

The Mega Man X Compedium

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Part I

Games

Preface

This document aims to be a compendium of all the knowledge available of Mega Man X games, from main plot/lore to game mechanics, including trivia, fun facts and even glitches/bugs. For each game in the series information regarding story, characters (although only in a superficial way), weapons and game mechanics will be presented, as well as an analysis of each stage including its secrets and boss (with both story-related and game game-related information). Following games analysis, a more accurate and complete description of each character will be presented, combining pieces of information coming from different sources, both in-game and from other official materials.

This document is meant to be accessible and understandable to everyone, from experienced players to new ones, from people who want to learn more about the serie's lore to ones who want to discover tricks and secrets of each game. Moreover it is open for editing to anybody: everyone can suggest additions if something is missing or modifications if any mistakes were made.

Finally, one last remark has to be done. This document is not meant to be a guide of any kind, nor for new players or speedrunners. While some tips for both of these categories will be given, what is presented here should not be taken as a guide of any kind.

How to read this document

While reading the document, readers will notice words or numbers with different colors. These are actually links that connect various parts of the document to each other to allow the reader to jump between various sections and chapters. More precisely:

- **Blue text** are links to other sections of the document, typically with a deeper analysis of referred arguments.
- **Red numbers** refers to bibliographic references, shown in the text with entry number in the bibliography between squared brackets. Clicking these numbers will bring the reader to the corresponding bibliographic entry.
- **Cyan text** are urls referring to web pages, typically source of bibliographic material.

Furthermore, since in some occasion words and figures are not enough to describe a concept, together with this document a video folder is also included, which contains short video demonstration of what explained in text.

Chapter 1

Mega Man X

Mega Man X was born as a spin-off game of the classic Mega Man franchise for the Super Famicom/SNES consoles (later also for PC) between the 1993 and the 1995 [1]. The game takes place one hundred years after the main franchise timeline, in a world where humans and special robots capable of having feelings co-exists and where X, one of those robots, fights the evil Sigma which aims to eliminate humans in order to create a world only for robots.



In the year 2005 a remake of the game was done for PlayStation Portable, upgraded to a 3D graphic close to the precedent title, *Mega Man X8*. This game (named *Maverick Hunter X* or *MHX* in short) had the purpose to retell the first game's story with some minor changes such as X relationship with Mavericks and

Sigma, which weren't present in the original game. Changes also affected level design, such as Light's capsule positions or Sigma stages, completely different from original ones.

1.1 Main plot (X)

In the year 21XX humans live peacefully with a new kind of robots: reploids. Reploids are a particular type of robots with the ability to make autonomous decisions as well as having feelings and sentiments [2]. However sometimes a reploid's electric brain can undergo malfunctioning making him act dangerously for nearby humans and other reploids. When this happens the reploid is labeled as "Maverick" and has to be stopped, in order to be repaired or disposed of, by a special organization created with the exact purpose to stop mavericks: the Maverick Hunters. Leader of the Maverick Hunters is Sigma, one of the most advanced reploid of the time.

The situation takes a turn when Sigma himself goes maverick, declaring war against humanity and recruiting in its rank other maverick hunters, both willing to follow him or threatened by Sigma himself. In order to stop the war X, the main protagonist of the story, decides to join the fight alongside Zero, a close friend of his, on the battlefield, an highway currently under attack. There he is however stopped by Vile, an ex-hunter released by Sigma from prison, in his ride armor. Only the intervention of Zero himself, which forces Vile to flee, allows X to escape safely.



Figure 1.2: Zero saving X from Vile.

The two then decide to split: while Zero goes to locate the enemy fortress, X has to deal with the threat of Sigma's mavericks. As X defeats all the eight mavericks, acquiring in the process new power-ups and strength, he joins Zero who in the meanwhile has located the Sigma fortress flying over the sea. At the entrance however they are immediately confronted with Vile and his ride armor, which first manages to capture Zero (that challenged him in a one-versus-one fight) and subsequently X too. As Vile laughs at his victory, Zero manages to escape from his cage, latches on the ride armor and detonates himself, destroying it but leaving Vile untouched. Seeing his friend's action gives X new energy, allowing him to break free too and face Vile, now vulnerable, defeating him in the process. Before going on however X listens to Zero's ultimate words [3].

Zero informs X that his auto-repair system cannot handle all damages taken and that X has a power even greater than his own, which makes him capable of facing Sigma (eventually Zero also gives X his own Z-buster if he didn't manage to get his own buster upgrade).



Figure 1.3: Zero, near death, giving X his arm cannon.

After that, Zero dies and X proceeds infiltrating Sigma's fortress and his dangers, including re-facing all the previously-defeated mavericks. At the end X arrives at Sigma's place where Sigma is waiting. At first Sigma acts with arrogance, looking surprised that X has managed to reach him with his only forces and claiming he could destroy him without effort. However he decides to leave the pleasure to his pet Velguarder, as he leaves the scene to assist at the fight. After X successfully manages to destroy Velguarder, Sigma changes his mind a little, understanding why Zero placed his trust in X and claiming X could have been a hunter as strong as he was. After that he proceeds to confront X on his own, but gets defeated and his body destroyed so that only his head remains, which subsequently proceeds to merge with a giant wolf-based mechaniloid in the room, giving Sigma a new body to fight X. However X succeeds in destroying the new body as well, effectively getting rid of Sigma for good. As Sigma blames X for destroying his dream of a world only for reploids, Sigma himself and the fortress start to explode, forcing X to teleport to the outside. In the end X ponders about the destruction he helped to generate, on the sacrifices made for the victory, and questioning if choosing to fight was the right choice, meditating if another option was possible. As the flying fortress sinks in the ocean, X realizes that he will have to fight more battles before having the answers he needs. After the game's credits, it is however revealed that the next battle will not take long before occurring, since a message from Sigma is played, where the maverick states that his spirit is still intact and waiting for a new body to be built to face X again.



Figure 1.4: Sigma’s fortress sinking in the ocean and Sigma’s final message to X.

1.2 Main Plot (*MHX*)

While being for the major part similar to the original plot, *Maverick Hunter X* takes some divergence regarding characters relationship as well as X’s background [4]. One of the main divergence points regards X’s story prior to the war’s beginning. Next is a summary of *Maverick Hunter X* differences respect *X1*.

- An in-depth background of the war is given, via the “Day of Σ” OVA, explaining how Sigma started his revolution. Here X’s background is also changed, now already being a Maverick Hunter (in contrast with the original, where no information is available) serving in the 17th Elite Unit alongside Zero and commanded by Sigma himself. X’s hunter rank is B (in contrast to Zero’s SA rank) due to his kindness and pacifist spirit making him prefer dialogue over fighting, traits which most mistake for weakness. The only ones suspecting of his true potential are again Zero and Sigma.
- Another character with an expanded background is Vile. Here he aims to destroy both X and Sigma, to create his own world, hence following Sigma plans only due the fact some objectives they have match.
- A main difference between games regards the final portion of the story [5] and in particular the final level’s layout. In fact, while in the original X and Zero immediately face Vile as they enter Sigma fortress, here X first travels through the fortress, facing previous bosses brought back to life, and only at end he meets with Zero and is stopped by Vile. As the main story, however, Vile captures both of them, resulting in Zero sacrificing himself and X destroying him.

- Finally, even Sigma has a different attitude regarding X due already suspecting X's great potential. In fact he first tests X by making him fight Velguarder (in contrast with the original game, where Sigma uses Velguarder thinking to be sufficient to defeat X) and then challenges X himself, ending in the same way as the original story.

1.3 Main Characters

1.3.1 X



Figure 1.5: X

X (see chap. 3 for full information) is the first type of a new kind of sentient robot capable of having feelings and making decisions of his own, developed by Dr. Thomas Light in the year 20XX. Being provided with great power, Dr. Light needed to ensure X's integrity by running a series of tests which would have required thirty years to be completed. Unlikely, Dr. Light's lifespan didn't allow himself to live longer to complete all tests, so he sealed X in a capsule capable of running tests in autonomy.

In the year 21XX X's capsule is found by Dr. Cain (chap. 7.1) during an archaeological expedition [6], [7]. Dr. Cain awakens X and, using Light's designs and X's help, develops a new kind of robot which he names "Reploids" which quickly integrates in the society due their great contribution in doing hard tasks. X however remains questioning about his place in the world and the future Dr. Light wanted for him. Despite this, when the evil Sigma starts his war against human kind, X is forced to step up and fight in order to restore peace alongside his friend Zero.

What is told until now refers to the original role of X in the *X1* game. Nevertheless, as stated before, *Maverick Hunter X* re-write X's story by providing a new background for events prior to Sigma's revolt. In this continuity Dr. light seals X away not for testing his integrity, but rather believing the world not to be ready for X's technology and potential. Here Light is firmly convinced that X has a good spirit and that he will use his power to achieve peace [8].

Moreover after his awakening X joins the Maverick Hunters (which do not happen in the original story), serving in the 17th Elite Unit, alongside Zero and under the direct command of Sigma. Despite having great potential, however, X's hunter rank is only B (in contrast with the SA rank of Zero) due to what seems to be his lack of decision during battle. In reality this is caused by his pacifist nature, making him reluctant to fight and preventing him to use his real power [2]. Nevertheless, when the evil Sigma starts his war against human kind, X is forced to step up and fight in order to restore peace together with Zero.

1.3.2 Zero



Figure 1.6: Zero

Fighting alongside X against Sigma is Zero (see chapter 4). In the original *X1* game, very little information is given regarding Zero, except being a friend of X and the new leader of the Maverick Hunters [6], having the highest rank above all hunters which didn't side with Sigma. Different is the situation in the *MHX* game, where Zero's relationship with X is explained better, the former being a close friend and a mentor to X in the 17th Elite Unit, having an SA hunter rank and working under Sigma. Here it is also stated how Zero repels evil with all his strength, fighting merciless against Maverick, Sigma included [2].

In any case, Zero's story is the same for both games. He first appears at the end of the highway saving X from Vile's grasp, and asking X to take care of Sigma forces while he locates the enemy hideout. Next he's seen at the entrance of Sigma fortress where he acts as a decoy to let X sneak inside. Lastly Zero is seen for the last time at the final battle with Vile, where he sacrifices himself to destroy Vile's armor and allow X to defeat him. Finally with his last words he asks X to go and take down Sigma, eventually giving X his own Z-buster, in case X hasn't upgraded it yet.

1.4 Game Mechanics

Mega Man X's gameplay stays faithful to its original series by being a 2D hybrid between a run'n'gun game and a platformer, where the main protagonist (X in this case) has to clear different stages in order to unlock the final area of the game. Each stage has its own theme, contains a certain number of items to collect (depending on the stage it could be one or more) which may require other power-ups to be collected first in order to be obtained (typically bosses weapons). Finally at the end of the stage a boss waits, which has to be defeated in order to clear the stage and which will give X a new weapon based on one of his attacks. As in the original series all main stages can be accessed in any order and all bosses presents have a "weak point" corresponding to a weapon obtained from defeating one another boss first. The "weak point" typically consists of a weapon dealing more damage to the boss, but sometimes other effects can occur, such as stunning him or preventing the boss from doing certain actions.

X1 introduces however some new mechanics which will later define the series [9]:

- Dash: X, via the boot parts, can dash and move faster, as well as jump higher via a dash-jump. It can be considered an evolution of the sliding mechanism, as it is tied to a specific button instead of a combination of two buttons.
- Wall-jumping: X can jump onto walls in order to climb them or can slide down to descend slowly. He can also dash-jump off to a wall to cover a greater distance.
- Armor parts [1.6]: By finding Light's capsules (four in total) X can be upgraded unlocking new powers which can help the player during the game.
- Sub-Weapon charging [1.5]: via the buster upgrade, X can not only charge his main X-buster, as in the main series, but he can also charge his other sub-weapon to increase damage dealt or change their functionalities.
- Heart tanks: beside classical Sub-tank X, eight heart tanks are also scattered in various stages (one per each). By picking them up X's energy grows by two, starting from 16 up to a maximum of 32 [10].
- Stage interactions: although a very limited feature, by clearing certain stages, other ones will be affected and change in some portions.

1.5 Weapons

Here is a list of all sub-weapons available in *Mega Man X / Mega Man Maverick Hunter X* ([11], [12]):

1.5.1 Homing Torpedo

When equipping this sub-weapon, X gains the ability to fire up to two (three in *MHX*) [13] torpedoes capable of tracking enemies. As they pick up speed, they home in on the closest enemy and pursue it. When charged X will release a fan of four (six in *MHX*) fish-shaped missiles with greater speed and attack power which home better to enemies. This weapon is obtained after defeating Launch Octopus [1.8.2].



Figure 1.7: Homing Torpedo sub-weapon's regular and charged attack.

1.5.2 Chameleon Sting

The Chameleon Sting, obtained after beating Sting Chameleon [1.15.3], emits a single straightforward laser which then splits into three directions: forward, up-forward, down-forward. In *MHX* it instead directly emits three lasers, which can be angled diagonal-up and diagonal-down and are slightly faster. In both games the charged version makes X flash in various colors of the rainbow making him invincible to any damage (besides insta-kill hazards like pits) for a short amount of time. In the original game X cannot switch to any weapon while the invincibility is active, meanwhile in the remake is free to fire both with the current one and any other weapon [14].



Figure 1.8: Chameleon Sting sub-weapon

1.5.3 Rolling Shield

After beating Armored Armadillo [1.10.4], X will gain the Rolling Shield. By using it X spins energy at high speeds within the X-Buster and launches it as an energy shot that rolls along the ground. The generated projectile is about the

same size as X (half in *MHX*) and will roll following the ground until making contact with an enemy or disappear after a while. Only in *MHX* the shield will absorb any projectile directed toward it, as well as dispose of Mets even while hiding [15]. Upon contact with a wall, the shield will ricochet once and disappear up hitting a wall again. When charged X will surround himself with an energy field which eliminates any enemy with less than three hit points that makes contact, but will disappear upon hitting enemies with more than that life value. In the original game while the charged shield is active X cannot shoot nor change weapon while in game, requiring the player to change weapon from the pause menu and thus making the shield disappear.

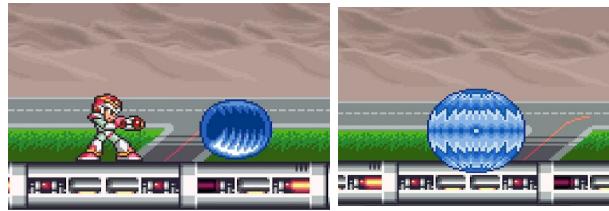


Figure 1.9: Rolling Shield sub-weapon's regular and charged attack.

1.5.4 🔥 Fire Wave

Fire Wave converts the X-buster into a powerful flamethrower, which deals continuous damage to enemies but that cannot be used underwater. Upon pressing the fire button X will start shooting fire from his X buster at a continuous rate draining energy in the process. Once charged X will fire a fireball which creates a pillar of fire upon hitting the ground and that moves forward for a while. However in order to charge the weapon X must keep firing, draining energy in the process. If used underwater the weapon won't work, only producing smoke (but still draining energy) This weapon is obtained once Flame Mammoth is defeated [1.11.4].



1.5.5 💡 Storm Tornado

The Storm Tornado turns the X-buster into a high-power fan that blasts opponents with hard-hitting wind, capable of destroying enemies that stand in its path. It shoots an horizontal tornado which stays on the screen for a short



Figure 1.10: Fire Wave sub-weapon's regular and charged attack both outside and inside water.

amount of time, and then starts moving in the direction X was facing when shot. Due to its length it can hit enemies multiple times, being an effective way to dispose of most of them, especially bigger ones. The *MHX* version has its length halved, which allows it to shoot at a faster rate. When charged the Storm Tornado will create a large vortex covering all the screen in high, which surrounds X in the original game while explodes instead from a shot projectile once it hits a solid surface in the remake [16]. It is obtained by defeating Storm Eagle [1.12.4].

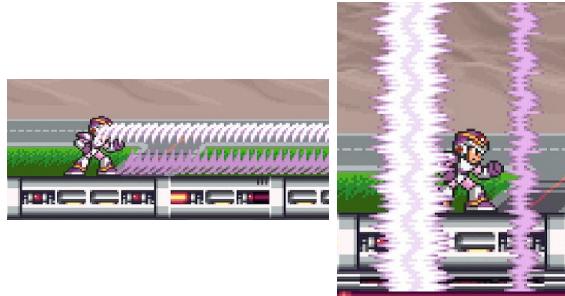


Figure 1.11: Storm Tornado sub-weapon's regular and charged attack.

1.5.6 ⚡ Electric Spark

Electric spark creates high-pressure voltage within the X-Buster and fires it, for a maximum of three shots at time. If the electric spark hits a hard surface, it splits in half, starting to travel up and down along the surface. The charged version of this weapon differs between the original game and his remake. In X1 upon charging X will release two electric columns in front and behind him which will move in their respective directions, while in *MHX* X will generate electricity in all directions from his body, covering the entire screen. This weapon is acquired upon defeating Spark Mandrill [1.14.3].



Figure 1.12: Electric Spark sub-weapon's regular (normal and split) and charged attack.

1.5.7 Boomerang Cutter

By defeating Boomer Kuwanger [1.13.2] X will gain access to the Boomerang Cutter. This weapon fires up to three [17] sharp boomerangs made from a special metal whose trajectory depends on the position X was when he fired them: they will arc upwards if X was standing on the ground, while they will arc downwards if X was in the air. If a boomerang does not hit an enemy, it returns to its owner, and if it passes an item on its way back, it picks up the item and delivers it to its own owner (even bringing dropped life/weapon energy from enemies). If a boomerang successfully returns to X without hitting an enemy, it will replenish the energy used to create it. Upon charging X will release four bigger boomerangs spiraling out of him diagonally. In *MHX* this has been changed with four boomerangs of doubled size which will move back and forward in a straight line a few times.

This weapon has, finally, a special perk. Both Flame Mammoth and Launch Octopus, in fact, while not being directly weak to Boomerang Cutter can be heavily damaged when hit with this weapon, the former losing his trunk and the latter his tentacles, resulting in both being unable to perform certain attacks anymore.



Figure 1.13: Boomerang Cutter sub-weapon's regular and charged attack.

1.5.8 Shotgun Ice

Shotgun Ice is the weapon obtained by X after defeating Chill Penguin [1.9.3]. It absorbs moisture in the air and fires it in crystallized form. If it hits an enemy or a hard surface, it breaks into 5 pieces which ricochet backward and get destroyed if it hits another wall or enemy. When charged the weapon creates a Chill Penguin-shaped ice platform (only in *X1*, while in *MHX* is only a sharp

sled of ice) similar to how the boss creates his ice sculpture. X can stand on the platform which will start moving forward shortly after being created. If X creates the platform and then places himself in the same spot where the platform is creating (due to the fact that the creation is not immediate) the platform will slightly push X left or right depending on its position, enabling some glitches such as wall clipping [1.20], only in *X1*).



Figure 1.14: Shotgun Ice sub-weapon’s regular (normal and deflected shots) and charged attack.

1.6 First Armor

While exploring stages X can run into one of the four capsules hidden by Dr. Light. When X makes contact with the capsule, it will open revealing Dr. Light’s hologram which will talk to X and give him one of the armor parts [18], explaining in the process how it works.



Figure 1.15: First armor X.

The First Armor is composed by the following parts:

- Foot Parts: Namely “Emergency Acceleration System” [6] allow X to dash forward, as well as to perform dash-jumps and wall dash-jumps, also reducing his hitbox’s height a little while dashing. Moreover X can destroy specific blocks by wall-jumping onto them. The capsule containing the foot parts resides right in the middle of the Snow Mountain Stage, being mandatory to take. In *MHX* the capsule is instead at the beginning of the Factory Stage.



Figure 1.16: Foot Part capsule location

- Body Parts: When equipped, X will have all incoming damage reduced by 50%. It is found in the Forest stage after climbing the wall right before the cave. After defeating RT-55J the capsule will emerge from the ground. Meanwhile *Maverick Hunter X* has moved it in the Storm Eagle Stage, requiring the head part to access it.



Figure 1.17: Body Part capsule location

- Arm Parts: Allow the X-Buster to be charged up to a third level, and to charge up special weapons. Originally Dr. Light thought this upgrade to be included in the basic X-Buster [6], but he sealed away X when the upgrade was not ready yet, forcing him to turn it into a modification to give to X only later.



Figure 1.18: Arm Parts capsule location

Despite the capsule itself not being mandatory, the game will in any case

give the player the buster upgrade in form of the Z-Buster if the player arrives at facing Vile without having found the capsule first. While in *X1* there are no differences between the Arm Parts and the Z-Buster, in *MHX* the former allow to shoot the Spiral Crush Buster, which has the same power of the second-level charged shot but is larger and hit multiple times, while the latter deals more damage against bosses than the previous alternative. In *Meg Man X* the capsule resides in the Factory stage, requiring a precise dash-jump and the Head Parts to break some blocks in the ceiling, while in the remake it is in the same place the Body Parts was in the original game.



Figure 1.19: Spiral Crush Buster attack.

- Head Parts: When equipped X will gain the ability to break specific blocks with a headbutt, as well as avoid damage from falling rocks in the Forest stage (file `videos/X/Helmet_protection1.mp4`). The capsule is found in the Airport stage, hidden behind an obstacle marked with a flammable warning which can be destroyed simply by shooting at it, and in Chill Penguin's stage in the remake, this time requiring the foot part to break blocks hiding it.



Figure 1.20: Head Part capsule location

- Hadoken. While not technically being a component of the First Armor, rather a hidden bonus, this technique is stored too inside a Light's capsule

so it is reported here. It allows X to perform the well-known technique from *Street Fighter* by inputting the button combination $\downarrow \searrow \rightarrow$ (with X facing right) + fire button or using the same combination while X is charging and release the charged shot [19] AND X is at full health. The projectile deals 32 points of damage [20] to all enemies, basically one-shooting every non-shielded enemy, bosses included. The only exception is Sigma's final form, and only in the original *Mega Man X*.

Both in the original game and its remake the capsule is hidden in Armored Armadillo Stage (see [1.10.3] for more information on how to unlock it). In any case the player has to keep in mind that, in the original game, this



Figure 1.21: hadoken Capsule location and technique

power-up isn't saved by the password system, meaning that it has to be re-unlocked again if the game is restarted.

1.7 Highway

The Highway Stage (Central HighWay in *Maverick Hunter X*) is the first stage of the game. X arrives here in order to join the fight against Sigma's forces. The stage is rather straightforward, having X travel it while eliminating different enemies, and also teaching the player some basic mechanics such as wall-jumping. The stage can be split into two main sections [21], the second one having more gaps and pieces of the highway falling as X stands on (recognizable by a darker texture color). In the first section of the highway two sub-bosses are presented in the form of **Bee Blader**. At the end of the stage X will be attacked by the **Death Rogumer**, which will start sending towards him several **Road Attackers**.

Once some of them have been destroyed, Vile will drop out the airship and start attacking X with his ride armor. Vile is literally invincible, so there is no point in fighting. Instead as X drops below a certain amount of energy Vile will start shooting an energy projectile toward X and as soon as it connects, X gets trapped and the fight ends, starting the cutscene with Zero saving X.

A common speedrun technique involves having X getting hurt in order to start the boss fight with low health, which will force Vile to immediately shoot the trapping projectile and then run into it, basically skipping the entire fight. Attention however has to be made, since Vile will not stop attacking with the armor, which may result in the player being defeated.



Figure 1.22: X facing Vile.

This stage contains following enemies [22]:

- Ball De Voux
- Bomb Been
- Crusher
- Gun Volt
- Jamminger
- Road Attackers
- Spiky
- Bee Blader

Once finished the introduction stage the player will be presented with the classical boss selection screen typical of the Mega Man franchise, which allows the player to choose which boss to face first. Here stages will be presented in order as they appear on the screen, from left to right, top to down.

1.8 Ocean

The *Ocean stage* (later renamed Subterranean Base in *MHX*) is where Launch Octopus hides. Here X starts from the shoreline to immerse underwater shortly after level's beginning. Once underwater X will jump higher than normal which, combined with dash-jump high reach and the beginning of the level being placed on top of a cliff, makes the player capable of skipping a good portion of stage's



Figure 1.23: Full map with Bosses and their locations

first part [23]. Various fish-based enemies are present, but main difficulties come from the sub-bosses the stage has, being three plus an optional one. In the first part main difficulties are given by spiked pit which X has to jump and from where **Sea Attacker** will spawn in group of three, interrupting X's jump and making him fall into the pit, and from the two **Anglerge** sub-bosses, the second one being particular dangerous, since the floor has two spiked pits and the Anglerge will keep using his vacuum attack to push/pull X into them. Here the best strategy consists in staying at the leftmost platform and keep shooting, dashing to the right once it starts pulling and shooting while it pushes X. Anglerges will also shoot X four serpent-shaped harpoons which will move horizontally and then fall/rise onto X when they're above/below him. Finally Anglerges will rarely shoot a beam of light from their lamp, which can be destroyed. After passing the second sub-boss the second part of the stage begins. Here spiked gaps are less common (although still present) and whirlpools will start to appear at regular intervals and in specific positions. Those whirlpools can be used to propel X up to the ocean's surface. Proceeding in the stage bombs will start dropping from above, fired by a **Cruiziler** enemy. X can either climb a whirlpool to get onto it and destroy its core, making it sink and stop it from shooting bombs, or avoiding it and proceed in the level. Once passed falling bombs, X will find himself into an arena filled with sand. Here an **Utuboros** will start attacking him, rising from the sand, then swimming for a while and then immersing again in the sand. It is invincible for most of its body (which X can stand on), only the head and tail being vulnerable. Although its weakness is considered to be the Boomerang Cutter, due to lack of invincibility frame a single Storm Tornado fired behind its head will destroy him in one shot [24]. After this other sub-boss X has to go forward only for a little before finding himself in front of the boss door.

Here is a list of all enemies present in the stage [25]:

- **Amenhopper**

- Anglerge
- Cruiziler
- Gulpfer
- Mega Tortoise
- Sea Attacker
- Sky Claw
- Utuboros

1.8.1 Heart Tank

This stage only has a heart tank has its collectible. In order to get it the player must first destroy the Cruizer by reaching the ocean's surface via the closest whirlpool, climbing it and then shooting Cruizer's blue core, avoiding in the meanwhile the Sky Claws which the ship will spawn. Once destroyed, the Cruizer will sink and will destroy the ocean's floor, revealing a hidden portion with a large room filled with spiked gaps on the ground. Here another Utuboros (technically the first since the other one resides later in the level) must be defeated, in order to open the door which leads to a Heart Tank. After that X must exit from where he entered and climb the wall where the ship fell in order to return to the main path.

1.8.2 Launch Octopus

Launch Octopus, the “*General of the Deep Sea*” [26] was a Maverick Hunter of the 6th Fleet armada before joining Sigma’s rebellion and setting his base in the dept of the Ocean, in order to attack marine cities with his army of mechaniloids and to cut off shipping routes. In *X1* he joins Sigma due the fact he shares the dream of a world only for reploids, having always doubt about protecting humans, while in *MHX* he is pictured as a military tactician who wants to achieve beauty in combat, considering himself an unappreciated artist of underwater fighting. Only Sigma understood his art, making Launch Octopus side with him [5].

In battle Octopus has two main techniques: Homing torpedo and Energy Drain. In reality he has a third technique, which consists in firing what can be considered a charged version of his Homing Torpedo. Both his types of missiles can be destroyed by shooting at them. Launch Octopus will always start the boss fight with a barrage of homing missiles, to then switch to one of the other two weapons he has. Just like X, Octopus can fire a charged version of his homing missiles, which are piranha-shaped and home much faster than their counterpart. Finally he has his Energy Drain attack. When performing this Octopus will first swim on top of the arena, either left or right, and then start spinning to create a whirlpool to suck X in. If he succeeds he will start draining

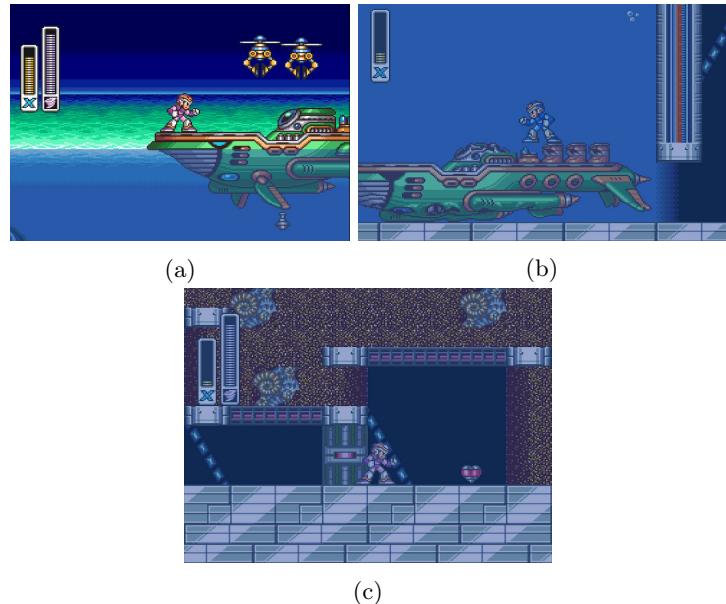
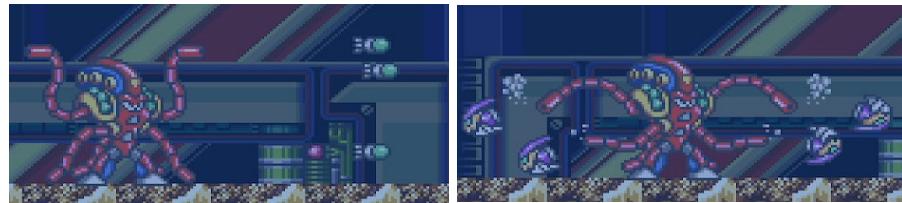


Figure 1.24: (a) Via whirlpool the player can reach the Cruizer on ocean's surface,(b) When destroyed the ship will fall down, breaking the ocean floor and opening a new path,(c) Once destroyed the Utuboros inside the cave, a room will open with the Heart Tank inside



Figure 1.25: Launch Octopus' designs ([26])



(a) Homing Torpedo

(b) Charged Homing Torpedo



(c) Vortex

(d) Energy Drain

(e) Tentacles cut off

Figure 1.26: Launch Octopus' attacks

X energy to replenish his own, prolonging the fight until the player breaks free. Octopus main weakness is the Rolling Shield, which deals him extra damage but can be hard to hit, due Octopus high mobility and the shield colliding with his missiles instead. However Octopus can be also heavily damaged by the Boomerang Cutter, which in three hits will sever his tentacles blocking him to perform his Energy Drain attack.

Officially [27] Launch Octopus is 232 cm tall and 182 Kg heavy, in contrast with in-game information [28] which show a weight value smaller than actual ones (see fig 1.27).

Once Launch Octopus has been defeated X will gain the Homing Torpedo (1.5.1) weapon, as well as cause a flood in the Forest Stage, making water appear near the beginning of the stage. In battle Octopus has two main techniques: Homing torpedo and Energy Drain. In reality he has a third technique, which consists in firing what can be considered a charged version of his Homing Torpedo. Both his types of missiles can be destroyed by shooting at them. Launch Octopus will always start the boss fight with a barrage of homing missiles, to then switch to one of the other two weapons he has. Just like X, Octopus can fire a charged version of his homing missiles, which are piranha-shaped and home much faster than their counterpart. Finally he has his Energy Drain attack. When performing this Octopus will first swim on top of the arena, either left or right, and then start spinning to create a whirlpool to suck X in. If he succeeds he will start draining X energy to replenish his own, prolonging the fight until the player breaks free. Octopus main weakness is the Rolling Shield, which deals him extra damage but can be hard to hit, due Octopus high mobility and the shield colliding with his missiles instead. However Octopus can be also heavily damaged by the Boomerang Cutter, which in three hits will sever his tentacles blocking him to perform his Energy Drain attack.

Officially [27] Launch Octopus is 232 cm tall and 182 Kg heavy, in contrast with in-game information [28] which show a weight value smaller than actual ones (see fig 1.27).

Once Launch Octopus has been defeated X will gain the Homing Torpedo (1.5.1) weapon, as well as cause a flood in the Forest Stage, making water appear near the beginning of the stage.

1.9 Snow Mountain

Snow Mountain (Abandoned Missile Base in MHX) is probably the first stage most people go when starting the game, due to its low level of danger it contains [29], as for having inside the most useful upgrade X get can get, the Foot Parts. The stage, as the name states, takes place in a snow-covered mountain which X has to climb to get to the boss. The stage is divided into three main areas. The first area is where X starts and consists of a path that brings him inside a cave through a series of enemies. Once inside the cave (the second area) X has to climb it while avoiding enemies which drop from higher level, and then surpass some frozen platforms separated by pits until he reaches the



Health Bar	32
Attack	Damage
Contact	4
Homing Torpedo	2
Charged H. Torpedo	2
Energy Drain	1-15

Figure 1.27: Left: Launch Octopus' specifications and according to X1; Right: In-game data [28].

end of the cave. In the third area X is again on the outside. Here he can take a Ride Armor and proceed for a while. With the armor X can also destroy the igloo he finds and that would otherwise start spawning enemies. Passed the first igloo a choice can be made: to keep the Ride Armor and enter the small cave which comes next, where it is request to jump some gaps using the armor while also face another enemy Ride Armor, or use the armor to reach the top of the cave (jumping out of the armor to gain extra lift), basically skipping the lower portion. After that there is a tall wall which the armor cannot surpass, forcing him to leave it behind. Here X has to follow a path full of slopes, gaps and **Snow Shooters**, which will throw snowballs at him and that become bigger the longer they roll on the snowy ground. After passing these enemies, the player will reach the boss door.

The stage contains following enemies [30]:

- **Armor Soldier** (with Ride Armor)
- **Axe Max**
- **Bat Bone**
- **Bomb Been**
- **Flammingle**
- **Jamminger**
- **Ray Bit**
- **Snow Shooter**
- **Spiky**
- **Tombot**

1.9.1 Light's Capsule

In Mega Man X this stage contains the Armor capsule for the Foot Parts, which allows X to dash, also allowing to perform dash-jumps and wall dash-jumps. Furthermore, dashing also reduces a little X's height and hitbox, allowing to dodge certain attacks by dashing beneath them. The capsule is found directly onto the main path after climbing the first part of the cave. Since it is right in the middle of the path it is not avoidable, making it the only mandatory capsule of the entire series.



Figure 1.28: Foot Part capsule location

In the remake *MHX*, instead, this stage hides the Head Parts. The capsule is hidden in the first indoor climbing section, hidden by block breakable only via Foot Parts.

1.9.2 Heart Tank

The Heart Tank of this stage is hidden in the last igloo X meet before facing the section with snowballs. To reach it X has to jump using the Ride Armor. After the first igloo there is a light blue column, right before the cave with the enemy Ride Armor. From the top of the column the player has to jump with the armor and, once reached the maximum height, jump out of it in order to reach the wall which leads to the upper path. Here two other igloos are found which can be destroyed, now that the armor is gone, by using the Fire Wave weapon. In particular the last one contains the searched Heart Tank.



Figure 1.29: Heart Tank location.

1.9.3 Chill Penguin



Figure 1.30: Chill Penguin’s designs ([26])

The “*Glacial Emperor*” [26], better known as Chill Penguin was a reploid of the 13th Polar Division, specifically designed for operating in polar environments also thanks to his small-size body. However, due to the long permanence in the South Pole, away from civilization, Chill Penguin grew tired of his mission, seeking a way to get away from there. Sigma’s rebellion gave him exactly what he needed to return to civilization, allowing him to escape and join Sigma in his fight. There are however some differences in how his story is told between *X1* and *Maverick Hunter X*. In the former, after Sigma started his revolt, Chill Penguin autonomously eliminated his own commander and escaped to join Sigma [2], seizing a mountain base in order to crush nearby cities using avalanches. Meanwhile in the remake it is Sigma himself who took away Chill Penguin from the South Pole by making him join the 17th division together with X and Zero, even before the revolution’s beginning [11]. Later, while facing X, Chill Penguin reveals that, beside leaving the South Pole, he also joined the revolt due the payment Sigma gave him [3]. Another minor difference with the original version is that, in the remake, Chill Penguin seized an abandoned missile base, suggesting his purpose was to use it to attack the cities.

According to descriptions, Chill Penguin is known to be a belligerent, rowdy (sometimes even warped) individual, while also having trouble with his partner Flame Mammoth (1.11.4) due his jealousy of Mammoth size and the latter attitude of bullying smaller reploids.

