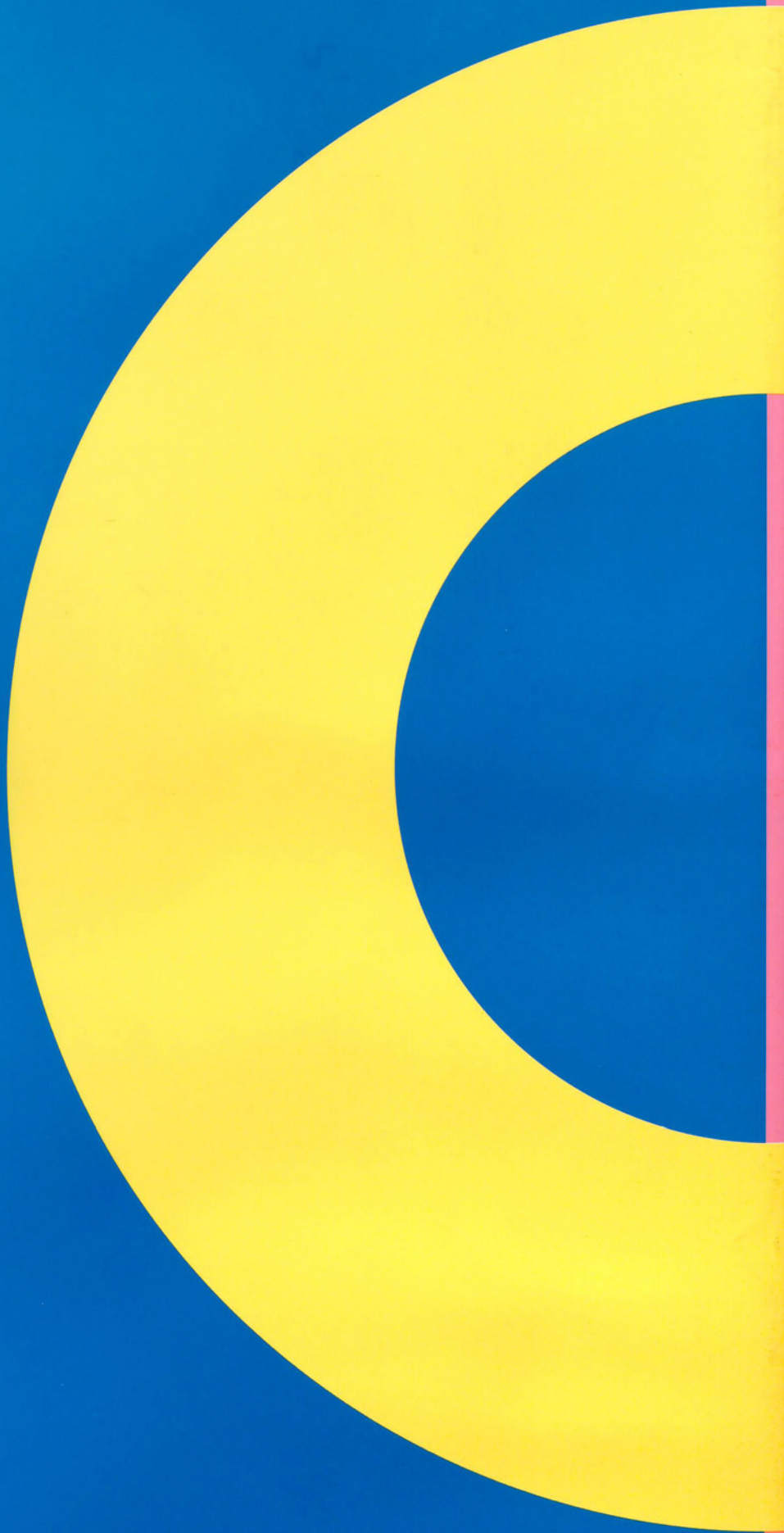
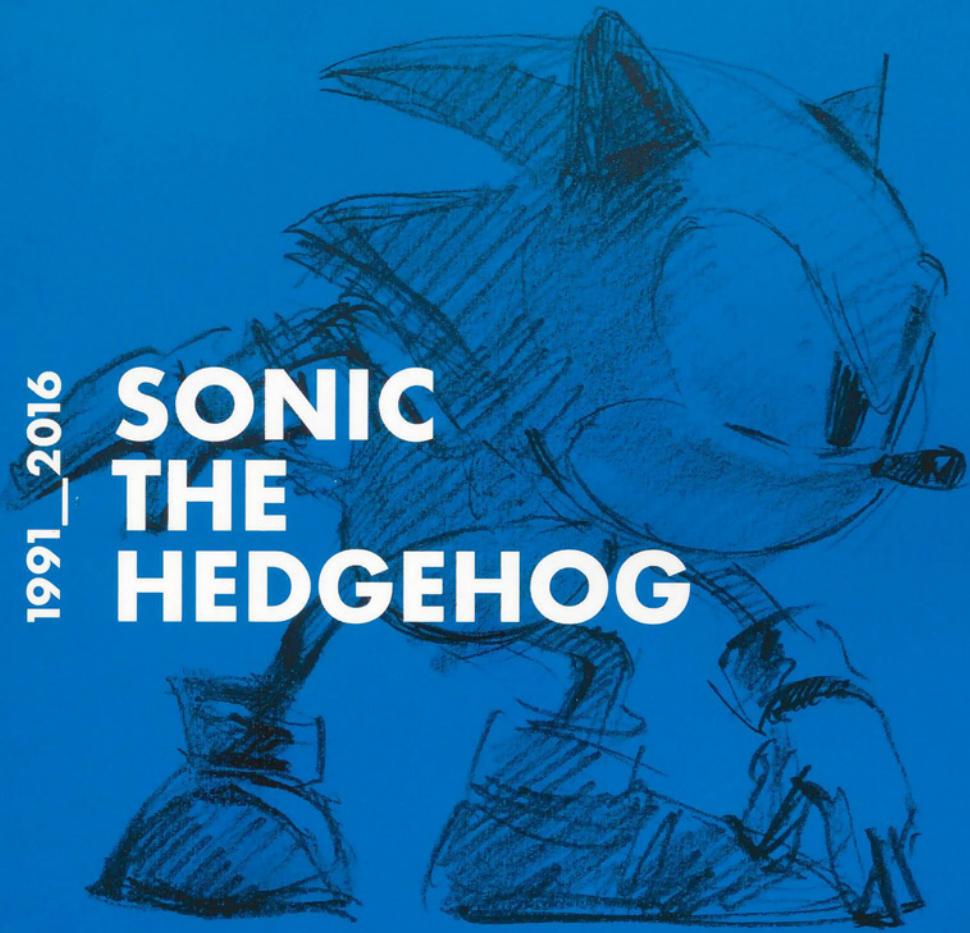


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SONIC THE HEDGEHOG



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**SONIC
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ABOUT THIS BOOK

DEAR READER,

Twenty-five years into its existence, Sonic the Hedgehog is hard to miss. The 'blue blur' stars in dozens of video games, boasts television series and comics, and was rightfully inducted in the World Video Game Hall of Fame in 2016. Today, Sonic is a well-loved video game icon that has proven its staying power over and over again.

The Sonic 25th Anniversary Art Book is a tribute to the art behind the hedgehog. In this book, we follow the Sonic Team in its pursuit of a lead game character, a company mascot, that embodied speed in ways alternatives of the time didn't; document important steps in the design of Sonic and his world; and highlight the technical, artistic and economic considerations that informed design decisions over the years.

The focus on visual design is something we cherish. Video games are a big part of today's popular culture and visual narrative, yet aren't always properly credited for fulfilling that role. Cook & Becker, an international art dealership and art book publisher from Amsterdam, The Netherlands, takes this to heart. Through books like this one, we hope to show how

video game art and design matter, and how video games are cultural artifacts that represent a value beyond the games themselves. Compiling a Sonic art book greatly adds to that endeavor.

We are greatly indebted to SEGA for allowing us to use the Sonic art archive, and to have us interview key members of Sonic Team on the history of their beloved character. We especially like to thank Naoto Ohshima, Takashi Iizuka, Kazuyuki Hoshino and Yuji Uekawa for their invaluable contributions. It's been a great honor to talk to them, and an immense pleasure to browse through 25 years of their work, enthusing about everything from pencil doodles to digital, in-game art assets. To us, there is no bigger thrill than seeing a character we have known and loved for so many years come to life through the eyes of its designers.

We would also like to thank programmer Yuji Naka, widely regarded as the father of Sonic. Although not an employee of SEGA anymore, Naka-san agreed to be interviewed for this book, greatly adding to our understanding of Sonic's conception and early design considerations.

Maarten Brands
Ruben Brands
Bart Heideman
Arjan Terpstra

Cook & Becker
Amsterdam.







SONIC THE HEDGEHOG

A DESIGN HISTORY

Sonic the Hedgehog is, without a doubt, the definition of an 'iconic video game character.' Just ask any lover of the medium to close their eyes, and have them sum up Sonic's key characteristics. It'd be a surprise if they don't mention blue fur and spiky hair, or refer to speed, rings, and red-and-white sneakers. If you ever played as Sonic in one of the many games to feature him as a protagonist, racing through a level and rolling into a ball to dash through enemies, remembering his shape is easy.

But a well-known character with an instantly recognizable shape doesn't always add up to iconic status. Sonic truly stands as a symbol of the incredible story of video games, as well as a beloved mascot in a brand capacity. The 'Classic', pixel version of the blue hedgehog symbolizes an era when video games were in a different place, commercially, technically and culturally. In June 1991, when the original *Sonic The Hedgehog* rolled onto the Mega Drive console (aka the Genesis, in the U.S.), a young video game industry was still reshaping itself, finding new confidence after the market crash of the early 1980s.

By contrast, 'Modern Sonic'— a bolder design, first seen in 1998's *Sonic Adventure* for the Dreamcast — is symbolic of the myriad changes we've seen since video gaming's early days. Software and hardware technology evolved in giant leaps, ever-better platforms for video gaming arriving on the market in swift succession. Managerial and marketing strategies changed with them, driving new forms of production, sales and — consequently — consumption of video games.

In the quarter-century since Sonic's birth, there has not been a single aspect of video gaming technology, marketing, or culture that has not been touched by change, often of the radical kind. But every era of gaming, since the 8- and 16-bit days, is connected through the unmistakable image of this in-a-hurry hedgehog: the star of close to a hundred video games and compilations, released over dozens of platforms.

Sonic did not reach this status by chance. His conception was the result of Japanese-American game company SEGA's bid to find a suitable character to use as a mascot for their video game enterprises. In a sense, Sonic the Hedgehog was *designed* to be an icon, says programmer Yuji Naka, Sonic's spiritual father.

At Sonic's genesis, Naka and game artist Naoto Ohshima went to great lengths to find a design that served the needs of both SEGA and the gaming audience. They developed a character that was an 'inevitable outcome of the game' they worked on—which would, as it worked out, be 1991's debut Sonic title. A lover of racing games, Naka envisioned a 2D platformer game in which players reached 'supersonic' speeds, and so the lead character needed to embody speed and agility.

"Sonic was a character born from the game," Naka said. "Also, I was very careful about having the character be recognized even in silhouette. I think both traits combine into why people feel he is so iconic."

Not long before the launch of *Sonic The Hedgehog*, in 1991, Japanese video game developer and publisher SEGA was going through a turbulent period.

Long before it became a powerful player in the 1980s and 1990s video game market, SEGA had flourished — initially as Service Games (note the first two letters of each word), operating out of both the United States and Japan — as one of the world's biggest manufacturers of coin-operated entertainment machines. Later, when the company had taken on the name SEGA Enterprises and headquartered itself in Tokyo, where it remains today, it pioneered what was to become known as arcade gaming with the release of *Periscope* in 1968.





PART ONE

THE 'CLASSIC SONIC' YEARS

Periscope was an electro-mechanical game cabinet in which players fired torpedoes at ships while peeping through a (realistic looking) periscope. These types of coin-operated games found players around the world. People gathered in amusement halls, or arcades, driving a slot machine industry comprising pinball, gambling and entertainment cabinet manufacturers. This industry got a major boost when, in 1972, American company Atari combined a coin-operated cabinet with a video game in *Pong*, and saw their profits explode.

Other manufacturers quickly followed Atari's example, and started their own lines of arcade game cabinets. Before long, SEGA found itself in the top five arcade video game manufacturers in North America, and was also a strong contender in its domestic Japanese market, launching hugely popular and innovative arcade games like *Monaco GP* (1979), *Zaxxon*, and *SubRoc-3D* (both 1982.) Around the same time, the first generations of gaming computers and consoles found their way to consumers. Systems like the Magnavox Odyssey (1972), Atari 2600 (1977) ColecoVision (1982) and Commodore 64 (1982) introduced video games to households on a global scale, while the first generation of handheld video game devices with LCD screens — such as Nintendo's Game & Watch series, which started in 1980 — took them onto the streets. Video game arcades, home consoles and handheld devices all contributed to a rapid increase in this new entertainment medium's popularity.

But the boom wasn't to last. By 1982, the market was flooded with too many console games for consumers — and more pertinently stockists — to successfully manage. New gaming publishers sprung up regularly, and not all of them favored quality over quantity, leading to a surge of sub-par products. People were being turned off from games consoles, and that combined with other factors — inflation, home computer competition, changes to the industry's publishing model — meant that a bust was inevitable. In 1983, the gaming market crashed *hard*.



Japanese (right) and US (left) marketing render of Sonic the Hedgehog.

While this dramatic downturn in video gaming revenues is primarily known as the North American video game crash, the repercussions were felt globally, and SEGA was caught up in it. With money bleeding from the games market — in the two years between 1983 and 1985, revenues fell by an astonishing 97% — the company was forced to make big structural changes. Its North American arcade manufacturing plants and licensing rights for arcade games were sold off, and focus shifted instead to the manufacturing of home game consoles, and development of console games.

SEGA's first foray into the console market happened in 1983, when it released the SG-1000 onto the Japanese market. A year later, almost to the day, a revised version of the console, the SG-1000 II, emerged. These early models weren't commercially successful, but they would form the foundation of what would be SEGA's home-gaming breakthrough: 1985's SEGA Mark III, remodeled for international retail as the SEGA Master System. SEGA's new endeavors played a part in the video games industry's post-crash revival. Consumers were now being offered hardware and software representing better value for money, and sales surged. Japanese companies



led the way, both in terms of units shifted and confident technological advances. Nintendo, SEGA's main competitor for the decade to come, prospered in particular — its Nintendo Entertainment System, or NES (aka the Family Computer, or 'Famicom' in Japan), was the best-selling toy in the U.S. in 1988, and by 1990, one in every three American households owned one.

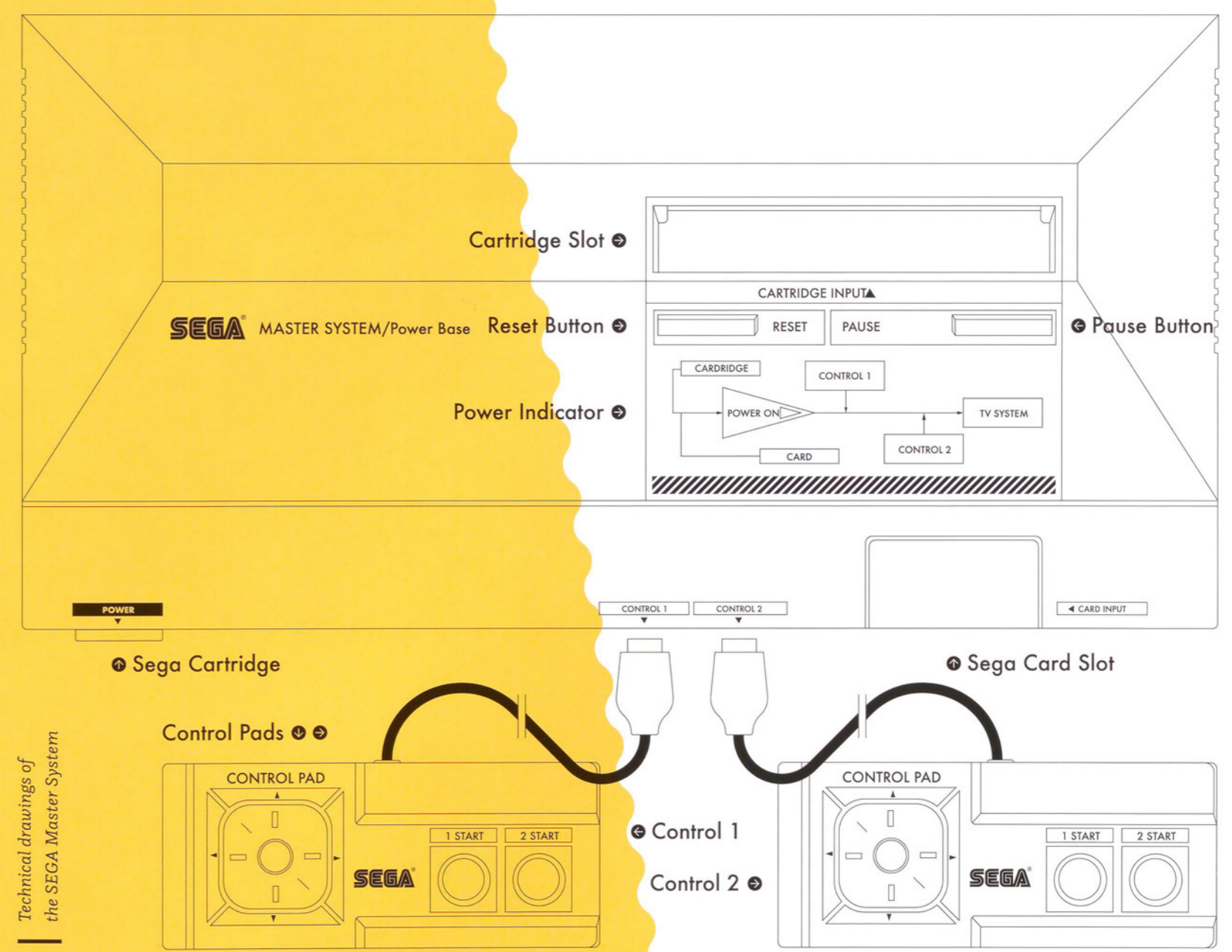
Part of the NES' success was attributed to its nomenclature — it was sold as an "entertainment system", not explicitly as a video games console. Perhaps more significant though was the release of the groundbreaking platform game, *Super Mario Bros.*, after which its hero, Mario, featured heavily in Nintendo's marketing. This mascot-led approach was all new to video games, which had previously been about the machines themselves, more than the characters you control on them. But it was massively successful, and consumers around the world soon came to recognize Mario as the face of Nintendo.

SEGA had nothing in its software library to compete with the popularity of

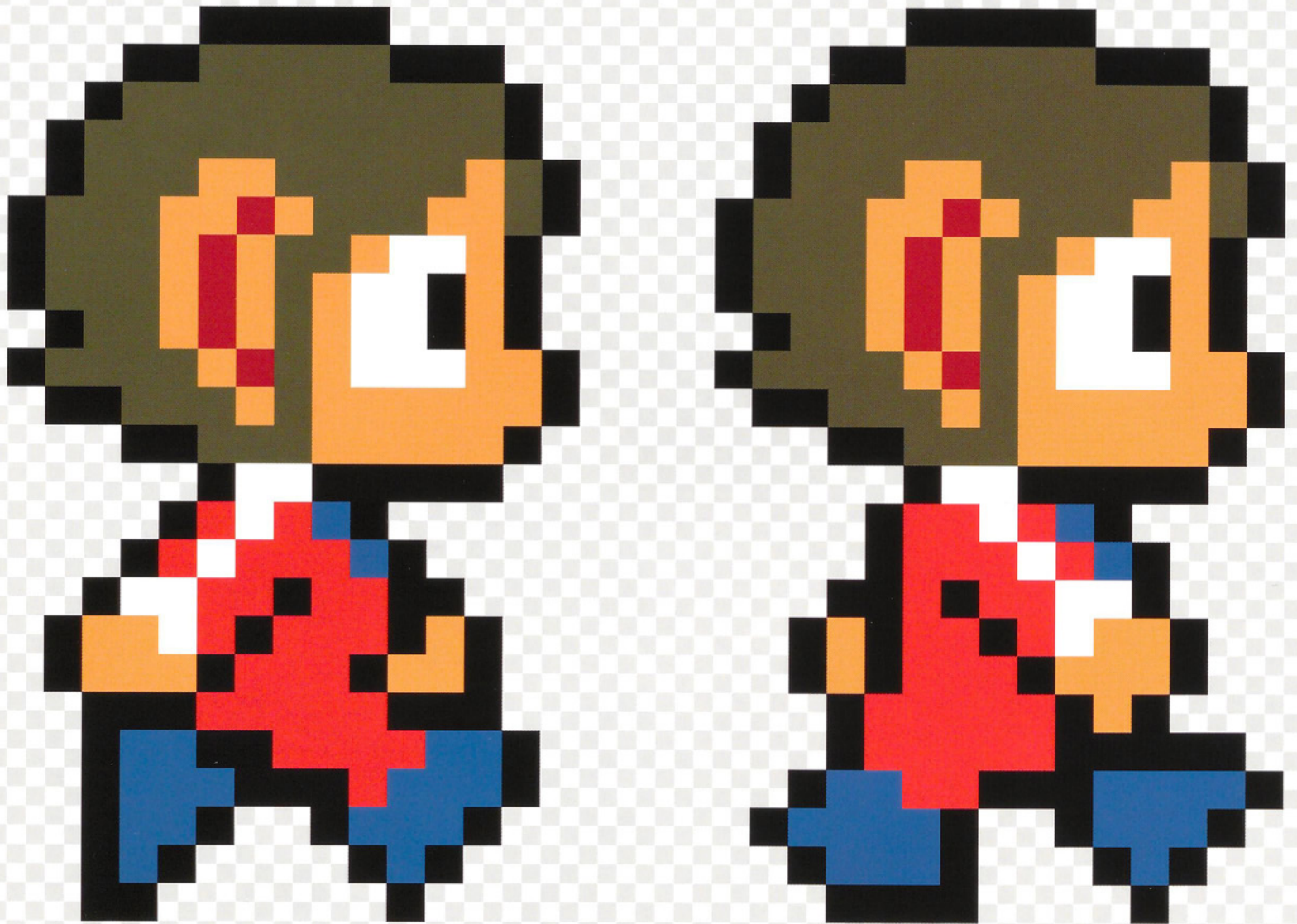
Nintendo's mustachioed plumber. Action was necessary — it needed a mascot of its own, and that was a directive that came down from the company's presidency itself. SEGA's first attempt at a character that could also serve as an instantly recognizable symbol of the company itself was Alex Kidd, the star of 1986's Master System platform, *Alex Kidd in Miracle World*. This was a very calculated move on SEGA's part — they saw the character as a vital component of their Master System marketing strategy. They needed him to click with the same audience that had taken Mario to their hearts.

But *Miracle World*, despite a positive critical reception, was no *Super Mario Bros.* competitor, and while Kidd would appear in further SEGA-exclusive games up until 1990, SEGA needed something more, something better. Its console sales were lagging far behind Nintendo's. In 1989, it began a company-wide design competition for an action game featuring an emblematic lead character that could be used in marketing.

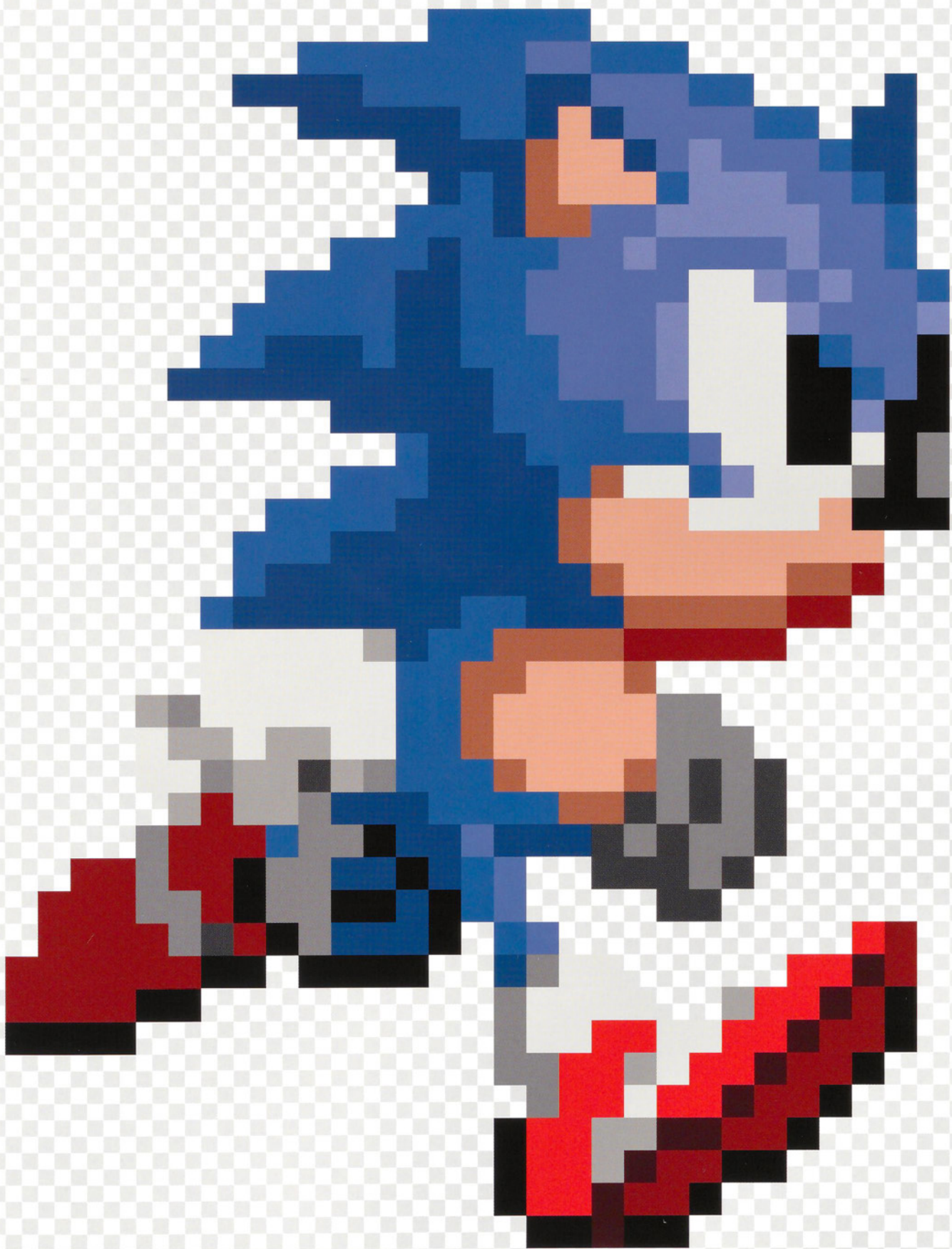
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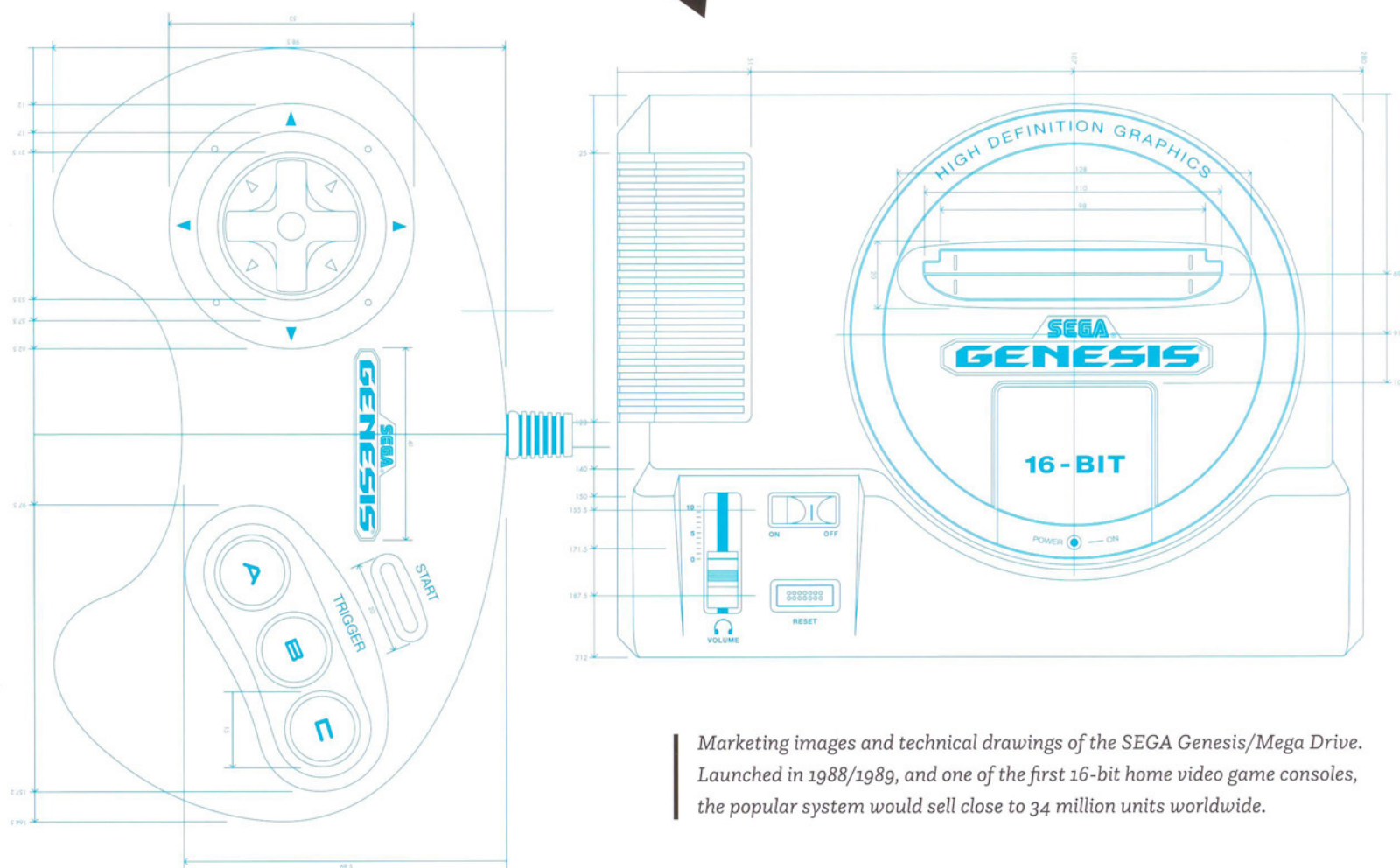
Technical drawings of the SEGA Master System



Alex Kidd as he appeared in his first game Alex Kidd in Miracle World on the SEGA Master System/Mark III (1986). For some time, the character served as SEGA's unofficial mascot, but was finally replaced by the blue hedgehog.







Marketing images and technical drawings of the SEGA Genesis/Mega Drive. Launched in 1988/1989, and one of the first 16-bit home video game consoles, the popular system would sell close to 34 million units worldwide.

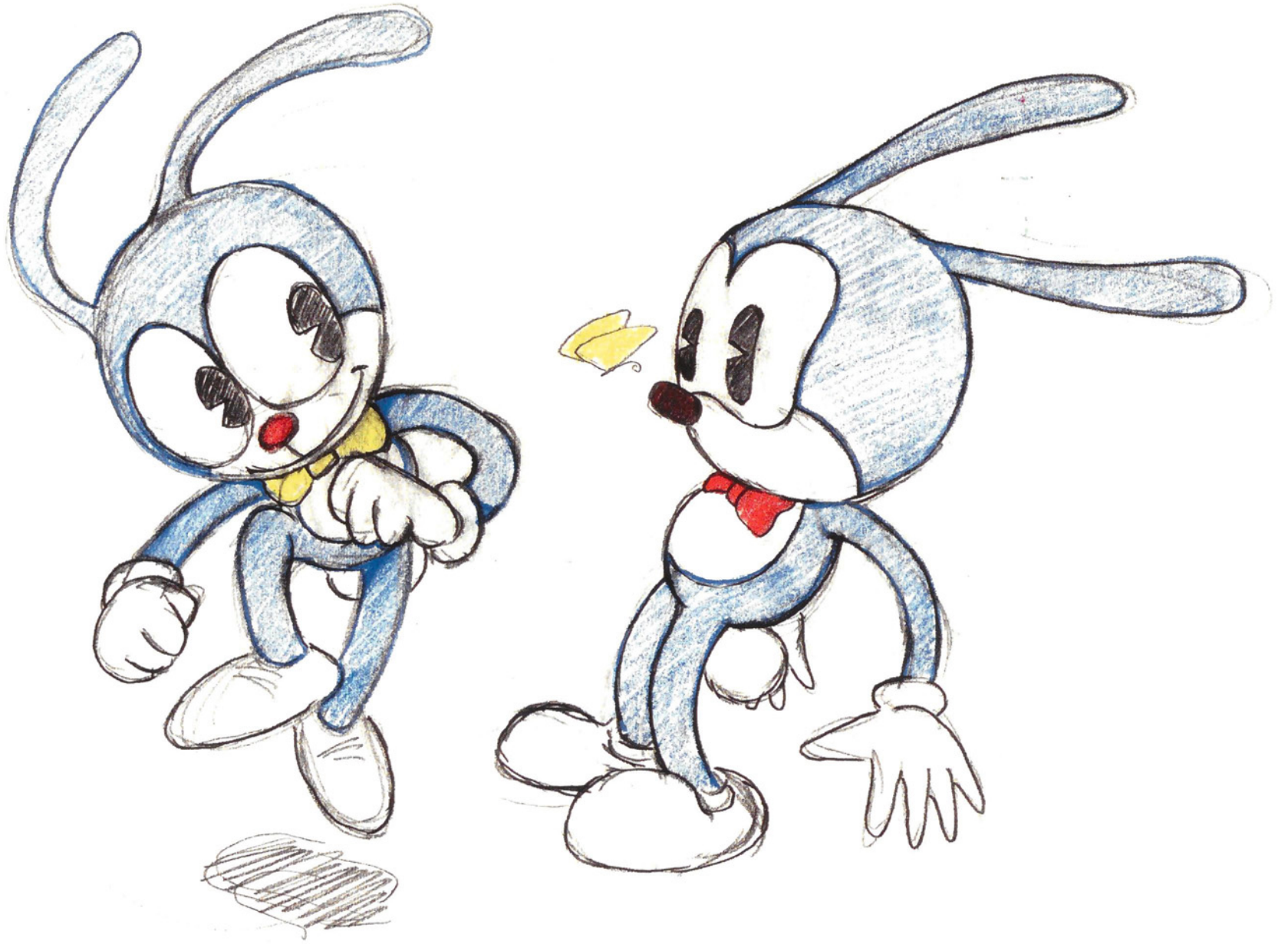
The timing was all-important. In 1988, SEGA launched the Mega Drive in Japan (introduced to the American market as the Genesis the next year, and as the Mega Drive again in Europe in 1990). This powerful home console gave SEGA a technological edge over its competitors — the NES-succeeding Super Nintendo Entertainment System (SNES) wouldn't launch in Japan until 1990, and later internationally. The Mega Drive was one of the first consoles to incorporate a 16-bit microprocessor unit, leading to a much-improved technical performance compared to the previous generation of 8-bit consoles, including the NES. As well as offering improved graphical techniques, such as complex parallax scrolling, the Mega Drive could also output larger image sprites, and more colors. These technical improvements would greatly enhance the game design of what would become *Sonic The Hedgehog*. Sensing Nintendo was many months away from launching the SNES, its own 16-bit console, SEGA had a window in which they could convert their technological advantage into sales.

SEGA's internal design competition for a new mascot yielded some 200 new characters, from across all departments within SEGA Japan and SEGA of America. After a lengthy process of elimination, one stood out from the rest: a rabbit with a bow tie and long ears, drawn by Naoto Ohshima, a 26-year-old game artist who had worked on a couple of SEGA titles in Japan. Ohshima was invited to partner with a developer within the company, and to start thinking about a game that would support the new character. He approached programmer Yuji Naka, 25 at the time, to work with him. Naka, a big lover of racing games and one of the most talented coders of

his generation, proposed a side-scrolling title all about ultra-speedy movement, in which the player experienced something like what a jet fighter pilot might feel after breaking the sonic barrier.

His design idea found its origins in Naka's dissatisfaction with many of the 2D platform releases of the time. Games in the 8-bit era rarely had a saving or backup system, usually requiring players to restart after every failed attempt to reach the ending. As a consequence, people played the first couple of levels over and over, and quickly got bored with the endless repetition. What if skilled players could speed through the early levels, challenging themselves to finish them faster, Naka imagined. Then, the first stages would be fun to play again and again, even if you knew all the required moves.

The new pairing of Ohshima and Naka proposed their ideas to SEGA board members. They impressed them by having prepared a set of marketing materials at their presentation — the rabbit character had been made into a plush toy. Yet their true trump card was their vision of a game all about speed: a *supersonic* game that would work miracles in advertising the processing power of the Mega Drive to consumers. Naka's ideas were supported by a game prototype of a fast-moving character rolling like a ball through a long tube. It used a technologically advanced algorithm that allowed the character sprite to smoothly follow a curved trajectory, setting the demo apart from other games in which sprites moved about with considerably less elegance.



**Left**

Naoto Ohshima's bunny character (ca. 1990) would start the design process that led to the first *Sonic the Hedgehog* game.

**Right**

Two other entries submitted for the internal design competition at SEGA.

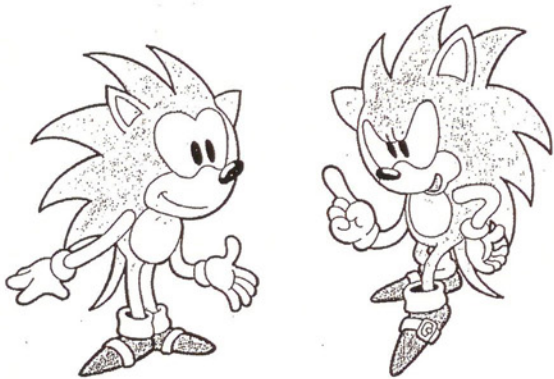
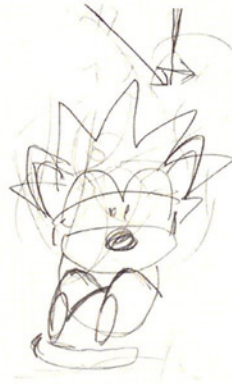
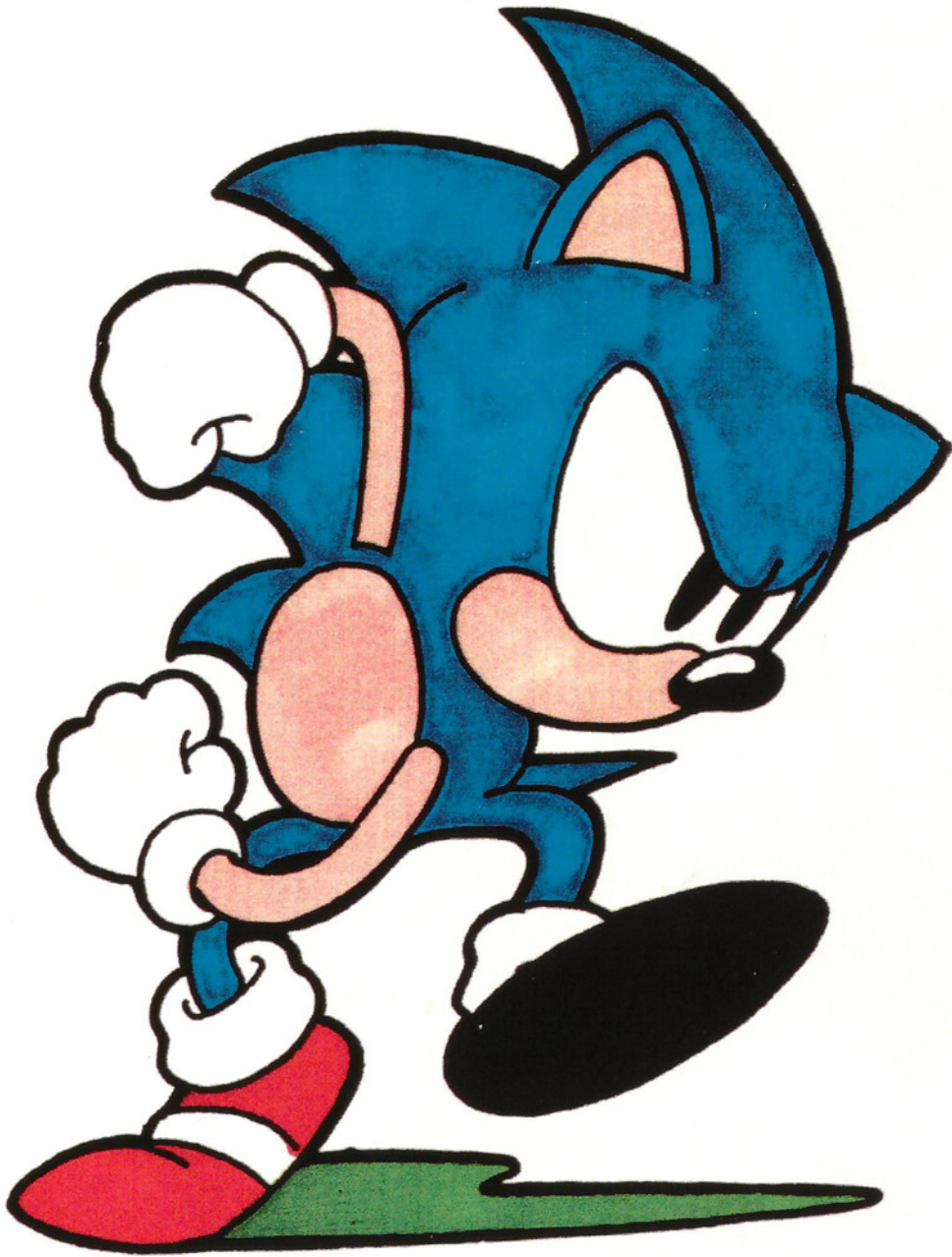
Naka's dedication to speed was supported by his groundwork on porting Capcom's side-scrolling action arcade game *Daimakaimura* — released as *Ghouls 'n Ghosts in the West* — to the Mega Drive, where his team succeeded in accelerating the scrolling speeds. Naka felt he could improve on that, providing SEGA with a new and more energetic take on video gaming which stood apart from the competition. SEGA liked his line of thinking, and asked Naka and Ohshima to further develop their concept, allocating them a generous amount of development time and assigning Hirokazu Yasuhara to assist them as game designer. The mission for the new team was clear from the get-go: develop a killer game for SEGA, to boost Mega Drive sales, and create a company mascot in the process.

The team went to work, and quickly ran into its first design challenge when Ohshima's character was used in Naka's code. "At first, our player character was a rabbit that beats up enemies by picking up and throwing objects with his ears," Naka remembered. "However, it quickly turned out that game speed could not be maintained with this process." The rabbit picking up objects with his ears, aiming and throwing them shattered the impression of speed, and hampered smooth gameplay. It also required

more button pushes from the player than the team felt was right: to gain an optimal experience of speed, the actions of the playable character would ideally have to be mapped to a minimum of controller button pushes.

Speed and a wish for a simple controller scheme were far more important than the specific type of game character they used. The team sensed a solution was possible, if they could find a protagonist who jumped while speeding, and somehow caused damage to enemies by jumping alone. After some deliberation, they arrived at a new idea: what if the character rolled into a ball after jumping, and smashed obstacles like a bowling ball or pinball would?

A rolling attack had obvious advantages: it not only kept the game's tempo high, but also simplified animating the character, freeing up processing power. As a consequence, the rabbit was off the table, plush toy and all. Exploring their new direction further, the team looked at animals that rolled into a ball to either attack or protect themselves. They arrived at a shortlist of just two: the armadillo and the hedgehog. It didn't take too long for the former to be dropped: the hedgehog's quills were simply better suited for attack than the armadillo's leathery armor shell.

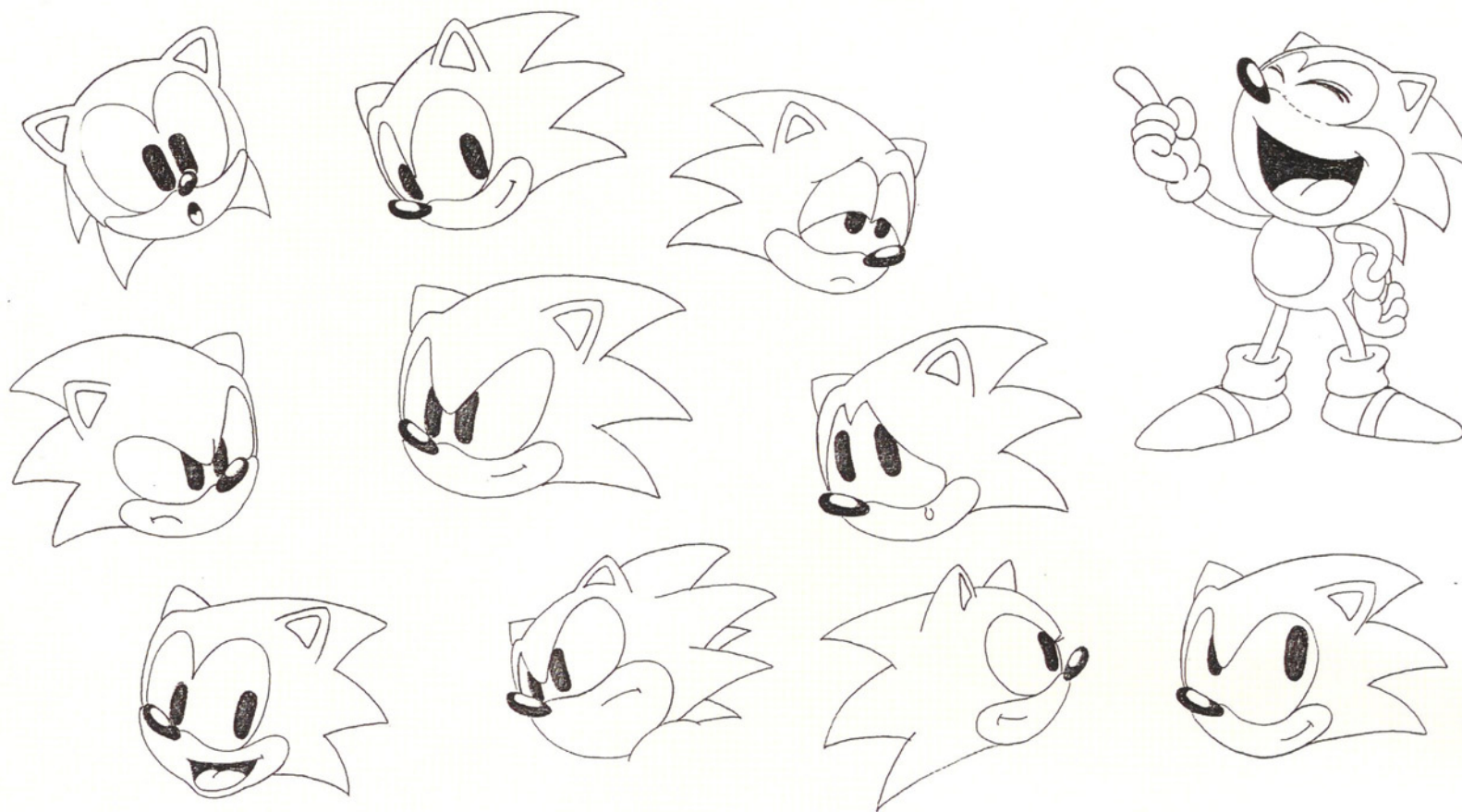


HEDGEHOG

©SEGA / ヘッジホッグ

Some of Naoto Ohshima's early sketches and character design studies (p. 22-25). Some of the main design features were decided on at a very early stage, such as giving the hedgehog long legs and long, rounded quills.

SONIC HEAD CONSTRUCTION



At this point, Ohshima reached for his design sketches and found a pencil doodle he remembered. It featured a 'Mr. Harinezumi', or 'Mr. Needlemouse', a hedgehog with long legs and pointy shoes, a determined look and long, semicircular quills across the back of his head and upper body. Up until this point, the doodle had been one of many discarded sketches, filed away in lieu of something better. But when it was reintroduced to Naka and Yasuhara, they recognized that *this* was the design they were looking for. The hedgehog had long legs, which gave it running credibility, and its quills suggested it could form a ball-like shape well before the character actually rolled into one.

The name Mr. Harinezumi soon gave way to 'Supersonic', in obvious reference to his speed, and to 'Sonic' a little while later — the word 'super' was already in high rotation amongst the competition. The team started work on animating the new character for the game, adjusting the original sketch design as they went along. The hedgehog now wore white gloves, Mickey Mouse style, and red running shoes with white socks. Pointed ears stuck through his quills, and head-to-body proportions were reimagined, balanced against those long legs.

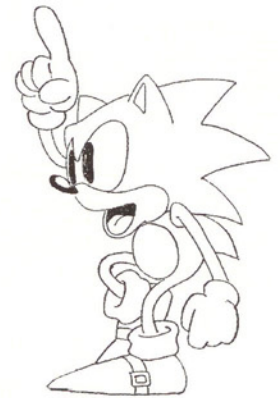
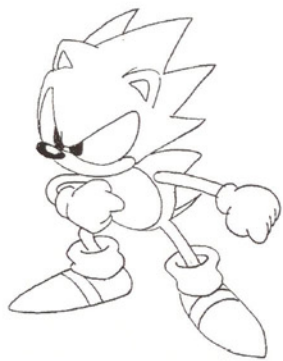
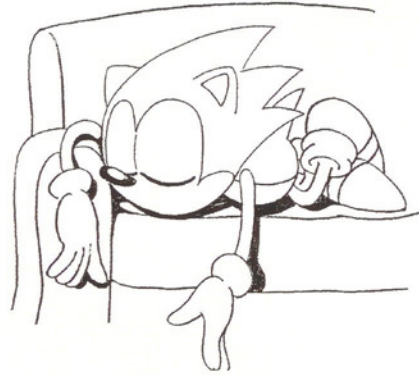
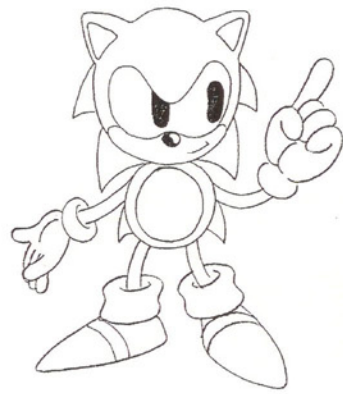
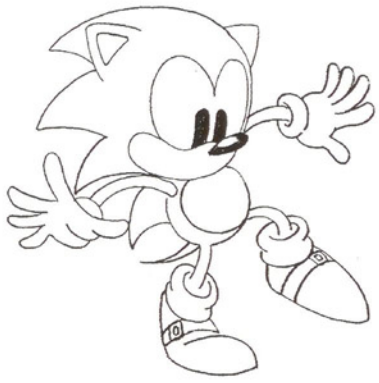
It was smooth sailing for Ohshima, who was well versed in drawing game characters through his involvement in games like 1987's *Phantasy Star* and its sequel. Yet the transition from a pencil sketch, seen from the front, to fully animated and pixelated 2D character, seen from the side, wasn't

without its challenges. How would the quills behave when the character was running? Where, exactly, would they be when Sonic rolled into a ball? "After Ohshima designed Sonic, I asked [SEGA] to make a Sonic clay figurine based on that design," Naka recalled. "By having this three-dimensional Sonic when developing the game, the design of his quills was fixed, and it also helped when drawing him in 2D in general."

After defining Sonic's shape came the question of coloring. Ohshima worked on a color scheme of sky-blue hair, red shoes, white gloves and socks, and a pink-brown skin tone for the hedgehog's belly and lower face. However, as many of the game levels had a blue background — the first, Green Hill Zone, features a lot of water — the character was blending in too much with its surroundings. So the hedgehog took on a darker hue, more akin to that of the SEGA logo, tying the character closer to its parent company in the process.

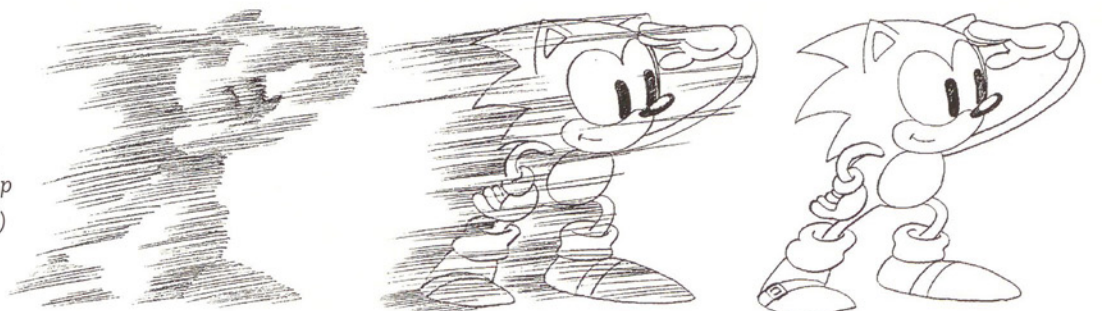
As Ohshima worked on the character designs, Naka tinkered with the game code. Building a 'supersonic' game on a new console led to a range of issues for SEGA coders to tackle, such as screen flicker, slow frame rates, and jerky animations. Naka delved into the root of the problem and re-wrote the algorithm responsible for the side-scrolling movement of both the character sprite and background animations, prioritizing Sonic's running speed over other concerns.

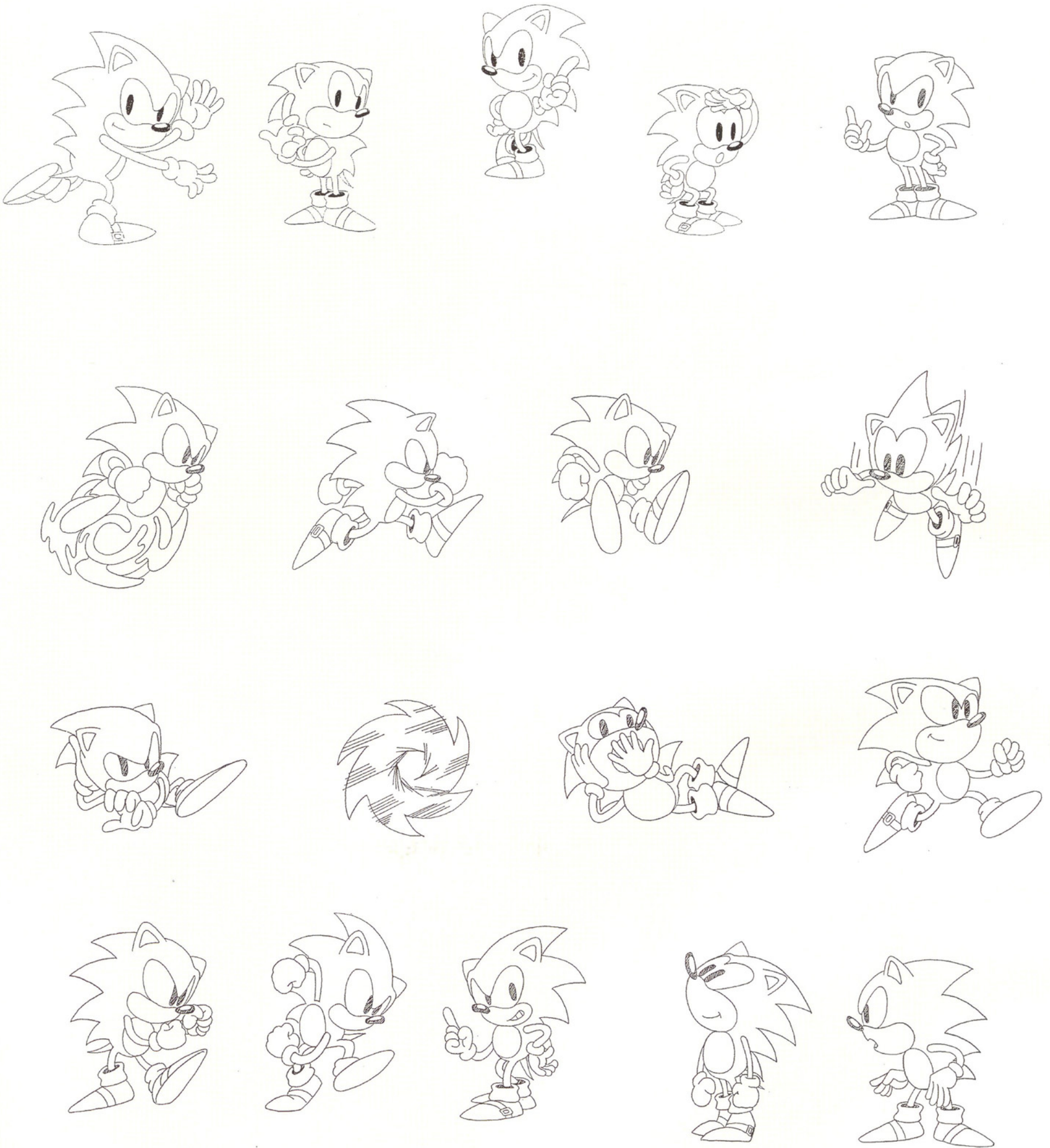
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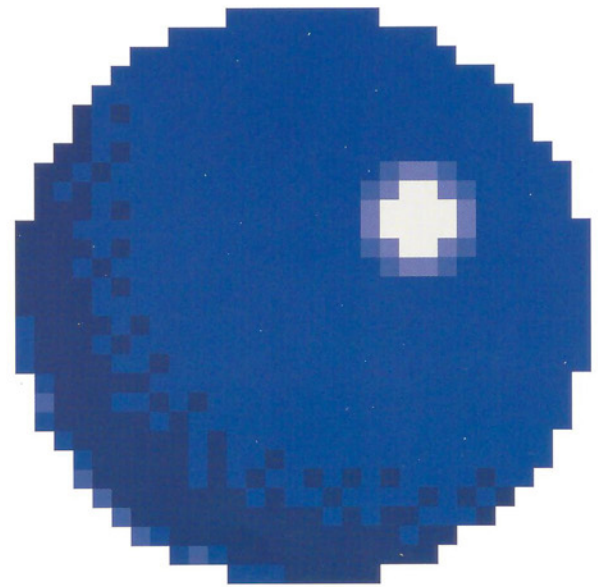
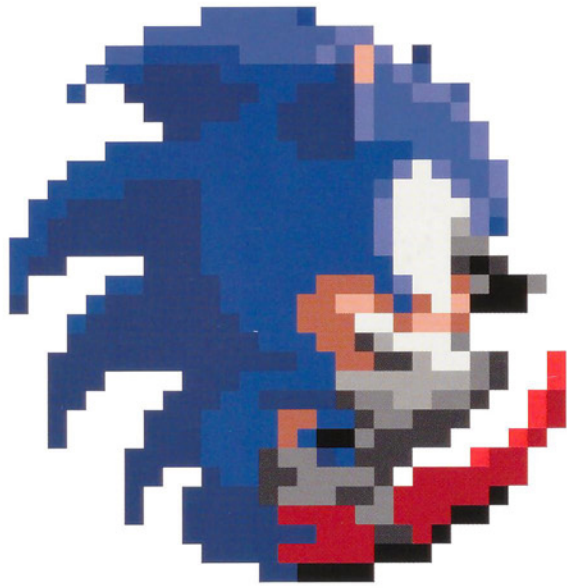
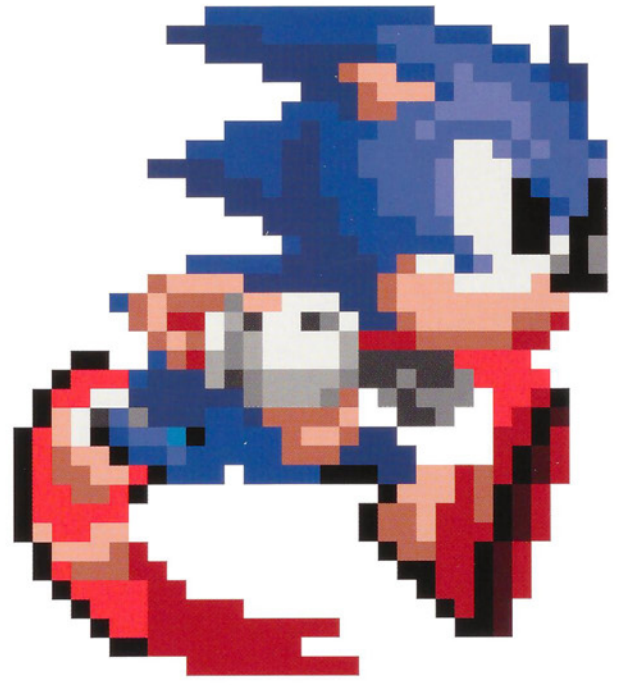
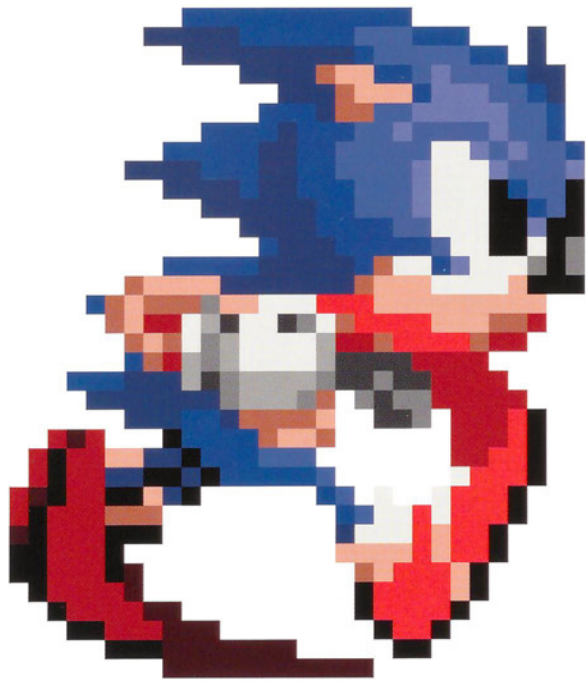


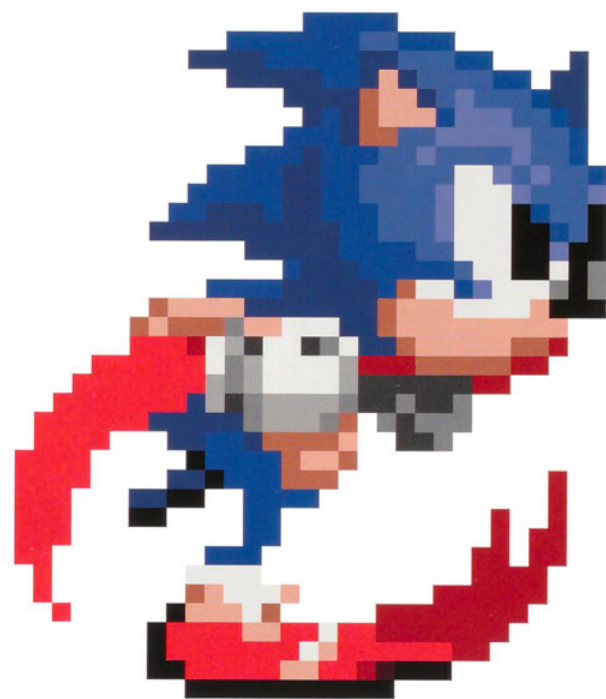
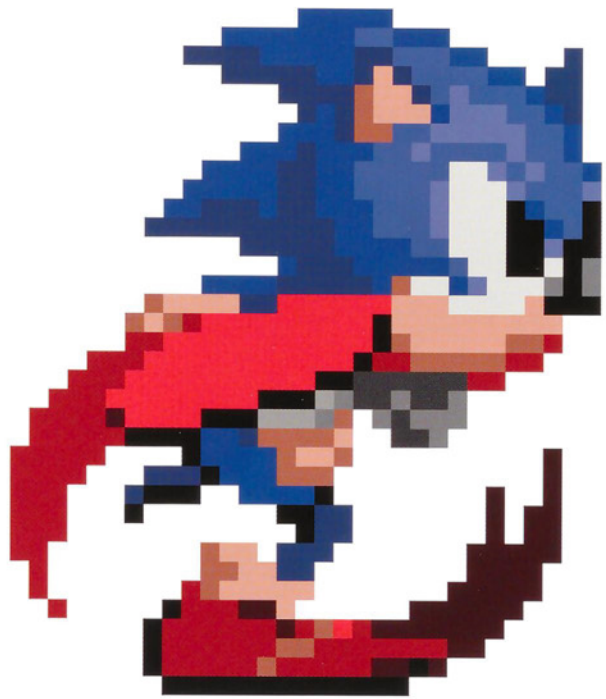
⚠ 真後、正雨を止めの絵は、使用しないで頂きたい。

After struggling to find the right in-game proportions for Sonic, programmer Yuji Naka asked SEGA to make a clay figurine based on Ohshima's early designs, to help the team better understand Sonic's (three-dimensional) properties, such as the look and position of his quills.









"I put a lot of thought into how to successfully make Sonic look speedy," Naka said. "Since just scrolling the screen along with where Sonic is running doesn't look too speedy, I made the parallax screens behind Sonic delay slightly. I think this made the players think Sonic is speeding faster than he actually is."

The result was nothing short of a technical revolution. Naka dreamt of a lightning-fast game, and fully delivered when it came to fleshing out the software: at the time there simply was no other video game around with the same scrolling speeds. Early in testing, the game at times even seemed too fast, with players reportedly becoming dizzy and nauseated. Listening to feedback, Naka gently slowed the scrolling speeds.

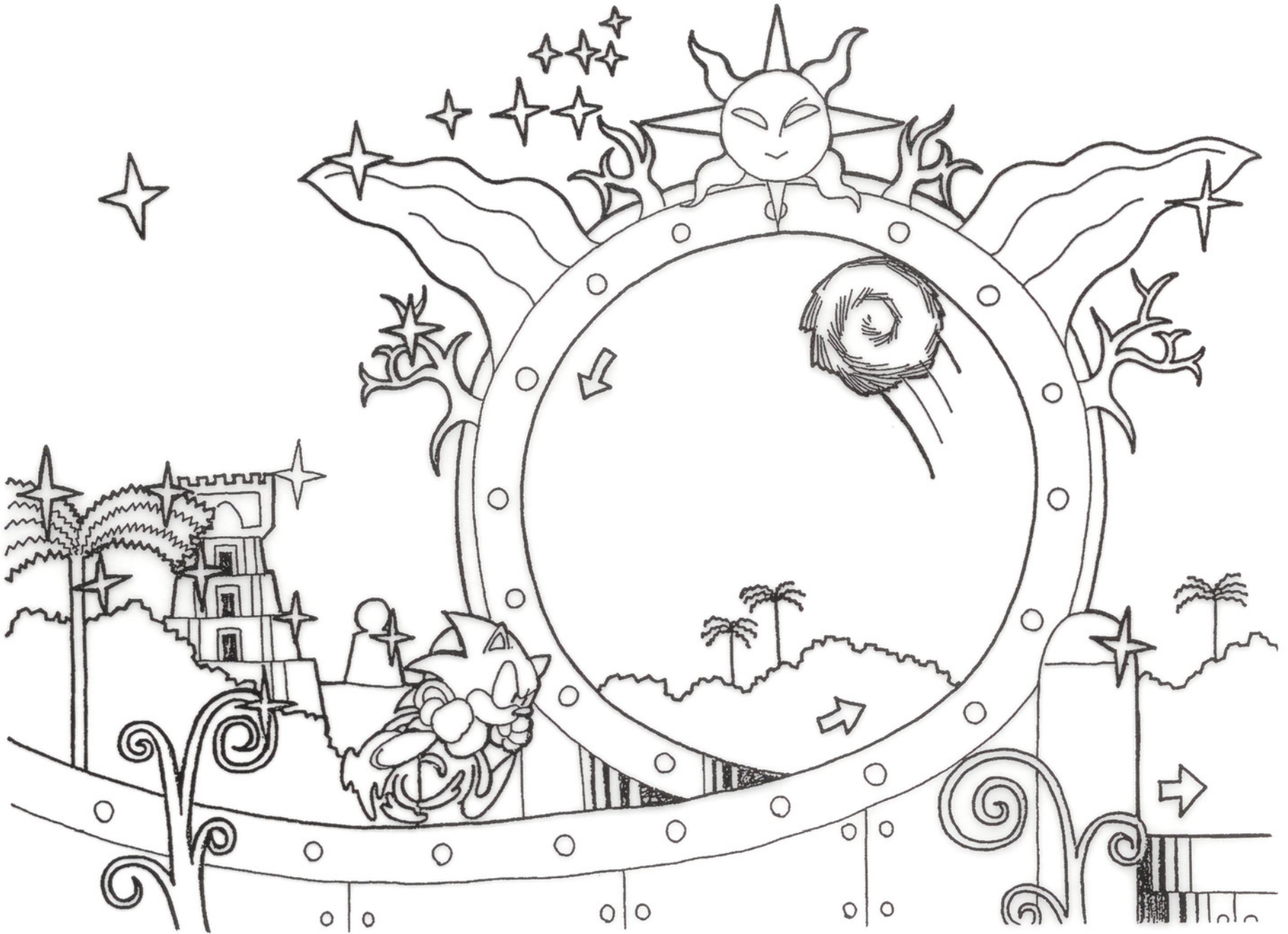
The moment-to-moment gameplay was totally aligned with his ideas about

speed and speeding, too. *Sonic The Hedgehog*, as the game was now named, was all about building and maintaining momentum. The player raced Sonic through the levels, aiming to anticipate the physical characteristics of the terrain throughout, creating a balance between (in-game) world physics and player input. Running speed increased automatically when Sonic steered clear of obstacles. Pressing down on the controller's directional pad changed Sonic's shape into a ball, and when the player ran him off a curved slope, it increased his speed further. Loop-the-loops, springboards and bumpers worked as accelerators too, but only relative to the speed and angle of Sonic's approach.