Chill Penguin is often considered the easiest boss of the game and the first one a player should face due the simplicity of avoiding his attacks, also thanks to the Foot Parts the stage gives to the player. He has four main attacks which he performs at random [31]. When using his Shotgun Ice, Chill Penguin will shoot four frozen projectiles which travel in a straight line, although some of them can fall off and slide on the ground, which shatter upon contact with a wall but can nullify X’s shots if the two meet. Other times instead of his projectiles he will

emit a snowy breath which will create two penguin-shaped ice sculptures and, if X is in range, will also freeze him in place. Sculptures act both as obstacles (X takes damage if he makes contact with them) and as covers since both X and Chill Penguin projectiles will be stopped by them, but can be destroyed if enough damage is dealt to them.

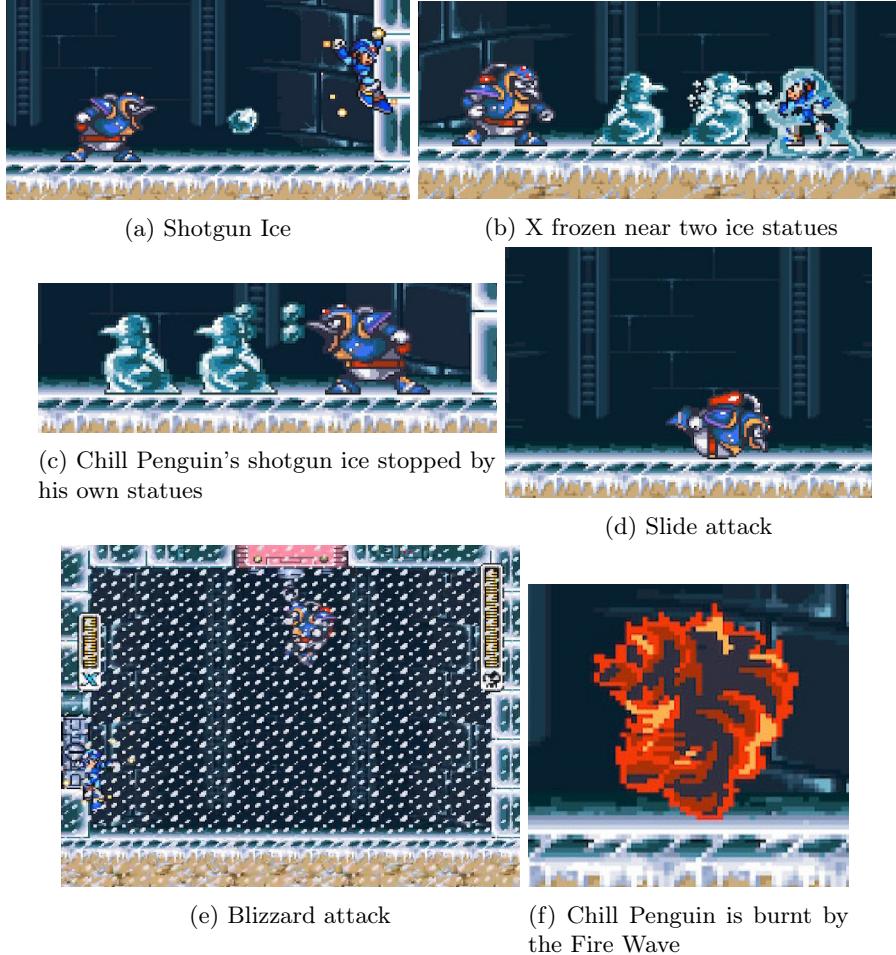


Figure 1.31: Chill Penguin’s attacks

On some occasion Chill Penguin will leap in the air and grab the hook on the ceiling, unleashing a blizzard which will push X and the statues (if present) against a wall, causing sculptures to shatter in the process. Finally he can also slide on the floor for a while, turning immediately in case he hits a wall. While in this state he is invincible, but will also get rid of the sculpture he creates. As it is possible to see, Chill Penguin’s attacks only cover the low part of the arena, meaning the best strategy to fight him consists in staying on the higher part

via continuous wall-jumps, only dropping to hit him when possible. Attention however must be made, since sometimes Chill Penguin will perform a high jump toward X position which can hit him even if he's in the high corner of the room. Besides that he can be hit at any time, even when grabbing the hook, beside when sliding. Penguin's weakness is the Fire Wave, which will burn and stun him for a while, but it has no other particular effect.

After defeating him X will gain the Shotgun Ice ([1.5.8](#)) weapon as well as freezing the lava in the Factory Stage, considerably reducing the danger level of the stage.

Chill Penguin is 163 cm tall and 108 Kg heavy, despite the information screen on the game report being different ([1.32](#)).



Health Bar	32
Attack	Damage
Contact	6
Shotgun Ice	2
Ice Breath	0
Ice statue	4
Sliding	6

Figure 1.32: Left: Chill Penguin's specifications and according to X1; Right: In-game data [[31](#)].

1.10 Gallery

The Gallery Stage (or Energy Mines Ruins in *MHX*) is the stage controlled by Armored Armadillo. Peculiarity of this level are its mine carts on which X can stand and, as soon as he does it, they start moving following the track, increasing their speed as they keep going and destroying all enemies that enter in contact with them. However the player must be careful, as all the carts end their run into pits, bringing X down with them if he doesn't jump off at the right moment. This stage is also famous for containing the secret Light's capsule which teaches X the hadoken technique, as well as being the best place to farm health capsules and lives.

The stage itself is rather simple. Immediately at the beginning a mine cart is present which brings the player forward in the level while also taking care of enemies until it reaches a series of gaps, one of which it cannot jump and falls into. After this sequence only a few small gaps and some enemies separate X from the next section, which begin when he has to fall off a long pit in the ground. Here as he touches the floor a [Mole Borer](#) will destroy the left wall

and start chasing X. This enemy is invincible and its roller can insta-kill X if he touches it, so only two solutions are possible: the first one is to escape to the right, continuing in the level; the second one is, as soon as X reaches the ground, wall jump immediately to the left before the Mole Borer breaks the wall and then jump down, following it from behind (while also gaining access to the sub tank). In both cases the player has to go right to continue. The second part of the stage mirrors the first one, having again a mine cart at the beginning and another Mole Borer at the end, only this time however X will land behind it and has to follow it as it creates a passage in the mine. Finally one last cart ride takes the player through remaining enemies until it reaches an opening on the mountain and flies off over a huge gap, impossible for X to jump. Once in the air the player must jump off the cart in order to land on the other side of the pit (or grab the wall if high enough), where the boss door is.

Following enemies are present in the stage [32]:

- Bat Bone
- Batton M-501
- Dig Labour
- Flammingle
- Metal Wing
- Metall C-15
- Mole Borer
- Spiky

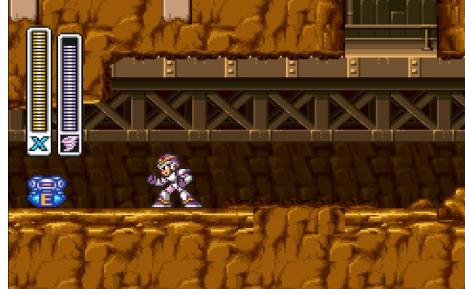


Figure 1.33: Gallery stage's subtank location

1.10.1 Sub Tank

This stage's Sub Tank is located where the first Mole Borer appears. In order to get it the player must, once arrived at the first big gap in the ground, jump into it and then immediately wall-jump to the left, in order to let the Mole Borer break the wall and go right passing under X. Once it is passed, the player can safely jump off and go left to find the sub tank where the Mole Borer originally was.

1.10.2 Heart Tank

The heart tank is located near where the second Mole Borer is found. Once X jumps off the gap he has to chase the mechaniloid and destroy it in time, since as it proceeds it will destroy walls which allow access to the Heart Tank. To do this the Fire Wave weapon is suggested, since it deals massive amounts of damage to it in a short amount of time.

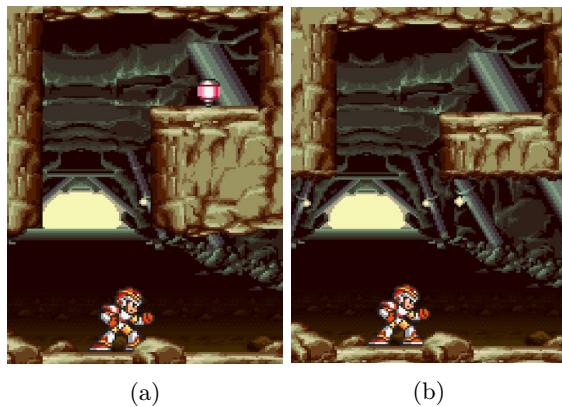


Figure 1.34: Gallery stage's heart tank location. In (a) the Mole Borer has been destroyed and X can wall jump and reach it, while in (b) the Mole Borer has passed and X cannot reach the opening anymore

1.10.3 Hadoken

The hadoken is the last upgrade X can get before facing finals stages. The capsule containing it can be unlocked only if the player has managed to collect every other upgrade in the game: eight Heart Tanks, four Sub-Tank, four armor capsules and all the weapons from bosses. Next the player has to travel through the gallery stage and reach the top of the ledge above the boss door at least three times after defeating Armored Armadillo. At the fourth time, if the player manages to reach the place at full health, near the usual health drop there will also be the secret capsule.



Figure 1.35: hadoken capsule with Dr.Light in Ryu’s attire.

The best way to make the capsule spawn is as follow: As the stage begin, the player has to travel the level (by walking or on the mine cart) until it reaches the zone where a single [Battion M-501](#) drops from the roof (near the first Flamin-gle). Here the player should farm lives by continuing to kill that enemy (which has an increased drop rate for them) and making it respawn by walking away and returning (it is suggested to use a charged Rolling Shield as it destroys it in one hit). After having accumulated enough lives (at least five) the player can proceed in the level until the last minecart is reached, making sure to be at full health by this point. Here X has first to release a charged Sting Chameleon and immediately after ride the cart until over the pit, where he should jump off and grab the ledge over the boss door, reaching the top of it. As X reaches it, he has to jump into the pit, losing a life and respawning at the last checkpoint (before the second Mole Borer). From here the player has to repeat this procedure for another three times until, at the fourth one, the capsule will be there. In the remake the capsule does not require multiple travel through the stage, being available immediately.

Once opened the capsule will reveal Dr. Light wearing a robe similar to Ryu’s one from the Street Fighter series, which will ask X to step into the capsule to teach him the technique. In the Japanese script of the game [33] Light states that he trained under the nearby waterfall a lot to learn it, and that he will now teach it to X who can learn it, as stated again by Light himself in the remake, due to him having a nearly-human soul.

1.10.4 Armored Armadillo

Armored Armadillo was the commander in charge of the 8th armored force, as well as a soldier loyal to his superior, Sigma. Once the latter started his revolt, Armored Armadillo blindly followed his orders, occupying a mine to extract raw materials from which Sigma aims to create weapons for his plans.

Faithful to his name and title (“*Armored Warrior*” [26]) Armored Armadillo fights by using his impenetrable armor both as a shield to deflect X shots and



Figure 1.36: Armored Armadillo's designs ([26])

as a weapon to crush him while using his main attack, the Rolling Shield, which see him turning into a ball and start bouncing off arena's walls while also being immune to any attack. On some occasions Armadillo will also take out the cannon hidden in his forehead and start shooting a sequence of rapid bullets in a straight line before beginning to roll again.



Finally Armored Armadillo can also guard X's attacks, which makes him invincible and, moreover, he allows him to absorb and re-release charged shots which X fired at him.

The main difficulty in facing Armored Armadillo is given mainly by the few times he leaves open himself to hits before turning invincible and start attacking again. To solve this problem his weak point comes into play. Armored Armadillo



(e) Armadillo hit by the Electric Spark



(f) Armor broken

Figure 1.37: Armored Armadillo's attacks.

is in fact extremely weak to the Electric Spark since not only this weapon deals him more damage than others but it also can remove his plating. Once deprived of his armor, Armadillo won't be able to guard himself anymore and will also lose his invincibility while rolling, basically making the fight much easier for the player to manage.

Upon beating Armored Armadillo X gains the Rolling Shield weapon ([1.5.3](#)), but no other effects take place in other stages.

According to information given, Armored Armadillo is 194 cm tall and 232 kg heavy, while in-game information report him slightly smaller and lighter ([1.38](#)).



Health Bar	32
Attack	Damage
Contact	6
Rolling Shield	6
Guarding	6
Head Beam	4

Figure 1.38: Left: Armored Armadillo's specifications and according to X1; Right: In-game data [34].

1.11 Factory

The *Factory Stage* (*Prototype Weapons Plant* in *MHX*) is probably one of the most difficult stage among the eight, due to the high number of dangers X can meet and that can kill him instantly. The level takes place inside a factory which has been designated to weapons production, as the numerous conveyor belts, presses, and molten metal suggest and that X must face before reaching the boss. However if X manages to defeat Chill Penguin before entering the level the metal will become frozen solid, reducing considerably the danger level of the area, as X can stand on it should he fall from a conveyor belt.

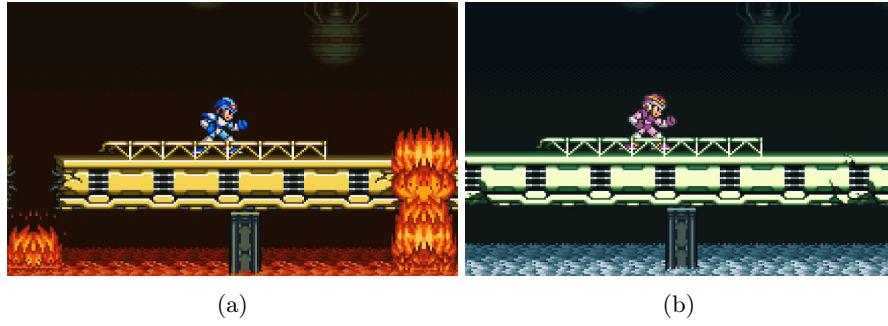


Figure 1.39: Factory Stage before (a) and after (b) defeating Chill Penguin

The stage can be divided into four parts. At the beginning two sets of conveyor belt are present over molten metal which will try to obstacle his movement, together with [Scrap Robos](#) which will keep spawning on them and that will try attack X by crawling at him or by shooting lasers. At the end of this section X has to jump off a hole into the ground which brings him deeper into the factory. The next section is where all level's power-ups are concentrated. It consists of a single big room, again on top of molten metal, without conveyor belts but with multiple platforms at different heights from which enemies will attack X. Next is another section with conveyor belts, this time with the addition of presses which insta-kill X if he gets caught. Finally the last part of the stage sees X walking on pipes with molten iron dripping from pipes, although it only damages X. In this section some ladders are present, but their only purpose is to create side-paths to skip enemies and their utility is questionable. At the end of this section there is the boss door which leads to Flame Mammoth.

These enemies appears in this stage [35]:

- [Dig Labour](#)
- [Hoganmer](#)
- [Metall C-15](#)
- [Scrap Robo](#)

- Sky Claw
- Rolling Gabyoall

1.11.1 Light's Capsule

At the entrance of the big room the player will notice some blocks on the roof which can be broken with the Head parts. In order to do so the player has to dash-jump to the left from the very end of the first platform in order to make X destroy the rightmost block, which will allow him to wall-jump on the remaining one. Once X has started wall jumping the player has to keep going, in order to climb while destroying remaining blocks and then to access the capsule with the Arm Parts. It is a very precise jump, so many tries can be needed. Furthermore it is possible for X to destroy the block but not start to wall jump, falling on the ground. This complicates the situation, since the jump now is even more difficult, but still doable, requiring enough precision to make X land on the remaining block at sufficient height to start a wall jump. If for some reason the player destroys the second block too the climb becomes impossible and the player has to kill himself to reset the area.

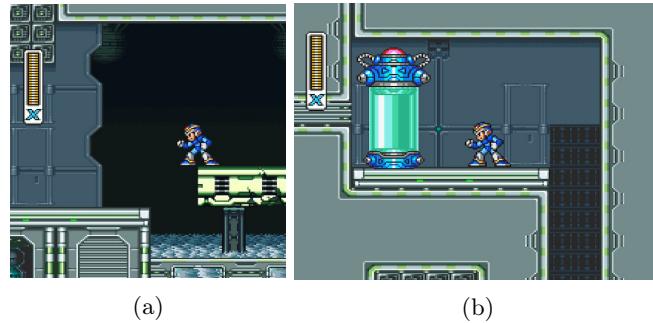


Figure 1.40: Buster upgrade position: a dash-jump is required from (a) to start wall-jumping and break the ceiling to reach (b).

In the *MHX* remake the capsule is easier to get since the roof is lower, requiring no other items to get it. However this time it will contain Foot Parts instead.

1.11.2 Sub Tank

In the big room, while going to the top-right brings to the exits, going to the top-left corner will bring the player to the sub tank. To obtain it the player has first to reach the highest platform (the one with a life up) and then dash-jump to the left to reach the wall and climb it. While climbing X will reach a part of the wall made of block breakable with the Foot Parts. Behind these blocks there is a small path with the sub tank in it.



Figure 1.41: Flame Mammoth’s Sub Tank

1.11.3 Heart Tank

As with the previous power-ups, the Heart Tank too is “hidden” in the big room. In truth it isn’t hidden at all, since it is in plain sight at the bottom-right corner of the room, floating on top of the molten iron. There is no way X can get it with the iron in the molten state, so the only way to get it is to defeat Chill Penguin first, freezing the ground and allowing X to walk on it to reach the Heart Tank safely.



Figure 1.42: Factory Stage’s Heart Tank location. To get it, defeating Chill Penguin is mandatory.

1.11.4 Flame Mammoth

Flame Mammoth, the “*Blazing Oil Tank*” [26] was the captain of the 4t Land battalion, with base in the Middle East, before joining Sigma and being labeled as Maverick. His big size and firepower have always been his pride, making him arrogant and cocky, eventually even leading to enjoy bullying/humiliating smaller reploids (which as [27] states, he even hates), Chill Penguin [1.9.3] [36] included. Mammoth’s only desire was to show his full power and use it to go

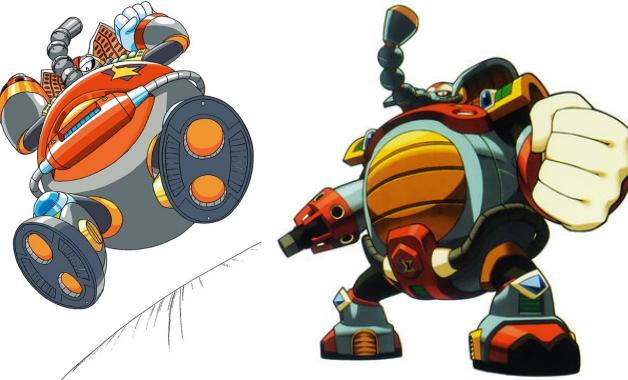
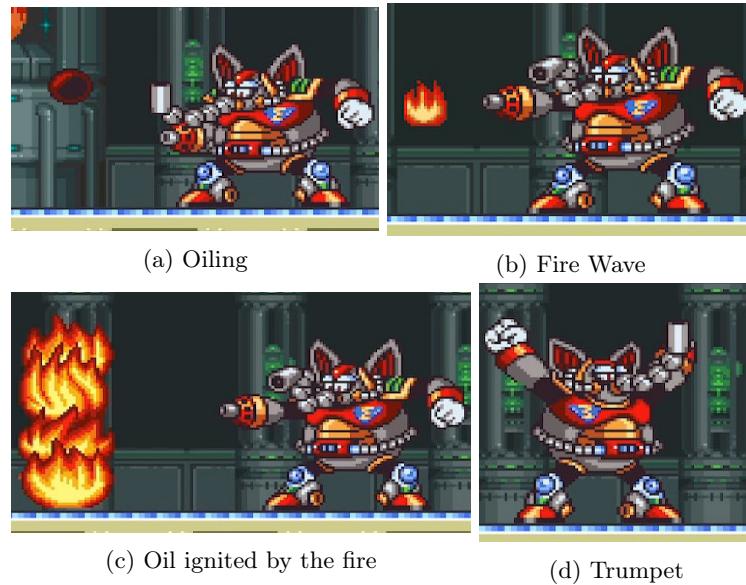


Figure 1.43: Flame Mammoth’s designs ([26])

into a violent rampage, destroying everything he wanted, and Sigma’s rebellion was the perfect way to achieve it. However due to being an extremely arrogant and hated leader, no one from his old battalion followed him [11].



The battle against Mammoth takes place in a large arena on top of a conveyor belt. Mammoth himself commands. He has three main attacks: When he uses his “Oiling” attack he launches a blob of oil (stored in his stomach [27]) from his trunk. The oil itself does not harm X but can set up a trap when combined with another of Mammoth’s attacks, the Fire Wave. With this attack, Flame Mammoth shoots several fireballs from his buster towards X which fall onto the ground. If a fireball makes contact with the oil, it bursts into a pillar of



(e) Jump Press



(f) Flame Mammoth with
his trunk cut off

Figure 1.44: Flame Mammoth's attacks.

fire. Finally Mammoth can use his “Jump Press” attack, which sees him leaping toward X in order to crush him. Once he lands, a shock-wave is produced which stuns X making him fall onto the ground, if he was on the ground when Mammoth landed. Occasionally Flame Mammoth will also trumpet inverting the direction the conveyor is facing.

Battling Flame Mammoth can be tricky, but is not impossible. While his oil and Fire Wave attacks are rather simple to dodge, the real threat resides in his press attack, which he will use often and, moreover, he will perform from off-screen. The arena in fact is much wider than all others, not fitting into a single screen. This can lead to the boss to attack from outside the field of view of the player, who has to act quickly to dodge incoming attacks, such as Mammoth leaping onto X. Furthermore, as stated previously, his jump attack also creates a tremor which stun X if on the ground, so avoiding his landing may not be sufficient. Flame Mammoth’s weakness is the Storm Tornado which however just deals more damage to him and can dispel his flame attack, but it has no other effect on Mammoth himself. What instead has an effect on Flame Mammoth is the boomerang cutter: three hits will cut his trunk, preventing him to spit oil and to reverse the belt direction.

By beating Flame Mammoth X gains the Fire Wave ([1.5.4](#)) and, by consequence, the access to Chill Penguin’s heart tank (see [[1.9.2](#)]). However, beating this stage has no interaction with other stages.

According to data available, Flame Mammoth is 321 cm tall and 327 Kg heavy (slightly heavier than what portrayed in game).



Health Bar	32
Attack	Damage
Contact	4
Fire wave	2
Oiling	0

Figure 1.45: Left: Flame Mammoth’s specifications and according to X1; Right: In-game data [[36](#)].

1.12 Sky

In the *Sky stage* (or *New Type Airport* in the remake) X starts from the ground and has to climb up the airport structures in order to reach the [Death Rogumer](#) as it leaves, in order to destroy it.

The stage focuses mainly on platforming above bottomless pits and on moving platforms, as it takes place in the sky. Various enemies are also placed on some of this platform in order to obstacle X while jumping. X starts on the ground and has to immediately climb using some rising platforms to reach the airport's roof, while some **Sky Claws** try to grab him and make him fall into the pit. Once on the roof some enemies separate X from the following platforming section. Here a series of platforms moves up and down in an alternate way and on some of them **Flamers** are positioned, which have a good horizontal range and must be destroyed in order for X to step on their platforms. However they are positioned on every other platform, meaning the player can skip them, by dash-jumping from the platform X stands when it's at the peak and landing two platforms ahead, in another empty one. Following this part, there is a pretty straightforward section where X has to defeat more enemies in order to proceed. Finally the last part begins with a series of three platforms above a bottomless pit which will proceed to fall as X steps on them, giving the player little time to jump onto the following one. Passed this X will reach the Death Rogumer itself and, after passing its two cannons, X will stand in front of the boss door. On the far right of the ship, before entering the boss, a weapon tank and a health tank are present onto the ship wing.

The stage has the following enemies [37]:

- **Ball De Voux**
- **Flamer**
- **Gun Volt**
- **Hoganmer**
- **Lift Cannon**
- **Metall C-15**
- **Sky Claw**
- **Death Rogumer's cannons**

1.12.1 Heart Tank

Right at the beginning of the stage, if when the rising platform reaches its top X jumps left instead of right will land onto a platform right above the starting point but not accessible from below. On this platform is where the Heart Tank is.

1.12.2 Sub Tank

After reaching the airport roof the player will find a **Lift Cannon**, a cannon on top of a platform which rises and lowers as the cannon spins. Once the enemy is destroyed the platform will fall down, only to rise again if X stands on it,



Figure 1.46: Sky's Heart Tank location. A dash-jump from (a) to the left brings the player to the Heart's location (b).

bringing him near a window X can destroy and enter the tower. Here a [Gun Volt](#) is present and, as X destroys it, all windows will shatter, opening and exit on the opposite side X has entered. At the end of this tower is where the Sub Tank is.

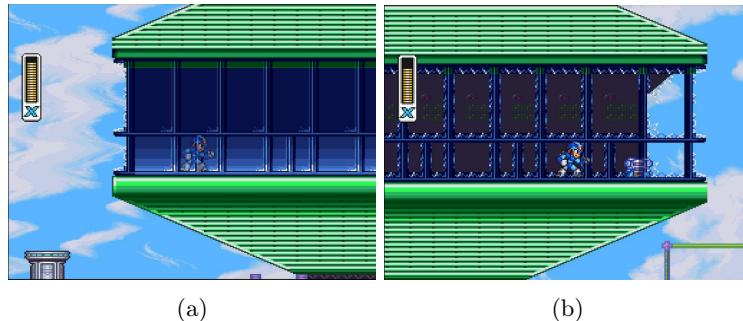


Figure 1.47: Airport's Sub Tank location. From the top of the platform X has to break the window and enter the tower. At the end is where the Sub Tank is.

1.12.3 Light's Capsule

While traveling the stage the player may notice that some locations present walls which incorporate canisters bearing a flammable mark onto them. These objects are not background but breakable objects which hide secret paths. While it is logical to think the Fire Wave weapon is necessary to detonate them, this is not true and X buster's charged shots can work as well, only requiring a few more shots. Most of these secret paths lead only to small rooms with single health tanks or life up, but the one near the pylon after the moving platforms' sequence (which also presents a slightly different color pattern) hides the secret path which leads to the Head Parts capsule.



(a)

(b)

Figure 1.48: Head parts location: by destroying the fuel tanks the capsule is on the right.

In *MHX* this capsule contains the Body Parts instead, placed in the same location as the original game. However to reach it the Head Parts are required since the entrance is closed by some breakable blocks.

1.12.4 Storm Eagle



Figure 1.49: Storm Eagle's designs ([26])

Storm Eagle was the taciturn, calm, careful strategist and leader of the Maverick hunters' 7th Airborne Unit [38]. Although not talking much and being difficult to approach, Storm Eagle was a very popular leader among his men [11]. Loyal to his job as Maverick Hunter, when the rebellion broke out Eagle's first reaction was to haunt down and challenge Sigma. However Sigma was no match for him, and Storm Eagle was forced to surrender. It not clear

however if him joining Sigma was mostly due simply to an self-preservation instinct (as the original game and the collection hint [2]) or due his pride, which forced him to follow Sigma even if reluctant (hinted in the remake). In both cases Storm Eagle ended up controlling the Death Rogumer, a new type of aerial battleship (the same one X meets at the end of the Highway Stage from which Vile descends).

The difficulty of Storm Eagle's battle can vary a lot depending on whether X has already obtained the Foot Parts [1.9.1] or not. This is due the fact that most of Storm Eagle's attacks (two out of four) revolve around pushing X off the arena, which is only a long platform on top of a pit, and having the dash completely nullify these attacks. In particular these two attacks are his Gust [38] and Storm Tornado.

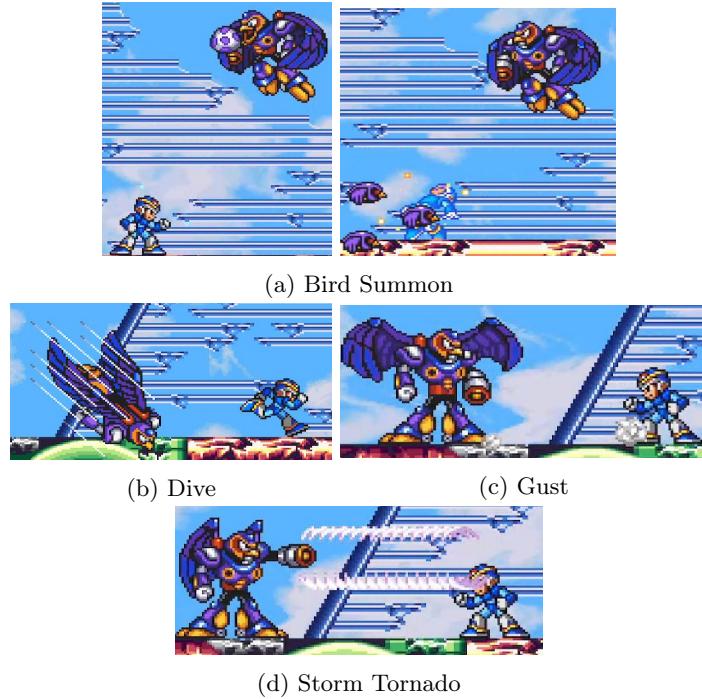


Figure 1.50: Storm Eagle's attacks.

The former sees Eagle flapping his wings to create a rush of air which push X away at a slow rate and simply walking can prevent X from falling, if he has enough space left, while the latter generates a horizontal tornado which doesn't deal any damage but push X much faster and, without dashing through, can be hard to counter. Beside them, Storm Eagle has also his Diving attack, that makes him rise out of the screen to dive-bomb diagonally onto X several times before returning on the ground. X can either focus on dodging Eagle, which should be rather simple as the arena is tall enough to see Eagle diving in advance,

or can even try to hit him, as he's not invincible while performing this attack. Finally Storm Eagle has his Bird Summon attack, that consists in him shooting out an egg from his beak while hovering mid-air and, if the egg hits the ground, it hatches into four mini bird-like robots which fly towards X.

Storm Eagle's weakness is the Chameleon Sting, which deals him more damage and, thanks to its angle, can hit him better when he's mid-air. Upon defeating him, X will gain the Storm Tornado (1.5.5) and, furthermore, the Death Rogumer will crash land onto the Power Plant Stage cutting the electricity in some section, making the level easier to navigate (moreover the airship will also disappear from the level preview screen and from the level itself, since future revisits will have X exit before the falling platforms section).

Storm Eagle is 250 cm tall and 135 Kg heavy, while his title is “*Nobleman of the Skies*” [26].



Figure 1.51: Left: Storm Eagle's specifications and according to X1; Right: In-game data [38].



Figure 1.52: Airport level preview before and after defeating Storm Eagle. Note how the Death Rogumer disappears.

1.13 Tower

Among all other stages, the *Tower Stage* (or *Fortress Tower*) is the most different due to the fact of extending mostly in vertical. This translates in the player having to climb it via wall-jumping or using moving platforms, with the risk of being hit and falling down back at the beginning.

The first part of the stage sees X climbing a series of platforms placed in a zig-zag pattern and with enemies on them, which will try to attack X while jumping from one to another and make him fall down. Next is a horizontal section in which [Sine Faller](#) will keep spawning and chasing after X which will also have to deal with laser traps that will shoot X if he passes through laser triggers while active. The traps cannot be destroyed, but it is possible to trigger them and avoid lasers if the player moves fast enough.

The third part begins with a series platform one on top of each other, with some of them with a [Mega Tortoises](#) on it (they can be skipped with precise dash-jumps). Once on top the player will reach an elevator with spikes all along the walls. As X stands on it, it will start ascending and going towards some platform with spikes beneath them, which will insta-kill X if he isn't fast enough to dodge them. Other enemies will also spawn and aim at X to obstacle his movements. As the elevator goes up it will start increasing its speed and making it more difficult to avoid the obstacles. Near the end of its ride the elevator will slow down to let X dismount in time, before crashing against the spiked roof. During this part a trick can be performed: if X stands on the rightmost side of the elevator he will avoid all spiked platform, eliminating the major risk factor of this part (see fig. 1.53 or the video file `videos/X1/Tower_spike_climb.mp4` for more information).



Figure 1.53: By standing in this precise position X will not collide with any spikes, even the lateral one, lowering the difficulty of this section.

Finally there are two other climbing sections, one on the tower's outside with moving platforms and enemies on top of them, and the last one, inside, again with enemies on top of moving platforms and on walls as well. At the end of this last part the player will find the boss door.

This stage contains following enemies [39]:

- Dodge Blaster

- Hoganmer
- Jamminger
- Ladder Yadder
- Mega Tortoise
- Ray Trap
- Sine Faller
- Slide Cannon
- Turn Cannon

1.13.1 Heart Tank

This stage's Heart tank is hidden in plain sight right at the end of the outside section, on a large platform near the entrance for the last stage's portion. While being easy to spot, it isn't as easy to get, especially during the stage's first run. Three methods exist to get it. The first and easiest way is to replay the stage after having acquired the Boomerang Cutter and use a boomerang to grab it from the tower's inside, since boomerangs pass through walls. The second way is to use a charged Shotgun Ice from the entrance and ride the platform while midair, to perform a dash jump from it which will give X enough height to grab to the platform's edge (see video file `videos/X1/Tower_heart_ice.mp4`). Finally it is also possible to reach the platform via a pixel-perfect dash-jump which gives X barely enough height to trigger a wall-jump of the platform's edge and subsequently reach its top and the Heart Tank [1.20.2] for information on involved tricks). This last technique is known as *Iceless*.



Figure 1.54: Tower Stage's Heart Tank location.

1.13.2 Boomer Kuwanger

Boomer Kuwanger (lately renamed *Boomerang Kuwanger*) was a former Maverick Hunter of the 17th Elite Unit under the direct command of Sigma (and also

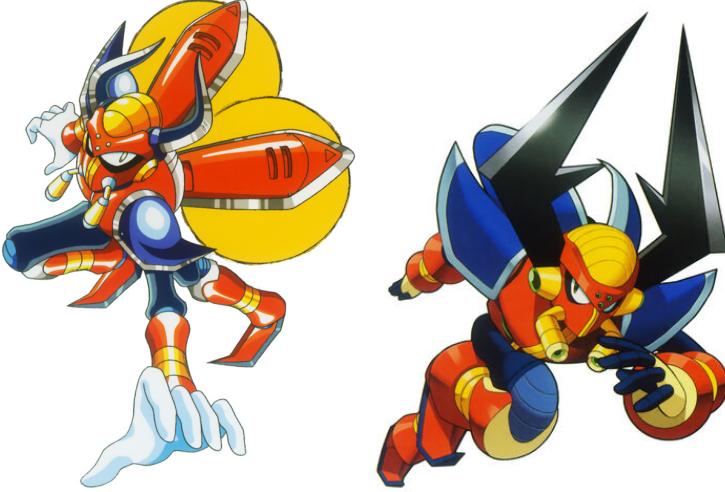


Figure 1.55: Boomer Kuwanger’s designs ([26])

partner of X and Zero in the *MHX* remake). However due to his cold, analytic, almost nihilist [40], and cynical vision of the world, he has never had a true sense of justice nor ideals, acting only following logic and his own interest [11]. This led him to join Sigma’s rebellion without interest in its meanings, but the true reasons behind his choice have never been explained. Some sources suggest Kuwanger went Maverick and followed Sigma only has it was the most logical action [11], others due to his own interest in seeing the events’ turn [41] or even both [40]. Other sources even suggest he went Maverick out of fun [2] or out of spite for humans [27]. Whatever Boomer Kuwanger’s reasons were, after joining Sigma he conquered the tower symbol of the city, to convert it into his own base.

In battle Boomer Kuwanger attacks with his signature ability, the instant transmission, which allows him to teleport across the arena, typically behind his opponent, to strike him with his horns. This teleportation ability worth him the title of “*Blade Demon of Space and Time*” [26]. Once Kuwanger reappears



(a) Dash

(b) Boomerang Cutter

he will perform one attack between Boomerang Cutter and Death Lift. With



(c) Death Lift

Figure 1.56: Boomer Kuwanger’s attacks.

the first one he will throw his horns toward X with a curved trajectory which will then travel back to him, as the name suggests, while when performing the second one, Death Lift, he will grab X with his mandibles and throw him into the ceiling dealing large damage. Finally Boomer Kuwanger also has a dash attack, where he dashes toward X to damage him.

Dealing with Boomer Kuwanger isn’t easy without his weakness, as the continuous teleporting makes him hard to hit with buster shots more than once. Furthermore the player has to keep moving in the arena to avoid Kuwanger to teleport near him and use his Death Lift attack for massive damage.

The boss fight takes a turn when fought with Boomer Kuwanger’s main weakness: the Homing Torpedo. Since missiles shot with this weapons lock onto enemies they can chase Kuwanger even when teleporting, meaning they will always hit him no matter his position. This drastically reduces the fight complexity as X can literally hide in a corner while shooting torpedoes which will automatically hit Boomer Kuwanger, also with increased damage as they’re his weakness.

Health	32
Attack	Damage
Contact	4
Boomerang cutter	2
Death Lift	4

Figure 1.57: Left: Boomer Kuwanger’s specifications and according to X1; Right: In-game data [41].

According to his specifications Boomer Kuwanger is 242 cm tall and 94 Kg heavy (again, different from in-game information which makes him shorter and lighter). More interesting however is the fact Boomer Kuwanger is one of few reploids known to have a family relationship with another reploid (in this specific case a brother): Gravity Beetle.

After defeating him X will gain the Boomerang Cutter weapon [1.5.7] for his own use.

1.14 Power Plant

The *Power Plant* stage (or *Electromagnetic Power Plant* in the remake) is where Spark Mandrill resides. As to be expected from its name, this stage's main feature revolves around electricity in various forms. However if the player manages to defeat Storm Eagle first the Death Rogumer will crash land onto this stage, cutting the power and removing part of the stage's hazards.



Figure 1.58: Power Plant first (a) and after (b) Death rogumer crash land. In (b) remains of the airship are also visibles

The first section of the stage consists of a maze of pipes split into different levels connected by ladders. Here, along with some enemies, electric sparks will spawn and travel along the ground, dealing damage on contact. If Storm Eagle has already been defeated sparks won't spawn, and lights will turn on and off at regular intervals. Passed this part a dangerous one awaits: here the light will shut down at regular intervals making it difficult to spot the level layout, especially pits. Furthermore along the stage [Hotarions](#) will spawn traveling horizontally illuminating the stage along their path. They can be rather dangerous as they move fast and, if the player doesn't know where they spawn, can hit X while jumping and make him fall into a pit. At the middle of the stage a sub-boss is present: the [Thunder Slimer](#). Its main attack consists in leaping into X with his big hitbox or to block X by scattering around bubbles of slime which trap X in place, making him vulnerable to his lightning bolts which it will shoot after having absorbed electricity from the plant. However if the player has cut off the power Thunder Slimer will not be able to perform this last attack.

Passed the sub-boss there is a more traditional section with enemies placed along the way which ends with another platforming part with light going off. Once passed this section the player will reach the boss room.

Following enemies appear in this stage [42]:

- Ball De Voux
- Flammingle
- Jamminger
- Gun Volt
- Hotarion
- Mega Tortoise
- Rush Roader
- Thunder Slimer
- Turn Cannon

1.14.1 Sub Tank

This stage's Sub Tank can be found right at the beginning of the stage in the tube "maze". At one of its dead ends, in fact, the player should be able to spot The Sub Tank inside a room behind a wall, which is however impossible for X to enter, as all its sides are closed. This forces the player to have acquired the Boomerang Cutter and use its ability to grab an item from distance in order to get it, by throwing it while midair as doing it on the ground will cause boomerangs to curve upward, missing the desired item.



Figure 1.59: The stage's Sub Tank.

1.14.2 Heart Tank

While not properly hidden, this stage Heart Tank can be easily missed if the player does not pay enough attention during the level. More in detail, the Heart Tank is hidden at the end of the corridor passed Thunder Slimer, before descending the ladder. It is placed in the rightmost corner, which players could easily avoid if they fall down immediately instead of climbing the wall.

In order to get the collectible two options are possible: by using again Boomerang Cutter's grab ability or with an accurate dash-jump from the wall.



Figure 1.60: Heart Tank location.

1.14.3 Spark Mandrill

Spark Mandrill was originally a Maverick Hunter of the 17th Elite unit directly under Sigma's control. When the latter started his revolt, Mandrill followed his commander without questioning, thus being labeled as a Maverick too. While not being very smart, Spark Mandrill compensated this lacking by holding incredible raw power [11] which, also due his taste for electricity, made him the perfect candidate to seize the Power Plant, to private cities of electric power while also granting Sigma a stable source of energy. Another main trait Mandrill was also known for was his laziness. In fact once seized the Power Plant, he left the remaining work to his subordinates, while he stayed in the sidelines napping and chowing off the electricity produced by the main generator [27].

Better known as the “*Quick-Fisted King of Lightning*” [26] Mandrill keeps faith to his title by fights against X mostly using melee attacks, but he can also use ranged attack in the form of his own Electric Spark whether the situation requires.

Despite his size, Mandrill can move quite fast, especially when using his dash punch. This attack can be hard to avoid if X is near Mandrill since the



Figure 1.61: Spark Mandrill's designs ([26])

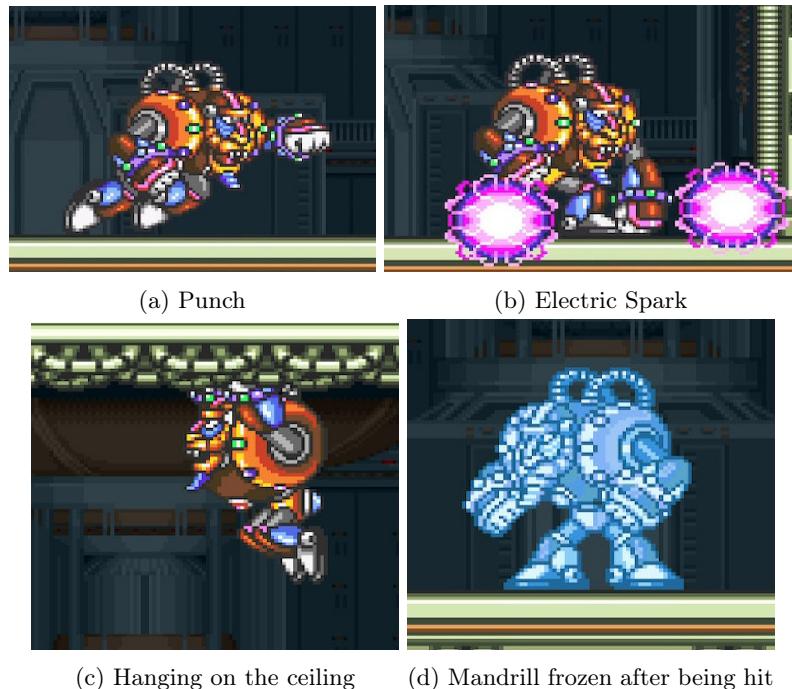


Figure 1.62: Spark Mandrill's attacks.

punch comes out at high speed, while is easier to avoid when far from him, since Mandrill's dash speed is relatively low. As said before Spark Mandrill can also attack from the distance using his Electric Spark. With this move Mandrill punches the ground producing two orbs made of electricity which travel in split directions along the ground and also along walls. These orbs move relatively fast but can be avoided with a jump at the right timing. Finally Mandrill will sometimes jump and hang to the ceiling and move toward X, dropping down when he passes below him.

Spark Mandrill weakness is the shotgun ice. This weapon is extremely effective against him since not only it deals more damage and can hit him everywhere, thanks to its ricochet ability, but most importantly it freezes him in place, also making him fall if hanging on the ceiling. Once frozen Mandrill will reset his attack pattern, which means that if stopped while attacking he won't complete the attack once defrosted, but he will start a new one. More importantly Mandrill lacks invincibility frames when the ice shatters that makes him vulnerable to a second hit. This leads Mandrill into a deadly loop in which he gets frozen, breaks free and gets immediately frozen again without having the chance to attack. The time window to hit Mandrill as he breaks free isn't wide, but is large enough to allow most players to use this technique. Because of how much Mandrill's weakness trivialized the fight, over time internet users coined the term "*Spark Mandrill Syndrome*", which is used to indicate a boss that becomes very easily due to an exploit or a weakness.

According to his specifications Spark Mandrill is 305 cm tall and weighs 394 Kg (slightly heavier than in-game information). Upon defeated X will gain the Electric Spark [1.5.6] weapon.



Figure 1.63: Spar Mandril's specifications.

1.15 Forest

Last but not least of *X1*'s main stages is the Forest (or Recon Base Ruins). This is a rather plain and straightforward level with no particular gimmicks involved or secret paths. Finally this is also one of the few stages which change



Health	32
Attack	6
Contact	6
Dash Punch	6
Electric Spark	4

Figure 1.64: Left: Spark Mandrill’s specifications and according to X1; Right: In-game data [43].

depending if another boss has been defeated before: in this particular case if Launch Octopus is gone the Forest will be flooded. However this doesn’t have an impact on level’s difficulty, in contrast to other stages with this feature.



Figure 1.65: Forest stage before (a) and after (b) the flooding caused by Launch Octopus’ defeat.

The beginning of the level sees X teleporting in the middle of the forest. From here he must proceed to the right fighting enemies, some of them also disguised as bushes, until he reaches the entrance of a tunnel. From here there are three possible paths: if X climbs the wall above the tunnel he will reach an area with the optional miniboss **RT-55J** and the Armor Parts; if he slide down the pit he will reach a hidden cave with the Heart Tank; finally if he proceed straight he will go on in the stage. While in the tunnel an earthquake will cause rocks to fall from the roof, damaging X if they hit him. Moreover enemies will also fall from the roof: they’re **Crag Men** which disguise themselves as rocks and fall onto X as he passes beneath, only to transform after hitting the floor. This section is far less dangerous if X has either defeated RT-55J (which is the earthquake’s cause) or obtained the helmet parts (which makes X invulnerable

to falling rocks). In both cases Crag Men will always be present.

The last portion of the Stage is a Ride Armor section. Right at the beginning X is given a Ride Armor to proceed in the stage, which now presents large ponds of mud which makes X and the Armor slowly sink, interrupted by a small platform where the player can stand on. While X can free himself by repeatedly jumping, once the Ride Armor has sunk it is gone. This can be problematic since near the end enemies Ride Armors will start attacking and can be tough to take down without using one too. At the end of this stage's portion the player will find the boss door.

Following enemies appear in this stage [44]:

- RT-55J
- Amenhopper
- Armor Soldier(with Ride Armor)
- Axe Max
- Crag Man
- Creeper
- Hoganmer
- Jamminger
- Mad Pecker
- Planty&Iworms

1.15.1 Light's Capsule

The armor part is found near the beginning of the stage, before entering the tunnel. If X climbs the wall above said tunnel (reaching it by a dash-hump from above the pit) and proceed right he will reach an arena which will immediately close the exit with some falling rocks, and the RT-55J miniboss will appear. His main attack consists of using his claw to grub X (or pull itself towards the wall if the claw hits it) or, if X is out of the claw's range, jump onto him. Its weak points are the head and his whole body, which however is covered most of the time by its claw, which is instead immune to all attack. This means that beside specific occasions (such when it throws the claw), the main spot to hit is the head. Due to the lack of invincibility frames, the Storm Tornado is the best choice, although the Boomerang Cutter is considered its main weakness [45]. As the fight proceeds RT-55J will start smoking, indicating the fact that his health bar is low. Once the miniboss has been defeated the Light Capsule with the enhancement(Armor parts in the original, Buster parts in the remake) will rise from the ground.

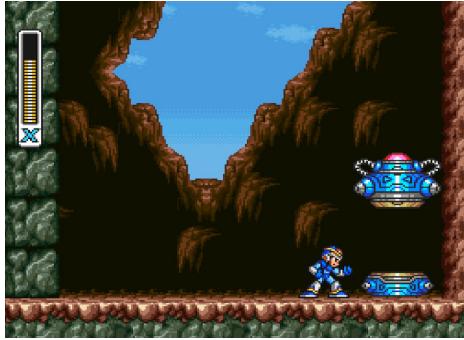


Figure 1.66: Body part's capsule location.

1.15.2 Heart Tank

The Heart Tank position is mirrored with the Armor Parts. To reach it X has to slide down the pit near the beginning of the stage to find a wall breakable by the Foot Parts which leads to a small cavern. Once inside the Heart Tank will be on a small platform in the top-right corner of the room, above a bottomless pit. X cannot reach it normally with a dash jump due the distance, but he can if the cave is flooded as a consequence of defeating Launch Octopus, thanks to the extra height X gains when jumping underwater. Doing a wall dash-jump from the cave entrance is not recommended, since X will hit the roof and fall down into the pit.

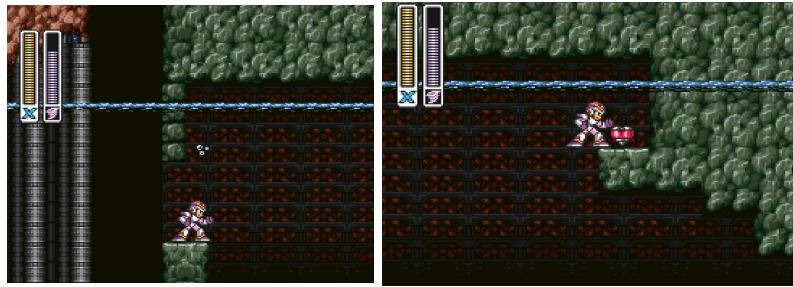


Figure 1.67: Forest stage's Heart Tank location

1.15.3 Sting Chameleon

Sting Chameleon once belonged to the Maverick Hunter's Ranger Unit (namely 9th Special Force [27]). He was a very high-skilled Hunter which however was never worth a promotion due his sly, sneaky and sharp-tongue nature, which made him unpopular [2] among his commander and the other members of his unit. Furthermore Sting Chameleon's preference for strategy and his strong belief in the "*By any mean necessary*" mantra worth him the title of coward [11].



Figure 1.68: Sting Chameleon’s designs ([26])

Once Sigma started his riot, he saw an opening to rise through ranks and prove what he was capable of. Sigma then proceeded to put him in charge of defending the front-line base in the forest.

Sting Chameleon uses three main weapons when fighting [46]: his natural ability to blend with the surrounding, which makes him almost invisible to enemies, his long tongue, which he use to deliver high-speed attacks or even to hang himself around, and his main projectile, the Chameleon Sting, which he shots from his tail. These weapons all translate in attack he can perform while battling X at the end of the Forest Stage. His main method of movement is his Transparent Movement, which makes him transparent and invincible. After a short amount of time Chameleon will reappear, usually hanged on the background, ready to attack X. The player can however spot his position due the distortion he causes when moving, and intercept him before he launches his attack. If Chameleon reappears near X this means he will use his Iron Tongue attack, which strikes the player by rapidly extending his tongue, even up to three times in a row. Otherwise if he reappears in a top corner, then he will use his Chameleon Sting attack, shooting a sheet three of projectiles by swinging his tail. Finally Chameleon can also hang to the roof by using his tongue and start shaking, causing spikes to fall from the roof (Thorn Rain) which will damage X, even with the Helmet Parts equipped.

While fighting Sting Chameleon without the correct weapon is not trivial, everything changes when using the Boomerang Cutter, his weakness. Although at first it seems this weapon only does increased damage to him, since it does not sever him like Flame Mammoth or Launch Octopus, at a more accurate analysis it is possible to see this weapon force his AI into a loop which can be exploited to end the fight quickly. Once hit Chameleon will, in fact, always move to the opposite side of the room and use his Thorn Rain attack. This means that the only thing the player has to do is stay in the center of the room, shooting some Boomerang Cutters where Chameleon will reappear and, as soon as he gets hit, turn and do the same thing in the opposite direction. The player

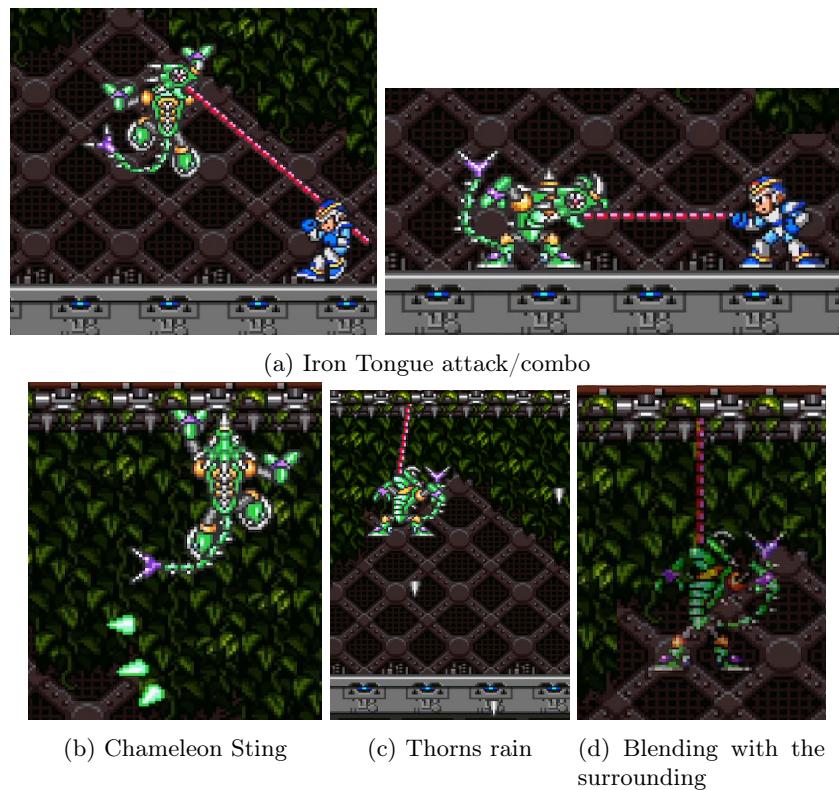


Figure 1.69: Sting Chameleon's main attacks.

hasn't even to take care of weapon energy, as all boomerangs which don't hit the boss will return and replenish the weapon energy used(see video [videos/X1/Sting_Chameleon_boomerang_loop.mp4](#) for an example of what said).

According to data, Sting Chameleon was 177 cm tall and 77 Kg heavy, while his title was "*Frightening Forest's Strike*" [26]. After defeating Sting Chameleon X will add the Chameleon Sting (se. 1.5.2) weapon to his arsenal.



Health	32
Attack	Damage
Contact	4
Iron tongue	4
Torn rain	2
Chameleon Sting	2
Spikes (ceiling)	8

Figure 1.70: Left: Sting Chameleon's specifications and according to X1; Right: In-game data [46].

1.16 Sigma's Hideout 1 (X)

After having defeated all eight stages Zero will contact X telling him he has found Sigma's hideout and asking to reach him. This will unlock the first of the four Sigma Stages. These levels all take place inside the Sigma Fortress and lead toward the final boss. However before starting it is important to note that the game doesn't save the progress between these stages, meaning that all of them have to be done without exiting, or the player will be brought back to the first stage losing all progress done.

The stage begins with a dialogue between X and Zero, where the latter says he will act as decoy to let X infiltrate from the back. After this scene the player regains control of X and can start traveling through the level.

At the beginning X has to face some enemies to reach a wide gap which separates him from the hideout entrance. Over the pit there are moving platforms at different heights, requiring the player to jump from one to another to reach the entrance while also fighting enemies which will spawn and home to X, making jumping across platforms harder as if they hit X he will be stunned and fall. Moreover, moving on these platforms isn't as easy as it looks, since sometimes the game will not register any dash input for a short amount of time if the player has first entered a moving input [19]. Basically this means that if the player starts moving while on one of these platforms, for about six frames all dash input will be ignored messing with movement and, probably, resulting

in a death as X jumps off the platform without enough speed to reach the next one. To avoid this it is suggested both not to stop on these platforms or to directly input the dash command when start moving. Furthermore it is also possible to reach the entrance without needing to use all platforms. In fact the third platform brings X near the fortress's basements which are considered as a solid wall where X can wall jump. Although not easy it is possible for the player to climb this portion (while also dealing with enemies, so a protective weapon such as charged Chameleon Sting or charged Rolling Shield is suggested) and reach the entrance.

Following the pit part is a more regular section with enemies placed on the floor and ceiling shooting at X. This part terminates with a series of ladders leading the player to a boss door. Once reached the door Vile will appear and Zero will challenge him, leaving the room before X. After this scene the player can enter the next room, an empty one, and then the following one. Here Vile (inside his own Ride Armor) has captured Zero and now challenges X to a fight which, similar to the first one, the player cannot win. In fact this battle will always end with Vile paralyzing X once he drops below a certain amount of health. After this Zero will break free, leach to Vile and explode, destroying however only his armor and leaving Vile untouched: it is then X's task to finish him by breaking free too, regaining all lost energy and facing him in fight.

After beating Vile one last scene will play with Zero speaking his last words to X, and eventually giving the player his Z-buster (which behave exactly as the Arm parts). The rest of the level is another traditional run-and-gun section with enemies coming from the Tower stage, springs and laser included. This is not a coincidence as once reached the end of this part another boss fight awaits: it's the rematch against Boomer Kuwanger [1.13.2] and the very first of eight rematches the player has to face before reaching the final boss, a tradition shared across all Mega Man games. These fights have nothing new respect original ones, so those same strategies used back then work here as well. However, should the player have unlocked the hadoken technique, and reached the fight with full health, most of these rematches can be won very easily. Boomer Kuwanger, for example, will always use his dash attack as first move, which opens him very well to be hit by the hadoken (file `videos/X1/Kuwanger_rematch_hadoken.mp4`).

Once Kuwanger has been defeated the door to the last portion of the stage will open. Again this is a traditional run-and-gun section leading to the final boss of the stage: Bospider.

Enemies present in the stage are following [47]:

- [Ball De Voux](#)
- [Dodge Blaster](#)
- [Gun Volt](#)
- [Hoganmer](#)
- [Jamminger](#)

- Mega Tortoise
- Metall C-15
- Ray Trap
- Sine Faller
- Spiky
- Turn Cannon

1.16.1 Vile

Vile (or *Vava* in Japanese, chap. 6) was once an SA ranked Maverick Hunter (the highest rank, the same as Zero) belonging to the 17th Elite Unit commanded by Sigma himself. However due to a fault in his electric brain his mission of protecting humans became twisted in the obsessive need to destroy Mavericks at all cost, even ignoring collateral damage. Because of this he was removed from the Maverick Hunter and incarcerated with the suspicion of being a Maverick himself. His time in prisons was not long however since Sigma's rebellion began shortly after his capture and this gave him the perfect chance to escape [2],[11],[27] (or, as seen in the *day of Σ* OVA, Sigma himself set him free). Vile's personality and roles in the *X1* game and its remake are rather



Figure 1.71: Vile's designs ([26])

different. In the original game little is known of the reasons he joins Sigma, but it seems he occupies a high position among Sigma's ranks, first taking part in the attack to the highway and later being the first line of defense in Sigma's hideout. In both situations Vile proves himself to be an arrogant and violent

person, but also a careful one, knowing that Zero is a formidable opponent that he can't face easily and which leads him first to retreat, during the highway attack, and later to set up a trap to capture him when the two face in Sigma's hideout [48]. However he doesn't reserve the same treatment to X, implying the fact Vile doesn't consider X to be a match for him. In the remake Vile has similar traits, but also has a deep hatred for X from the beginning due the high expectations everyone has for him and that Vile doesn't understand. Here Vile's sole purpose is to destroy X at all cost and has no interest in helping Sigma at all, even arriving to the point of claiming he will defeat Sigma and change the world instead¹.



Figure 1.72: Vile in his custom Ride Armor([26])

As stated by Zero himself, Vile “*is designed to be a war machine*”. While this is especially true when he’s inside his Ride Armor, which makes him completely invincible, it is not so true for Vile himself. In battle he only has a few attacks which, while they deal a good amount of damage, are easily avoidable even if the arena has no walls to perform wall jumps.

Vile has only three attacks [48]. The first one is his Electric Shock Round, which is the same projectile Vile uses to paralyze X in the previous fights. Just as other instances if this attack connects it won’t damage X but will stun him briefly, making him unable to move and open to other attacks. His second attack is the Head Bomb. Vile will perform this attack while hovering in the air and will drop two bombs from his knee which, upon contact with the ground, will split into two sparks which travels along the ground in opposite directions. Finally Vile can also dash at X with relative good speed to deal him contact damage. He can perform this attack either by dashing along the ground or by leaping into the air and landing onto X.

The real difficulty of this battle is not given by Vile’s attack but rather by his speed, as Vile will be constantly moving across the screen and even outside. This, combined with his relatively small hitbox, makes him a hard target to hit with normal shots and even his main weakness, the Rolling Shield. Vile however

¹“You underestimated me. I hate that about you... X! There’s nothing you can do! I’ll defeat you and Sigma! Then I’ll change the world” [3]

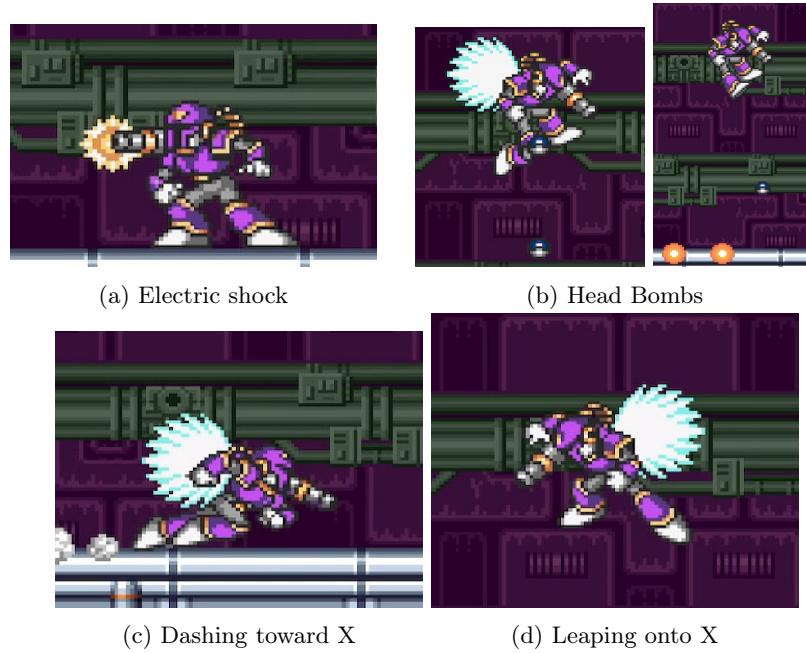


Figure 1.73: Vile’s attack.

Health	32
Attack	Damage
Contact	8
Head Bombs	4
Head-Bombs spark	4
Shock Round	0

Table 1.1: Vile’s in-game data (un-armored).

takes significant damage also from another weapon, the Homing Torpedo. Using this sub-weapon makes the fight slightly easier since it will automatically aim to Vile's position allowing the player to focus on dodging incoming attacks.

1.16.2 Bospider

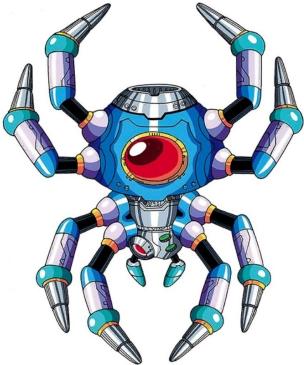


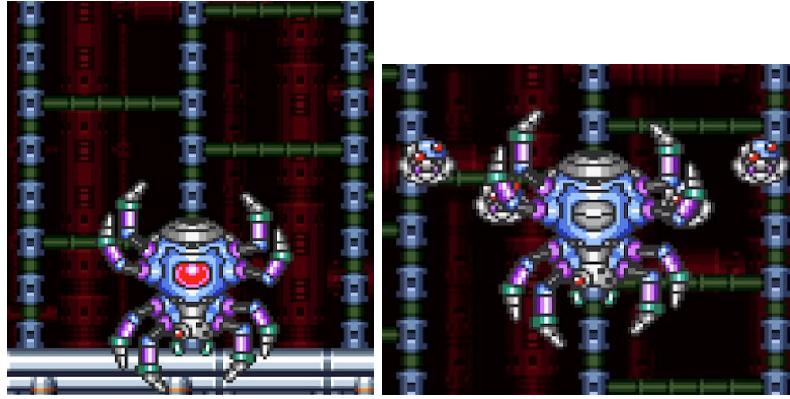
Figure 1.74: Bospider's design([26])

Bospider was developed to be a large-scale crusher. At the beginning of its development it was supposed to become an invincible mechaniloid without defensive flaws, but a design mistake caused him to expose his core when the body received a shock. The same core also powers-up an internal device which enables Bospider to create spider-like child mechaniloids [27]. Sigma took it and made him a guardian of his hideout.

Bospider's fight highly revolve around RNG. Inside the boss room there are four rails which get connected by horizontal lines which generate randomly. The boss will appear on top of one of the main rails randomly and descend following rules of the "Amida Lotter" (Amidakuji), basically changing the rail it descends every time an horizontal line is found. Once on the ground Bospider will shortly expose his red core to be hit before climbing up and restarting its attack pattern. Furthermore Bospider will sometimes spawn four Petitpiders (either while on top or half-way while descending) which will travel along and climb walls until they reach the roof [49]. In order to defeat Bospider the player has to quickly calculate where Bospider will land and hit him with an attack before the core disappears (however besides charged shots and Shotgun Ice any other weapons will deal small damage to him). This cannot be trivial, especially in the later part of the fight where Bospider increases his attack speed.

1.17 Sigma's Hideout 2 (X)

The second hideout stage is rather simple. At the beginning is a short section with moving platforms and enemies which aims to catch X while jumping and



(a) BossSpider Core exposed

(b) Bospider releasing Petitpiders.

Figure 1.75: Bospider attacks.

Health	32
Attack	Damage
Contact	8

Table 1.2: BossSpider's in-game data [49].

make him fall, which ends with a wall X has to climb. On top of the wall is the first boss door of the stage, containing Chill Penguin's rematch [1.9.3]. Next is a long corridor with more enemies, Ride Armors included. These latter foes can be hard to take on as they move very quickly, hit hard and take many hits to be destroyed. Luckily right at the beginning of the section it is possible to find an Armor Soldier standing next to an empty armor. If the player acts quickly it is possible to destroy him before he jumps into the armor, allowing the player to steal it and use it for the rest of the section, otherwise the enemy will jump in and will use the Ride Armor against the player. In this case it is suggested to make some step back in order to let the Armor Soldier and the Armor to respawn, giving another chance to steal it. At the end of the part a vertical section awaits, where there are two paths separated by a wall: on the left X has to climb via wall jumping while avoiding cannons onto moving platforms, while on the right X can climb using ladders, while cannons move along the walls. Either way once reached the summit X will have to rematch Storm Eagle [1.12.4] by jumping a gap between the exit of the tower and the rematch's arena. After the fight, by jumping the gap to the arena's right, the last part of the stage awaits. It is another climbing section, similar to Tower stage's first part with enemies placed on upper platforms attacking X while he climbs. Once reached the top X the player will find the last boss door of the stage.

Enemies in the stage are the following [47]:

- Armor Soldier (in Ride Armor)
- Batton Bone
- Dig Labour
- Dodge Blaster
- Flammingle
- Hoganmer
- Sine Faller
- Spiky
- Turn Cannon

1.17.1 Rangda Bangda

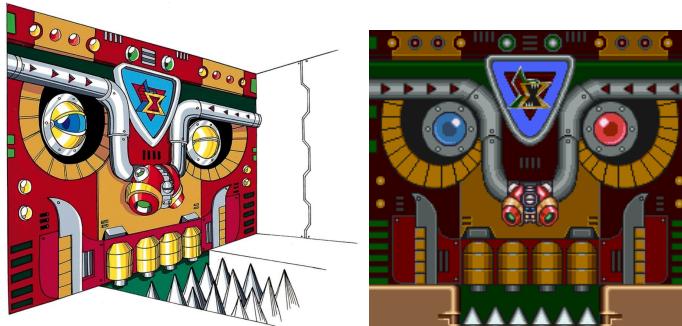
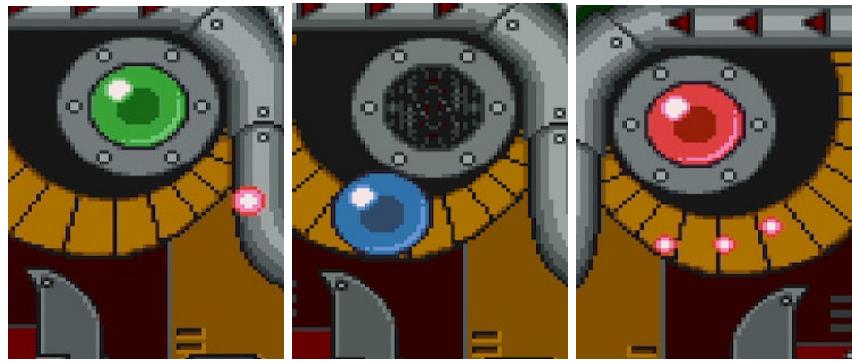


Figure 1.76: Rangda Bangda’s design([26]) and full sprite, with spikes resembling teeth.

Rangda Bangda was designed as a machine to crush intruders which entered Sigma’s hideout. However due a miscalculation his walls only close halfway, forcing his creators to remodel it in order to make its eyes and nose move and attack. Its design is based on a mural Sigma saw in Southeast Asia while still working as a Maverick Hunter, and that pleased him [27].

Rangda Bangda has only four attacks, three of them which comes from its eyes [50]: the green eye will shoot projectiles to X; the blue eyes will home to X position but will not change its direction while moving, meaning that if X moves a little than the eye will miss him; the red eye combines both the blue and green one by either shooting while moving toward X or shooting three projectiles at once. For his last attack Rangda Bangda will close the walls to cover all the floor except for the spike pit and the nose will start bouncing between them (its first movement will always be diagonal upwards [51]). After a while the nose will stop moving, and the wall will open up again.



(a) Green eye attacking

(b) Blue eye attacking.

(c) Red eye shooting three projectiles at once.



(d) Red eye shooting while moving.



(e) Nose bouncing between walls.

Figure 1.77: Rangda Bangda attacks.

Total Health	32
Eyes Health	11
Nose Health	10
Attack	Damage
Contact (eyes)	6
Contact (nose)	6
Eye projectiles (all)	2
Spikes	Instant death

Table 1.3: Rangda Bangda's in-game data [50].

Fighting this boss is relatively easy but it should not be underestimated, since it can deal heavy damage and one single error could mean falling onto the spikes and having to restart all over again. In order to defeat it the player has to destroy all its parts (the two eyes and the nose) by attacking them. To do this its weakness, the Chameleon Sting, can be helpful as it aims diagonally and can easily hit the eyes in all their positions as well as the nose. However it is suggested to save the nose for last as once destroyed the wall won't open again, making it almost impossible to see which eye has opened and where, while also making harder to hit them.

1.18 Sigma's Hideout 3(X)

This stage is the last one before the final boss. Here are concentrated all remaining rematches which miss from previous stages, split up by short sections with enemies and healing items. This stage has the highest number of rematch in the all game, for a total of five out of eight.

X starts at the bottom of a vertical room which X has to climb to reach the first boss: Armored Armadillo [1.10.4]. Here a glitch can also be performed, which allows the player to enter the boss room without making the boss appear, skipping the whole fight (see [1.20.7] for more details). The next rematch is against Sting Chameleon [1.15.3], and after that a descendant path leads to Spark Mandrill [1.14.3]. Next is a small underwater section which preempt the rematch against Launch Octopus [1.8.2] and, following it, a long corridor which ends in the rematch against the last remaining boss, Flame Mammoth [1.11.4]. Once defeated this last boss the player will be able to proceed to fight the stage's final boss.

Enemies that appears in the stage are followings [47]:

- Batton Bone
- Dig Labour
- Gulpfer

- Mega Tortoise
- Rush Roader
- Sine Faller
- Turn Cannon
- Ray Trap

1.18.1 D-REX



Figure 1.78: D-Rex's design([26])

D-REX is the final boss of the third Sigma's Hideout stage. It was originally designed to be a 30-meter tall weapon of destruction based on carnivorous dinosaur from the past but Sigma's fortress was discovered before the project was finished, so its construction was rushed and the only part completed (the head) was mounted onto a movable tank. However its two components (the upper and lower jaws) are not connected and can move on their own, an ability that D-REX uses to crush foes with a scissor attack. Furthermore each one of its components has an individual power reactor from which they can absorb energy and combine it into a massive energy ball [27].

When battled D-REX will mainly attack by slamming one of its parts into the wall trying to hit X, the lower when X is on the ground while the upper if he's mid-air. However the player has to be careful, as if both parts connect to a wall at the same time X will get stunned for a short amount of time. X can easily dodge these attacks by standing on the ground and performing a dash-jump over the lower part as it comes closer. X can also stand on it to avoid getting hit, but this will cause the upper part to fall down and crush him. Finally D-REX will sometimes charge its Energy Ball attack, which will create a big energy sphere which will then shoot to X.