The game that Naka, Ohshima and Yasuhara envisioned was steadily finding its form. Four more staff joined what would become known as Sonic Team to ramp up production of the game, and to flesh out the levels.



1. メタリック調のステージ… 背景は東南アジアをイメージした黄金の国、金色のメッキで輝いている。





Sonic Team went out of their way to give Sonic The Hedgehog's level designs a futuristic look, applying several optical tricks. Although the palm trees are made from pixels (cubes), the leaves appear to be made out of 'polygons' (multi-sided planes) - computer graphics not yet available for video games at the time. A faux shadow applied to the checkered ground give an illusion of depth to the loop-the-loop.

Sensing they had something going that could genuinely impress, they upped the ante with the stage designs. The Mega Drive's processor allowed them to build vibrant, colorful worlds that would stand out from any 8-bit game on the market. Yet showing off the system's superior graphics by simply using more colors was not enough.

Artistically, the team settled on a cartoonish yet futuristic design style that took cues from advanced computer technology of the era, said Kazuyuki Hoshino, Sonic Team's art director and character designer on many Sonic games.

"The design direction was pushed by a fond affinity [that team members had] for high-end computer-generated graphics. Back in those days, 3D computer graphics were very new. Having a computer that could render polygons, and vibrantly colored, three-dimensional worlds, was very exciting. You know, only a select few had a machine that could do that, so our designers gorged on computer magazines that were laying around the office, studying these images of high-end visuals, wishing they could have them in their game — which was technically impossible when programming for the Mega Drive, of course."

The love for these advanced computer graphics inspired a visual design that was ahead of its time, and defied the technical limitations of a machine like the Mega Drive. In Green Hill Zone, Sonic raced on checkered ground that looked like computer-generated, three-dimensional imagery. The trick here was applying a faux 'shadow' to suggest overhanging rock parts. Palm trees looked like they were made from 3D polygons, as were the famous rings Sonic collected throughout the game. They were pure 2D, but a little optical wizardry communicated a cutting-edge visual style to the player.

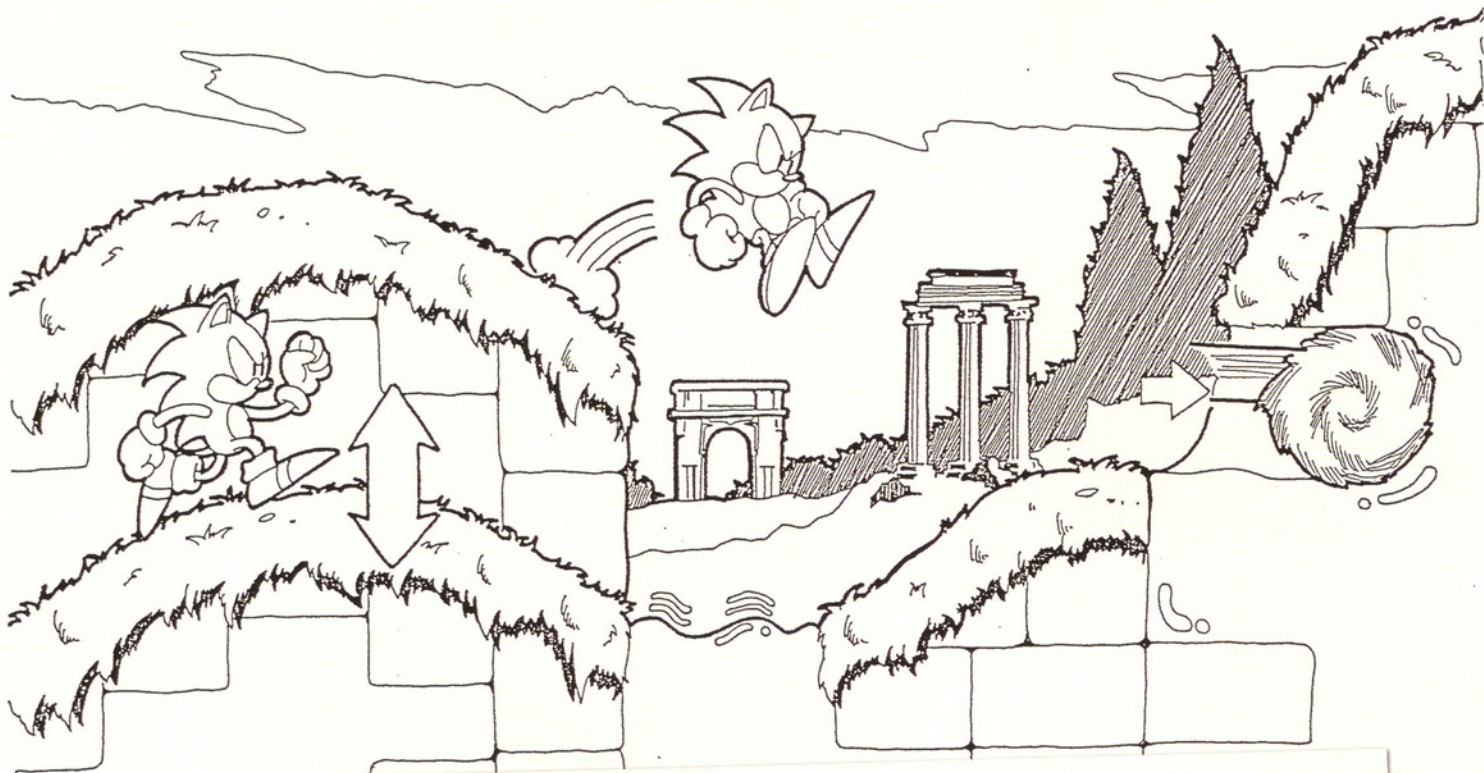
"The whole game was designed so that the screen looked as if it was drawn by ray tracing [a technique that uses light to convey objects as 3D shapes]," Naka explained. "Through this style, I was able to make the 2D rings look as if they were rotating, and were reflecting the light."

Color-wise, Sonic Team members wanted bright hues and striking contrasts. Hoshino: "They chose this California-like bright blue sky, but together with an orange ground, to make the contrast as defined as possible". "Their friends at SEGA would stop by and check out what they were working on, but were taken aback: 'You guys have way too much going on! It's too bright, there's too much contrast!' (Laughs) They didn't listen, didn't care, saying: 'This is what we want our game to be.' And they went out and used that design sense throughout their entire game."

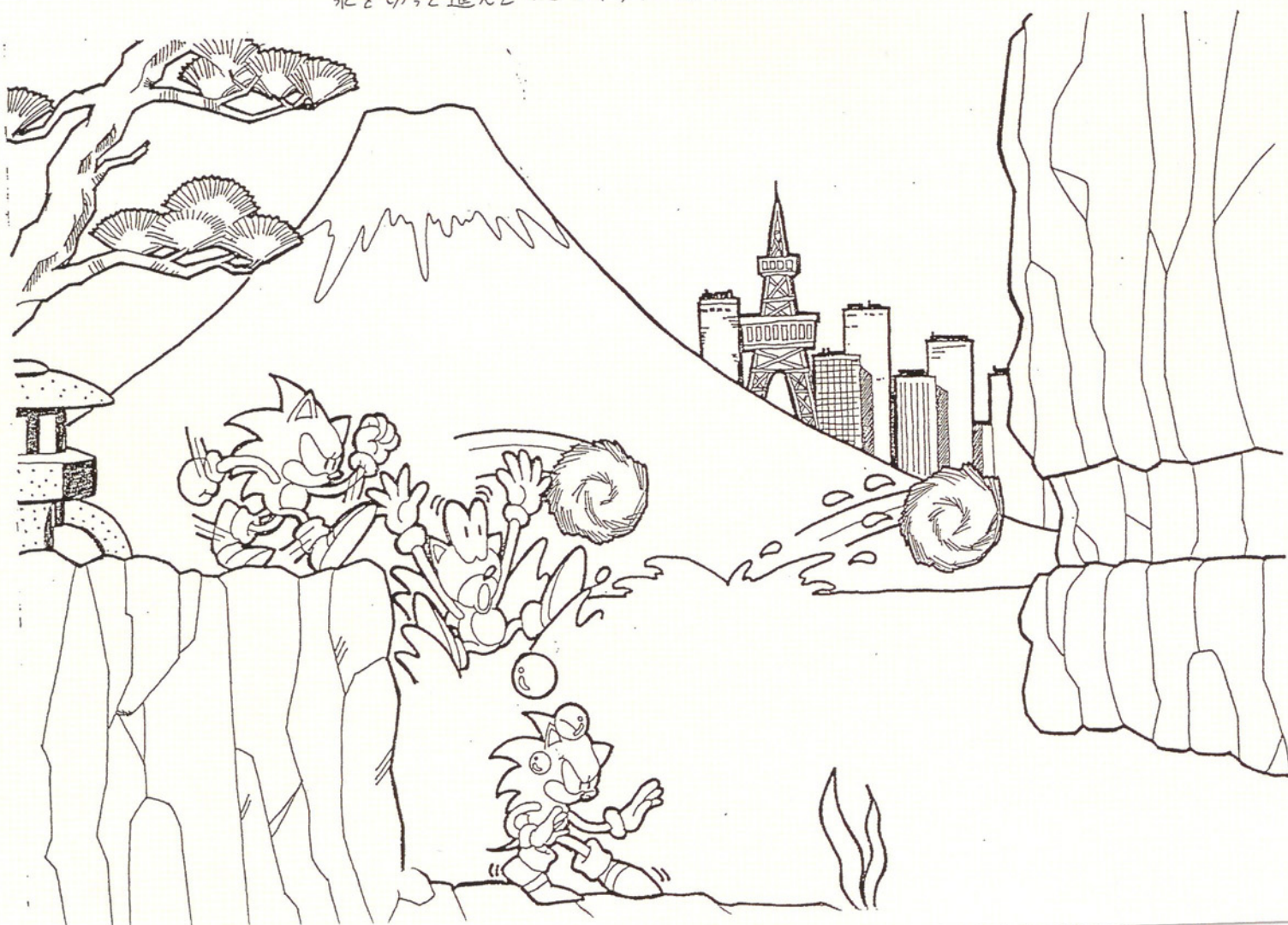
By June 1990, the game's development was well underway. Demos were shared with more and more people within SEGA, with an unexpected outcome: SEGA of America, the division responsible for SEGA's North American activities, expressed strong objections to Sonic's at-the-time back story.

Continues on page 35...

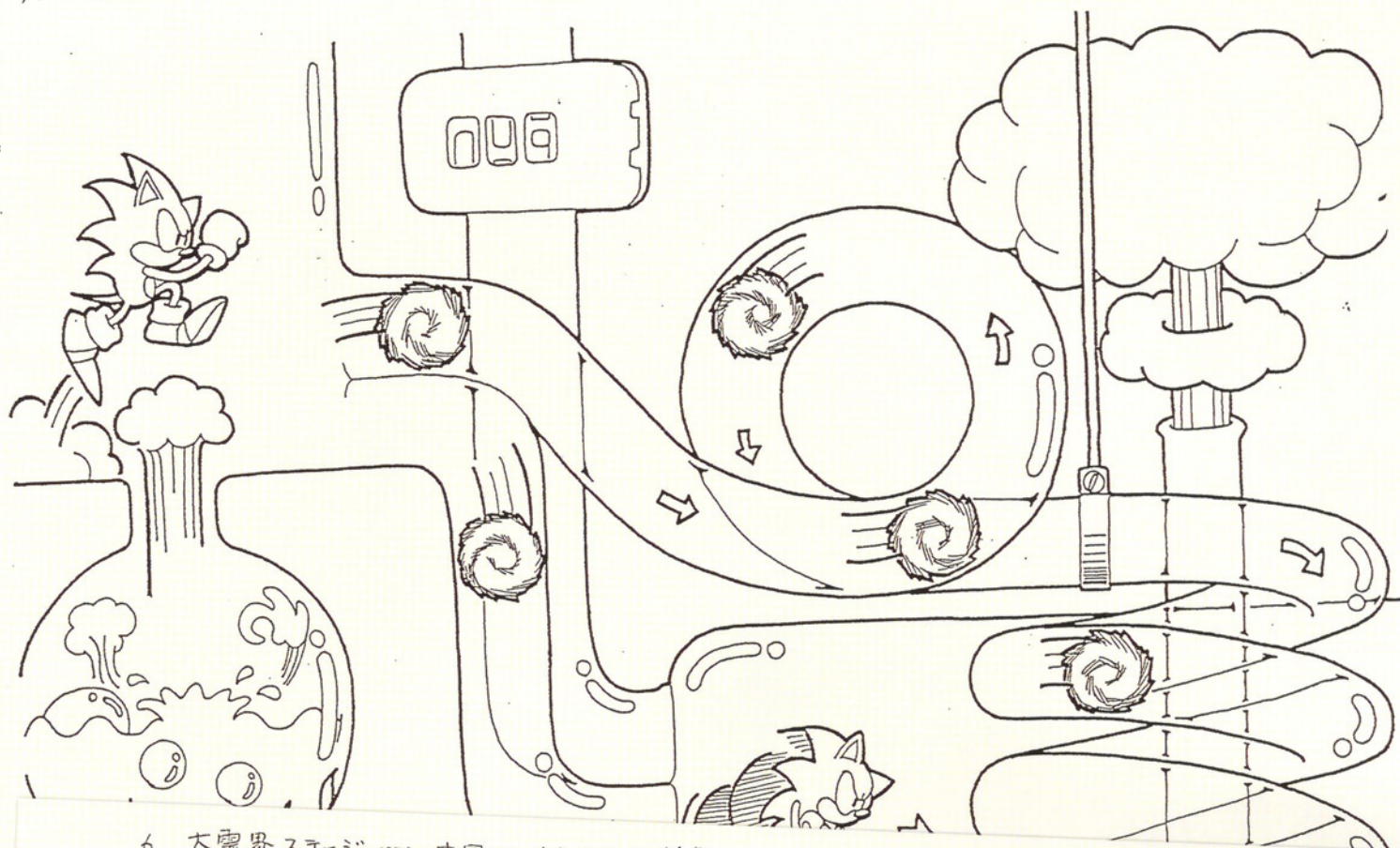
4. 地形がゆれるステージ …… 地中は、アムバ形状にならび、地面がゆれている。アムバ状の地形を迂り進み、地中にもぐることもできる。



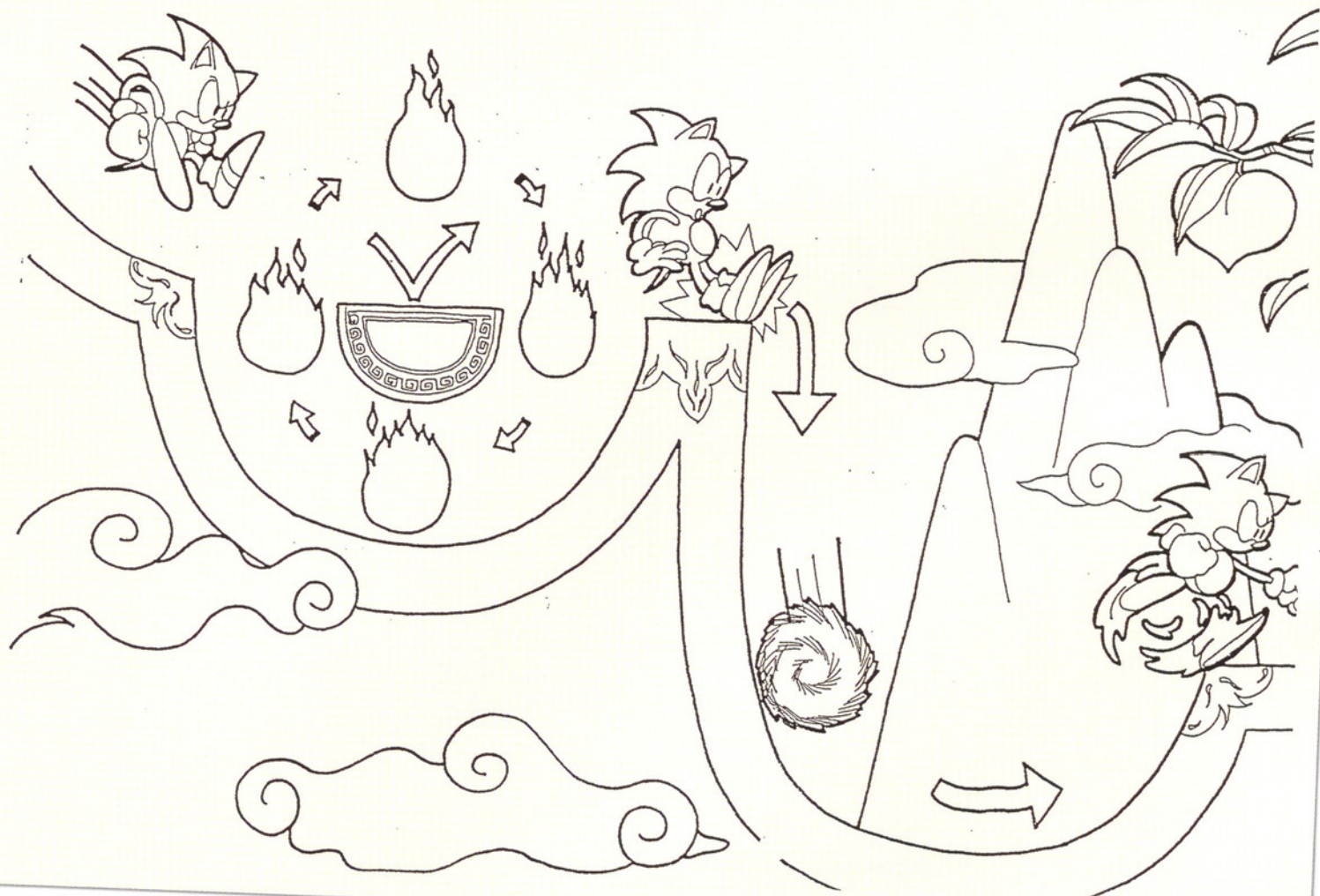
3. 岩山と水中のステージ …… 日本をイメージした岩山のステージ。水中のシーンもある。図では回転して、水を切って進んでいるが、テクニックで、いろんなコースが送れる。



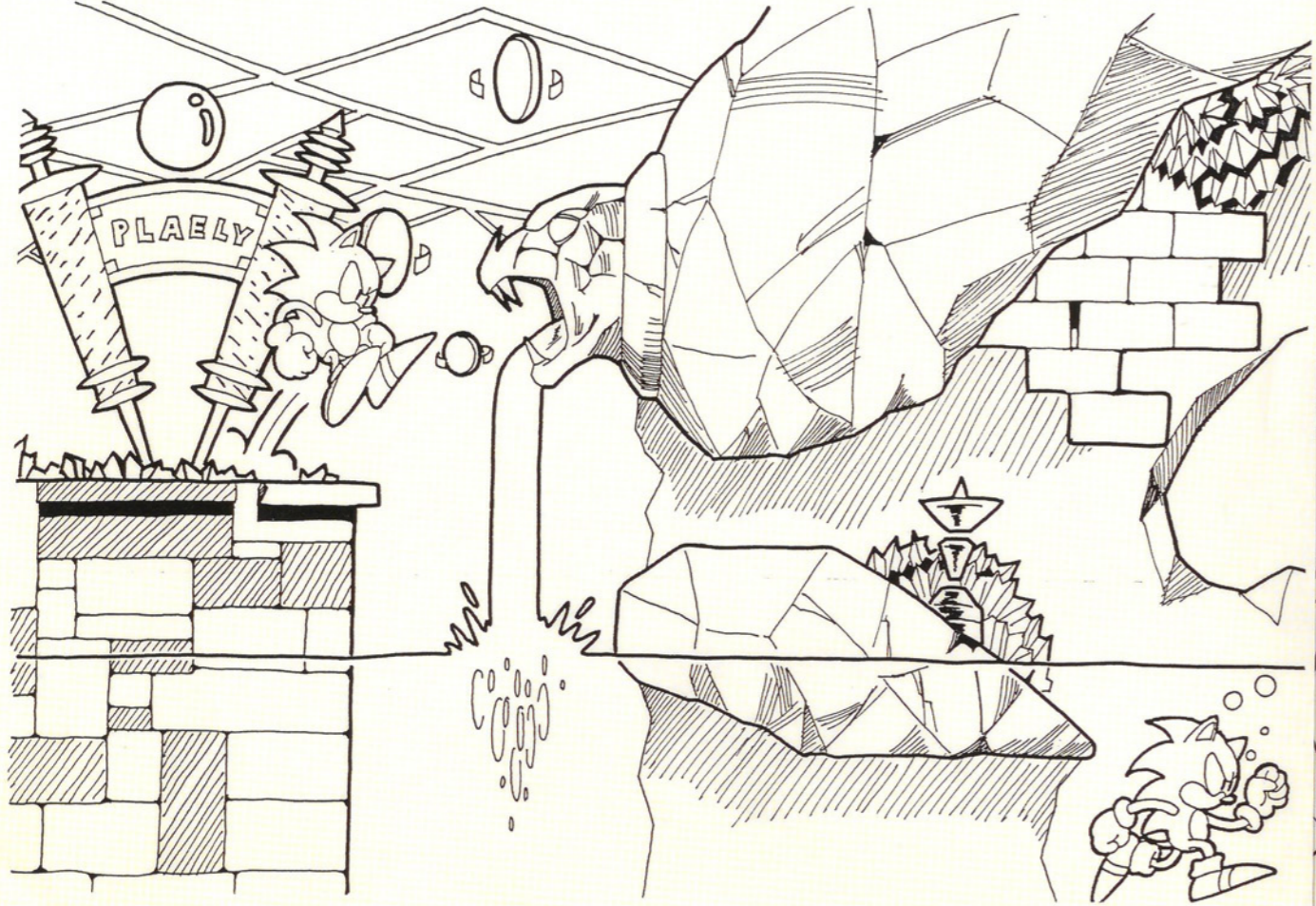
7. 実験器具のステージ... パイプ類を配置して、その中をくくりぬけていく。



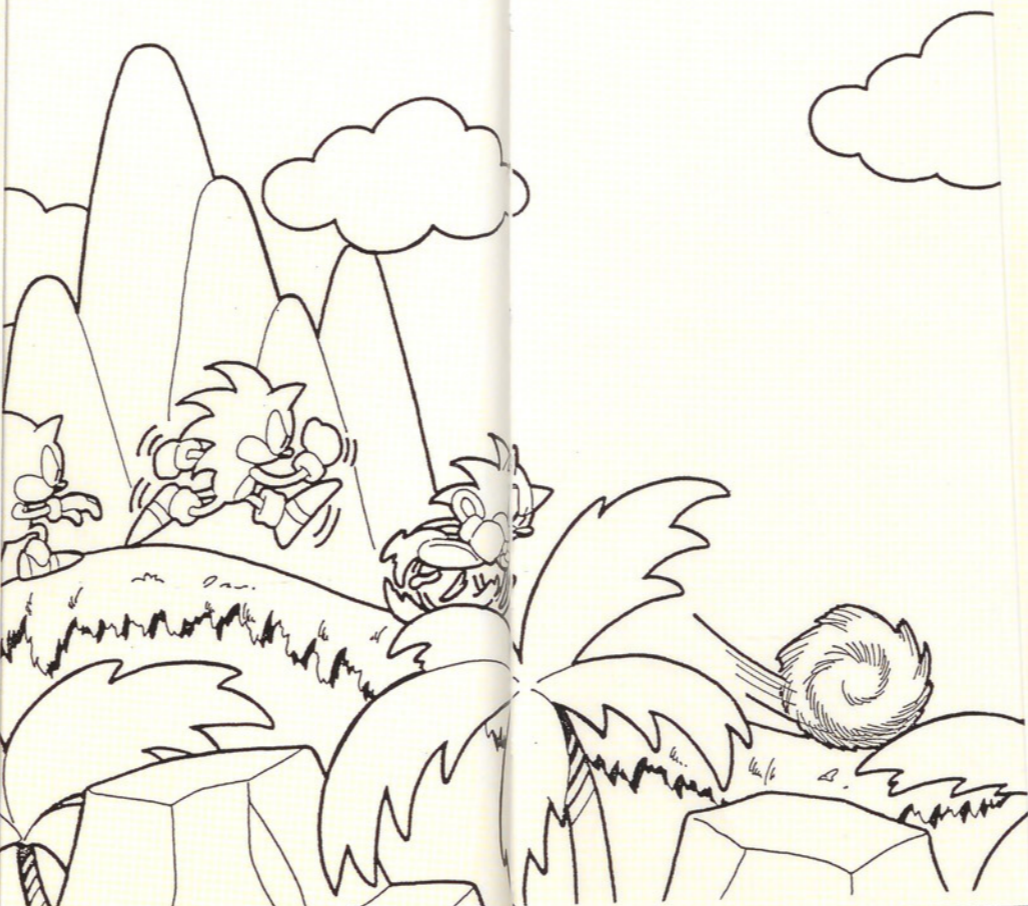
6. 大霊界ステージ... 中国をイメージした背景。



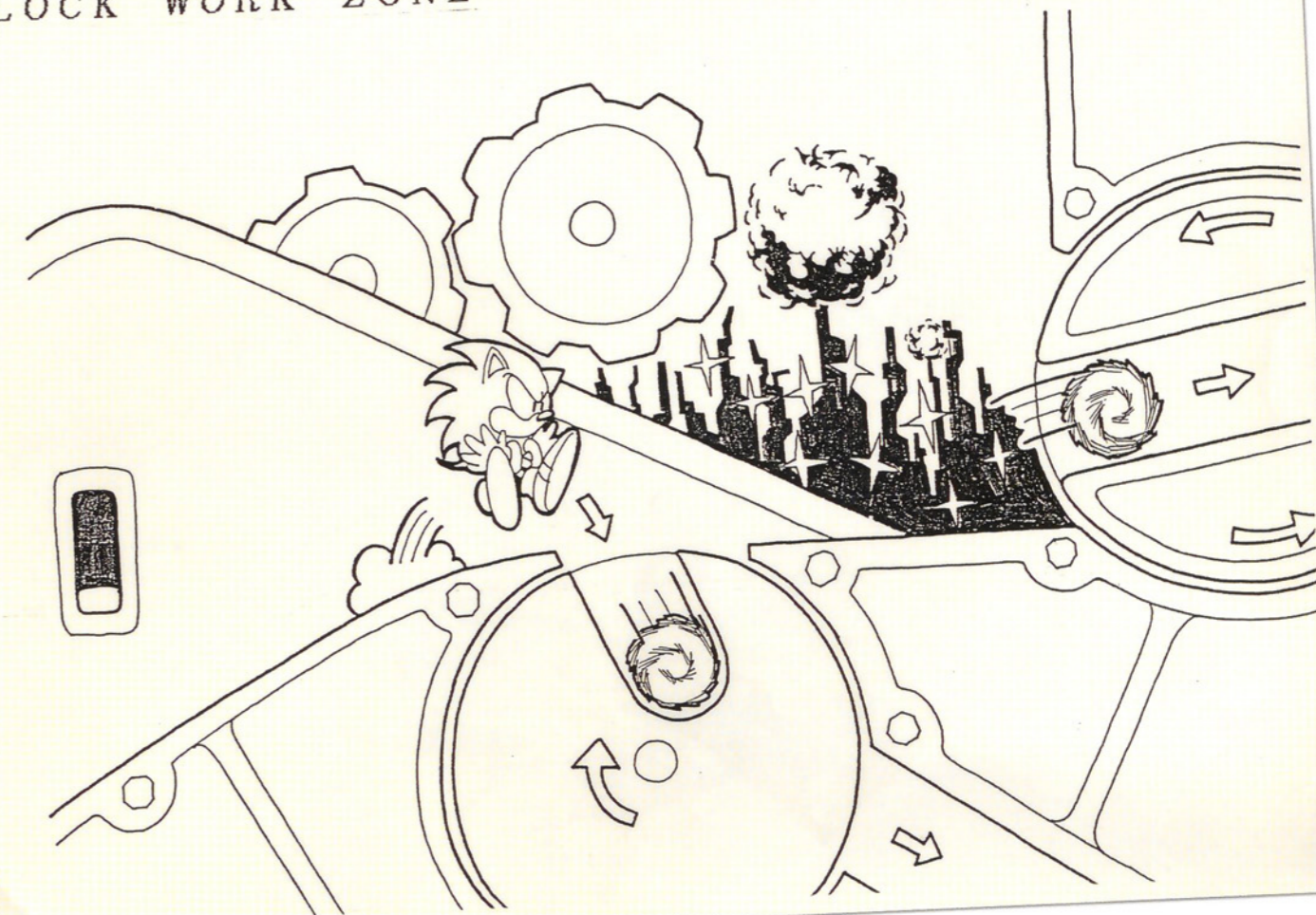
LABYRINTH ZONE



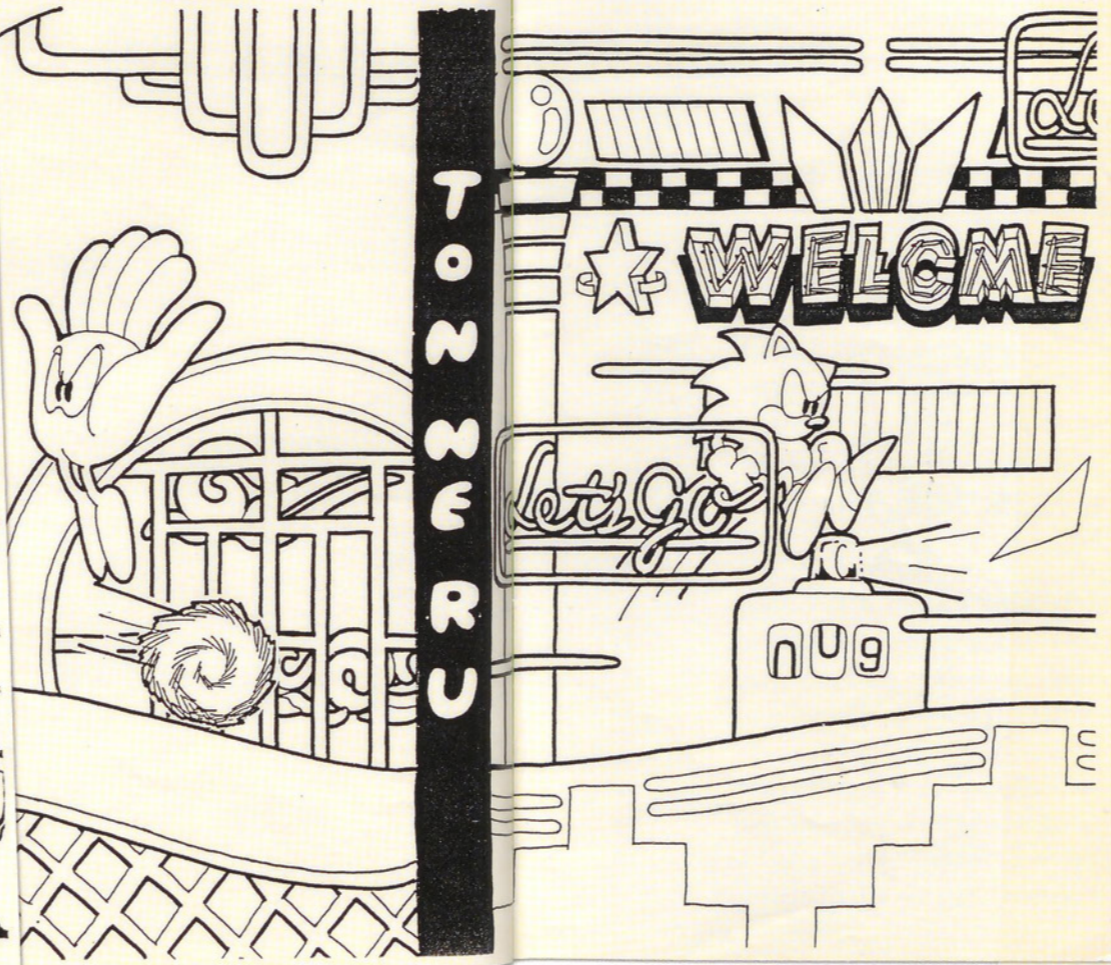
HILL ZONE



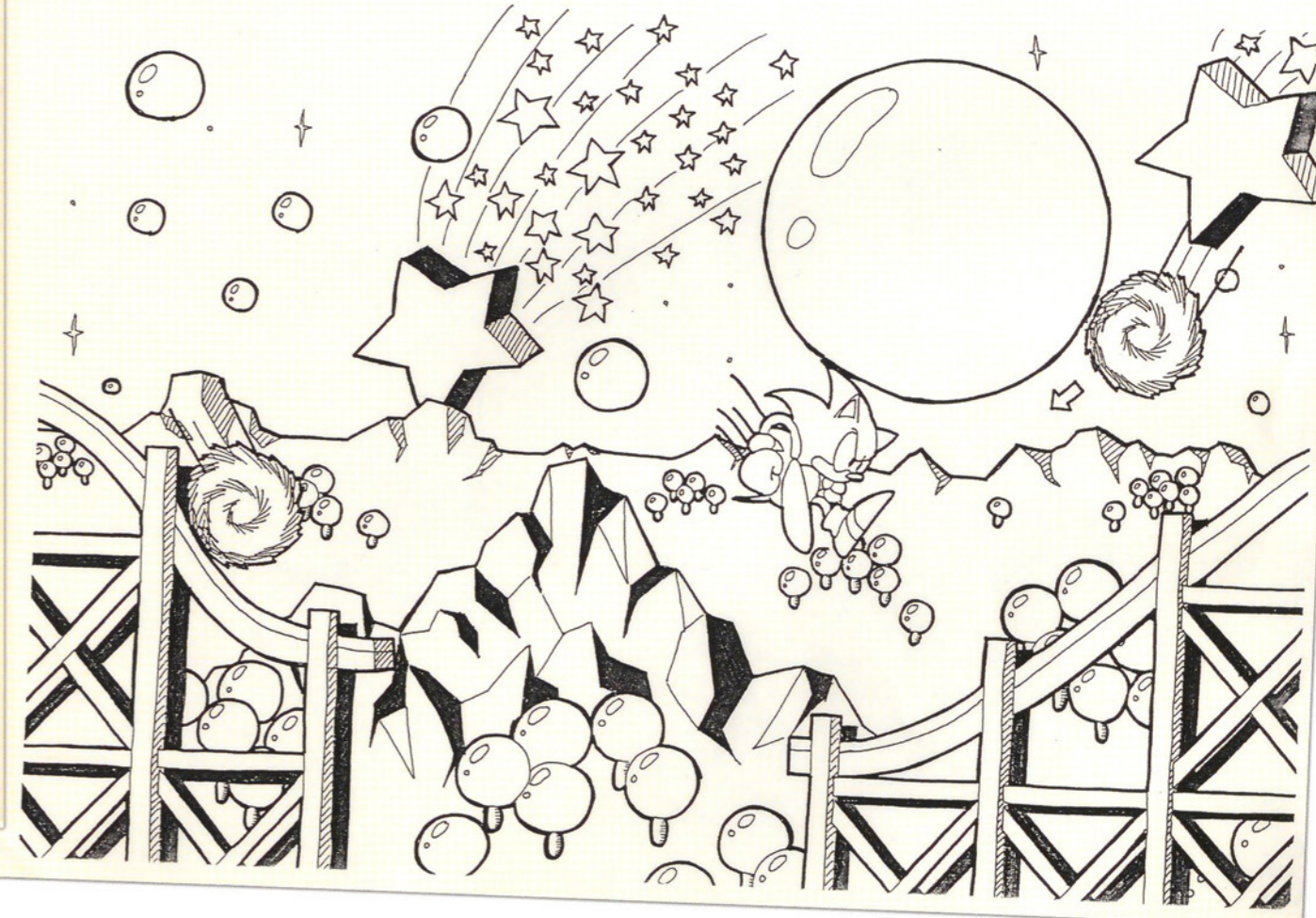
CLOCK WORK ZONE



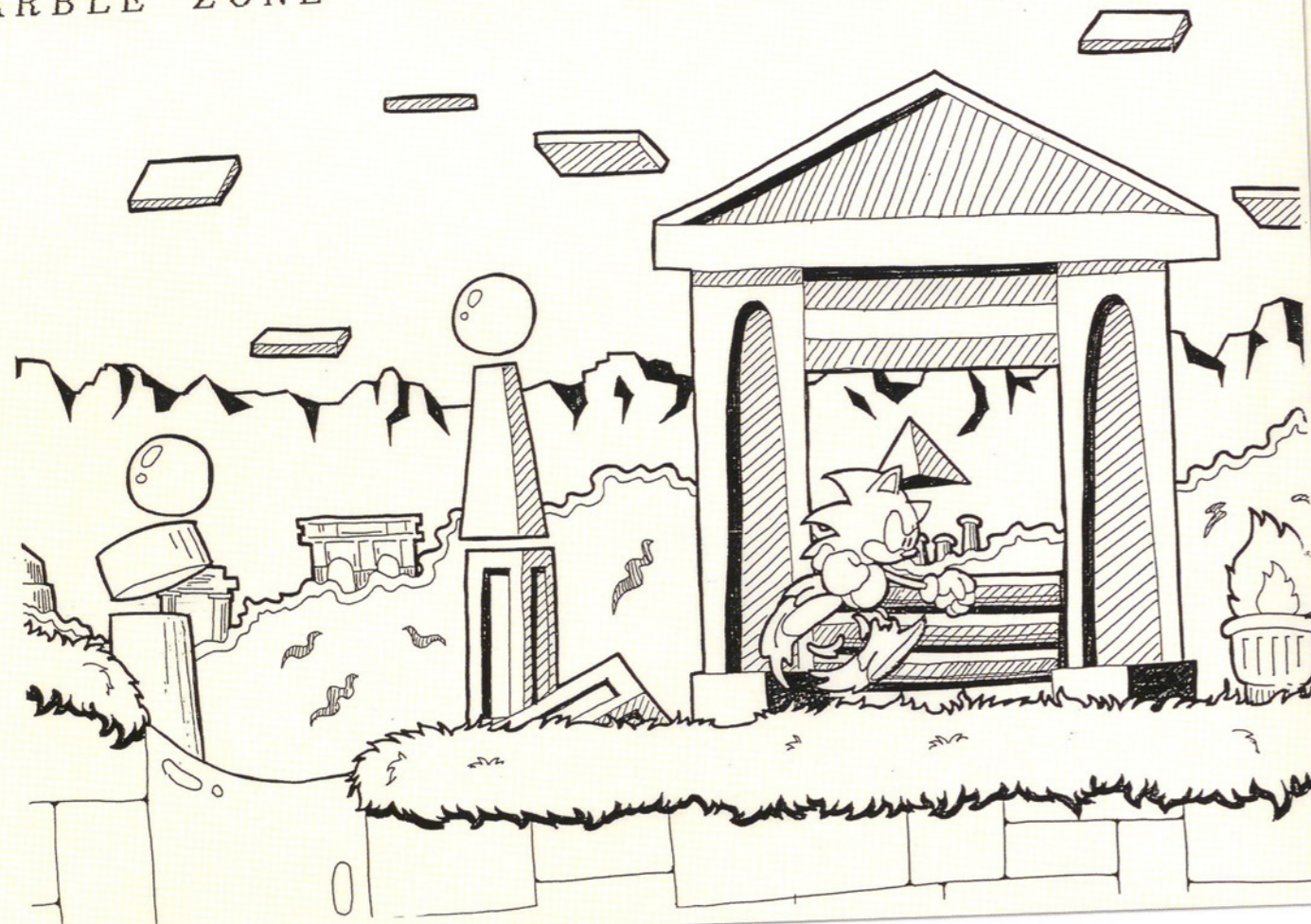
SPARKLING ZONE

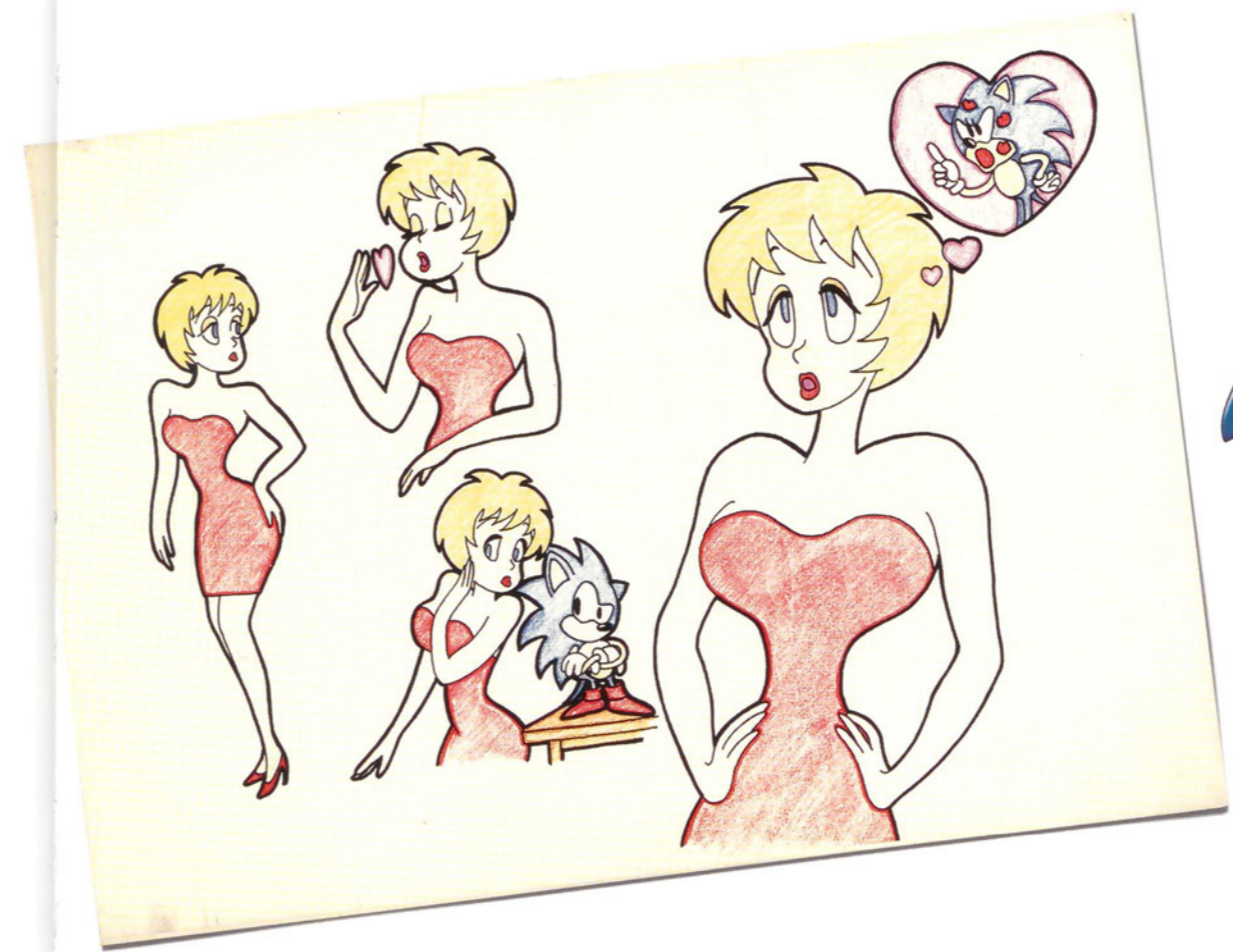
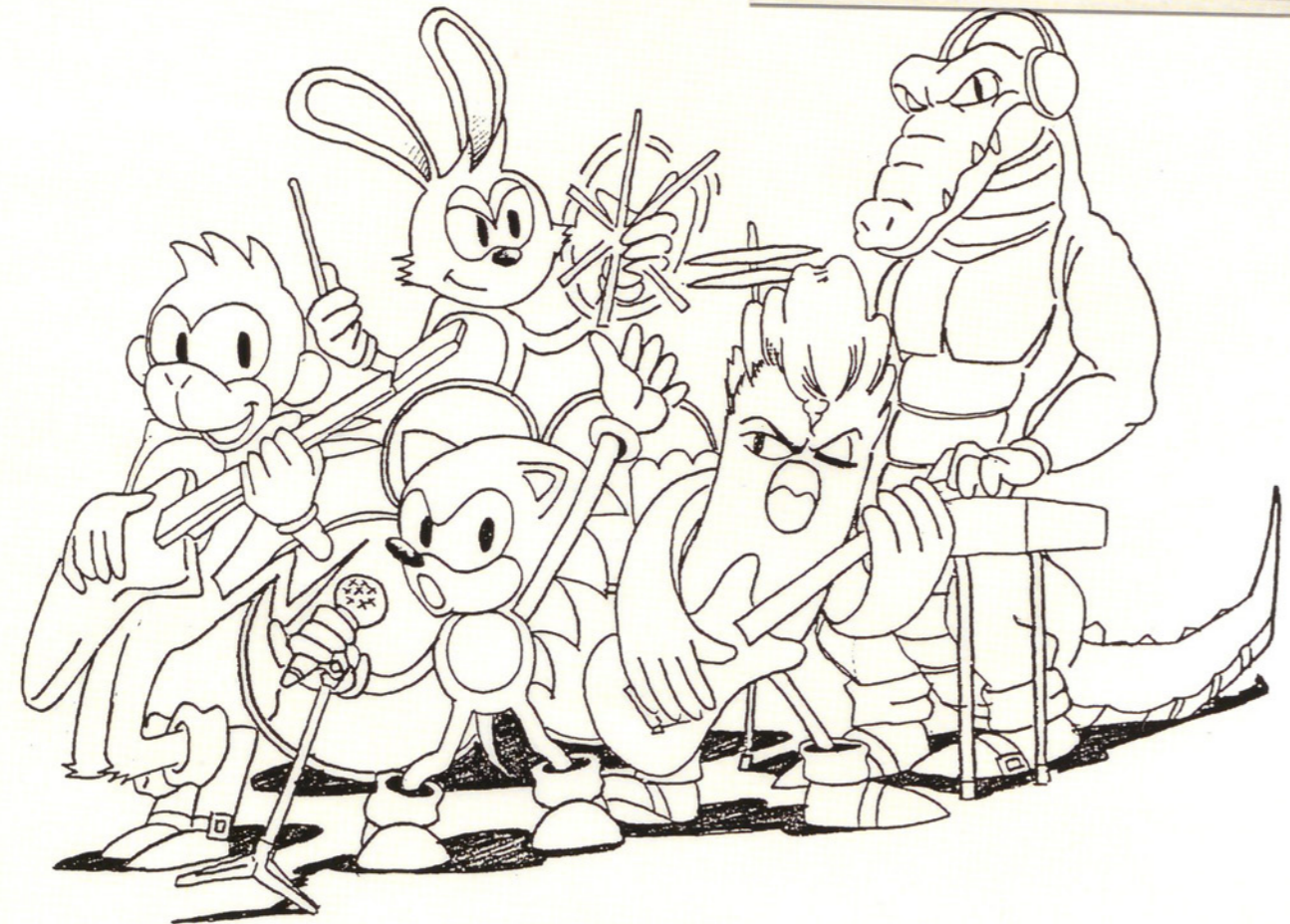
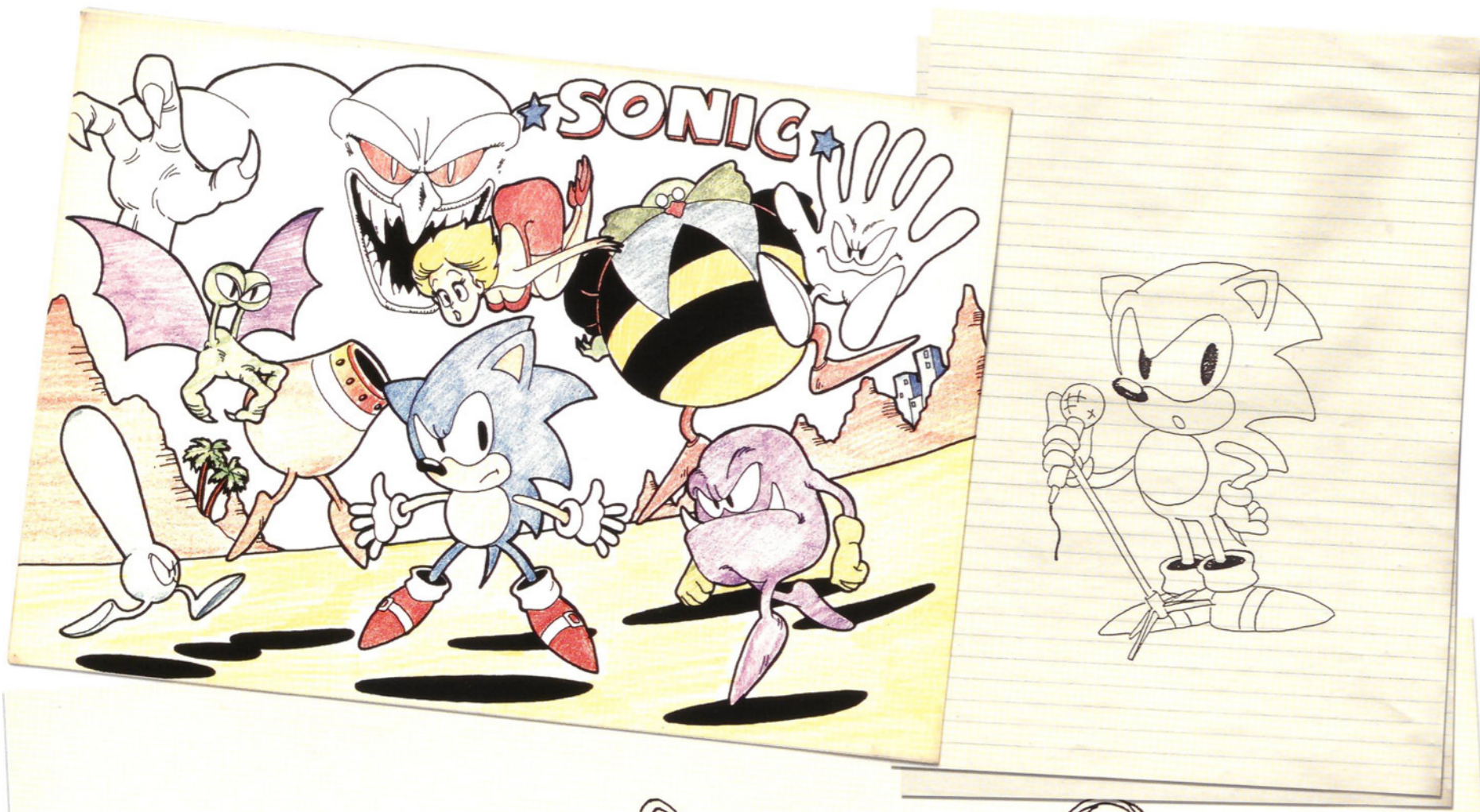


STAR LIGHT ZONE



MARBLE ZONE





The early backstory for Sonic the Hedgehog featured Sonic as the leader of a rock band, who has a girlfriend named Madonna. The scenario was eventually rejected, but partly repurposed: the figure in the bee costume later became Sonic's rival Ivo Robotnik.

Ohshima had portrayed Sonic as the singer of a rock band, who attended to the whims of his girlfriend, named Madonna (possibly based on the American pop star). It was a radical scenario for a video game by any standard, and a big departure from the usual hero versus villain setup. The scenario had functioned for months, without too many people knowing about it, and certainly no complaints. Yet when SEGA of America saw the designs, they demanded drastic changes.

Blue cartoon animals with human love interests were a no-go, as far as they were concerned, as was any reference to the pop star, then one of the most famous women in the world. Sonic's rock band was seen as a very unnecessary element—to the Americans, it didn't serve any purpose other than giving Sonic some friends. Finally, the scenario of Sonic saving his girlfriend from an evil antagonist was deemed to have too much in common with Mario forever saving Princess Peach.

The objections of the American division began a process of push and pull between different people within SEGA, resulting in a reorientation of Sonic the Hedgehog, both the character and the game. At first, Sonic Team positively disliked any American interference with their game, but later became convinced that change was for the better.

The old scenario of the stylized animal protagonist and his human partner was ultimately considered too weird, perhaps too Japanese, to capture the imagination of an international audience. Moreover, Sonic was an important weapon in the fight with Nintendo, destined to be the face of SEGA

worldwide. The hedgehog could not properly fulfill its mission when that face was also associated with Madonna, or with rock music. In other words: Sonic would not work as a SEGA mascot as his makers initially devised, and the game would have a tough time proving itself in terms of marketing, advertising and merchandising without fundamental changes to the character and its backstory.

Sonic's redesign was driven by SEGA of America, and in particular by product manager Madeline Schroeder, who readied Sonic for a future where he would resonate with audiences worldwide, and could be used in comic books or television series. After the overhaul, Sonic had lost his band and girlfriend but gained an iconic enemy, and the game an environmental theme. The new back story involved antagonist Doctor Ivo Robotnik (named Doctor Eggman in most Japanese versions of the earlier Sonic games, and more recently globally), a maniacal scientist who turns Sonic's animal friends into robots, and puts them to use in his quest to collect six Chaos Emeralds and change the lands of South Island into a Robotnik Empire.

Conceived by Ohshima, Doctor Robotnik was the visual opposite of Sonic. His coat was a bright red, in sharp contrast to Sonic's blue fur, and his plump, oval body quite the contrast to Sonic's slim and sleek features. Robotnik relied on technology, and cared little for the plants and animals on the island he sought to conquer, adding a strong theme of nature versus technology to *Sonic The Hedgehog's* game world.

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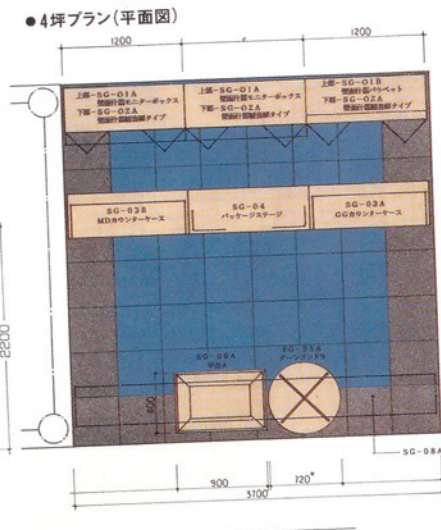
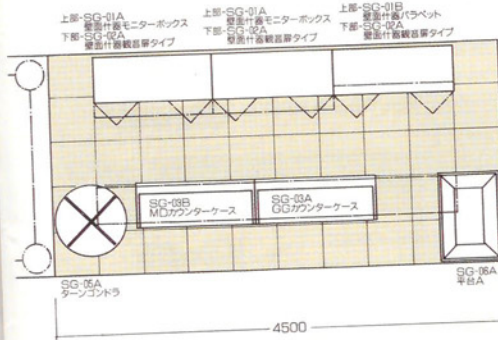
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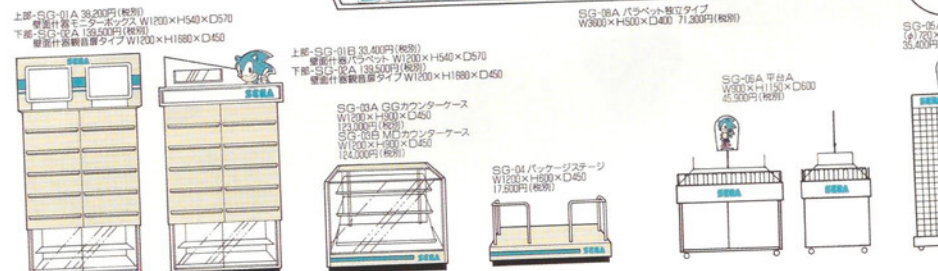
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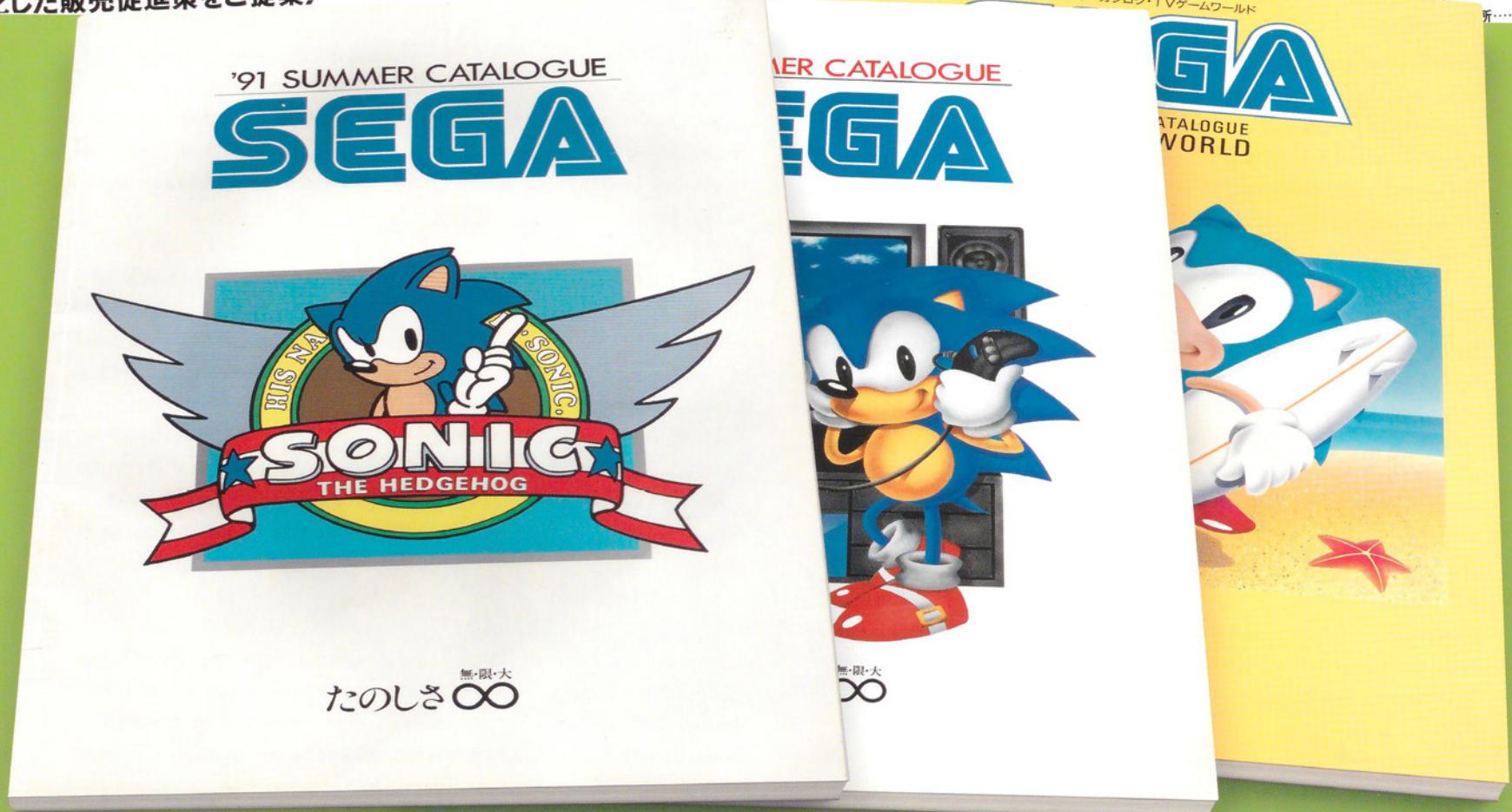
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 名古屋営業所……………TEL.052(0)2-23-1111
 関西支店……………TEL.06(0)6-33-1111
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Sonic and SEGA Genesis brochures for retail business partners in Japan, including detailed store display instructions.



The introduction of a strong antagonist changed the role of the protagonist, too. Sonic now had a strong cause that players could relate to — rescuing animal friends. This softened him a little, yet his rock-star attitude, as first imagined by Ohshima, remained. That much is clear from the original game’s instruction manual: “Only one tough dude can put an end to the demented scientist’s fiendish scheme. It’s Sonic, the real cool hedgehog with the spiked haircut and super sneakers that give him super speed.”

The text makes it perfectly clear this new video game character was aimed at a target audience of teens, rather than children, positioning this “dude” (and by extension SEGA and its 16-bit console) as the mature alternative to Mario. Following the 1983 crash, the NES had set Nintendo up as a family friendly brand, where parents could be assured that their kids could have fun in a safe virtual environment. SEGA aimed to be different. It had games you’d rather not share with your parents, or let them know you were playing at all; “real cool” stuff, suggestive of danger and adrenaline. Sonic, SEGA’s mascot, in a way symbolized adolescence, with connotations of independence, edginess and rebelliousness. He wasn’t any ordinary anthropomorphized avatar.

At the start of 1991, SEGA finally had both its mascot and a killer video game to take on Nintendo. Confident about the new proposition, the company presented its new game at the Consumer Electronics Show (CES) in Las Vegas, January 1991, an event of great industry importance. At the show, a dream scenario for SEGA’s marketing department played out—they represented the proverbial David, taking on the gaming Goliath of Nintendo. As Nintendo announced Super Mario World for North American release in the fall of 1991, coinciding with the launch of the 16-bit SNES, SEGA boldly showed off *Sonic The Hedgehog* by displaying screenshots of the game alongside those of the next Mario game. Nintendo’s game was excellent, yet so far as first impressions go it was outshined by Sonic. SEGA’s game came away with a CES Innovation Award, courtesy of the Electronic Industries Association.

Sonic The Hedgehog was released on June 23, 1991 in North America, and in Japan and Europe the following month, to great acclaim. The video games press awarded it rave reviews, and Sonic starred on gaming magazine covers around the world. Challenging Nintendo head-on,

SEGA now aggressively compared itself to the competition, claiming that ‘Genesis does what Nintendo’t’, as its infamous slogan of the early 1990s ran. Making the most of the SNES still being some time away in Western markets, SEGA devised a marketing strategy that was radical for the games industry.

Tom Kalinske, then-president of SEGA of America, proposed that the company bundle a copy of *Sonic The Hedgehog* with every Genesis, to entice consumers to pick it up over both the NES and the forthcoming SNES. Some deemed this commercial suicide — here was SEGA effectively giving away its most promising new video game. Profit from gaming was predominantly made through cartridge sales, not number of consoles sold. Consoles were expensive to make, and had to retail at an affordable price, which meant tiny profit margins — or even losses. Game cartridges, by comparison, were cheap to make, so the profit margin could be higher — covering both development and production costs and netting the publisher a healthy return. But Kalinske’s plan had merit, evident from a cursory analysis of the market. While they had the better technology, SEGA was still behind Nintendo in terms of consoles in homes. SEGA had to focus on selling more consoles, and bundling Sonic with the Genesis was sure to yield positive results. His vision prevailed, and between July 1 and August 31, 1991, every new Genesis sold came with a free copy of *Sonic The Hedgehog*. The timing was everything — that was also the SNES’s launch window in North America.

The success of the Sonic bundle drove the narrative that SEGA was leading the 16-bit revolution. Some 15 million Genesis consoles were sold in the States in that period, strengthening the popularity of SEGA’s new mascot. *Sonic The Hedgehog* had proved the hot cake SEGA had been so hungry for. In the words of Electronic Gaming Monthly magazine’s May 1991 issue, Sonic was out “to deliver some of the brightest, boldest, most excited action you’ll ever see on the Genesis (or any game system for that matter)”, a sentiment that reflected the generally positive reception of the new game. When the dust settled and marketing moved on to work on other game titles, an estimated four million copies of *Sonic The Hedgehog* were sold on top of the 15 million ‘free’ copies, and Sonic was a bona-fide video game star.

The stage set for expansion, SEGA commissioned Sonic comic books, television series and merchandise. Before long, Sonic was seen on the back of Nike shoes, in McDonald’s Happy Meals, and on everything between bedspreads, cups and posters. But naturally, gamers wanted more. *Sonic The Hedgehog* needed a sequel, the sooner the better.

SEGA deployed two teams to work on new Sonic titles: one headed by Yuji Naka in the U.S., the other by Ohshima in Tokyo. Over the next seven years, in what’s commonly referred to as the ‘classic Sonic’ era, they further explored what had been established with the first game. Design-wise, Sonic and the futuristic island environment he inhabited did not change much in appearance, as both teams focused on expanding the game world, rather than reinventing it.

Continues on page 41...

GENESIS DOES WHAT NINTENDON'T



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**SONIC
THE HEDGEHOG**

Includes Inside: ■ Genesis Unit ■ Control Pad ■ AC Power Adapter ■ Auto R.F. Switch Box ■ Sonic The Hedgehog Game Cartridge



From the world famous Archie Comics series to the UK's Sonic the Comic collection by Egmont, comics have played a big part in the world of Sonic brand spinoffs. Pictured here are two original cover drawings for Sonic the Comic: issue 100 (far left) and issue 3 (left).

Sonic gained new attack moves, like the Spin Dash — a fairly self-explanatory ability, it saw him spin on the spot, building speed, and then let loose to dash, destructively, into an enemy (or rows of them). Also, the list of support characters grew with each new game: *Sonic The Hedgehog 2* (1992) introduced Tails, a two-tailed orange fox; *Sonic The Hedgehog CD* (1993) introduced Amy Rose, a pink, female hedgehog, as a love interest for Sonic; and *Sonic The Hedgehog 3* (1994) saw the first appearance of the hedgehog-like echidna, Knuckles, as Sonic's friendly rival.

Level structures grew in intricacy and size, taking advantage of new technology and programming ideas as soon as they seemed viable. The Japanese-made title *Sonic CD* made the most of the enhanced storage space of compact discs, the medium used for the Mega-CD (SEGA CD in the States) add-on device for the Mega Drive. Levels could be traversed in four different time periods—past and present, plus a good and bad future depending on actions in the past—and featured animated cutscenes, delivered by Tokyo's famed Toei Animations and the directors of the *Dragon Ball* anime series.

Sonic 2 explored two-player co-operative possibilities: Tails would follow Sonic around when a single player controlled the titular hero, but a

second player could join the game and play as the newly introduced fox — a mainstay of the series to come. In select stages, players could race each other while the screen was split in an upper and lower half, allowing for simultaneous competitive play — another novelty for console platform games. Solo players could also select Tails from the game's options menu before starting, cutting Sonic out of the adventure entirely. Both *Sonic 2* and *Sonic CD* featured 3D special stages. In the former, Sonic and Tails raced down half-pipes, collecting rings and avoiding bombs on their way to, hopefully, capturing a Chaos Emerald. In the latter, Sonic found himself in a small, rotating landscape, with traps and springs and more, and tasked with busting a selection number of UFOs to win an Emerald.

Sonic 2's special stages, conceived by Naka, were too gimmicky to use for an entire game, but foreshadowed the Sonic series' future as a 3D platformer. Everyone knew 3D imagery was the future for both Sonic and gaming in general, and *Sonic Team*, through the special stages, showed their eagerness to experiment with the possibilities. The stages were nice enough, but were held back by the technical limitations of the Mega Drive and Mega-CD. To truly make the leap from 2D to 3D, *Sonic Team* needed a new generation of game consoles to work with.