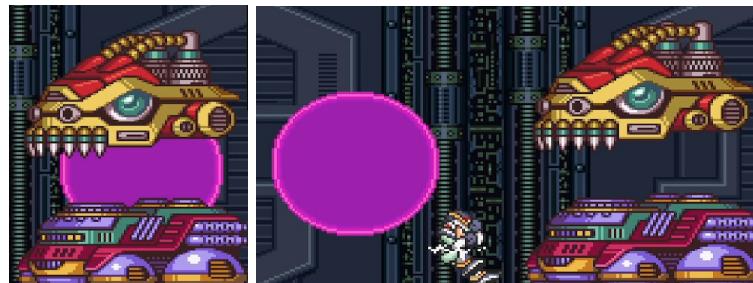
In order to defeat D-REX X will have to hit it on the upper part only, as the lower part is totally invincible. This could be tricky, as most weapons attack in straight lines and aiming can be difficult while dodging, especially since the upper part will mostly be in the air. Luckily its main weakness, the Boomerang



(a) D-REX Crushing X between his jaws.



(b) D-REX attacking with the upper part (c) X falling due D-REX hitting the walls.



(d) D-REX Energy Ball.

Figure 1.79: D-REX attacks list.

Total Health	32
Attack	Damage
Contact (top)	4
Contact (bottom)	0
Crush into wall	6
Crush in jaws	10
Energy Ball	8

Table 1.4: D-Rex's in-game data [52].

Cutter, solves this problem as it not only deals good damage to it, but its upward-curved trajectory is ideal to hit it while standing on the ground.

1.19 Sigma's Hideout 4 (X)

This is the last stage of the game. Nothing is here except for the long climb to Sigma's chamber. No enemies appear here except for [Creepers](#) which will endlessly spawn from two holes midway through the climb. These enemies are the perfect spot to restore weapon energy as well as life-ups and health drops which can be used to fill sub-tanks. To do this the suggested way is to use the charged Rolling Shield and stay below the spawn point, which will cause enemies to get destroyed as they appear and drop energy directly onto X. Once all preparations have been done the player can proceed to reach the summit's stage, where three boss fights awaits, with no checkpoint in between and increasing difficulty.

1.19.1 Velguarder

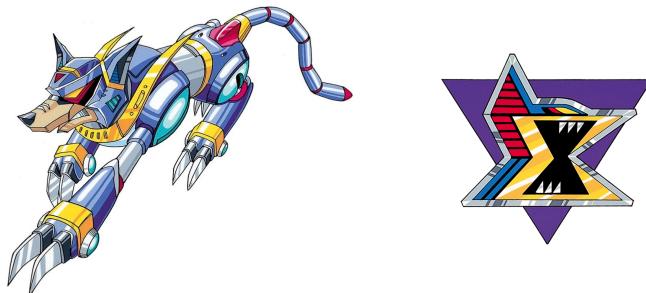


Figure 1.80: Velguarder's design([26]). Near is Sigma's insignia, which shares a common point with Velguarder's head.



(a) Velguarder performing a triangular attack and leaping onto X.



(b) Velguarder's Plasma shots.



(c) Velguarder's Fire breath attack.

Figure 1.81: Velguarder's main attacks.

Before facing Sigma himself X has first to defeat his pet, Velguarder. Velguarder is a wolf type reploid, specifically created with a ferocious mind circuit in order to hunt and terminate those who oppose Sigma. Since Sigma himself supervised his creation, Velguarder and Sigma have common traits, such as the ability to perform the Triangular Attack (dashing between two walls at high speed).

As a boss Velguarder can be difficult to manage as its very aggressive towards the player, especially since most of his attacks come out at high speed and can be difficult to dodge if the player is not prepared. Moreover his wall jump abilities makes it dangerous for the player to use wall jumps to avoid his attacks. In addition Velguarder is also capable of shooting two different types of ranged attacks: electrical projectiles which are scattered at various heights in a curved trajectory, and a fire stream which travels first downwards to curve up at X's position. Velguarder's weakness is the Shotgun Ice which deals him heavy damages and, due its ricochet capability, it guarantees to hit him even while it's jumping. Another successful strategy is using the hadoken to instantly kill at the beginning of the fight. In fact as the fight begins Velguarder will always perform the same pattern: a diagonal-upward jump to reach the wall behind X, then a diagonal-downward jump to go back to his original position and finally a dash toward X. Although this pattern is performed at high speed the time Velguarder uses to perform it is more than sufficient for the player to input the hadoken, which is guaranteed to land and end the fight(see first part of [videos/X1/Velguarder+Sigma_hadoken.mp4](#) for timing).

Total Health	32
Attack	Damage
Contact	6
Plasma shots	4
Fire breath	4

Table 1.5: Velguarder's in-game data [53].

1.19.2 Sigma



Figure 1.82: Sigma's design([26]).

Once Velguarder has been defeated Sigma will reappear to fight X on his own.

Sigma (chap. 5) was the greatest creation of Dr. Cain, the father of all reploids, and often considered the strongest reploid ever created [27] or even the ultimate reploid [11]. Former leader of the 17th Elite Unit of the Maverick Hunter, the same unit Zero, Vile (and X in the remake) Sigma was created with incredible strength and intelligence to be the perfect leader: calm and collected when giving order, merciless when fighting [2]. As the time passed however Sigma began to change, reaching the point where he decided that, to create a suitable world for reploids, humanity must be extincted and therefore starting a rebellion. Due its role in the Maverick Hunter organization and incredible strength he managed to recruit a large number of soldiers in his ranks, crushing the ones who opposed him.

Sigma's reasons for the rebellion is substantially the same both in the original

game and its remake, the latter also thanks to the “Day of Σ” OVA which tells the story prior to Sigma’s betrayal. From both games it appears that Sigma had become fascinated by reploids’ potential, especially X’s one, to the point of making him believe reploids were destined to be the next evolutionary step and humans were only a stop to that process [6]. He then took charge of accomplishing that process by eradicating humanity in the name of evolution² to create a new world for reploid only³, and labeling anyone who doesn’t agree as a traitor of it⁴.

Being the strongest reploid ever created clearly comes into play when speaking of Sigma’s attitude since he is clearly conscious of his situation which lets him watch other reploids from above of his power, sometimes underestimating potential threats like X. However he also possesses an incredible fighting spirit, which lights up when he recognizes X as a worthy opponent, although keeping his presumption. However Sigma doesn’t rely on pure strength to accomplish his mission. In fact he controls his rebellion like a commander would do during a war (experience Sigma already has being the former leader of the Hunters) by displacing his troops in strategic positions (Mines, Power Plants, Factories), developing weapons and cutting supplies to ensure him an upper hand against his enemies. Moreover Sigma had also developed a plan in the, unlikely, case of his defeat. According to his secret message in the Japanese version of Mega Man X (and the English one too, although not immediate) Sigma had already taken in account being defeated and started to create new bodies to contain his essence (he explicitly speaks of the defeated Sigma as “*not my true self*” and as “*more like another body*” [33].)

Much like his pet Sigma heavily relies on high speed movement to hit the player during the fight. His most common move is performing Triangular Kick to move from wall to wall and land onto X position to damage him. However Sigma’s hitbox is larger than Velguarder’s, making it more difficult to dodge his attacks. More rarely Sigma will shoot laser bullets from his forehead, but this attack is easily avoidable, as Sigma shoots them aiming at the ground. Finally Sigma will also occasionally swing his sword to deal damage, but this attack is rare as Sigma will perform it only if X is at very close range.

Sigma’s weakness is the Electric Spark which can be really helpful during the fight, as its shots travel along walls acting as a trap for Sigma or can hit him directly while jumping, allowing the player to focus more on dodging incoming attacks. There are however two ways to deal with him without taking many damages. The first one consists of exploiting his AI to force him to keep jumping between the walls while also damaging him, basically trapping him into an endless loop. This can be done as soon as the fight starts by climbing up the left wall and dropping down while Sigma is chasing (preferably while he’s jumping from the left wall to the right one) and shooting at him while doing so. Then as soon as X reaches the floor repeating the process all over again, trapping

²“You see, evolution requires sacrifice” - Sigma - Day of Σ [54]

³“We would have begun … the age … of … Reploids….” - Sigma - Mega Man X [3]

⁴“After all, I’ve entrusted all dealings with traitors to him (Velguarder A/N)” - Sigma - Mega Man X (Japanese script) [33]

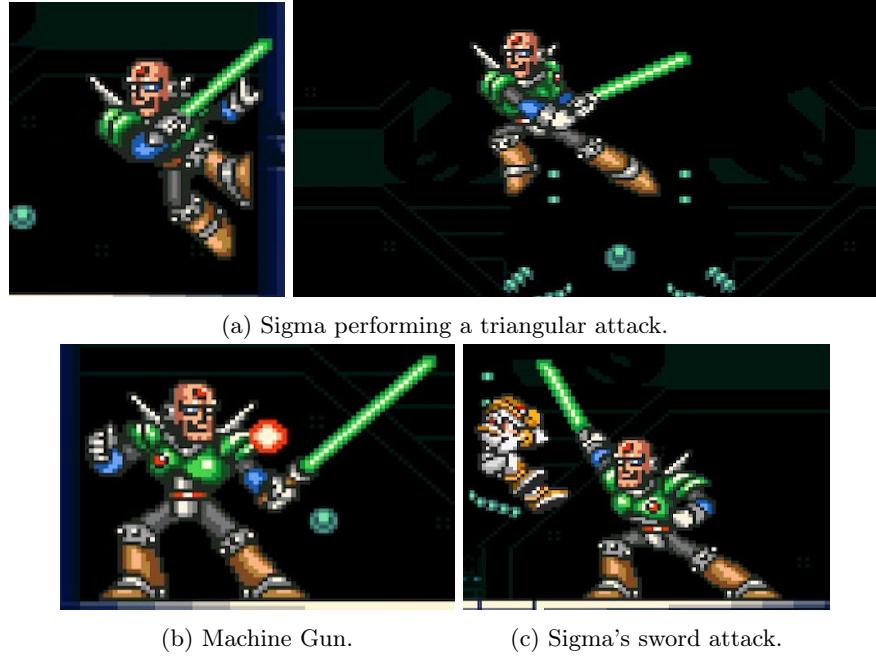


Figure 1.83: Sigma's attacks.

Total Health	32
Attack	Damage
Contact	10
Saber Swing	14
Head Beam	8

Table 1.6: Sigma's in-game data [55].

Sigma in an endless chase. Alternatively as soon as the fight starts the player can perform an hadoken, which will instantly kill Sigma. The time to input the command is however much shorter than Velguarder as Sigma immediately dash toward X as first attack (see also [videos/X1/Velguarder+Sigma_hadoken.mp4](#)).

1.19.3 Wolf Sigma

Once defeated Sigma, the real final battle begins. From the background a giant wolf-type reploid appears and Sigma's head, the only thing it remains from Sigma's body, connects to its head as a brain and activates it. This weapon was supposed to make Sigma' forces unstoppable in his plan for world domination. Unluckily for him X arrived before its completion forcing Sigma to use it while still incomplete. In fact from the original plan only the torso and hands were



Figure 1.84: Wolf Sigma([26]).

completed, while feet and arms not [27].

Although still incomplete this body is a real match for X in terms of fighting power and defenses. In fact while it can deal heavy amounts of damage with his attacks, it is also invulnerable to most of X's weapons, hadoken included. Moreover the only spot X can (and has) to hit is Sigma's head, which is placed in the middle of the arena, at midair. The only way X has to hit it is to use the moving hands as platforms to reach the correct height to attack with the only two weapons that damage him: the Rolling Shield and the Spiral Crush Buster (the reasons the player is forced to acquire the Arm parts).

Wolf Sigma can perform a wide variety of attacks, all of them capable of dealing heavy damage to the player, even with the Armor Part equipped. During the fight Sigma's Hand will float in circle at the two sides of the room. When one of them stops and opens is the signal that it will try to attack X by launching at him wherever he is. This is the best occasion to jump onto it as when it reaches X' position the hand will shortly stop and stay there. Once on top of it X can ride it to reach Sigma's head and attack it. Furthermore while on top X will be safe from all other attacks Sigma will perform: his Flamethrower, which covers the room's central part, and his Bullet attack, which shoots several projectiles to the ground. Projectiles direction is always the same so the player should memorize a safe spot and head for it when Sigma starts launching this attack. Finally Sigma will sometimes generate lightning from his hands which strikes both upward and downwards. This attack is mainly aimed to avoid players to stall the fight by damaging them if they stay on top of the hands. However this attack is easily avoidable since lightnings generated from the hand's center and it doesn't cover the whole platform, meaning that X won't get hit if he stays on the ledge.

With that said it shouldn't be difficult to find that the optimal strategy to defeat Wolf Sigma is to jump onto one hand and patiently wait for the moment in which X has a clear shot onto Sigma's head, while avoiding situations which can cause X to fall off and making him vulnerable to Sigma's attack. One thing to keep in mind while standing on a hand is that sometimes the opposite one will



(a) Wolf Sigma's Thunder Strike. If X stays on claws' borders the thunder won't hit him.



(b) Flamethrower.

(c) Plasma Bullet.

(d) Claw attack.

Figure 1.85: Wolf Sigma's moves.



Figure 1.86: Wolf Sigma's hitbox.



(a) Sigma's claw traveling horizontally, hitting X while on top of the other claw and making him get hit by the lightning.

Total Health	32
Attack	Damage
Contact (Head)	10
Contact (Claws)	8
Plasma Bullet	10
Flamethrower	14
Thunder	12

Table 1.7: Sigmas in-game data [55].

launch his attack to X which translates in a horizontal movement that, while not damaging X, will push him down. This can be problematic as it leaves the player vulnerable to all other Sigma's attacks until a new chance is given to jump onto a hand and restart the cycle. Avoiding this attack is also not trivial, since X cannot always jump over due the distance with the ceiling.

Once even this last form is defeated, Sigma will be gone for good, X will teleport outside the castle and the game's last scene will play before the credits.

1.20 Miscellaneous

In this section are collected a series of information regarding hidden game mechanics as well as useful tips and even some glitches known in the game.

1.20.1 Unexplained Game Mechanics

Here are listed some untold game mechanics which can be helpful to know while playing [19] to perform some advanced maneuver:

- Higher jumps: If the player keeps the jump button down after jumping, the reached height will be greater than the one of a simple jump.
- Wall dash-jump: With the dash upgrade, X cannot only dash and dash-jump for greater heights, but can also do it off walls, which can be very useful especially in bosses rooms to jump from one side to the other.
- Dash shots. If X shoots an uncharged shot while dashing, the projectile will deal two points of damage rather than one. This only apply for one projectile on screen at the time, so shooting multiple projectiles while dashing will give the damage boost only to the first, until it collides or exits from screen (see the file `videos/X1/dahs_shot.mp4` for a practical demonstration).
- Staring boss fight with a charged shot: If the player enters a boss room while holding down the fire button and a charged shot ready (any level)

and releases it while X is out of control, X will shoot immediately as the boss fight starts.

- Slope jumps: If X jumps while walking down a slope, he will jump higher than normal (see `videos/X1/Slope_jump.mp4` for reference).
- Ladder wall jumps/ Gap jumps: The top of every ladder, where it passes through the floor, can also act as a hole where X can wall jump. In order to do so the player has to hold left or right and press jump to leave the ladder and let X start sliding on the edge of the floor.
- Seven pixel wallkick [56]: Near every wall there is a small stripe of air seven pixels wide which enables X to wall jump. This comes handy when it is necessary to trigger a wall jump even if the wall is not easily reachable. Furthermore it can also provide extra distance when performing wall dash-jumps.
- Automatic turn wall jump: If X is in a position which enables him to wall jump (near the wall or in the seven pixel stripe) and the player taps the jump button X will begin to wall jump. The interesting part is that X will do this even if he's not facing the wall, as he will immediately turn and start wall-jumping. This translates in the possibility to trigger a wall jump onto surface X is not facing simply by being near them enough.

1.20.2 Iceless jump

The Iceless jump is a difficult speedrun technique which allows the player to gain access to the Tower's Heart-Tank without requiring any weapons or upgrades beside the Foot Parts. By using the Seven pixel wallkick technique it is possible to give X enough height and distance to barely reach the rightmost edge of the platform where it is possible to trigger a wall jump thanks to the automatic turn mechanics explained before. To start the wall jump it is necessary to input the jump command very precisely as too soon or late won't have any effect. Furthermore to reach the desired distance it is necessary that the last jump X performs from the wall to be a seven pixel jump and the player has to keep the jump button pressed to increase the jump's height at its maximum. This technique is very hard to perform and even more difficult to get consistently due its pixel-perfect requirements, hence a lot of training is required.

1.20.3 Air hadoken

Air hadoken is an advanced technique which, as the name states, allows X to shoot an hadoken while in mid-air from a wall. Performing this is not trivial, as it requires fast and precise input in a short amount of time. First the player has to shoot a charged shotgun ice inside a wall in a way that, once fully created, it can act as a platform for X, even if for a few moments. Then X has to stand on it while the player input the first three commands for hadoken, ↓ ↘ → (facing



Figure 1.88: X performing the hadoken in the air.

right) and then immediately pause the game. Next the player should select from the weapon menu the X-buster, unpause the game and immediately press the fire button (see file `videos/X1/Flying_hadoken.mp4`). If all has been done correctly X will fire the hadoken while standing in the air, with the ice platform disappeared. While this technique may not seem useful, as most enemies stand on the ground and flying ones don't have walls nearby, there is one instance where it comes in play: it can be used to kill instantly Sting Chameleon during his rematch while he's hanging from the roof, since he leaves himself open to be hit and at the perfect height for the attack.

1.20.4 Minor Glitches

Here are listed a series of glitches that can be performed while playing Mega Man X. Note that while some of them are harmless others can softlock the game, forcing a restart to keep playing.

- **Opening Stage SoftLock:** If the player manages simultaneously to defeat and get defeated by the last Road Attacker, Vile's cutscene will still play but without X. The game will then softlock once Vile grabs the invisible X in his hands (see also videos `videos/X1/Intro_softlock_1.mp4`.
- **Heart Tank Glitched Texture:** This glitch can be performed easily in the Tower stage. The player has to use the Boomerang Cutter in order to grab the Heart Tank from the platform it stands, then while the boomerang is returning, fall from the tower and land onto one of the lower platforms (the closer to the beginning the better) while the boomerang is



Figure 1.89: Vile grubbing an invisible X

still chasing. Then the last action is to open the menu and switch weapon with another one. If done correctly the boomerang will disappear and the Heart Tank, now with a glitched texture, will drop onto the ground (as in [videos/X1/Tower_stage_heart_texture_glitch.mp4](#).



Figure 1.90: X standing near a glitched Heart Tank.

- **Tower Stage Wall Clipping Glitch:** In the Tower Stage, once reached the top of elevator's section if the player head right, then left and wall jump onto the spikes (which won't kill X) while the screen moves right X will be pushed into the wall and get stuck. The only way to escape from this condition is to use the charged Shotgun Ice which will slightly push X into the opposite direction it is fired every time it is used. Once freed the player can resume traveling the level, although some sprites will have their colors changed.
- **Ladder Wall Clip Glitch:** As shown in the previous glitch the charged Shotgun Ice can push X into a certain direction if fired when in the right position. If X fires it while on a ladder he will be pushed into the opposite direction. If done a few times X will be pushed inside a wall (see for example [videos/X1/Wall_clipping_glitch.mp4](#)).

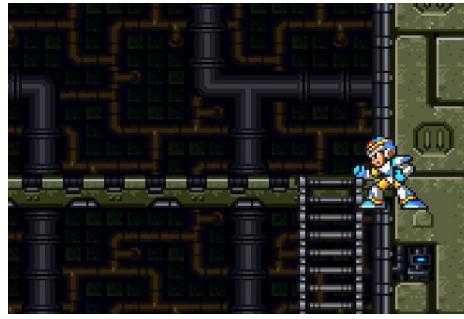


Figure 1.91: X trapped inside a wall.

- **Factory Stage glitch:** Near the stage's beginning, in the first set of conveyor belts, there are some pipes from where enemies come down. By using Utuboro's scraps as platforms it is possible to reach the pipe's base, which is a solid wall where wall jumping is possible. Via wall jumping it is possible to reach an opening on the ceiling and exit the map's bound. From here X can travel on top of the map for a while until reaching the large open room with the Sub-Tank and Heart Container. The room will however look different with all textures changed as well as some sprites and even invisible enemies. If the player manages to cross the room and reach the next area the glitch's effects will wear off and the stage will return to normal (as shown in file `videos/X1/Glitched_factory_1.mp4`).



Figure 1.92: X near Factory Stage's glitched Sub-Tank.

- **Gallery Stage Enemy's palette swap:** Near the end of the Gallery stage, if the player manages to return into the tunnel after crossing the large pit before the boss door (by using the mine cart to reach the left border before it fall into the pit) and return into the gallery enemies' texture won't be properly loaded resulting into a weird coloring.
- **Charged Shot hadoken Glitch:** Always into the gallery stage there is a glitch involving the hadoken. If, while riding a minecart, the player

fire and hadoken first and immediately after a Spiral Crush Buster (as shown in [videos/X1/Charged_hadoken.mp4](#)) the latter's pink bullet will be replaced with hadoken textures, probably due the game allowing only one of the two projectile texture to be on screen at the time.



Figure 1.93: X firing a Spiral Crush with the hadoken texture.

- **X's Invisible Legs:** If the player finishes the game without the Foot Parts (which are mandatory) via a special password at the end of credits, when X dashes away, his legs will become invisible due to not having them equipped.



Figure 1.94: X dashing without the foot part, resulting in invisible legs.

1.20.5 Magic Carpet

This glitch can only be performed in the Sky Stage if the player hasn't collected the Heart Tank yet, and requires high precision in setup and performing. The player has to reach the roof where the Heart Tank stands, and move to the left at the point the collectible is barely visible. At this point it is necessary to jump

and, while X is descending, throw a Boomerang Cutter to grab the heart and immediately dash right, to slide onto the wall. Then as the boomerang with the heart is returning jump left in a way that lower green wall (the one below the wall X slide after throwing the boomerang) is barely visible as the heart catch with X, but enough far so that it disappears by slightly moving to the right as soon as the Heart is collected. If everything is done correctly as X catches the heart and moves right a platform will spawn on top of the boomerang and will start following X. X can stand on the platform and use it to move, although its movements are tied with the one of the boomerang, meaning that if X stands on it the platform will only go up, if he stays to the right it will go right and so on. Since it is possible to wall jump on these platforms, the player can repeatedly wall jump (very quickly due the short height) to make the platform move right and with that travel the stage.

1.20.6 Vile Dialogue Skip

In the first Sigma stage it is possible to skip all Vile's dialogue starting from his first appearance before the boss door. First X has to have equipped the Rolling Shield, as it will be necessary shortly after but there won't be time to change the weapon. Next the player must perform a ladder jump from the ladder which brings in front of the boss door to the left wall, skipping the cutscene trigger set on the floor. From these wall X has to wall jump to the right one and slide to enter the door. As X enters the dialogue will start playing but X will be able to move and reach the exit door (it is mandatory to reach it before the dialogue ends). As last step, once entered Vile's room, X has to fire a Rolling Shield along the ground and immediately follow it. If everything has been done correctly Vile will immediately start attacking X as he appears on screen while his dialogues will still play in the background. Furthermore if X reaches the battle already having low health it is possible to even skip the first fight as Vile will immediately start to shoot his paralyzing projectiles. The file `videos/X1/Vile_dialogue_skip.mp4` shows how to perform this glitch.

1.20.7 Armored Armadillo Rematch Skip

In previous glitches it has been shown how the charged Shotgun Ice has the property of pushing X while it is created. While this feature has no use traditionally, there is a special case in which it is helpful: skipping Armored Armadillo rematch. The setup for the glitch is rather simple, as it only requires X to position in front of the boss' door (not too far nor too near, see Fig. 1.95 for reference) and to have the camera set to the lowest possible (the less of the room's roof is shown, the better). Next comes the hard part: the player has to fire a charged Shotgun Ice toward the door and, while it's creating, move forward in order to be pushed right as the slate grows (it isn't the slate that has to push X, rather the growing itself which moves X to create space). If all has been done correctly X will be pushed enough to trigger the door opening animation and will enter the room. However the camera will not move properly, moving only left and

not up, not loading the room's roof and, with that, Armadillo's spawn point. This will lead the game to think the boss has been defeated, and will immediately open the door for the next area. The file `video/X1/Armadillo_skip` as well as figures 1.95 show better the correct position and movement to perform this glitch. Important to note is that even if the door opens the game doesn't

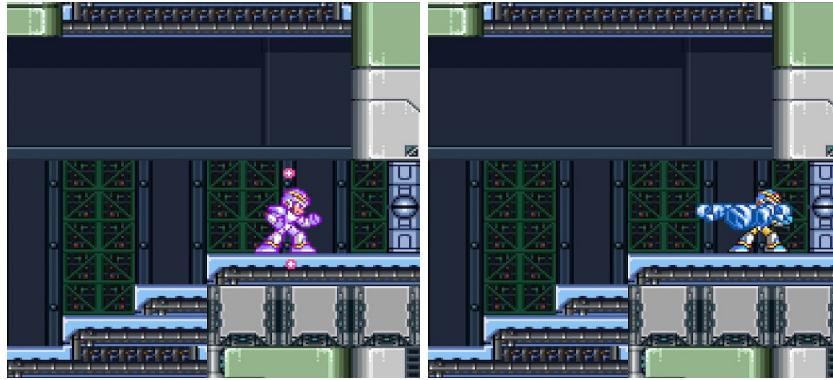


Figure 1.95: Approximate position to fire the charged Shotgun Ice to perform the rematch skip.

account the boss as defeated, meaning that jumping to move the camera up will correctly load and Armadillo will spawn, playing his entrance animation. However the door will remain open meaning the player can still flee from the battle to the corridor passed next the room and go on. Armadillo too can exit his room and go into the corridor, but his textures will become glitched.



Figure 1.96: If Armadillo is spawned after performing the skip his textures will become glitched.

1.20.8 Energy and Life-up Farming

While advanced players can easily travel the game without the need to fill up all their Sub Tanks and not bothering about their life counter, beginner players may have some difficulty during certain stages. That said, having an easy and fast way to grind lives and refilling their Sub Tanks may be very helpful in order to play the game more easily without worrying too much about dying

or healing. The best place to do both Sub Tank refilling and life grinding is



Figure 1.97: The only Batton M-501 enemy in the game. This enemy easily drops Life-Up making the perfect spot to farm them.

the beginning of the Gallery Stage. If the player traverses it without using the cart but by walking, in fact, it will be impossible not to note the large number of [Batton Bone](#) falling from the ceiling. These enemies home at X in large numbers, frequently drop energy capsules and, even more, respawns as soon as the player moves the camera away from their original location and then comes back. Moreover these enemies are very fragile, so disposing of them is easy. For a faster solution the player could consider using the charged Rolling Shield, if available, which will destroy them as they come closer and won't vanish after hitting them, making X virtually invincible against them.

The previous technique can also be applied for life farming ([videos/X1/Life-Up_farming.mp4](#)). Always in Gallery Stage's first part, after the first Flammingle, there is a single [Batton M-501](#) enemy which falls from the roof. This enemy has a high chance of dropping life-up once defeated and follows the same rules described previously, being destroyed in one hit(although it is invincible while in his sphere form) and respawning as soon as the player leaves and then comes back. Again as before the charged Rolling Shield is the best weapon since it doesn't cost munition after firing it and can be used endlessly to destroy this enemy.

Chapter 2

Mega Man X2

VS X-Hunters

Mega Man X2 is the direct sequel of the first *Mega Man X* game, released in Japan on December 16, 1994, and in North America and PAL regions in 1995, one year after the release of the first game. The game features the same gameplay and graphics of its predecessor, but Capcom included the Cx4 enhancement chip inside the cartridge, which allowed for the usage of 3D wireframe effects which the development team was instructed to utilize for as much as possible when working on the game [57]. The game, however, also had an heavy script localization in the American version which resulted in the removal of important detail and links in favor of an easier to follow,yet incomplete, script (such as changing all occurrences of X's name with *Mega Man X*). In order to avoid confusion, in this chapter all plot-related events will come from direct translations from the Japanese game script (found in [58] and [59]).

2.1 Main plot

Six months after Sigma's defeat by X, mavericks are still posing a threat to mankind and reploids. Maverick Hunter are still fighting against them to restore peace, but the heavy losses undergone during the first revolution has reduced the number of available Hunter to a quarter of their original value [60]. Furthermore in later periods maverick attacks have been increasing in number and many Maverick Hunter bases have been attacked and destroyed, despite the original number of reploids joining Sigma wasn't very high. What makes the situation even worse is that by analyzing defeated mavericks, scientists have found a special chip bearing Sigma's insignia, installed at the moment of their creation responsible for them going maverick. After some research, the Maverick Hunters manage to locate the factory where these mavericks are created and X, alongside the 17th Unit, begins its attack on the facility.

It is during this operation that Mega Man X2 starts: after a harsh fight outside the facility, X manages to enter and destroy it, but only after having dealt with one of the giant mechaniloid CF-0 produced in the factory. After the fight the scene moves away from X, revealing three figures in the shadow, observing X's movement on a monitor and commenting on how he could pose a threat to their plans. Although they do not seem to fear him they recognize his strength and the fact that he could interfere in their plans, for which they're in hurry, and decide to let him fight with their eight maverick subordinates to gather time and complete their scheme.

X, however, proves himself to be far superior respect to the three figure's expectations, disposing of mavericks at a faster rate than imagined. This leads the three figures to come out from the shadows and face X directly, both slowing down X and attempting to eliminate him by themselves. The three contact than the Maverick Hunter headquarters and present themselves: they're Agile, Serges and Violen leaders of a group called the "X-Hunter" ("Counter-Hunter" in the Japanese version) which act has a counterpart to the Maverick Hunter and aims to destroy them. The three pose a challenge X : if he manages to locate and fight all of them in a one-vs-one fight, for each of them X defeats he will receive one of Zero's body parts they had previously retrieved and repaired. These, together with Zero's control parts recovered and preserved inside the M.H. headquarters, could allow him to resurrect his friend. For here the story can take two paths, depending weather the player manages to locate and defeat all the X-Hunter or not: If X gather all Zero's parts Dr. Cain will begin his reparation, and in the meanwhile he will also locate the X-Hunter fortress; on the other hand, should X miss at least one of them, they will storm Dr. Cain's laboratory and steal all Zero's component, control circuit included, to revive him as a Maverick, but also leaving a trace pointing to their headquarter, which in both case results to be located in the north pole.

Once reached the X-Hunter fortress, X infiltrates inside and fights once more against the X-Hunter, only this time their objective is to effectively dispose of him and not to slow down. This translates in them recurring to their full power and all means to take down X: Violen challenges X as Neo Violen, a more powerful form of him, Serges tries to stop him by recurring to his Serges Tank and finally Agile by using the Agile Flyer; however none of them succeed in the plan and are all defeated by X. Unluckily for X though, X-Hunter plan was in the end completed as a reborn Sigma contact X while the fortress he is in start exploding, and challenges him to a fight in the Central computer, a location already visited by X while facing mavericks sent by the X-Hunter. Once X reaches the location, two events can occur based on the outcome of Zero's quest.

Shouldn't X have recovered all Zero's part, allowing the X-Hunter to steal all the remaining one, he will find Sigma, with his new body, alongside a repaired Zero which however doesn't show any sign of consciousness, as he attacks X as soon as Sigma orders him to do it. Only after being defeated by X Zero regains his consciousness, apologizes to X for all the trouble he has caused and decides to help X by opening a passage for him to reach Sigma.

If instead X managed to recover all Zero's parts when reaching the Central Computer he will find instead Sigma alongside a black replica of Zero, which Sigma intends to use against X. Luckily the real Zero appears, easily destroying his replica and leaving Sigma surprised in finding out Zero decided to size with X. After this dialogue Sigma retreats, but Zero opens up a passage for X to chase him down.

Whatever the two previous events happen, in the end X will always reach the final confrontation with Sigma, reborn in a new body and ready to face X once more. As in the previous game, however, X manages to destroy Sigma's new body but this time only to reveal Sigma's true form: the Sigma virus. Sigma appears in fact not anymore as an actual reploid, but rather as a materialized virus with a consciousness. After a long battle X finally manages to defeat Sigma again, which disappears but before making his final warning. This time however, instead of blaming X for the failure of his plans, Sigma warns X that he will always manage to match his power, whatever the level his. Nevertheless, one thing seems to bother Sigma while disappearing, this being Zero siding with X. Sigma, in fact, was sure beyond any limit that Zero would have followed him, almost as it was his destiny.

After Sigma's defeat, X and Zero reunite together near a seaside. Here X ponders again on the reason for his fight, on why he has such incredible power within him and, more importantly, if he will ever be capable of admiring realized the dream of a world where humans and reploids coexist and that Dr. Light dreamed of.

2.2 Main Characters

2.2.1 X

X (see also chap. [3]) is Dr. Light's last creation and the basis on which Dr. Cain developed all reploids, although X's technology cannot be fully understood even with the knowledge of the time. When Sigma began his revolution against humanity X stood up and fought him, putting a halt to Sigma's plans and bringing peace to the world. Thanks to this, X was promoted leader of the 17th Elite Unit, which he belongs to and was previously lead by Sigma himself and Zero, a close friend of X which sacrificed himself to save him, but his Hunter rank have remained unchanged although some people have started noticing that X's hidden potential could even surpass the abilities of SA-ranked Hunter.

Despite his incredible power, X remains a kindhearted person which refuse to believe violence is the only solution to the maverick problems, and the turmoil caused by his kind spirit and the need to fight to protect innocent is something very few people understand[60].

2.2.2 Zero

Zero (chap. [4]) was an SA-ranked Maverick Hunter under the 17th Elite unit and was X's best friend as well as only one of few people who could truly understand X's feelings. During Sigma' war he was appointed leader of the Maverick Hunter and led the others against Sigma. However near the end of the conflict Zero was forced to detonate his energy core to protect his friend X, dying in the process. Luckily his control chip remained intact and was brought to the Maverick Hunter headquarters where they reside during the event of this game.

Similar to X, however, Zero's body is far too complex to be repaired even by a scientist of Dr. Cain's level, but not for X-Hunter's scientist Serges, who not only manages to repair Zero's body but even to upgrade it in order to revive him as a Maverick[61] (even succeeding depending on which ending the player achieve). Whether to be Serges or Dr. Cain (with Serges' rebuilt parts) to rebuild him, Zero makes his return at the end of the game, where he either challenges X or destroys his copy, and opens the to Sigma for X. He is later seen during the end, gazing at the sea near his friend.

2.2.3 Dr. Cain

Dr. Cain (chap. [7.1]) is the greatest expert in robotics of the 22nd century[60]. By using Dr. Light's schematics and X's help, he solely managed to transform robots of his times, by introducing reploids, robots perfectly capable of thinking and acting autonomously as well as showing emotions. This, however, also led to the appearance of mavericks, not last Sigma which, by chance, was Dr. Cain 's greatest creation. In the present Dr. Cain acts as the founder of Maverick Hunter, also covering a position on its high vertex as well as playing a supportive role in the Maverick haunt, as the X2 games show. Here, in fact, Dr. Cain coordinates X's operation from remote, locating in the end the X-Hunter's base for the final attacks. He also works to restore and repair Zero, but only when provided with all already-restored parts X recovers from all the X-Hunter.

2.2.4 X-Hunter

After Sigma's defeat by the hand of X, it was believed mavericks attacks would cease, as there was no leader to command them. But this was not the case. Although at first the loss of their leader may have led the maverick army to a series of losses against the more organized, even if weakened Maverick Hunter, not so much time had to pass before a new head would appear to lead the rebellion. Only this time instead of a single one, three reploids took charge of the army: a group called the X-Hunter.

Composed by three incredibly strong reploids, Agile, Serges and Violen, this group takes the lead of Sigma's army, and re-organized it in order to bring on Sigma's plan from where it stopped. The first step consists in the creation of more maverick troops in order to reinforce the army. To do so a reploid factory is

conquered and altered in order to implant special chips inside produced reploids to brainwash them into loyal maverick soldiers. Furthermore inside the factory giant reploids CF-0 are also built to increase even more their military potential.

The second, and more important step, in X-Hunter plans, is the revival of both Zero and Sigma. This plan, however, requires a large amount of time to be completed, as only Serges is the one capable of building a new body for Sigma and repairing Zero's parts they recovered. Beside time, the other limiting factor to the plan is the missing of Zero's own control circuit, the only component saved by Maverick Hunter and now stored in their headquarters. To gain time to complete their project, the three decide to deploy the eight SA-ranked mavericks they have to hit strategic objectives and slow down Hunter's operations. They however underestimate X's strength, as he disposes of deployed maverick at a much faster rate their plan proceed, which force them to intervene in first person and, more importantly, to use Zero's part they restored as prize to force X into a fight, with the risk of losing a key factor of their plan. Depending on how the game proceed, they can either be all defeated, which leads them to retreat into their fortress and hurry to complete their plan by creating a fake Zero replica, or survive the fight with X, giving them the chance to attack the Hunter's headquarter while X isn't there and stole all Zero's components, to fully resurrect him as a maverick, but also leaving a trace for X to follow them to their hideout.

In both cases, X manages to find the X-Hunter headquarters and begins his attack. To stop him, the three decide to fight him each one on their own and use all their available equipment to surpass him in strength. However none of the three succeeds, as all of them in the end are defeated and destroyed by X.

2.3 Game Mechanics

Being a direct sequel of *Mega Man X*, *Mega Man X2* reuses almost every game mechanics present in the first title, while also bringing some new feature to the gameplay:

- Dashing: X now has the ability to dash from the start. However this ability can be further enhanced, allowing for air-dashing.
- Stage Interactions: stages now no longer interact between them, hence beating a level now doesn't grant any advantages in another one.
- “Refill” rooms: some stages have special rooms which at first present themselves as empty rooms, but if X releases a charged Silk Shot inside them it will attract various health and energy capsules for X to collect, without a limit to how many times this operation can be done.
- X-Hunter challenges: Once the second boss is defeated, the three X-Hunter will begin appearing inside remaining levels. X-Hunter movements can be seen in the map screen as soon as the player returns to it, where the player will see the remaining Hunter teleporting from one stage to another. Once

inside a stage the X-Hunter can be challenged inside a secret room X can meet while traveling the level, but which normally are inaccessible. For each Hunter defeated X will receive a Zero part to resurrect his friend, meanwhile skipping the fight will cause the X-Hunter to flee forever, losing the chance to get the part for good. Finally should the player get a game-over, or enter and exit an already-beaten level, it will trigger X-Hunter movement across remaining levels.

- Ride Chaser
- New Ride Armor

2.4 Weapons

Here are now listed all sub-weapons available inside *Mega Man X2* [12]

2.4.1 Crystal Hunter

Crystal Hunter shoots a glob of liquid which crystallizes small enemies that come in contact with it. Crystallized enemies cannot move and, if they were flying, they will fall on the ground. X can use the formed crystal as a platform to stand on, or dash through it to instantly shatter the crystal and the enemy inside it. Enemies destroyed in this way will always drop a health capsule of random size. When charged, this weapon will cause the screen to distort for a little and slow down the time, resulting in everything on screen (X included) to move slower. This weapon is obtained by defeating Crystal Snail [2.14.4]



Figure 2.1: Crystal Hunter sub-weapon and trapped enemy.

2.4.2 Bubble Splash

Bubble Splash is the weapon obtained by defeating Bubble Crab [2.12.4]. When used it will fire a stream of bubbles which slightly curve upward as they move and pop if they make contact with enemies. The number of bubbles fired depends on how much the fire button is pressed: a light pressure will cause few bubbles to spawn, while a heavier pressure will cause more to spawn, up to seven in total [62]. Keeping the fire button pressed will make the weapon fire

continuously, making new bubbles appear as soon as previous ones pop. When charged this weapon will create several bubbles which will orbit around X and damage enemies which come in contact with it. However, the orbitals bubble will keep draining X's energy, only to disappear once it has been all depleted. Furthermore, since keeping the fire button pressed is required to charge up the weapon, X will keep shooting bubbles in the process, consuming energy while doing so.

Underwater Bubble Splash will behave slightly differently: fired bubbles will curve upward much faster and, when charged, the weapon will allow X to jump much higher than normal.



Figure 2.2: Bubble splash normal fire and charged version.

2.4.3 Silk Shot

By defeating Morph Moth [2.8.4] X will acquire the Silk Shot. When used X will launch a hunk of garbage in front of him, while when charged X will draw to him a huge mass of scraps, which remains attached to the X buster acting as a shield as long as the fire button remains pressed, only to be released and explode when the button is released.

This weapon is probably one of the most gimmicky of the entire series due to its two features. The first, and most important, one is the fact that damage dealt and projectile type fired by the weapon will change depending on the stage it is used in (charged version remain almost unchanged, save for the type of material drawn), according to following scheme [63]:

- In the **Energen crystal mine** stage the weapon will shoot a crystal shard which moves in the direction X is facing while bouncing on the floor.
- In the **Weather Control** stage the weapon will fire a pile of leaves which float upwards. This is the weakest version of Silk Shot.
- In the **Volcanic Zone** and **Deep Sea base** the weapon will fire a rock projectile, which will bounce on the ground a little before exploding.
- In all remaining stages the weapon will fire a metal scrap, which explodes as soon as it touches a surface, ground included.

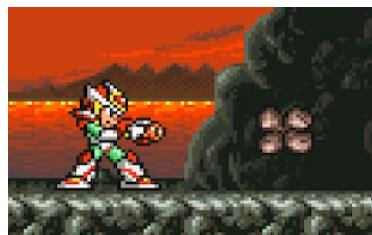
The second feature of this weapon is its ability to draw health and energy capsules when its charged shot is used inside special rooms in some specific stages.



(a) Crystals



(b) Leafs



(c) Rocks



(d) Scraps

Figure 2.3: Silk Shot attack types in normal and charged versions.

2.4.4 Spin Wheel

When using the Spin Wheel, X fires a buzz saw blade which falls on the ground and then crawls along the floor, continuously damaging enemies which come in contact with it until the blade disappears or the enemy is destroyed. In the latter case the blade will then restart moving forward until it disappears. The saw can also destroy certain blocks and terrains, to open new passages, but only one blade per time can be on screen. When charged, X will release a blade which, instead of moving forward, will split into eight energy bolts traveling in all directions. Bolts pass through obstacles and enemies, dealing damages while also maintaining destructive properties of the uncharged version. This weapon is obtained after defeating Wheel Gator [2.13.4].



Figure 2.4: Spin Wheel normal and charged version.

2.4.5 Sonic Slicer

After defeating Overdrive Ostrich [2.11.4] X will gain access to the Sonic Slicer. This weapon fires a spinning blade which travels horizontally at high speed and ricochets on walls with increasing angle of reflection each time, before disappearing once an enemy is hit or it goes offscreen. When charged this weapon fires five blades very close to each other upwards, which then separates and descend down becoming larger in the process.

2.4.6 Strike Chain

When using the Strike Chain, X will release a chain with a hook at its end, which can both damage enemies which come in contact with them. How much the chain extends depends on the length the fire button is pressed: a short pressure will cause the chain to extend slightly, while a longer pressure will cause the chain to extend up to its limit. Beside dealing damage, the chain is also able to grub items from distance, enemy drops included, and if a wall is hit, it will pull X towards it. When the weapon is charged X will release a faster and longer chain, which also deals more damage. Furthermore enemies destroyed in



Figure 2.5: Sonic Slicer normal and charged version.

this way will always drop an energy pickup for X. This weapon is obtained by defeating Wire Sponge [2.7.4]



Figure 2.6: Strike chain normal and charged version.

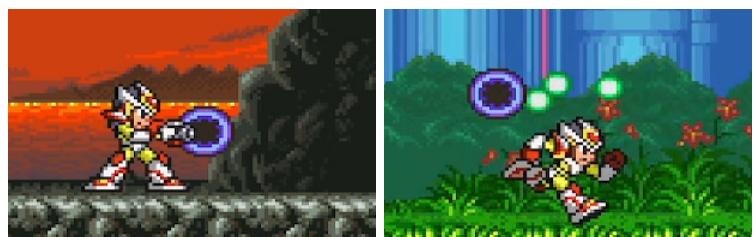
2.4.7 Magnet Mine

Defeating Magna Centipede [2.10.4] allows X to use the Magnet Mine. This weapon fires a single mine which travels at constant speed in the direction it is shot. If the mine makes contact with an enemy it explodes, but if it hits a surface it remains in place for a short time, before exploding. Once a mine attaches to a surface X can immediately fire another one, which can land on the previous one, forming a chain. There is virtually no limit on how many mines X can fire, but typically only four can be shot before the first one explodes. More importantly, the path of each mine can be controlled vertically by inputting up or down, but once a direction is given the mine will follow that direction, meaning that to make it go straight again it is necessary to keep inputting up and down. Once charged, the weapon will release a small slow-moving black hole which can be controlled similarly to the base version (see [videos/X2/Charged_mine_control.mp4](#)). The black hole keeps moving forward, passing through obstacles and enemies (which are still damaged) and absorbing incoming projectiles, growing in size in the process up to two stages



(a) Normal fire

(b) Three mines stacked onto each other.



(c) Charged version

(d) Absorbing incoming projectiles



(e) Charged version second stage (f) Charged version max size

Figure 2.7: Magnet Mine sub-weapon.

bigger, but also becoming more difficult to control.

2.4.8 🔥 Speed Burner

Speed Burner releases from the X-buster a pair of intertwined fireballs which travel at high speed in straight direction, disappearing once they collide with an enemy or a surface. In addition, if Speed Burner is fired while standing on the ground, it will also leave a small trace of fire along its path which deals damage to enemies too. When charged this weapon will wrap X in flames and make him dash forward at high speed, damaging enemies. When in this state X doesn't take contact damages from enemies, but he does from stage hazards like spikes. This attack can also be used in the air, allowing X to perform an air dash.

Similar to the previous game, this fire weapon behaves differently when used inside water. For the regular attack, in fact, underwater the two fireballs won't ignite, and only two small orbs (which deal very small damage) will be shot leaving behind a trail of smoke. For the charged version instead X will simply dash forward, again leaving behind a trail of smoke. When in this state X is not invincible, and will take damage if he makes contact with an enemy.

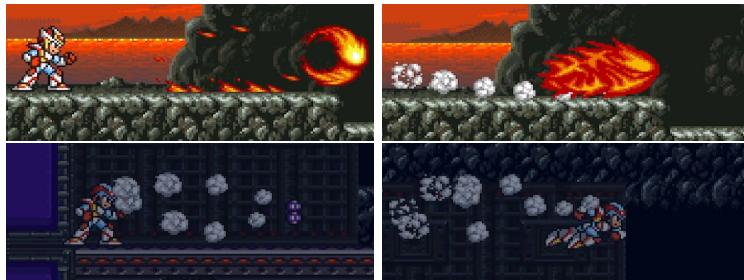


Figure 2.8: Speed Burner sub-weapon attacks outside and inside water.

2.5 Second Armor

Returning from the previous game Dr. Light's capsules, each one storing a new armor part, which are scattered across four of the eight stages, although this time they are more hidden and often require a specific sub-weapon (or even other parts) in order to get access to them. Furthermore, differently from the previous game this game doesn't have any mandatory capsule, making the armor fully optional. According to [64]¹, the second armor is actually an improved version of the first one, which X had returned past first game's events. Once returned, Light's capsule analyzed armor's field data in order to upgrade it into a new armor for X.

The second armor is again composed of four main parts, with the addition of a fifth, secret, one in a similar way the Hadoken was in the first game.

¹Translation: <https://twitter.com/kobun20/status/1305162448878612480>

The Second Armor is composed by following components:

- Foot parts: When equipped, these parts allow X to perform dashes, already available from the start, in the air too. However air-dashes cannot be performed if X has already dashed on the ground or if he is already dash-jumping. However Foot Parts' air dash flight distance can be extended by combining it with a charged Speed Burner. The capsule containing this power-up is hidden inside the Desert Base, behind a wall breakable only by the Spin Wheel sub-weapon.



Figure 2.9: Foot Parts location



Figure 2.10: Body Parts location.

- Body Parts: Similarly to the previous game, this power-up increases X's defense by halving all incoming damages to X. Furthermore, all damage dealt to X will also increase a special gauge which, one full, allows X to perform the *Giga Crush* attack, which heavily damages all enemies on screen. However the gauge doesn't refill between stages, meaning the only way to store energy is by getting hit. The capsule containing Body Parts is hidden in the Robot Junkyard stage, under a floor at the beginning of the stage breakable only with the Spin Wheel sub-weapon. .
- Arm Parts: This upgrade allows X to use two X-buster when using a charged shot. When charging, X will be able to pass the second charge level, accumulating energy in the second Buster, up to two levels. When the player releases the fire button, X will shoot a first charged shot (depending on the charge level reached) and will remain flashing until the fire button is pressed again, making X release a second, fully charged, shot. Most importantly, if the player releases the two charged shots in rapid succession, they can combo against all enemies, bosses included,

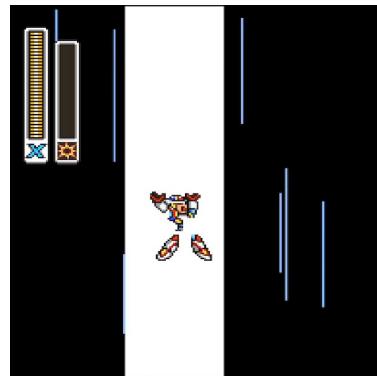


Figure 2.11: Giga Crush attack



Figure 2.12: Arm Parts location .



Figure 2.13: Double charged shot.

ignoring their invincibility frame and dealing massive damage. This upgrade is stored inside Wheel Gator stage, inside a chamber accessible only via wall jumping from an opening on the roof, and can be obtained either via precise wall-jumping, by using the Giga Crush to extend X's airborne period, by using the Strike Chain to pull X towards the wall ([videos/X2/Buster_capsule_chain.mp4](#)), or simply by using the air dash to reach the opening.

- Head Parts: The Head Parts allow X to use the item tracer, a radar which X can fire and will point in the direction of the closest secret in the level. Secrets pointed include hidden passages and items (such as), heart tanks and sub-tanks, other Light's capsules and refill rooms. Despite showing an ammunition gauge, this upgrade does not use any energy. The capsule with the Head Parts is hidden in Crystal Snail's stage, at the end of a secret path found while sliding down a pit after the stage's sub-boss.



Figure 2.14: Head Parts location and Item Tracer.



Figure 2.15: Shoryuken's capsule location and attack.

- Shoryuken: Similarly to X1's Hadoken, this secret upgrade is the prize for collecting all other power-up items (Zero's parts do NOT count). Once obtained, X will be able to perform the fire uppercut from the *Street Fighter* series by inputting the command →, ↓, ↘ (with X facing left) + fire button but ONLY if X is at full health and on the ground. Differently from the previous technique, however, is the fact that the damage dealt by this technique is dependent on the number of frames the attack makes contact with an enemy, meaning that a misplaced Shoryuken can fail to insta-kill bosses. To be precise, Shoryuken deals 16 damage to enemies without invincibility frame and 8 otherwise and the damage is applied every two frames, meaning that in order to kill a boss at full health (32 hit points) 5 frame of contact are needed (16 damage the first frame, than zero the second, 8 the third, than again 0 on fourth and last 8 at the fifth). This upgrade can be found inside the third X-Hunter stages, at the end of a secret passage full of spikes which requires a precise air dash. In order to obtain this capsule, moreover, X has to reach it with full health (but there are no limitations on Sub-tank status).

2.6 Opening Stage

Being the first stage in the game, this level acts as a tutorial for the player to (re-)learn basic game mechanics. The stage begins with a short scene where X and other Hunters are riding their vehicles to the factory, but are attacked by a fierce resistance. X then jumps off his bike, which crashes onto an enemy, and proceeds on foot. From here the player gains X's control and can start moving. Attention must be done immediately, however, since the enemy on which the bike crashed on is still alive and will shoot X immediately. Past this first obstacle the player will enter the factory where other enemies lie ahead, such as [Bar Waying](#) which do not deal damage but use their body to block the path and require several shots to be destroyed. Traversing the factory X will find himself onto a production line, which uses conveyor belts to move manufactured mavericks from one construction bay to the other (three in total); if X get caught inside one of they bays he will receive damage, while if he pass over it the bay will simply upgrade the constructed maverick which, in case of the third and last bay, will activate and attack X. Near the end there is a mini wall-jump tutorial: a [Slidame](#), as soon as it detects X, will rush at the top of the room it waits and begin closing the walls in an attempt to crush X. Although not very fast, the player has to climb the wall quickly in order to not get killed by the wall. Should instead the player fall down back to the room's bottom and the wall close it will be sufficient to return back in the stage a little, in order to reset the room as it was before, giving another chance to climb. Once reached the top of the room a small corridor awaits, ending in a deep pit which X has to jump into, as at the end a boss door awaits.

Beside enemies already cited, this level also house following enemies [65]:

- [Bar Waying](#)

- Cannon Driver
- Mecha-Arm
- Scrambler
- Scriver
- Slidame

2.6.1 Giant Mechaniloid CF-0

Differently from the previous game, this opening stage ends in a boss fight the player has to win. The boss in question is the giant mechaniloid CF-0, an enormous robot created by the X-Hunter with the purpose of mass production and conquering cities around the world, although due its weight the movement speed is reduced to the minimum. X-Hunter's plans were however halted by Maverick Hunter's attack, which forced them to activate the only completed mechaniloid to try to stop the attack, but resulting only in its destruction by the hands of X.

Despite its size, the fight against CF-0 is relatively simple. The boss room is very big and filled with platform at various level, connected by ladders to allow X to climb up should he fall down, and this allows X to easily dodge the two attacks this boss can perform: a spiked fist which aims at player's current position and a jump attack where CF-0 aims to land onto X. However both of these attacks can be easily avoided by keeping moving between top platforms and deals minimal damage to X. It is in fact on the upper side of the room that X should stay to damage the boss, as its only weak point is the head, which happens also to be one of the three body parts that can damage X if he makes contact with them, the other ones being CF-0's arms and feet. All the rest of its body does not deal any damage of any sort, acting like a background. Finally, and having the health bar of a boss, CF-0 takes massive damage from X's charged shot, which can destroy it in four shots.



Figure 2.16: Full map with Bosses and their locations

2.7 Weather Control

The first stage the game presents is the weather control stage. As the name suggests, the focus of the stage are weather conditions, which can change and be controlled as the stage progresses in order to affect X's mobility or enemies' behavior. The source of said weather changes is to be found in an element presented right at the beginning of the level: [weather crystals](#). Although these items are considered enemies, they won't hurt X in any way, even if he makes contact with them. What they will do, instead, is change the weather in the portion of the level X is in, affecting X's movement and changing enemies' behavior and power. While this can only appear to be a cons, the truth is X can manipulate said enemies to obtain favorable weather to ease the stage exploration. There are a total of four crystals in the stage, each one with a default weather set which can be changed depending on the weapon X uses to hit it, according to following list [66]:

- **Cloudy weather:** Obtained hitting the crystal with the Strike Chain weapon (the crystal turns yellow). In this state all enemies are active and [sky farmers](#) plant [sabotteins](#), which only grow half-size.
- **Warm/Sunny weather:** Obtained by hitting the crystal with the Speed Burner (the crystal turns orange). In this state all enemies are active, but [croak hoppers](#) will overheat and explode, while planted [sabotteins](#) will growth to their full size.
- **Rainy weather:** Obtained by hitting the crystal with the Bubble Splash (the crystal turns cyan). In this state [croak hoppers](#) will actively move for the stage instead of staying in place, while planted [sky farmers](#) will release [rightods](#) to chase X. [sole solars](#) will instead remain deactivated. Finally in rainy weather a constant, inverse, speed is applied to X while moving, resulting in a slower walking and running speed, as well as a shorter jump distance.
- **Foggy weather:** Obtained by using the Crystal Hunter on the crystal (it turns purple/black). In this state all enemies are deactivated.

Should the player destroy a crystal, weather conditions for the stage's portion will be set at random.

The first crystal the player finds is near the beginning of the level, in a very straightforward section with only some enemies to stop X and that ends with a second weather crystal, opening to the second part of the level. Here floating platforms will move up and down over a spiked pit, and X has to move from one to another paying attention as platforms are taller than wider, meaning the best way to stay on them is by wall-jumping. The main difficulty in this section is given by the default weather set, which is the rain that will reduce X's jump distance, making harder for the player to pass from one platform to the next one. The third section is very similar to the first one, only with more enemies and spiked pits. Here are the last two weather crystals, which will activate

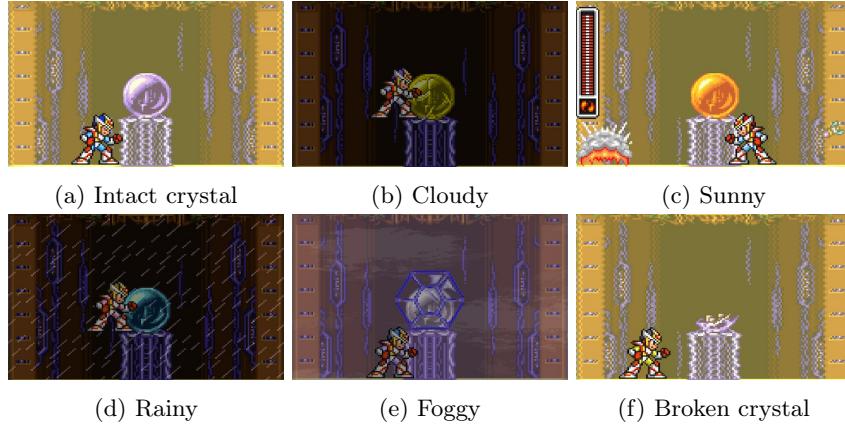


Figure 2.17: Different states of weather condition and crystals.

different enemies as the player proceeds. Once this part has been passed, a climbing section awaits, with platforms with enemies on top and connected by ladders ending in a corridor which leads to the boss door.

Following enemies occupy the stage [67]

- [Aclanda](#)
- [Croak Hopper](#)
- [Rightod](#)
- [Sabottein](#)
- [Scriver](#)
- [Sky Farmer](#)
- [Sole Solar](#)
- [Weather Crystal](#)

2.7.1 Heart Tank

The Heart Tank is hidden immediately at the beginning of the stage. By climbing the leftmost wall of the beginning room, the player will find a small entrance in the top corner with the Heart Tank inside it.

2.7.2 X-Hunter' room

When reaching the elevator section, if the player manages to make X sneak under the elevator a new path will open, leading to the X-Hunter room

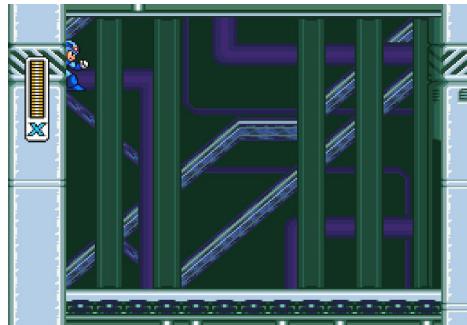


Figure 2.18: Heart Tank location.



Figure 2.19: X-Hunter room location.

2.7.3 Sub Tank

In the rain section, if instead of proceeding by platforming the player uses the first one to jump onto the wall on the right (where the second crystal is found) and climb it, it will reach a new path over the default one made of logs separated into two main platforms. At the end of the second one is where the Sub Tank resides.



Figure 2.20: Sub Tank location.

2.7.4 Wire Sponge

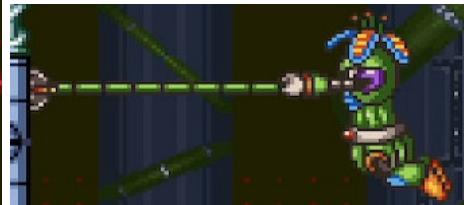
Wire Sponge (the “Little Forest Demon” [26]) was a sponge cucumber-based Maverick manufactured inside one of Sigma’s factories although born from an accident. Because of a design mistake, in fact, Wire Sponge was built with a personality disorder which made him childish, cheerful and easily amused, with the love for dancing and playing. Although this personality was not tailored for army, Wire Sponge’s strength and violence was uncontested, and X-Hunter put that in use by making him conquer the weather control center which he uses as his own playground, changing the weather as he please [68],[61].

In battle, Wire Sponge mainly attacks by swinging his chord, the Strinke Chain in various ways to damage X. When Wire Sponge spins his chain he will deflect all incoming projectiles, so attacking while in this state is useless. After spinning the chain, Wire Sponge will almost always attack by throwing it at X and, if the chain hits a wall, he will be pulled towards it. Other times Wire sponge will instead throw the chain on the ceiling and start climbing it, while firing seeds from his head aiming at X. When a seed hits a wall or the floor (not the roof, of which the seed will ricochet on) it will grow into a spiked vine which damages X on contact. These spikes can be destroyed by any weapon and doing it is a suggested action, since after four vines are planted Wire Sponge will drop down [69] terminating his attack which leaves him very open for damages, so the longer he performs it the better. Finally once Wire Sponge’s health drops

below 10 points he will start using his desperation moves. With this move his flower becomes a lightning rod from which he will make lightning fall in the room but they can be easily avoided as they fall at the same distance every time and never near the boss himself, so staying close is a good strategy to avoid taking damage. However once this attack is performed Wire Sponge will become charged with electricity which will increase his damage output.



(a) Spinning the chain



(b) Being pulled to the wall



(c) Hanging and launching seeds
(bottom left: a sprouted vine)

Wire Sponge is often considered an easy boss due the long time he makes himself vulnerable when he hangs from the ceiling and the fact that all his other attacks are easy to dodge. This makes fighting him with only the buster relatively safe, also since his main weakness, the Sonic Slicer doesn't do much more to him than increased damage (and a different animation when it is used



(d) Charging and releasing his desperation move



(e) Powered up by electricity



(f) Cut in half.

Figure 2.21: Wire Sponge's attacks.

to defeat him).

According to in-game data, Wire Sponge possesses a power of 6400 rp and a speed of 4800 rp, and upon defeating him X will gain access to the Strike Chain [2.4.6].

Health		32
Attack	Damage	Damage-electrified
Contact	5	7
Strike Chain	2	4
Seed/Vines	2	-
Lightnings	2	-

Table 2.1: Wire Sponge’s attack’s damages [68]

2.8 Robot Junkyard

As the name suggests, the Robot Junkyard stage takes place inside a scrapyard where old robots are demolished.

The beginning of the stage corresponds to the junkyard’s entrance. From here it is already possible to see how most of enemies in the level will present themselves: most of them will be, in fact, old robots ready to be destroyed or repaired in some way, that will attack X as he comes closer. The beginning of the stage consists in a long corridor full with enemies and a magnet on the roof which pulls metal upwards thus enhancing X’s jump capabilities, although this little bonus is totally useless, as there are no pits in this section. Continuing in the level the player will face the first of two sub-boss: entering inside the capsule room will in fact trigger the door closure and free from the capsule itself a **Paraloid S-38** which will possess and **Old Robot**. This enemy is heavily armored and X’s attack will bounce off it unless aimed at its center, the only spot which can take damage. Old Robot’s main attacks consist in moving toward X by performing small jumps, making a big jump in the air and diving onto X and occasionally firing junk projectiles. Although the sub-boss itself may not appear as dangerous as other ones, the real difficulty of the battle comes from its possible-endless duration. As the Old Robot is destroyed (easily done by using a charged Spin Wheel, if available) the Paraloid S-38 will exit the robot’s body and immediately dive into the ground in order to resurrect another one, basically resetting all player’s progress in the boss fight. In order to avoid this a well-aimed Charges Shot or, even better, Speed Burner are sufficient to defeat the small insect and open the exit door.

Once outside the sub-boss rooms a long ladder will bring X deeper in the stage, until reaching another corridor, similar to the first one met, awaits. However here magnets will work in the opposite way respect the first one, reducing X’s jump height, but again this can be totally ignored, as no platforming is

required in the section. At the end of the corridor a ladder awaits to bring X a level lower in the stage inside a room where a second combination of **Paraloid S-38** and **Old Robot** has to be fought again as second sub-boss of the stage to access, upon its defeat, to the last stage's corridor before the boss room.

Following enemies appears in the stage [70]:

- Cannon Driver
- Disk Boy 08
- Garakuta Robot
- Hanged Reploid
- Pararoid R-5
- Paraloid S-38 and Old Robot
- Pararoid V-1

2.8.1 Heart Tank

Near the beginning of the stage, before entering the junkyard facility the player will spot a **Disk Boy 08** on top of a platform. By trapping it with the Crystal Hunter it is possible to create a higher platform for X to jump on and, from the top of it, dash jumping onto the upper part of the junkyard entrance where a life up and the heart tank are hidden. Alternatively if the player is capable of performing a *Neon Jump* (see sec. 2.20.3 for more details) it can use it to reach the upper level without having to obtain the Crystal Hunter weapon first.



Figure 2.22: Heart Tank location: from (a) it is necessary to reach the upper-right wall in order to reach (b). Using a crystal Hunter on the enemy which stands on where X is is the intended way.

2.8.2 Light's Capsule

In the first magnetized roof section, near its end if the player uses the Item Tracer power-up from the helmet the radar will point at a specific position on the floor. If the player releases in that spot a Spin Wheel (normal or charged), the blade will start digging in the terrain, opening a new path which leads to the armor capsule holding the body upgrade. The item tracer is not mandatory, as experienced players can open the passage directly.



Figure 2.23: Armor Capsule's location. From (a) the Spin Wheel will open a passage up to (b).

2.8.3 X-Hunter' room

In the long ladder section if instead of dropping down directly X jumps to the right he will find a corridor leading to the Hunter's room.

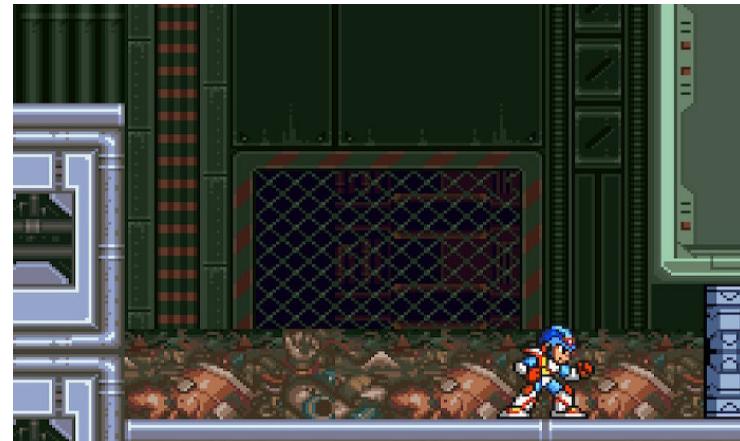


Figure 2.24: X-Hunter's room location

2.8.4 Morph Moth

Morph Moth was a mysterious reploids with an unknown past and affiliation. An experimental prototype, Morph Moth was built with the special capability of powering himself up by absorbing scraps, in order to evolve from his cocoon form to the adulthood [71],[61]. This particular feature caught Sigma' interests, which enrolled him into his army only to be deployed by the X's Hunter during their revolution. The plan was to use Moth's special ability in controlling scraps to resurrect and create new mavericks for their army. However Morph Moth never showed any particular interest in his work.

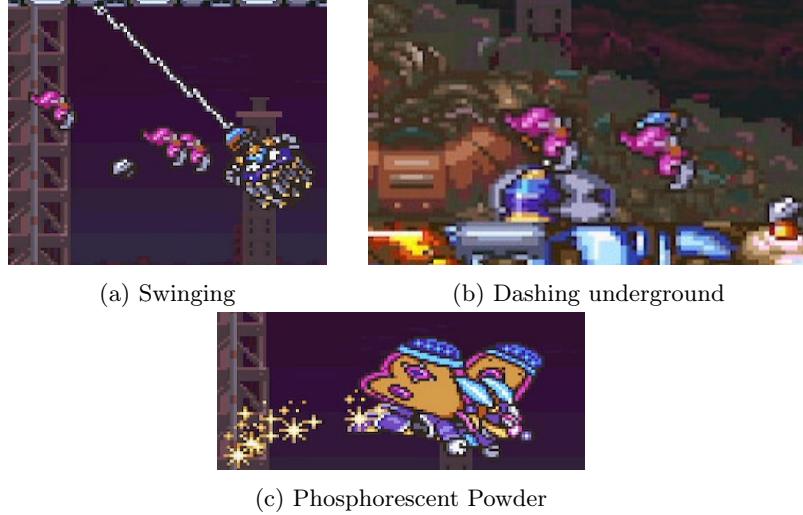
The battle against Morph Moth is split into two phases, the cocoon form being the first. While in this state Moth will perform three attacks cyclically. The first attack is the Scrap Scatter, where Morph Moth swings at increasing speed, scattering scraps around, only to fall down when the speed is high enough to break the string. At this point Moth will begin to attack with his Dash Scrap Scatter, moving underground from one side of the arena to the other while scattering more scraps as he goes. Finally he will re-hang himself to the ceiling and start performing his Scrap Absorption attack, absorbing scrap in clockwise or counterclockwise ways at high speed, increasing in size in the meanwhile.



Figure 2.25: Different stages of Morph Moth's growth.

The second phase of the boss fight can be triggered in two ways. The first (and often seen) one is by bringing Moth's health below 75%, while the second one can be achieved by letting him absorb enough scraps to achieve full-size (if left performing his attacks, the player will note that Moth's cocoon will increase in size). One one of these conditions are met, Morph Moth will exit the arena destroying the ceiling, to reappear shortly after in his Moth form. In this second phase Morph Moth has only two attacks he'll perform while flying around: the first one is the Phosphorescent Powder, where he will start gliding down leaving

behind a trace of scales which slowly descends and damage X on contact; the second one is the Beam attack, where he fires a powerful beam aiming at player's position [72].



Battling Morph Moth without taking much damage can be hard. In his cocoon form the scraps he tosses around will be thrown randomly, so quick reflexes are needed to avoid them, while to dodge the absorption attack quick and precise wall jumps have to be made in order to jump from one side of the arena to the other, while also avoiding to land on the boss. In the second phase, instead, Moth will continuously perform attacks, alternating between the two he has, which can be difficult to dodge: the scales cover a wide area, while the beam comes out fast and aims at the player, which could find difficult to dodge if already dealing in avoiding the scales. Furthermore in this phase Moth's attack power is increased, meaning he can deal many damages in a short amount of time. Moth's weakness is the Speed Burner, which will set him on fire dealing heavy damages and stunning him, but it does not have any other effects, meaning the boss will keep performing all his attacks in order without any limitation.

Also labeled the “*Fallen Angel from the Island of Dreams*” [26], Morph Moth possesses a power equal to 3200 rp and a speed of 8800 rp. Once defeated X will gain access to the Silk Shot (2.4.3) which, ironically, is able to destroy most enemies found in the stage in one hit, sub-bosses included.

2.9 Volcanic Zone

The Volcanic Zone Stage is, among all other stages, the one which will test the player's ability in climbing and wall jumping [73].

The stage's beginning is relatively easy, as no enemies are present except



(d) Beam



(e) Burnt in cocoon form and hurt in Moth form

Figure 2.26: Morph Moth's attacks.

Health	32
Attack	Damage
Contact - Cocoon	4
Contact - Moth	8
Scraps (any)	2
Phosphorescent Powder	2
Beam	2

Table 2.2: Morph Moth's attack's damages [71]

for a single **Beetron**, which will move up and down until it matches X's same vertical height. At that point it will ram into X and, if it hits a breakable wall, Beetron will destroy it, opening a passage but also destroying itself in the process. Besides opening new passages X can also stand onto Beetrons, as they have a platform on top.

Whether X enters the volcano from the top or by breaking the bottom-left wall (in this case the player will find a small passage with healing items) the second stage's section takes place inside the active volcano. here as X reaches a metallic floor the screen will start shaking. From that moment the lava will begin rising, leaving as the only escape option climbing up to the volcano's top. To do this the player must be very quick and precise in wall jumping, as the exit conduit is not regular but presents several narrowing and ledges which require continuous moving from one wall to the other. Once reached the top the lava will continue to erupt upwards, not following X anymore.

The third section is an outside one, where the player has to platform between rock pillars, which will begin collapsing into the lava as soon as X touches them. At the section's end a second Beetron can be found, which can be used to open one of the two blocked passages (one above and one below the main one) for the second indoor section. Here there is first some platforming to do between collapsing pillars onto a lava pool and then a final climb part. This time there is no lava chasing X, but the section is full of pipes which constantly emits gas that can be set on fire when a **Morgun** enemy lands near a pipe. The fire lasts for some time and deals heavy damage to X, so disposing of these enemies is suggested. The gas itself does not damage X, so standing in front of it is safe.

Once exited from the second volcano, by going a little further to the right the player will find the boss door.