Continues on page 159...



In the early 1990's, marketing for the different world markets was done by different teams. As is clear from these box designs for Sonic The Hedgehog, American marketing touted a different Sonic from the Japanese designs, or the ones for European markets: a Sonic with shark-like fins, instead of hedgehog-like quills. People on Sonic Team "were not very happy with these different interpretations of the character," game director Takashi Iizuka says. "Starting from Sonic Adventure, SEGA decided they would have no more of this, and would manage and control how the character is represented."

From left to right

American, European, and Japanese box art for Sonic The Hedgehog (1991).



MEGA DRIVE

Mega Drive Cartridge

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SONIC
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SEGA

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PLAYER



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SEGA



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1=1.05 320

3=2= 320 256



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“When it comes to character design, there were a lot of memorable character designs back in the day [the early 1990’s], be it in video games or animated TV shows, but most of them had this cute quality to them, a certain softness. When Sonic came out he stood out for being really fast, really cool, and for this really strong attitude, and this fundamentally put him apart from the rest.”

- GAME DIRECTOR TAKASHI IIZUKA

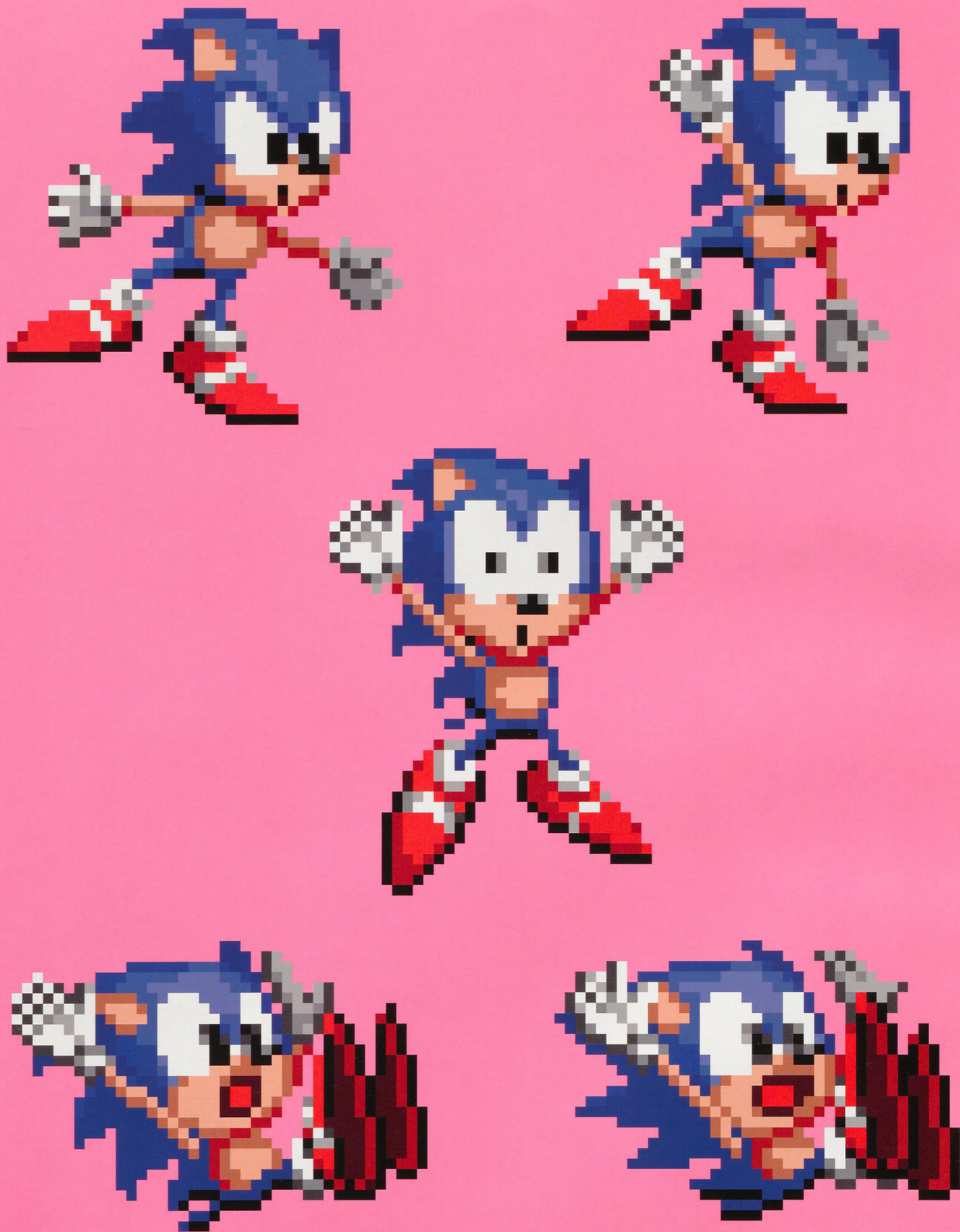
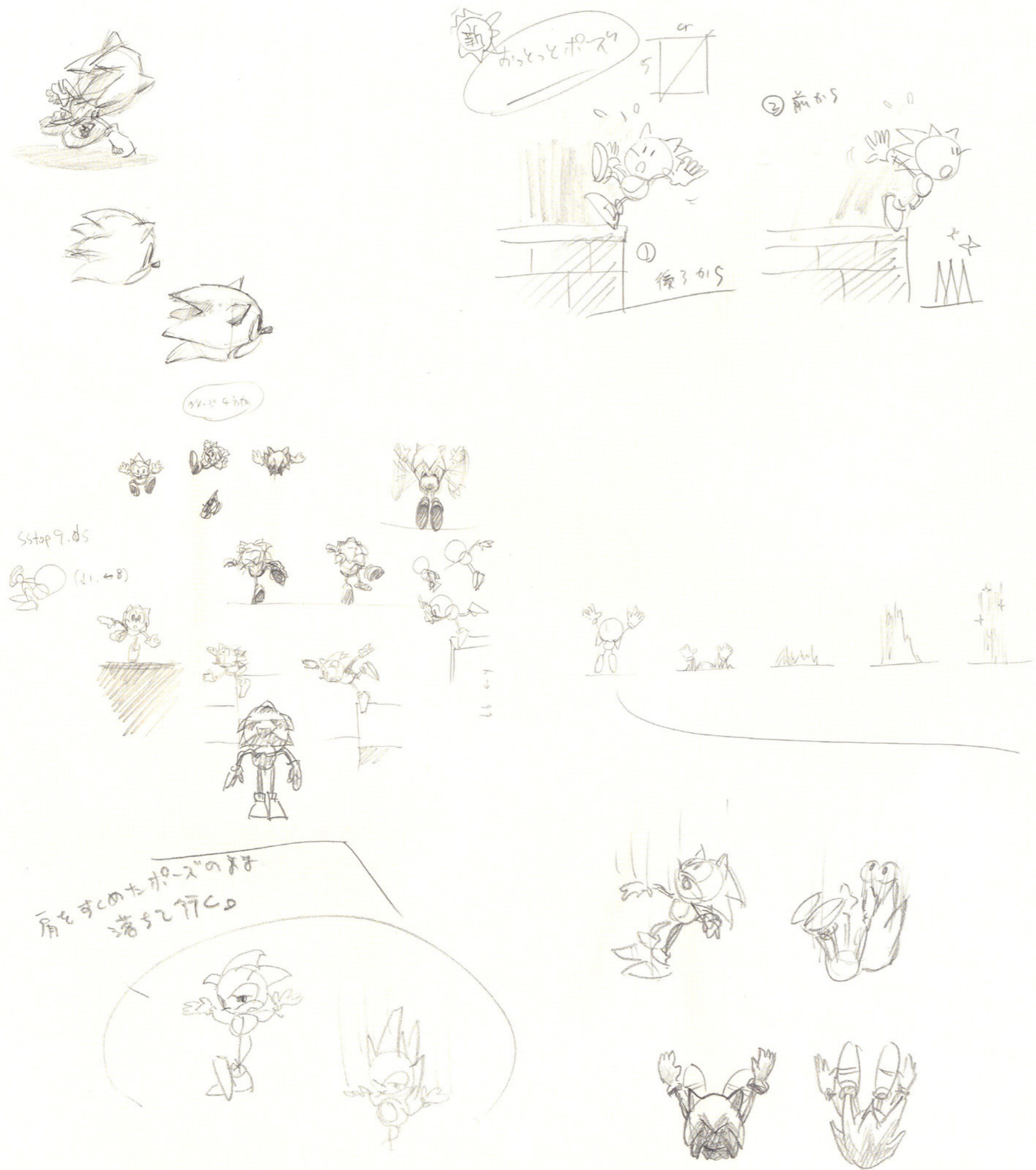


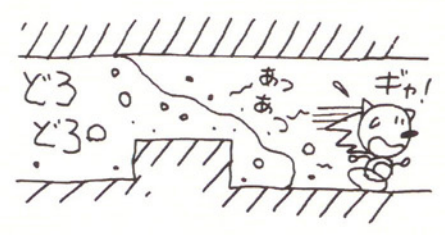
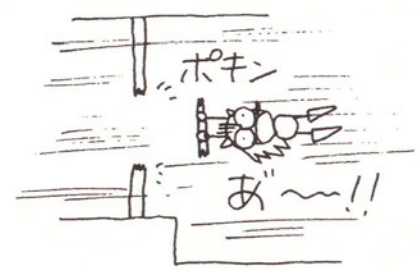
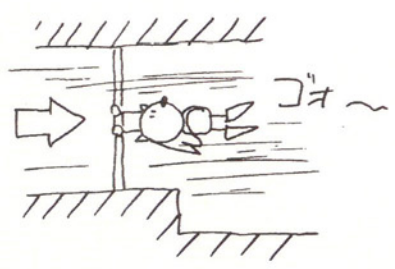
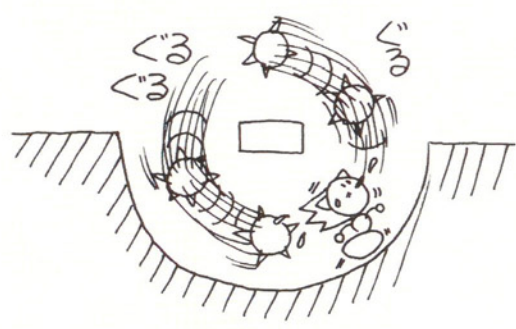
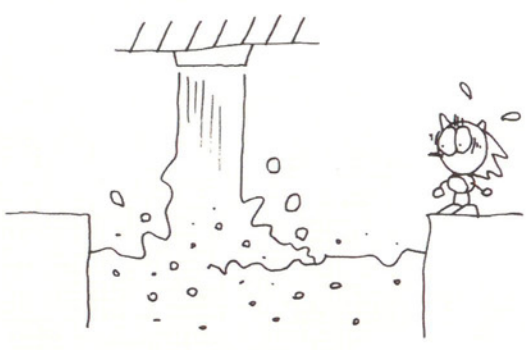
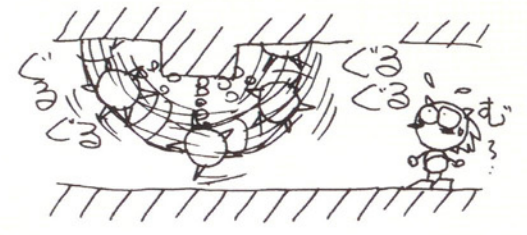
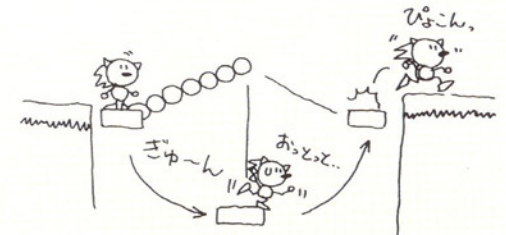
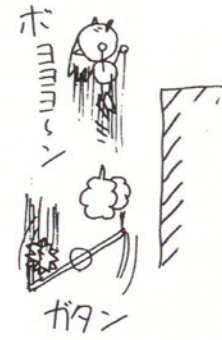
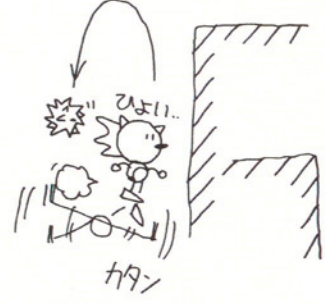
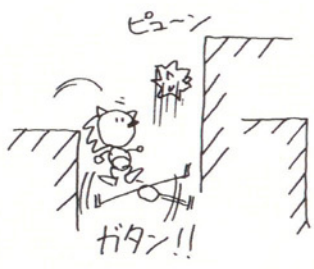
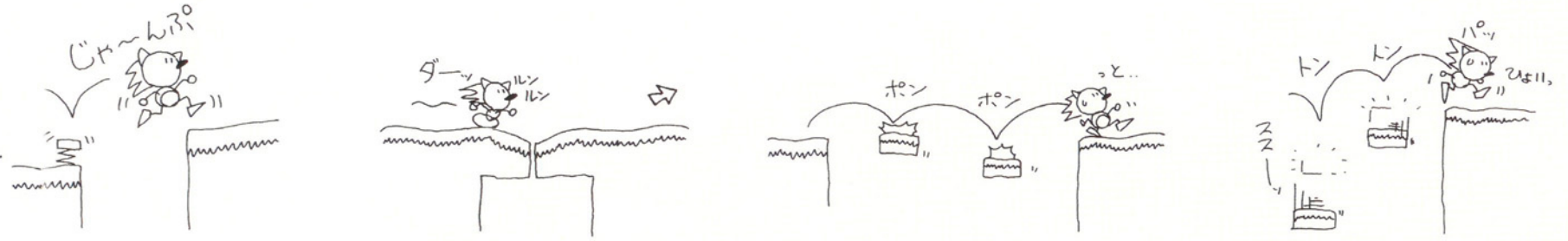
SONIC

THE HEDGEHOG

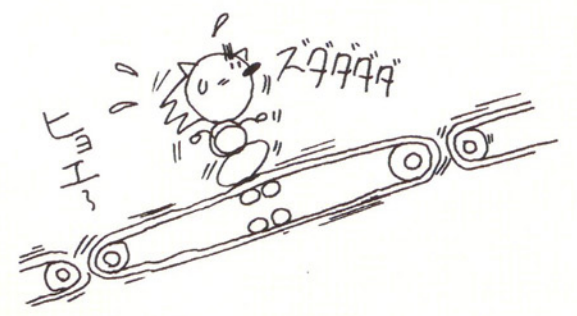
SEGA

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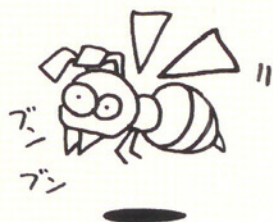
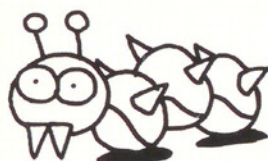
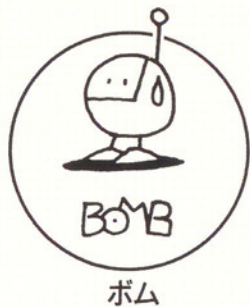


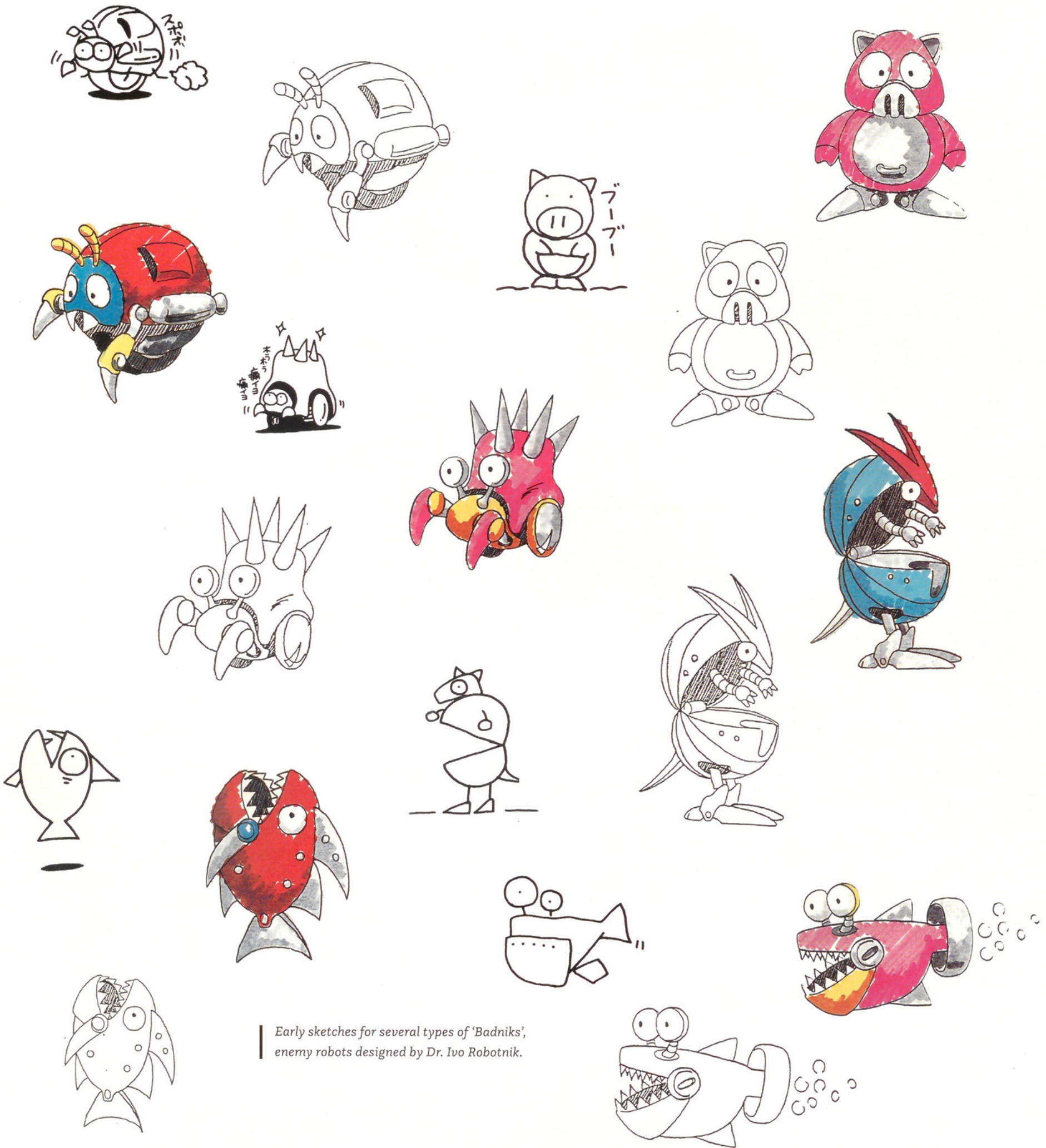
Gameplay illustrations by game producer Hirokazu Yasuhara, used in the manual of the Japanese edition of Sonic The Hedgehog (1991).



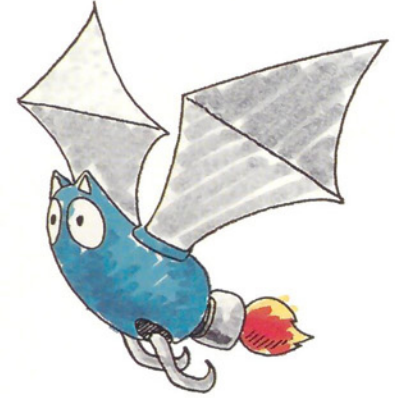
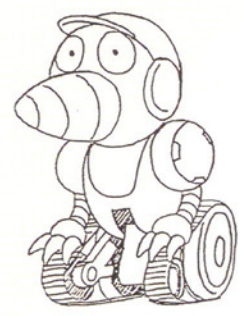
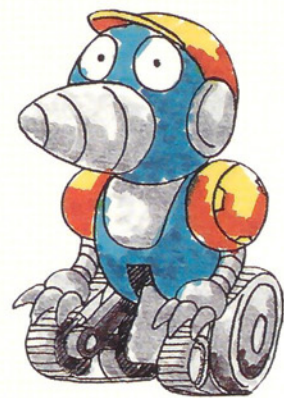
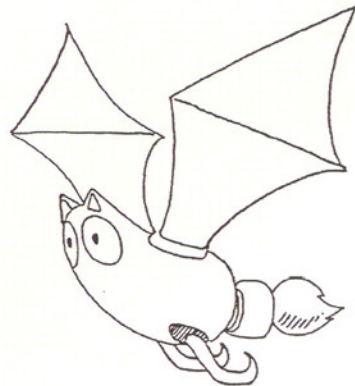
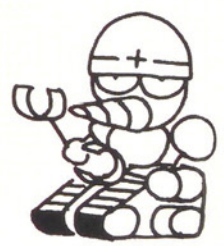
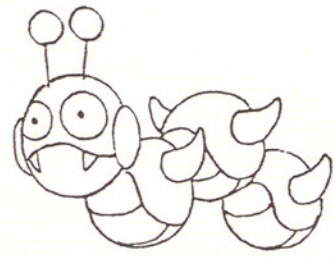
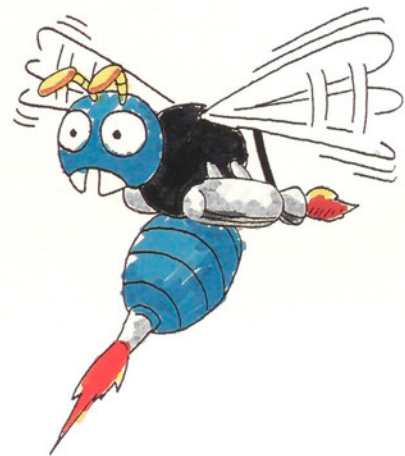
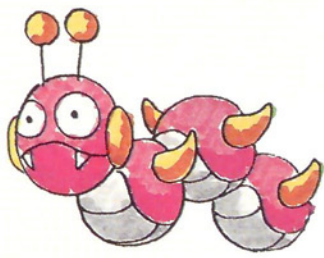
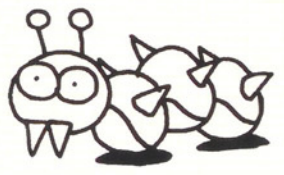
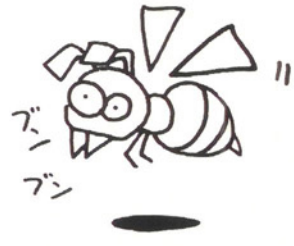
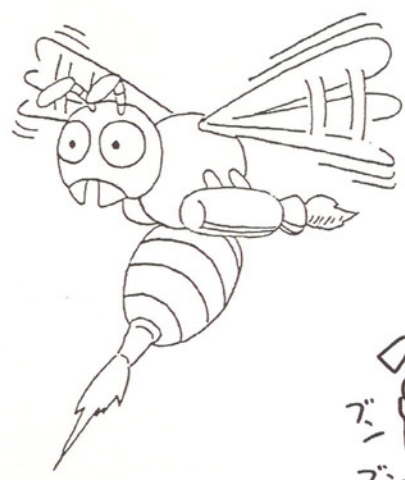
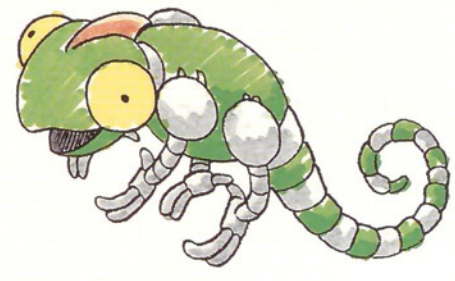
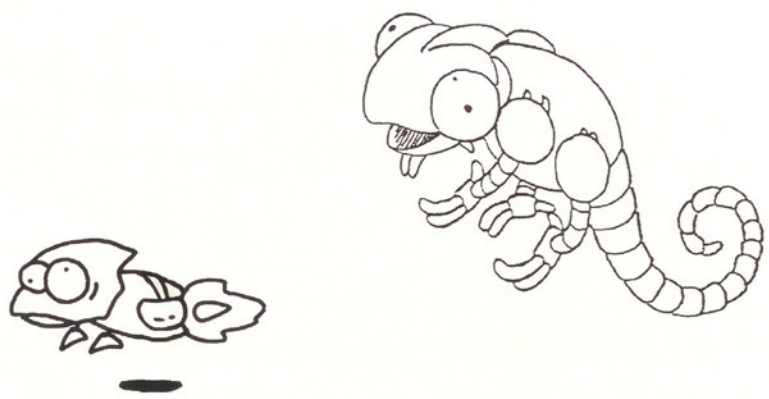


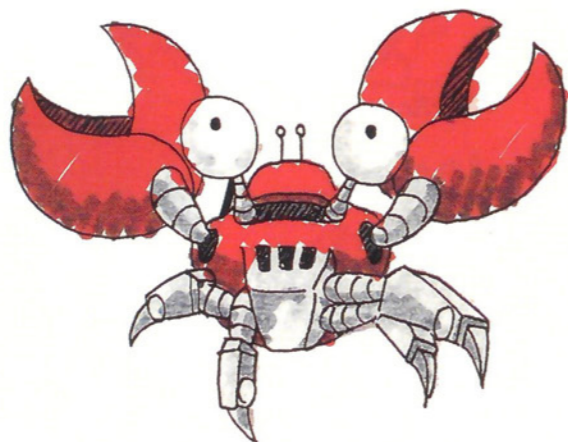
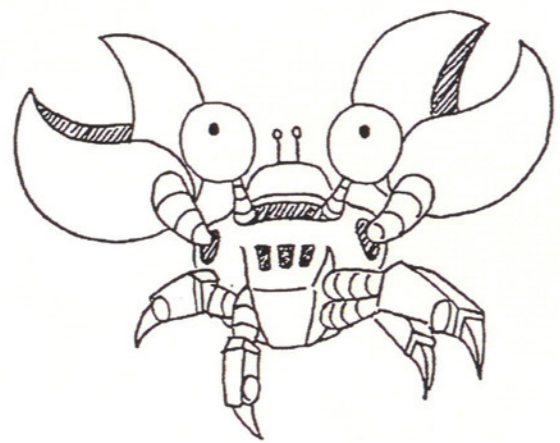
SONG

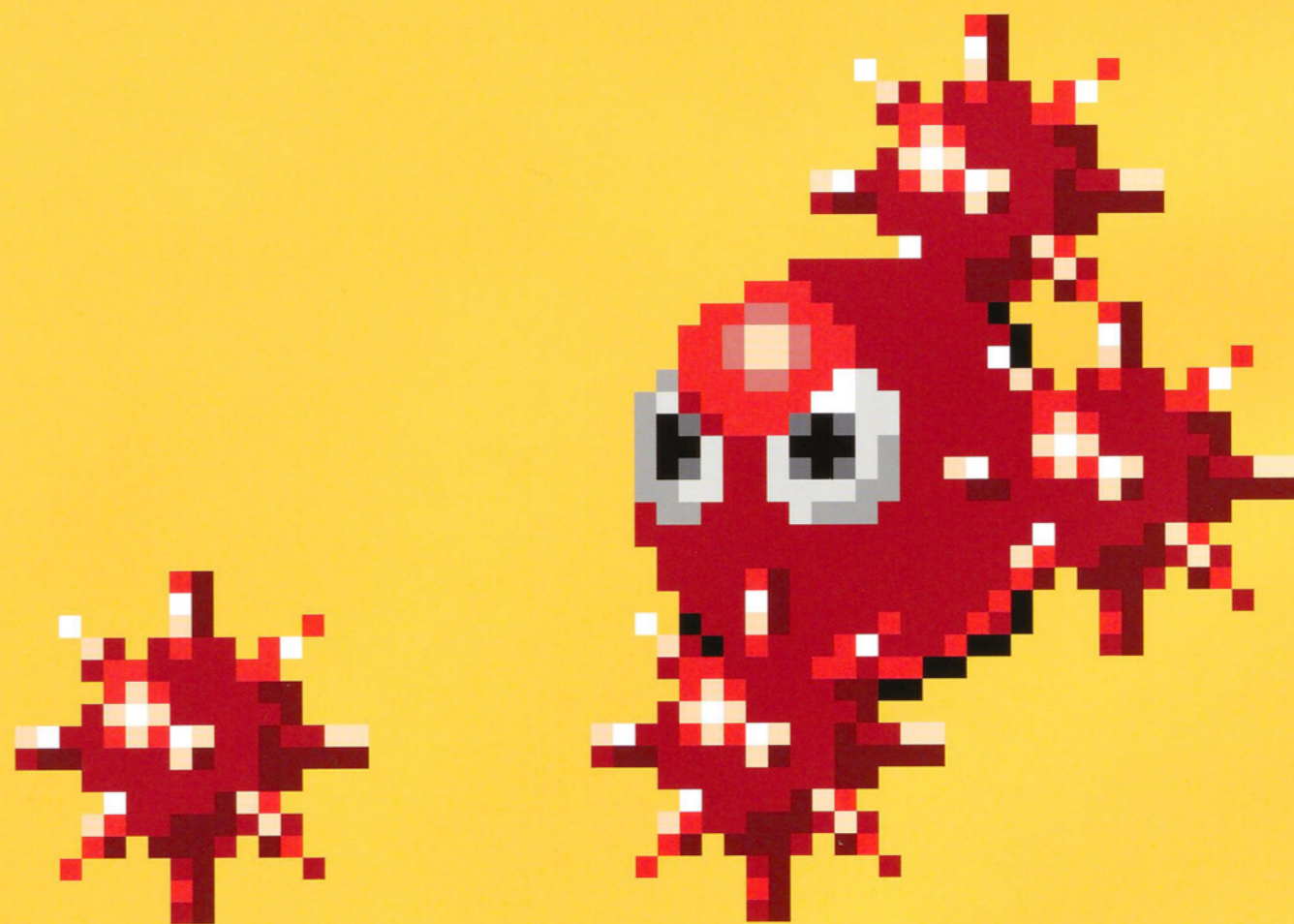
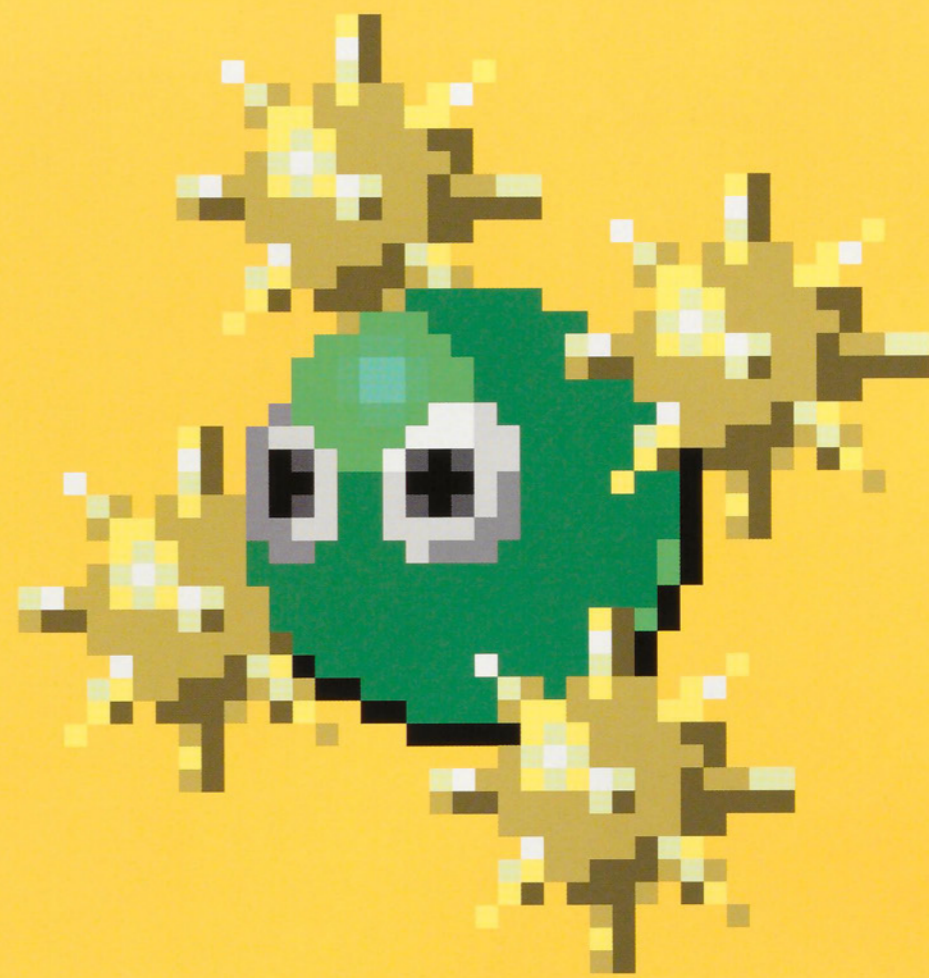
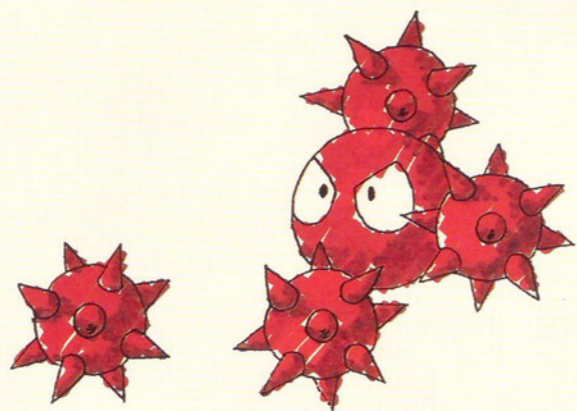
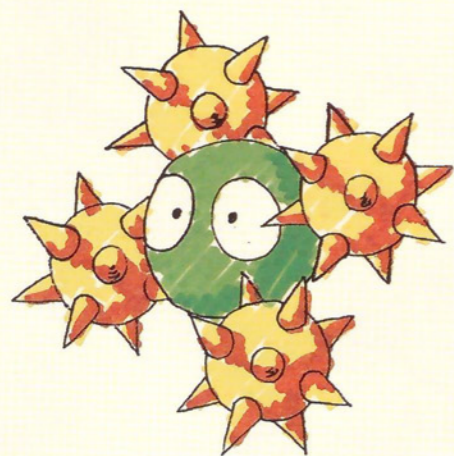
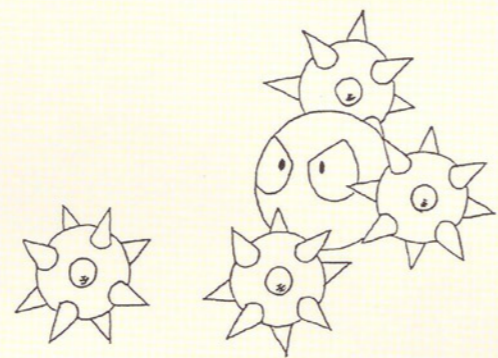
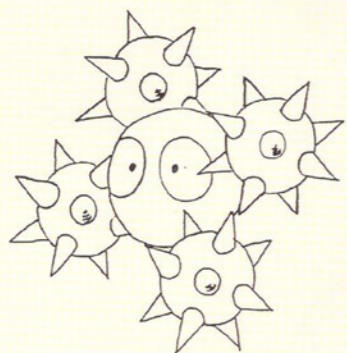
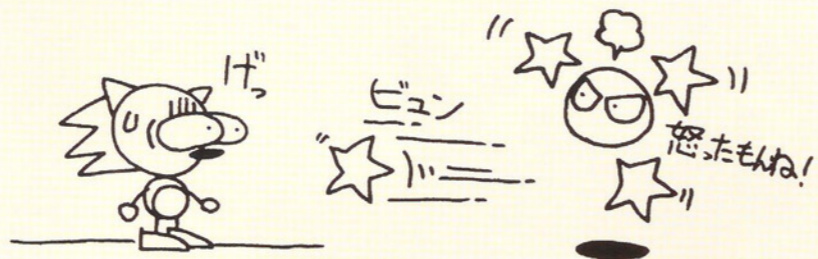


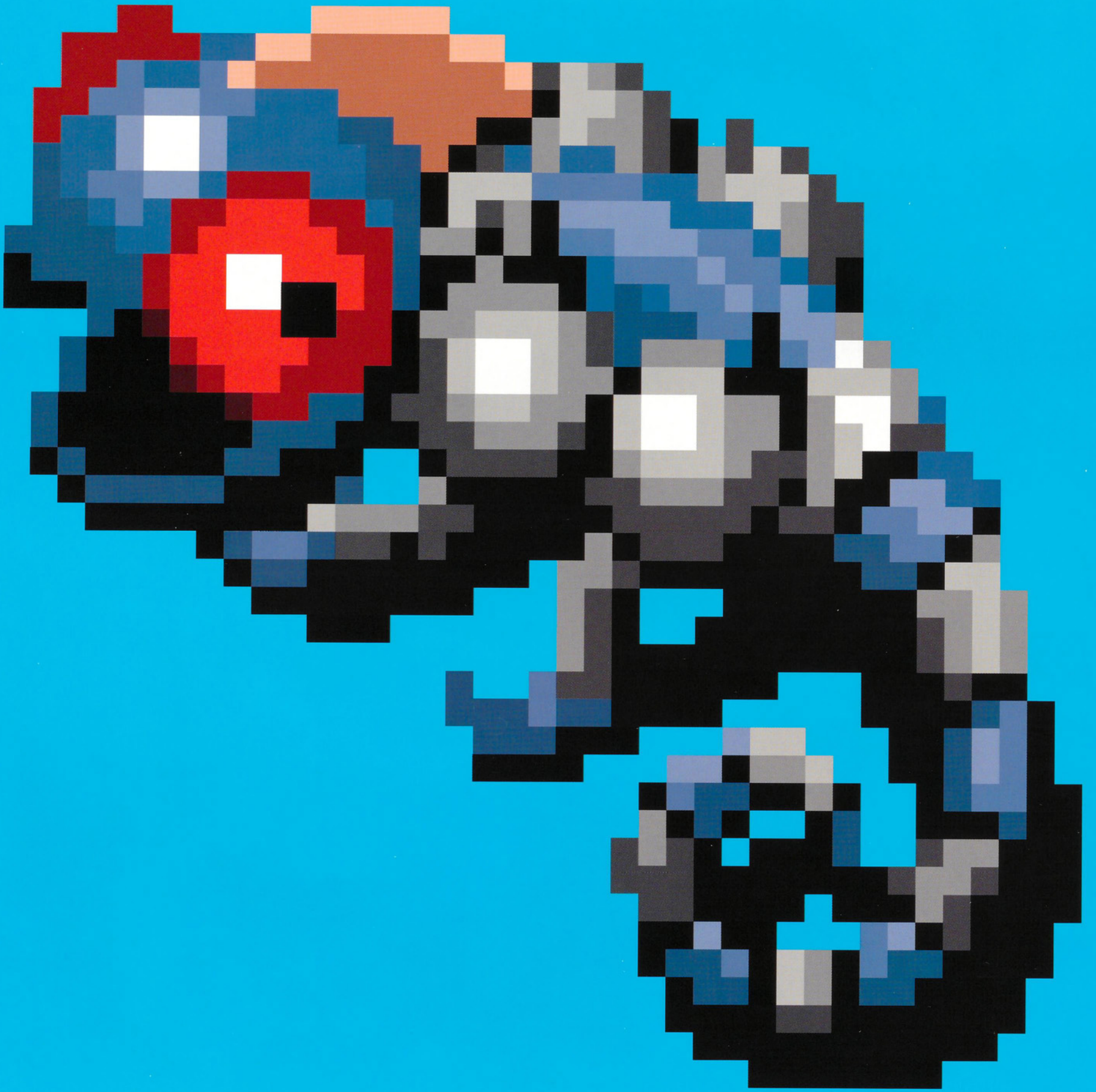


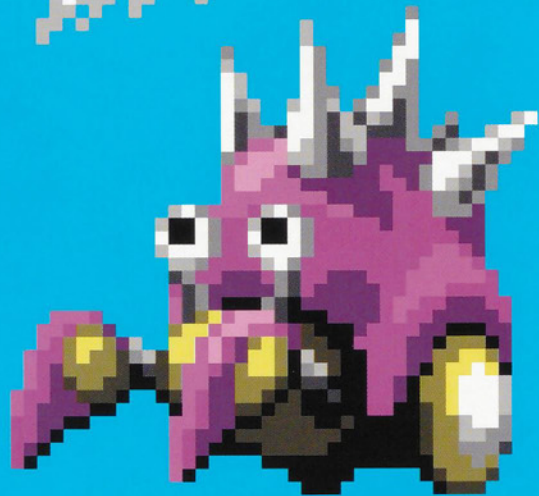
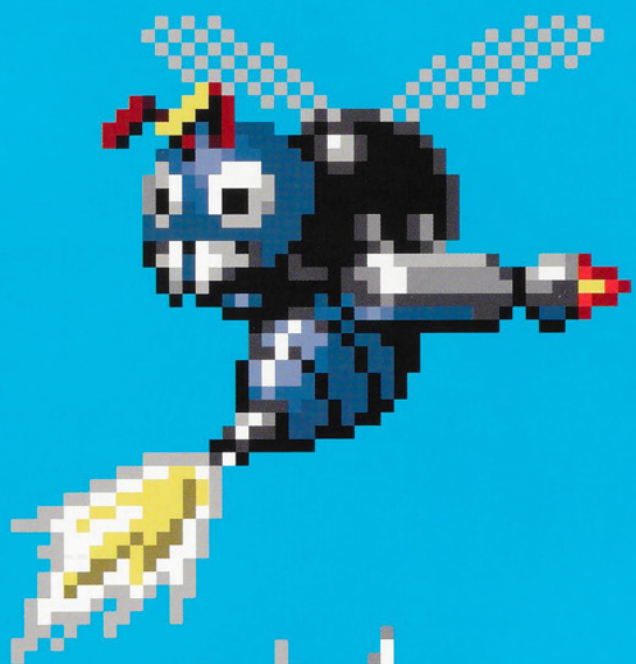
Early sketches for several types of 'Badniks', enemy robots designed by Dr. Ivo Robotnik.

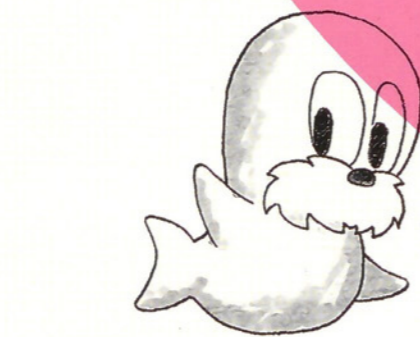
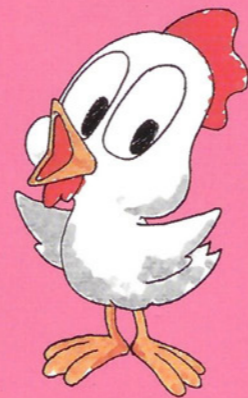
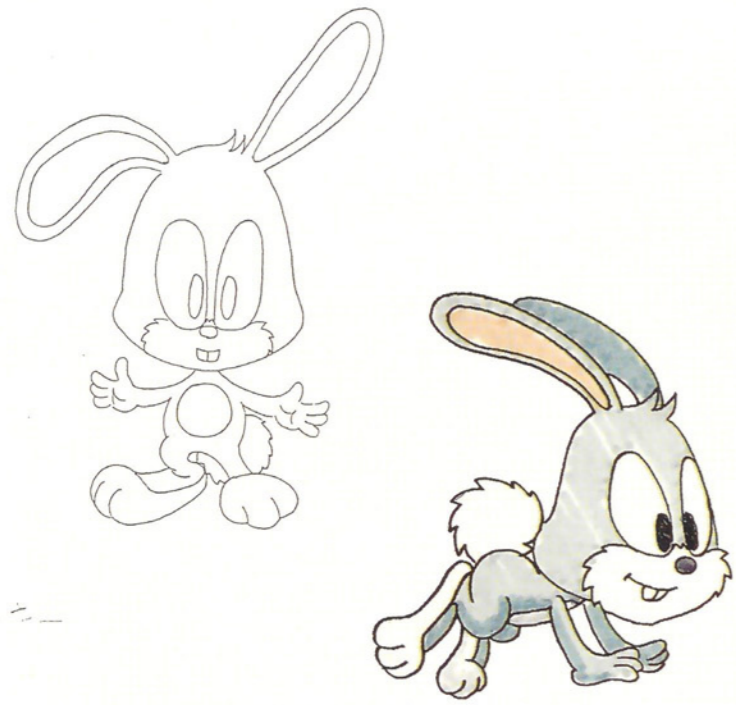




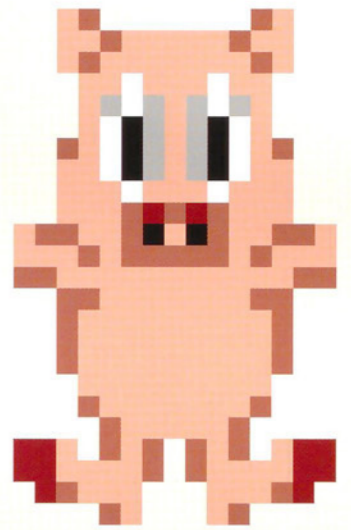
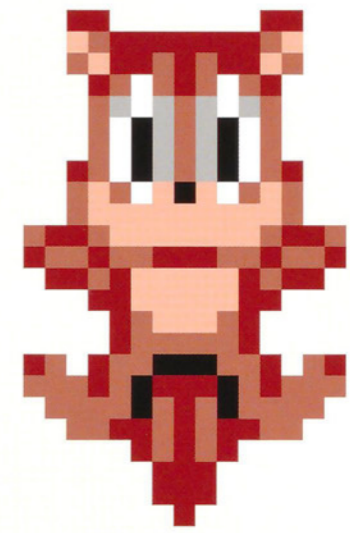








Early designs for the animals Sonic rescues throughout Sonic The Hedgehog (1991).



D /

Introducing

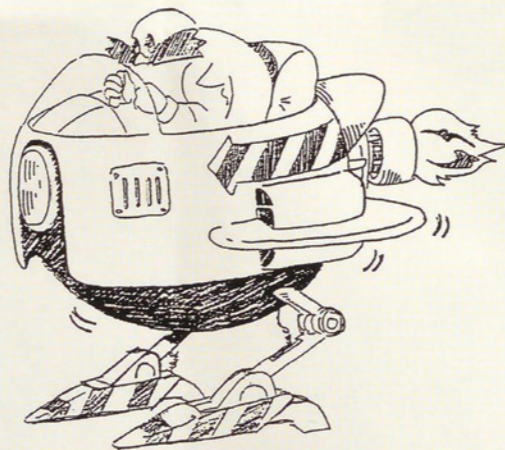
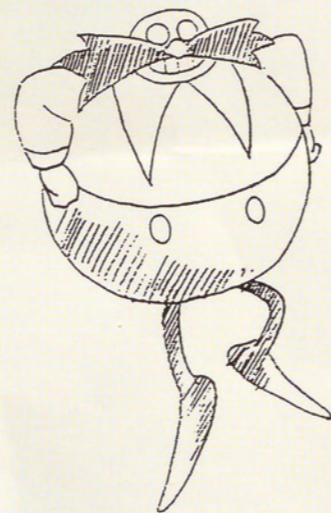
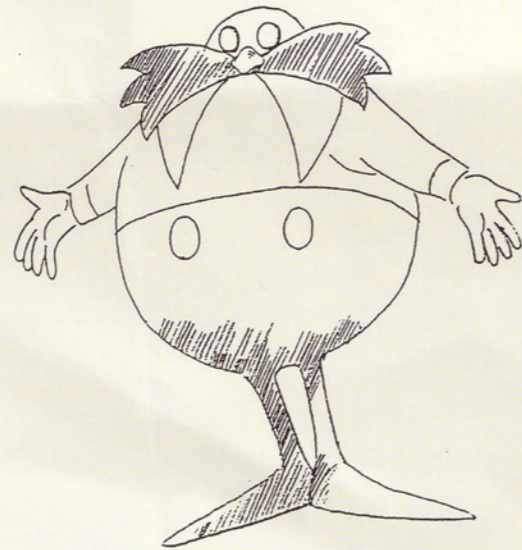
**DR. IVO
'EGGMAN'
ROBOTNIK!**

| First appearance: Sonic The Hedgehog (1991).





1989



Dr. EGGMAN

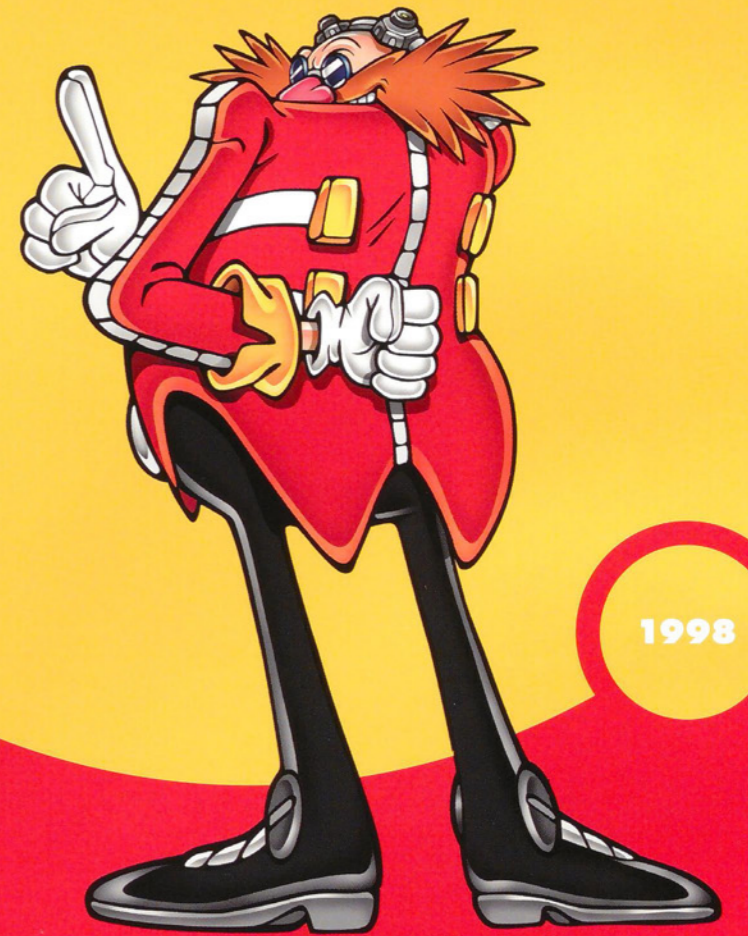
1991

1991

1991



1993



1998



2005

2006

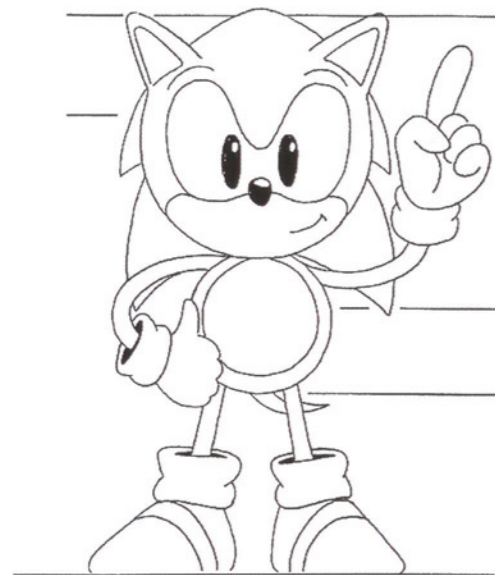


2013





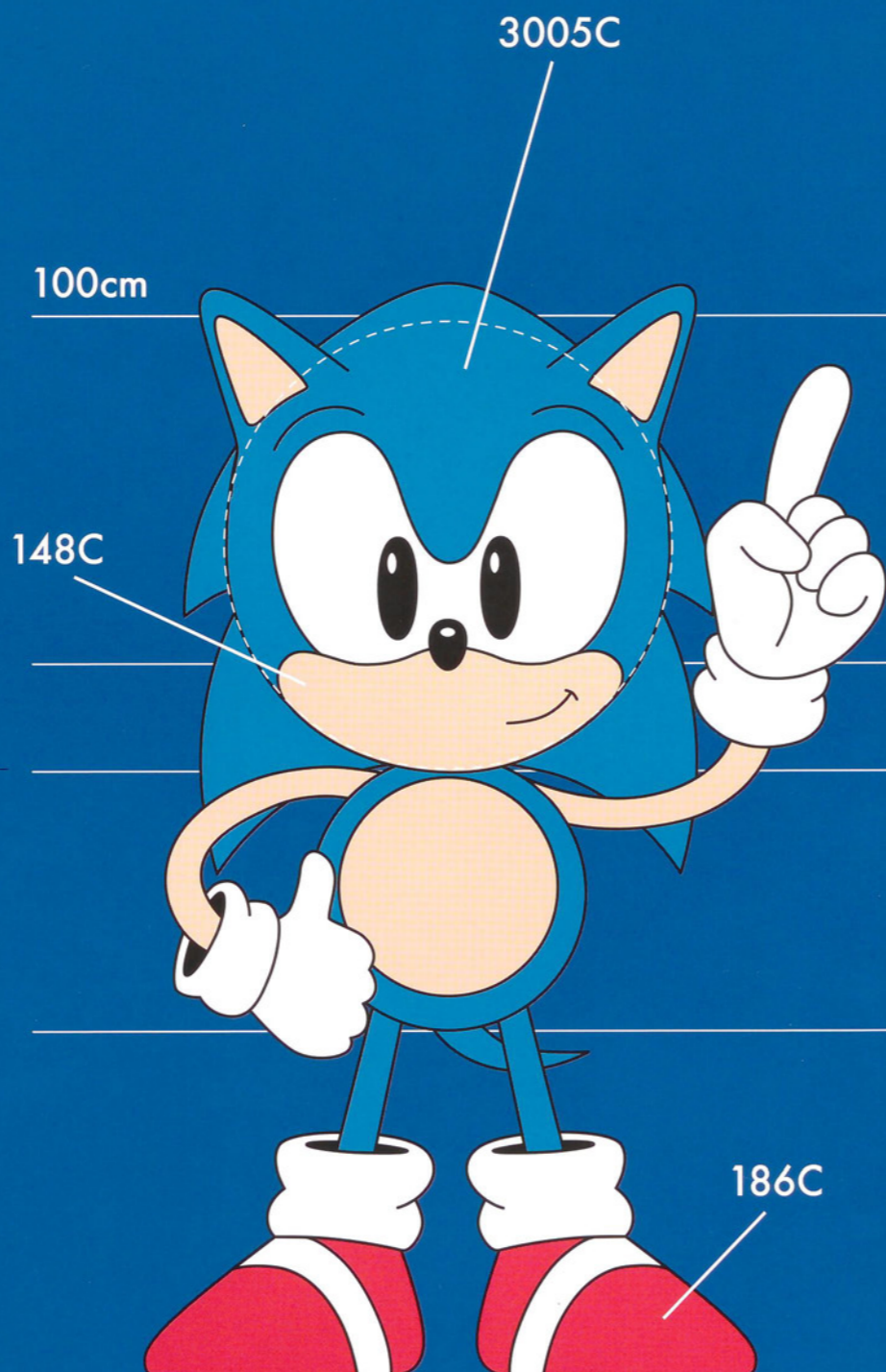
2014



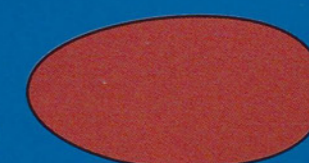
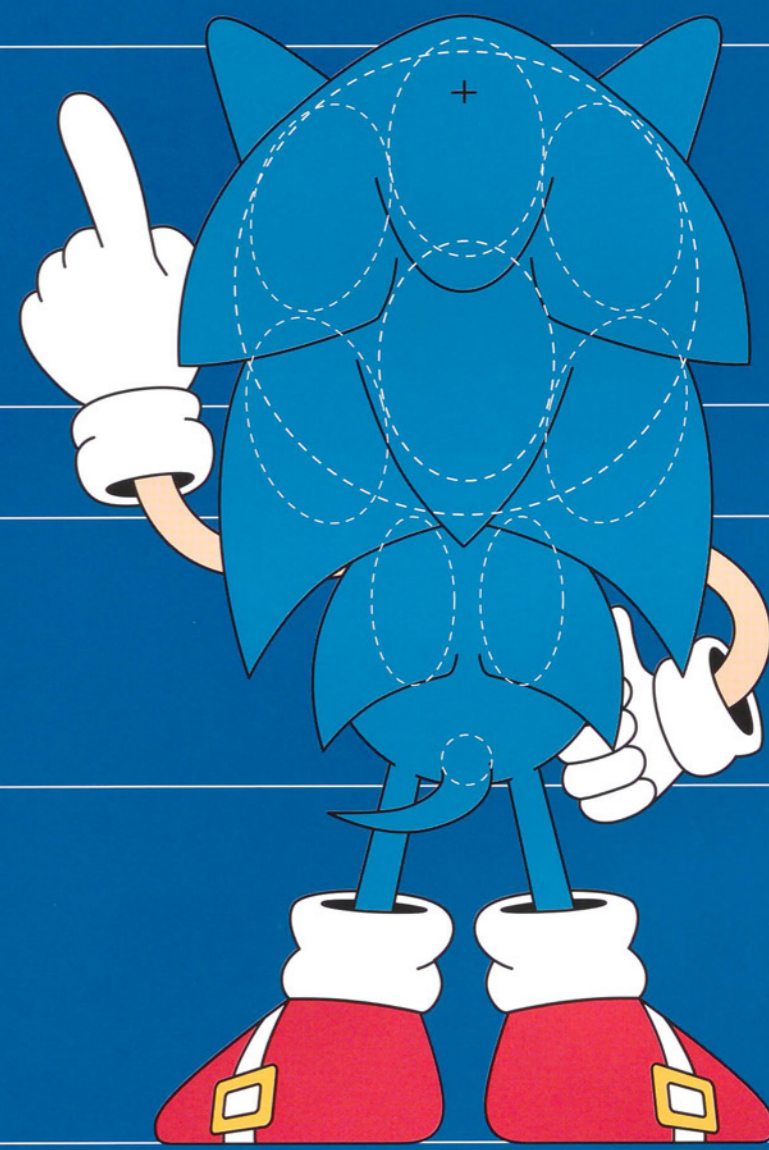
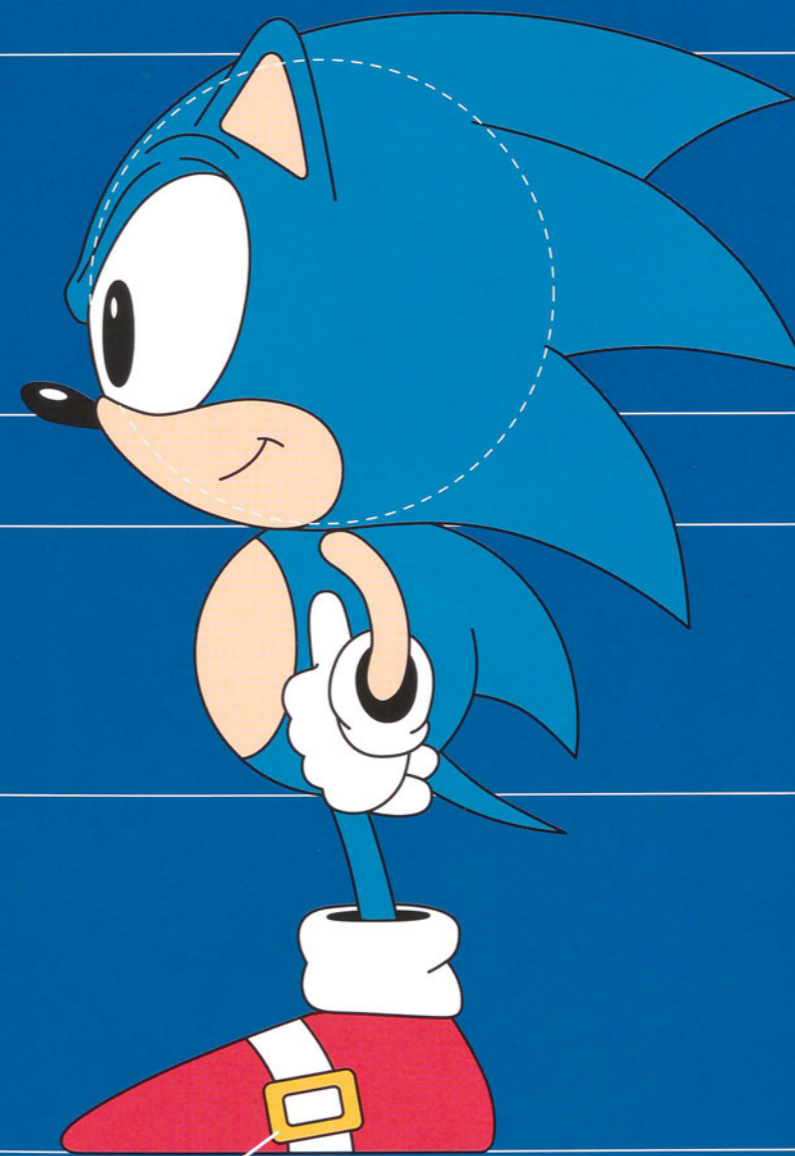
The current style guide for 'classic Sonic' games still references one of the earliest technical drawings by Naoto Ohshima.

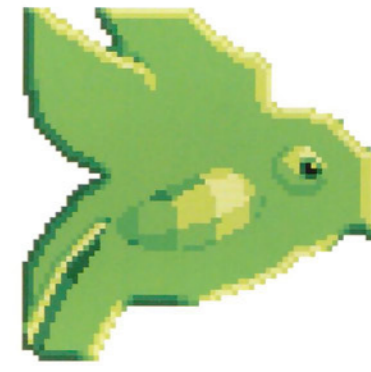
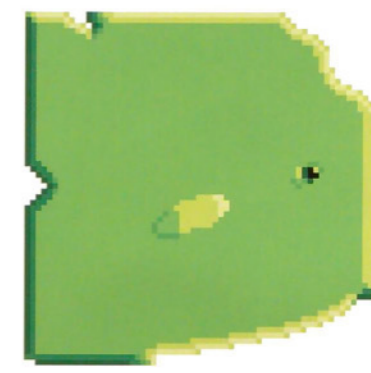
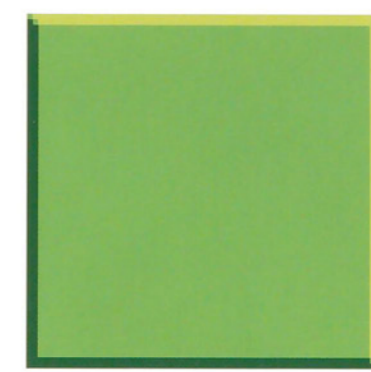
Classic - SONIC (Japan Spec)

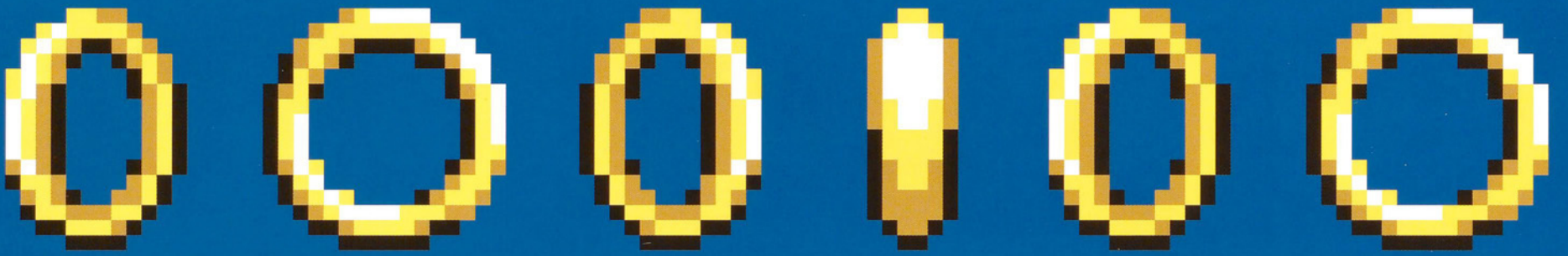
- C:100/M:40
Body
- M:20/Y:30
Skin
- W:100
Glove
- K:100
Outline
- C:10/M:90/Y:60
Shoe
- M:20/Y:100
Buckle
- C:10/M:70/Y:60/K:40
Shoe sole
- M:50
Tongue
- M:100/Y:70/K:40
Inside of mouth

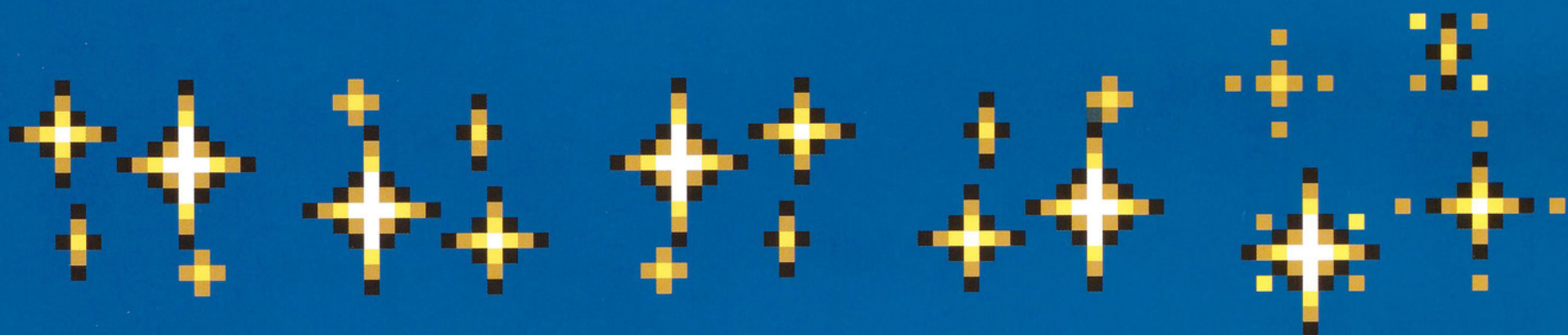


Inside of mouth : 194C
Tongue : 190C









Collecting rings has been central to Sonic games since Sonic The Hedgehog. But why is Sonic collecting them? Sonic Team's art director Kazuyuki Hoshino: "From a game design perspective, the rings are used as affirmation to the player that they are on the right course. As long as they are seeing rings they know they're on the right way. It's breadcrumbs basically; if you're unsure if you need to go up or down, you only have to look at the rings to find directions. Obviously we used the rings for a second fundamental game design feature too: collecting as many rings as possible gives the player a sense of accomplishment, and losing them helps motivate the player to try again. The same goes for the collectible Chaos Emeralds, that were introduced to encourage replayability."

SONIC 2

THE HEDGEHOG

SONIC TAILS

Don't just sit there and waste your precious time. When you want to do something, do it right away. Do it when you can. It's the only way to live a life without regrets.

Mega Drive Cartridge
メガドライブ専用



SONIC 2

THE HEDGEHOG

SONIC TEAM PRESENTS

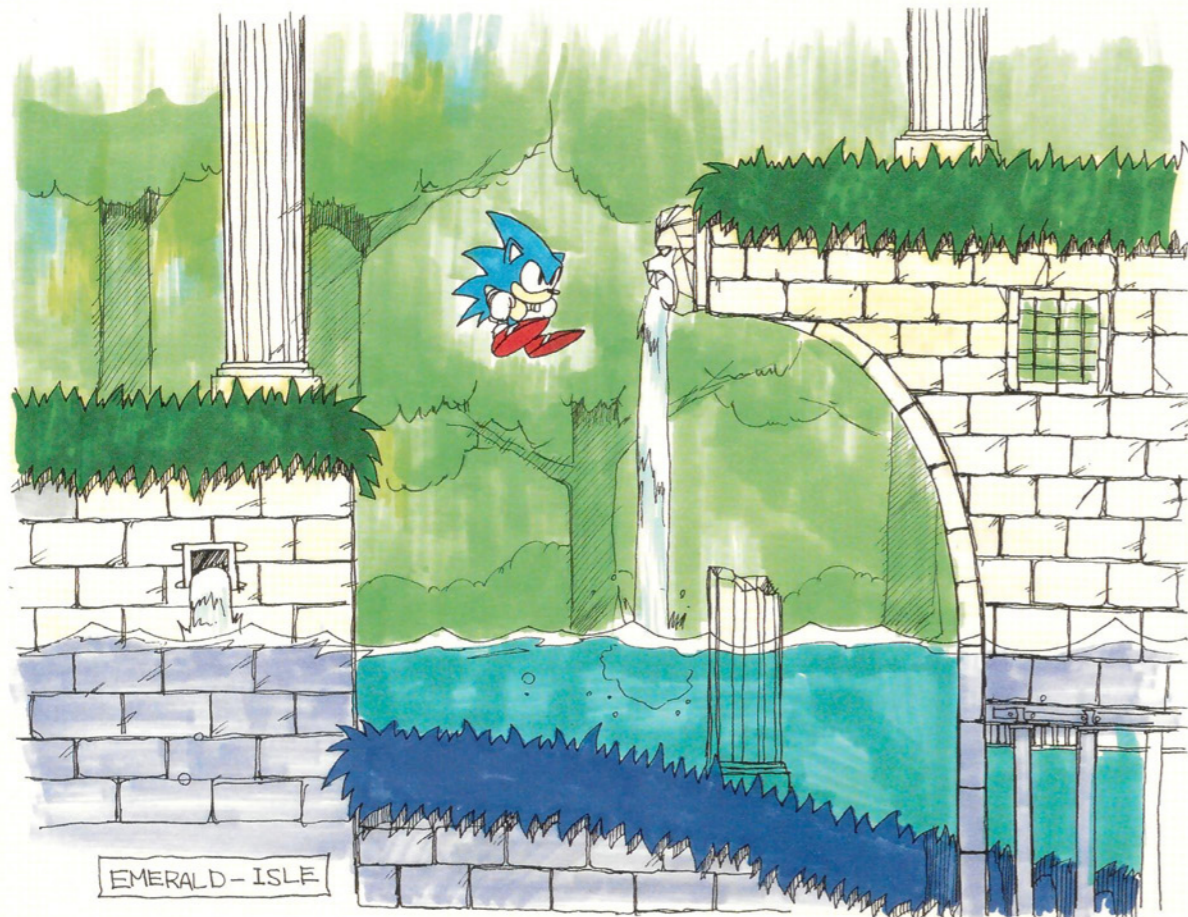
ソニック・ザ・ヘッジホッグ 2

SEGA

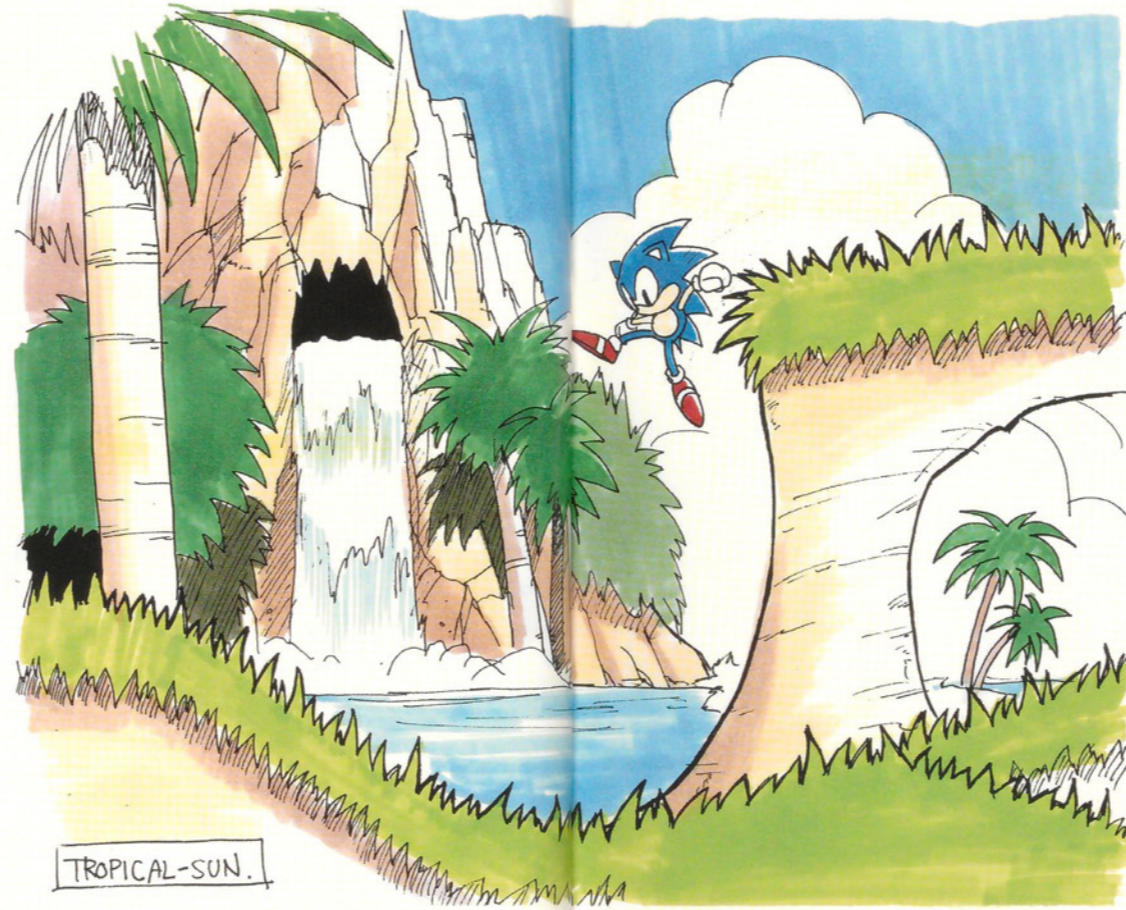
SEGA



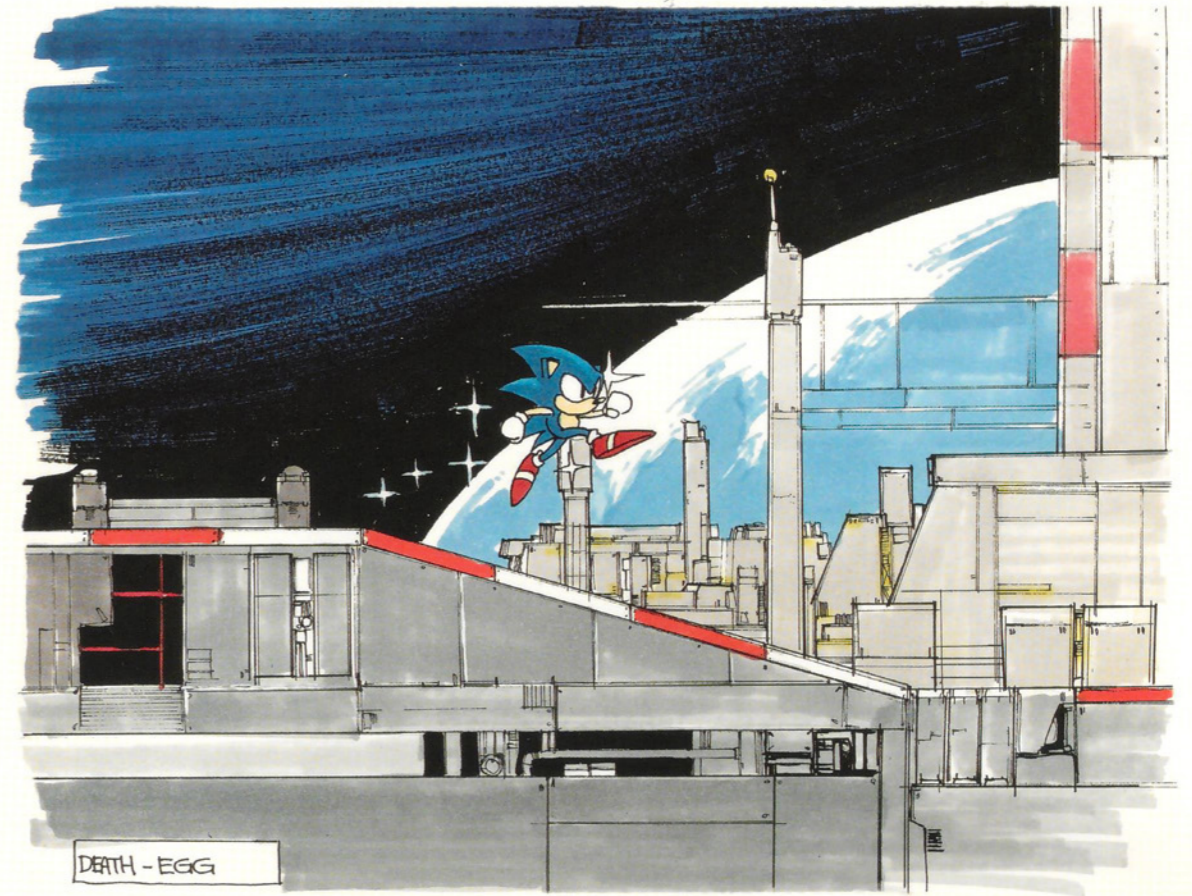
Box and promotional art for Sonic The Hedgehog 2 (1992). Miles "Tails" Prower, who was introduced in this game, was the first of many new characters to populate Sonic's ever-expanding universe.



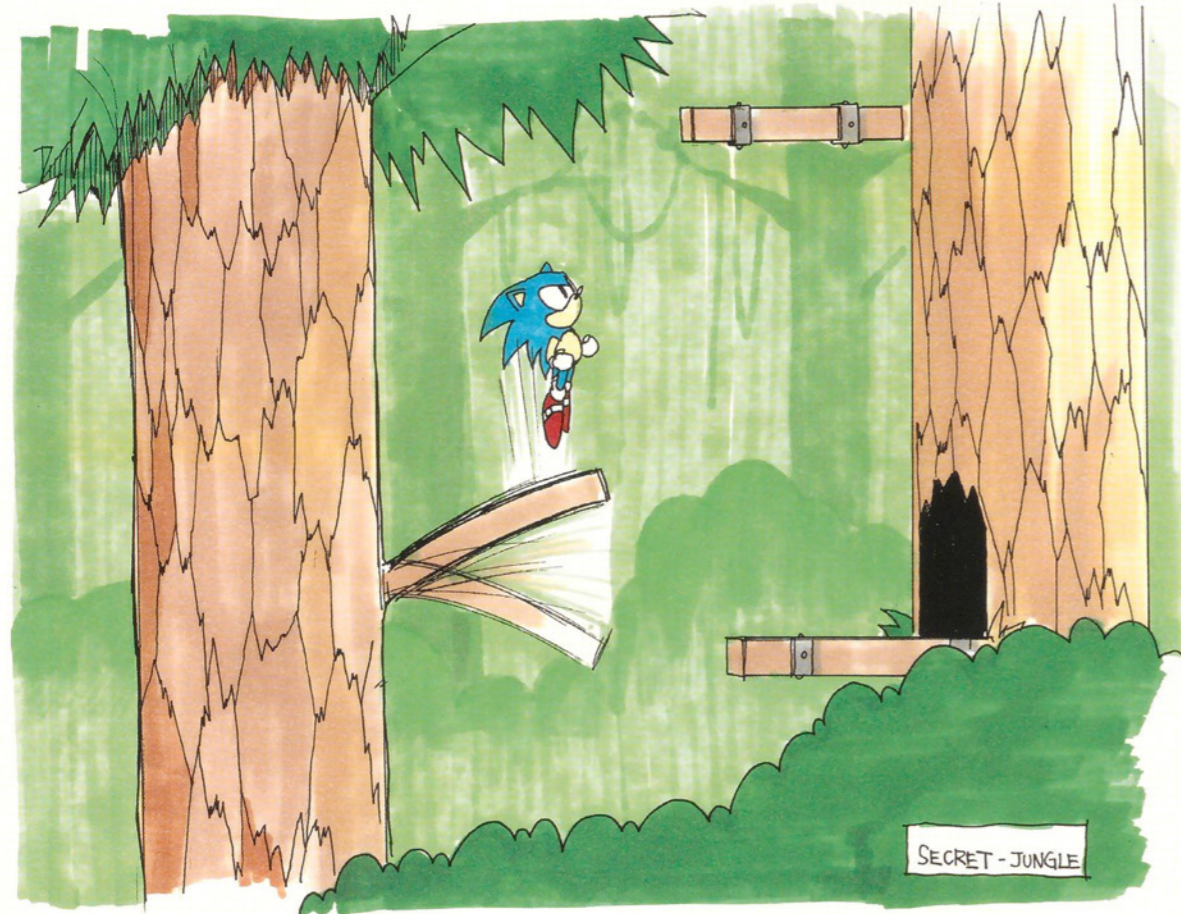
EMERALD - ISLE



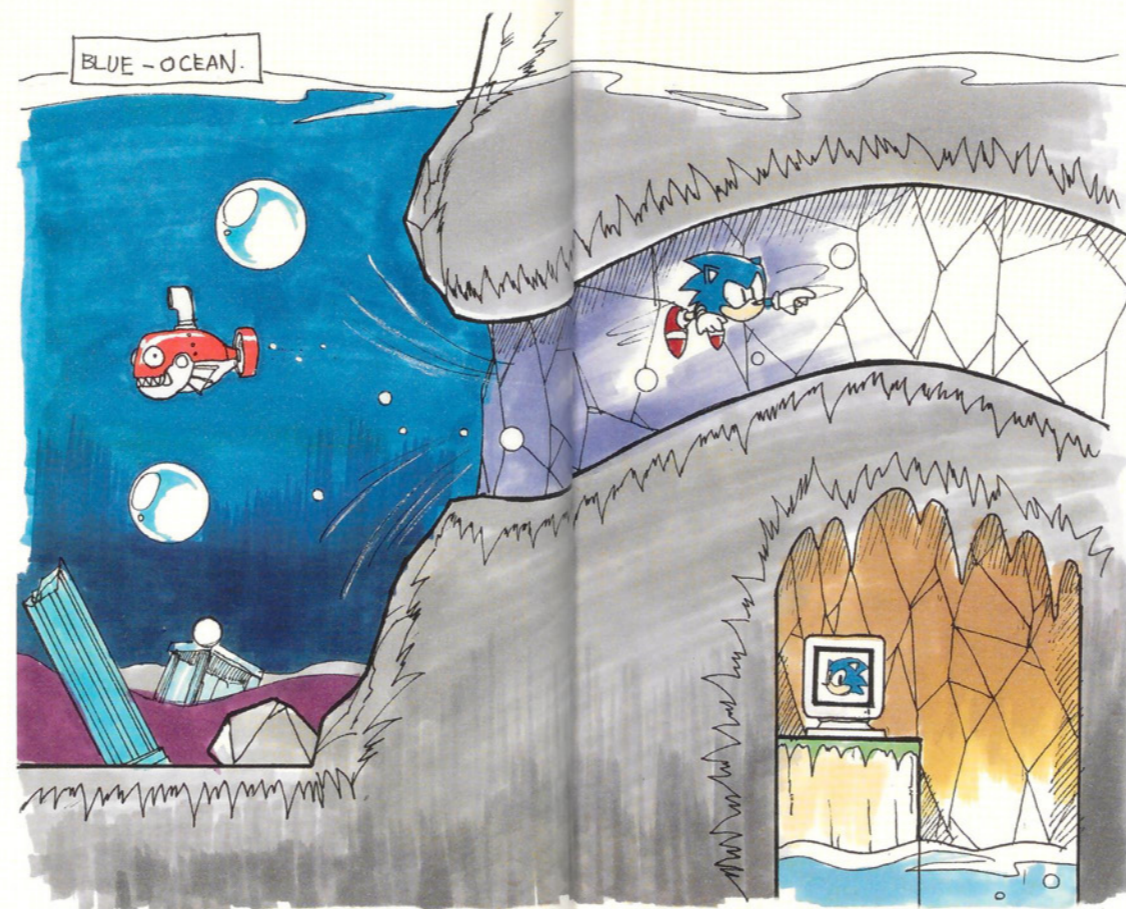
TROPICAL - SUN.



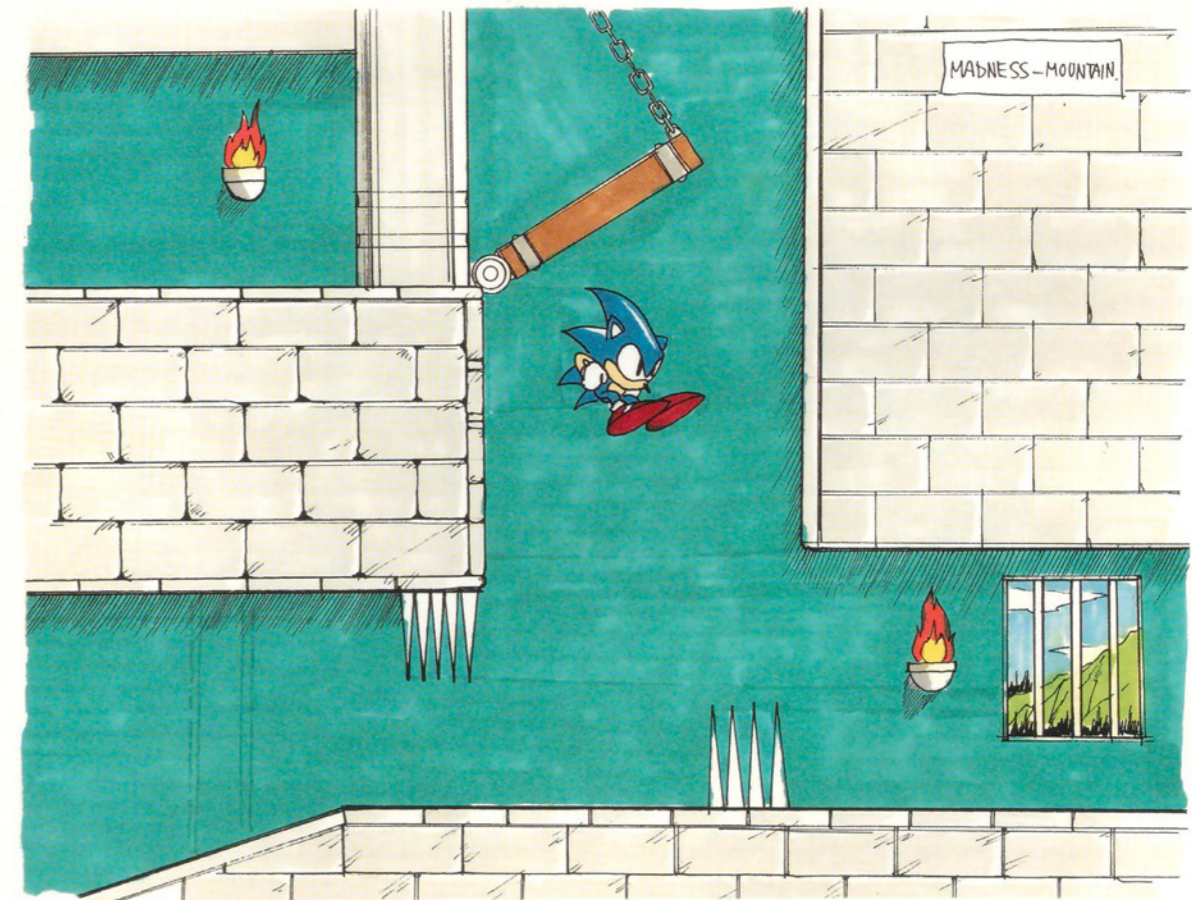
DEATH - EGG



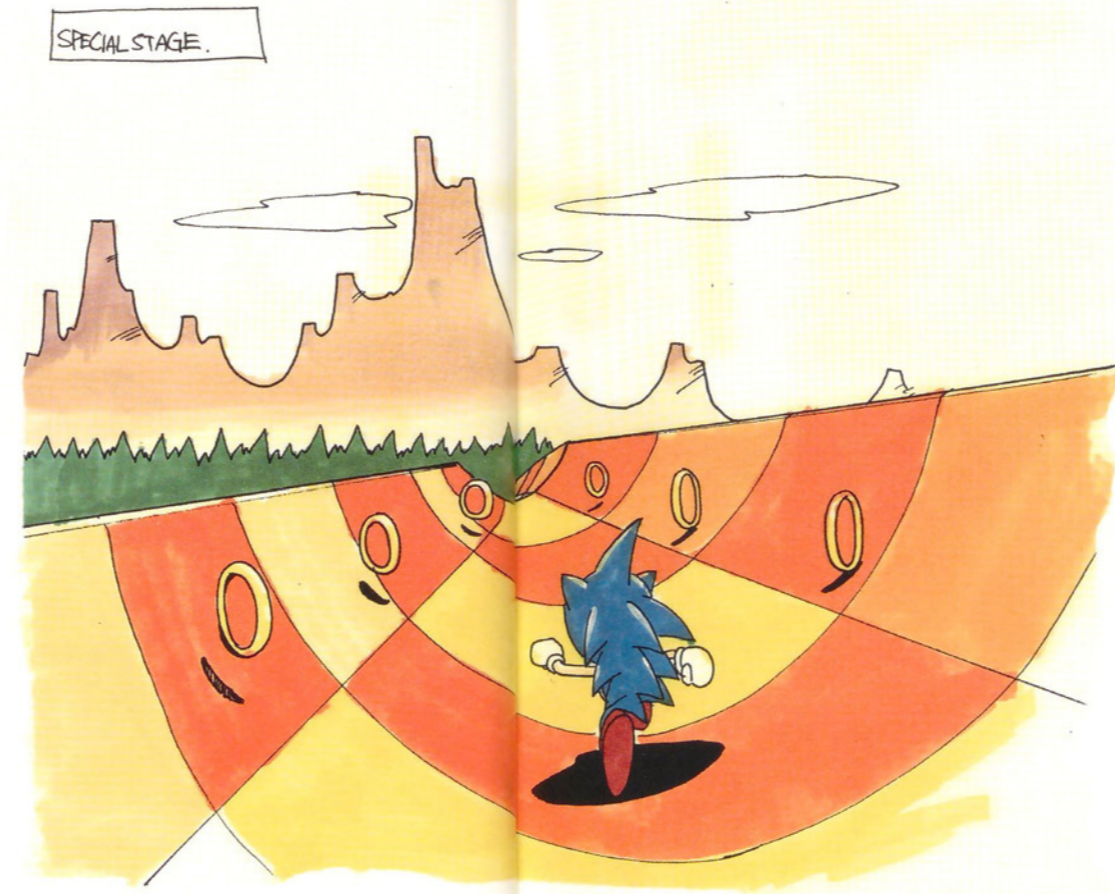
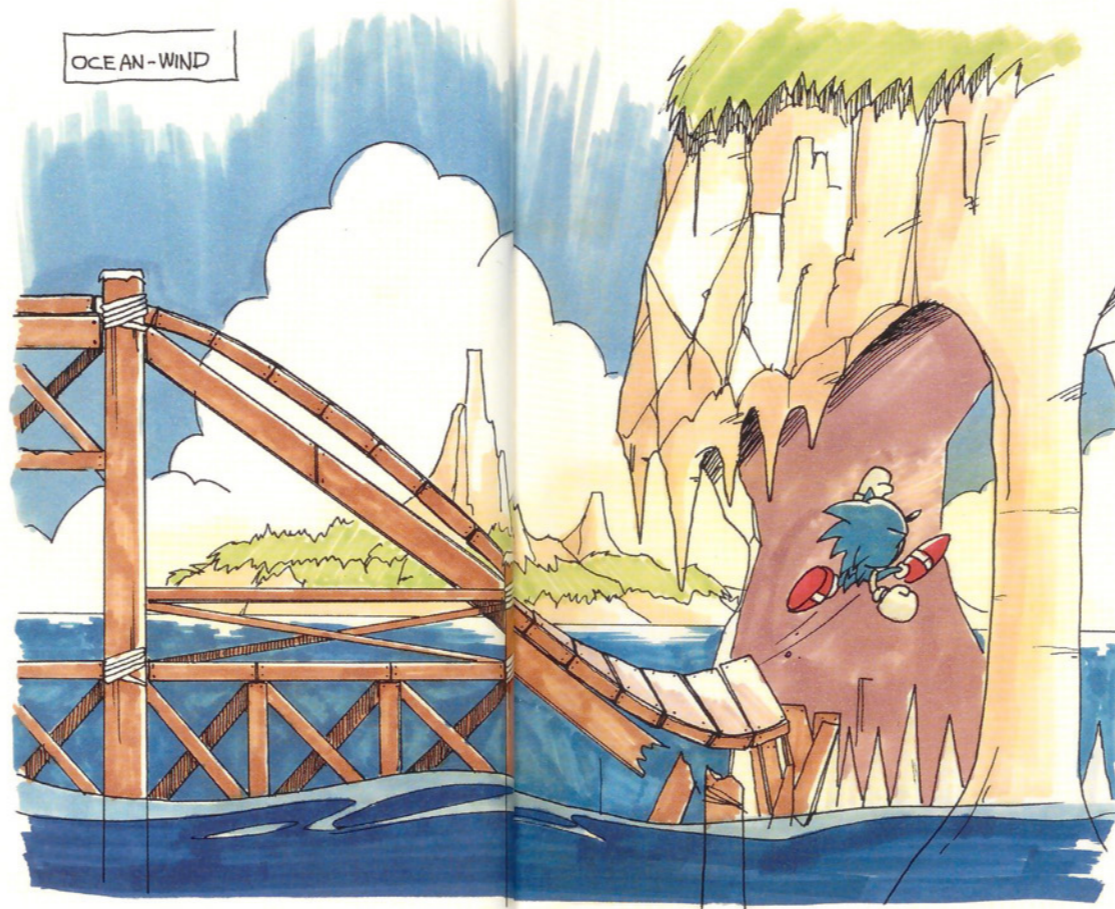
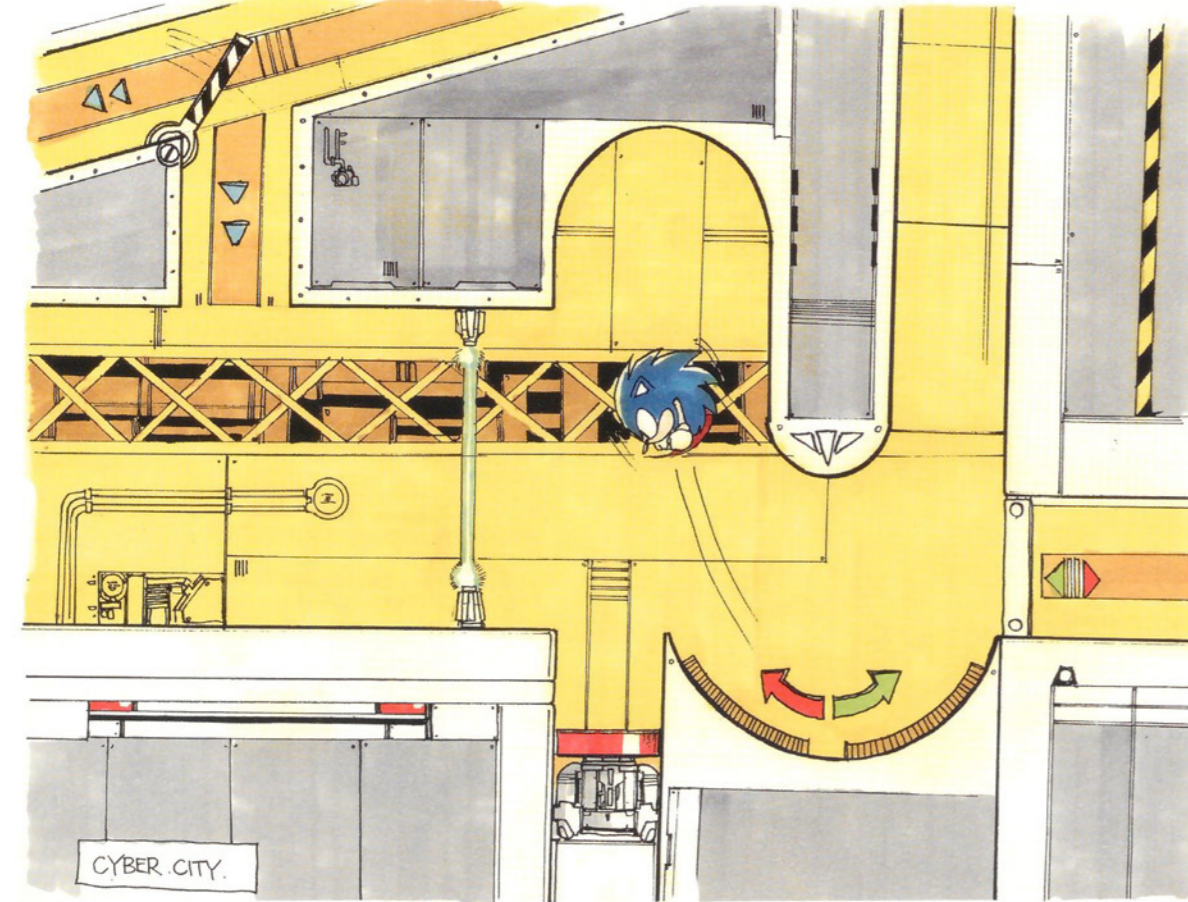
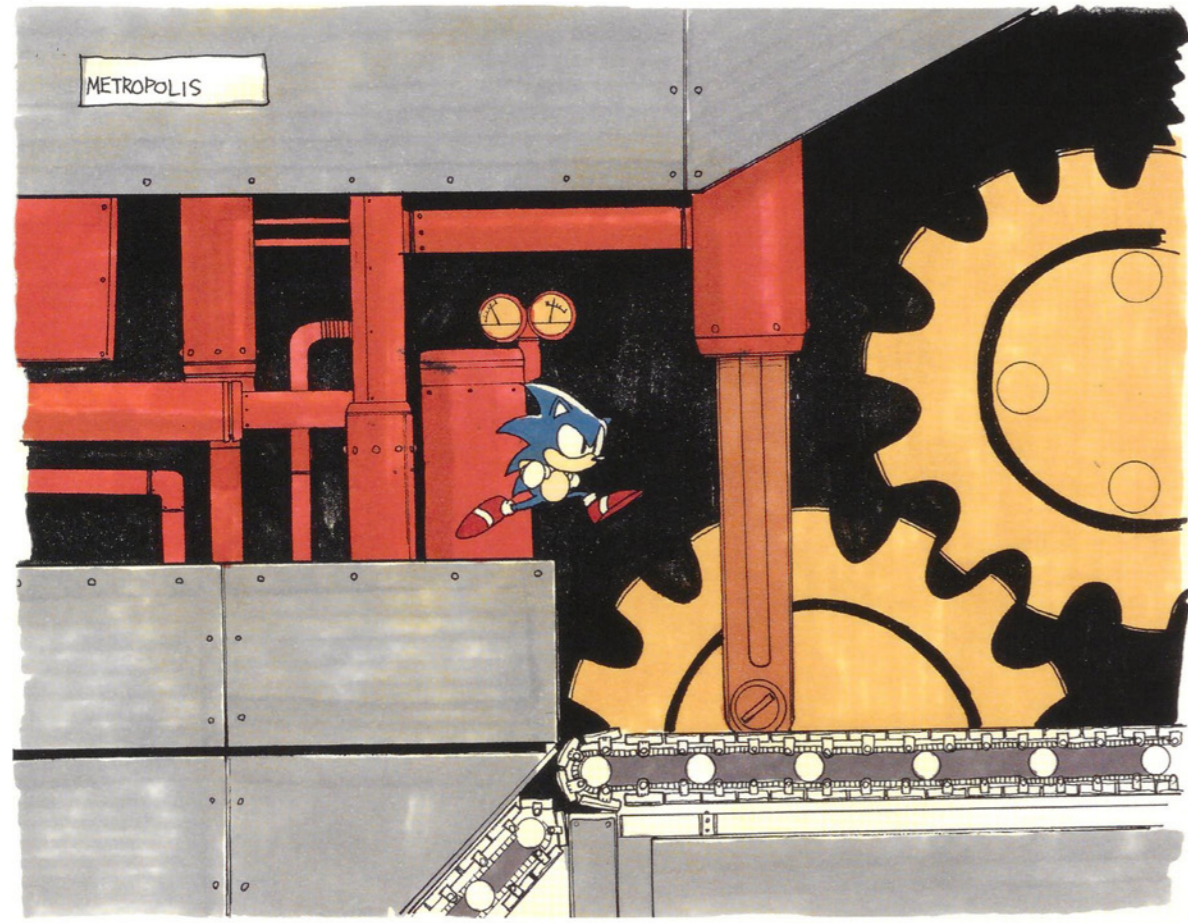
SECRET - JUNGLE



BLUE - OCEAN.



MADNESS - MOUNTAIN



Concept sketches for Mecha Sonic, a Sonic-modelled robot created by Dr. Eggman.

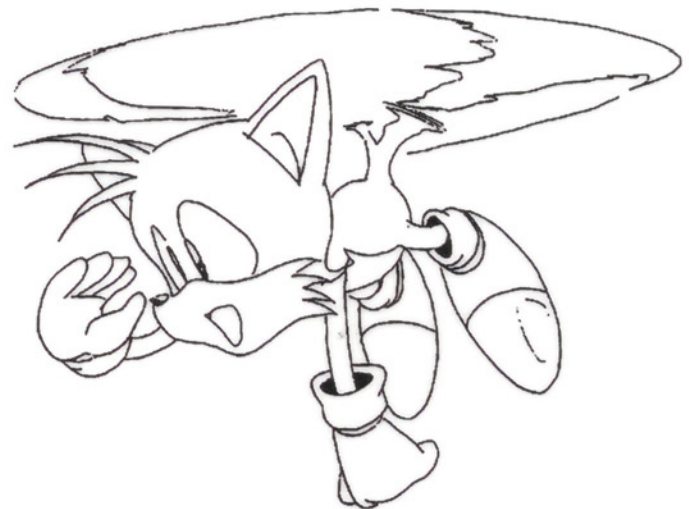
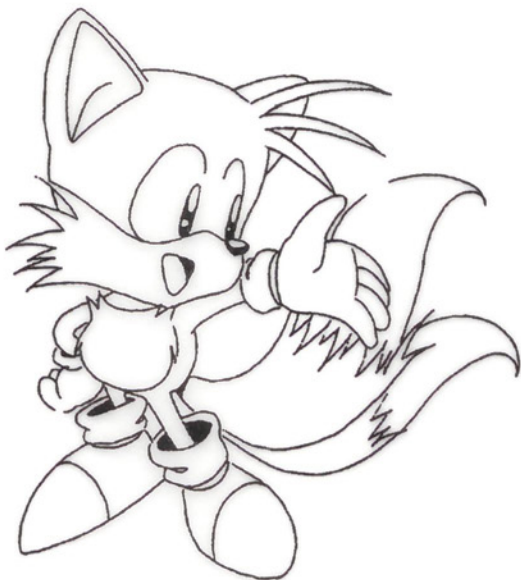
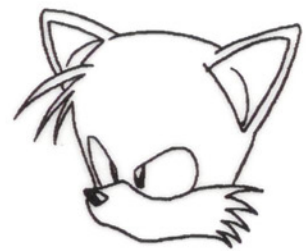
Introducing

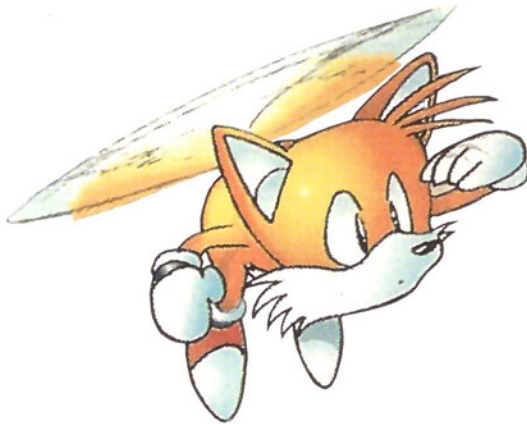
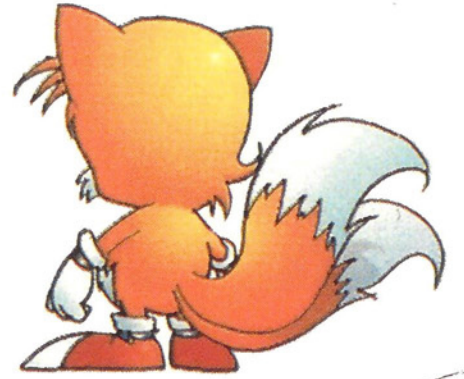
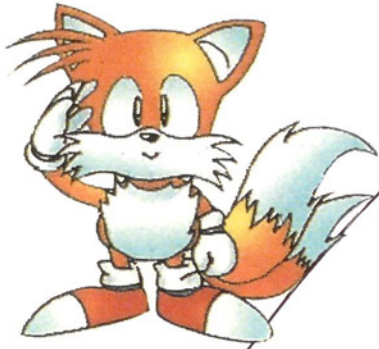
MILES 'TAILS' PROWER!



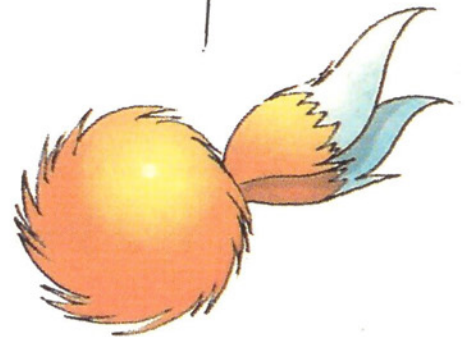
| First appearance: Sonic The Hedgehog 2 (1992).

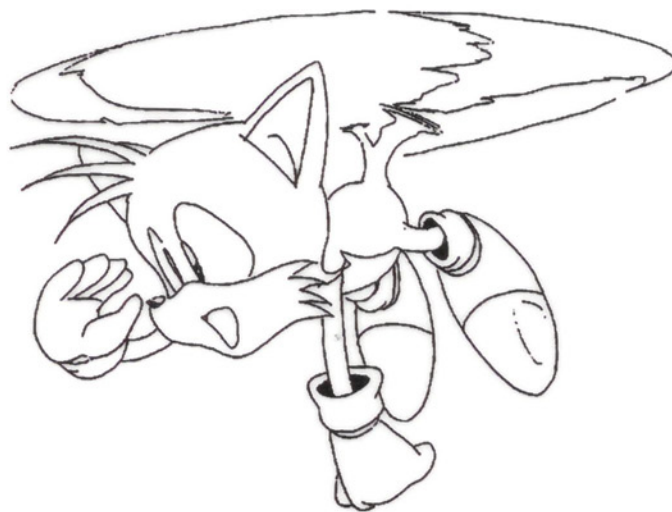
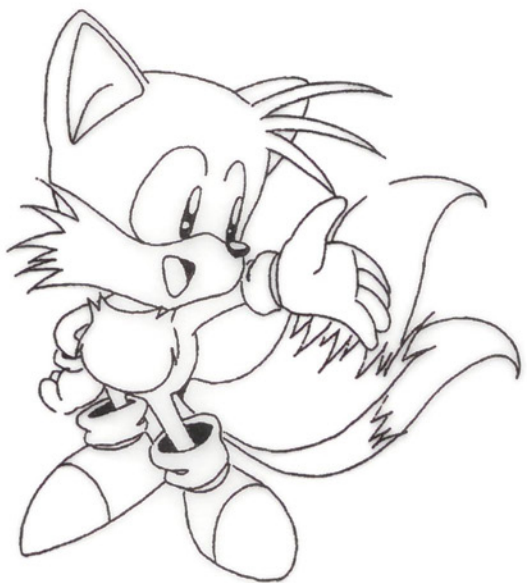
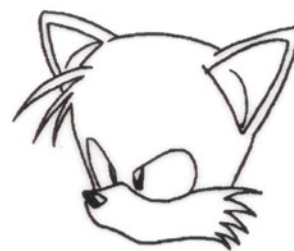






1992





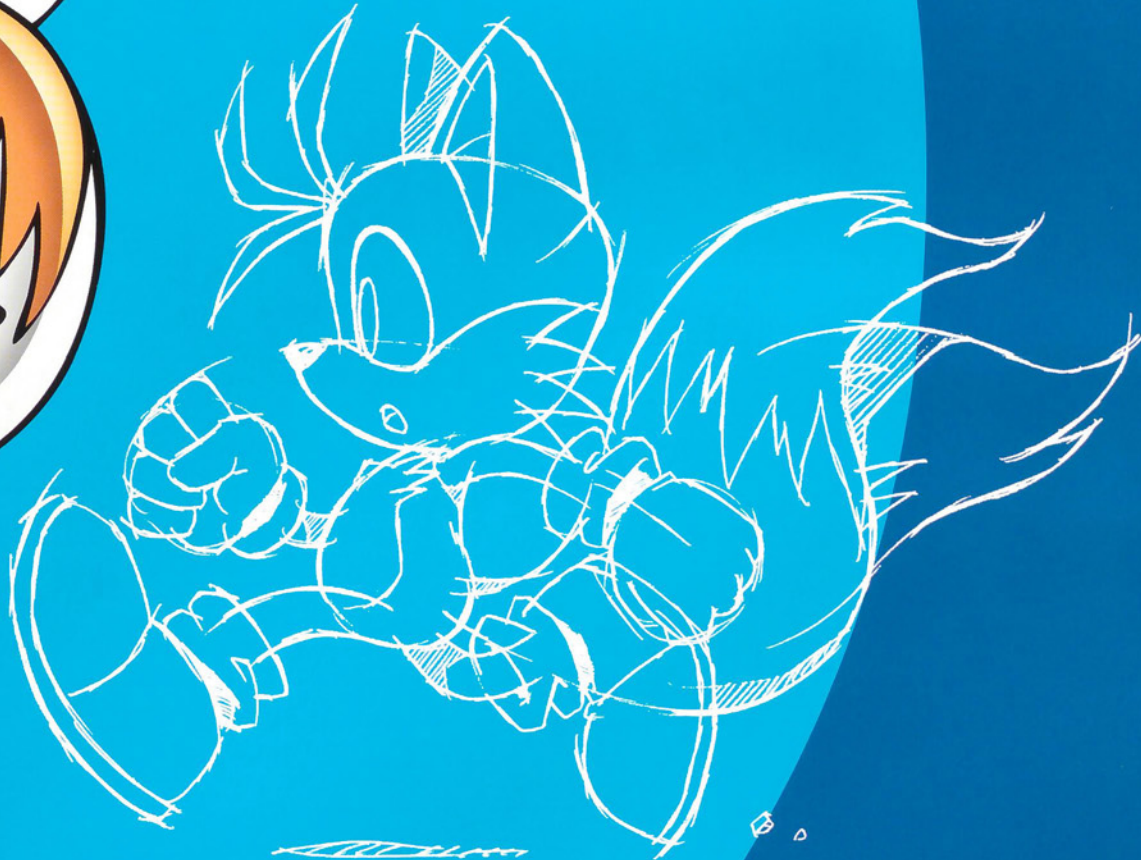
1997



1997



1998



2003



2011

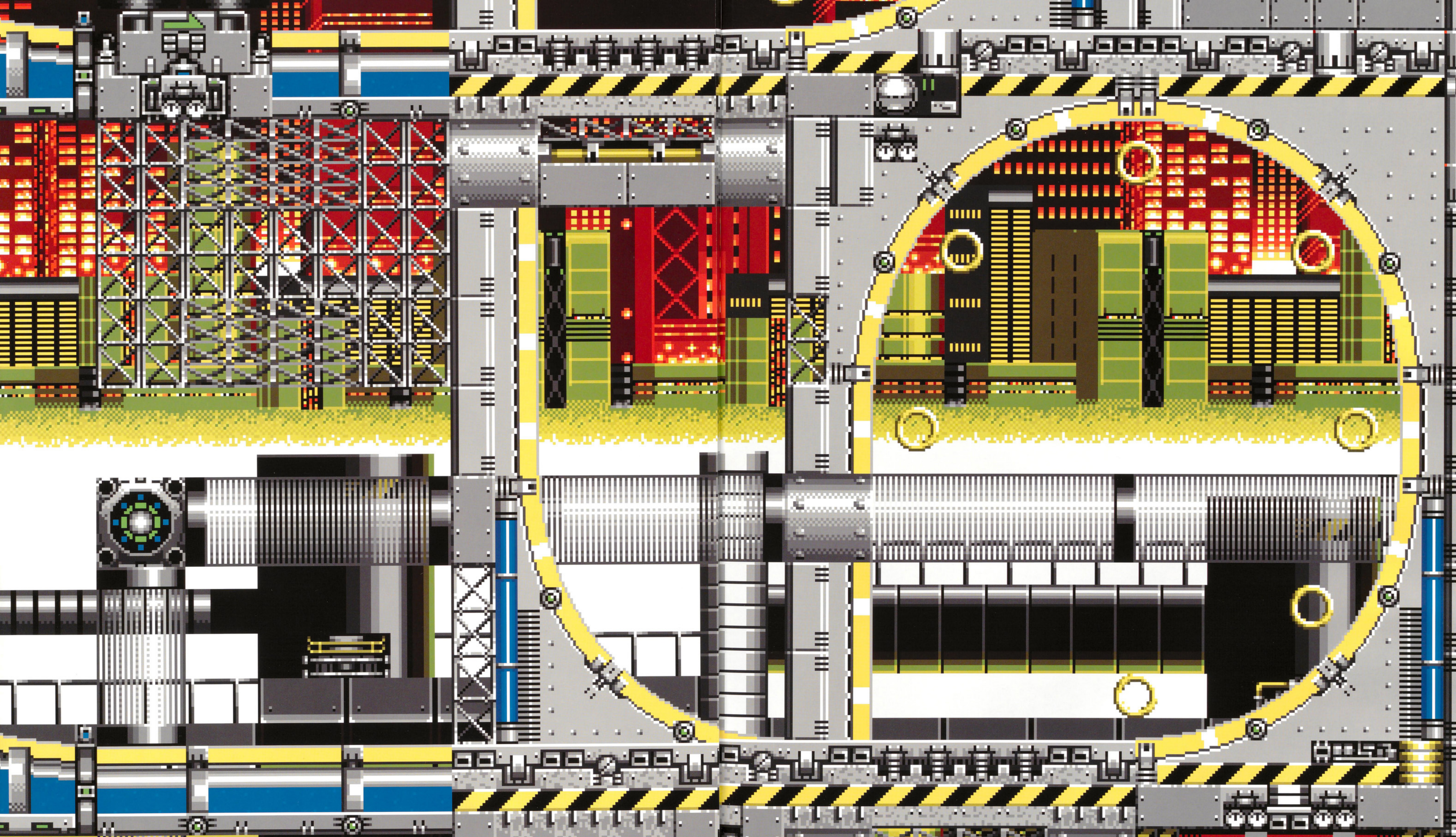


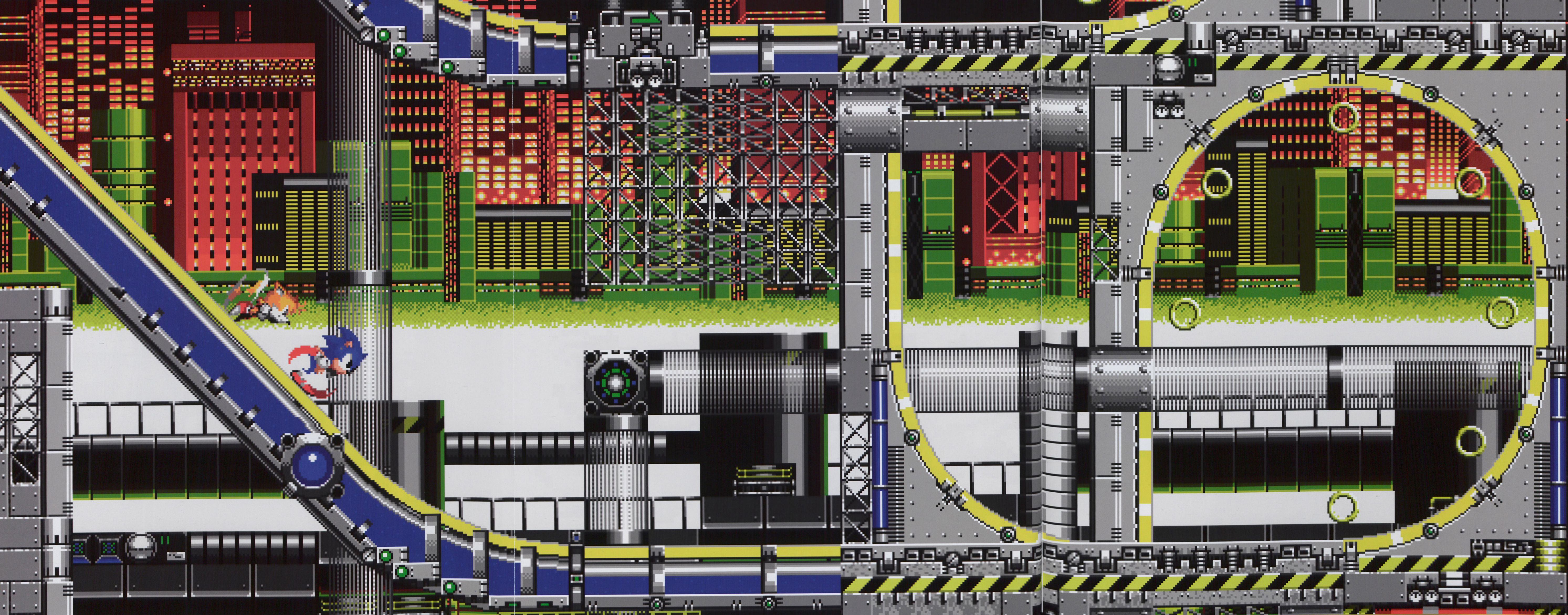
2014











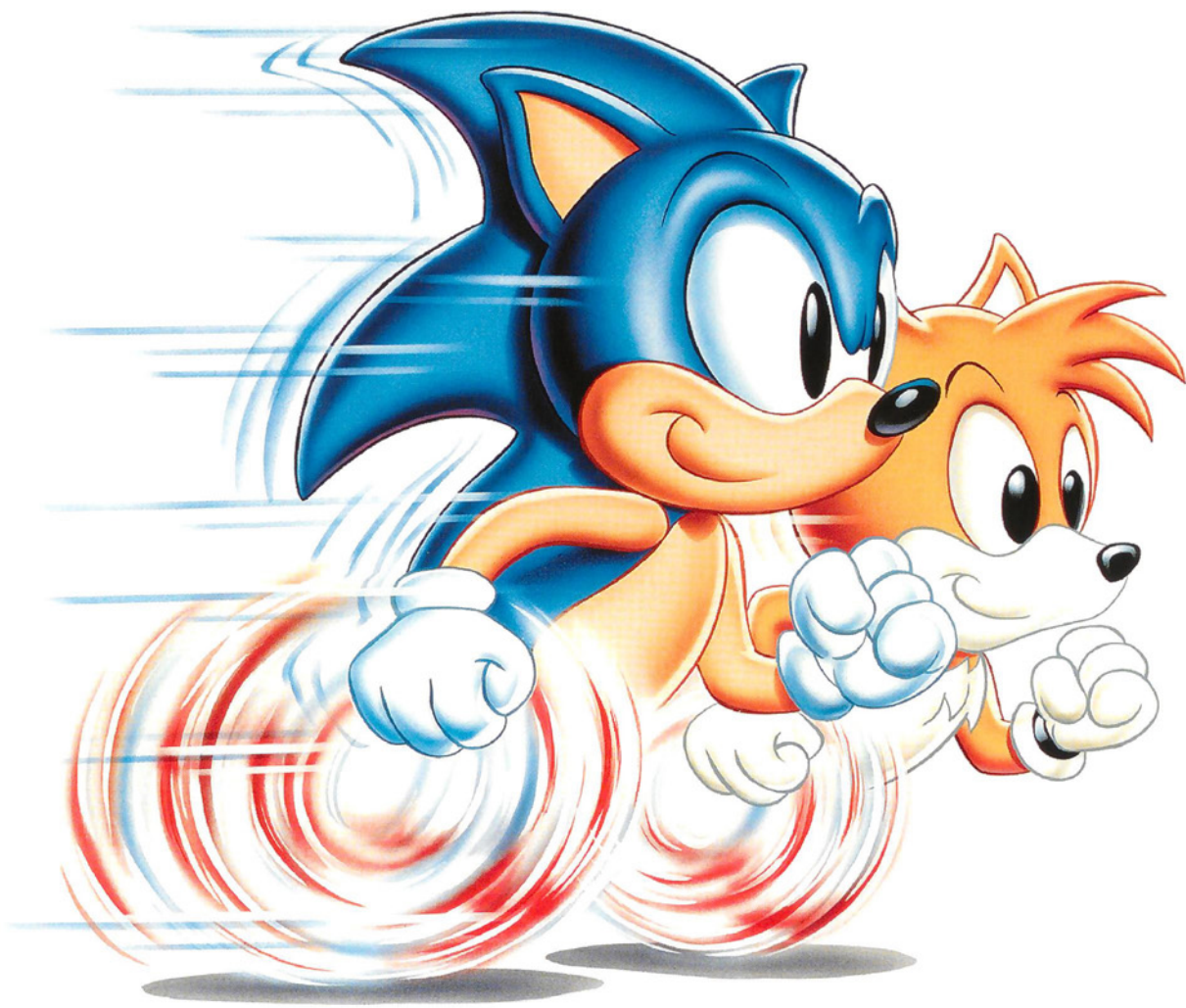
SONIC
RINGS 62

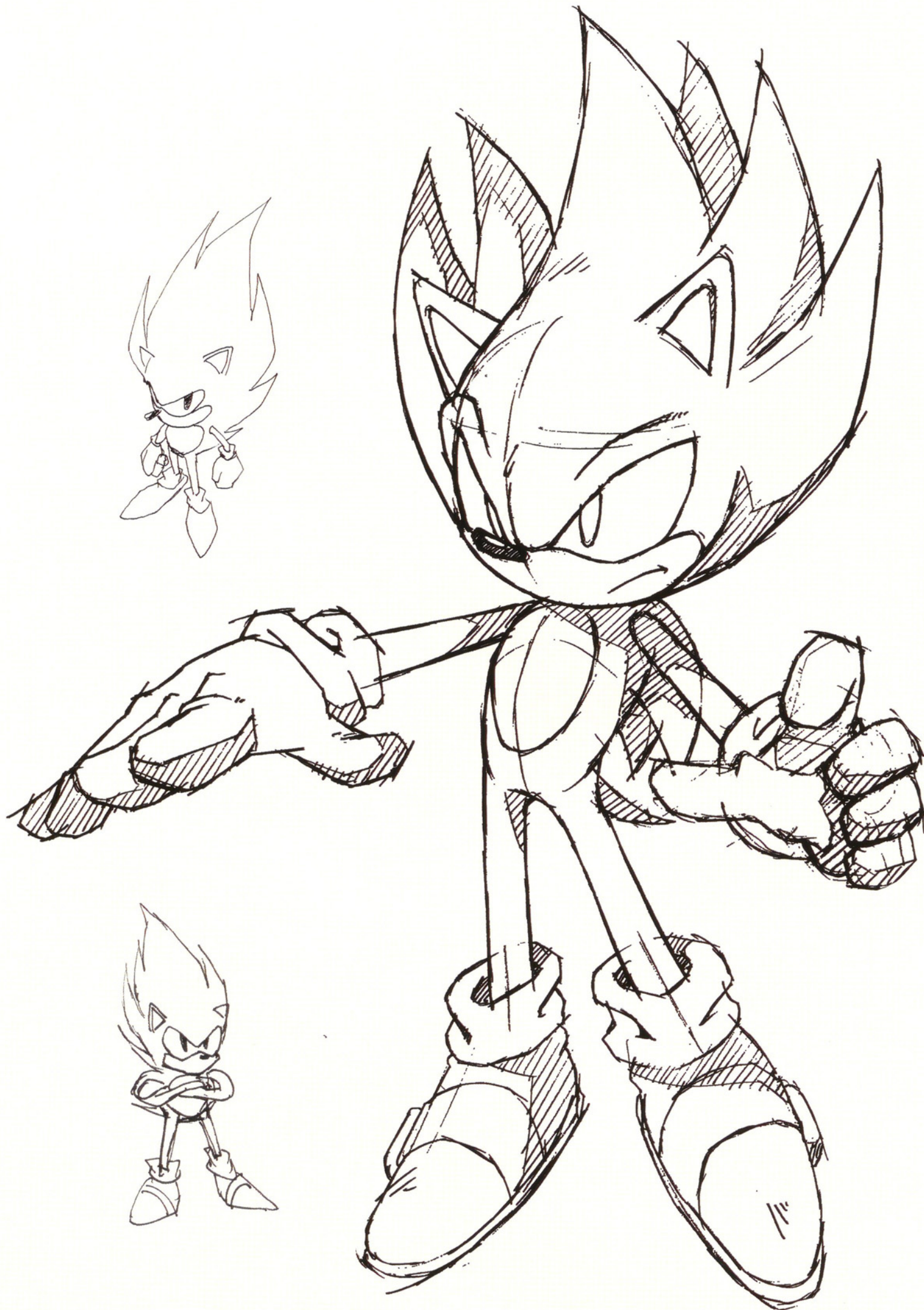
TOTAL
67

"TAILS"
RINGS 5

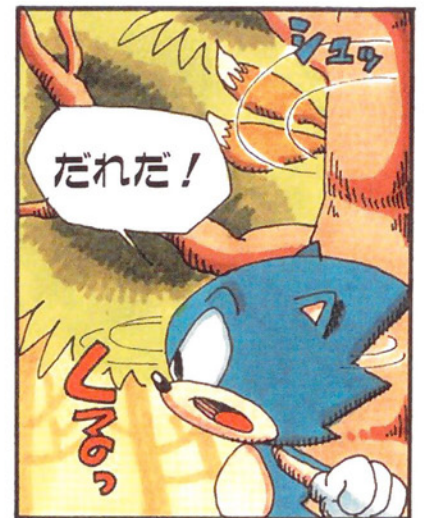
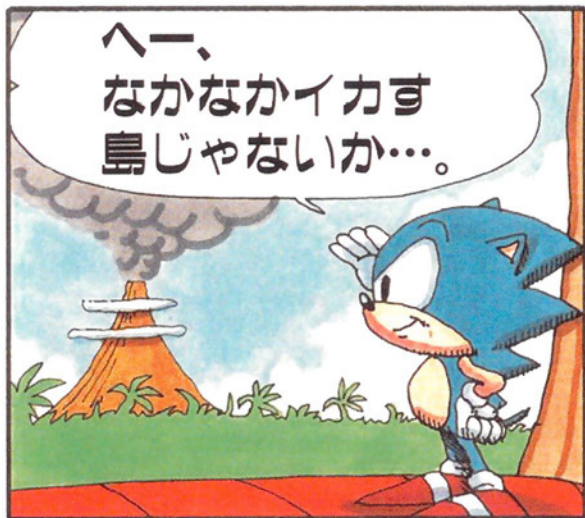
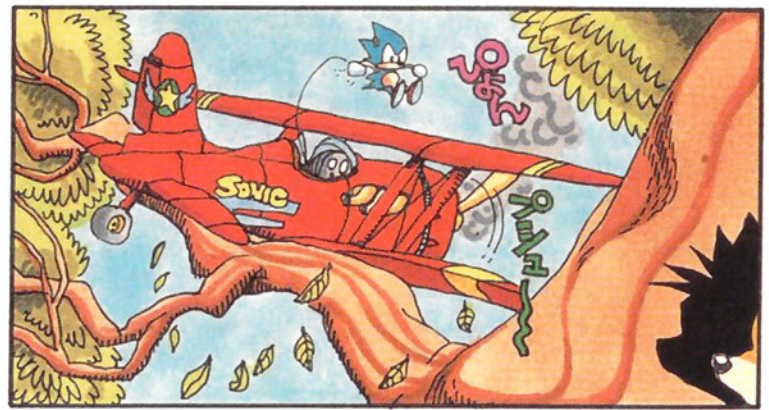
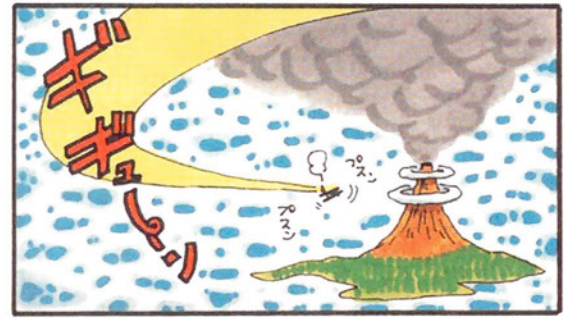
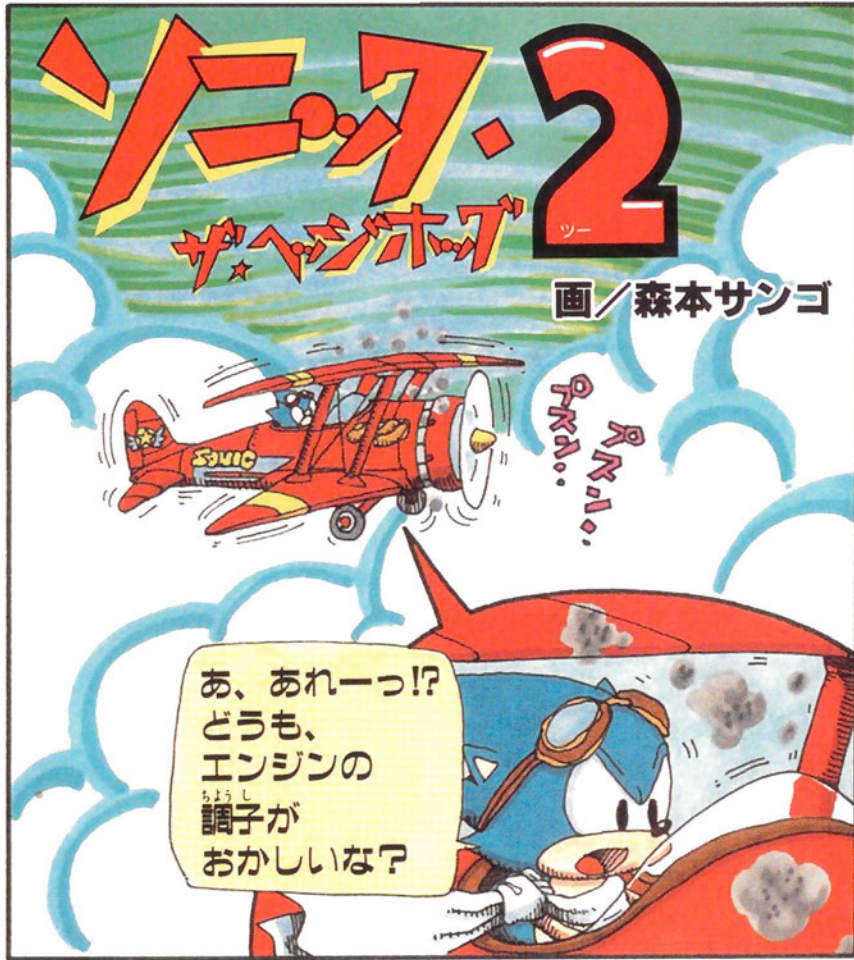


Sonic The Hedgehog 2 (1992) was the first Sonic game that introduced 3D gameplay in some of its Special Stages. Characters ran through a set of half pipes, avoiding bombs and navigating hard curves, to obtain rings and eventually a Chaos Emerald. An early example of 3D in Sonic games, Sonic Team was unable to implement more complex three-dimensional movement due to hardware restrictions.









Comic from the Japanese manual of Sonic The Hedgehog 2 (1992)







SONIC TEAM PRESENTS

SONIC THE HEDGEHOG

SONIC THE HEDGEHOG

取扱説明書

SONIC
THE HEDGEHOG
CD

To live a life of power, you must have faith that what you believe is right, even if others tell you you're wrong.
The first thing you must do to live a life of power is to find courage. You must be ready to reach beyond the boundaries of Time itself.
And to do that, all you need is the will to take that first step...

1 PLAYER

BACKUP RAM

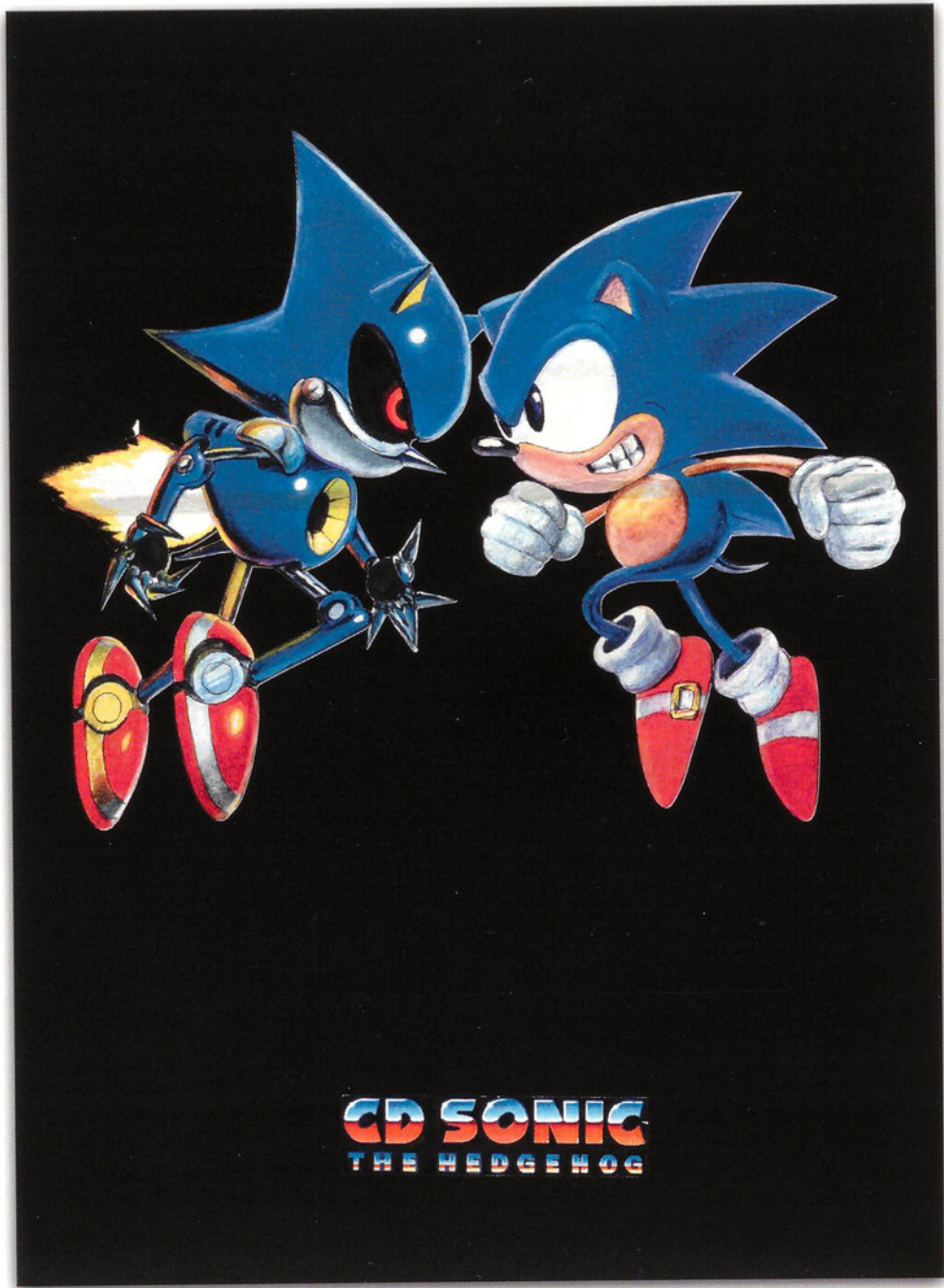
メガ・CD専用

MEGA CD

SEGA

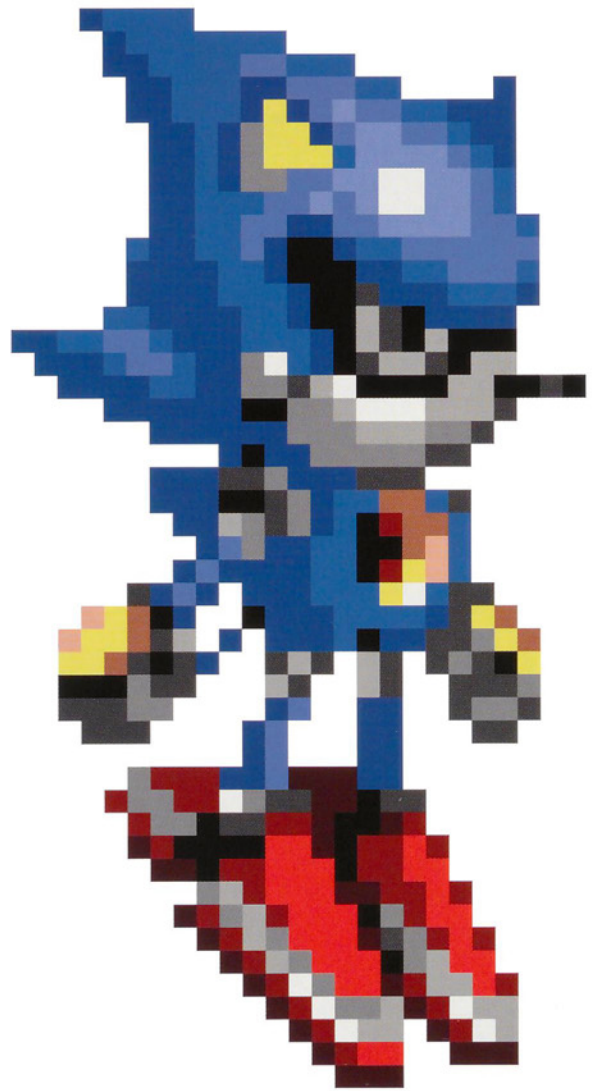
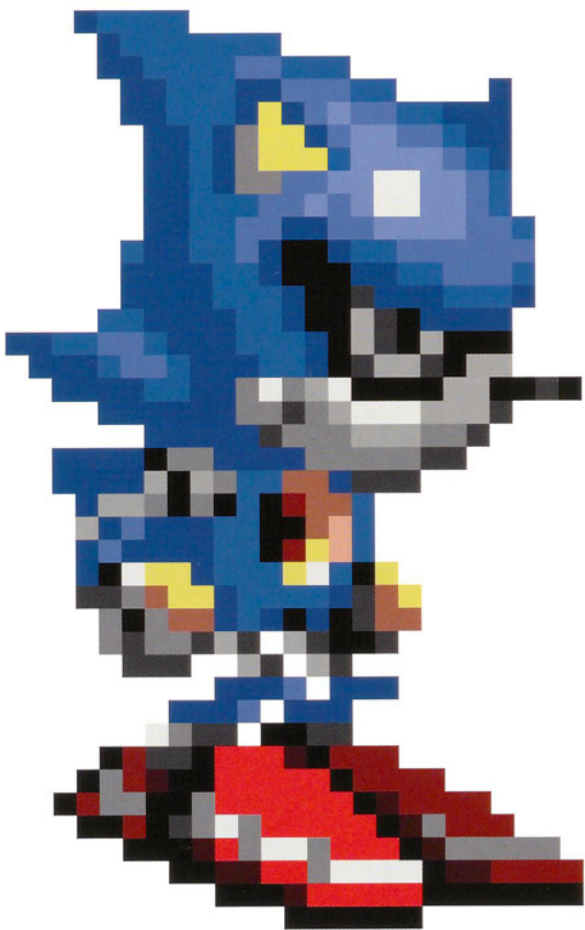
Japanese box art for Sonic CD (1993). While Sonic The Hedgehog 2 was made in the US, Sonic CD was made in Japan, marking the split development cycles of Sonic games that would happen in the future.





| Concept art for packaging of Sonic CD (1993).