Following enemies appears in the level [74]

- **Bar Waying**
- **Barite Lastar**
- **Beetron**
- **Morgun**

2.9.1 Sub Tank

Right at the beginning of the stage if the player manages to reach the entrance to the volcano without destroying the Beetron, and from there jump on to the platform this enemies carry on, the Beetron will move backwards until it reaches a hidden zone on the top left of the map, where the Sub Tank resides.

2.9.2 Heart Tank

While escaping from the lava in the first volcano the player will immediately notice the Heart Tank, in plain sight on one of the many narrows while climbing.



Figure 2.27: Sub Tank location.

Reaching this collectible can be difficult, not only due to the lava chasing the player, which will kill X if he is too slow, but also for the Bar Waying enemy which will act as a wall, slowing down the process to get it even further. The best way to get this item is to climb as fast as possible and dispose of the Bar Waying as soon as he appears by using weapons such as Spin Wheel, Magnet Mine or Silk Shot.



Figure 2.28: Heart Tank location.

2.9.3 X-Hunter's room

When entering the second volcano, if the player uses the second Beetron to destroy the upper wall two possible passages will open: by going down the player will return to the main route and continue in the level, while going up the player will find the X-Hunter's room.



Figure 2.29: X-Hunter' room location location.

2.9.4 Flame Stag

Flame Stag once belonged to the 17th Elite Unit, where he fought alongside his friend Boomer Kuwanger. When the rebellion began the two friends defected together, but Flame Stag became missing shortly after, whereas his friend ended up as shown in sec. 1.13.2. Six Months later his mysterious disappearance, Flame Stag reappeared, aiming to cause the Volcanic zone to erupt, obscuring the sun with the ashes and giving start to a new ice age. If his plan is somehow connected with X-Hunter activities is unknown.

Also known as the “*Heat Knuckle Champion*” [26], Flame Stags stays faithful to his nickname and the animal he is based on by fighting with fast fire-based melee attacks in rapid succession. He will often begin the fight by performing his triangular kick attack to rapidly climb the arena’s wall (which for this battle is much taller, similar to Morph Moth’s one) and chasing X if he tries to climb them to avoid him. Should X instead stay on the ground Stag will perform only few jumps and then come down, where he will perform one of his remaining two attacks, these being the Speed Burner in projectile mode, where he shoots two fireball projectiles the first one which slightly descends and the second one which rises and can also climb walls, and the Speed Burner in Body Blow mode, where Flame Stag dash towards the player covered in fire and, if it hits, it will launch X in the air with a powerful uppercut. This attack also leaves behind a trail of fire which also deals damage. Finally, as most bosses of the game, if Flame Stag drops below under 50% of health he will activate his last resort, in this case being the Super Mode. While in this state (which lasts for the all duration of the fight) Flame Stag’s flame turns blue, corresponding to an increase of movement and attack speed as well as the addition of another attack following the uppercut, which consists of slamming X onto the ground after sending him fly with the first attack.

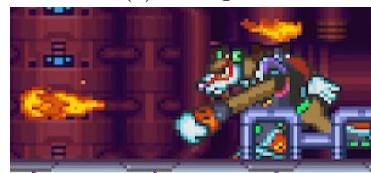
Despite his fast attack, all Flame Stag’s attacks can be avoided relatively easily. Staying on the ground ensures him to almost never perform his triangular kick, and by dash-jumping off the walls allow to easily avoid all remaining



(a) Triangle Kick



(b) Super Mode activation



(c) Speed Burner Projectile



(d) Speed Burner Dash



(e) Uppercut from Speed Burner



(f) Slamming X onto the ground

Figure 2.30: Flame Stag's attacks.

attacks. Moreover to ease the fight even more Flame Stag possess not one but two weapons which deal him increased damages, these being the Sonic Slicer and the Bubble Splash, although only the last one is considered to be his main weakness since, beside the augmented damage, stun him and completely reset his attack pattern. This can be exploited to make Stag fall into a loop where he shoots the Speed Burner Projectiles, the player dodge them by wall-jumping and hit him with the Bubble Splash, which forces him to repeat the projectile attack.

According to in-game data, Flame Stag possesses a power of 3600 rp and a speed of 7000 rp and once defeated X will gain access to the Speed Burner ([2.4.8](#)).

Health	32
Attack	Damage
Contact	2
Speed Burner- projectile	2
Speed Burner - dash	3
Speed Burner - trail	2
Speed Burner - Uppercut	3
Super mode combo	2+5

Table 2.3: Flame Stag's attack's damages [[75](#)]

2.10 Central Computer

The Central Computer Stage is probably one of the most difficult stage to travel due to dangers that it stores and that come in various forms, sometimes even as insta-kill traps. This stage has as its focus the stealth action, requiring X to proceed while avoiding searchlights to no trigger alarms. Avoiding being spotted is not mandatory, but triggering the alarm will activate more enemies to attack X, making it more difficult to proceed in the stage while keeping high the health level.

The first part of the stage is filled with searchlights. Here X has to proceed avoiding getting spotted, by hiding behind some background walls which block the light, but they become smaller and harder to use as the stage progresses. If the alarm triggers **Blecker** enemies in the area will activate, dropping down and start shooting X, while also deactivating bridges causing more pits to appear. After proceeding deeper in the stage spotlights will disappear leaving place to another danger: **Installers**. These enemies are big moving blocks which will start moving as soon as X approaches them, moving into a predefined configuration and then staying in position for as long as they are on-screen. These enemies are totally invincible (safe for purple-shaded one) and, without caution, can close the player into a death trap very quickly. The section itself is not very long but

the player should not relax too much, since as soon as it enters the next room the first sub-boss of the stage will appear: the [Chop Register](#). This miniboss, a 3D wireframe sword, can be difficult to approach at first, especially without knowing its weak point. In order to defeat the boss, in fact, the player has to attack the handle which is the only weak point, as the blade is completely invincible. The problem to face is that, most of the time, the blade will be pointed towards X to attack him, hence making hitting the handle an harder task, which is also made even harder by the fact in some occasion the blade will swing very quickly up and down, to deflect all projectiles X has shot it. The best way to deal with this boss is by having something that can one-shot him immediately as it appears, in order to avoid fighting it at all. A Giga Crush attack, or a well placed charged Sonic Slicer (ensuring that all projectiles hit the handle in the rising phase) will destroy the sub-boss immediately.

After defeating the miniboss, the second part of the stage will open. Here spotlights return, only this time X has to avoid them while sliding down a wall, with hiding spot coming out from said walls. Once finished the descent X will reach a large room, where blocks will start falling from the roof. These blocks will solidify as they reach the floor, becoming part of it and changing the room's layout. Here, if X got caught by the searchlight previously, the alarm will trigger speeding up the block's fall process and making harder to avoid damages. Also in this room a scanner will appear homing to X's position to analyze him and empower the subsequent miniboss, should X got caught. While avoiding it is rather simple with the alarm off, falling blocks can make this task harder as they slow down X if he gets hit, giving time to the radar to reach for him. As said previously, passed this small section another miniboss awaits, the [Raider Killer](#). This enemy has different attack pattern and damages, depending on how many times the scanner managed to scan X, up to four in total. The upgrades regard only its offensive, and partially defensive, capabilities, but they does not impact on the total health it has. To dispose of him the Speed Burner is the suggested weapon, dealing him increased damage.

Defeated the last miniboss, a final corridor divides X from the boss' door. In this last section the alarm will always trigger, not matter what, causing [Blecker](#) to drop down and attack, bridges to fall and open bottomless pit and also [Installer](#) to fall, to push X down the pits. If the player manages to avoid all these dangers, at the corridor's end it will reach the boss' door.

Following enemies populate the stage [76]:

- [Barrier Attacker](#)
- [Barite Lastar](#)
- [Blecker](#)
- [Chop Register](#)
- [Installer](#)
- [Raider Killer](#)

- Scrambler

2.10.1 Heart Tank

After the first searchlight section the player can notice an opening on the roof, which normally is not reachable by simply jumping. Here if the player has managed to avoid triggering the alarm a Blecker can be found near the left wall, allowing X to start wall-jumping onto it and subsequently reaching the opening where the Heart Tank is. Alternatively, should the player be able to perform a Neon Jump (sec. 2.20.3), it is possible to reach the opening even if the alarm was triggered.

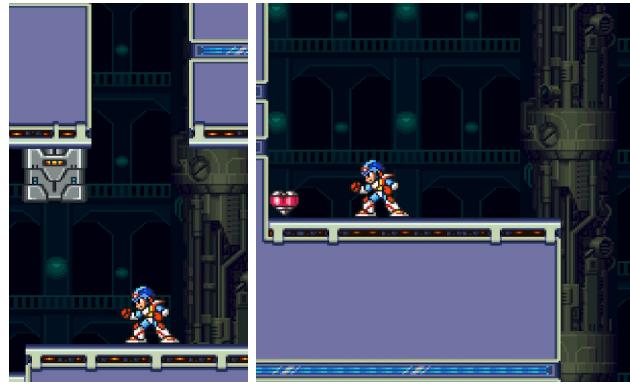


Figure 2.31: Heart Tank location. By not activating the Blecker, it is possible to reach the opening on the roof.

2.10.2 Sub Tank

Passing the first Installer's sections, immediately before the first sub-boss room the player can notice another opening on the roof, similar to the one leading to the Heart Tank. This time however there is no way to reach via normal jumping, as no Blecker is present to provide help. Instead what is needed to reach the opening is a combination of the Foot Parts, the Buster Parts and the Speed Burner, in order to perform a dash-jump from the left ledge (the higher one, under where the last Installer can be found) and extend the airborne period with a charged Speed Burner, making possible to reach the right wall (which is shortly lower) and start wall-jumping up to reach the room with the Sub-Tank. Alternatively a Neon Jump can be performed here similarly to what was done for the Heart Tank to reach the opening.

2.10.3 X-Hunter' room

Inside the large room, past the second spotlight section and before the Raider Killer sub-boss, is where the X-Hunter room can be found. While to reach it is



Figure 2.32: Sub Tank location.

easy by words, as the door to enter it is located at the bottom right corner of said room, below the passage to the sub-boss, reaching it can be difficult, mainly due the falling blocks that change the room's layout. If, in fact, it happens for a block to fall in front of the door, it is possible for it to completely block the access, thus preventing from fighting the eventual boss.

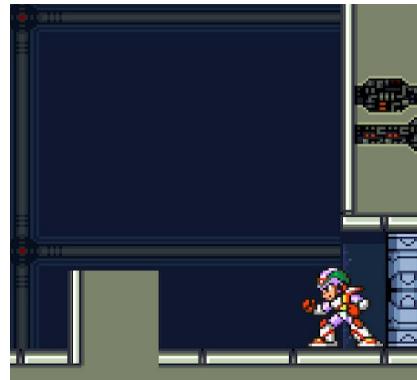


Figure 2.33: X-Hunters room location.

2.10.4 Magna Centipede

Magna Centipede was once a Maverick Hunter belonging to the Special 0th Unit, also known as the “Shinobi” unit. During the first Maverick revolution he fought against Sigma as a Maverick Hunter but was captured while on duty and brainwashed [61]. Turned into a Maverick loyal to Sigma, Centipede became a cold-hearted and emotionless assassin (which worth him the title of “Crimson Assassin” [26]) which followed every order given to him, even destroying his old comrades. Due to his blind obedience X-Hunter entrusted him with an

important mission: to capture the Central Computer and use it to spread the Maverick Virus all over the world.

Being a ninja-type Hunter, battling with Magna Centipede cannot be easy, especially if underestimated, as a bad move can rapidly change the battle's course and snowball into a defeat. The first problem to deal with is Magna Centipede's high mobility, as he will often teleport in the arena, moving from one corner to the other (both lower and upper, in the latter case reappearing upside-down) and sometimes even multiple times to trick the player into wasting an attack. Beside the mobility, Centipede disposed of three main weapons, one deadlier than the other.

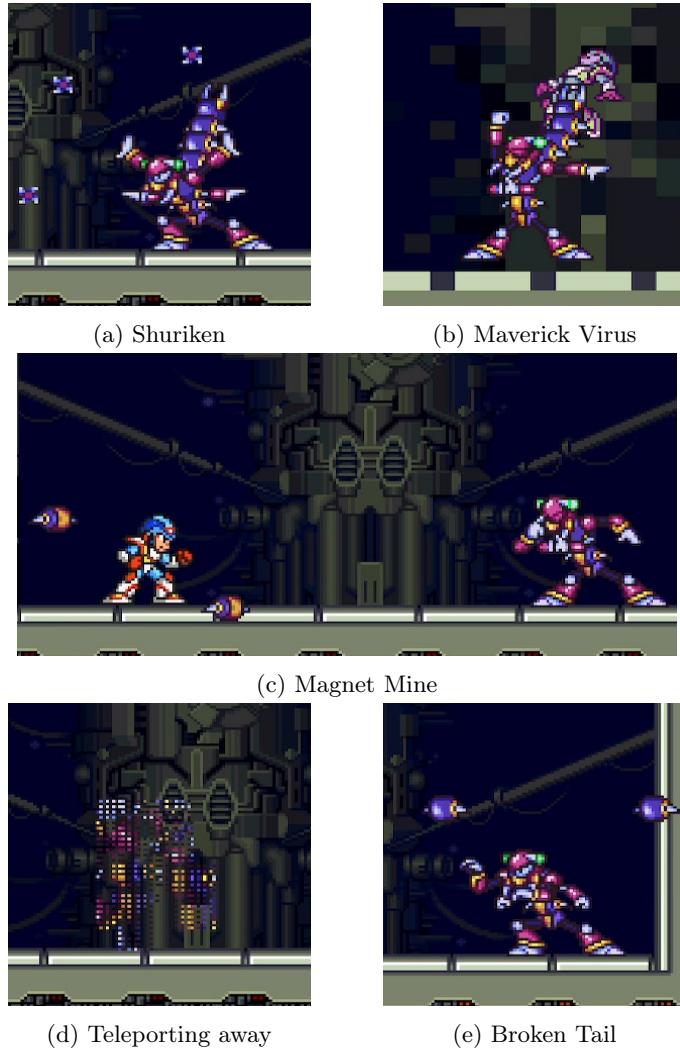


Figure 2.34: Magna Centipede's attacks.

His most basic attack consists in throwing three shuriken (even multiple times) which follow a curved trajectory with different height. Next there is his Magnet Mine attack, which sees Centipede splitting his tail and sending the fragments toward X. Fragments (two at the beginning and three when on low health) orbit around X for a while, halting his shots in the meanwhile, only to close onto him shortly after. Before closing the gap, however, the tail's pieces will halt shortly, giving the player the chance to escape in the free direction and to avoid the hit. Finally there is Centipede's most dangerous attack which, although by itself doesn't deal any damage, can drastically change the battle's outcome: the Maverick Virus injection. During the fight, in fact, Magna Centipede will begin to draw X near him with great force (it is possible to avoid getting caught if X is far enough from the boss) and, once caught, will begin injecting the virus in X, debilitating him more and more for the rest of the battle. It is, however, possible to escape from Centipede's grasp by mashing any button. The real problem about this attack is that Centipede will use it regularly, so the chance of escaping from hit reduces as the fight progresses. Even worse, Centipede is able to accumulate virus effects at every injection up to four times, past which no more effect will take place, although no more are needed since after four injections X's ability will be almost totally debilitated, and the win chances with them. The virus effect injected by Magna Centipede are always the same and in the same order, and are the following [77]:

- The first injection will disable all forms of charged shots.
- The second injection will block X from shooting more than one projectile at the time.
- The third injection will reduce the dash distance by a lot.
- The final injection will greatly reduce the jump height.

Should the player find out Magna Centipede's weakness, the whole fight becomes trivial. Should, in fact, X hit even only one time Magna Centipede with a Silk Shot, this would cause his tail to shatter, disabling both the Magnet Mine and Maverick Virus attacks, and leaving Centipede with the only option to teleport and attack with shuriken. This trivializes the fight, especially also due the fact that Silk Shot's metal scraps are thrown diagonally, making it the perfect weapon to hit Centipede while on the roof.

According to in-game data, Magna Centipede possesses a power of 2900 rp and a speed of 8800 rp, and once defeated X will integrate the Magnet Mine (sec. 2.4.7) into his arsenal.

2.11 Desert Base

The Desert Base Stage is the first level in the entire series to introduce a feature which will become recurring in most of following games: ride chaser sections, which sees X using a high-speed vehicle to travel the stage across obstacles

Health	32
Attack	Damage
Contact	4
Shuriken	3
Magnet Mine	3
Maverick Virus (1)	0, disable charged shot
Maverick Virus (2)	0, disable rapid fire
Maverick Virus (3)	0, reduce dash distance
Maverick Virus (4)	0, reduce jump height

Table 2.4: Magna Centipede’s attack’s damages [77]

while avoiding to crash or to fall into pits. Because of this the stage presents few enemies to face.

The beginning of the stage is rather straightforward, although it introduces an important element of the stage: barriers. These obstacles (found immediately at the beginning and later on) by default act as regular walls for X and enemies but, if shot, will gradually lower until they become ramps. Although at the beginning this has no use, later this feature will become essential. This section ends with a rock wall which obstructs the corridor, forcing the player to use the ladders to descend into a lower section, where it will find the first ever [This](#) vehicle will start moving as soon as X jumps onto it and won’t stop unless X jumps off or it crashes into a wall, can only turn left or right (which can be used as a sort of brake), can pass over spikes without damage and shoot as X would normally do (but shots cannot be charge), jump and dash. However, differently from Ride Armors, Ride Chasers do not protect the driver, meaning all received damage is transferred to X’s health.

The Chaser section lasts most of the level, traveling from the first base to a second one passing through the desert. Here attention is required, as while riding the player will meet those barriers mentioned earlier which have to be lowered in order to avoid crashing the bike into, using them instead as ramps to jump over large gaps. Keeping the bike in this part is not totally essential, but losing it translates into doing all the stage on foot, which extends the required time. The first big gap is immediately at the tunnel’s end where the chaser is found, anticipated with a tall barrier which can also act as a bridge. After the first jump there is a small section where enemies will attack X with their bike and a sandstorm will rage up. Shortly after the player will notice a strange machine which is the sandstorm’s cause and that can be destroyed by crashing the bike onto it. If this happens, the player can find another bike shortly before the machine, by backtracking a little.

The next part is probably the most difficult. After the sandstorm generator there is a large gap preceded by a small barrier that has to be lowered. The player has to shoot it enough to get the barrier in position, but not too late or there will be no time to sprint over it, resulting in the bike crashing onto the

pit's right wall. If instead the bike manages to pass, immediately after the gap another barrier awaits, meaning that if the player is not quick enough to react the bike will inevitably crash.

After the desert zone, X will enter into a second base. Here the Ride Chaser is almost useless, as this portion of the stage is just a long corridor to the boss's room. This section is where most of the stage's collectibles are. Differently from all other stages in the game, entering the boss' door will not activate the fight, instead when entering the player will find a rocket waiting to be launched. In order to activate the fight X has to jump onto the rocket, which will take off as he gets on. From there X will automatically destroy the rocket, landing into the arena where the boss will appear.

Following enemies appears in the stage: Following enemies appears in the level [78]

- [Aclanda](#)
- [Crash Roader](#)
- [Road Riders](#)

2.11.1 X-Hunter' room

Immediately at the beginning of the stage the player will find the corridor obstructed by rocks, which will force it to take the ladder down to where the Ride Chaser is. If the player instead uses the Spin Wheel onto the rocks the weapon will dig a passage, which will lead to the X-Hunter' boss' door.



Figure 2.35: X-Hunters room location.

2.11.2 Heart Tank

Inside the second base, immediately after the entrance, is a platform covered in spikes that ends with a spiked wall. On this path various pickups can be found which ends with the Heart Tank. The intended way to get the upgrade is to ride the Chaser up to the point, over the large gap and inside the base, to pass over the spikes and collect the upgrade, only to immediately turn to avoid the

spiked wall. An alternate method however is possible, which requires less effort to execute. If the player manages to perform a dash jump followed by a charged Speed Burner at the right height and time, the distance gained will be enough to reach the Heart Tank even without the bike. Clearly this will also cause X to die from the spikes, but the upgrade will remain collected.



Figure 2.36: Heart Tank location.

2.11.3 Light's Capsule

In the same zone where the Heart Tank is, on the leftmost wall the player can find a path obstructed by some blocks. Here, just like for the X-Hunter' room or Morph Moth's capsule, using the Spin Wheel is needed to open the passage and reach the Leg Upgrade.



Figure 2.37: Foot Part capsule location.

2.11.4 Overdrive Ostrich

Overdrive Ostrich was once a proud member of the 7th Maverick Hunter Airborne Unit (the same as Storm Eagle), until a serious accident deprived him of his flight capabilities, forcing him to resign from the Hunter in shame. Although unable to fly, Ostrich maintained a speed and jump power far superior

to most other Reploids of his time, abilities which didn't go unseen at Sigma's eyes which saw usage for Ostrich's powers. Grateful to Sigma for showing him how to use his abilities, Ostrich pledged his loyalty to Sigma and his cause.

Ostrich's abilities were put in play during the second uprising, where the X-Hunter charged him with the task to occupy an abandoned missile base and use the remaining warhead to destroy the Maverick Hunter HQ [60], [61], [79].

In order to keep faith to his surname, the "*Swift Runner of the Sands*", Overdrive Ostrich's boss battle takes place in the middle of the desert, in an open arena which, up to the time this document is written, keeps the record as the longest arena in the series.

Regarding the battle with Ostrich itself, this battle is heavily influenced both by which attack Ostrich's uses and from where he performs it, since the different heights caused by dunes can drastically change how easy it is to avoid a certain attack. The first attack Ostrich is likely to perform at the beginning is his Charge, where he sprints at full speed towards the player sending him flying. Alternatively at the previous one, Ostrich can also perform the Step attack, which is similar to the Charge but sees Ostrich skipping toward the player, again to send him flying if it connects. To avoid both of these attacks the best way is to use the arena to the player's advantage, by reaching a high point and dash-jumping over Ostrich (which will stop as soon as he passes X) or, in case of the Step, dashing under him. Beside his physical attacks Overdrive Ostrich also possess the Sonic Slicer, a projectile he can use to damage X from distance in two variants: the horizontal version is a simple projectile shot towards X, while the Overhead version are five projectiles fired in the air that rain down shortly after. The distance between projectiles is always the same, so it is possible for the player to calculate a safe position based on Ostrich's current location. Fleeing from the boss is also not an option, since as soon as the Ostrich goes off-screen he will move to the background and start running until he reaches the player position and, once reached, will perform an High Jump from the background to the foreground aiming to land onto X.

As said earlier, the battle against Overdrive Ostrich is heavily influenced on where and which attack he performs. Excluding the High Jump, in fact, all other attacks can be performed randomly and without warning, meaning they can catch the player off guard. Moreover the arena's shape can greatly influence how difficult an attack can be to dodge, as some attacks can be avoided easily while being on the high ground (such as the Charge) while others when being on the lower ground. A great help in the fight comes from the Buster Upgrade, since due to Ostrich's height will grant almost every time both shots to connect, dealing heavy damages. Another help comes instead from the Crystal Hunter weapon, which is Ostrich's main weakness. This weapon not only will deal additional damages to the boss but, due to its innate trapping ability, will also freeze him in place. Additionally once Ostrich breaks free from the crystal it will be more likely for him to perform the Sonic Slicer Overhead, creating a potential for an AI loop up to his death.

According to in-game data, Overdrive Ostrich has a power level of 3800rp and a Speed level of 9900rp, the second highest in the game and, once defeated,



(a) Charge



(b) Step



(c) Sonic Slicer (horizontal)



(d) Sonic Slicer (overhead)



(e) High Jump



(f) Frozen by Crystal Hunter.

Figure 2.38: Overdrive Ostrich's attacks.

X will integrate the Sonic Slicer (sec. 2.4.5) in his arsenal.

Health	32
Attack	Damage
Contact	4
Charge	4
Step	4
Sonic Slicer (horizontal)	2
Sonic Slicer (overhead)	2
High Jump	4

Table 2.5: Overdrive Ostrich's attack's damages [79]

2.12 Deep-Sea Base

It wouldn't be a surprise to state that, as the name suggests, the Deep-Sea Base Stage has as its main feature underwater movement and fighting.

At the beginning of the stage X has to enter a small cave which soon becomes flooded and X has to proceed in a small underwater corridor. At the cave's exit is a large door which will open as soon as X comes closer and set free a **Sea Canthller** which will begin traveling across the stage. If ignored this enemy will simply travel forward in the stage, firing homing missiles and releasing mines as it goes. Moreover it also possesses a searchlight which it will use to scan the seafloor and will trigger a laser sweep if X gets caught [80]. The ways the player can deal with this enemy is either to avoid it and try to pass over, proceeding in the stage (although this will cause it to speed up in order to catch up with X) or to destroy it as soon as possible (in this case a well placed charged Sonic Slicer can dispose of it in a single hit). In either case the stage proceeds straightforward until reaching a large horizontal gate which will open as the miniboss approaches, or immediately if the sub-boss is destroyed, permitting to proceed further in the level.

By dropping down the hole the second stage's section begins. This part is very linear, requiring the player to do some underwater platforming while fighting enemies to proceed and avoiding falling into bottomless pits. Near the end gaps become much longer, so attention must be paid when jumping from one ledge to the other. At the end of this section is the base entrance, where a room will drain all the water. From here only some more enemies separate X from the boss.

These enemies home the stage [81]:

- **Barite Lastar**
- **Button Bone type G**
- **Fishern**

- Jelly Seeker
- Sea Canthller
- Scriver

2.12.1 Heart Tank

Near the stage's beginning, in the first section where the Sea Canthller appears, if instead of jumping down the gap opened by the sub-boss the player moves right, it will reach a wall it can climb. By going up from there X can reach an entrance in the wall that only leads to some pickups, or, once at the correct height, jump left to reach a moving platform (similar to ones in the Weather Control stage) which moves up and down. By using said platforms X can go up even further, until he exits the water to reach an isolated platform on the far top of the cavern's roof where the Heart Tank is.



Figure 2.39: Heart Tank location. By using the moving pylon reachable from the right wall it is possible to get up into the small cave on the cavern's roof

2.12.2 Sub Tank

In the second part of the stage, where X has to move from one platform to another above bottomless pits, is a bigger platform on which X can move more easily due the size and few number of enemies. From here if the player releases a charged Bubble Splash and jumps up and left it is possible for X to reach the water's surface and a small wall that can be climbed (possible only thanks to the charged Bubble Splash that enhances the jump's height in water). Once reached the ledge it is necessary for X to keep jumping and move right, in order to keep floating on water's surface while also moving to reach the ledge of the upper platform where the Sub-Tank is. Alternatively by using a slope jump (shown in previous chapter, section 1.20.1) from the small slope near the platform it is possible to reach the ledge without having the Bubble Splash (hence, having to re-play the whole level, as the weapon needed is given by the stage boss)



Figure 2.40: Sub Tank location. By using the moving pylon reachable from the right wall it is possible to get up into the small cave on the cavern's roof

2.12.3 X-Hunter' room

At the end of the stage, before entering the base, it is possible for X to climb the walls outside the base and proceed into an upper path that leads to a hidden room. Here if X didn't destroy or surpassed in speed the Sea Canthller, it will be docked at the entrance, blocking the path. If instead X managed to satisfy one of the previous conditions he would find the path open, leading to the X-Hunter' boss door.



Figure 2.41: X-Hunter room entrance

2.12.4 Bubble Crab

Bubble Crab, the "*Shredder of the Deep*", was a Maverick Hunter of the 6th Fleet armada alongside with Launch Octopus and Wheel Gator, with whom he had a strained working relationship leading to continuous arguments. Bubble

Crab has always considered himself a pragmatist [60], but truth is he never had any sense of honor or justice, always following his greed and desire for money which, eventually, lead him to abandon his work as a Hunter in favor of joining Sigma seeking a bigger profit. During the uprising lead by the X-Hunter Bubble Crab was dispatched into the Sea Base, in charge of commanding the army's transport units which ships maverick around the world [82], [61]

Being an aquatic Maverick it shouldn't be a surprise to find out Bubble Crab's arena is filled with water, similarly to Launch Octopus' one, only this time the water's level will change during the fight, meaning that X's jump capability won't remain constant, messing with eventual dodges. Regarding the fight itself, Crab possesses a wide variety of attacks, which can use either to defend himself or attack. Crab's defense mechanism consists in activating his Bubble Barrier, a large bubble which covers his whole body and requires many shots to take down, and much less effort from him to recreate it, while his attacks come into three main forms. His most basic attacks is the Vertical Jump, an attack Crab will perform only when X is directly above him, and consists in a high vertical jump with big beam claws attempting to slice X. In doing so, however, he will also eventually destroy his own bubble, making him vulnerable again. His second attack is instead the Bubble Splash, a ring of bubble that crab will shoot toward the player as a projectiles, while the third attack are his Mini Crabs, three crab-shaped drones each wrapped into a bubble which will float to the water's surface and stay in place until X hit one of them, in which case the bubble will break, releasing the crab which will instantly home onto X. Although this attack cannot be seen as much dangerous, the real problem is comes from the fact that crabs can accumulate, quickly covering all the water's surface which will eventually lower, making almost impossible to avoid being hit. Finally, just like other bosses, Bubble Crab possess a special attack, performed only at low health. This attack, the Mini Crab Scatter, fires five crab-drones around the arena which will bounce on walls for a while before disappearing. Crab may also perform this attack in succession, putting the total number of crabs up to ten. Although at first sight the battle may seem hard, there are two main techniques which drastically reduce its difficulty. The first and easiest one is to use against Crab his weakness, the Spin Wheel. This weapon has the great ability to deal extra damage to him but, more importantly, to ignore his barrier by popping it if it makes contact with the blade. The second strategy usable during the fight is an exploitation of Crab's AI. He is, in fact, programmed in a way to always use the Vertical Jump attack any time X is directly above him, which opens him to be exploited in combination with the water in the arena allowing for higher jumps than normal. By constantly jumping above him and then escaping, Crab will always be forced to perform that specific attack, destroying his own barrier in the process, while exposing himself for the whole duration of the attack. Once landed the process can be repeated indefinitely until Crab's defeat.

Once beaten X will acquire the Bubble Splash (sec. 2.4.2). According to game data Bubble Crab poses a 6000 rp power and 4800 rp speed values.



(a) Bubble Barrier



(b) Bubble Splash



(c) Mini Crabs



(d) Vertical Jump



(e) Mini Crab Scatter

Figure 2.42: Bubble Crab's attacks.

Health	32
Attack	Damage
Contact	3
Contact (Barrier)	2
Vertical Jump	3
Bubble Splash	2
Mini Crab	2

Table 2.6: Bubble Crab's attack's damages [82]

2.13 Dinosaur Tank

The Dinosaur Tank is probably one of the biggest stage in the game per extension. Respect to the others, this stage is much closer to a classical Mega Man stage, focused on running through the level while shooting enemies and avoiding pits and spikes, than a Mega Man X stage which usually gives the player more freedom of movement thanks to wall-jumps and dashes.

The stage takes place inside a giant dinosaur-shaped tank, the starting point being an entrance and requiring the player to travel all the machine to reach the front, sometimes from the inside and sometimes from the outside. To enhance the sensation of being inside a moving machine the stage is set on top of a moving background of a city, and the screen will shake at constant intervals representing the machine's movements.

The first section of the stage goes from the back entrance down to the dinosaur's belly and consists of a long path with a zigzag structure (i.e go far right, drop down a level, go far right, drop down again and repeat) with the only unique element being spiked floors. There X can't proceed normally nor skip them with dash jumps, but is forced to move above by using special moving platforms which change directions every time X jumps onto them according to the green arrow above them, which will rotate 90 degrees clockwise every time X lands on them. Moving on these platforms is rather simple, but attention must always be paid as even a little mistake can make X fall onto spikes. At the end of this first part a Ride Armor awaits, to bring the player further in the stage by breaking the giant obstacle in the way. This Ride Armor differs from the one from the previous game, as it can also hover for a short while and also charge its attacks (resulting in a more powerful dash attack). Unluckily X will not keep this power-up for long, as it can only be used in the bottom section of the stage, where also enemies Armor will attack the player. At the end there is a ladder which allow to re-enter the Tank. From here a path analog to the beginning brings the player from the lowest part of the tank to the topmost one, via a series of spiked elevators which uses those previously-mentioned moving platforms to move up. Once reached the upper part of the machine the player will go outside and reach the tank's front part, where will again go inside to reach the boss' door. Following enemies appear in the stage: [83]:

- Cannon Driver
- Disk Boy 08
- Rideroid G
- Tubamail Generator
- Tubamail-S
- Tiranos

2.13.1 Light's Capsule

Immediately at the beginning of the stage is an opening on the roof, which brings to a room where the capsule with the Buster part is. In order to reach it normally the player should have acquired the foot part to perform an air dash while sliding from a small ledge near the right walls, in order to reach the small portion of the left wall not covered by the right one and from there start wall-jumping to reach the room. Alternatively there are two other methods, more complicated and not intended, to reach the opening. Both of them require a precise dash wall-jump from the rightmost wall towards the opening with the only difference between them being in what happens next. In the first alternate method the player has to release a Strike Chain aimed at the wall in order to make it pull X onto the wall and then start climbing; in the second method the strike chain is not needed and the opening is reached directly with the dash-jump. In order to perform these two methods a very precise positioning is required, almost to the point of pixel-perfect in the second one.



Figure 2.43: Armor Capsule location.

2.13.2 Heart Tank

After the section on the Raid Armor the player will return inside the tank by a ladder. From here X can go right and continue in the stage, or go left reaching

a spiked wall with on top the Heart Tank. Here, again, two methods exist to reach the collectible, one intended and not. The intended method to reach the Heart Tank is to perform an air dash followed by a charged Speed Burner from one of the elevated platforms on the right to gain enough air time to land onto the platform avoiding the spiked wall. Alternatively it is possible to reach the Heart Tank by abusing the invincibility frames X obtains after getting hit by an enemy to climb the spiked wall. This can be achieved by provoking the [Tiranos](#) into shooting X and letting the projectile advance on the screen until it is close enough to the spikes, than getting hit and use the invincibility frame to climb the spikes.



Figure 2.44: Heart Tank location.

2.13.3 X-Hunter' room

During the last elevator section, near the end of two passage will became available: the first one consists in going left immediately as possible, continuing normally in the stage; the second one instead consists in continuing going up into a section with spiked walls leading to a trap with spikes on the roof that will kill distracted players. Here immediately after the roof is another passage to the right which leads to the X-Hunter's room.

2.13.4 Wheel Gator

Once a Maverick Hunter together with Bubble Crab (sec. [2.12.4](#)) and Launch Octopus (sec. [1.8.2](#)), Wheel Gator was the second-in-command of the 6th Naval unit of the Maverick Hunter [60]. Of cruel and ferocious nature, Gator had always taken pleasure in satisfying his destructive impulses, which eventually led him to flee from his group once one of his fangs was pulled out from one of his comrades [61]. Becoming a fugitive, Gator found a new home under Sigma's command, which allowed him to set free all his cruelty and strength against his foes [84]. During the X-Hunter insurrection, Gator was given charge of using



Figure 2.45: X-Hunter' room location.

the powerful Dinosaur Tank to wreak havoc and destroy an entire city, but was stopped by X who infiltrated the tank and destroyed him, halting the rampage.

Also known as the “*Evil Fanged Heavy Tank*” [26], Wheel Gator is probably one if not the strongest of the main bosses in terms or raw power and damage output. Combining this factor with a wide variety of attacks, some of which are launched by surprise, make this boss fight one of the easiest to lose. The arena is, in fact, filled with oil that reaches X’s legs and in which Gator will dive into, disappearing before launching one of his attacks. The most common one while in this stage is the Spin Wheel, a spinning blade which travels on oil’s surface towards X and that can also climb walls, falling when it reach its peak. The blade deals damage all the time, even when falling, and spawns in random position every time but that can be anticipated as the oil will start moving in waves shortly before Gator launches the attack, and a sound will play as he attacks. Occasionally Gator will also launch a second blade, this being more probable as he drops low on health. After the blades, Gator will attack himself, by jumping out of the water trying to catch X in his mouth with his Bite attack. If X gets caught, he will take damage continuously until he breaks free and the player has to quickly mash button in order to escape as soon as possible to avoid receiving heavy damages. After this attack Gator will remain on the surface for a while, performing one his others two attacks: another variant of the Spin Wheel, firing two blades from his shoulders that bounce on the oil while aiming at X, or the Shot Devour, where Gator will open his mouth in order to eat one of player’s projectile to spit it back in form of four energy shots that travel in straight line. After that Wheel Gator will submerge again and restart his attack pattern. Finally, as most bosses of the game, Wheel Gator also possesses a special attack tied to his health: the Lunge attack. With this attack Gator will turn himself into a giant spinning drill, adjust his height to match X’s and then lunge at him. Beside the damage this attack can cause, it is also important to note the side effect it produces, as the point of the wall gator ram into will get damaged, leaving a non-deadly spike that will damage X if he makes contact



(a) Underwater Spin Wheel



(b) Bite attack



(c) Spinning Wheel (above water)



(d) Eating and spitting a projectile



(e) Lunging

Figure 2.46: Wheel Gator's attacks.

with it. These hazards cannot be cleared, meaning that they will accumulate as the fight proceeds (except if the player makes Gator hit always the same spot), disabling more and more the player's wall-jumping capabilities thus making the fight harder.