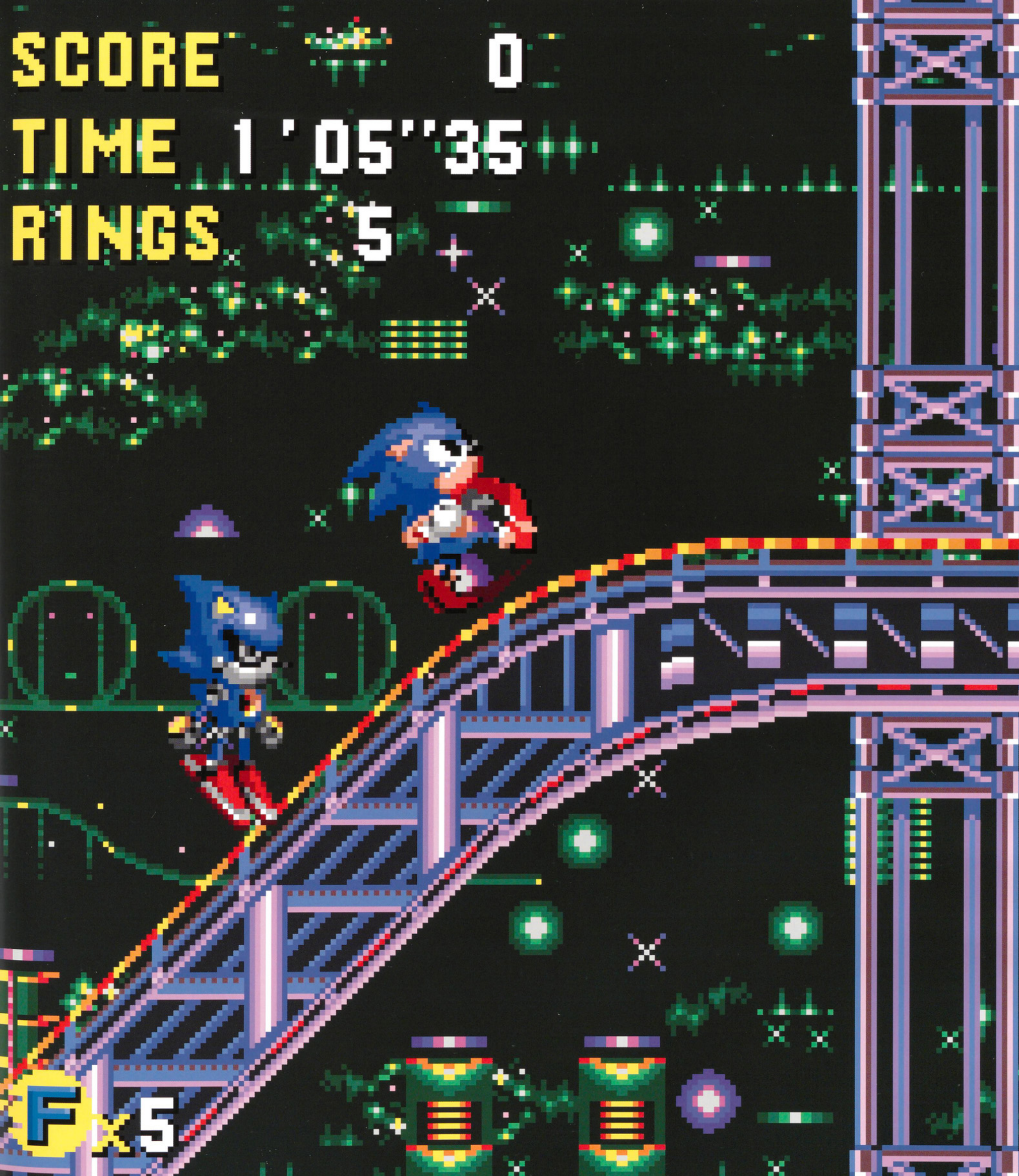


SCORE

0

TIME 1'05''35

RINGS 5



F 5



Introducing



**METAL
SONIC!**

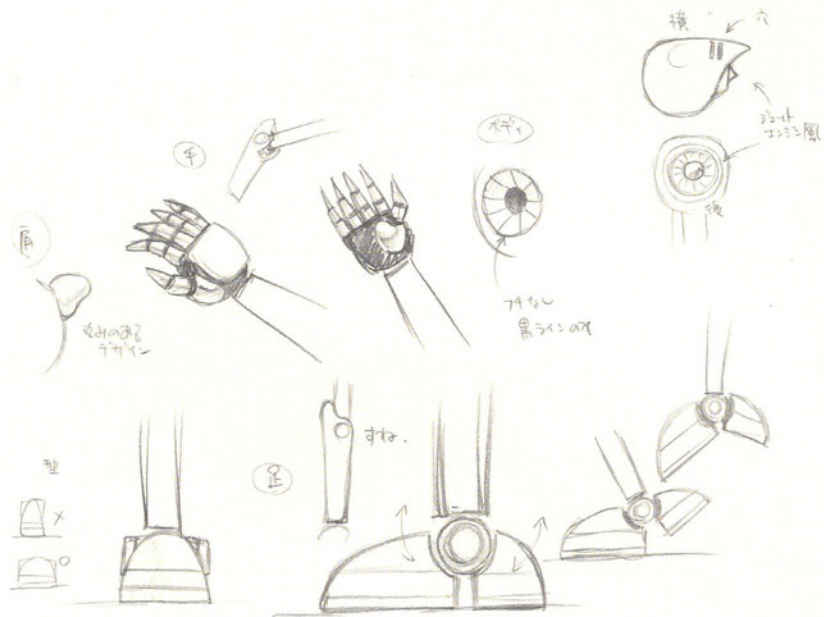
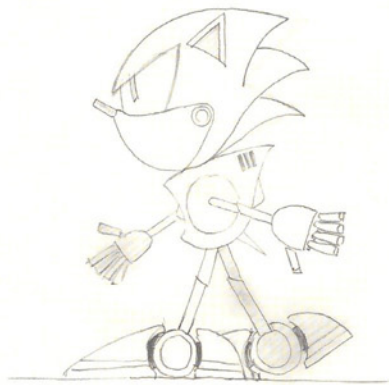
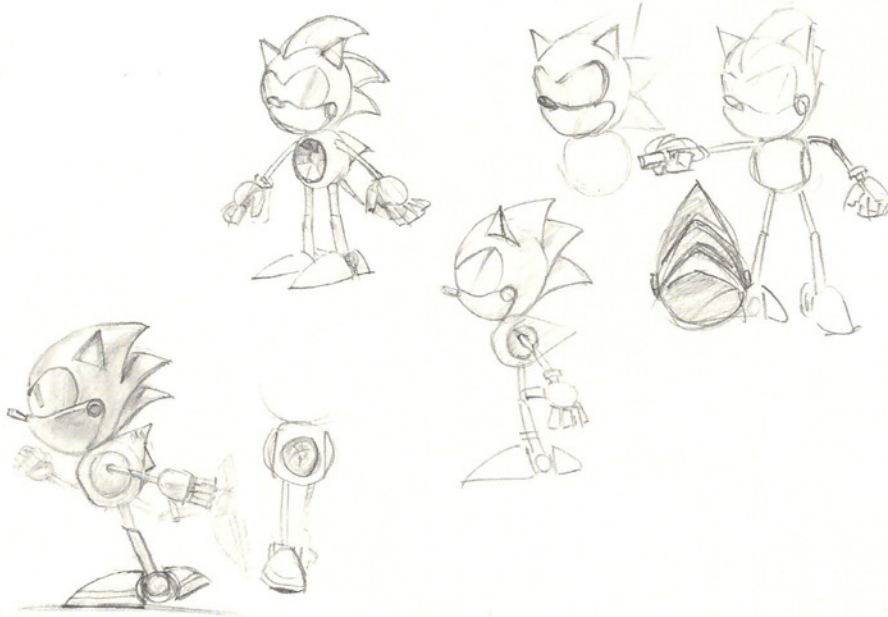


| *First appearance: Sonic The Hedgehog CD (1993).*



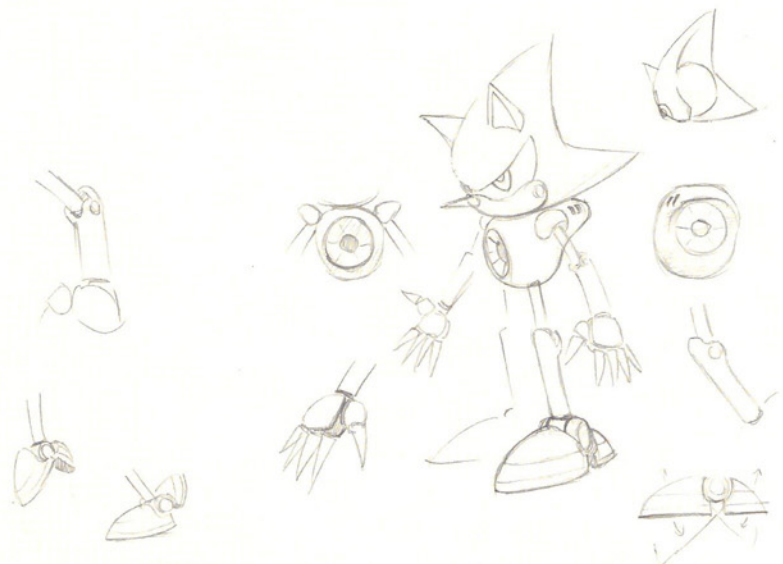
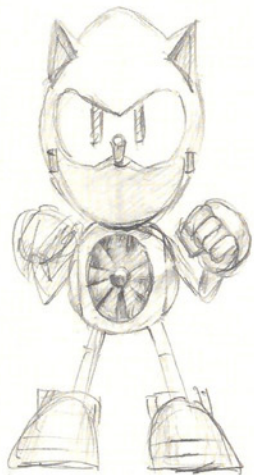


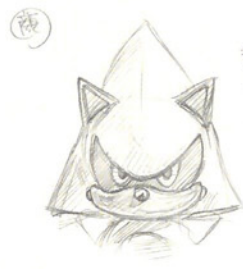
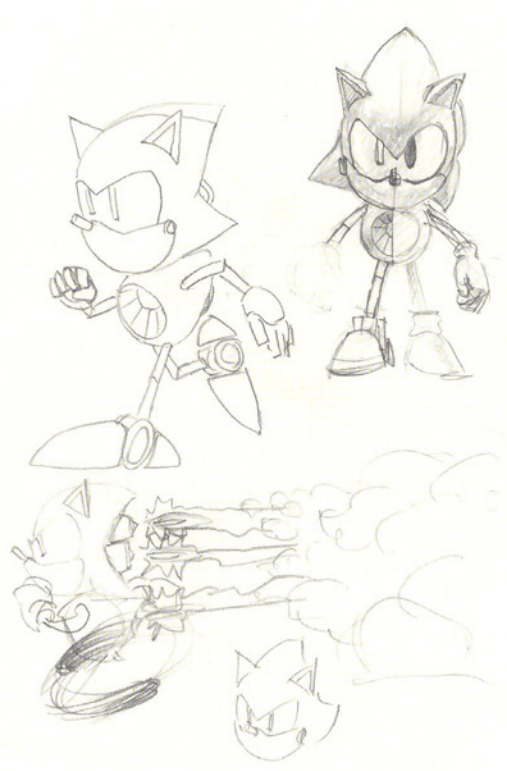
1993



Hashino
05/27/2005 Metal Sonic ①

x+y=47 | 号
8号





顔(頭部)のスケッチ
注意下さい。

現状 横つぶり2相面化
有り過ぎています。

・顔の型は1/4と1/2と一緒

・耳のつせ方 両耳の間隔も注意

・眉間の型 (右側を参照)

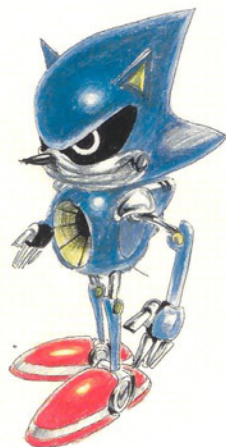
・口は上唇、下唇の部分が外側を括弧で
括弧の2Dで示す(既述)の型に。

・目は細く描くように。

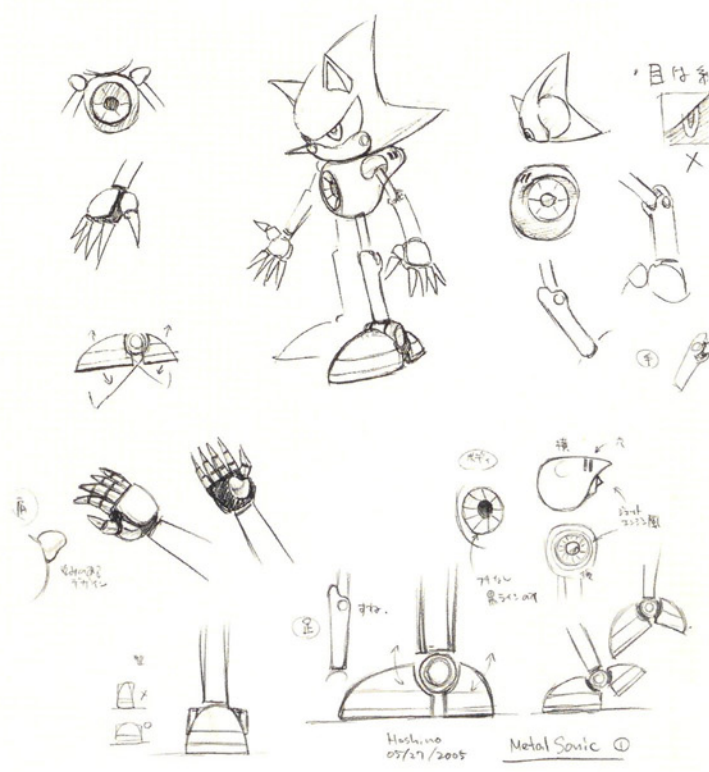


Hoshino
05/27/2005

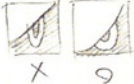
Metal Sonic ②



Color: 1



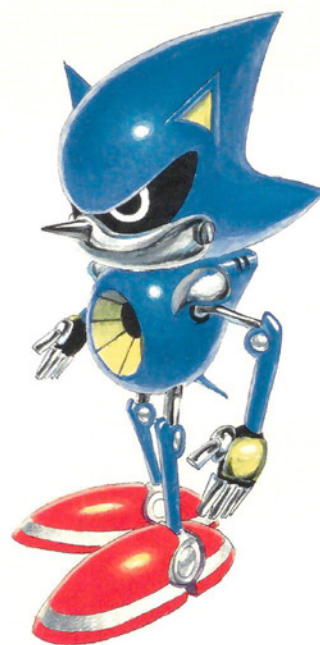
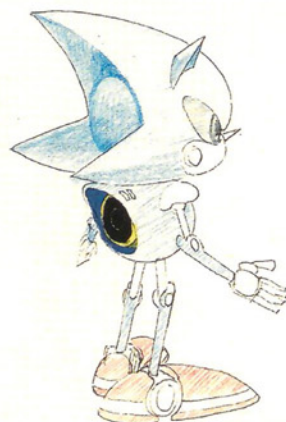
目は細く描くように。

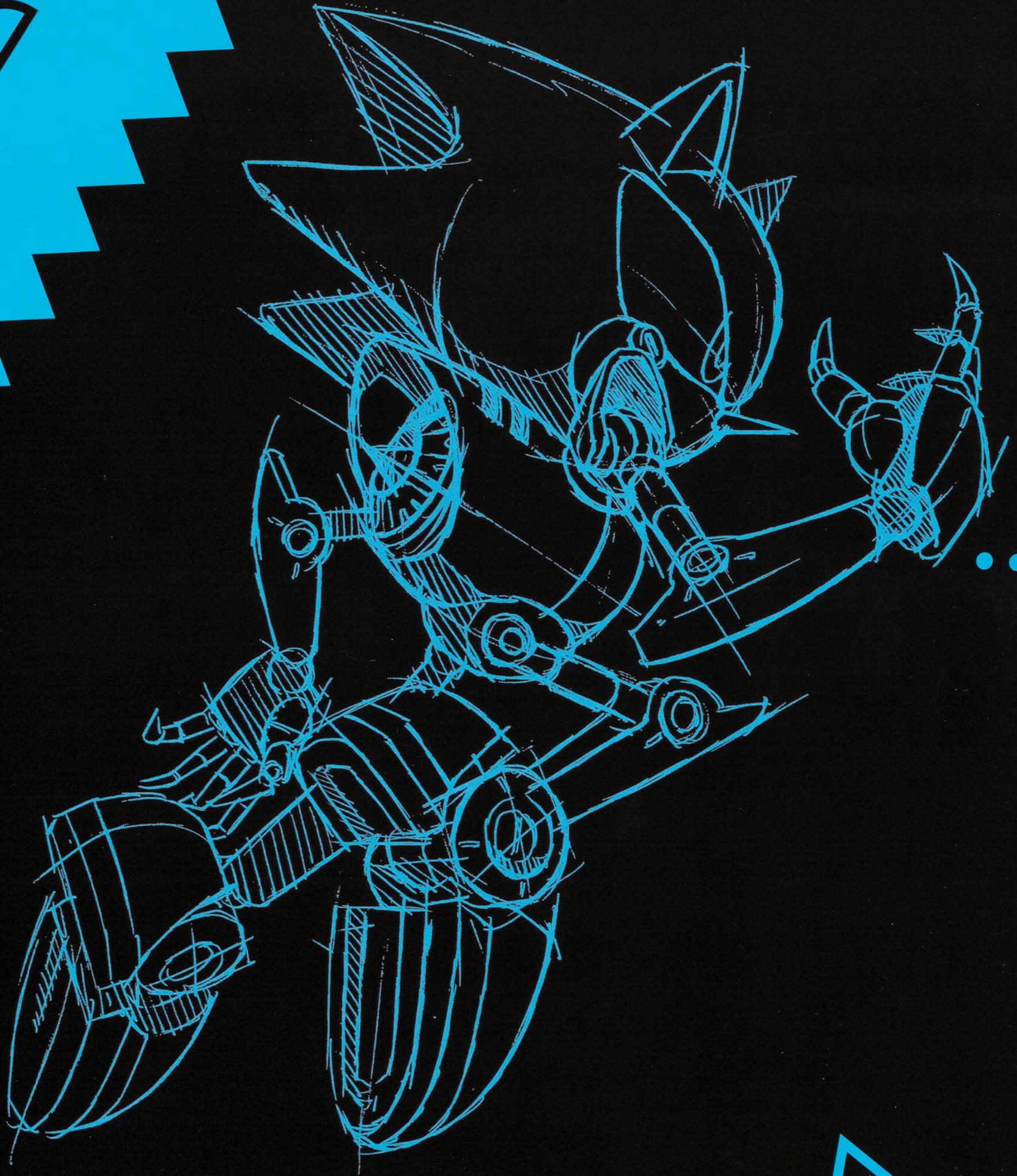


顔

Hoshino
05/27/2005

Metal Sonic ①



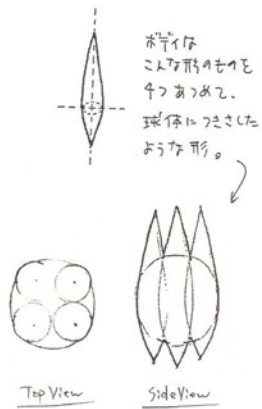


2007

2015

2011

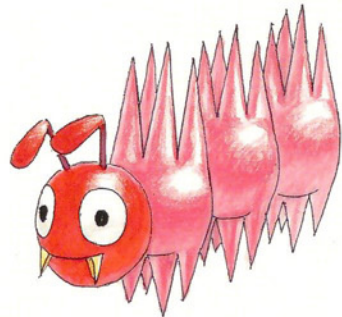




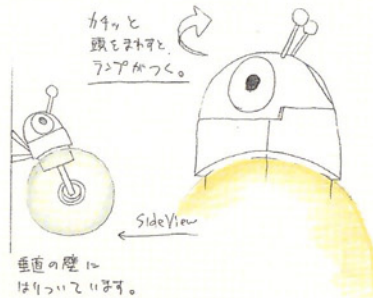
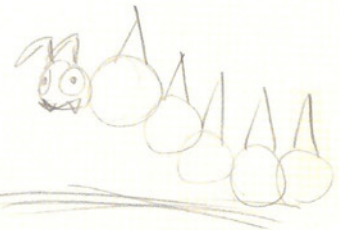
赤い虫
この形が虫の
手前まで。
球体に付いた
ような形。



開閉の時に交互に上下させながら
中へへ前に進む。

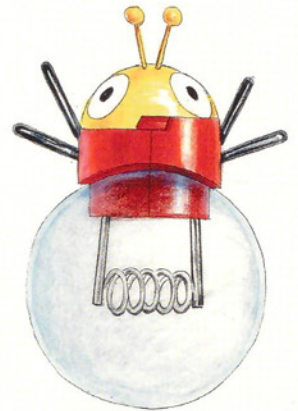


ケムシメカ (仮名)



かかと
頭を動かすと
足が動く。

垂直の壁に
はたいていす。

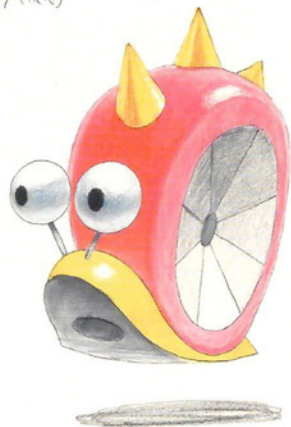
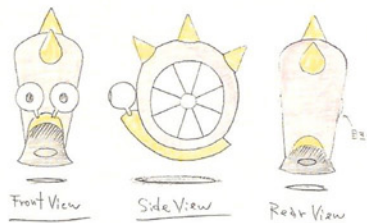


ホタルメカ (仮名)

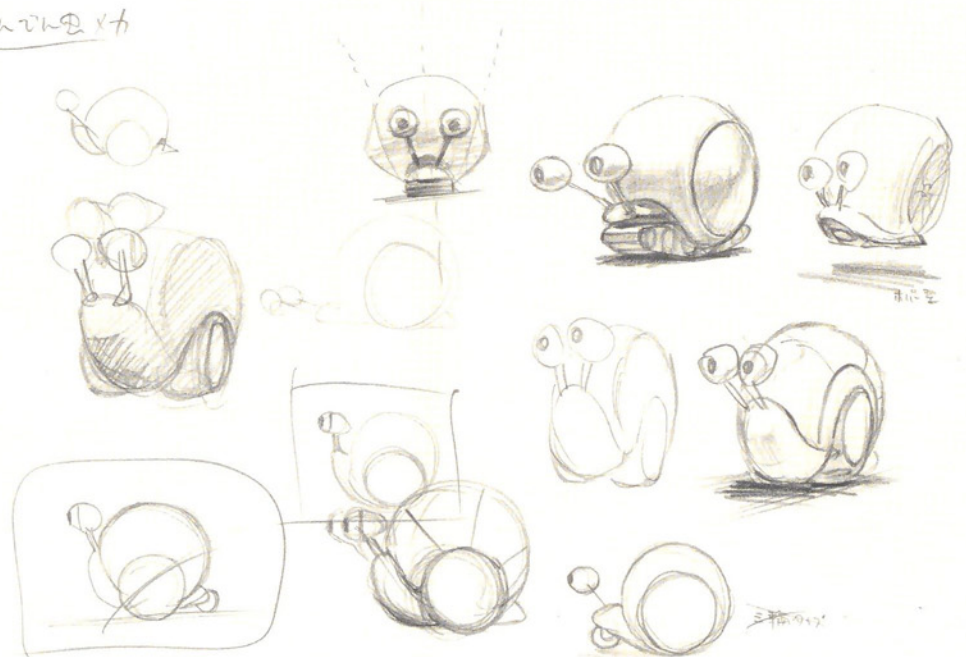
ローターをまわして
空気を取り入れ
ホバーを使ってふわりと
浮いていす。

ぶんぶん虫メカ (仮名)

この形が虫の形です。



ぶんぶん虫メカ





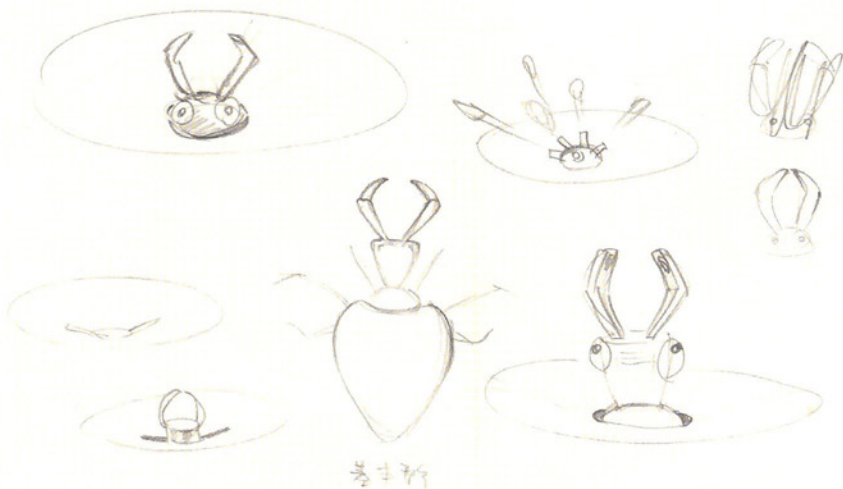
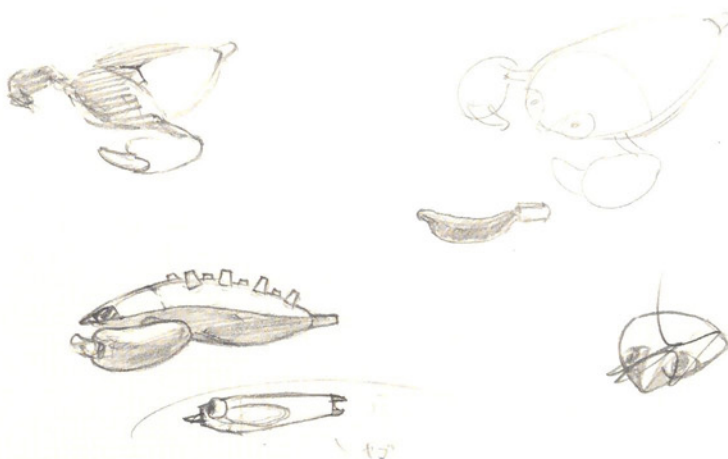
トゲトゲの遊離の
ミヤ化攻撃。

おしな管の勢いよく水を吐いて
ミヤを推進する。

Front View



夕ガ××カ (仮名)



オトコガ

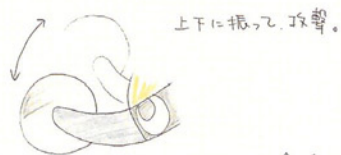


この穴の中に入れて...

パチと出てきて攻撃する。
4つのグイヤを伴った上下移動。



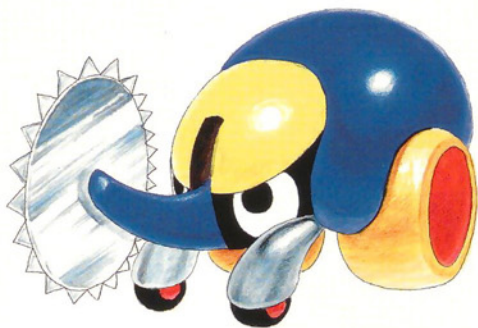
アジゴク×カ (仮名)



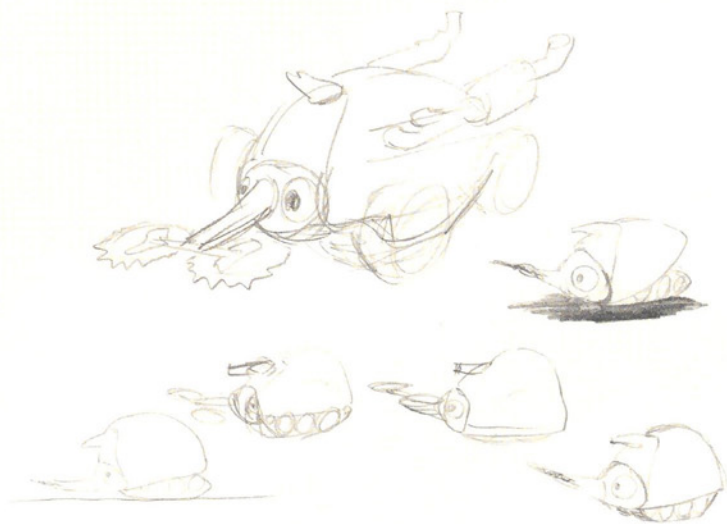
上下に振って、攻撃。

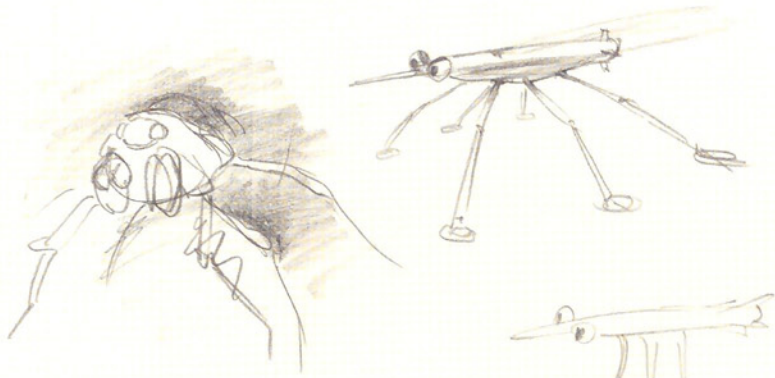


Rear View

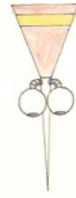


カブトムシ×カ (仮名)

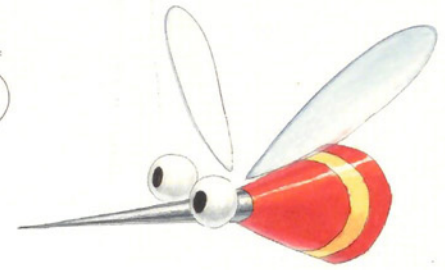




おじのRear View。
(7/11-12のSCRE後の
おじの身体。)



目は
25mmくらいです。



カ×カ (98%)

カマキリ



おじ Rear View

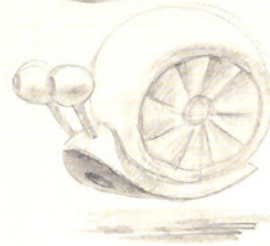


カマを飛ばして攻撃します。



カマキリ×カ (98%)

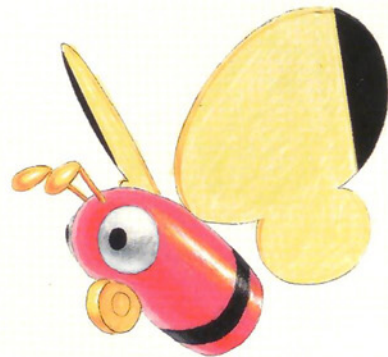
身長



下から見ると



おじ Rear View
おじの 顔と 喉の SCRE
25mmと 幅が 25mm。



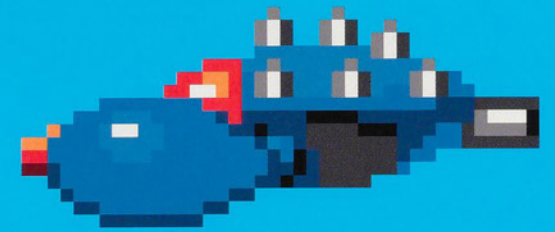
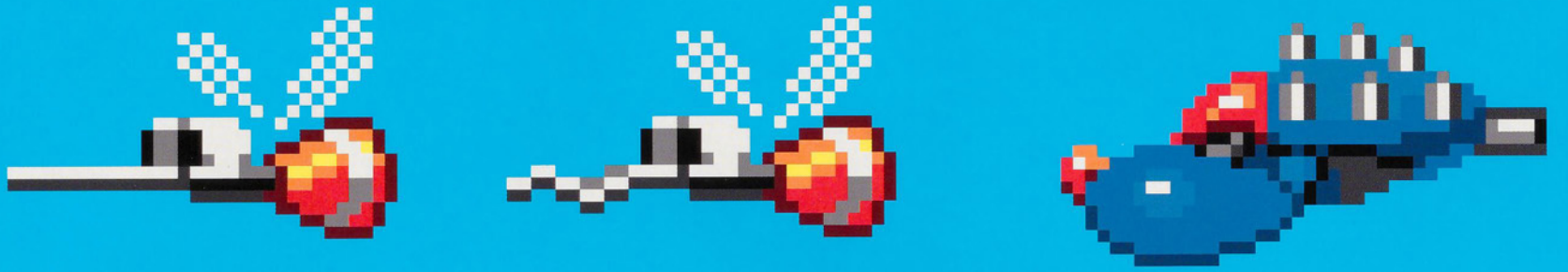
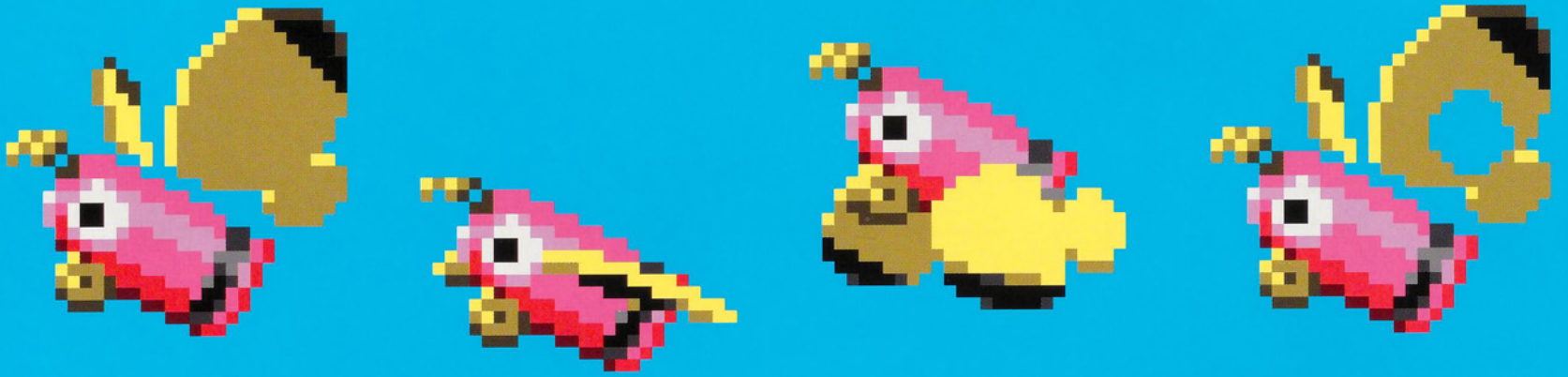
カ×カ (98%)

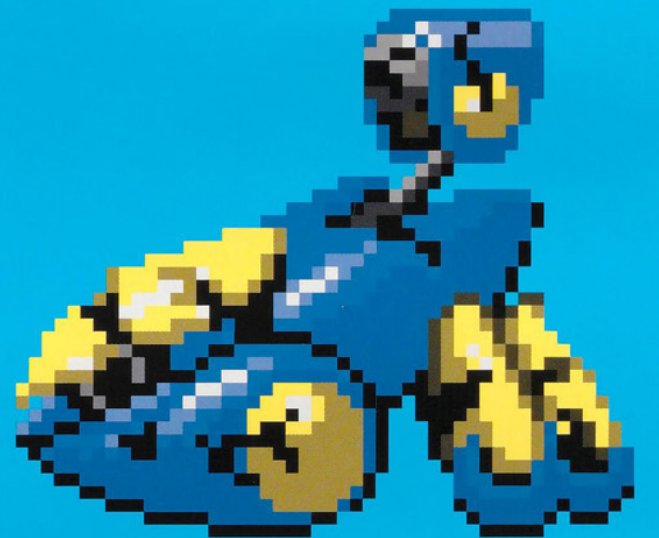
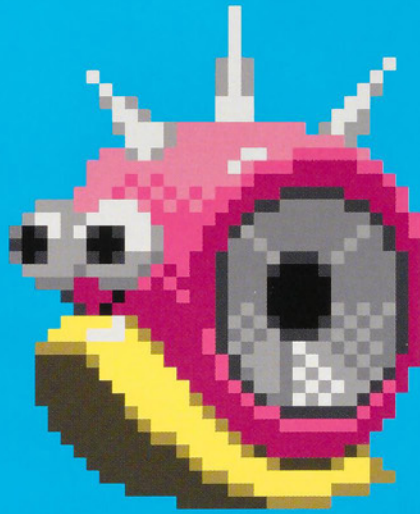
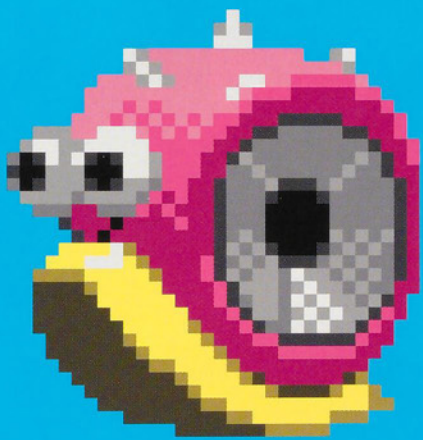
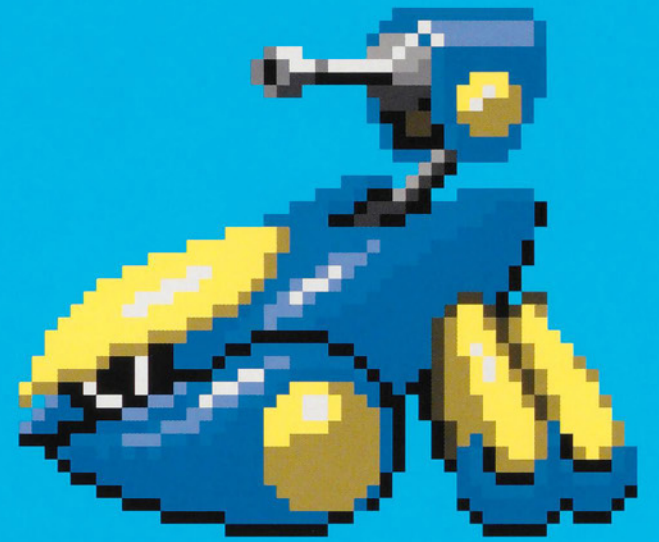
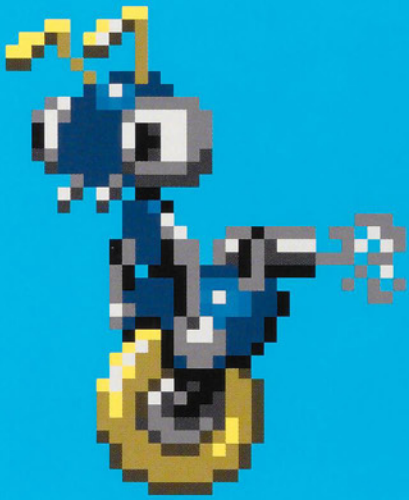
知表の輪状部

カ×カ

音をさせると



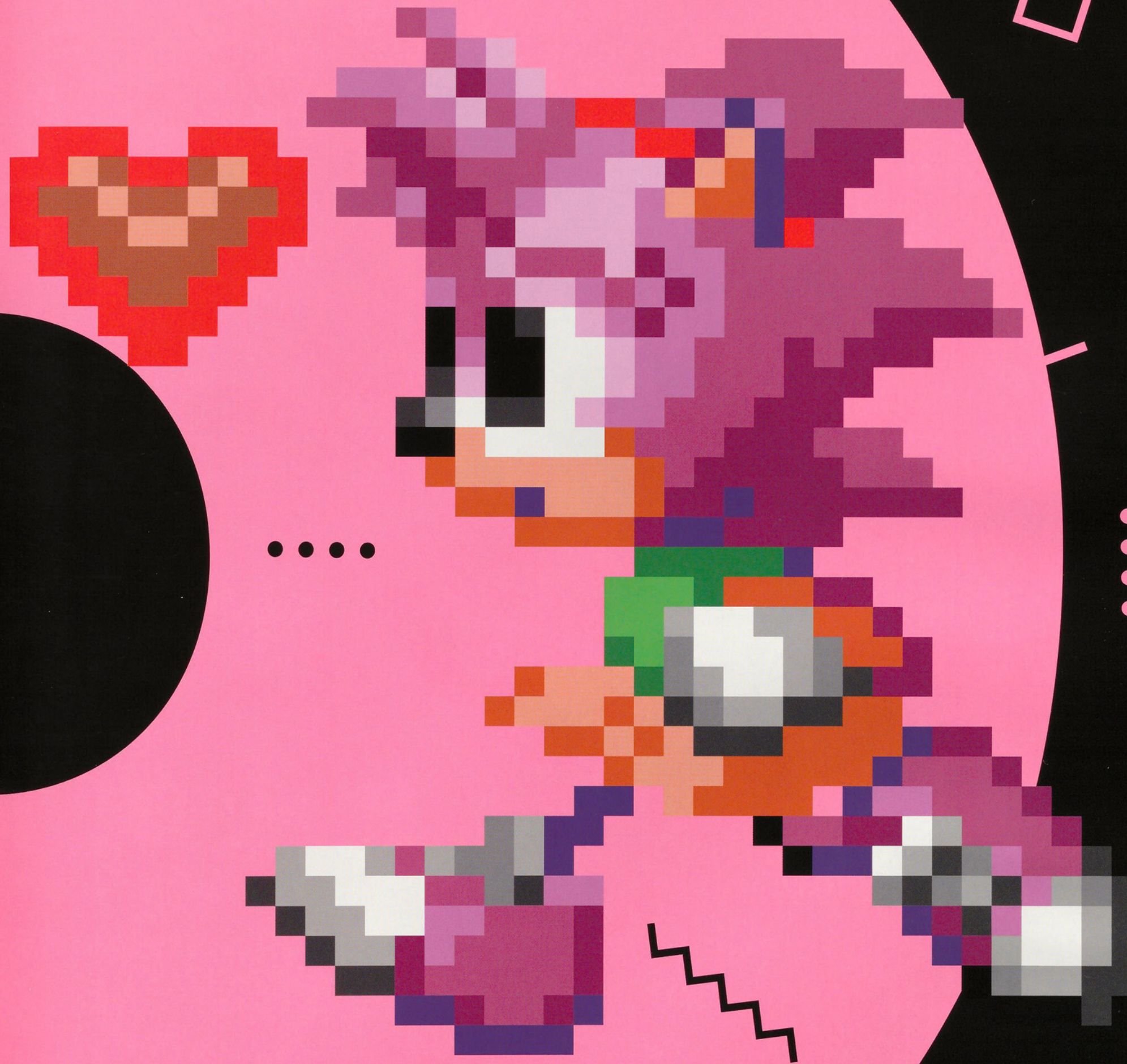
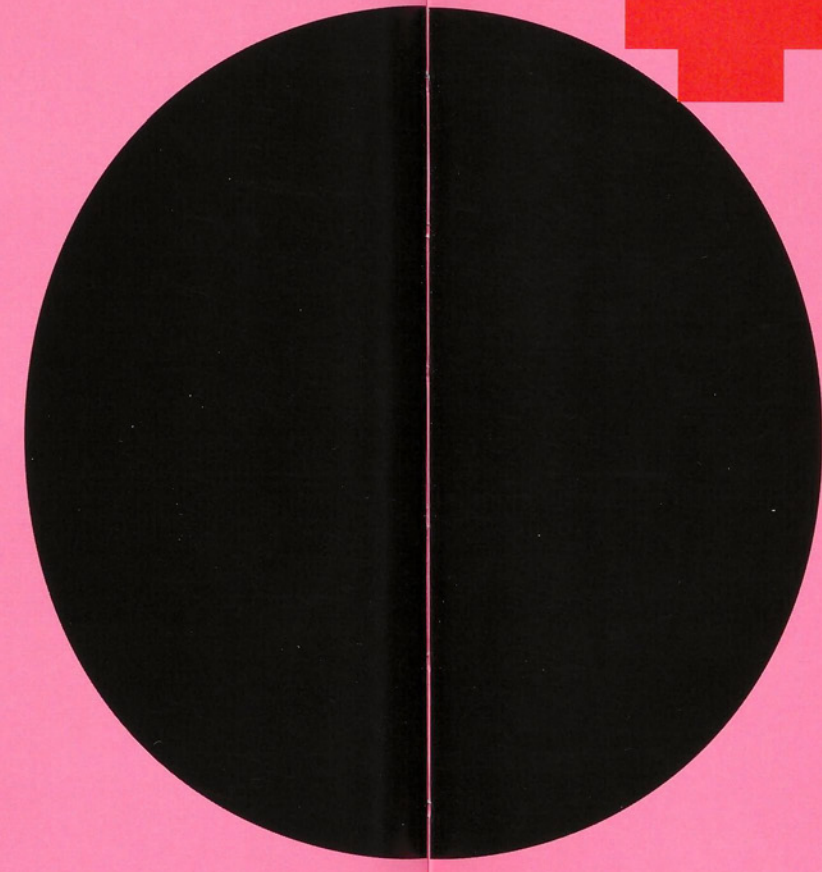


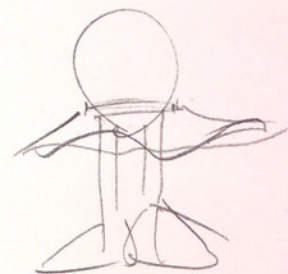
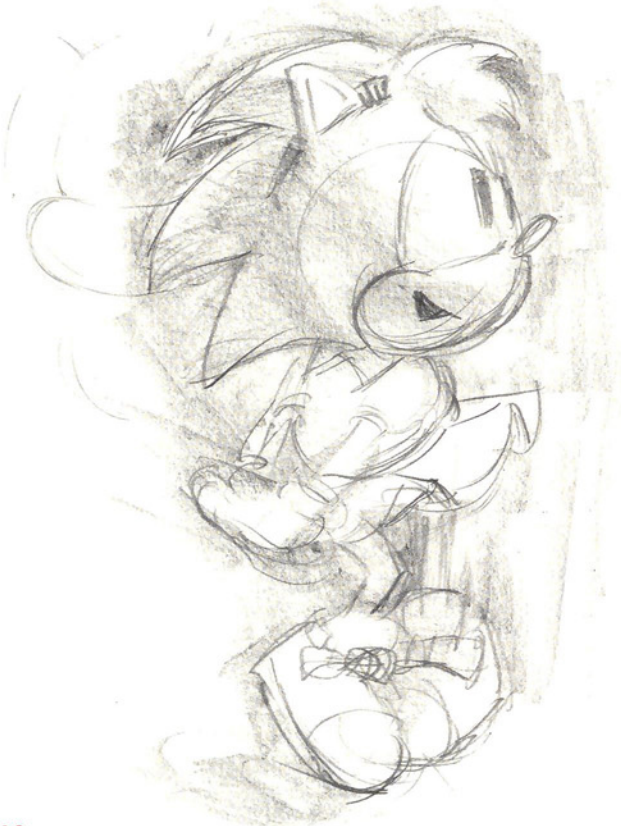
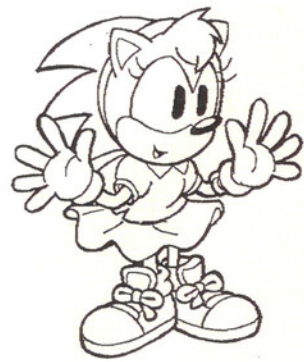
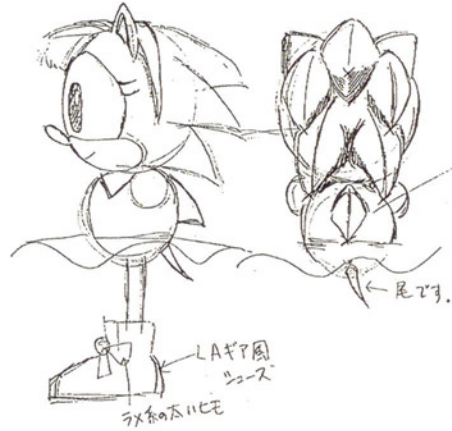


Introducing

AMY ROSE!

| First appearance: Sonic The Hedgehog CD (1993).





23

1993

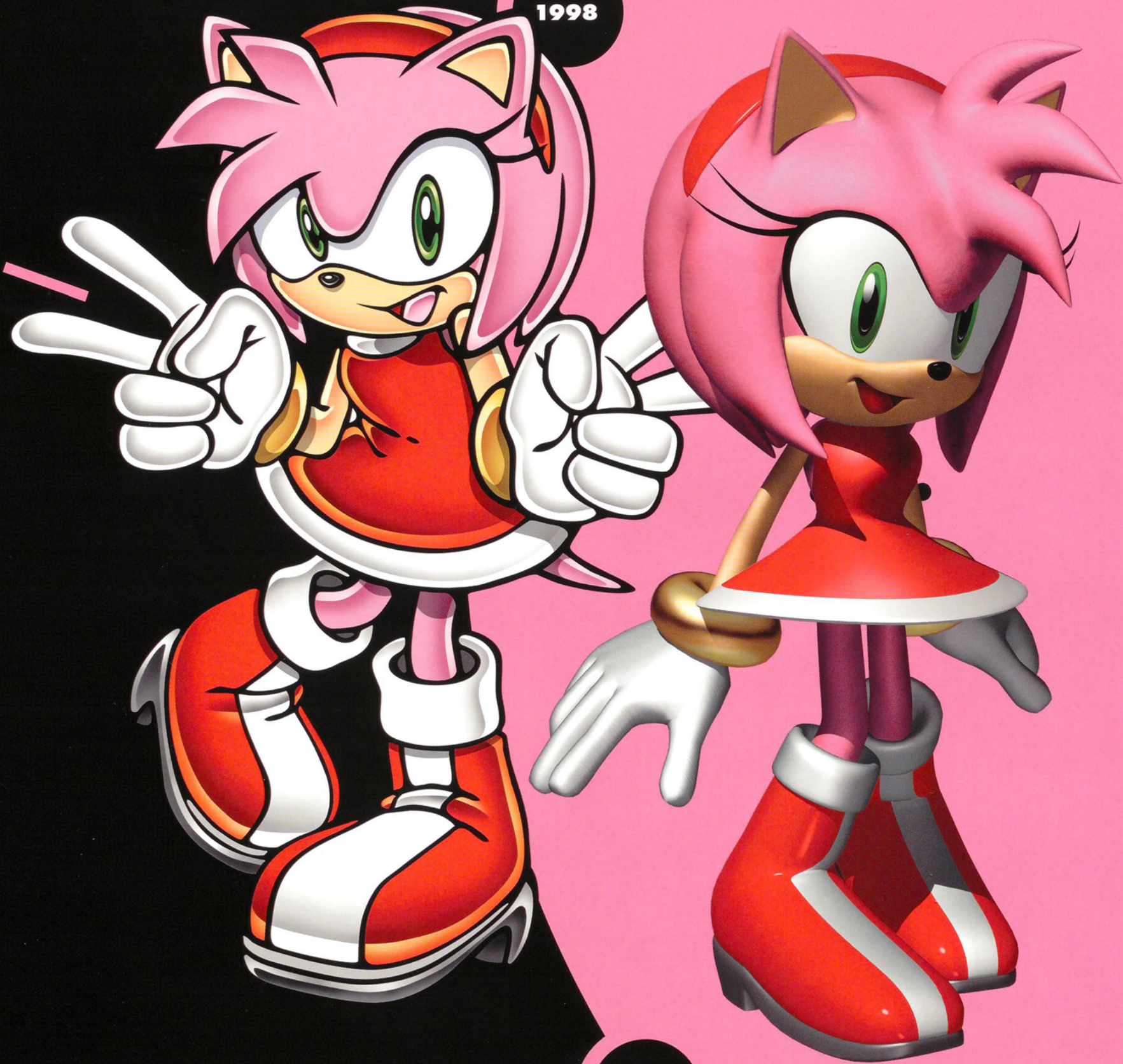


1/2より針の数が少ないです。



1998

2003

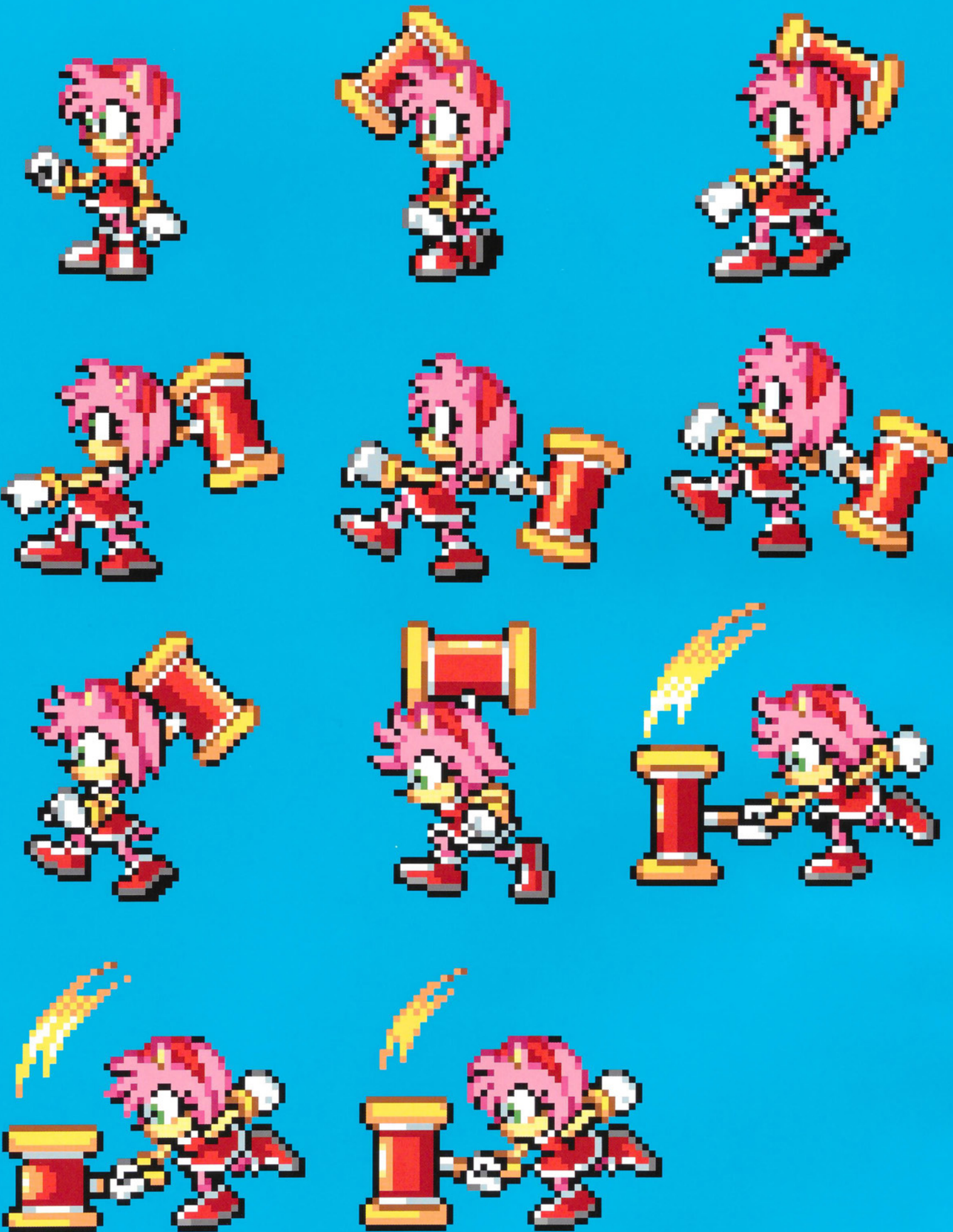


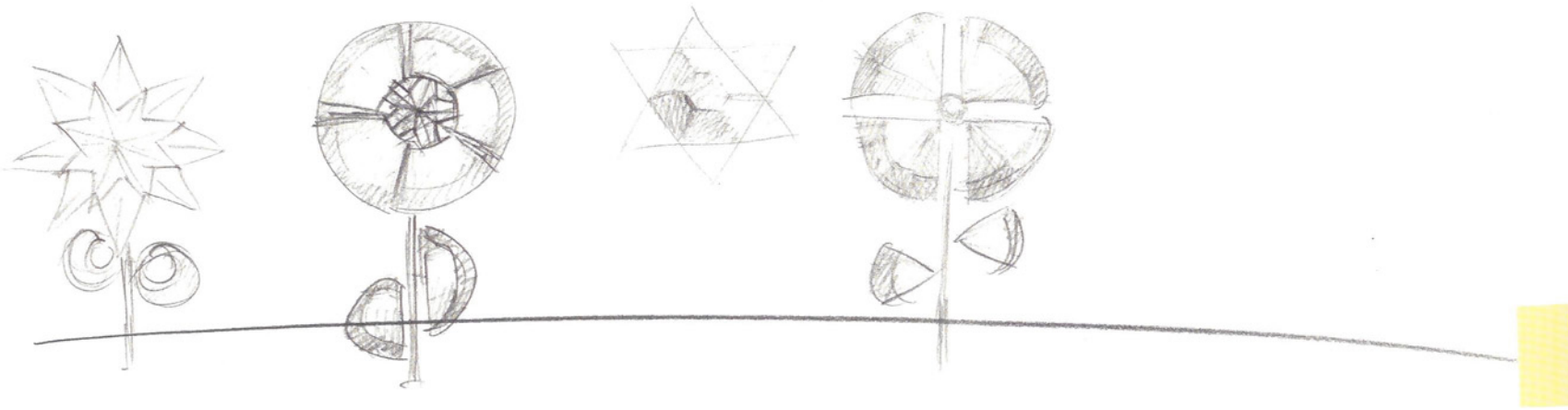
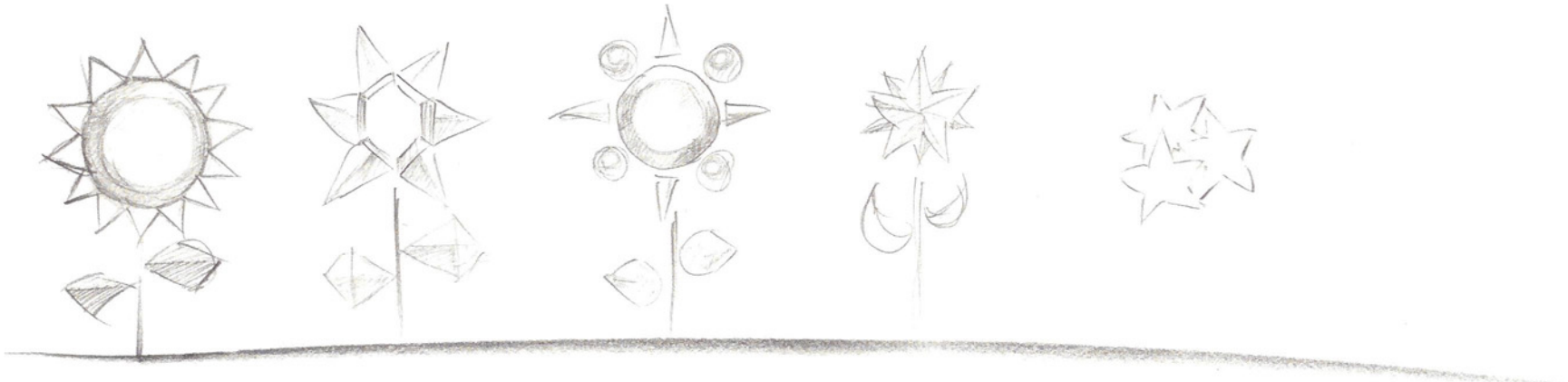
2015

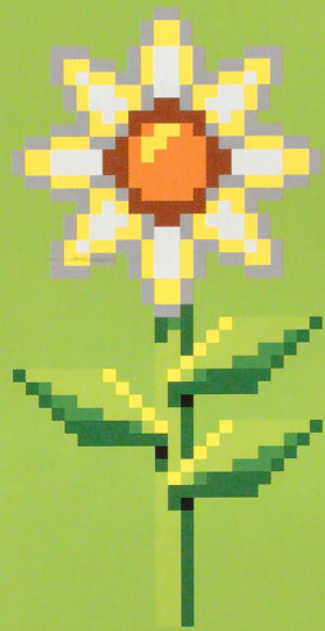
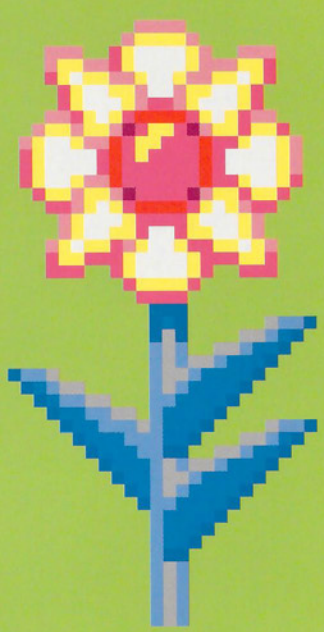
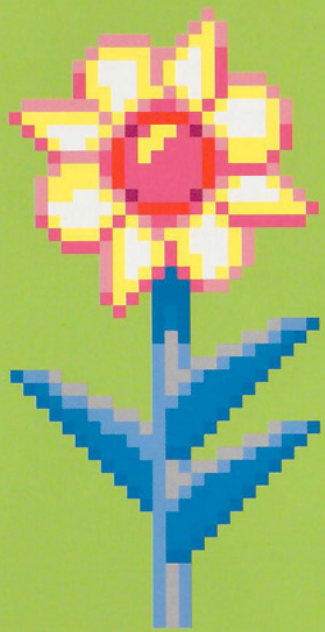
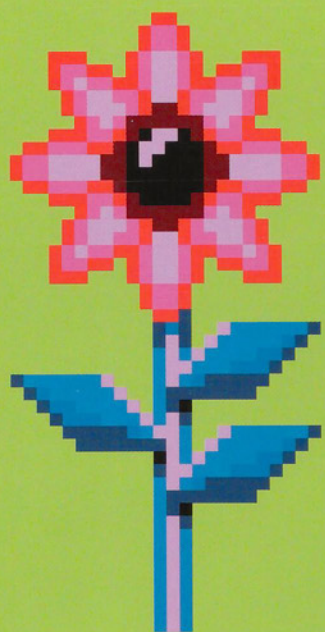
2014

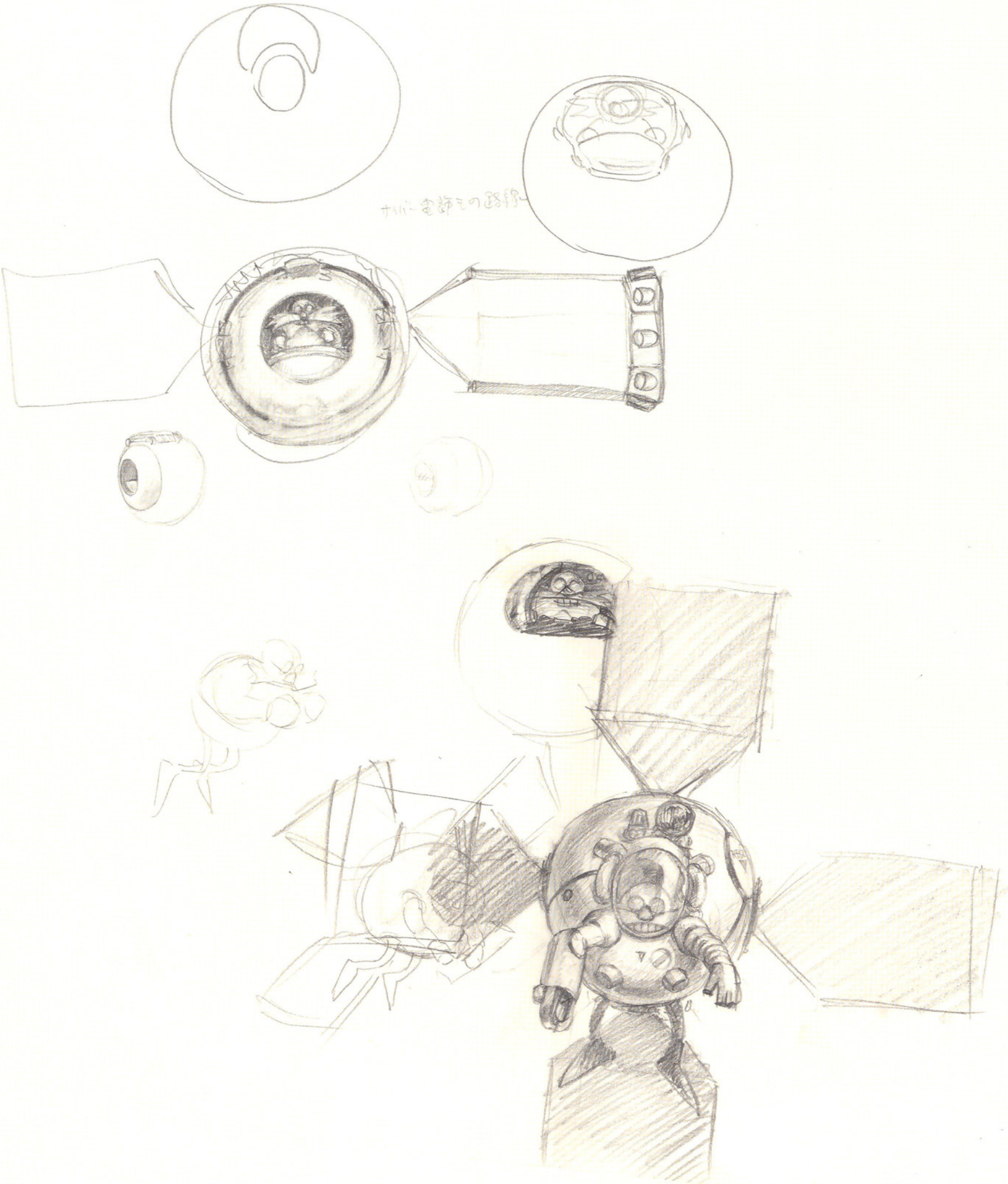


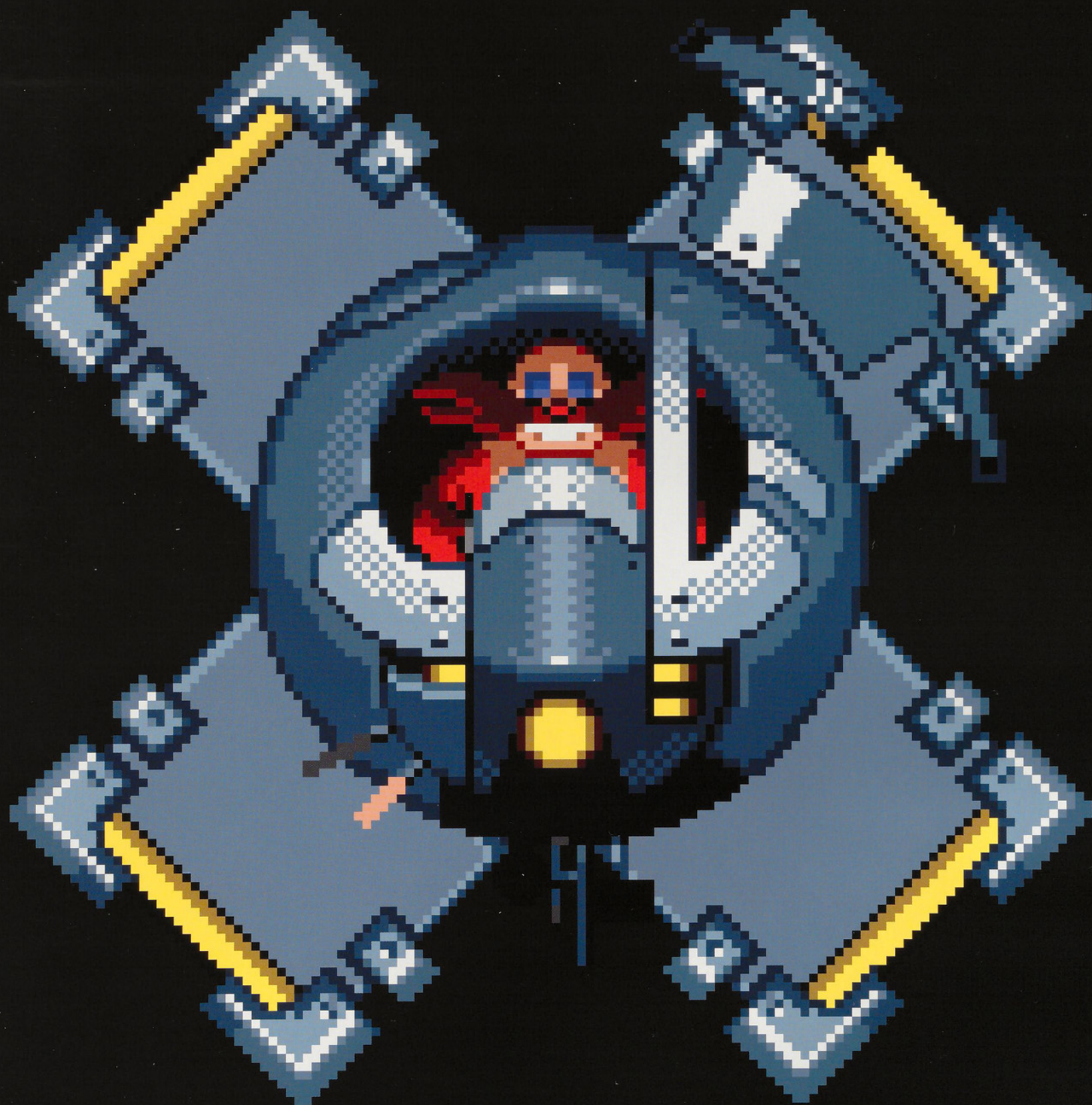




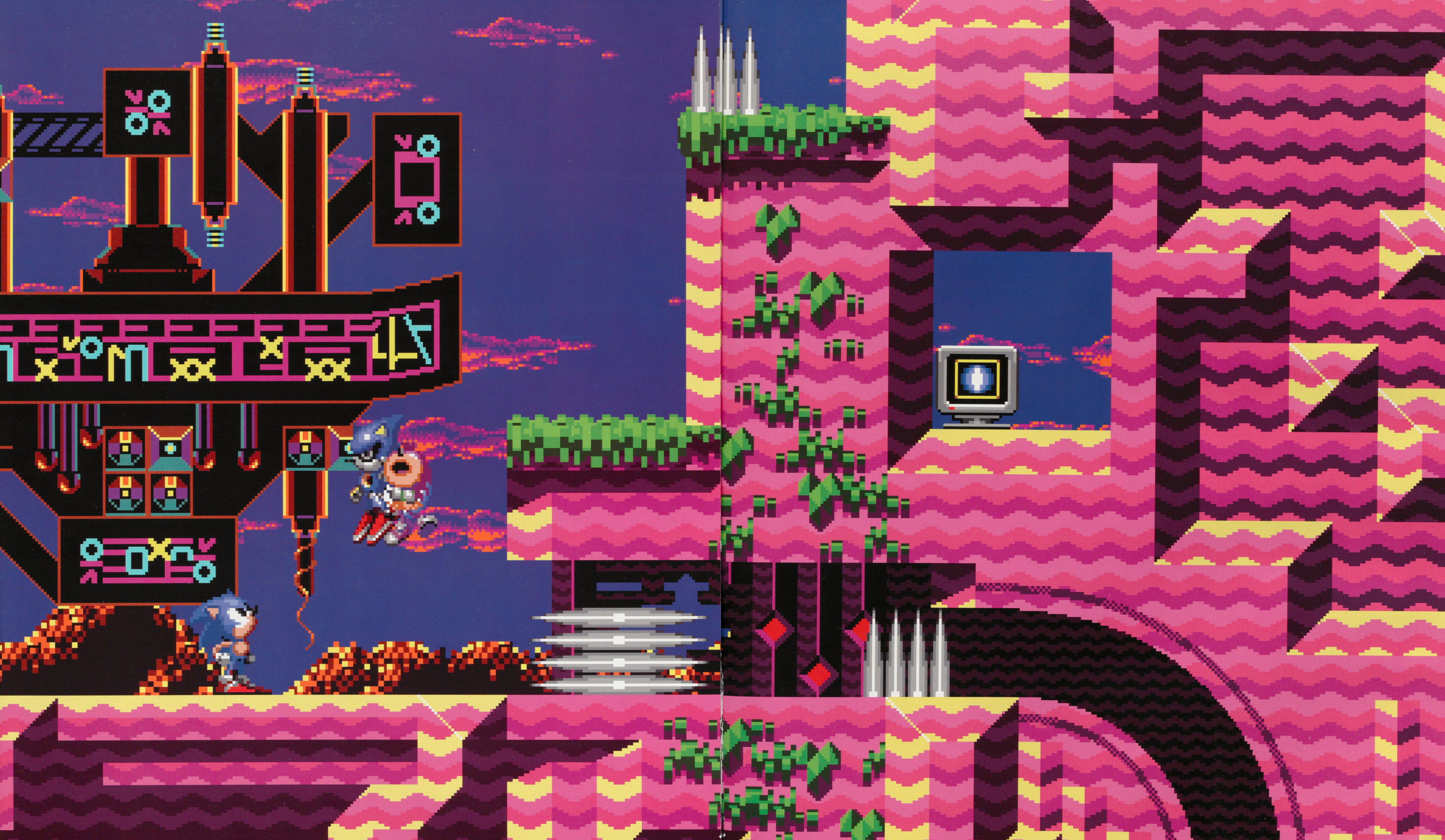


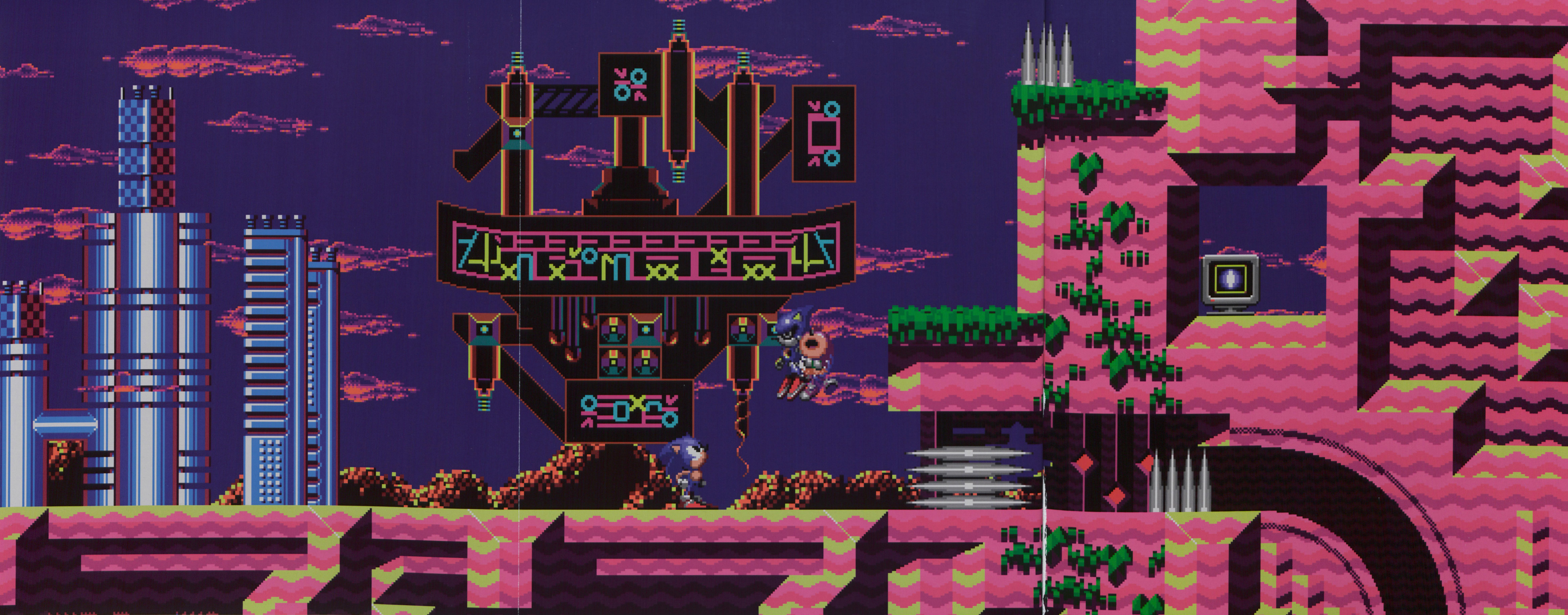


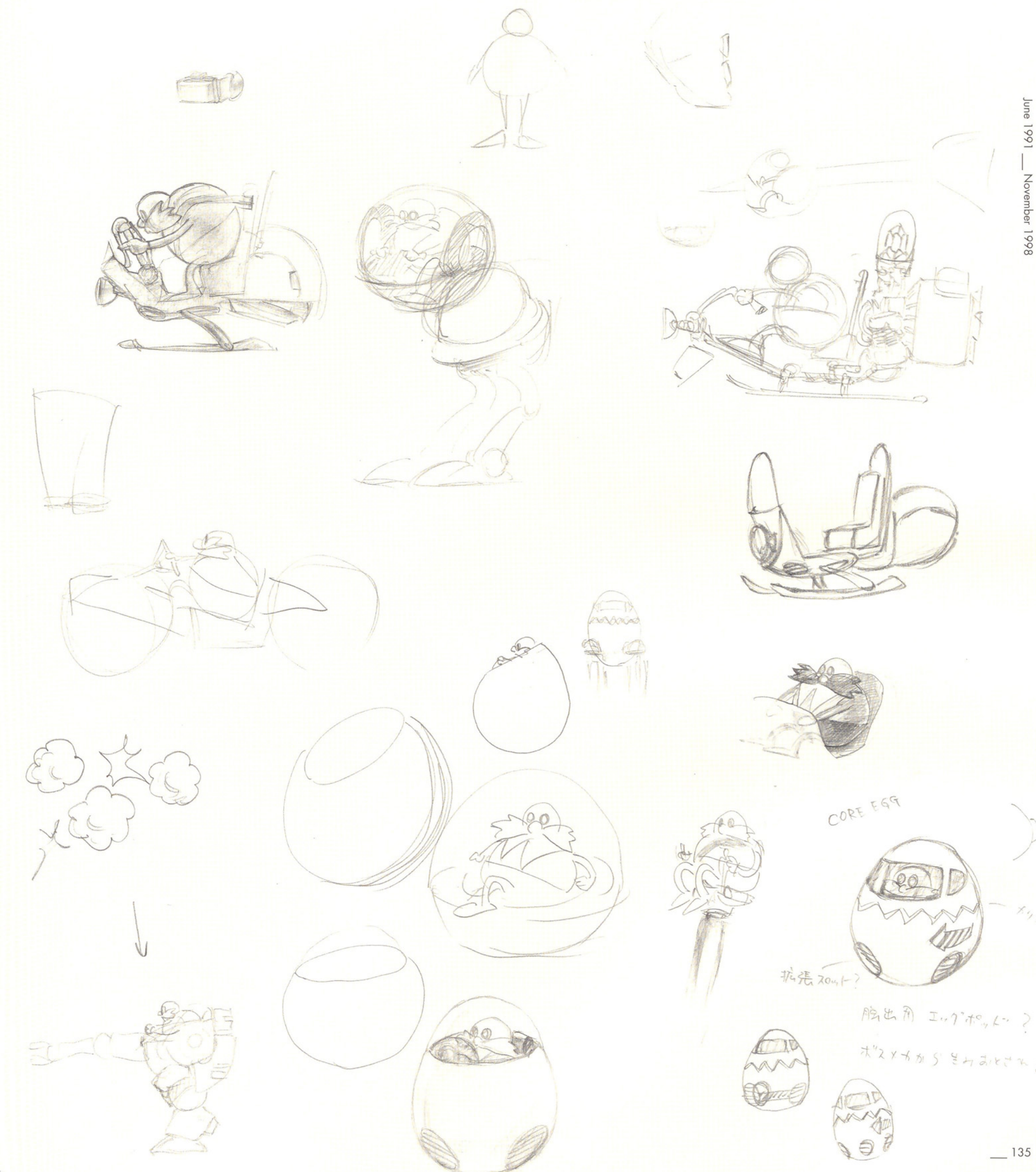
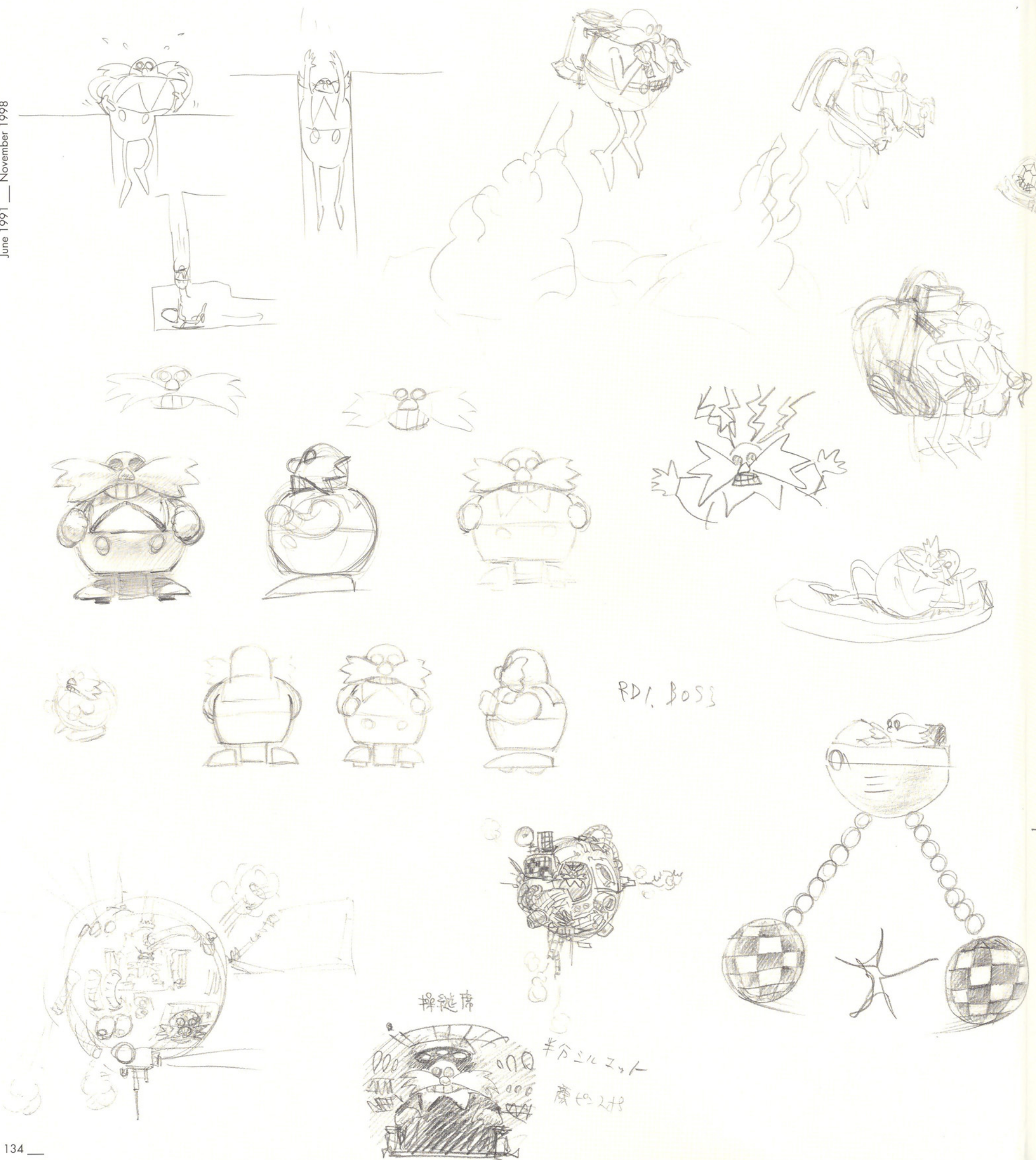


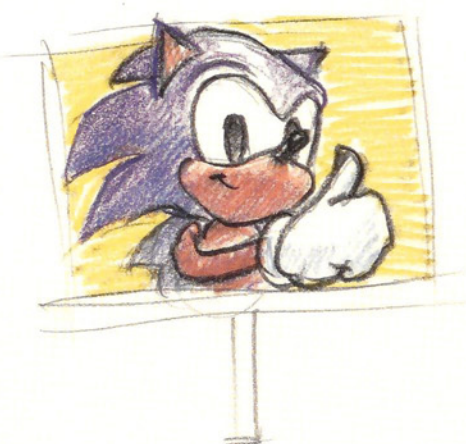




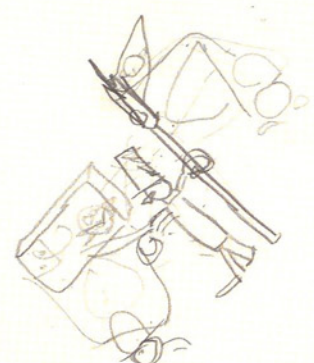








エッグマン マーカ
きりり面 } 4x12 } アーカイブで表示
自然面 }
オキキキ面 }



E.M.I.
Egg Man Industries

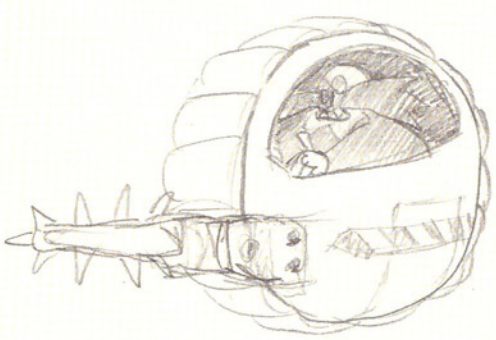
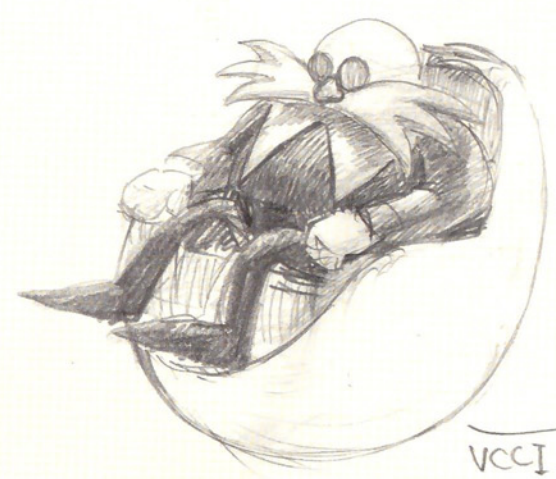
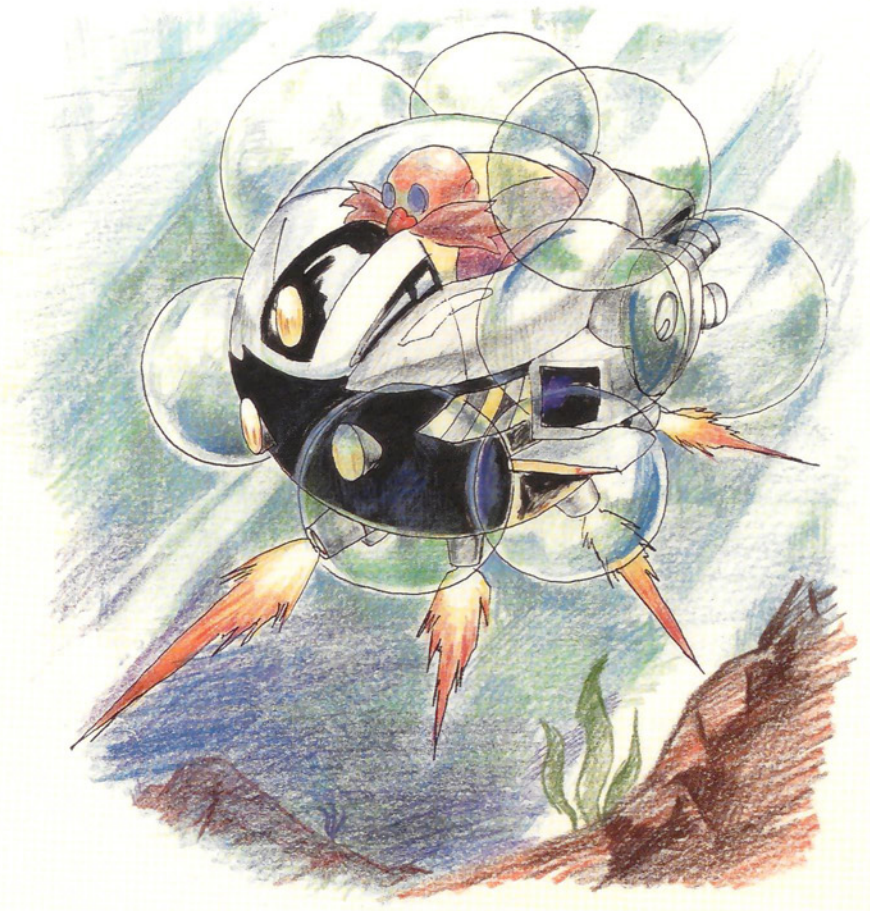
エッグマン工業

DMG-YOJ
SHVC-...
SFX-
HVC
VCCI

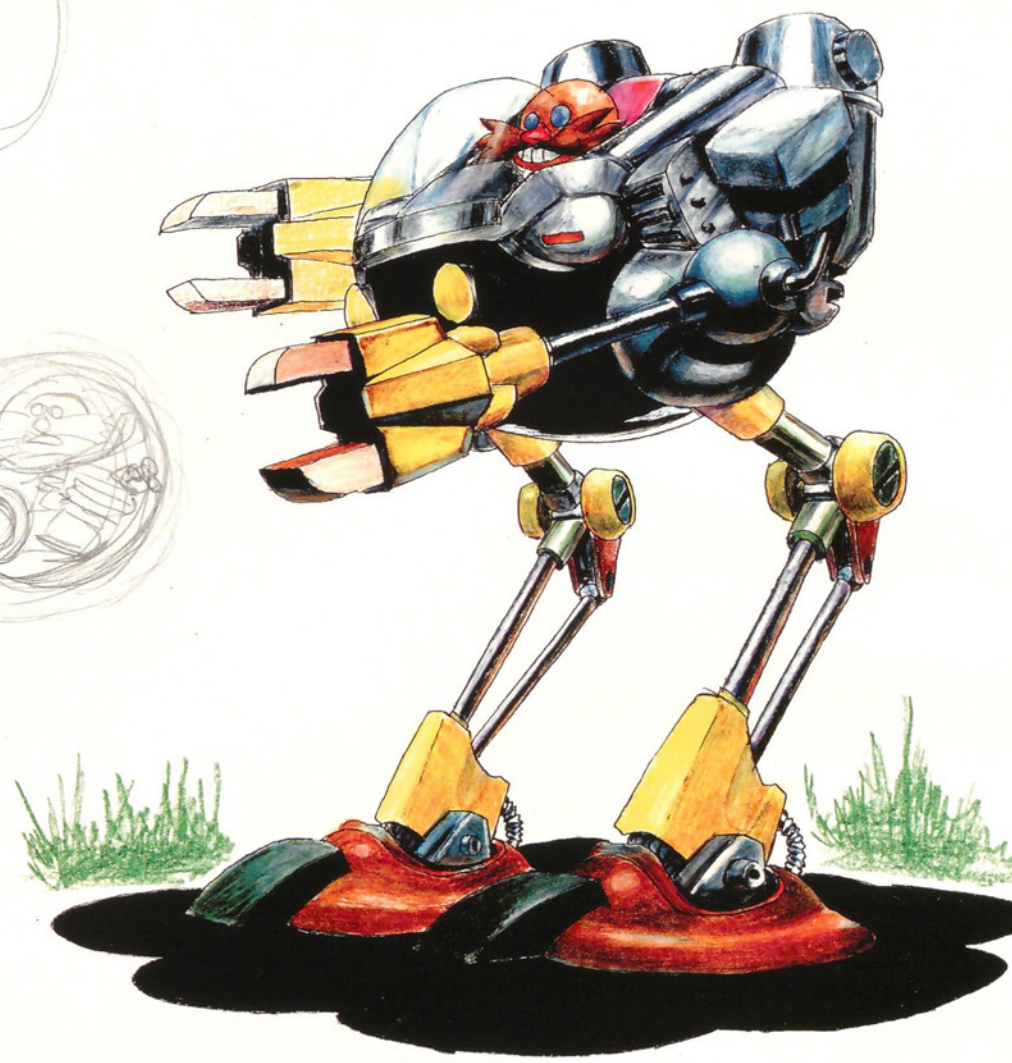
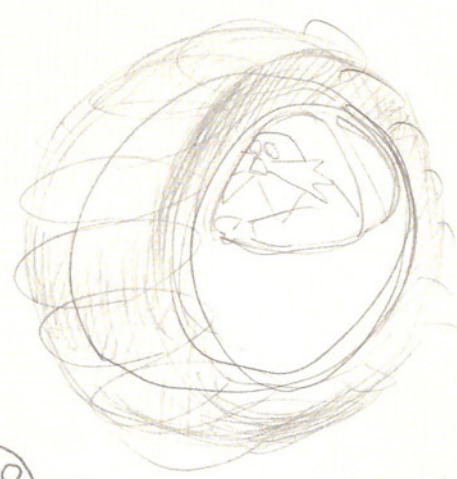
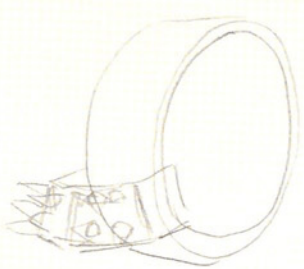
573
765

VCCI-811

"PRESIDENT'S CHAIR"



R2



MEGA DRIVE

SONIC 3

THE HEDGEHOG

ソニック・ザ・ヘッジホッグ3

G-5531

SEGA

THE MOST FAMOUS
HEDGEHOG
IN THE WORLD

SONIC 3

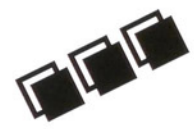
THE HEDGEHOG

ソニック・ザ・ヘッジホッグ3

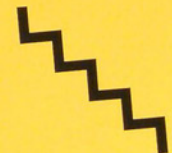


SONIC TEAM PRESENTS

SEGA



Sonic The Hedgehog 3 and Sonic & Knuckles were the last Sonic titles for the SEGA Genesis/Mega Drive. Planned for release as a single game with three playable characters (Sonic, Tails, and Knuckles), it was eventually split in two separate titles. New to the series (and there to stay) was the character Knuckles the Echidna. Knuckles was the product of yet another internal design competition at SEGA, which led to game artist Takashi Yuda's design being picked over a hundred other ideas.

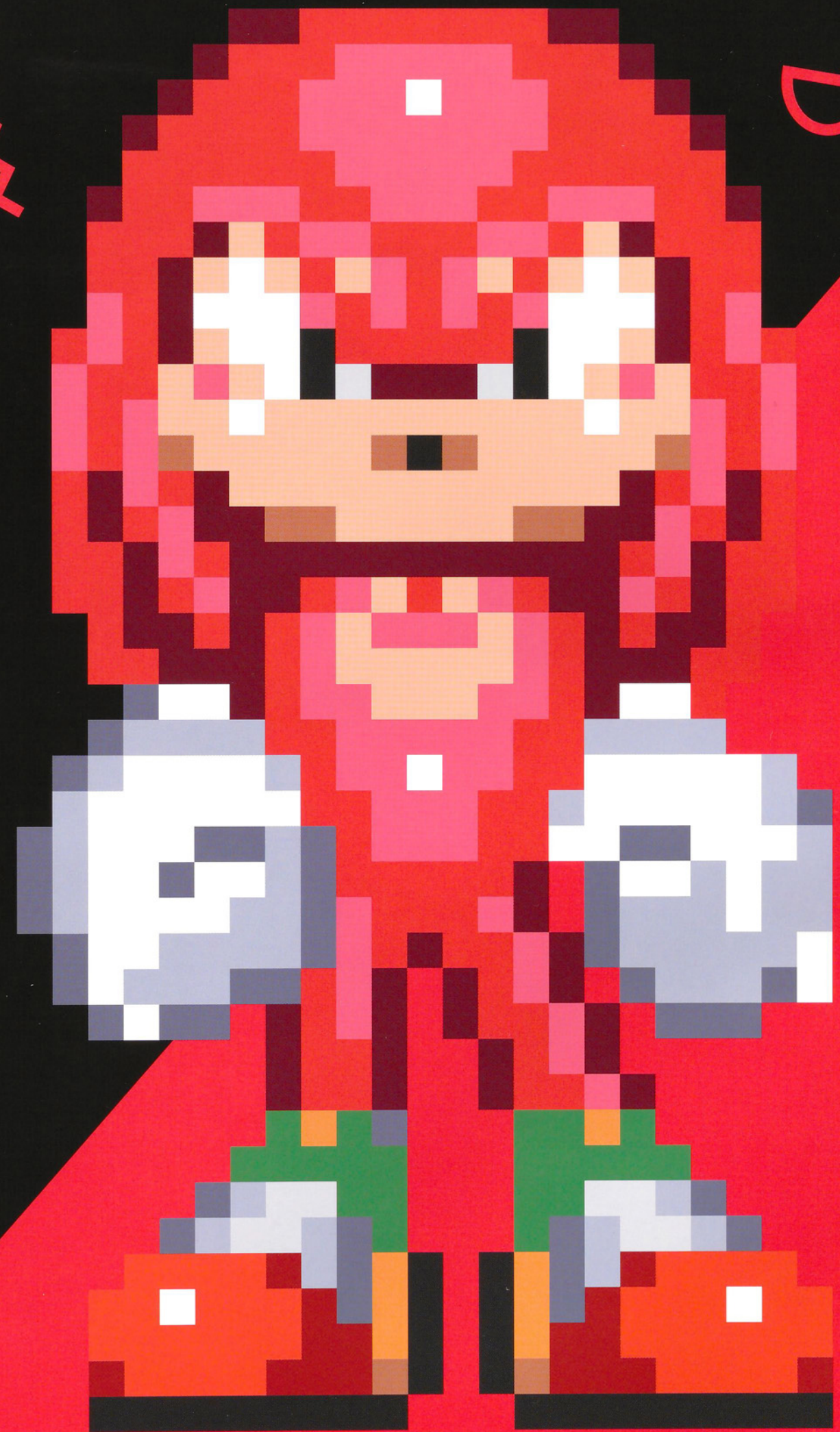




Introducing

KNUCKLES THE ECHIDNA!

| First appearance: Sonic The Hedgehog 3 (1994).



1994



1997



1997



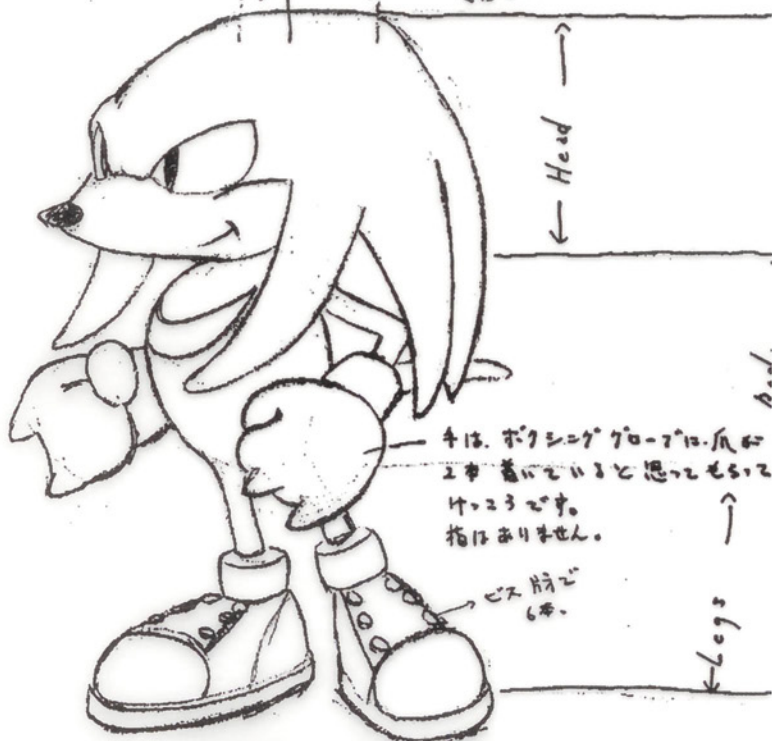


頭部は、Y字のみに
球体ではありません。

頭の角は、角が
ありません。

ボウは、丸い玉
と差して、
くさくさ。

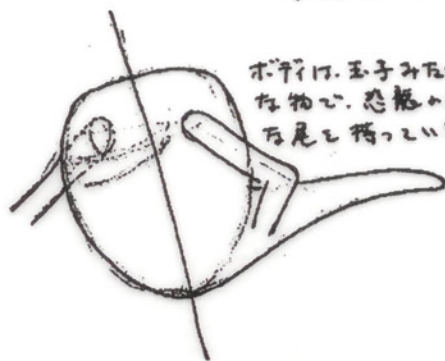
胸は、マフラー、白。
月輪が、丸い
な模様です。



手は、ボウリンググローブ、爪が
上手に着いていると思われ、
けこりです。
指はありません。

ビス、片ど
6本。

Legs



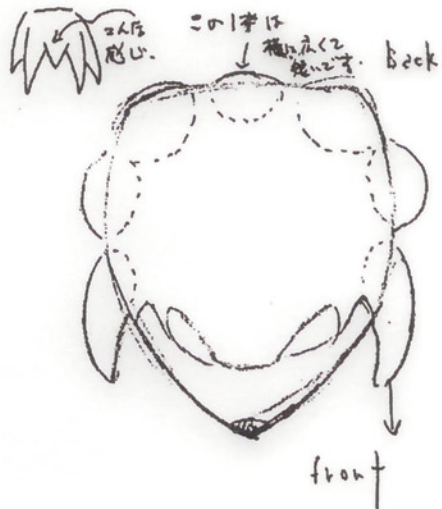
ボウは、玉子み
たいな物で、怒
ると、尻尾を
揺る。

うぶは、黒+5
の3本は、丸く、
ハシリ、黒+5
出ます。色は
Y字の黒+5。
ボウは、黒+5。

4

毛(?)は、全部で、7本。
横は、5本、3本、1本、見
えませんが、
最後3本、1本、です。

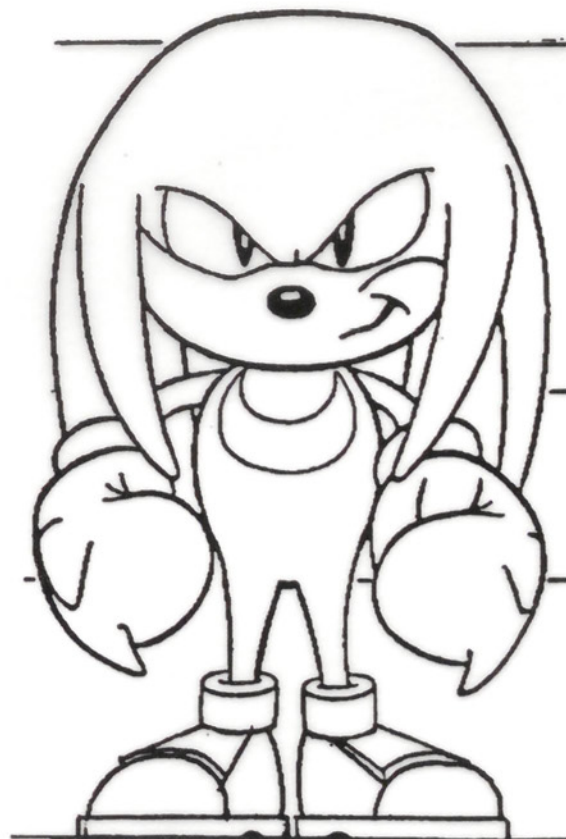
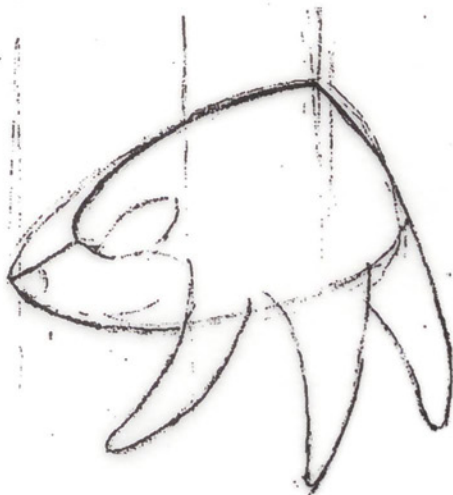
くさは、Mr. ホーヤンズ、の
色は、つぎが、赤、本体は、
黄色、くさは、緑、
上部は、黒、金属プレート

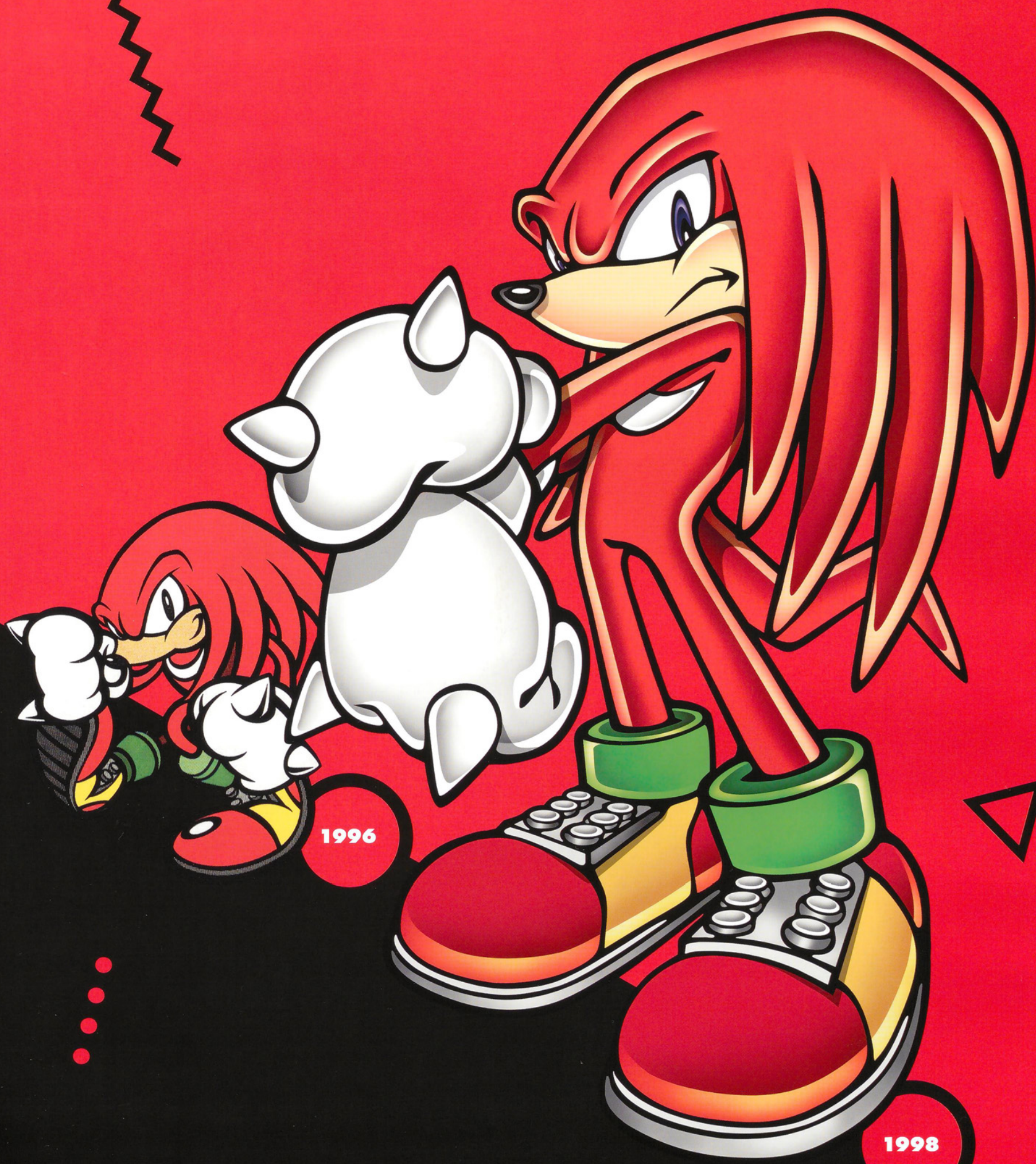


この髪は、
丸く、
丸く、
丸く、

Back

front

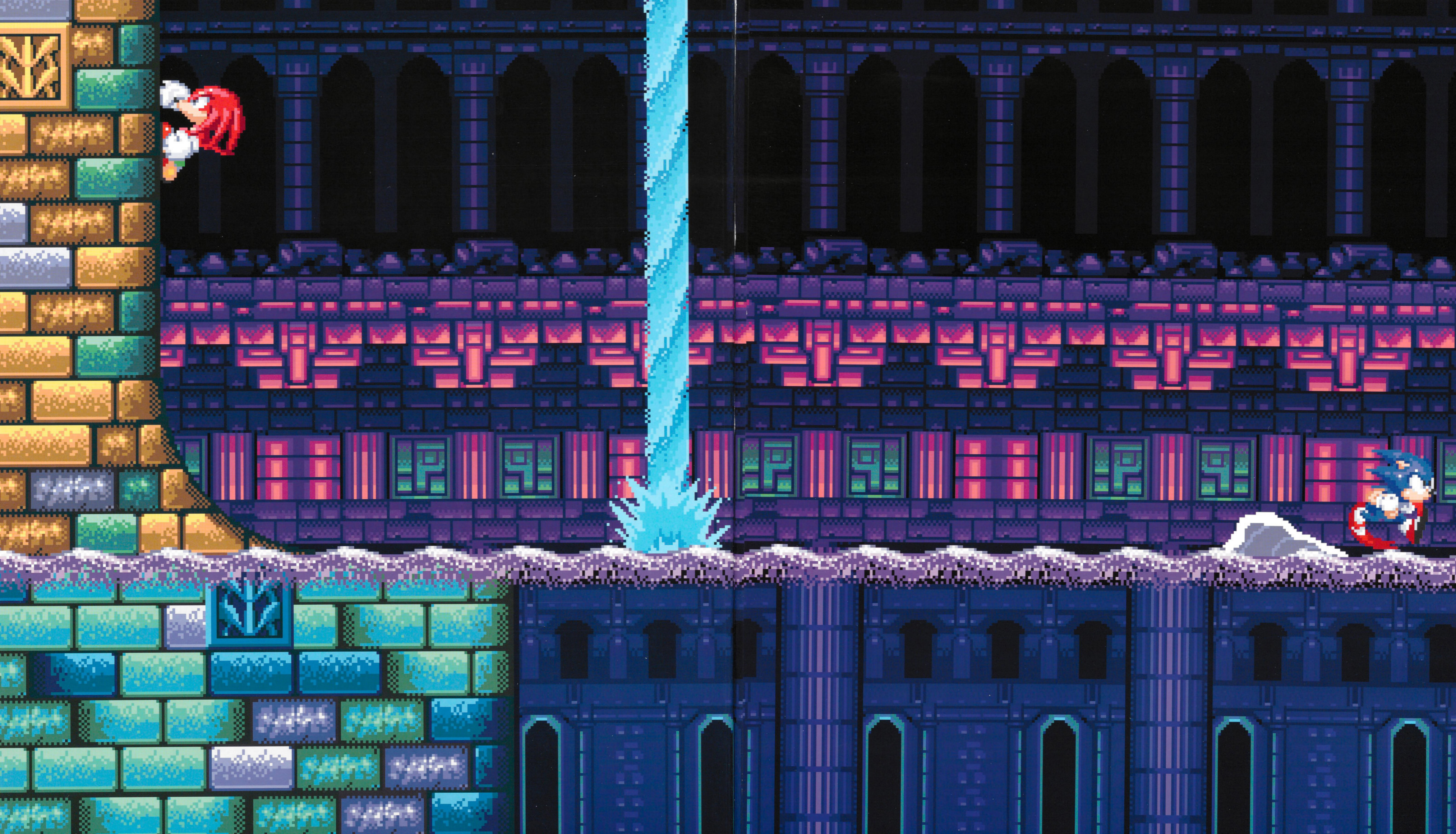


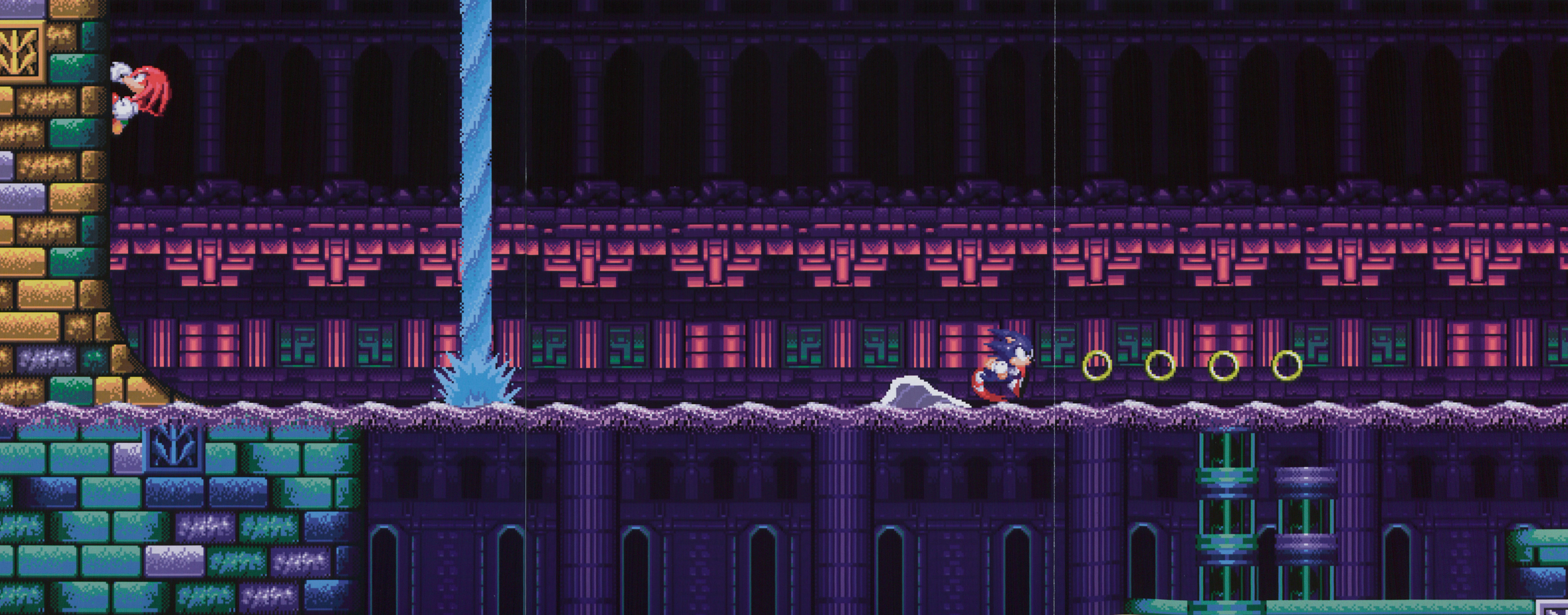


1996

1998















Pinball was an obvious inspiration for many Sonic games. Sonic's 'spin dash attack' screams pinball, and many Sonic games show pinball-styled flippers. Sonic Spinball took things one (logical) step further. Released in 1993 for the SEGA Genesis console, players bounced Sonic through levels with the help of flippers and bumpers.



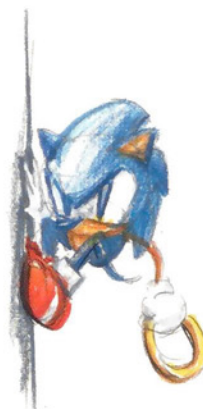
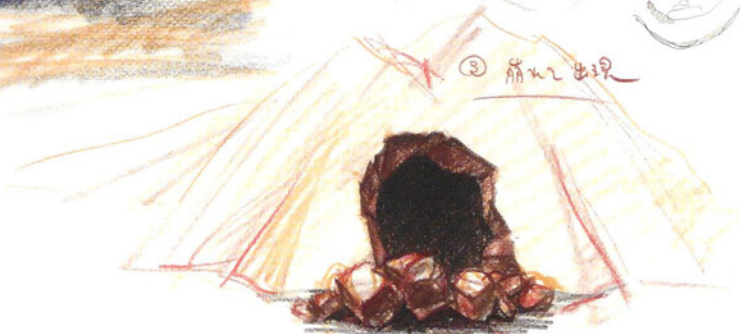
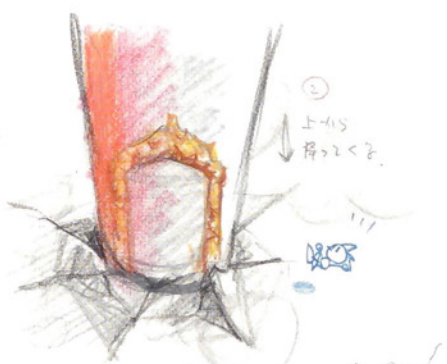
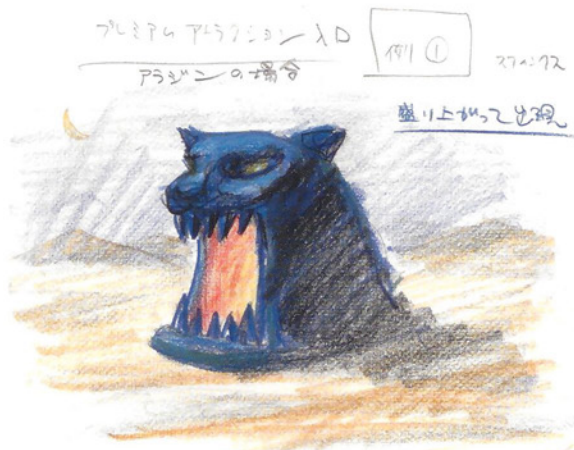
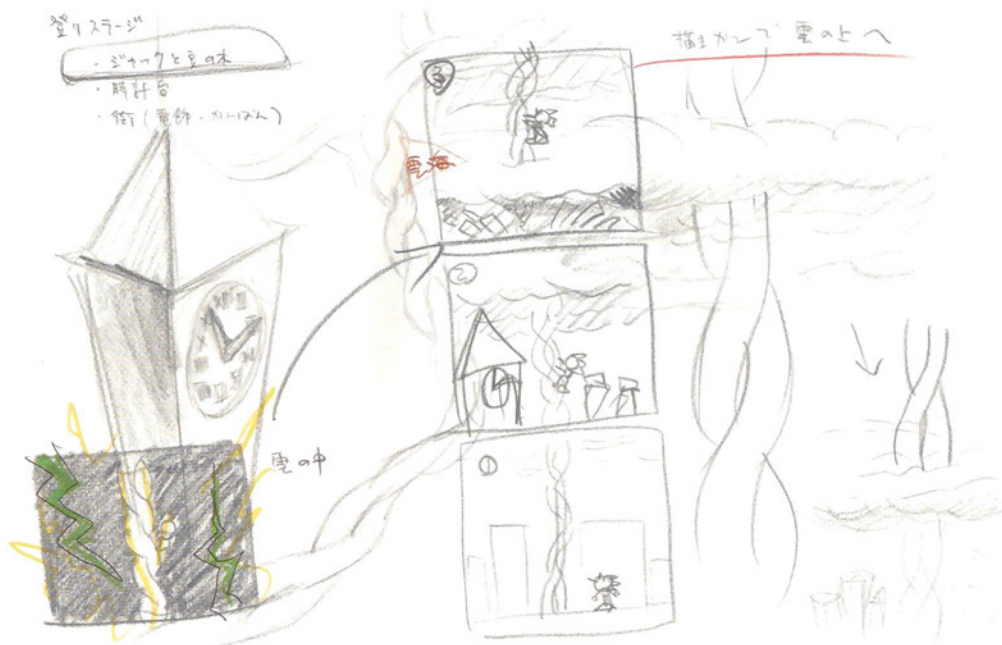
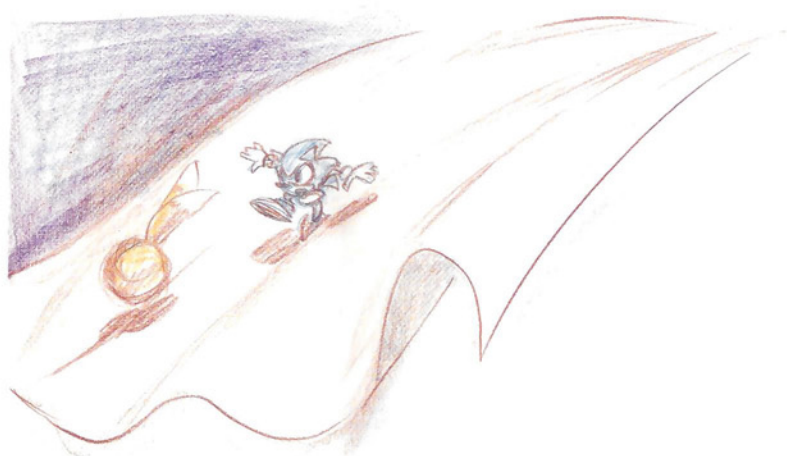


Page left

Promotional art for Sonic Chaos (1993), by Greg Martin.
British artist Gregory James Martin (1956 - 2013) was specialized in promotional artwork for television shows and video games, and worked with SEGA marketing on Sonic promotional art for Western markets for many years.

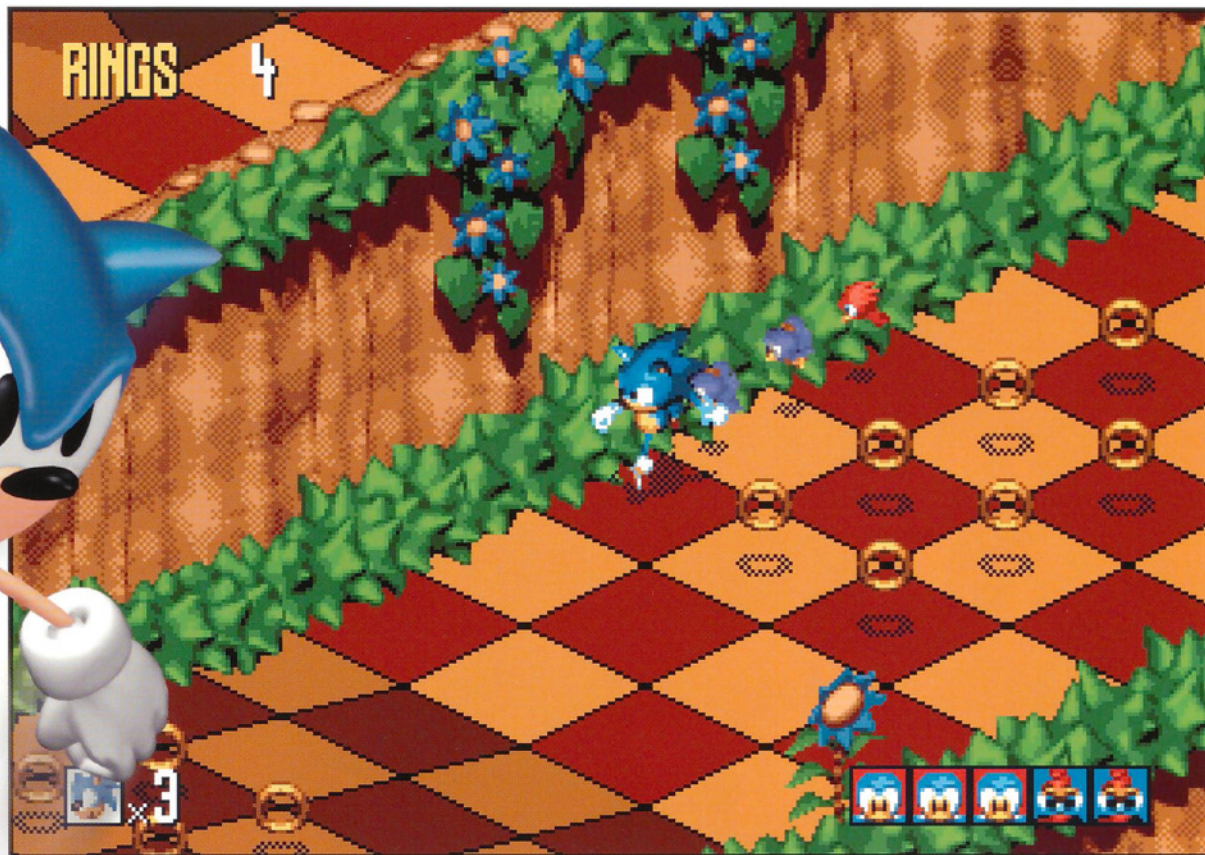
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Sketches from the notebooks of art director Kazuyuki Hoshino and other Sonic Team artists.





SONIC
3D



The '2.5D' style of *Sonic 3D Blast* (1996). It used an isometric perspective to suggest the depth of a 3D game.

PART TWO

SHIFTING GEARS

Sonic The Hedgehog 3 was launched in February 1994 in the U.S. and Europe — and, oddly, some months later in Japan — followed by the spin-off game *Sonic & Knuckles* eight months later. These titles heralded the end of the line for Mega Drive Sonic games — *Sonic 3D Blast* followed in 1996, but its isometric perspective and pre-rendered character models failed to click with consumers or critics. By then, attentions were turning away from 16-bit gaming and onto the next generation of 32-bit home consoles, capable of generating polygon graphics as well as crisp 2D sprites. Side-scrolling games began to look incredibly dated, however detailed and dynamic their art — studios were set on building 3D worlds, to be explored through third- or first-person perspectives, the latter allowing players to see through the eyes of the character they were controlling.

The question was never *if* SEGA and Sonic would make the transition from classic 2D to genuine 3D, simply *when* they would do it. Sonic games in three dimensions, in a way, had been a dream for Sonic Team from the start. Those special stages in *Sonic 2* and *Sonic CD* were illustrations of intent, at a time when there simply wasn't the hardware to do more. The Mega Drive could

simulate some 3D visuals, but nothing so complex as having a 3D character spin through a loop-the-loop. The situation changed when Sonic Team learned about the development of a new chip, used in Mega Drive games. The SEGA Virtua Processor (SVP) was contained within cartridges, not a part of the console itself. The inclusion of the chip saw production costs soar, however, and the result to the consumer was a \$100 asking price in the US, and £70 in the UK, well above the norm for a Mega Drive game. Nevertheless, Sonic 3's development began with the SVP in mind, and Sonic Team set on creating a 3D game. But as production deadlines for the processor passed, they had to scale back their ambitions and deliver a 2D title.

A different approach was tried with the game *Sonic 3D Blast* (1996). The game was a co-production between Sonic Team and British developer Traveller's Tales, and its aim was to present an illusion of a 3D world, through its isometric perspective. This '2.5D' approach was a smart design move, but only ever an intermediate solution. For true 3D games, Sonic Team knew that SEGA needed new hardware. And the platform they'd been waiting for became available in late 1994 — throughout 1995 in the rest of the world — with the launch of the SEGA Saturn, the company's first 32-bit console. The Saturn used CD-ROMs to carry game software, and packed some serious graphics processing power: the number of colors that could be used by developers exploded from the thousands of 16-bit machines to an astonishing 16.77 million. Two separate video processor units took on separate tasks — one handled generating polygons, textures and sprites in the foreground, while the other rendered the backgrounds.





The SEGA Saturn was SEGA's first 32-bit home console, which launched in 1994. Outflanked by rival systems on pricing and a relatively small library of quality games, it would be replaced by the SEGA Dreamcast in 1998 (Japan) and 1999 (worldwide).

The first Sonic game to benefit from the Saturn's capabilities was, again, co-developed by Traveller's Tales. Racing game *Sonic R* launched in 1997, tasking players with controlling Sonic and pals through a series of tracks, sprinting and leaping their way to victory over the competition. Some characters, Sonic included, stuck to an on-foot approach, while others used vehicles — Amy, for example, drives a bright red car, and Dr. Robotnik cruises around in his UFO-like Eggmobile. Its visuals were praised, but such was the time spent on making the 3D graphics of the game moving smoothly that aspects of development suffered. Critics complained that the game was too short, and there were not enough tracks included.

But SEGA wasn't throwing all of its Sonic-shaped eggs into a single basket. It was hard at work on other Sonic projects. *Sonic X-treme* began development in 1994 at SEGA Technical Institute, in the U.S. It would present Sonic in a third-person view, utilizing a fisheye camera to give players a sense of the totality of the character's surroundings. Sonic would be free to move around in the levels, and could walk onto walls and ceilings, with both the direction of the camera and the game's gravity rotating with him. The ideas were fantastic in themselves, and early demos were promising. But a string of development issues plagued satisfactory progress, and after months lost on ineffective solutions, SEGA pulled the plug on the project in early 1997.

No *Sonic X-treme* left *Sonic R* as the sole series installment specifically made for the Saturn, a situation that did SEGA's new system no commercial favors whatsoever. The Saturn was a good console, in hindsight considered to have both a strong first- and third-party library and praised for its revolutionary 3D Control Pad, featuring analogue shoulder triggers that are now standard

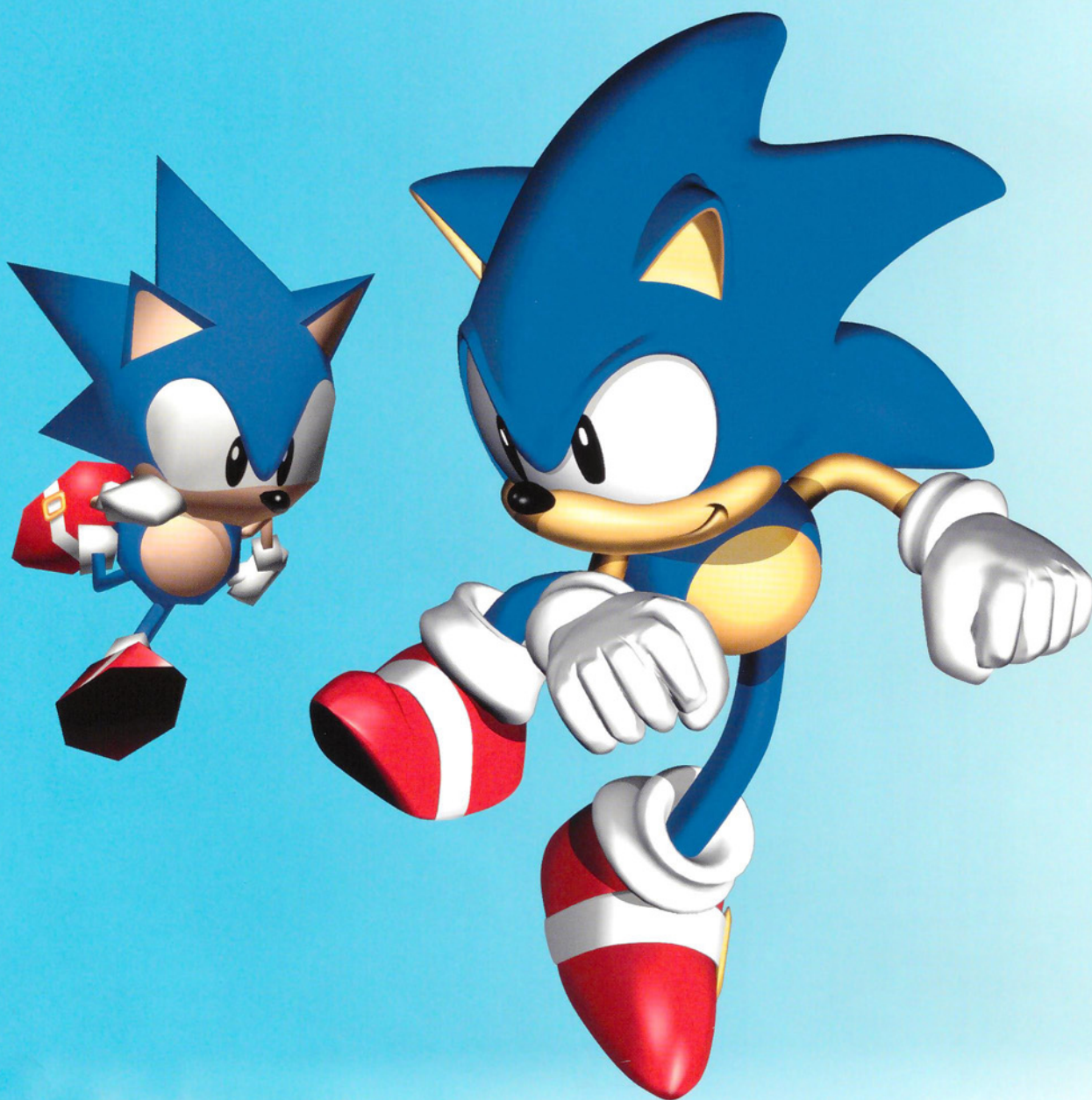
across contemporary console pads. But its nine and a half million units sold left it trailing far behind a rival 32-bit system. The PlayStation was the first ever games console built and released by Sony, a company that had made its name with the Walkman portable cassette player. It quickly ate into the market share of other consoles, impacting not only SEGA's overall console strategy but also the future of the Sonic series itself.