As it is possible to see, the battle against Wheel Gator requires the player to keep the focus on the fight until the end. There are no best strategies to deal with the boss, since his attacks can reach almost any point the player can stand. This fight is mostly a matter of reflexes, as quick reactions allow to avoid all incoming attacks and react to damage him the most before he disappears again. It doesn't help that Gator's weakness is the Strike Chain, a weapon with limited range which requires the player to be close to hit properly. Beside, after getting hit by the weapon, Wheel Gator will immediately escape without giving the player a second chance to hit. This would be, if it wasn't for a particular technique that, when performed, allow the player to stun-lock Gator in place. It happens, in fact, that Gator's invincibility frames when hit did not last enough to cover all his submerging animation, leaving open a 5-frame window in which he can be hit again. By exploiting this, a skilled player can continuously release a strike chain at the right moment keeping the boss stunned for the entire duration of the fight.

According to his in-game data Wheel Gator possesses a power of 9800 rp, greater than all other reploids and even matching Agile's one, and a speed of 1800 rp. Once defeated X will gain access to the Spin Wheel (sec. [2.4.4](#)).

Health	32
Attack	Damage
Contact	3
Spin Wheel	2
Shot Devour	2
Bite	1
Lunge	3
Wall Spike	2

Table 2.7: Wheel Gator's attack's damages [84]

2.14 Energen Crystal Mine

In the Energen Crystal Mine Stage X has to travel a crystal mine filled with environmental hazards in order to reach its deepest part, where Crystal Snail resides.

Main elements of the stage consists in the presence of crystallized floor, which behaves exactly as ice making. Immediately at the beginning of the stage is a slope covered in crystal which at about half has a hole where the player can fall into. Past the slope the player will find a Rider Armor which can be

used to easily proceed in the stage. Shortly after the Ride Armor X has to fall down onto a ground covered in crystal spikes that, just as normal spikes do, can instantly kill him. Ride Armors can, however, walk on such terrains removing the danger. At the end of the spiked floor there are two crystal blocks that only the armor can destroy due its attack power, whereas X has to go around them. Even once destroyed, however, another crystal block, this time unbreakable, halts the advance of the armor, forcing X to get out in any case. Immediately after, the player will find the first sliding pillar on top of a slope, which will start to slide down as soon as X comes closer. To avoid it X can either hide inside an opening on the ground near the slope's beginning or run away from it until it falls into the pit, not before having destroyed the block that prevented the Ride Armor from proceeding. From here the player can either proceed by foot or on the armor (the suggested option) to go further in the stage which is filled with more crystal spikes on the floor and more crystal blocks, especially near the end. Here there is a big pile of blocks which hides a life-up beneath them and acts also as a stop for the Ride Armor. From here the stage continues upwards, where the Ride Armor cannot reach, although it is possible to keep it and climb up by using crystal blocks as a ladder. Once at the top is the sub-boss of the stage, the [Magna Quartz](#). This mini boss consists of a machine trapped inside a crystal which does not move at all, only releasing small drones (one at the beginning and a second one later) which shoot X with bouncing projectiles. The only difficulty in the fight is due to the bouncing projectiles, as the boss doesn't move and is also relatively large, making a good target for most weapons, although Silk Shot and Spin Wheel are the more indicated [85]. Passing the miniboss, there is the final section of the level, which consists of more crystal slopes with falling pillars which will either chase X as he follows the slope or try to crush him. These latter can be especially dangerous, as the stage's layout will become more complicated, making escaping from pillars harder due the thigh space X will have to move into. Once avoided all these dangers the player will find the boss door to Crystal Snail.

Another peculiar trait of this stage is the fact that posses the lowest variety of enemies in the entire game, only two excluding the sub-boss [86]:

- [Batton Bone G](#)
- [Magna Quartz](#)
- [Refleczer](#)

2.14.1 Heart Tank

Immediately at the beginning if X slides down the very first pit will reach a platform over a large gap where, on the other side, is the Heart Tank. For X it is impossible to reach the other side alone, even with the combination of Speed Burner + air dash, so it is necessary to rely on the hover capabilities of the Ride Armor, which can be found shortly after in the stage. To reach the other side it is necessary to charge up the Armor's dash attack and release it, then jump

and hover over the gap. If this is done at the very edge of the platform it is possible for the player to reach the other side with the Ride Armor, whereas in most other cases it is necessary for the player to jump out of the armor and use the strike chain to grab the ledge to avoid falling into the pit. Once reached the other platform the player will find the Heart Tank to grab, as well as one of the moving platforms found inside the Dinosaur Tank, to bring back X to the other side.



Figure 2.47: Heart Tank position:Starting from the left the ride armor must fly the whole pit until reaching the other side (right figure).

2.14.2 X-Hunters' room

After the first falling pillar the player will find an elevated platform which leads to a path to the left closed by some crystal blocks. The player has to bring the Ride Armor there to open the path and reach a large room with the moving pillars which were also present in the Deep Sea Base stage. X has to use such pillars to climb the room (wall-jumping is not possible). Once on top the player will find the door leading to the X-Hunter room.



Figure 2.48: X-Hunters' room position.

2.14.3 Light's Capsule

After the sub-boss and the long slide with the crystal chasing there is a pit which, in a very similar way to how the Heart Tank is found, leads to a hidden passage. At the end of this corridor the player will find the Armor Capsule with the head parts.

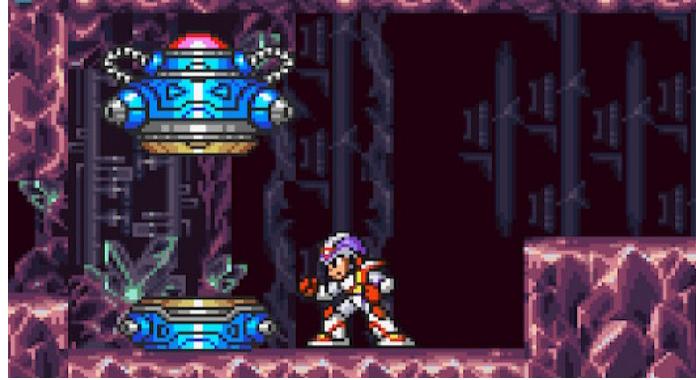


Figure 2.49: Head Parts capsule location.

2.14.4 Crystal Snail

Of all maverick bosses, Crystal Snail is one with the least amount of information available, with an unknown affiliation nor background. The only information available is that, at some point in time, he get enrolled by the X-Hunter with the task to defend the Energen Crystal Mine, where energer crystal are extracted to be used as energy source by the Maverick army [61].

Crystal Snail excels more in defense than offense. Of his three attacks, in fact, only one can deal actual damages: the Shell Lunge. When performing this attack the boss will hide in the shell and start spinning in midair, to lunge onto the player's position shortly after. Sometimes he will also perform this attack multiple times, halting midway and then suddenly changing direction. Crystal Snail's other two attacks are the Crystal Hunter, which fires three globs which freeze the player in place, making it harder to avoid following attacks, and the Slow-Down, which reduces the player's moving speed to simulate a time-slow effect. Snail will perform this attack only at low health. Although not being capable of dealing significant damage to the player during the fight, the opposite can also be true. Once Snail hides in the shell it becomes invulnerable to all damages, limiting the damage output the player has. This situation is totally avoided by using Snail's weakness against him, the Magnet Mine. Beside suffering major damages when hit, Snail will also get separated from his shell, causing him to get knocked in the direction he's facing (and take damage should he hit a wall), while the shell will go the opposite way. Once separated Snail will cease attacking, aiming only to reconnect to his shell by jumping into it. It



(a) Crystal Hunter



(b) X trapped in crystal



(c) Shell lunge



(d) Slow-Down



(e) Hit by Magnet Mine



(f) Ejected from the shell



(g) Dashing to recover the shell.



(h) Absorbing crystal hunter.

Figure 2.50: Crystal Snail's attacks.

is possible to avoid so, however, as the player can literally kick the shell around, to prolong the chase, or even knock the shell at Snail which will get hit and suffer damages. Finally it is also worth to note that the charged Magnet Mine (the black hole) will absorb all projectile Snail fires, protecting X as long as it is on screen.

Also known as the “*Crystal Magician*”, Crystal Snail has a 6800rp power and 500 rp speed, the lowest of all other bosses. Once defeated X will integrate the Crystal Hunter (sec. 2.4.1) into his weaponry.

Health	32
Attack	Damage
Contact	4
Shell Lunge	4
Crystal Hunter	0
Slow Down	0

Table 2.8: Crystal Snail’s attack’s damages [87]

2.15 X-Hunter’s Stage 1

Once all Maverick have been defeated a small scene will play, which will change depending on whether X has collected all Zero’s parts or not. Should he have missed one, Dr. Cain will call X warning him that one of the X-Hunters has attacked the Maverick Hunters Headquarter, stealing Zero’s core but leaving behind a trace that points towards their base, at the north pole. If instead X got all Zero’s part, only the latter part of the message will play, displaying X-hunters’ base location. At this point the world map will shift upwards, revealing a new stage, the first of the last five.

The first X-Hunter stage has as its main feature wall climbing with closing walls, those same ones which were present also in the very first stage of the game, during the introduction and then never seen again. There are a total of four of these wall-climb sections of increasing difficulty due to walls positioning in irregular patterns or distance between each other. Beside this main danger, the stage also contains many enemies and, near the last third, a split path, with the upper one being shorter but harder to travel due [Mecha Arms](#) which will try to pull X into the lower path. This last path is much longer, also possessing another climbing section with moving pillars and electrified walls. Those two paths then converge, immediately before the last closing-wall section.

Differently from the introduction stage, however, this time X’s arsenal is at full potential. This is important as the main cause of walls closing are [Slidedames](#), enemies which will quickly fly upwards to close walls as the player approaches. This is totally avoidable by destroying Slidedames as they appear on screen before they escape, removing completely the main danger this stage

has. All weapons which have an upwards trajectory will do the job, such as Bubble Splash, Silk Shot, Magnet Mine and charged versions of Spin Wheel and Sonic Slicer.

Following enemies appears in the stage:

- [Aclanda](#)
- [Barite Lastar](#)
- [Barrier Attacker](#)
- [Batton Bone type G](#)
- [Crash Roader](#)
- [Mecha-Arm](#)
- [Slidame](#)
- [Scrambler](#)
- [Scriver](#)

2.15.1 Violen & Neo-Violen

Violen (pronounced in the french way) was the strongest member of the X-Hunters organization. His power level surpassed the one of all his maverick comrades, and was said to be the highest among all reploids in the world [61], although his speed remained average. Nothing is known of Violen before the second uprising, where he along with his two other fellow X-Hunters pulled the string of the conflict waiting for Sigma's return. The only little information available is that, one time, he single-handedly managed to raid and destroy a mid-sized Maverick Hunter base.

During the second uprising Violen challenged X for the possession of one of Zero's parts, in an attempt to buy enough time for the X-Hunters project to be completed. Once all mavericks were defeated and X began raiding the X-Hunter fortress, Violen was the first to set up a line of defense to try to stop him by using all his power and assuming the form of Neo-Violen. However even in this state Violen's power was not sufficient to defeat X, as the more power he released the more his brain circuit became defective, allowing X to easily defeat him once and for all.

Although being considered two different bosses (Violen and Neo-Violen), the fight against Violen remain basically the same, safe for some minor changes which affects the arena, rather than the attacks the boss can perform.

It should not be a surprise to state that Violen's main strength comes from his incredible raw power, which can decimate X's health very quickly. Violen's main threat comes from his Hammer attack (which comes in two variations), where he swings his flail around the room making it ricochet off walls at high speed. This attack has high damage output and is difficult to avoid due the

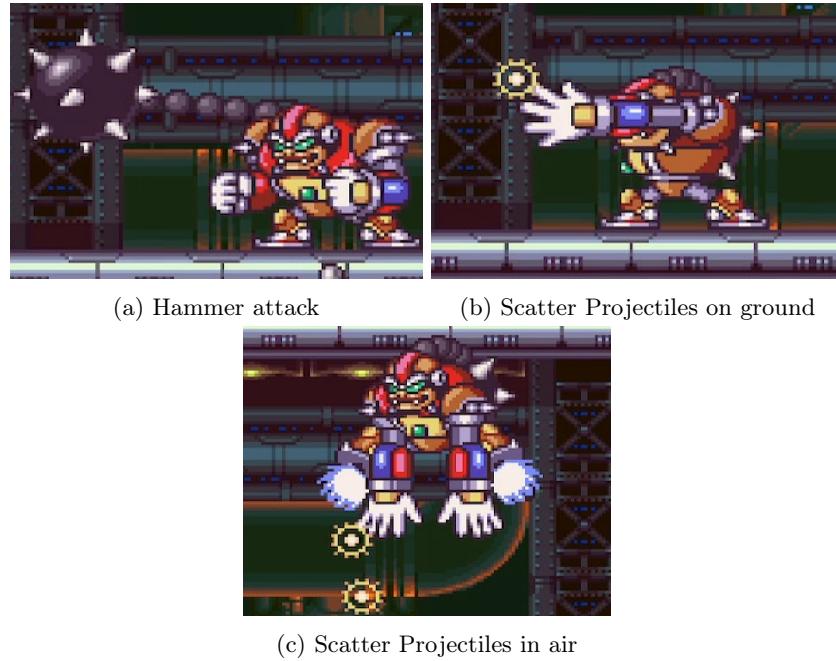


Figure 2.51: Violen and Neo-Violen's attacks.

randomness of where it hits and how it ricochet. Furthermore Violen can either start this attack by swinging his flail back and forward, or going for a direct hit to the player. Beside these two attacks, Violen can also resort to using his scatter bullets attacks, firing a spray of bullets either while standing on the ground and toward a wall, or while hovering in mid-air and aiming at the ground. These last attacks are the last dangerous, as they are easily avoidable and projectiles do not move much fast.

During his second battle Violen, as Neo-Violen, will perform these same attacks with an increased damage output. The only difference is that in this last battle floating platforms will appear and change position during the fight, creating more surface for the flail to bounce off, making its path even harder to decipher. However such platforms can also become a safe spot for X to hide and attack Violen safely. In this fight, however, it seems Violen is not capable of performing his Scatter Bullet attacks while on the ground anymore.

There are not many advice for both of Violen's fights. Trying to avoid as much damage as possible is the key element, but it may be hard to perform due the randomness the flail moves. Closing the fight as quickly as possible is the best option. Using high-effective weapons such as Bubble Splash (canonically his weakness) or Sonic Slicer (which deals the same damage as Bubble Splash) or the leaf-version of Silk Shot (although only for the first fight, as this weapon is unavailable in the second one) are good candidate, as they deals good damage

and comes out faster than a charged shot. This however does not reduce the danger of the fight, which in many cases can simply turn into a race of who tanks most hit and deals most damage over time.

By game information, Violen's power is of 18400 rp, the highest in the game and tieing with the final boss, although his speed is only 6200rp.

Health	32	
Attack	Damage	Damage (Neo-Violen)
Contact	3	3
Hammer Attack	5	6
Scatter Bullets	2	2

Table 2.9: Violen's attack's damages [88]

2.16 X-Hunters' Stage 2

The second X-Hunters stage is relatively short and revolves around underwater platforming. About two third of the stage are underwater sections with X jumping above bottomless pits or doing platform between moving pillars above spiked traps, all of these with enemies trying to damage X and make him fall to his death. The final section of the stage is instead a long rise, again using moving pillars, of a pit with spiked walls. Here, just as in Flame Stag's stage, gas pipes will emit flames, to damage X and make him fall back to the start. Once reached the top, only a single spiked floor separates the player from the boss door.

This stage houses following enemies:

- Barite Lastar
- Batton Bone type G
- Cannon Driver
- Fishern
- Garakuta Robot

2.16.1 Serges

Among the three X-Hunters, Serges was without doubt the most important. A special section is dedicated to him in chapter 7.2, exploring in depth his background, while here only general information about Serges' role in X2 story are described.

Serges was the leader of the X-Hunters, as well as the head of the group. His past before the X-Hunters is unknown, much like all of his comrades, as Serges

appeared first at the command of Sigma's remaining army after the latter's destruction by the hand of X. Under Serges command, Sigma's forces remained quiet for about six months, until X-Hunters' plan of mass-producing Maverick for their army was put in motion. Together with Maverick production, Serges' plans also consisted in Zero's resurrection as a Maverick, for which the control chip held by the Maverick Hunters was needed, and Sigma's resurrection [61]. In order to accomplish everything, however, X-Hunter's forces were not strong enough to hold X busy for the time needed, forcing the three members, Serges included, to challenge him using Zero's rebuild part as prizes.

Serges' main strength came from his intellect and thought program, said to surpass even Sigma's one and pairing him for intellect to the legendary mad scientist of the past². However the reploid possessed little to none physical strength, forcing him to rely on his craftiness to develop vehicles for him to fight on, such as the moving pedestal he used when challenging X for the first time or the Serges Tank, deployed during his last confrontation with X, where Serges was destroyed. Before dying, however, Serges managed to make a final cry, showing his regret for being defeated by X:

*Am I to perish here? Defeated by Light's memento robot again...
how regretful... [58]*

Differently from Violen, Serges' boss fights are radically different between the first and second encounter. Here both of the battles will be examined.

When met for the first time, Serges will face the player using his floating pedestal. Immediately at the beginning of the fight he will throw his cape away, which although it may not appear at first, is an actual projectile that can damage the player (for a single point of health) and will also instantly charge up the Giga Crush Bar (regardless of its current level). Beside this single-use move, in this state Serges posses only two attacks: Land Mines and the Rising Laser. With the first attack Serges will place a mine on the spot where he is, and then proceed to move forward. These mines remain for the whole duration of the fight, only exploding when X comes closer, and can easily become a problem since Serges can put down up to five and make the floor hard to move on. When this happens, Serges will stop using this move. His second attack is the Ring Laser, which sees Serges jump in the air while spinning, and releasing a volley of shots in a spiral pattern at high speed, while also moving forward. Serges can perform this attack a random number of times, making it harder to avoid getting hit. As if avoiding Serges' attacks were not enough, another layer of difficulty to this fight is added by Serges' barrier, which he will use to deflect all incoming projectiles aimed at him. This barrier is tied to the player's fire button, activating every time it is pressed. For normal shots this means that the barrier will activate immediately and protect Serges from damages. There are however some ways to avoid Serges' barrier to trigger. Using charged shots is the easiest way, since the barrier triggers when the charge begins, but not when the button is released to fire the shot. Charged shots also come very in

²aka Dr. Wily

handy as their size can seep the mines on the floor. Other weapons that work properly are the Sonic Slicer (the main weakness) which can hit Serges thanks to its ricochet ability and the charged version can also hit from above, where the barrier cannot stop the projectiles, the Spin Wheel, which can cut through the mines and can be deployed in mid-air to fall onto Serges, damaging him multiple times, and the Silk Shot, especially in the crystal variant, since the scattered projectiles can hit Serges without triggering the barrier. Finally since the barrier is tied to the pedestal, Serges is also vulnerable to hits when jumping in the air.

The second Serges' fight inside the X-Hunters' base is radically different from the first one. This battle takes place on top of a spiked floor, on top of four platforms which move up and down, and Serges is now piloting his giant Serges Tank. This machine covers all the arena in height and is equipped with four cannons on the front which will either shoot X and defend Serges from all damages.

The first phase of the fight consists in destroying all cannons, to expose Serges. Each turret possesses a different type of projectile, but only one will shoot at the time. The four types of projectiles are: an oval-shaped spinning single bullet that bounce off the floor from the first one; a spinning blade which curves and return into the turret in a boomerang-way from the second turret; an homing spark aimed at the player from the third cannon; an horizontal laser beam from the fourth one. To make the fight harder, once two out of the four turrets are destroyed the tank will move forward and destroy two platforms, limiting X's movement space. Once all four turrets are gone, the front part of the tank will break and Serges will become exposed to player's attacks. While in this state Serges will only be able to perform his Split Bullet attack, which fires a single projectile from his turret (which constantly moves up and down) that will split into four more, either in a cross or X shape. The shape projectiles will follow is casual and cannot be established.

The real danger from this fight, especially in the first phase, comes not from Serges himself but rather from the spike on the floor and the moving platforms. Such platforms are relatively small and since they move up and down in an alternate way they are never aligned, meaning that even a single hit can push X onto the spikes and end the fight. For a better fight, destroying all cannons as fast as possible, to limit the damage taken and keep the health for the second phase, is the best idea. The turrets are relatively weak, getting destroyed easily by the Silk Shot and the Sonic Slicer. The Giga Crush is also a viable option, being able to destroy all turrets at once, with the additional side-effect of making the tank only destroy one platform instead of two.

For the second fight, the main difficulty comes from hitting Serges directly. Since he's constantly moving up and down, just like remaining platforms, hitting Serges directly can be a hard task, whereas the opposite is not true, due Serges' projectile splitting can cover the whole arena and hit the player at most locations. There is, however, a way to avoid the danger of the spiked floor, trivializing the fight. Once the turrets are gone, the lower part of the tank becomes a platform for X to stand on. In that position X is directly below Serges, and

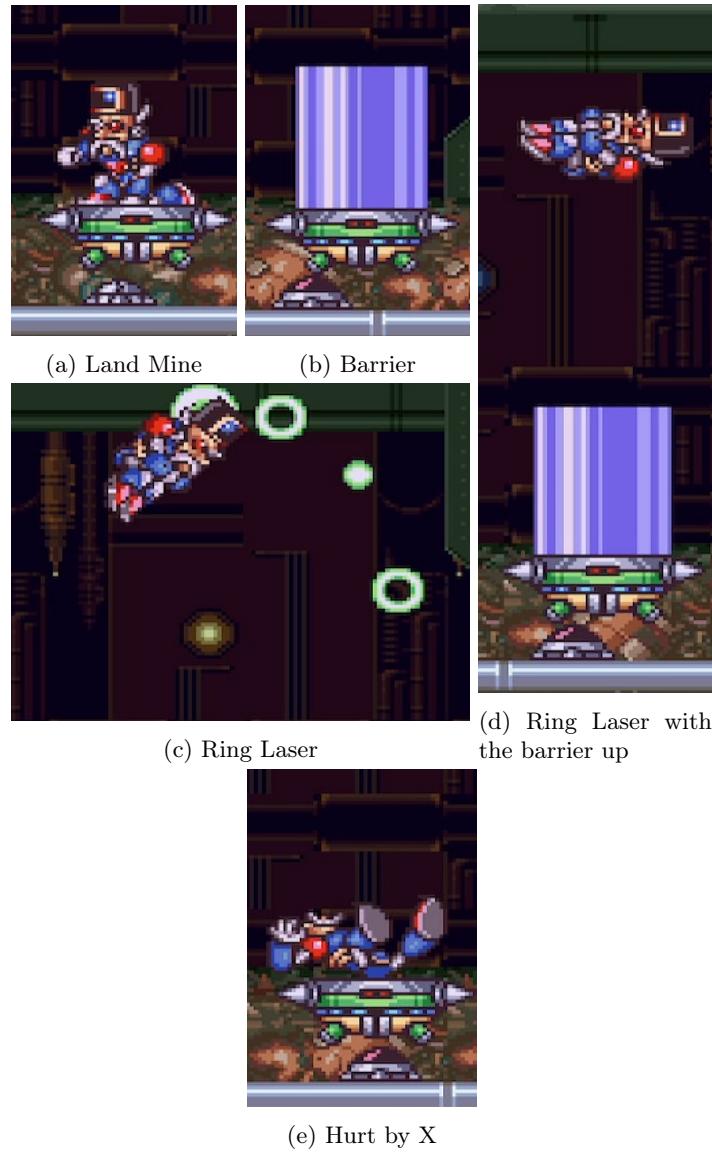


Figure 2.52: Serges' attacks.

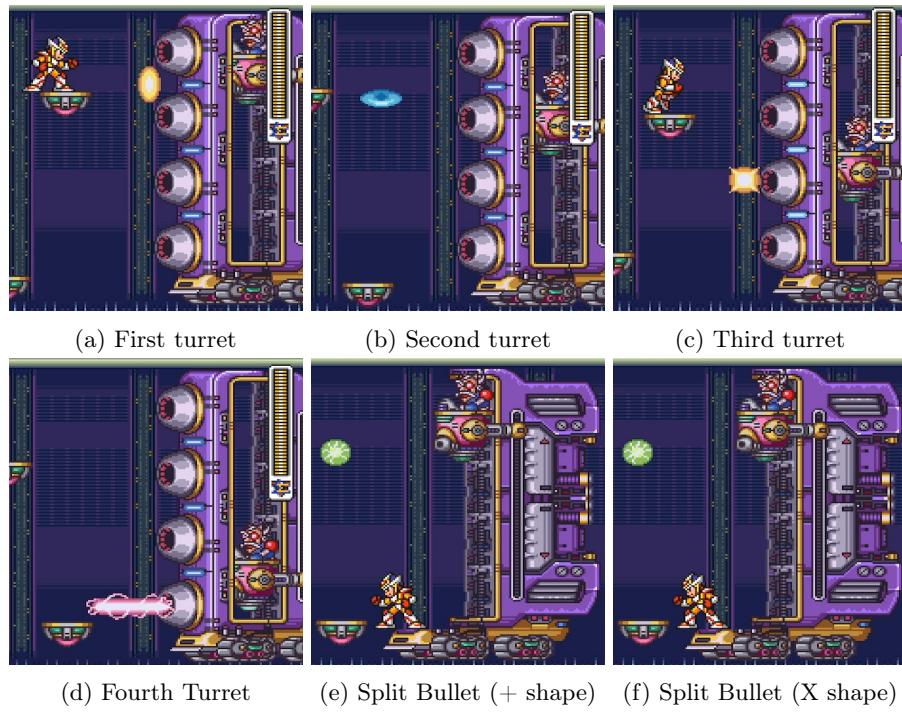


Figure 2.53: Serges Tank's attacks.

can easily hit him by releasing charged Sonic Slicer (which also occurs to be his weakness), since it curves upwards and then falls onto Serges, which is instead invincible to attacks from below. Moreover in this position Serges' projectiles are more likely to miss X, making the fight easier.

From in-game information, Serges appears to possess a power level of 10300 rp and a speed level of 12300rp, both of which probably refers to his vehicles.

Health		32	Health		32
Attack	Damage		Attack	Damage	
Cloak	1		Contact	4	
Contact (Serges)	3		All Turret	3	
Contact (Platform)	1		Split Bullet	3	
Land Mines	4				
Rising Laser	1				

Table 2.10: Serges (left) and Serge's Tank (right) attacks' damages [89]

2.17 X-Hunter's Stage 3

The third X-Hunter's stage is the longest to travel of all three.

The first half of the stage revolve around using moving the platforms from Wheel Gator's stage to move up in the stage, in a path set up to look like a mini-maze for the player. Here it is crucial for the player to avoid letting the platform go upwards and clash onto a solid floor, otherwise X will be pushed through the platform and fall down, leaving the platform stuck under the solid floor and impossible to use. The only solution at this point is to fall back and re-start the climb with a new platform. Otherwise it is possible for confident players to avoid using the moving platform, by doing precise wall-jumps to reach higher platforms, using the Crystal Hunter to turn enemies into platforms to gain extra height when the next one cannot be reached normally.

At about mid-stage the path will split into two different directions. One which goes upwards, via a ladder reachable only by crystallizing a nearby enemy and which leads to the secret capsule (see following section for more details), while the second one goes downwards, through a longer path with more enemies and spikes. Whichever the path chosen, they both reconnect near the end, where a long spiked floor separates the player from the boss. Here the only safe spots are given by small platforms, which are positioned in a way that it is just barely possible to see the next from the one standing. The two possible solutions here are to take a slow approach by using the Crystal Hunter to freeze the enemies which come toward X and creating new platforms, to make safer jumps, or to dash full speed though enemies by combining air dash with charged speed burner to gain sufficient airborne time to land on the following platform. Once passed this deadly path the player will face the stage's boss.

- Barrier Attacker
- Batton Bone type G
- Cannon Driver
- Disk Boy 08
- Fishern
- GarakutaRobot
- Pararoid R-5
- Pararoid V-1
- Tiranos
- Tubamail-S
- Tubamail Generator

2.17.1 Light's Capsule

Despite being near the end of the game, this stage hides the final armor capsule which, just like the previous game, can be unlocked only if the player has collected all the upgrades, safe for Zero's parts.

In order to access the capsule the player has to take the upper path in the middle of the stage, by using the Crystal Hunter on the Batton Bone which falls from the roof in order to create a platform to reach the ladder hanging from above. Once reached the upper path a life-up can be found, to restock players' life should they fail to reach the capsule at the first attempt. Although short this route is very dangerous, as it requires very precise maneuvers to avoid spikes on the floor and on the roof. Above all, the most dangerous movement to perform the final one, a U-turn while dashing in mid-air by combining X's air dash with the Speed Burner. After this last section, the only remaining thing to do is sliding down the left wall slowly, until a secret opening in the wall is found where the capsule resides. It is important to note however that it is required for the player to have maximum health before reaching the opening, otherwise the capsule will not appear.

It is also possible for experienced players to obtain the capsule in a different way. If the player has enough experience in performing the Neon Jump (sec. 2.20.3) it is possible to reach the wall with the secret passage from below, by first following the downward path (less dangerous than the upper one) and then performing the jump from the platform immediately after before the spiked floor. If done correctly X will reach the wall without much effort, allowing to reach the capsule by climbing it instead of descending.

2.17.2 Agile

Agile (pronounced in the French way) is one of the three members composing the X-Hunter, who took control of Sigma's army during the second Maverick uprising. He covers the role of spy, analytical intelligence officer and vanguard for his organizations [11]-[61]. He is an incredibly skilled swordsman, and the fastest reploid in the world.

During the second uprising, once the X-Hunter noticed their forces weren't enough to stop X and buy them time to complete their schemes, the three decided to intervene directly in the conflict, by challenging X to one-vs-one fight using as prizes Zero's part they have recovered. Agile in particular is assigned to guard Zero's lower body, and will move between stages X hasn't visited yet waiting for him to fight. Whether X challenges him or not, Agile reappears later inside the X-Hunter fortress, attempting to fight X one last time by using his Agile Flyer. However even with this increase in power, Agile is no match for X which defeats him easily, leaving him crying Sigma, his master, to avenge him.

As his name states, agility and attack speed are Agile's main characteristics in fighting, although this translates only into two attacks. His first attack is his Dash attack, which see Agile dashing along the ground swinging his saber at high speed trying to make contact with X, while his second attack consists in creating a Shockwave with his sword from one of arena's border, which covers a large vertical portion of the screen and move toward X. Although simple, these attacks shouldn't be underestimated, as Agile performs them at high speed and can accumulate damage onto X very quickly. Agile's weaknesses are the magnet mine and the silk shot (only when firing rock projectiles), but these weapons only deal him increased damage with any other additional effect. What really helps in fighting Agile is instead understanding how AI works. Agile's attack choice depends, in fact, on X's position in the arena: if X is on a wall, Agile will recur to his sonic boom, while if X is on the ground he will perform his dash attacks. This makes possible to manipulate him in performing only the sonic boom attack by quickly climbing onto a wall and immediately falling down to hit Agile while he's descending, only to repeat the process until Agile's defeat. During his second fight inside the X-Hunter's base, Agile's fight style drastically changes. By using the Agile Flyer, Agile now hovers on top of the screen, from where he launches his attacks. His first attack, which is also the most common, is the Block& Electric Shock combination. With this attack Agile will extend two spiked rows from his body which will generate sparks that travel the arena when they hit the walls. Such spikes will then fall down and, if they do not hit X, they will remain on the ground, elevating the arena's height. Agile will keep using this attack endlessly, as there is no limit to how tall the arena can become. The only way to avoid such attack is to remain under Agile's main body, as spikes will not appear where he is. It is important to note that Agile's spikes are not deadly, so getting hit will not result in an instant death, unlike the ones on the floor, which instead are deadly. Other attacks Agile can perform are his Body Blow, an attack that sees Agile turning red and slamming into a wall to crush X, and his Missiles, six fired in the background of which only

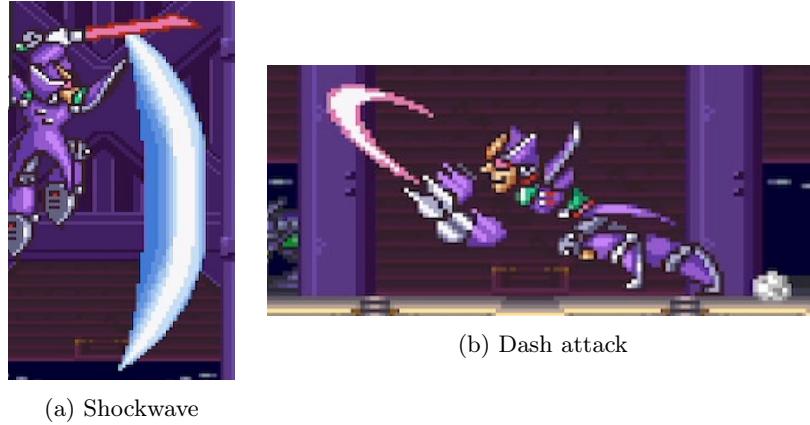


Figure 2.54: Agile's attacks.

one moves in the foreground to hit X. The best weapon for the fight is the Magnet Mine, Agile's original weakness. Even in this form, in fact, this weapon deals augmented damage to him while also having the benefit of controlling its trajectory, allowing it to curve upward and easily hit Agile. However the true weapon which trivializes this boss fight is the Shoryuken, as this deadly technique has both the vertical range needed to hit Agile from below and the damage output necessary to take him down in a single hit. Due the large horizontal hitbox Agile has in this form, connecting the attack is also rather easy although care must be taken when performing the attack, as a miss would mean making X fall into the pit and losing the fight.

According to specifications, Agile's power level is 9800rp, while speed is 17800rp.

Health		32	Health		32
Attack	Damage		Attack	Damage	
Contact	3		Contact	4	
Shockwave	1		Block	4	
Dash	4		Electric Shocks	2	
			Missile	6	

Table 2.11: Agile (left) and Agile Flyer (right) attacks' damages [90]

2.18 X-Hunter's Stage 4

As tradition of the Mega Man games, before facing the final boss a rematch with all previous bosses is mandatory. This is the purpose of the X-Hunter stage 4. This stage consists only in a big room with eight teleporters each one bringing

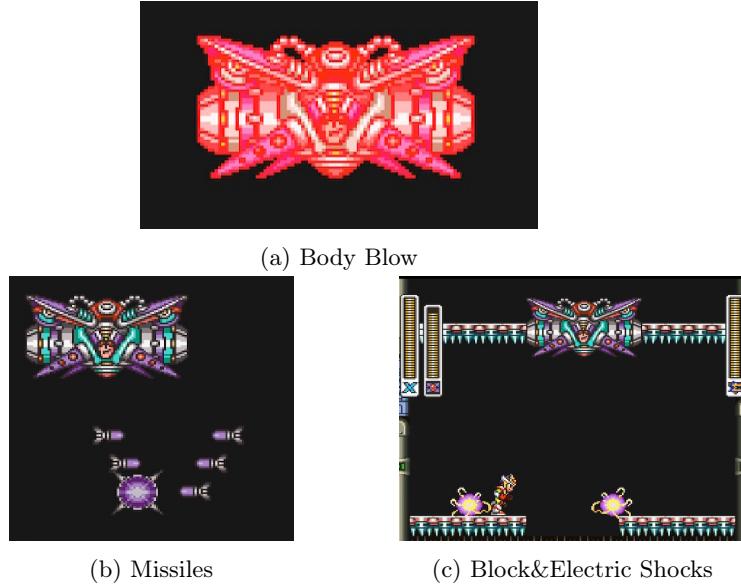


Figure 2.55: Agile Flyer's attacks.

to a different boss. At the top of the room, two health capsules respawn after every fight, to restore the player's health if needed. Boss layout is shown in figure 2.56. All bosses are identical to their first encounter, safe for Flame Stag, which will immediately begin the fight in his Super Mode.