Sonic Team had cooperated with Travellers' Tales, but had not independently released any major Sonic titles after *Sonic & Knuckles*. And with the successes of *Sonic 3D Blast* and *Sonic R* being only moderate when measured against 16-bit releases, SEGA did not have much to boast about on a franchise front. Any new step for its mascot now had to be taken with great consideration.

Nevertheless, and despite *Sonic X-treme's* problems and the Saturn underperforming commercially, SEGA's presidency insisted that the only way was up. Plans for the company's next console became a priority. That system, the Dreamcast, had 32-bit processors at its core, but it was never sold as a 32-bit machine. (Indeed, its claim of being a 128-bit system, based on being able to output four 32-bit operations simultaneously, was a factor in 'bit numbers' becoming a next-to-irrelevant aspect of console marketing in the future.) Its internal architecture was much improved on the Saturn's, capable of handling full 3D gameplay with no compromises. SEGA demanded that a Sonic game be ready for the Dreamcast's launch, and Sonic Team suddenly faced an all-or-nothing strategy where delivering a sub-par game simply wasn't an option.

The stage was set for *Sonic Adventure*.

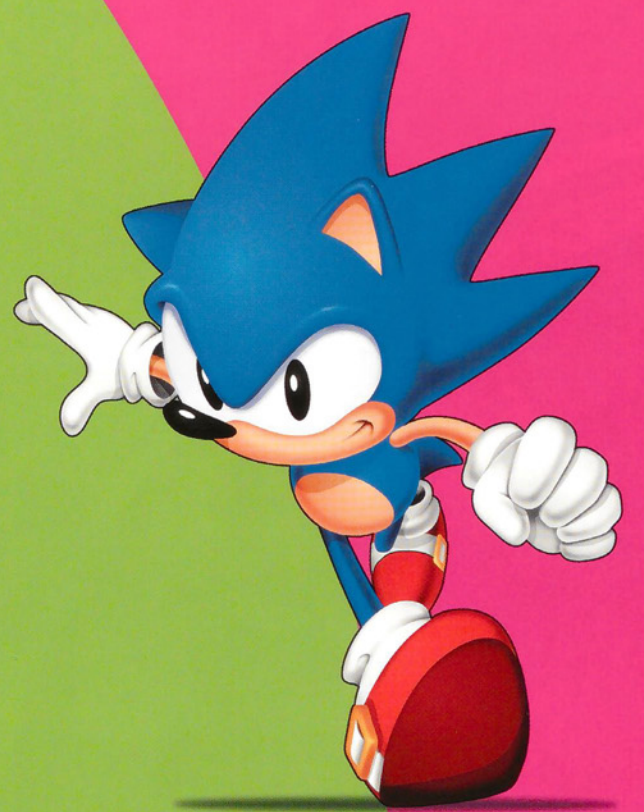
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Sonic's move from 2D to 3D games was marked by a series of games that experimented with the possibilities. Sonic R (1997) was the first game in rudimentary 3D. Smooth, pre-rendered 3D images dominate most of the marketing art, while the in-game art (rendered in real time) was a bit closer to the images of the Japanese box art for the game (right).





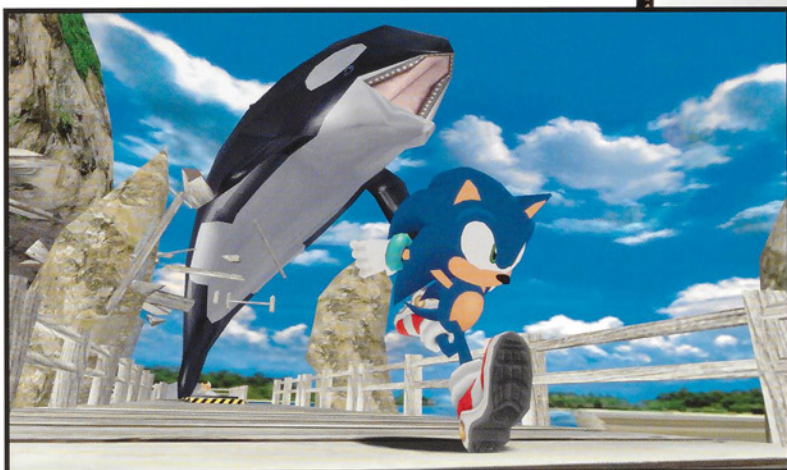


A re-issue of Sonic The Hedgehog 1, 2, and 3, and Sonic & Knuckles, Sonic Jam (1997) would be the final Sonic game on the SEGA Saturn.





Although the SEGA Dreamcast would mean the end of SEGA's involvement with home console production, the machine launched together with the much-praised game *Sonic Adventure*, heralding the 'modern Sonic' era.



3D camera necessitated the design of elements you previously couldn't see like the underside of shoes.



PART THREE

MODERN SONIC

A big part of the Saturn's disappointing sales had to do with pricing. The platform was generally liked by consumers, and would over time host a range of popular games — ports of SEGA's arcade successes like *Daytona USA* and the *Virtua Fighter* series were well received. But competing consoles, both the PlayStation and later Nintendo's N64, sold for less money — at launch in the U.S., the PlayStation undercut the Saturn's \$399 asking price by \$100, while the N64 was another \$100 less than Sony's system when it arrived in 1996.

One of the reasons for the big differences lay with SEGA's selection of specific hardware components for the Saturn: top-grade stuff, but expensive to produce. For its new console, SEGA decided on a different route. The

Dreamcast relied on components that had already found use in personal computers and could be bought 'off the shelf', without added development costs or use of exclusive licenses. This approach was reflected in stores: in September 1999, almost a year after its Japanese debut, the Dreamcast launched in the States for \$199, half the price of the Saturn.

Sonic Team began work on what would become *Sonic Adventure* with the Dreamcast's specifications in mind. Development of the game kicked off with its director Takashi Iizuka exploring new game ideas with Yuji Naka. To them, 3D gaming gave room to the gaming character, in a literal sense. Two-dimensional side views had restricted Sonic to narrow paths that he could not stray from, while 3D allowed him to roam freely. What if Sonic would leave the platform genre, and find himself in a role-playing game?

"Around this time, the company was kicking off with the Dreamcast," Iizuka remembers. "There was this brand new piece of hardware that had visuals that nobody had used in a video game before. To us, this posed an opportunity to explore new things: we felt we had the hardware we could challenge ourselves with in this undertaking of recreating Sonic, the

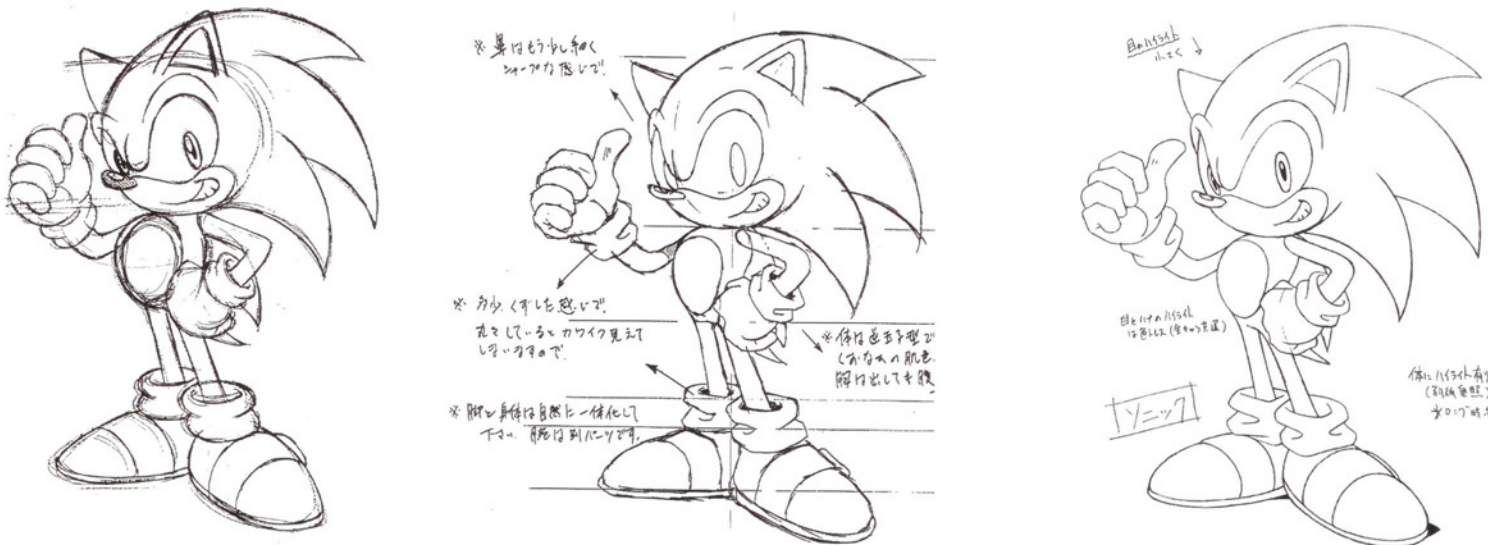
発表! Dreamcast™ 第1弾!

SONIC Adventure

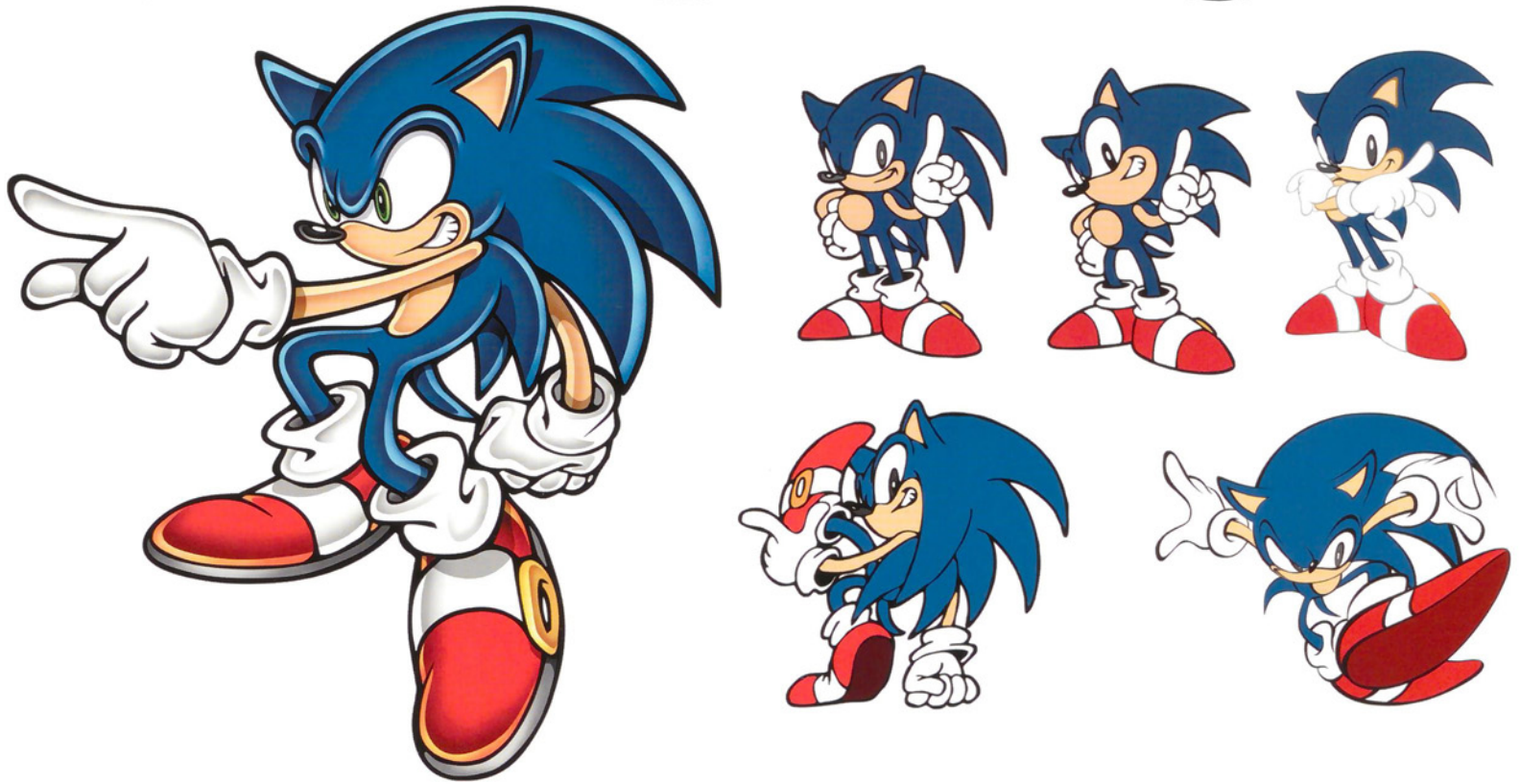


SEGA™

The advertisement poster for the announcement of Sonic Adventure showed a shocking new design feature: Sonic suddenly had green eyes.



Design sketches for Uekawa's dynamic, 'graffiti-style' Sonic.



character, and his world brand new. To us, it was the perfect timing. Sonic Team wanted to make this new, edgy, more Western character design work, and found an opportunity in the new hardware, so it all kind of culminated in *Sonic Adventure* and the modernization of Sonic.”

The team was up to the challenge, having spent a couple of years understanding the new tech in play. The transition from 2D to 3D meant their knowledge of game development was challenged, as computer hard- and software, game development software, and the skills and knowledge of staff members were all subject to rapid changes. The four years separating the releases of the 2D *Sonic & Knuckles* and 3D *Sonic Adventure*, by necessity, were spent experimenting with new technologies, trying out one thing or the next, to surprising and sometimes frustrating results.

Eventually, *Sonic Adventure* would be one of the best and most innovative games created by Sonic Team. Not only did it introduce radically new gameplay and new playable characters, it also pioneered a new art direction that portrayed Sonic in a different light than before. The cool attitude was still there, the bad boy exclamations and rock music sound track that expressed Sonic’s rebellious side; but the character had found a new and rather striking elegance, too. His body was much taller than before, with long arms and legs better expressing his moods. Sonic impatiently tapping his foot — an idle animation seen when players stalled the 16-bit games for a bit too long — had been a series standard from the first title onward; but now his range of bodily expressions was greatly expanded.



A new lead character designer, Yuji Uekawa, was responsible for the change in Sonic's expression and articulation. "We became free from the small dot art expression [with pixels] we were used to," he said. "Suddenly, we were able to have Sonic take dynamic action poses freely."

A graphic design major and illustration student before he joined SEGA, Uekawa would be a major influence in Sonic's new look. Citing various inspirational artists — Akira Toriyama's style of deformation and line art style, and Susumu Matsushita's airbrush art, but also Disney and Looney Tunes cartoon designs — Uekawa invented a style for Sonic that readied him for the 21st Century, and remains in use today. This was a more agile

Sonic than before: less round and cute, one that seemed more of a renegade than the classic character ever was. His quills grew proportionally and became more dominant, almost matching the length of his limbs, adding a set of dynamic vectors to any pose of the character. Also, Sonic suddenly had green eyes, lost his potbelly — loved by many — and was colored a harder blue than before. What had happened?

"A lot of things happened at once when we started work on *Adventure*," remembers Takashi Iizuka. To his mind, the newly styled Sonic — commonly referred to as 'modern Sonic' in contrast to the 'classic Sonic' designs — was born from necessity, after the move from 2D to 3D.



Music has always been a key element in Sonic the Hedgehog's game design, defining the mood and tempo of the game, and stressing Sonic's speed and agility. Sold independently from the video games, their soundtracks are very popular with fans.

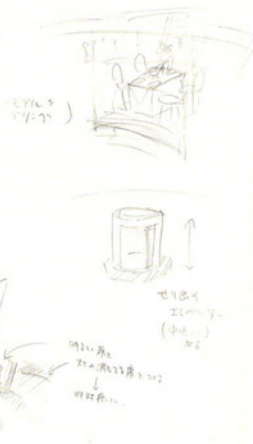
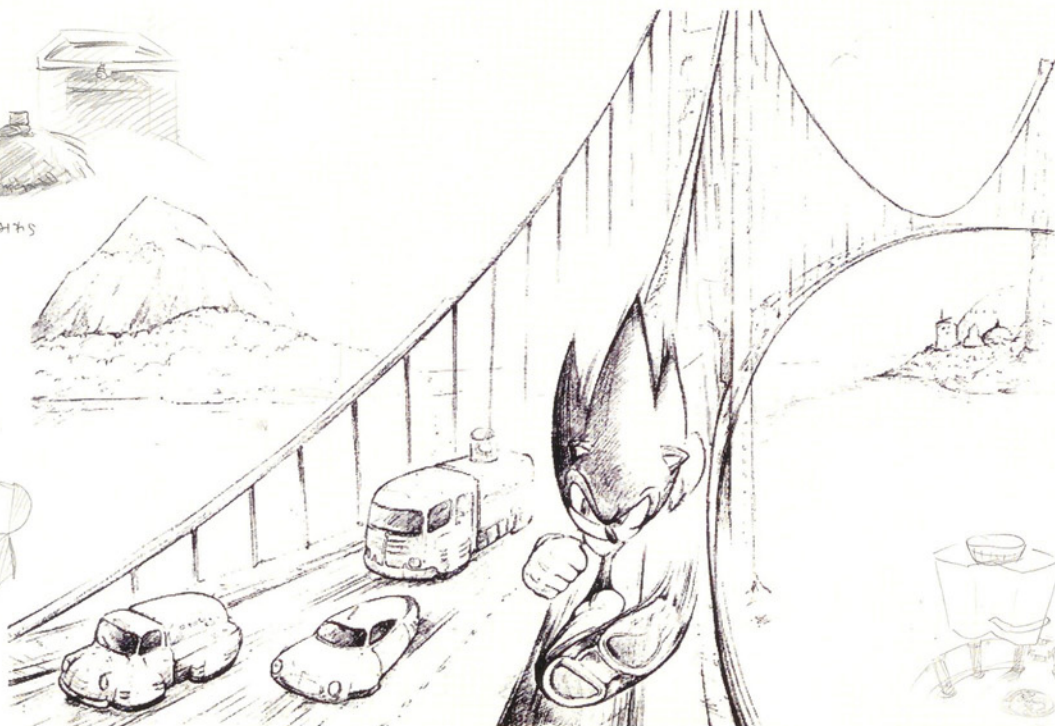
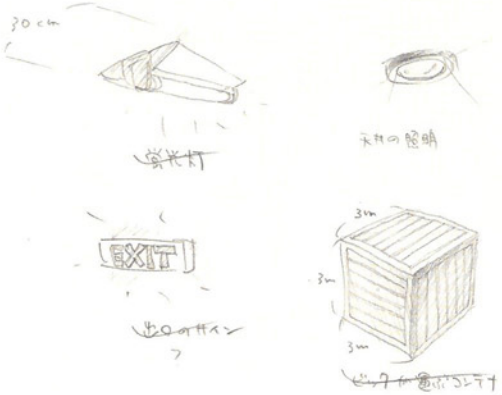
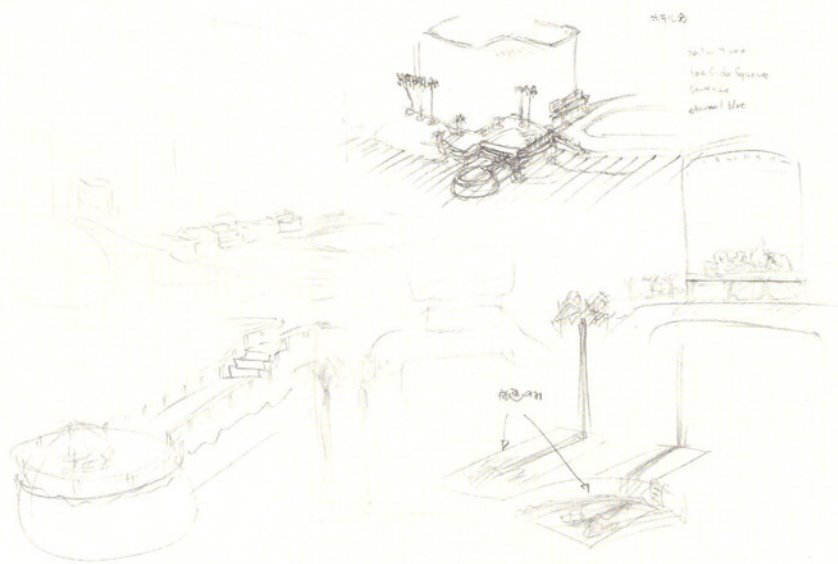
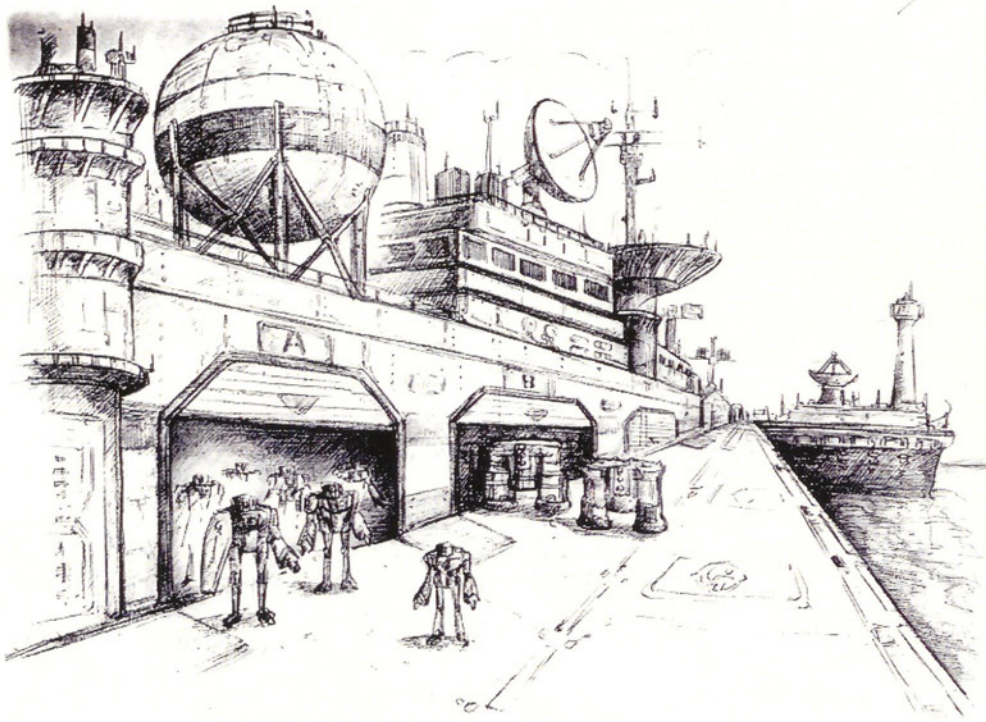
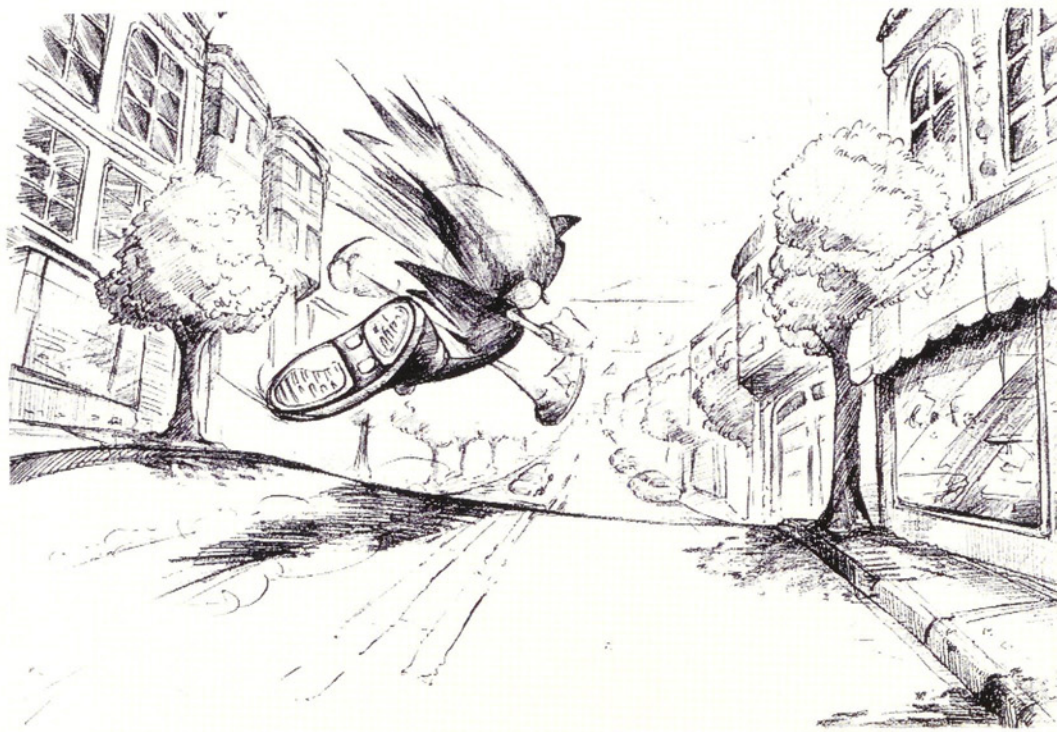
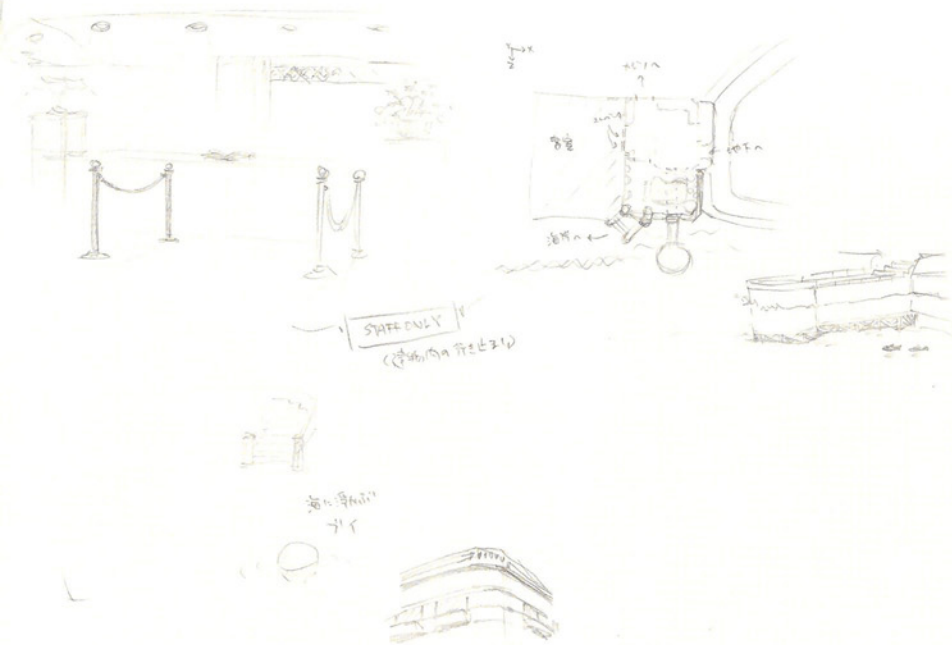
"For instance, the third-person camera would follow Sonic from behind and from a certain height, to give the player an idea of the area in front of him," Iizuka continues. "But when we used our existing character models, which were very short in size, Sonic's head suddenly looked so big you did not really see anything below. His body was obscured, and you could hardly see his arms and feet. To us it was clear we needed to change Sonic's basic design, make him taller, change his head-to-body proportions."

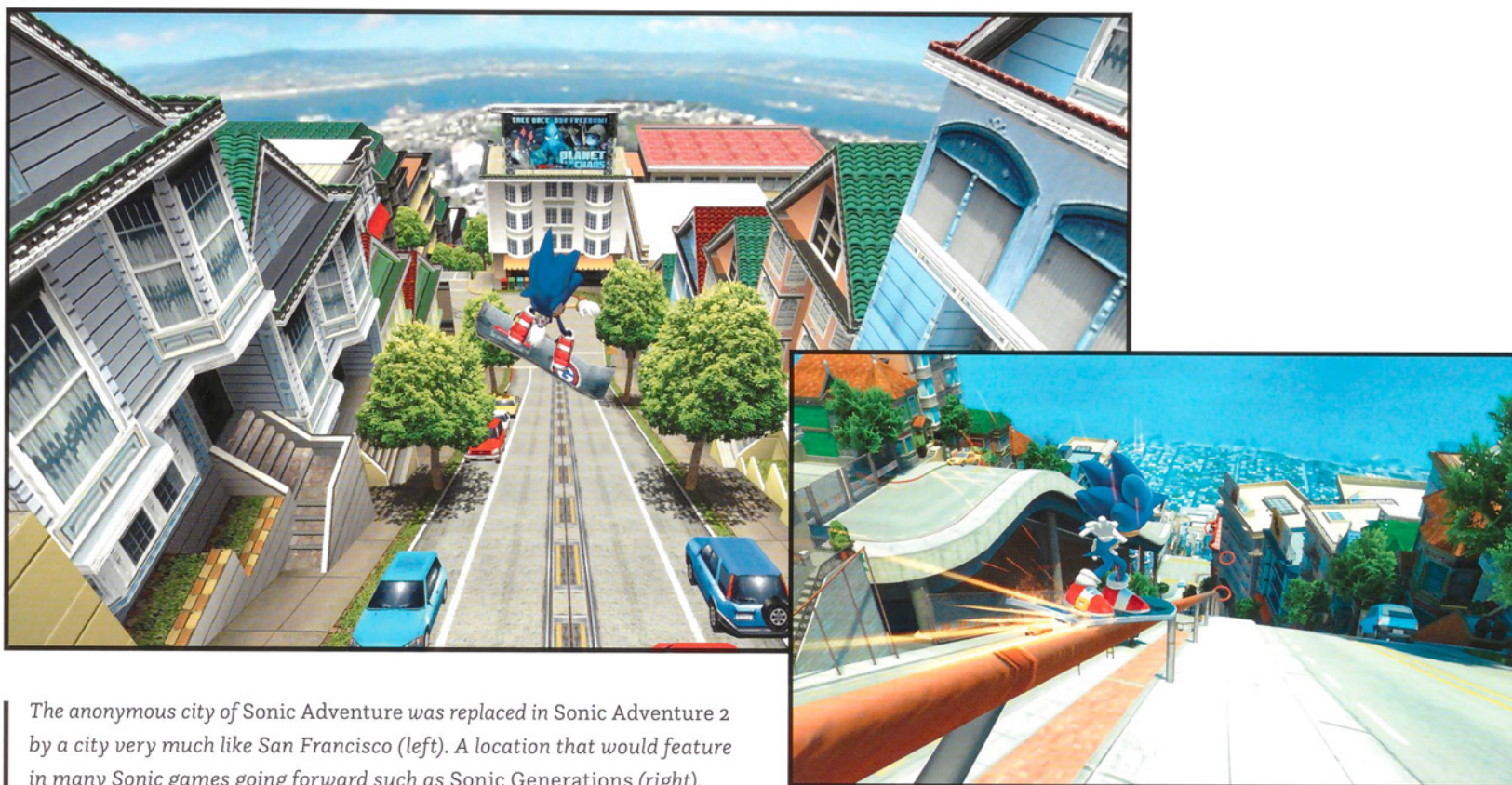
Other things became clear, too. With 2D pixels, and with a character animation seen from the side, there had never been a necessity to draw details like the undersides of Sonic's shoes. With 3D, you could see much more of the character than before, so Sonic Team needed to fill in things that had been left to players' imaginations in the 2D days.

Designing a Sonic that answered the many challenges was left to Uekawa. He kicked things off with examining what made the classic Sonic design great. "His iconic image, I reasoned, mainly stems from the unique eye shape, and the strong impression of his big quills: they make Sonic recognizable just by his silhouette, even when in motion. So, for the new illustration style, I prioritized the lines of the quills, always showing their beautiful curve, independent of Sonic's posture. To further express his dynamism and strength, I used a calligraphic 'line' expression you see in a lot of comics. This may well be the reason why to many people Sonic looks 'graphical', 'graffiti', or 'street styled'."

Uekawa's designs went back and forth with the rest of the team, until everyone approved of the new art direction. "Uekawa-san's final designs convinced us, yes, this is it," Hoshino says. "Next, he changed the other characters in the Sonic universe to fit the same design sense and style. Once the basic design was locked in, there were no problems for us adjusting the other characters."

Uekawa remembers the process as a 'refining' of Sonic, in which the character evolved to go with the times. Sonic now had irises around his pupils instead of the basic black dots he sported as a 2D character. Uekawa made them green to contrast with the other colors on his body and clothes, and also "because he is always seeing these green pastures around him, like in Green Hill Zone. I thought it would be nice to reflect that in his eyes."





The anonymous city of *Sonic Adventure* was replaced in *Sonic Adventure 2* by a city very much like San Francisco (left). A location that would feature in many Sonic games going forward such as *Sonic Generations* (right).

As a finishing touch, the color of the modernized Sonic changed to a deeper blue. “Although his age didn’t change, his proportions were improved upon, to the effect that a more grown-up Sonic emerged,” Uekawa explains. “His previous light blue color did not match with the new image, so I changed it to a more mature navy blue. Importantly, when confirming the new degree of blue, I considered the color of a new overseas [SEGA of America] logo, too. Sonic’s skin color parts were adjusted too, by the way, to keep the overall color balance.”

Artistic considerations were not the whole story behind the redesign. Sonic Team soaked up everything that went on around them, which was a lot when development of *Sonic Adventure* started in 1997. SEGA’s marketers informed Sonic Team of new fashion and merchandise trends they wanted to target, and indicated they were looking for something that was more ‘mature’ compared to how classic Sonic was perceived — although the Sonic games had been positioned as a more mature alternative to Nintendo’s Mario series, Sonic as a character was very popular with children.

Also, there was a growing unease at SEGA about Sonic being perceived as a ‘Japanese’ character. Although none of the Japanese members of Sonic Team ever expressed concerns about this, there was a general feeling the mascot could perhaps benefit from a more ‘American’, more ‘Western’ design—a distinction that is “kinda hard to explain,” Uekawa admits, but nevertheless is there.

“When you print a cute, Japanese-styled character like (the robotic anime cat) Doraemon on a T-shirt, it will look very childish, and most adults won’t wear it,” Uekawa explains. “But a Western cartoon character like Mickey Mouse doesn’t look unnatural on an adult’s shirt. What we tried to do is to lean the Sonic character design towards a Western ‘design art’ style, rather than the typical ‘cute’ or ‘kawaii’ style that is more Japanese, to aim for a more adult and cool ‘American’ style of expression, to enhance his international appeal.”

Sonic’s modernization involved more than a new character design, though. “Of course we had a real change in Sonic’s proportion and the look and feel of the character,” Hoshino said. “But when you get into questions like ‘what is modern Sonic’, I have to add we really looked into who he is, too. Sure, we know what he looks like, but what is he about? How did he get where he is? Who are his friends? And those answers came through the world building in *Sonic Adventure* and *Sonic Adventure 2*. They did a terrific job in reigniting Sonic’s back-story, and his universe. To me, ‘modern Sonic’ starts with that graffiti-style look, but the Sonic we know today is shaped through the video games, and the story-telling in the levels, since that design.”

The move to 3D emboldened the team to try new things in the games’ environments, to give Sonic new and mysterious worlds to explore, leading to inspired level designs. The switch from a 2D platformer to a more exploratory, three-dimensional gameplay made Sonic more of an adventurer



1999

1998

2003

2008

2011

too, albeit a speedy one. *Sonic Adventure* featured a rainy city, Station Square; a Windy Valley with floating rocks and running tracks high in a blustery sky; an underground maze with water traps, and lots more. A field trip to Peru was decisive in finding the right Mesoamerican feel for the temples, mountains and jungle in the Mystic Ruins levels — nobody on the team had ever seen a real jungle before.

After the creative and commercial success of *Sonic Adventure*, work began on *Sonic Adventure 2*. In-game environments received extra attention, as Sonic Team better understood the Dreamcast's technology, leading to the implementation of better scenes and levels, and more of them. The rudimentary urban surrounds of Station Square were replaced by cityscapes reminiscent of San Francisco and the Bay Area — the home of the relocated Sonic Team at the time of development.

The end result was a beautiful new game that would again prove hugely popular with fans, but emotions within Sonic Team were mixed, to say the least. *Sonic Adventure 2* launched in June 2001, marking Sonic's tenth anniversary. But months before the game released, Sonic Team had to digest some dramatic news. In January of that year, citing commercial difficulties, SEGA announced it would withdraw from console manufacturing altogether. Production of the Dreamcast ceased in March, and no new titles were announced, making *Sonic Adventure 2* effectively the system's swan song. SEGA once again reshuffled its operations, this time focusing on game software development as a third-party organization, creating titles for game platforms that had previously been competitors.

Hardware rivalries gone, SEGA was instantly regarded as a high-quality software provider in the eyes of Nintendo and Sony, both of which were happy to support SEGA games on their consoles. *Sonic Adventure 2* came out in late 2001 for Nintendo's GameCube, and SEGA ramped up partner-

ships with PlayStation and Microsoft's new entry into the console market, the Xbox. All-new commercial and creative possibilities became available to SEGA that simply weren't there when they were focused on making games exclusively for their own hardware. Eventually, even the most famous mascots in video gaming crossed over, when Sonic and Mario both appeared in 2007's Nintendo-exclusive *Mario & Sonic at the Olympic Games*. It would be the first of many games to feature the two icons co-operating harmoniously.

Whatever the platform they were destined for, further main series Sonic titles expanded on the template first explored in *Sonic Adventure*. New games would each have a different focus, with fresh gameplay elements and atmospheres, but the 'graffiti-style' modern Sonic was there to stay. Over time, Sonic Team found a rhythm to their design practices, independent of the title they were working on. Every new game would have a different art director, who decided on the general idea of the game and its mood. They would then rely on the team to fill in details, while keeping one eye on the unification of the artwork, both inside the game and out.

Compare *Shadow The Hedgehog* (2005) and *Sonic Lost World* (2013), and you'll notice big differences in mood, story angles and more, but none on general character design. "*Shadow The Hedgehog* was made for the PlayStation 2, the Nintendo GameCube, and the original Xbox," Iizuka said. "Players on those systems were seen as older, more mature, than what the core Sonic fanbase was at the time. So, the team worked on something cooler, darker, and certainly more violent than what Sonic was in the past. Conversely, *Sonic Lost World* was made for Nintendo Wii U and 3DS systems, which have more of a 'family friendly' status. This game needed to appeal to everyone, kids and parents, so the design team worked on brighter colors, a softer approach to shapes, and an overall pop feel in general."

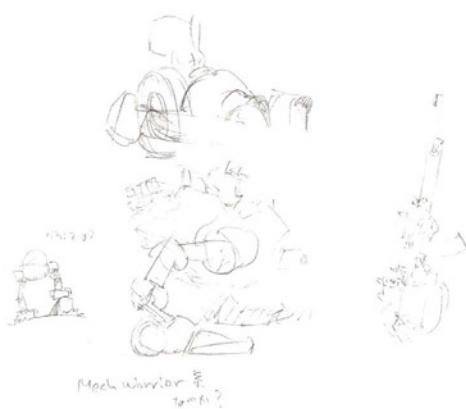
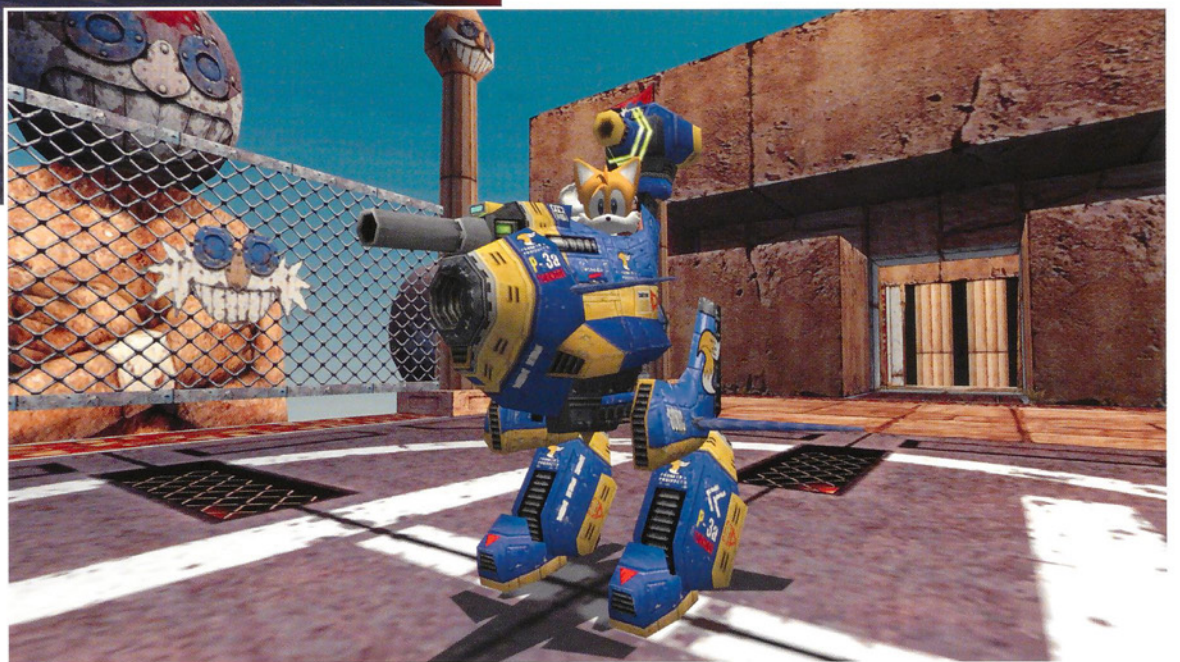
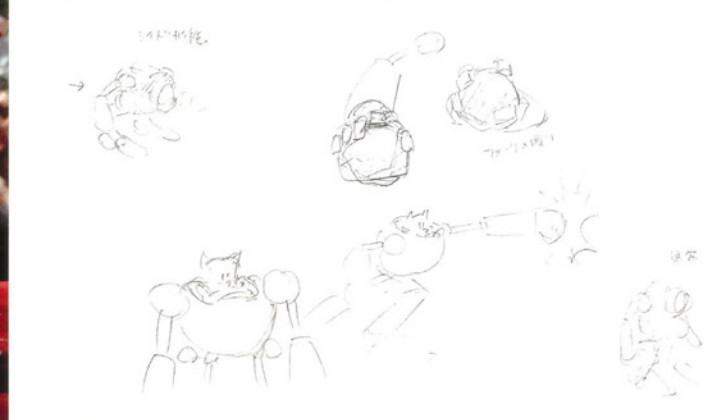
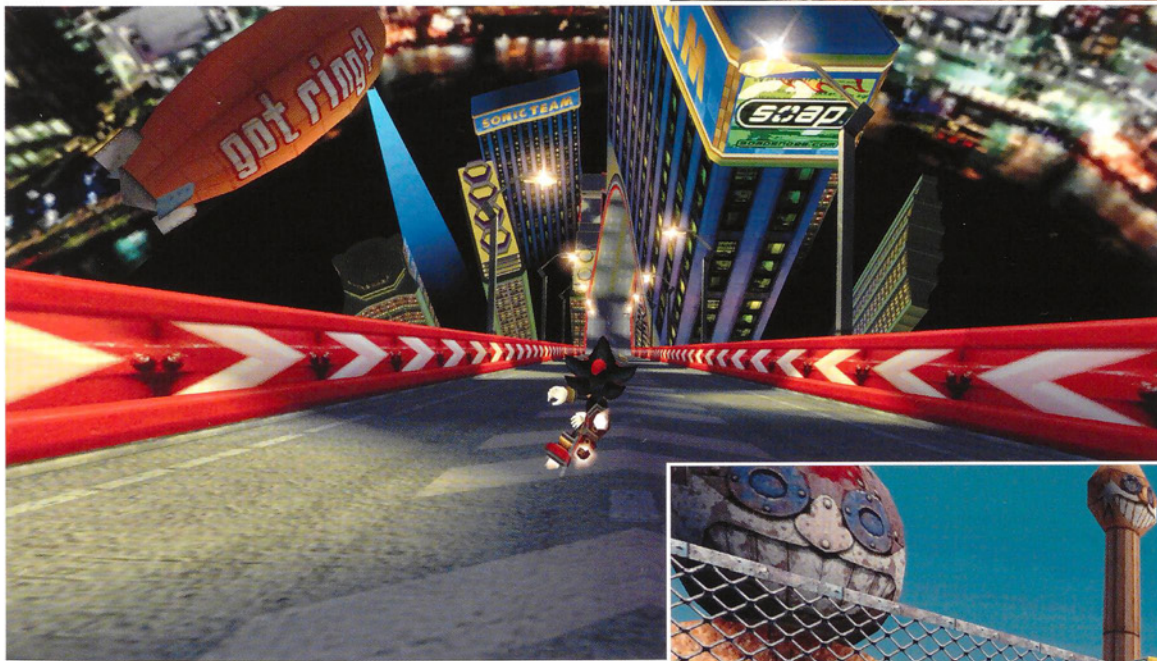
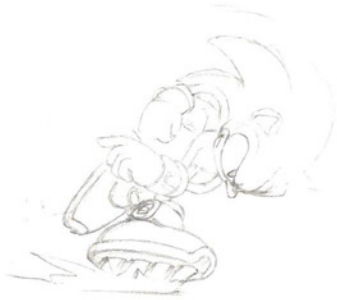
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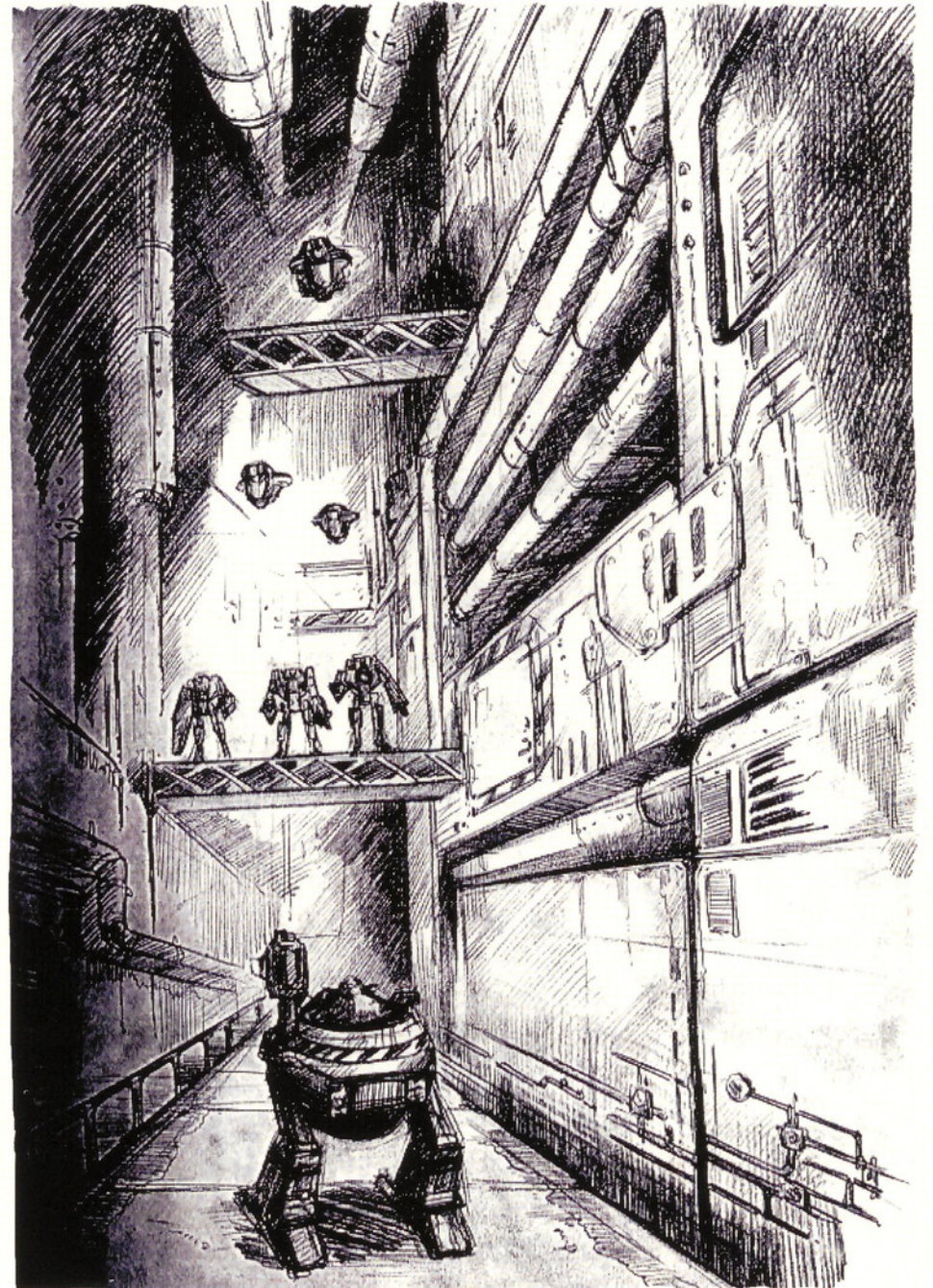
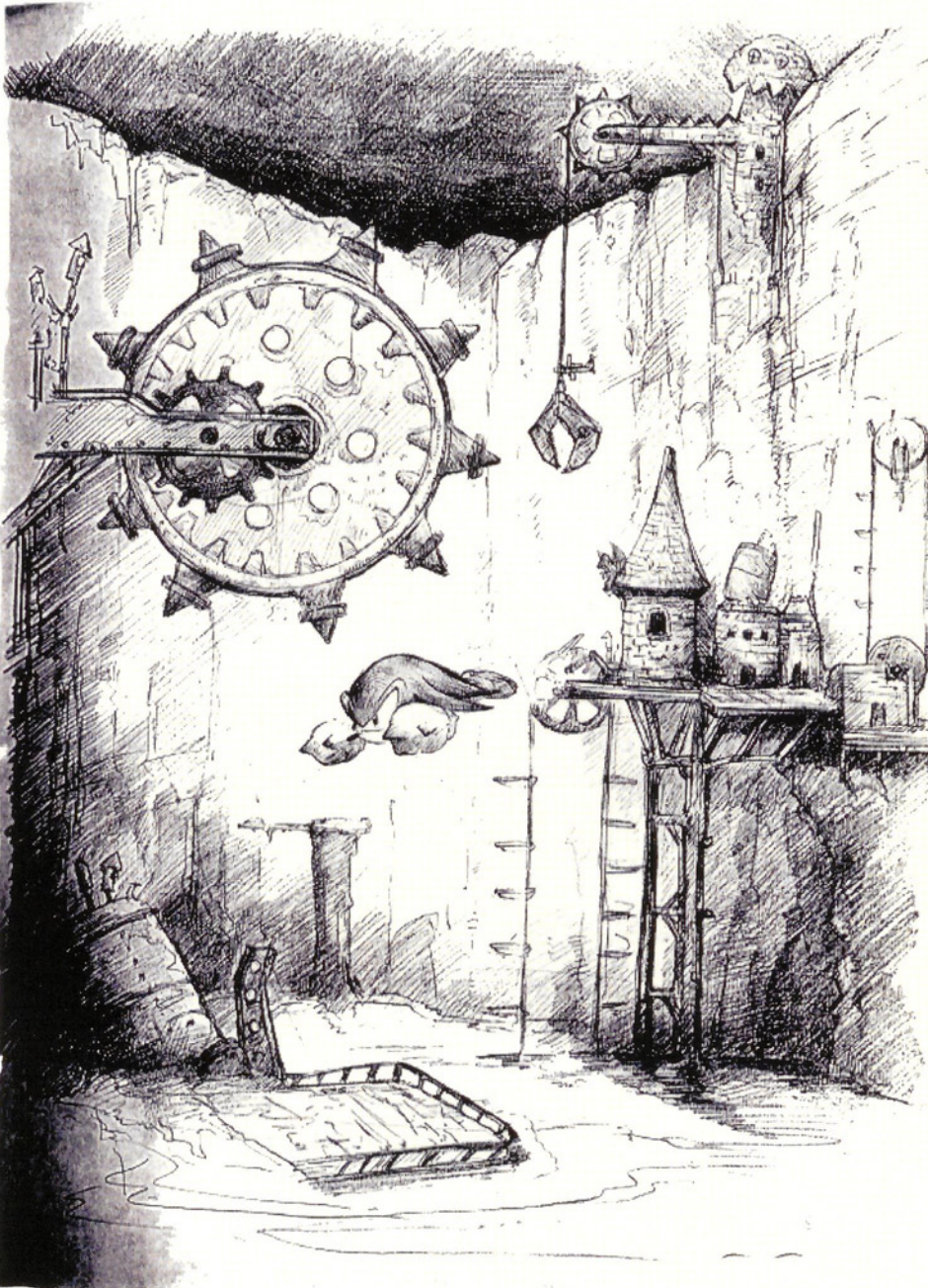
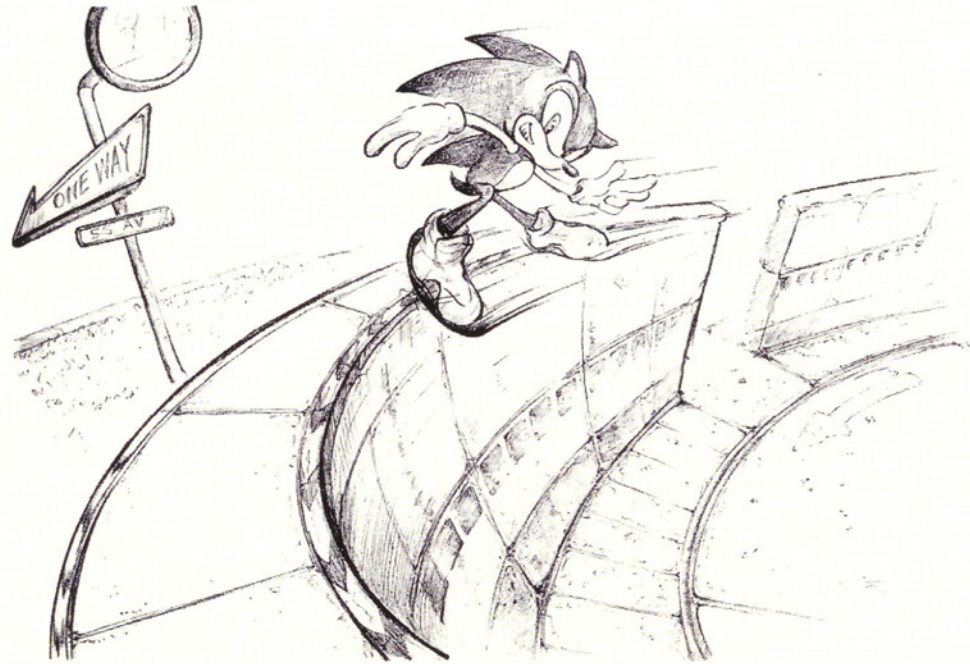
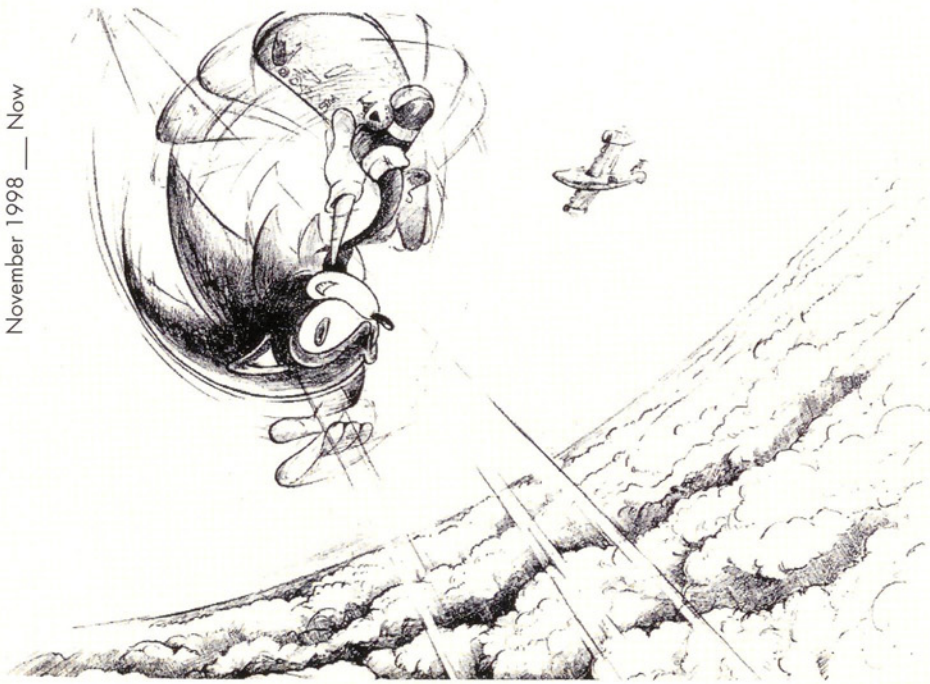
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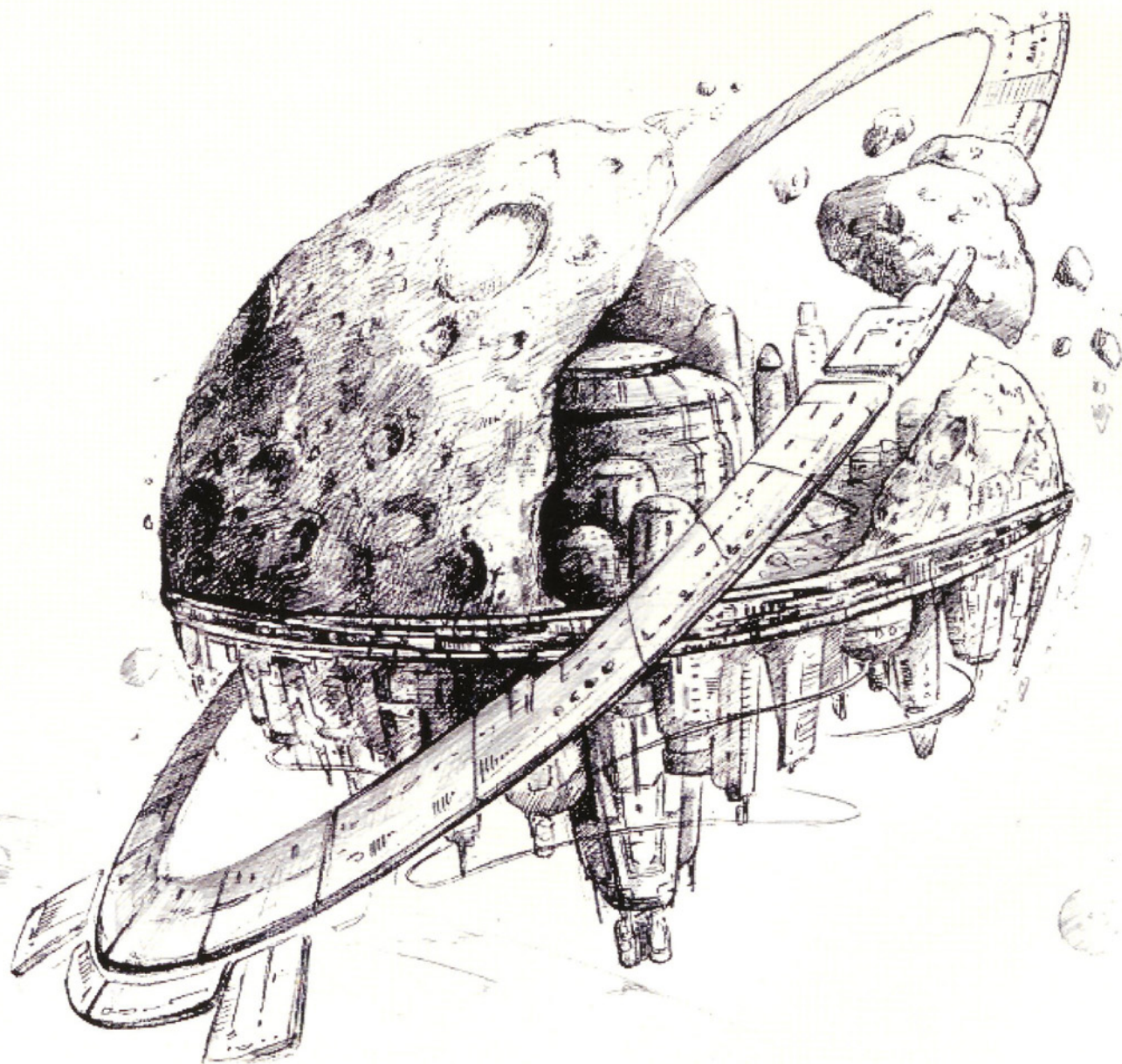
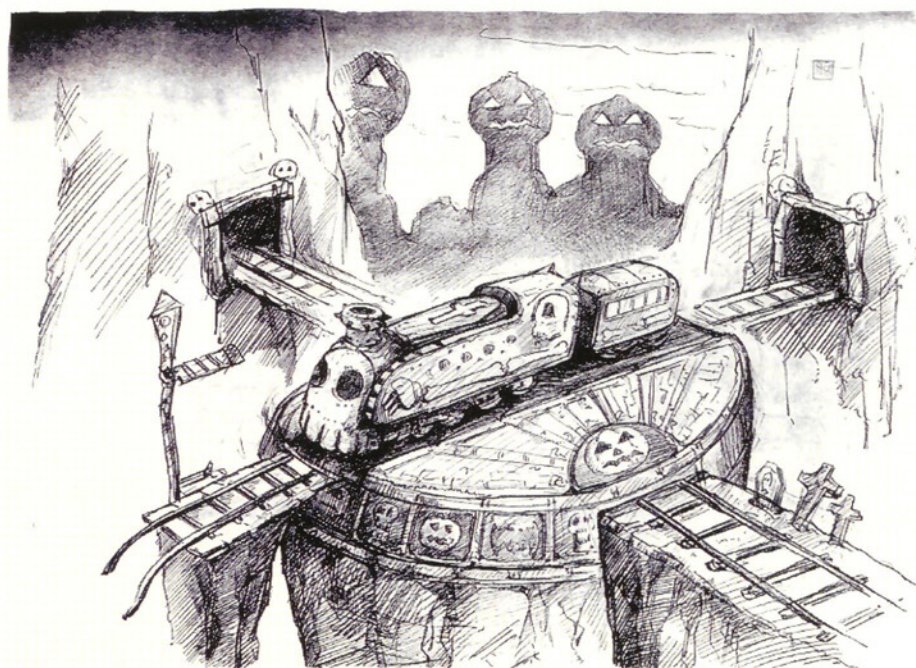
"The first time the 'modern Sonic' design emerged was for jacket cover art of a Sonic music CD, made by Uekawa-san. It sort of tested what the new design sense should be [for Sonic Adventure], and it would be shared with everyone in Sonic Team. After that, Uekawa-san had the sensibility to go and take on the other characters in the Sonic universe, and apply the same design sense to them. Once the design was locked in, we had no problems adjusting the other characters."

- ART DIRECTOR KAZUYUKI HOSHINO









Concept sketches for Sonic Adventure 2.



Sonic Adventure introduced the Chao to the Sonic universe, charismatic little creatures players could interact with and collect. Chao could be found in 'Chao Gardens' in the game, and stored on the portable 'Visual Memory Unit' of the Dreamcast. Designed as a small handheld device, the VMU had a LCD screen, sound, and a small control panel, allowing players to interact with Chao anywhere they liked. Popular amongst Sonic fans, elements from the Chao World would return in many Sonic games to come.

Over time, there emerged a fledged-out Sonic universe that was as flexible as it was recognizable. The cast of leading and supporting characters, limited in the classic era, was greatly expanded upon, as was the variety of 'worlds' that Sonic would appear in, enemies he would encounter, and gameplay variations players would enjoy. Action-platform features would mix with role-playing elements in one game, while more combat-centered gameplay would follow in the next, and Sonic could be seen in (motor) racing and sports games, too.

Over the years, Sonic would continue to impress players worldwide. At his 25th birthday, in 2016, over 80 million Sonic games had been sold worldwide, spanning several console generations, and quite probably a couple of human ones. That Sonic is one of gaming's best known characters isn't in doubt — he is an enduring icon of the industry, of the medium, and the original *Sonic The Hedgehog* was inducted into the World Video Game Hall of Fame in 2016, taking its place beside other all-time classics like *DOOM* and *Tetris*.

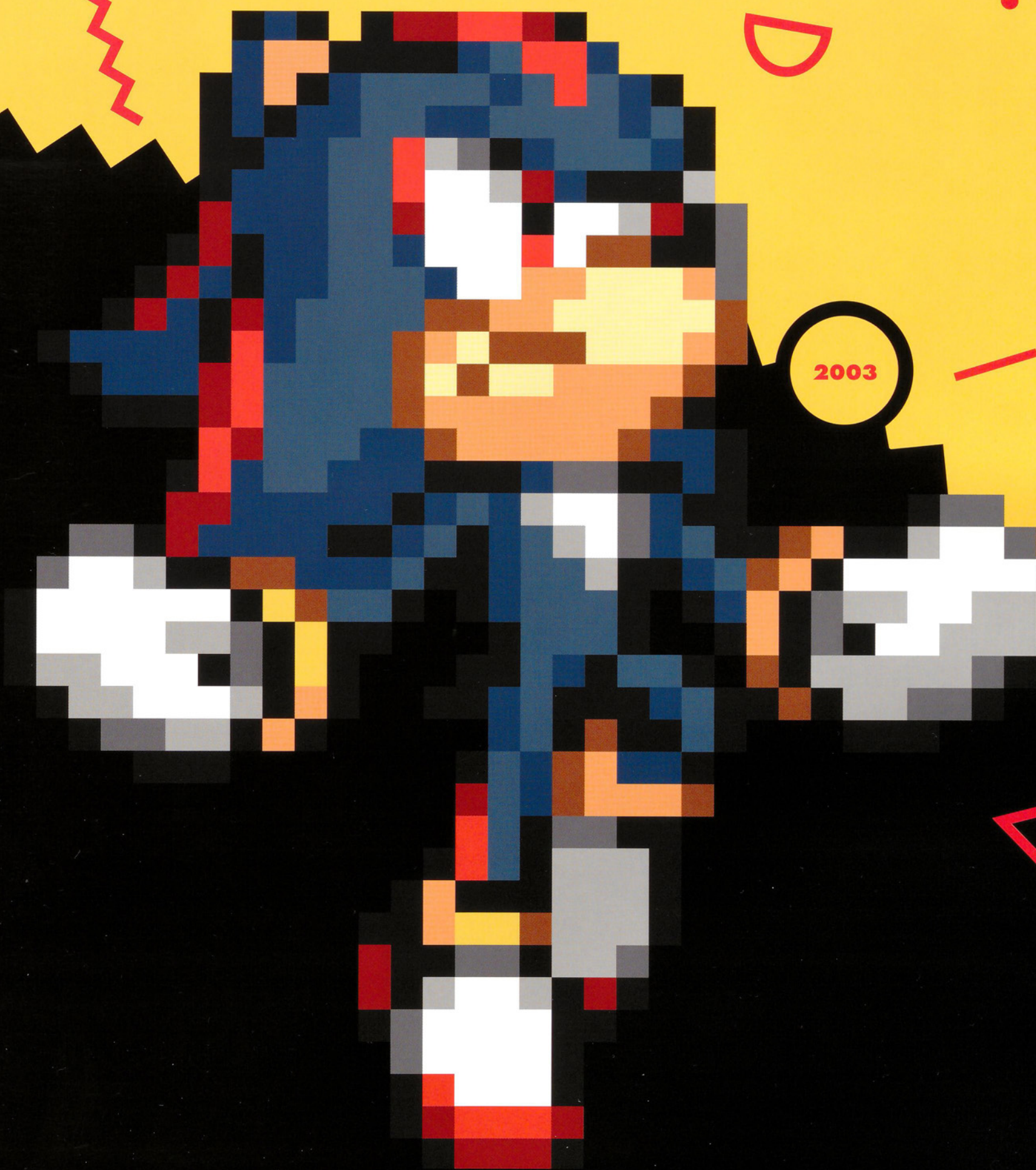
That kind of longevity is quite a feat, when you think about it, says Iizuka. "Since the start of Sonic, thousands and thousands of action games have been made. In the 2D days, they were mostly platform games, but even then *Sonic The Hedgehog* was the only one that was really pushing speed as one of the focal points. And that kind of unique quality to Sonic is something that set the series apart from everything else, I think, even when he moved into 3D games."

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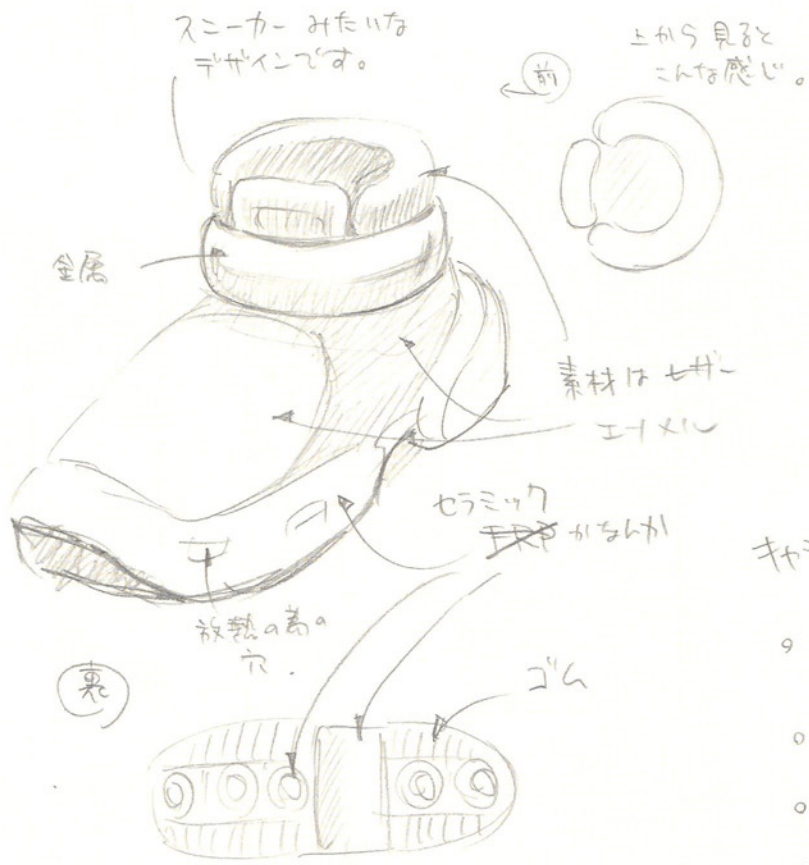
Introducing

SHADOW THE HEDGEHOG!

| First appearance: Sonic Adventure 2 (2001).



2003

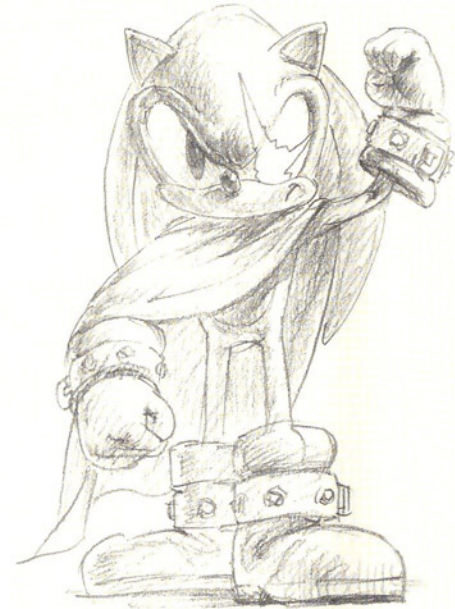
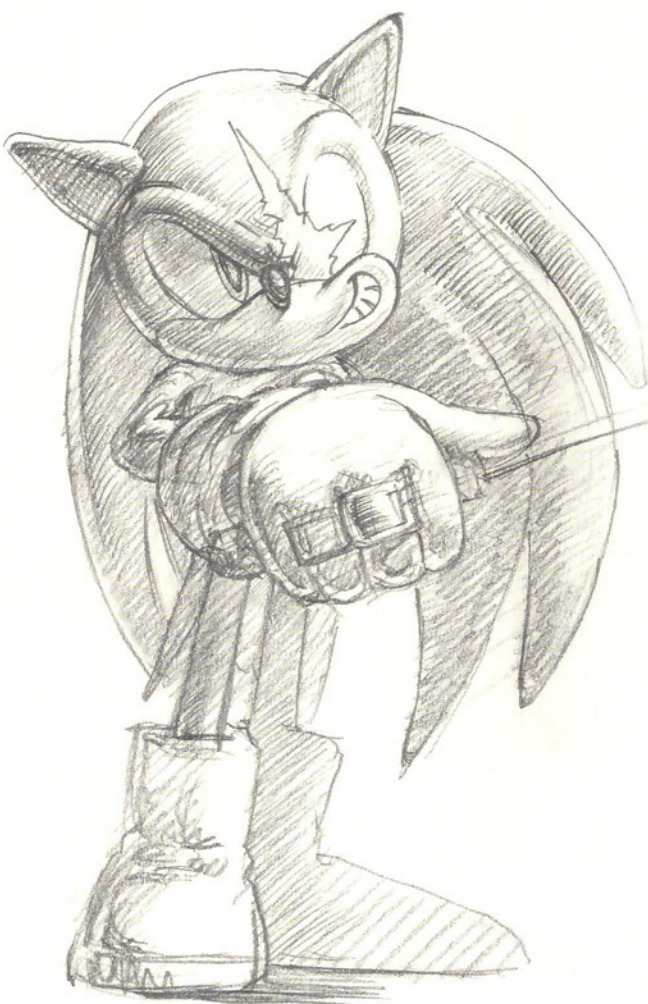
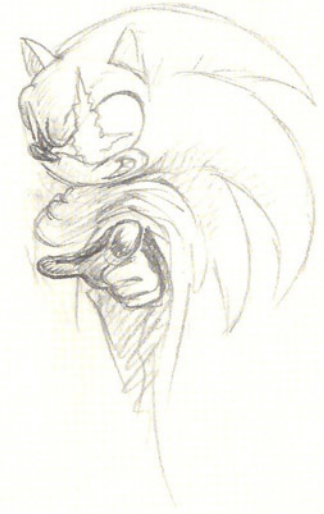
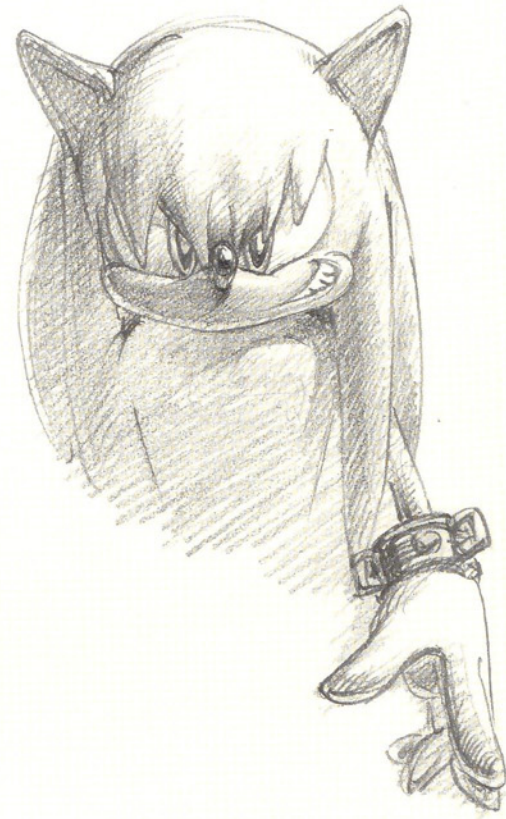


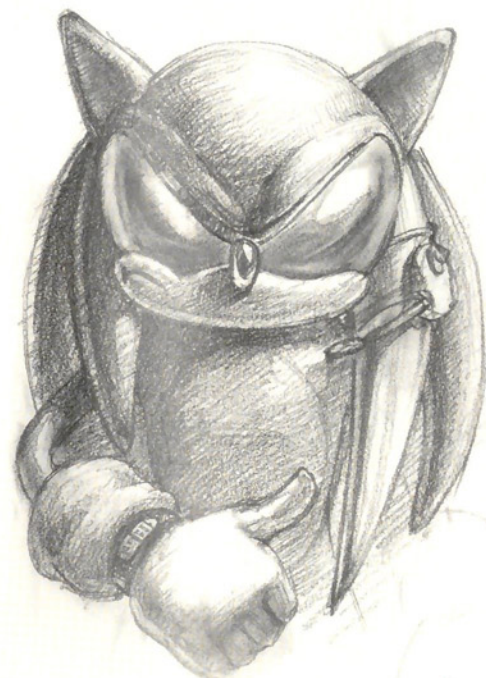
Shadow

背中のトゲは赤線はナシ。

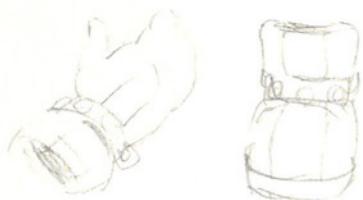
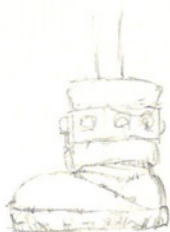
カラーのキーワード:

- (V=ミックがランナーであることに対して) スターター (イライラ)
- 忍者、ほろい
- 冷酷 (笑わない)
- バジルト





200-183A



"We expanded greatly on the roster of characters from Sonic Adventure 2, when we introduced Shadow and Rouge the Bat. And through these introductions we made sure there were new things happening in the games as well. To us, it's never been about characters you could dispose of in time, but about bringing to life characters players care about over the years."

- GAME DIRECTOR TAKASHI IIZUKA



1998



2005





2006



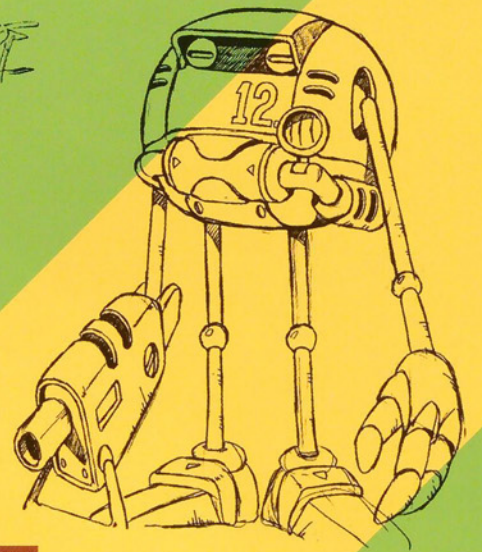
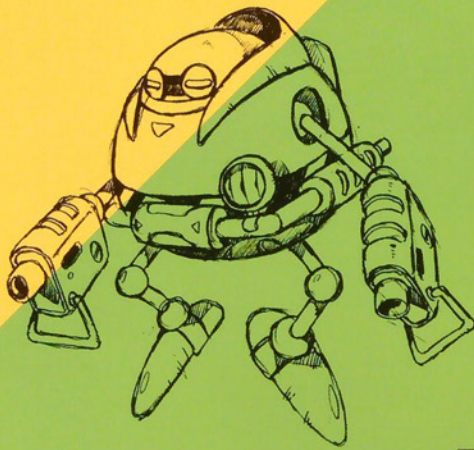
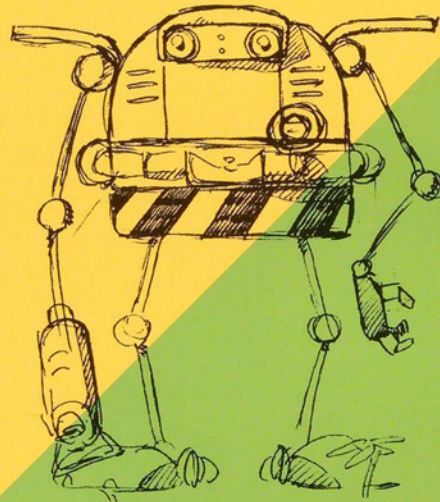
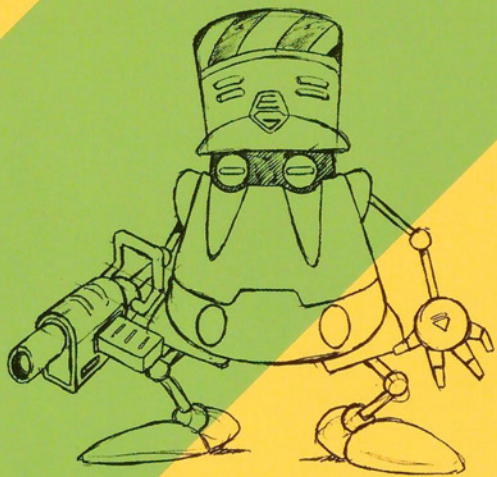
2016



Big the Cat

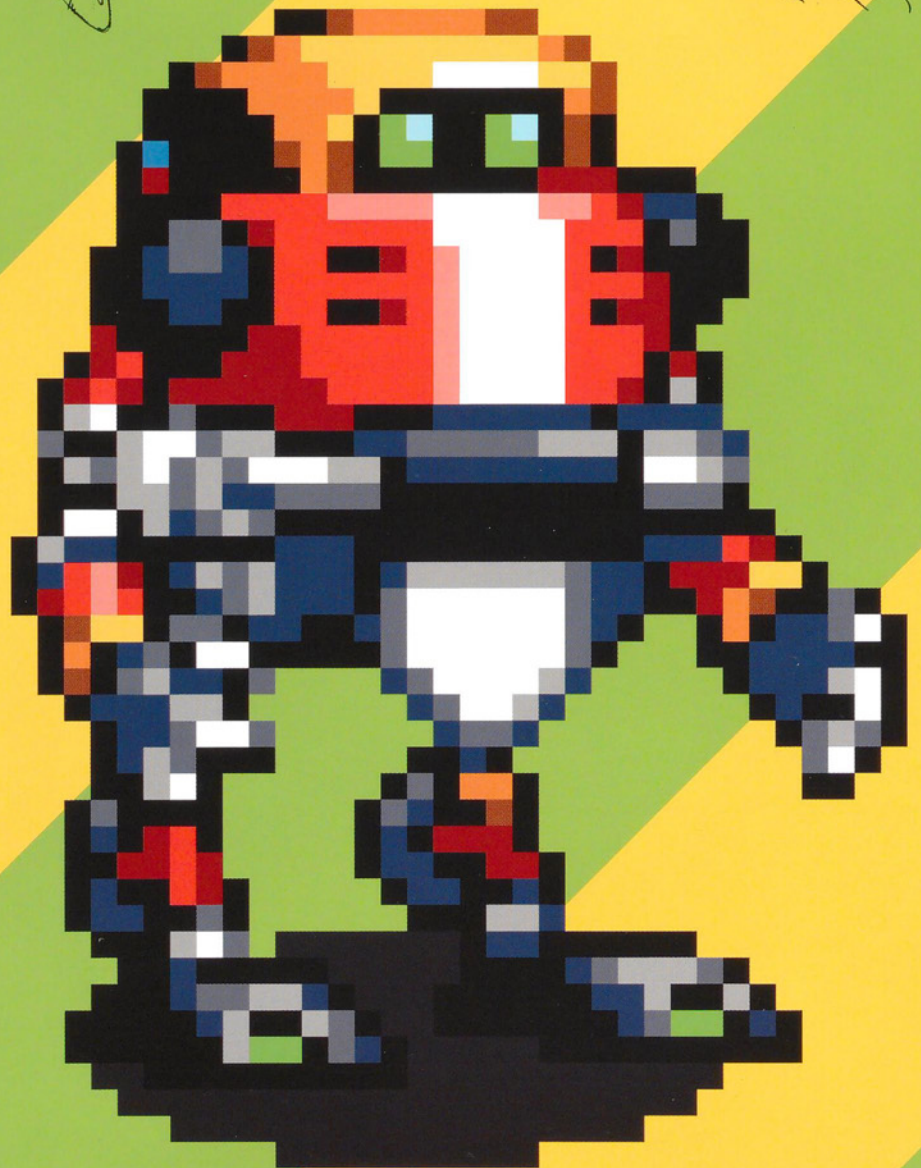
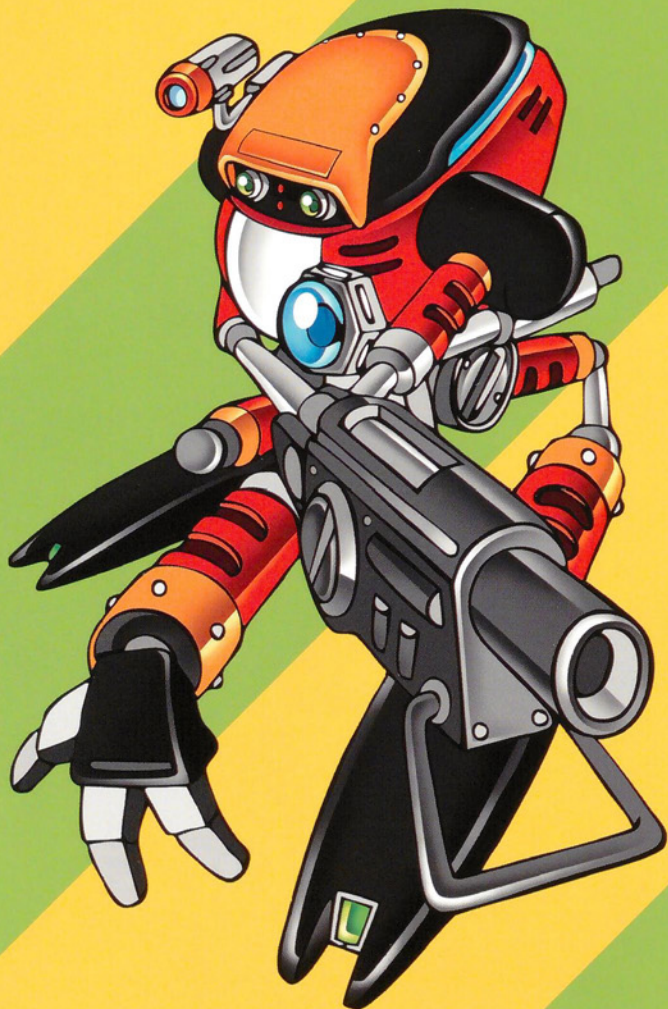
First appearance: Sonic Adventure (1998).





E-102 Gamma

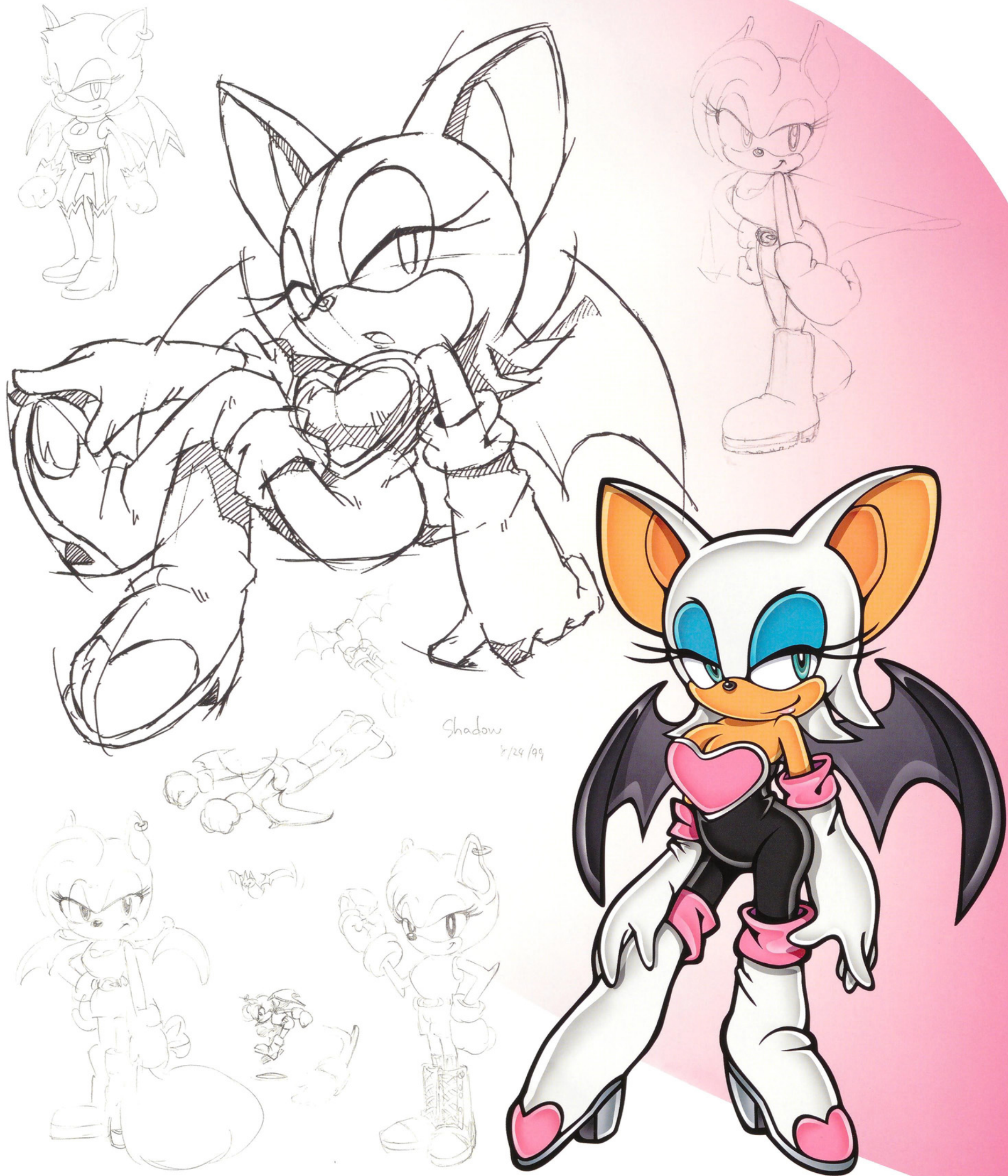
First appearance: *Sonic Adventure* (1998).





Chaos

First appearance: *Sonic Adventure* (1998).



Shadow
1/29/99

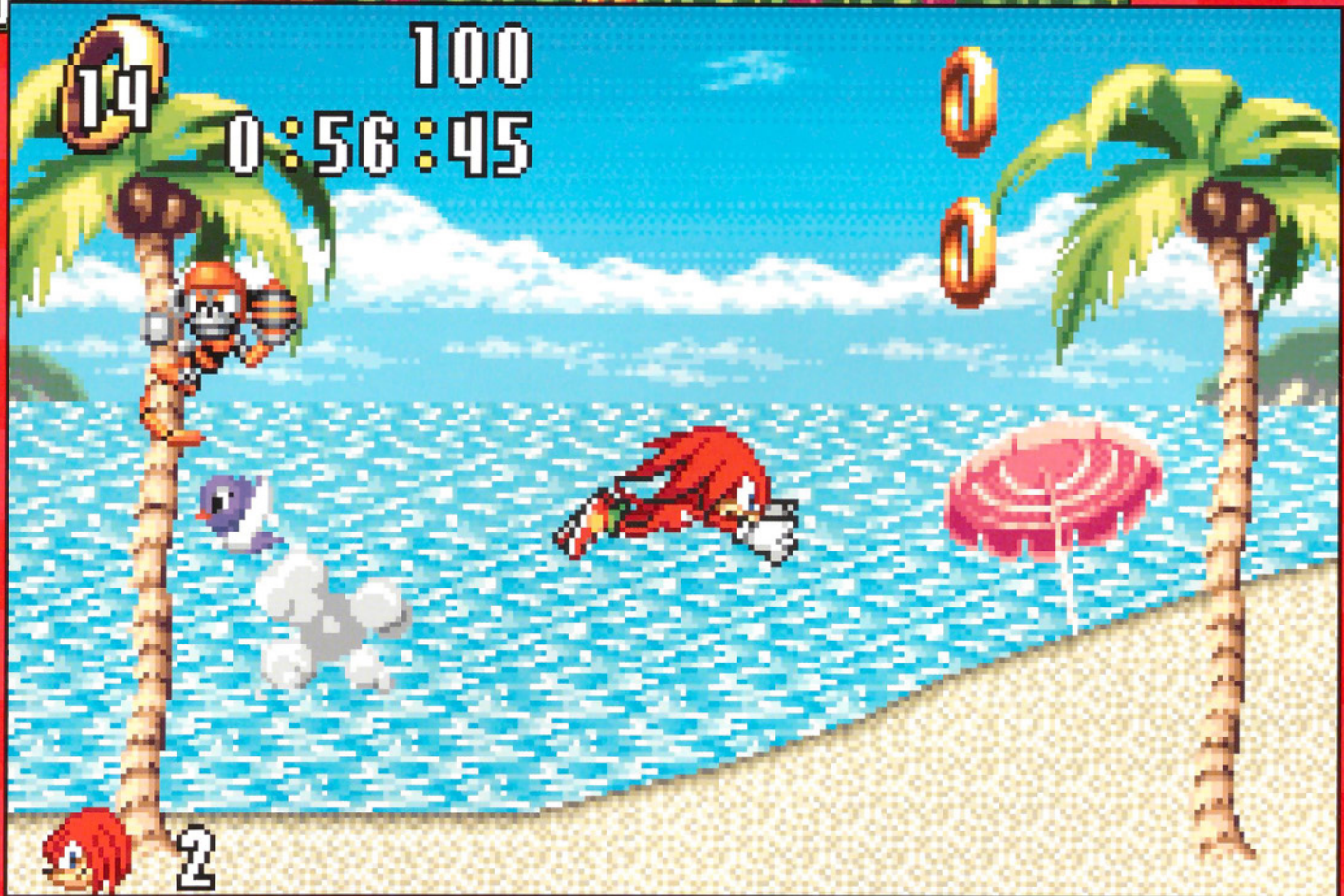
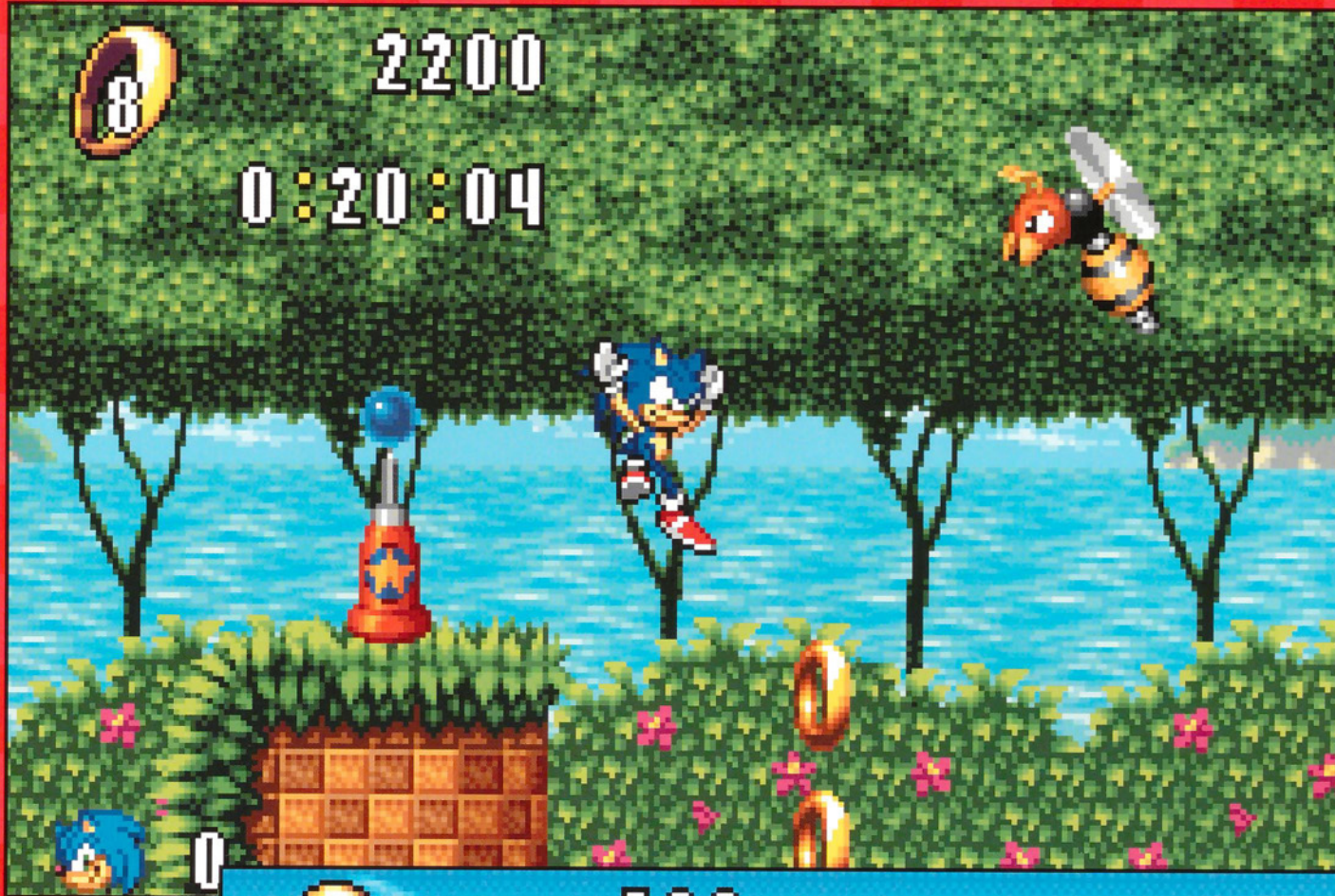
Rouge the Bat
First appearance: Sonic Adventure 2 (2001).





Tikal

First appearance: Sonic Adventure (1998).

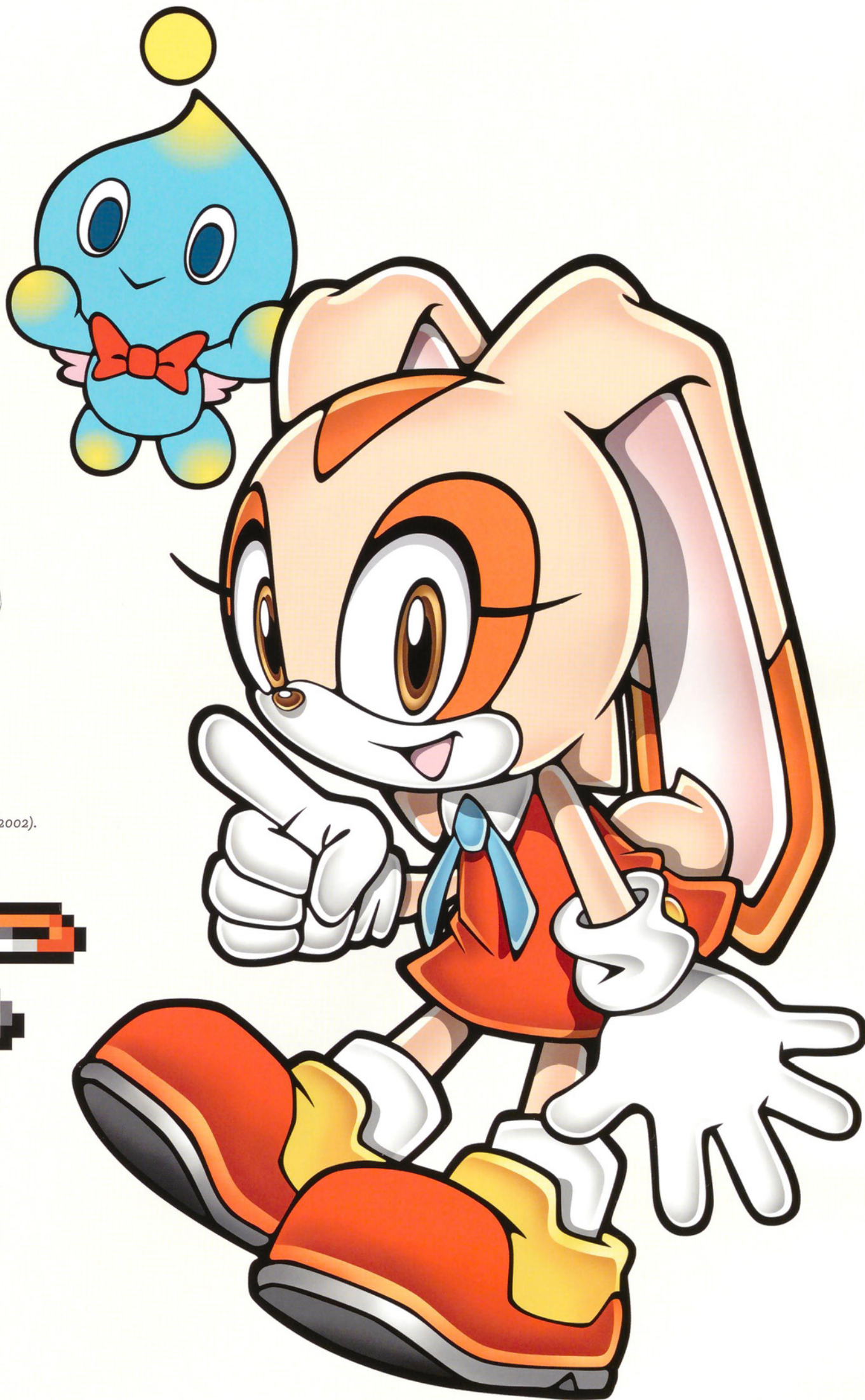


2D Sonic games did not disappear after the move to 3D games. Screenshots from the Sonic Advance series (2001).



Sonic Advance (release 2001) was the first original Sonic game to appear on a non-SEGA system. The Sonic Advance games for Nintendo's Gameboy Advance were very successful.





Cream the Rabbit

First appearance: Sonic Advance 2 (2002).



SONIC HEROES™

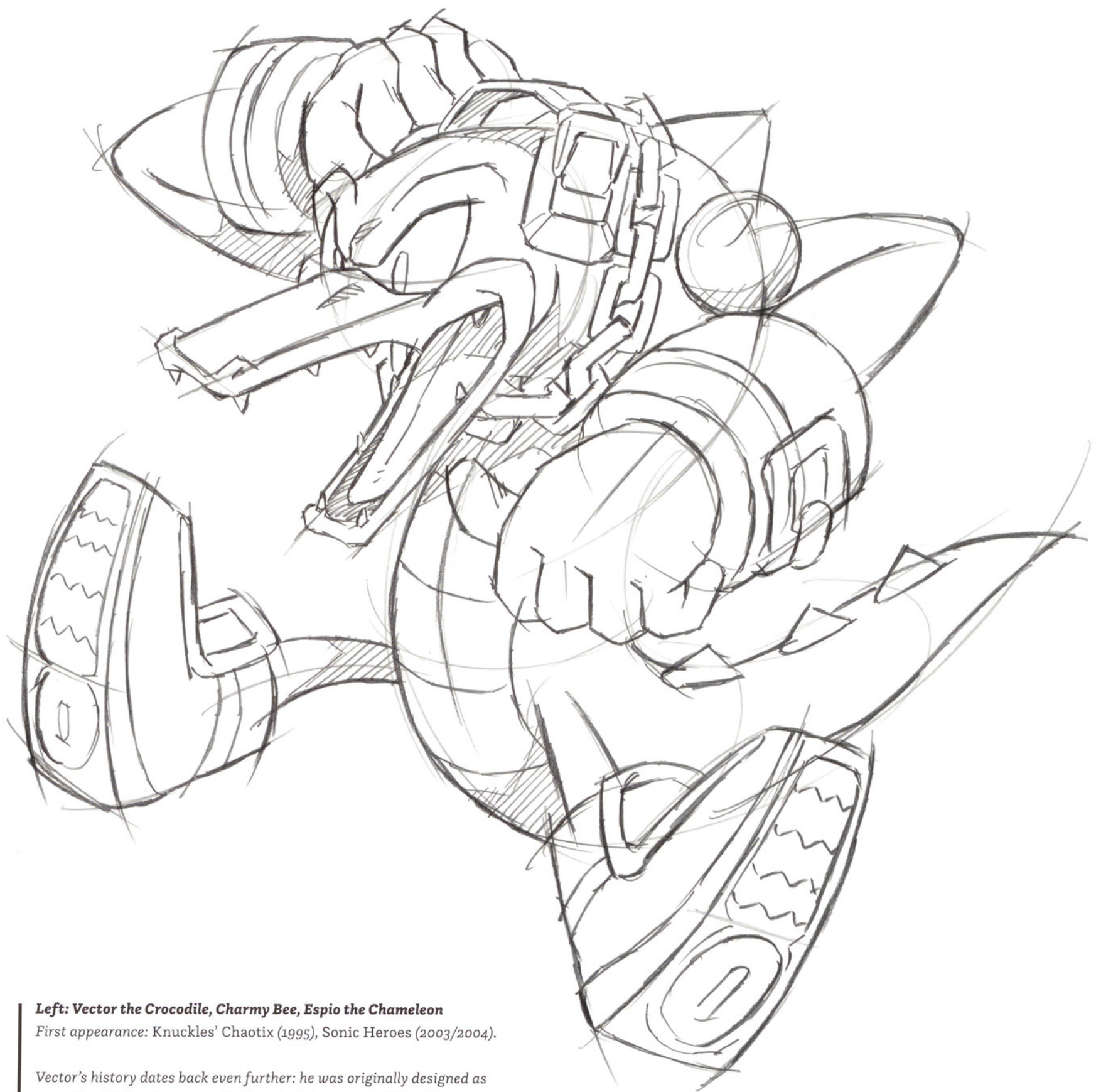




E-123 Omega

First appearance: Sonic Heroes (2003).





Left: Vector the Crocodile, Charmy Bee, Espio the Chameleon

First appearance: Knuckles' Chaotix (1995), Sonic Heroes (2003/2004).

Vector's history dates back even further: he was originally designed as one of Sonic's band members in the rejected scenario of the original Sonic The Hedgehog (1991, see page 34).



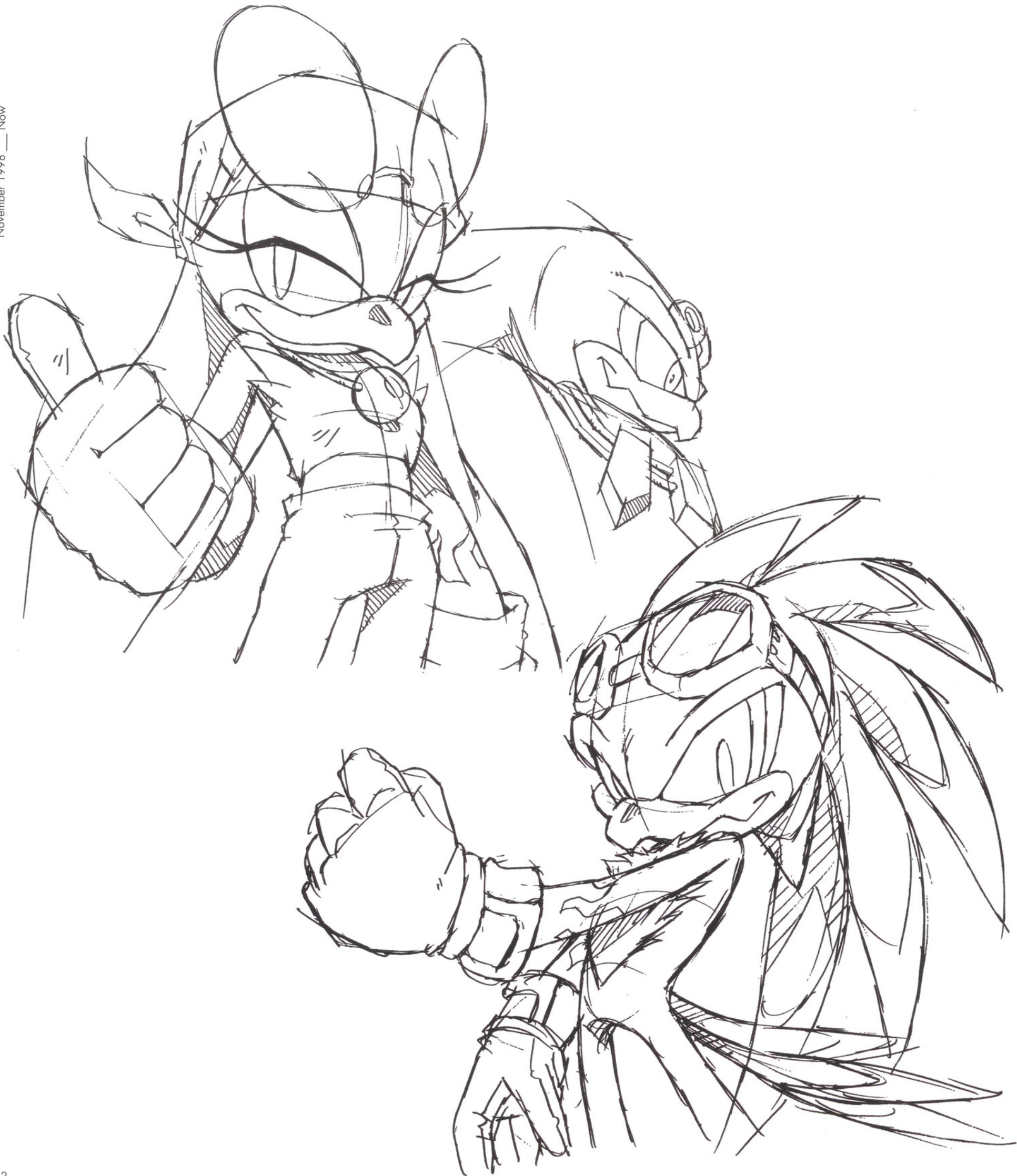
Emerl (bottom right)
First appearance: Sonic Battle (2004).



Blaze the Cat
 First appearance: Sonic Rush (2005).



Storm the Albatross
Jet the Hawk
Wave the Swallow
 First appearance: Sonic Riders (2006).



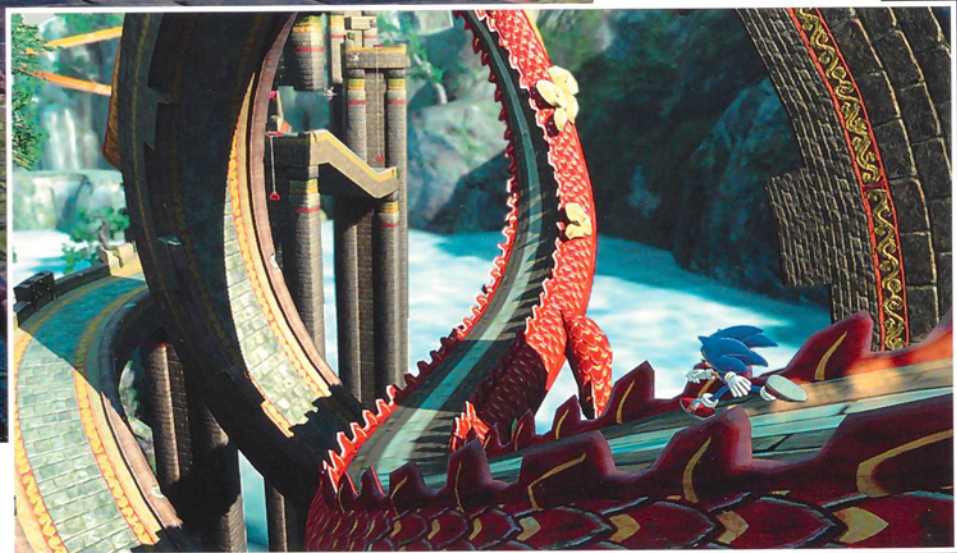




Silver the Hedgehog

First appearance: Sonic The Hedgehog (2006).



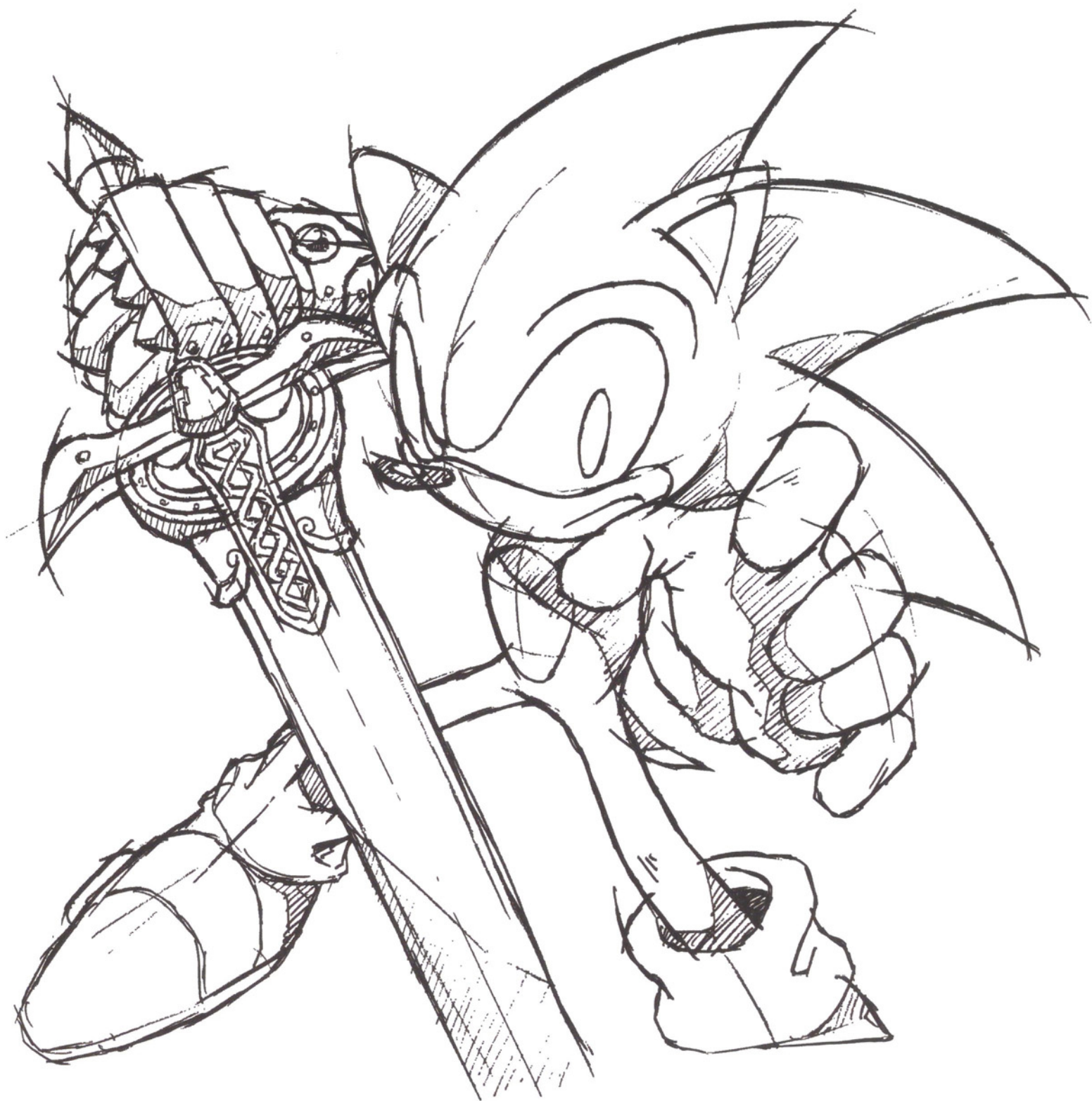


■ Sonic Unleashed (2008) introduced Sonic's transformation into a werewolf.









Sonic and the Black Knight (2009), a game for Nintendo's Wii console, introduced a sword fighting mechanic, in which the player used a motion controller to slash at the enemy.





Wisps were introduced in *Sonic Colors* (2010). Their name reminiscent of the atmospheric ghost lights luring travelers to swamps in folktales, Wisps in Sonic's universe are a race of extraterrestrial creatures who add their powers to Sonic's.







Orbot
 First appearance: Sonic Colors (2010).
 A prototype version appeared in Sonic Unleashed (2008).

Cubot
 First appearance: Sonic Colors (2010).



Wisps
 First appearance:
 Sonic Colors (2010).







The Deadly Six
Zavok, Zazz, Zeena, Zik, Zomom, and Zor.
First appearance: Sonic Lost World (2013).

SONIC BOOM™



PART FOUR

SONIC BOOM

Uekawa's 'graffiti-style' Sonic would become the standard model for all series installments in the modern era — but there have been notable exceptions. The 'classic' Sonic games are in constant demand by fans, leading to many game collections featuring 16-bit titles, and there have been excellent mobile and handheld ports too. And in 2014, a new line of Sonic games emerged, complementing a new television series that broke away from the 'modern' and 'classic' paradigm. *Sonic Boom*, as the series was called, was conceived as a 'parallel Sonic universe' with a unique style. The intention was to build a new, 'Westernized branch' of the Sonic franchise, as long-time Sonic game director Takashi Iizuka told interviewers. The series' aim was to reach new audiences in the West who had not experienced Sonic before, while maintaining the overall attraction that fans worldwide had come to expect.

To do so, SEGA reached out to Western studios for both the games and television series. American game studio Big Red Button took the lead on a 're-imagination' of the Sonic universe, a third important iteration on the hedgehog and his world. The new series would be more story-based than what was usually associated with Sonic, with the games leaning more towards adventure and exploration than pure speeding action, and with a stronger emphasis on cooperative gameplay than before. These decisions were informed by early ideas for the television series: as that medium cannot rely on action alone in the way games can, attention to story was prioritized. Working closely with Sonic Team, Big Red Button first re-established what every Sonic character was about, and directed their redesigns accordingly.



As the series would focus on an ensemble of four heroes — Sonic, Tails, Knuckles, and Amy — designers focused on producing distinctive shapes and silhouettes. As a result, 'bruised' Knuckles was drawn much larger and more muscular than he'd ever been. Tails was cast as the 'gadget guy', wearing a tool belt and aviation goggles, while Amy Rose gained a new, 'ballerina-like' elegance while swinging her destructive hammer.

The character-focused approach led to a different Sonic the Hedgehog, too. After a few abandoned experiments with fur-like textures, or clothing Sonic with pants, his redesign primarily concerned itself with a few, but very important, details. His body proportions were altered, adding length to distinguish his silhouette from that of the other characters. His limbs suddenly sported arm and leg wraps, a feature shared with Knuckles. Big Red Button's art director Bob Rafei explained how the designs were inspired by fighters and American football players, "two groups who don't really care what they look like, so long as the end result is that they kick ass at what they do". Sonic also gained a brown scarf, which Rafei explained as "an action adventure trope" commonly associated with cowboys, soldiers, adventurers, and even snowboarders. The scarf fits the bill of a 'practical heroism' that Big Red Button pursued for the good guys, which was juxtaposed against the vanity of the villains. Dr. Eggman in particular looked more formal than ever, and showed a vain awareness about his looks and that of his underlings. This contrast translated to the larger environmental theme, too: Eggman's assistants Orbot and Cubot are metallic and mechanical in appearance, while an all-new Sonic ally, the female jungle badger Sticks, was portrayed as embodying the forces of nature.

Sonic Boom provided the larger Sonic universe with a set of interesting alternative designs, and today the 'classic', 'modern' and 'Boom' varieties happily coexist, all playing a role in Sonic's future. The games announced for 2017 illustrate that point: *Sonic Mania* is a re-imagination of the early 2D side-scrolling games, presented in the 'classic' Sonic style, while an announcement trailer for 'Project Sonic 2017' shows 'classic' and 'modern' Sonic running side by side. As for the future, nobody can exactly know what Sonic the Hedgehog will look like. "Change has been a constant with Sonic," Yuji Uekawa says. "Just look at how adaptable Sonic was to perform not just in video games, but also with toys, stationery, books, and apparel." One of the strongest aspects of Sonic's design is how he's successfully evolved with the hardware he's appeared on. "His design style will always adapt to whatever new gaming platforms ask of him, resulting in a character that best suits the specifications of the platform," Uekawa concludes. "I think that will keep Sonic 'fresh' for a very long time."



Sticks the Jungle Badger
First appearance: Sonic Boom: Rise of Lyric (2014).





SONIC THE HEDGEHOG

SOFTOGRAPHY

Below you'll find a list of video games that feature Sonic the Hedgehog as the main character, together with the platform they originally appeared on, plus all relevant spin-off titles. The list does not include every 'all-star' compilation, nor does it feature releases that exist outside of the main video gaming market, such as the 2002 redemption machine *Sonic & Tails Spinner*.

1991

RAD MOBILE

Arcade racing game, published by SEGA. Sonic's first appearance in a video game, where a small Sonic figure-cum-air freshener hangs from a car's rear view mirror.

SONIC THE HEDGEHOG

Originally released on SEGA Genesis/Mega Drive, with a separate version developed and released for the SEGA Master System (the 8-bit predecessor to the Genesis/Mega Drive) and SEGA Game Gear handheld system. Re-released on Wii Virtual Console (2006), Xbox Live Arcade, Apple iPod (2007), Apple iPhone and BlackBerry (2009), Steam (2010), PlayStation Network (2011), Apple iOS and Android devices (2013).

SONIC ERASER

A download-only puzzle game available to those who purchased a SEGA Game Toshokan cart and a SEGA Meganet modem for the SEGA Mega Drive in Japan.

WAKU WAKU SONIC PATROL CAR

Children's arcade game.

1992

SONIC THE HEDGEHOG 2

SEGA Genesis/Mega Drive, with a separate version developed and released for the SEGA Master System and SEGA Game Gear. Re-released as download game on Wii Virtual Console, Xbox Live Arcade (2007), Apple iOS devices (2010), PlayStation Network (2011), Android devices (2013). The Master System version was released on the Virtual Console (2008) and the Game Gear version on the Nintendo 3DS eShop (2013).

1993

SONIC CD

Released on SEGA Mega-CD/SEGA CD (CD-ROM-playing

add-on for Genesis/Mega Drive system). Re-released for PC (1996), PlayStation Network, Xbox Live Arcade, Android and Apple iOS devices (2011), Windows Phone 7 (2012), Ouya (2012).

SONIC CHAOS

(also known as *Sonic The Hedgehog Chaos*, and *Sonic & Tails* in Japan). Released for SEGA Master System in Europe, and for SEGA Game Gear in EU, Japan, and North America. Re-released on Nintendo Wii Virtual Console as a download title in 2009.

SEGASONIC THE HEDGEHOG

3D isometric arcade game.

SEGASONIC COSMO FIGHTER GALAXY PATROL

Arcade game (Japan).

DR. ROBOTNIK'S MEAN BEAN MACHINE

SEGA Genesis/Mega Drive, SEGA Master System, SEGA Game Gear. Puzzle game developed by Compile (Japan), based on their popular game *Puyo Puyo*.

SONIC THE HEDGEHOG SPINBALL

Pinball game for SEGA Genesis/Mega Drive, later released on SEGA Game Gear (1994) and SEGA Master System (1995). Re-released as download game for Nintendo Wii Virtual Console in 2007, Steam and Apple iOS devices (2010).

1994

SONIC THE HEDGEHOG 3

SEGA Genesis/Mega Drive. Re-released on Wii Virtual Console (2007), Xbox Live Arcade (2009).

SONIC DRIFT

Kart game for SEGA Game Gear in Japan.

SONIC AND KNUCKLES

SEGA Genesis/Mega Drive. Re-released as download game on Xbox Live Arcade in 2009.

SONIC THE HEDGEHOG TRIPLE TROUBLE

(also known as *Sonic & Tails 2*). Developed by Aspect Co. Ltd, released for SEGA Game Gear. Re-released for Nintendo 3DS Virtual Console (2012).

SONIC THE HEDGEHOG'S GAMEWORLD

Educational game, developed by Aspect Co. Ltd for SEGA Pico, an electronic handheld device for kids aged 2-8.

TAILS AND THE MUSIC MAKER

Educational (music) game, developed by Aspect Co. Ltd for SEGA Pico.

1995

SONIC DRIFT 2

(also known as *Sonic Drift Racing*). SEGA Game Gear. Re-released for Nintendo 3DS Virtual Console (2012/13).

SONIC COMPILATION

(also known as *Sonic Classics 3 in 1*). SEGA Genesis/Mega Drive. Features *Sonic The Hedgehog* and *Sonic 2*, plus *Dr. Robotnik's Mean Bean Machine*.

TAILS' SKYPATROL

SEGA Game Gear. Re-released as part of *Sonic Adventure DX: Director's Cut* (2003) and *Sonic Gems Collection* (2005).

KNUCKLES' CHAOTIX

(known as *Chaotix* in Japan). Spin-off game for SEGA 32X console.

SONIC 2 IN 1

Compiles *Sonic The Hedgehog 2* and *Sonic The Hedgehog Spinball* for SEGA Game Gear.

SONIC LABYRINTH

Puzzle and platform game for SEGA Game Gear. Re-released for Nintendo 3DS Virtual Console (2012).

TAILS ADVENTURE

(also known as *Tails Adventures*). Spin-off game for SEGA Game Gear, developed by Aspect Co. Ltd. Re-released on *Sonic Adventure DX: Director's Cut* (2003/4), *Sonic Gems Collection* (2005), *Paypal Plug and Play* for Coleco Plug and Play console (2006), 3DS Virtual Console (2013).

1996

SONIC THE FIGHTERS

(also known as *Sonic Championship*). Arcade fighting game, originally released on SEGA arcade cabinets, but ported to platforms like Nintendo GameCube, PS2 & PS3, Xbox 360 and Xbox One. Re-released for PlayStation Network, Xbox Live Arcade (2012).

SONIC 3D BLAST

(also known as *Sonic 3D: Flickies' Island*). Co-developed by UK studio Travellers' Tales and SEGA.

SEGA Genesis/Mega Drive, SEGA Saturn, PC. Re-released as download game on Wii Virtual Console (2007), PC/Mac (Steam, 2010).

SONIC'S SCHOOLHOUSE

PPC (Windows). Educational game available in North America, teaching mathematics and spelling. Developed by Bap Interactive/SEGA.

SONIC BLAST

(known as *G Sonic* in Japan). Developed by Aspect Co. Ltd for SEGA Game Gear and SEGA Master System (Brazil only). Re-released for Nintendo 3DS Virtual Console (2012/13).

1997

SONIC & KNUCKLES COLLECTION

MS Windows PC game compilation, including *Sonic The Hedgehog 3*, *Sonic & Knuckles* and *Sonic 3 & Knuckles* — the first two titles combined, with altered gameplay. Re-released on Steam (PC) in 2011.

SONIC JAM

SEGA Saturn ports of *Sonic The Hedgehog*, *Sonic 2*, *Sonic 3* and *Sonic & Knuckles*.

SONIC R

Racing game developed by SEGA and Travellers' Tales for SEGA Saturn. PC version released in 1998, and ports developed for Nintendo GameCube and Sony PlayStation 2 in 2005.

1998

SONIC ADVENTURE

SEGA Dreamcast. (Japan only, with the North American and European editions following in 1999).

1999

SONIC ADVENTURE INTERNATIONAL

SEGA Dreamcast. (Improved, 'international' edition of *Sonic Adventure* for Japan and Europe.)

SONIC THE HEDGEHOG POCKET ADVENTURE

Neo Geo Pocket. (Developed by SNK for its 16-bit color handheld game console.)

2000

SONIC SHUFFLE

SEGA Dreamcast. Card-based (party) game co-developed by Hudson Soft Co., Ltd.

2001

SONIC ADVENTURE 2

SEGA Dreamcast. Re-released for Steam (PC), PlayStation Network, Xbox Live Arcade, (2012).

SONIC TENNIS SONIC THE HEDGEHOG SONIC'S NAPOLEON

Digital download games offered through Sonic Cafe, SEGA's mobile phone service in Japan.

SONIC ADVANCE

Nintendo Game Boy Advance.

First Sonic game to exclusively appear on a Nintendo platform, December 2001 (Japan). Co-developed by Osaka-based development studio Dimps. Western release in 2002. Re-released as *SonicN* for Nokia's N-Gage handheld system (2003), and Android devices in Japan (2011).

SONIC ADVENTURE 2: BATTLE

Sonic Adventure 2 enhanced port for Nintendo GameCube. Re-released as downloadable game on Xbox Live Arcade, PlayStation Network, Steam (PC).

2002

SONIC MEGA COLLECTION

Nintendo GameCube. Collection of 12 to 14 SEGA Genesis/Mega-Drive games (dependent on territory), featuring Sonic and associated characters. Re-released as *Sonic Mega Collection Plus* for Sony PlayStation 2, MS Xbox and MS Windows.

SONIC BOWLING SONIC FISHING SONIC BILLIARDS SONIC GOLF SONIC MINE SWEEPER

Digital download games offered through Sonic Cafe service (Japan).

SONIC ADVANCE 2

Japanese edition for Nintendo Game Boy Advance. Co-developed by Dimps. North American and EU releases in 2003.

2003

SONIC PINBALL PARTY

Nintendo Game Boy Advance.
Co-developed by Jupiter Corporation (Kyoto).

SONIC HEROES

Japanese release for Sony PlayStation 2, Nintendo GameCube, MS Xbox, PC. International release in 2004. Re-release on PlayStation Network (Europe only) in 2011.

SONIC ADVENTURE DX: DIRECTOR'S CUT

Nintendo GameCube, MS Windows. Enhanced port of Dreamcast game *Sonic Adventure International*. Re-released as download game on Xbox Live Arcade, PlayStation network (2010), Steam (PC, 2011).

SONIC RACING SHIFT UP SONIC PUTTER SONIC DARTS SONIC RACING KART SONIC REVERSI

Digital download games offered through Sonic Cafe service (Japan).

SONIC BATTLE

Nintendo Game Boy Advance.

2004

SONIC ADVANCE 3

Nintendo Game Boy Advance.
Co-developed by Dimps and Sonic Team. Re-released on Nintendo Wii U Virtual Console in 2016 (Japan).

SONIC CAKE HOPPING SONIC HOPPING 2 SONIC HEARTS SONIC PANEL PUZZLE SONIC GAMMON

Digital download games offered through Sonic Cafe service (Japan).

2005

SONIC GEMS COLLECTION

Nintendo GameCube, Sony PlayStation 2. Compilation of Sonic games not previously collected in the 2002 *Mega Collection*, plus Sonic game music and concept art.

SONIC JUMP SONIC NO DAIFUGOU SONIC KART 3D X SONIC THE HEDGEHOG

Digital download games offered through Sonic Cafe service (Japan). *Sonic Jump* re-released in the US and Europe through SEGA Mobile service (2007), Apple iOS and Android devices (2012).

SHADOW THE HEDGEHOG

Nintendo GameCube, Sony PlayStation 2, MS Xbox.
Re-released on PlayStation Network (2013).

AMY'S AMERICAN PAGE ONE

Digital download card game for Sonic Cafe service (Japan).

SONIC RUSH

Nintendo DS. Co-developed by Dimps and Sonic Team.

2006

SONIC RIDERS

Nintendo GameCube, Sony PlayStation 2, MS Xbox, Windows.

SONIC THE HEDGEHOG (2006)

MS Xbox 360, Sony PlayStation 3. Made in celebration of Sonic's 15th anniversary.

SHADOW SHOOT SONIC GOLF 3D SONIC SPEED DX SONIC'S 7 NARABE SONIC THE HEDGEHOG 2 SONIC'S NAPOLEON

Digital download games for Sonic Cafe service (Japan).

SONIC THE HEDGEHOG GENESIS

Nintendo Game Boy Advance port of *Sonic The Hedgehog*, in celebration of Sonic's 15th anniversary.

SONIC RIVALS

Sony PlayStation Portable.
Developed by Backbone Entertainment (USA), specifically for Sony's handheld platform.

2007

SONIC REVERSI HYPER SONIC'S TIME LIMIT TRAIN SONIC'S CASINO POKER

Digital download games for Sonic Cafe service (Japan).

SONIC AND THE SECRET RINGS

Nintendo Wii.

SONIC RUSH ADVENTURE

Nintendo DS. Co-developed by Dimps and Sonic Team.

MARIO & SONIC AT THE OLYMPIC GAMES

Nintendo Wii, Nintendo DS (2008).

SONIC RIVALS 2

Sony PlayStation Portable.
Developed by Backbone Entertainment (USA).

2008

SONIC RIDERS: ZERO GRAVITY

Nintendo Wii, Sony PlayStation 2. Developed in cooperation with CRIWare (Tokyo).

SONIC JUMP 2 SONIC AT THE OLYMPIC GAMES

Released as digital download games through SEGA Mobile service.

SONIC UNLEASHED

(also known as *Sonic World Adventure*). Sony PlayStation 2 and 3, Nintendo Wii, MS Xbox 360. A 2D version became available as phone game in 2009.

SONIC CHRONICLES: THE DARK BROTHERHOOD

Nintendo DS. Developed by BioWare (Canada), and the only role-playing game in the Sonic franchise.

2009

SONIC'S ULTIMATE GENESIS COLLECTION/ SEGA MEGA DRIVE ULTIMATE COLLECTION

MS Xbox 360, Sony PlayStation 3. Collects most classic Sonic games in a 40-plus-game bundle.

SONIC AND THE BLACK KNIGHT

Nintendo Wii. Combines speed with sword fighting battles.

MARIO & SONIC AT THE OLYMPIC WINTER GAMES

Nintendo Wii, Nintendo DS.

2010

SONIC AT THE OLYMPIC WINTER GAMES

Digital download game for Apple iOS devices. Promotional game for the title *Mario & Sonic at the Olympic Winter Games*, yet features only characters from the Sonic universe.

SONIC CLASSIC COLLECTION

Nintendo DS. Emulation of four classic Sonic games: *Sonic The Hedgehog*, *Sonic 2* and *3*, plus *Sonic & Knuckles*.

SONIC THE HEDGEHOG 4 EPISODE I

MS Xbox 360, Nintendo Wii, Sony PlayStation 3, Apple iOS, PC, Android, Windows Phone, BlackBerry (2010), Steam (PC), Android (2012), Ouya (2013).

Episodic download title in '2.5D' side-scrolling style.

SONIC FREE RIDERS

MS Xbox 360, using Kinect motion sensor technology.

SONIC COLORS

(*Sonic Colours* in Europe and Australia). Nintendo Wii, Nintendo DS.

2011

SONIC GENERATIONS

MS Xbox 360, Sony PlayStation 3, Nintendo 3DS, Steam (PC).

MARIO & SONIC AT THE LONDON 2012 OLYMPIC GAMES

Nintendo Wii, Nintendo 3DS (2012).

2012

SONIC THE HEDGEHOG 4 EPISODE II

Steam (PC), PlayStation Network, Xbox Live Arcade, Android and Apple iOS devices, Nvidia Tegra3. Ouya, Nvidia Shield (2013). Co-developed by Dimps and Sonic Team.

SONIC & ALL-STARS RACING TRANSFORMED

MS Xbox 360, Sony PlayStation 3, Nintendo Wii U, Nintendo 3DS, Sony PlayStation Vita, Steam (PC), Mac OSX (2013), Apple iOS and Android devices (2014).

2013

SONIC DASH

Digital download game for Apple iOS and Android devices. Developed by SEGA's Hardlight Studio in the UK. Windows Phone (2014).

3D SONIC THE HEDGEHOG

Nintendo 3DS. Enhanced 3D port of *Sonic The Hedgehog* (1991).

SONIC LOST WORLD

Nintendo Wii U, Nintendo 3DS. Windows (2015).

MARIO & SONIC AT THE SOCHI 2014 OLYMPIC WINTER GAMES

Nintendo Wii U.

2014

SONIC BOOM: RISE OF LYRIC

Nintendo Wii U. Developed by Big Red Button Entertainment (USA).

SONIC JUMP FEVER

Digital download game for Apple iOS and Android devices. Developed by Hardlight Studio (UK).

SONIC BOOM: SHATTERED CRYSTAL

Shattered Crystal. Nintendo 3DS. Developed by Sanzaru Games (USA).

2015

SONIC RUNNERS

Digital download game for Apple iOS and Android devices.

3D SONIC THE HEDGEHOG 2

Nintendo 3DS. Enhanced 3D port of *Sonic The Hedgehog 2* (1992).

SONIC DASH 2: SONIC BOOM

Digital download game for Apple iOS and Android devices.

2016

SONIC BOOM: FIRE & ICE

Nintendo 3DS.

2017

SONIC MANIA

(SCHEDULED). Side-scrolling platform game based on classic Sonic games, developed by (independent AUS developer) Christian Whitehead, Headcannon (USA) and PagodaWest games (USA, UK) for MS Windows, Nintendo Switch, Sony PlayStation 4, MS Xbox One. Expected Q2 2017.

PROJECT SONIC 2017

(SCHEDULED). All-new Sonic Team-built game for MS Windows, MS Xbox One, Nintendo Switch, Sony PlayStation 4. Expected Q4 2017.

THANK YOU

AT SEGA

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