Having the Shoryukens unlocked can greatly speed up the process of killing bosses, although most bosses require precise hits to be instantly defeated.



Figure 2.56: Teleport room (original image [here](#)) and bosses locations.

2.19 Central Computer (final stage)

Unexpectedly, the last stage of the game is one already visited, although slightly different. Accessed either by selecting the X-Hunter fortress or directly Magna Centipede's icon, the first part of the final stage is identical to the Central Computer, spotlight and moving blocks included. The main difference shows only when reaching the room which was once home for the [Chop Register](#). Here Sigma will appear alongside a different version of Zero, depending on whether X managed to rescue all his parts or not. If X collected all Zero's parts, here Black Zero will appear, only to be destroyed shortly after by the real Zero; meanwhile if X failed the collect quest, the real Zero will appear and fight X. Whichever the case, Zero will then open a hole in the ground, allowing the player to reach and challenge Sigma.

2.19.1 Zero

Reviving Zero as a maverick was the main goal X-Huters had, alongside building a new body for Sigma. Thanks to his genius, Serges managed to repair (or even re-built) all Zero's body, destroyed during Vile's fight in the first game, and even upgrade it to the design Zero will have for all remaining games. The only component Serges didn't manage to recreate was Zero's control circuit, his heart and brain, which was instead recovered by the Maverick Hunters.

Failing to recover all Zero's pieces will cause the X-Hunters to storm the Maverick Hunters HQ, stealing all parts eventually recovered as well as Zero's control circuit, the missing component, and allowing Serges to fully rebuild Zero as a Sigma's loyal soldier. Zero is then used by Sigma, which at this point knows well Zero's past and origins, to fight X, lured into the Central Computer by Sigma himself. Things however don't go according to Sigma's plans, as X manages to defeat Zero and bring him to his senses.

Although an optional boss, the fight against Zero can be considered one of the toughest in the game, mainly due the high damage output Zero's attacks have and his aggressiveness towards the player. Zero can in fact attack both from close range with his saber and from distance, with his Z-buster, in response to the player's movements. If the player is far from Zero, he will respond by using his Z-Buster, either with a single shot or with his own Charged Shot, which consists in a combination of two projectiles followed by a shockwave from the saber. This last attack can be negated by X's own Charged Shots, which will negate, and even bypass Zero's shot. Should instead the player try to fight Zero at close range, he will respond with his dash attack, which not only can damage X, but can also catch him and slam him into a wall for more damage. Even wall-jumping is not a safe option, as Zero will deal with it by using his Heart Gaizer, which makes debris around him fly upwards, to hit players directly above him (this attack also destroys the background computer on the first hit). Finally Zero can also defend himself, by guarding with his saber and deflecting all non-charged shots from the player.

There is not a safe option to deal with Zero. His powerful attacks combined



Figure 2.57: Zero's attacks.

with his aggressiveness make him a hard opponent to deal with. Moreover, considering what waits ahead, it is clear that the main reason for this boss fight is to accumulate as much damage as possible onto the player, maybe even emptying some sub-tanks, to make Sigma's following fight even harder. Beside such consideration, the most available option players have is to keep the distance from Zero, as his ranged attacks are the easiest to avoid, jumping over him only when necessary to avoid his counterattack. Zero's weakness, the Speed Burner, can help in shortening the fight, as it deals similar damages when compared with charged shots, but can be fired much quicker as it does not require charging. Alternatively a well placed Shoryuken can immediately end the fight, albeit performing it can be a hard task, mostly due to Zero aggressiveness which can easily result in the player losing some health, disabling the Shoryuken.

Health	31
Attack	Damages
Contact	31
Z-Buster	2
Charged shot	4(shots) +3 (slash)
Dash Attack	3(Saber) + 5(wall slam)
Earth Gaizer	2
Guard	0

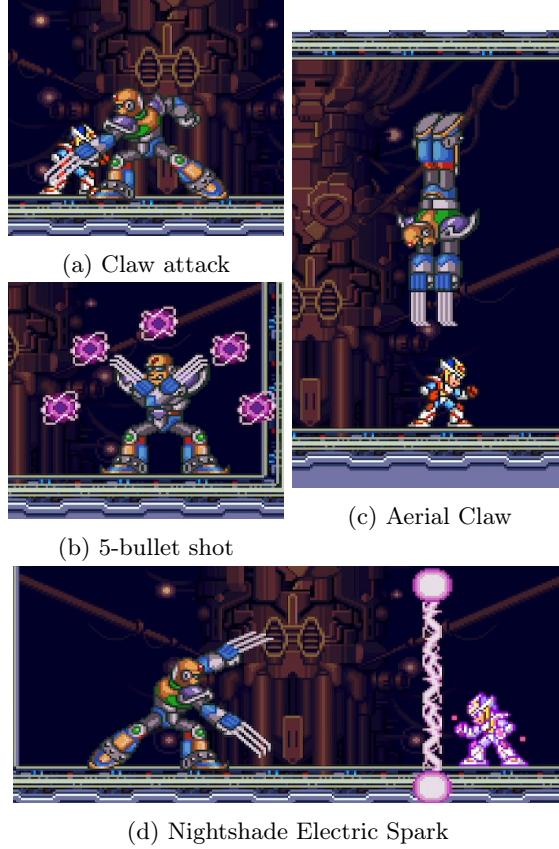
Table 2.12: Zero's attack's damages [91]

2.19.2 Neo Sigma

Zero's resurrection as a Maverick was only half of the X-Hunter's plan, the other one being the resurrection of Sigma. Left without a physical body after the event of the first game, building a new body to host Sigma's spirit was mandatory for the X-Hunters in order to have their master return and lead the maverick forces against humanity again. Just like in Zero's case, Serges is the creator of Sigma's new body, also called Neo Sigma [61].

Now equipped with a set of three retractable claws on each hand, Neo Sigma's fight can be considered a direct upgrade of Sigma's fight in the previous game: Sigma's sword attack is now replaced with a claw attack performed while dashing towards the player, which will also send X flying into a wall for more damage; the Triangular kick Sigma used to chase X is instead replaced with his Aerial Claw, an attack that sees Sigma teleporting directly above the player and hitting with a dive attack. Furthermore Sigma also maintains two ranged attacks: 5 lightning bullets (which ironically recall of Sigma's first weakness, the Electric Spark) that homes sequentially at player's position, and a Electromagnetic Wave [72], a moving wall of electricity Sigma fires from his claws. Due to the resemblance of this attack to the charged version of the Electric Spark, sometimes this move is also referred to as the Nightshade Electric Spark [40]. Sigma will use this last

attack only when below half health.



Differently from the battle in the first game, Neo Sigma' AI cannot be exploited to force him into an attack loop to the player's favor. This time, instead, players have to put all their skill in use to fight Sigma while avoiding taking damage for as much as possible. The best weapon against this boss is the Sonic Slicer, Neo Sigma's main weakness. Thanks to its ricochet capabilities, Sonic Slicer can hit Sigma almost everywhere and without requiring to put much effort in aiming, as the weapon is very likely to connect with Sigma's big hitbox. Furthermore, the charged Sonic Slicer is also a very effective weapon against Sigma's Aerial Claw, due the projectiles going upwards when released. Finally it is also worth mentioning that a glitch exists in the fight which can make the player completely invincible to Sigma's attack, removing every difficulty from the battle. Such glitch is appointed in section [2.20.6](#)

Being the strongest reploid, Sigma possesses the highest values of power and speed, both equal to 18500 rp.

Health	32
Attack	Damage
Contact	2
Claw attack	2+2(wall)
Aerial Claw	2
5-Bullet shot	5
Nightshade Electric Spark	6

Table 2.13: Neo Sigma’s attack’s damages [92]

2.19.3 Sigma Virus

Once Neo Sigma’s body is destroyed, Sigma is forced to reveal his true form to attack: the Sigma Virus. Drawing energy from the central computer ([61]), Sigma manages to manifest his viral form in the real world to attack X, absorbing more and more as X damages him in the attempt to increase his strength. However all his efforts are useless, as X still manages to defeat him once again.

By itself, the fight against the Sigma Virus is not relatively hard, especially considering the attack the Virus can perform. The Sigma Virus can perform only three attacks, one of which only when below a quarter of health. The two main attack Sigma can perform are the Viral Laser [40] (also called Heat Ray [72]), a red beam Sigma fires from his mouth aimed at the ground while moving horizontally (which however does not reach the very edges of the room, providing a safe spot), and the Viral Summon[40] (or Minion Summon [72]), which allows Sigma to summon two enemies (between [Fishern](#), [Tiranos](#), [Scriver](#), or [Tubamail-S](#)). Such enemies can be either a factor of disturbance for players but also a help, as they can drop health pickups. Finally, once Sigma reaches a quarter of health, he will perform his Error and Delete [40] attack (also known as Body Assault [72]). With this attack the Virus will disappear from the screen and reappear at the X’s position, trapping him and dealing constant damage until the player breaks free.

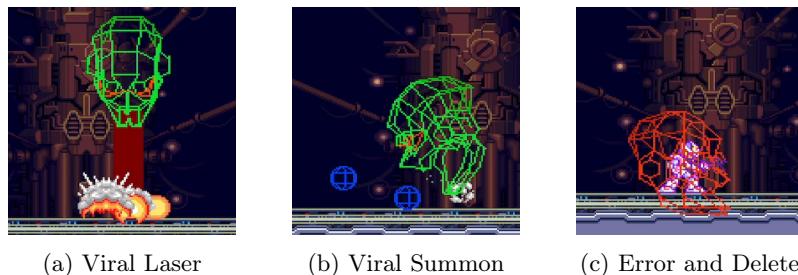


Figure 2.59: Sigma Virus’ attacks

Despite appearing as a simple fight, this battle hides some difficulties. The main one comes from the absence of the boss’ health bar. Although the Sigma

Virus has about the double hit points of a regular boss (64 against traditional 32) the player has no real clue on how much health the boss has, save for a change in Sigma's color palette (which shifts gradation from green to red with each 8 points lost). The second difficulty may come from Sigma's damage output, especially from the Viral Laser, which can chunk away X's health very quickly. Moreover it doesn't help that, in this phase, Sigma is immune to most of X's arsenal, safe for the charged shots (especially the second one) and the strike chain, a weapon not easy to use against this boss due his high mobility. Differently from the final boss of the previous game, this Sigma form is still susceptible to this game hidden weapon, the Shoryuken which can dispose of him with a well placed attack, although a miss could easily result in the loss of health and the disable of the Shoryuken itself. Once defeated, Sigma will disappear and the building

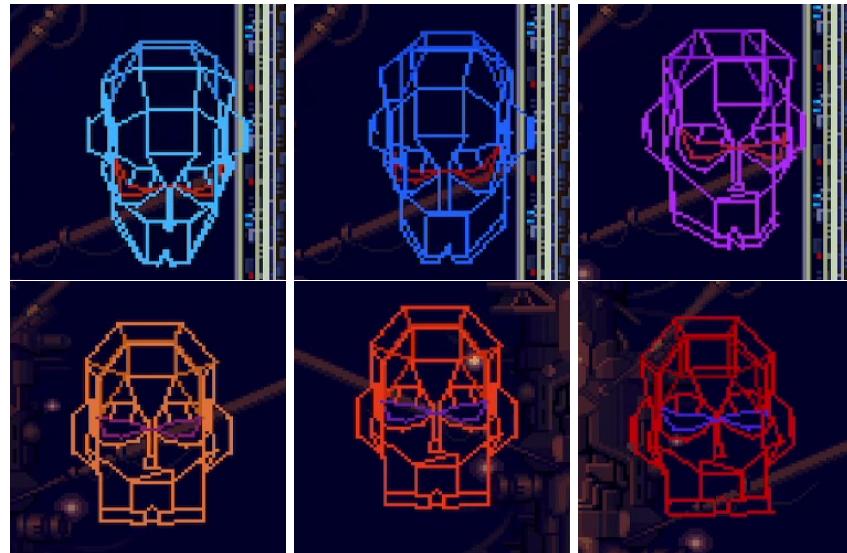


Figure 2.60: Sigma Virus' color changes during the fight. Each one represents an 8th of health lost.

will collapse. X will teleport outside with Zero, and the credits will play.

Health	64
Attack	Damage
Contact	2
Viral Laser	6
Viral Summon	4 (enemy contact)
Error and Delete	2 per hit

Table 2.14: Sigma Virus's attack's damages [92]

2.20 Miscellaneous

In this section are collected a series of information regarding hidden game mechanics as well as useful tips and even some glitches known in the game.

Since this game reuses many features from the previous game, all information provided back in section 1.20.1 are still valid.

2.20.1 Refill Rooms

Inside certain stages players can run into isolated rooms without an exit and totally empty. Such rooms may be more or less hidden and, although apparently useless, can be extremely useful to players. If they, in fact, release a charged Silk Shot inside such rooms, various pickups will be drawn toward X, which can be used to refill his sub-tanks or weapon energy. The most important part is that this operation has no limit, meaning that it can be repeated endlessly (or until the Silk Shot has enough energy) to completely refill X's sub-tank. Such rooms can be found inside:

•

2.20.2 Wall-clip Glitch

If while firing a Strike Chain X climbs down a ladder, the Chain will move inside the wall and pull X towards it. This will cause X to get stuck in the wall unable to move.

2.20.3 Neon Jump

The Neon Jump, also known as Liberty Jump, is an advanced technique which allows for double and even triple jumps by combining a charged shot of the arm parts with the air dash. The input command are the following:

1. Charge up a charged shot
2. Jump and Air-Dash
3. release the shot and at the same time press the jump button

If everything has been done correctly, X will release the shot and jump one more time. From this position another air dash is possible and, if X has the second shot ready, it is possible to perform another mid-air jump as follow:

1. Perform an air-dash
2. Shot and jump at the same time.

If a triple jump is not needed, then it is easier to perform the double jump with only the second method, as pressing two buttons at the same time is easier than releasing one and pressing another in the same frame.

2.20.4 Magna Centipede Tail Spin Glitch

In the Magna Centipede fight, immediately at the beginning of the fight it is possible to set up a glitch which completely paralyzes the boss for the whole fight, if done correctly. The glitch revolves around using dash-wall jumps to mess with the Centipede's mine orbit in order to make them spin around X endlessly, which will cause the boss to remain standing still waiting for the attack to complete, and also vulnerable to incoming attacks.

At the moment a precise guide on how to perform this glitch is not given, although there are some videos which aim to explain how to setup properly the glitch, such as [93] (from minute 27:00) and [94].

2.20.5 Triple Neon Glitch

At the moment this section is written, the only evidence the author has found of this glitch existing inside the game can be found at [95]. This glitch allows the player to perform three charged shots instead of the classical two by activating the pause menu at the same time the first shot is released, then exit the menu while holding the fire button, in order to trick the game into thinking the shot has never been fired. This results in X firing a charge shot but keeping two charged up, resulting in a possible triple shot.

2.20.6 Final Boss Invincibility Glitch

The following glitch can only be performed if the player has both acquired all Zero parts and the Shoryuken. Playing normally the player would proceed in the Central Computer, reach the room where the Chop Register previously was and trigger the scene with Sigma, Fake(Black) Zero and Zero. The latter would then destroy his clone, forcing Sigma to flee, and open a passage to reach the final boss room, destroying the floor for X to jump in and reach Sigma. The key element for all of this to work properly comes from the fact that immediately as X passes the trigger point in the computer room, the game forces X to make some steps back and positioning him correctly for the upcoming scene.

If, instead, the player passes the trigger point for the scene with a Shoryuken attack, due the property that move has, the left movement will not trigger and the result X will be in the center of the room for the upcoming scene. Because of this, when Zero destroys the floor X will immediately fall (due to him standing exactly on the collapsing part) but the dialogue will still play. If the player leaves this text box pending, when X reaches the bottom Sigma's dialogue will override Zero's. Due to this superposition between the two dialogues, once the player closes Sigma's one X will immediately regain control of his movement, in contrast to what normally happens, where X does not regain control until Sigma's health bar is full. Because of this, if the player manages to land a Shoryuken at Sigma while his health bar is filling, X will become invincible for the whole duration of the fight, or until another Shoryuken is performed. Clearly this glitch trivializes Neo-Sigma's fight. Additionally as a side effect of

this glitch X's charged shot will turn reddish. In figure 2.61 the position from which input the shoryuken is shown, while in 2.62 the charged shot color change is displayed.

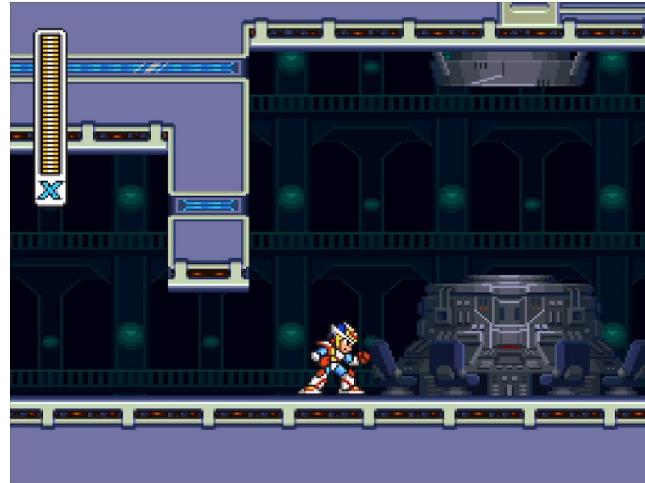


Figure 2.61: Starting position from which perform a shoryuken as first step for the invincibility glitch



Figure 2.62: Glitched double charged shot

Part II

Characters

Preface

In this part more detailed information about characters who appear in the Mega Man X series are given. Here, however, information will not only come from in-game material but also from external (but still official) sources which expand and complete what is said inside games. Another difference between this part of the document and previous ones is the fact that while in precedent chapters only facts were reported, leaving out any interpretation, here the objective is to try to put together all information available, even giving a plausible solution in case of conflicting elements. In any case whenever a solution is proposed it will be clarified, to let readers know what parts come from official sources and what instead are created solely for this document.



As the document proceeds some time reference will be given for some of the events that occur. However in some occasions the same events can refer to different points in time depending on the game's version or the source of the information. While these discrepancies will still be appointed, since the focus here is to give a coherent timeline of events there will be now listed all time-related assumption made in this part, with a short explanation:

- Maverick Haunters operate for about two years before the first games' event, according to the Japanese version of Dr. Cain's journal, contrary to the two-month stated in the English version of the same source. This due the fact that two months aren't sufficient to explain all events that occur before the first game, such as Zero's awakening, X joining the Haunters or X befriending Zero.
- According to the original story, X does not join the Haunters until Sigma's revolution begins. Here we deliberately choose the *MHX* storytelling, as it allows us to better explain some relationship between characters.
- Events shown in *Day of Σ*, save for Dr. Cain's fate, actually happens. This is mainly due to the fact that what shown isn't in direct contrast with anything shown in games .



- After his death, Dr. Light consciousness keeps living via AI, which communicates with X via his capsules. This due the fact that in multiple occasions Dr. Light is fully aware of the circumstances and even directly answer posed questions.

Chapter 3

X



X is the main protagonist of the Mega Man series which bears his name. He is the last creation of the brilliant Dr. Light, a robot built with the gift of free will and limitless potential, and a Maverick Hunter appointed to stop reploids gone maverick to hurt human people. X's primary characteristic is his kind heart and peaceful attitude, which makes him repel violence, often trying to reason with his enemies. However despite this attitude X knows well the threat mavericks are and, even if unwilling, fight against them with all his strength to bring the world at peace.

3.1 Technical Specifications

X's specification can be found both in the opening scene of the first Mega Man X game and in the *Rockman & Rockman X Daizukan* [96]-[97] book. While some information overlap between these sources, others are exclusive to a single one, hence here both of them are reported as sources of information.

General Information

- Height: 160 cm.
- Weight: 57 Kg (lighter than Rock due technological improvements).
- Main energy source is Solar energy.
- Armor is composed of a lightweight “Titanium-X” alloy, the strongest metal in the world. Very light and resistant to heat and shots.
- Internal skeleton is a super elastic armor that can reduce received damage by approximately 93%.
- A.I. age between 14 and 15 years old in human terms at the beginning of the first game. Matures as time passes.

Head equipment

- Eyes are constituted by broad-range cameras, giving him the ability to see more things the human eye can.
- Ears are composed of an ultra-high sound recognition system, allowing him to hear even ultrasonic sounds.
- Voice is produced by a voice generation system made by HAYATOM Inc. (MOKUOO Inc. in Japanese version).

Chest equipment

- An Accumulative Energy Generation Device allows to accumulate solar energy and provide X with the sufficient amount of power required to work.
- A Micro-fusion fuel tank, which stores fuel for X to use when solar energy is not available, such as caves or underwater.
- A Central Joint-controlling system, which acts as X's secondary brain and controls his movements.

Leg equipment

- Gyroscopic Stabilization System/Full auto-balancer to help X in remaining stabilized and land properly from any state he's in.
- The Emergency Acceleration System, which enables X to accelerate at high speed in a short amount of time. This equipment is optional and must be installed in a second moment.

Arm equipment

- Mega Buster Mk.17 (X-Buster). X's basic weapon built into his hand. When fighting his hand retracts and leave the place to the buster [98]
- Energy Amplifier to store and concentrate energy into a more powerful shot, the Charged Shot.
- Variable Weapon system: Allow the X-buster to transform and emulate attacks from enemies bosses. How the copy/learning process is performed remains, however, unknown.

3.2 Creation

X's creation begins in the year 20XX by the hand of famous scientist Dr. Thomas Light. Reasons that brought Dr. Light are to be found into two main facts that happened during the scientist's life. The first one was the coming of an unknown computer virus from space that caused robots to go violent (which could be a reference both to the "Evil energy" appeared in *Mega Man 8* or the *Roboenza* Virus appeared in *Mega Man 10*). After this event Dr. Light decides that a new battle robot had to be created in order to protect the future of earth [99], and starts building X. On why creating X and not upgrading Rock, the original *Mega Man*, many hypothesis can be formulated, one being the fact that Rock was originally designed to help with laboratory work and not to fight, hence the preference to create a new robot, instead altering Rock too much. In addition, since the new robot to be created may fight robots infected with viruses, a new anti-virus system had to be created within him. This last statement fits perfectly with the second reason Dr. Light began creating X, which is his dream to create a robot who could choose his own path in life, effectively having free will. How it is possible to see from his journal [100], in fact, the idea of a free-will was born and stayed in him from shortly after events of the first *Mega Man* game up until X's creation, as he believed it was his duty to accomplish such achievement¹. Furthermore as Roll pointed to Light, free will also create the perfect anti-virus system, as would make impossible for a robot to be manipulated². It is unknown how long it took for Dr. Light to complete X but, observing from the *Day of Σ* OVA, it is possible to imagine that the development took most of Light's

¹If a robot posses the intelligence to be conscious of the possibility of opposing a human for the right reasons, will it be possible for them to worry over what path is right? [...] I can



remaining lifetime as flashbacks show a doctor growing older and weaker as time passes. During this time period however Light realizes the importance of his project and its impact it could have on the world due the power X holds, making him also realize the danger X could represent³ if, should the world turns against him, he takes a wrong path in life or begins to question the first law of robotics, risking disasters even worse than ones created in Wily's incidents [101]. To avoid this situation, while still believing in X's good heart (as seen in X's flashback in *Day of Σ*), Dr. Light decides that X's moral integrity has to be tested deeply before letting him free. According to his studies, Dr. Light estimates that about thirty years of testing should be necessary to completely ensure X's safety, time far beyond his own lifespan. For this reason, being near the end of his life and not having anyone who could continue his work, Dr. Light creates a special capsule for X to rest in, capable of performing tests without the need of someone supervising it while also ensuring X's safety. After giving X farewell, on date 19th September 20XX, Dr. Light proceeds to seal him away and leaves a message (written or recorded depending on the game) for whoever will find the capsule, explaining who X is and why he's special.

3.3 Awakening and birth of reploids

X's sleep last for about hundred years inside Dr. Light's laboratory, buried underground and hidden from everything, until Dr. Cain, a scientist of 21XX, while searching for plant fossils from Mesozoic (or preserved plant from Middle Age [102] in the Japanese version) accidentally finds the laboratory. After some digging he manages to get in, where he first finds Light's note and documentation relative to X and, the following day, X's capsule itself still working. After reading

sincerely feel that coming to think of this is my duty. Dr. Light's journal, 29 March 2017

²“If artificial intelligence can be aware of its own intelligence, then one can fix any kind of tampering” [...] However if that very kind of electronic intelligence can realize ideas like hers (Roll), then I think it’s possible to establish a consciousness that cannot be manipulated Dr. Light’s journal, 7 March 2017

³“The name “X” also carries connotations of danger”.

Light's last note and warning message, and checking the capsule status, which as stated in the journal show all indicators on green, on the 14th April 21XX Dr. Cain awakes X from his slumber. Immediately after meeting him, Cain realizes how incredible and futuristic Light's creation is, even to his times, and decides to bring him, along all Light's design note, to his laboratory in order to try to replicate X's design and create a similar robot.

More than six months were needed to complete the first robot, but on the 22nd November Dr. Cain manages to create a robot using Light's schematics and X as reference. This new robot, just like X, is fully capable of making decisions on his own, even arriving to argue with Cain himself, to his surprise. However the new robot created isn't a perfect copy, as part of X's design couldn't be analyze even with modern technologies forcing Dr. Cain to fix missing elements at his best, especially components constituting his "*Distress Circuit*"[103] which allows X to choose his side in society, and the new robot's moral integrity wasn't tested deeply as X's one. However since these differences seem to cause no problems, Dr. Cain decided to start mass production of this new kind of revolutionary robot, which he named "*Reploids*" (or *Repliroids*).

It took not so long for reploids to integrate inside the society as Dr. Cain himself notes in his diary in an entry dated 3rd May, where he states that *everyone seems to be happy to accept them*. Reploids in fact began to work in place of and together with humans in all kinds of jobs, especially more dangerous ones which could put humans life at risk. However the situation won't last long, as first mavericks will shortly start to appear.

3.4 Mavericks and Maverick Hunters

In the following entry in Cain's journal dated 16 July the scientist states: "*Three reploids went "maverick" today and injured two people before they were stopped. This is the third instance of this type of behavior and I still have no idea of what is causing it!*". This entry describes the first mavericks occurrence in the series although, at the time the entry is written, they look more like isolated events related to some sort of explainable fault. However due the problem mavericks had caused, even with such a small number of occurrences (only three), the journal describes how the idea of halting the production already began to spread, but considering how society now depends on reploids, this idea is discarded from becoming reality. Instead a special organization called "Hunters" is established in order to track down and halt mavericks before they cause any damage. Appointed leader of the organization is Sigma, Cain's latest and finest work equipped with last-design circuit which should prevent him from any fault Sigma also serves as leader of the 17th elite unit, operating on front lines against the maverick threat. X will join the organization only later in time (see Part II preface), where will be assigned to the 17th unit under Sigma and where he will meet his future partner, Zero.

Thanks to hunters' effort any further injure occurred as consequence of maverick attack, creating a situation of peace that lasted for almost two years (two

month in the English, see Part II preface) During this period X fights together with his commander Sigma, his partner Zero and all his companions against mavericks, but deep inside he keeps questioning about his place in life and the path he has to choose⁴.

3.5 The X saga and the Maverick Wars

On 4th July 21XX, Dr. Cain's worst nightmare becomes true. On this day Sigma goes maverick and begins his revolution against humanity, which he now considers an obstacle to Reploids evolution that has to be eliminated. Together with him sides most of his subordinates Maverick Hunters longing to follow their leader as well as other reploids seduced by Sigma's charisma and strength. According to events shown in the *Day of Σ*, Sigma's war declaration coincides with him storming a missile base and using it to attack Abel City, where the Maverick Hunter's headquarters reside. On this occasion X, together with Zero, have a first confrontation with him but both of them are defeated and injured. Before fainting, however, X manages to unleash a final attack on Sigma using all his strength, burning Sigma's scars in. After this last attack X shuts down, having used all his remaining power in the last hit, but Sigma decides to leave him there and not to deal the finishing blow, as Sigma now wishes X to reach his maximum potential and challenge him again, in order to discover the true power reploids hold.



Figure 3.1: X burning Sigma's scars in.

After the rebellion's beginning, the few hunters remained loyal to their original purpose, X and Zero included, starting a period of wars which in future will be labeled as “Maverick wars”.

From now on X's story follows the game's plot. During the event of the first game (and its remake) Zero is appointed as leader of the Maverick Hunters, being the highest in rank still on the right side, and leads other hunters, X included, in fighting. Zero then asks X to take care of Sigma's subordinate both because their actions are causing trouble to humans and other reploids, but most importantly to allow X to grow up and become stronger, as Sigma is still

⁴“I am a little worried about X. He seems unsure of his place in life and what Dr. Light had planned for him” Journal of Dr. Cain, 10th December 21XX

too powerful for him. Once X disposes of the eight mavericks, Zero contacts him to ask help to infiltrate Sigma's fortress, which he managed to locate in the meanwhile. Once inside the two first challenge Vile, which results in his death but in Zero's death too. Finally X faces Sigma and defeats him, halting his plans of human extinction. After escaping Sigma's collapsing fortress, X returns to the Maverick Hunter headquarters, where he becomes the new leader in charge, under Dr. Cain's direction.

Despite Sigma's defeat, however, Maverick attacks against humanity do not stop. This lead to more fights between mavericks and Mavericks Hunters for six more months, which results in heavy losses for both parts, reducing the number of effective Hunters to a quarter of its original number and also in the loss. Despite that, however, mavericks' numbers do not suffers the same loss, rising instead. This is caused by special factories which mavericks had previously altered to implant maverick chips into new reploids. After some searching Dr. Cain manages to find the culprit factory, and X and the Maverick Hunters are dispatched to destroy it. Once arrived, X destroys the factory alongside the army of giant mechaniloid CF-0 which was produced. With this action X and the Hunters deal a heavy blow to mavericks forces, forcing the new leaders, the X-Hunters, to change their plans for the future and release their highest-ranked mavericks in order to buy them more time to complete their schemes. This plan too reveals to be a failure, since X manages to defeat his opponents much faster than expected, forcing the X-Hunters themselves to come out and face X, using the Zero's part they have repaired to lure X into fighting them. Despite this distraction, X manages to defeat all remaining high-ranked mavericks and proceeds to attack the X-Hunters fortress.

At this point the story branches into two paths, both of them which can be considered canonical. On one route X defeats all the X-Hunters and recover all Zero's parts. Dr. Cain then locates X-Hunters' secret base and proceeds to repair Zero while X begin to attack the fortress. There X destroys all the three X-Hunters and discovers that Sigma is still alive, and waiting for him at the Central Computer. Once arrived Sigma greets X and presents him a black clone of Zero, created by Serges, which he intend to use to destroy X. However the real Zero appears, destroys his clone and forces Sigma to retreat. Zero then opens a path for X to chase Sigma, and heads to destroy the main computer. Finally X faces Sigma, who in the fight reveals his true form as a Virus capable of manifesting into the real world, and defeats him again.

In the alternate route X fails to recover all Zero's parts. Here the X-Hunters attack Maverick Hunters HQ and steal all Zero's parts, control circuit included, and use them to revive Zero. From this point the narration follows the story described earlier expect for the final part, where Sigma present himself alongside the real Zero, now under Sigma's control. X and Zero fights, but the former manages to win, bringing Zero back to his sense. The plot then converge again into the same ending.

Chapter 4

Zero



WIP. Info will be added only when games which provides them will be discussed in apposite chapters.

4.1 The X saga and the Maverick Wars

As Sigma go Maverick, Zero is appointed as leader of the Maverick Haunters, being the highest in rank remained within the group. He than proceeds to lead the organization against Sigma, entrusting X to deal with Sigma's subordinates while he tries to locate the enemy fortress. The two manage to complete their task simultaneously, and reunite to attack Sigma together, Zero acting as decoy due him being more powerful than X, to let him sneak inside unnoticed. Once in they briefly reunite but are interrupted by Vile which Zero challenges to a duel,

only to be caught in a trap Vile had previously prepared. Vile than proceed to use him as an hostage and manages to capture X too, but Zero breaks free and, in order to save his friend, explodes to take down Vile too, but only manages to destroy his Ride armor. His action, however, give X the strength necessary to break free and take Vile down definitively. With his last words Zero encourage X to proceed and face Sigma, firmly believing he has the power to beat him.

Although destroyed, Zero's control circuit remains miraculously intact and is stored at the Maverick Hunters Headquarter. Zero's body (or what remains of it) is instead recovered by the X-Hunters, which tasks Serges to repair it. Serges not only repairs Zero's body, but also upgrade it into its final version, adding the missing shoulder pads and giving Zero his iconic Z-Saber. For the whole duration of the X-Hunters operation Zero remains incomplete, as the two key components stays in the hand of the two opposing factions. It is only near the end that Zero is resurrected, depending on the action X takes while fighting the X-Hunters. Zero can either be saved by X, who had previously won Zero's body parts from the X-Hunters, and be repaired by Dr. Cain, or can be resurrected by Serges, after the X-Hunters steal the control circuit from the Maverick Hunters HQ. In the former case he reunite with X shortly before the final fight, just in time to destroy his clone, while in the latter case he will be put under Sigma's control and will fight X, which has to defeat him and make him come to his sense. Whichever the case is, Zero aid X during the final confrontation with Sigma, by destroying the main computer Sigma is using to spread his virus in the world.

Chapter 5

Sigma



Sigma is Dr. Cain's greatest creation. Developed to be a strong leader to face the Maverick threat, Sigma is equipped with the latest design in terms of brain circuit, which according to Cain himself should be fault-safe and prevent him from going maverick. Sadly things don't go as Cain wished, as after solely two years of leading the Maverick Hunter Sigma not only goes maverick, but began a war against humanity bringing on his side a major part of Maverick Haunter which he led. To Sigma, in fact, humans are only an obstacle to reploids evolution, and should be eliminated to allow reploids to reach their full potential.

In this chapter Sigma' action through the X series will be described. Since in the first game Sigma acts only as the final boss, with very few interactions with X beside his boss quotes, for the first part of his story the description will stay closer to his *MHX* version, as it gives more insight on Sigma's personality and motivations.

5.1 Leader of the Maverick Haunters

WIP. Information will be added at the proper time.

5.2 The X saga

Sigma declares his war to humanity on July 4th 21XX, and launches an all-out attack onto Abel city, by deploying his troops to conquer strategical positions and assigning powerful reploids to protect them, but only after having first stroke the city with a missile attack, as shown in *Day of Σ*. On this occasion he has a first confrontation with X which Sigma easily defeats. However during the fight for a brief moment X manages to reach his full potential hitting Sigma and leaving his signature scars. After that he retires into his fortress, waiting for his scheme to be completed. In truth, Sigma's plans not only aims at human extinction, but he also wants to discover X's true potential my forcing him to fight. To no surprise, in fact, X manages to defeat all his subordinate and, with the help of Zero, to infiltrate his fortress. Here Sigma prepare a last test for X, by resurrecting all defeated reploids and making them fight X once more¹. X passes this trial too, even taking down Vile, and finally reaches Sigma which happily verifies that he was right about X and reploids' unlimited potential, and then proceeds to challenge him in a final fight, firmly believing to be superior. Sigma however misjudge X, which strikes him down even after he combines with a giant wolf-type mechaniloid (1.19.3) to further increase his power. Defeated in the body, but not in the spirit, Sigma's body sinks into the sea alongside his fortress while X, teleported outside, watches silently believing to have put an end to the war. Sadly, however, this couldn't be far from true, as in reality Sigma's true consciousness had already left his original body before the fight with X, preparing to resurrect again in case of defeat: “*What you defeated was not my true self. The machine that was destroyed was more like another body. I will materialize and resurrect once more*” [33].

¹“*Sigma must have brought his body back to life*”-X talking to a resurrected Launch Octopus-[5]

Chapter 6

Vile



Although Vile does not play a major role in the X saga except for the first game, his status as recurring enemy in some games plus the presence of a dedicated game mode in the first game's remake, which better describe Vile's personality, are sufficient in order to dedicate this small chapter to him alone.

Before beginning, however, it is important to appoint how differences between the original Mega Man X games and its remake Maverick Hunter X will be handled. In those games, in fact, Vile's personality is slightly different, since in the former not much information is given beside his background and his dialogues as a boss, while in the latter, also thanks to his dedicated game mode, more details about his personality are given. In this document we will stick to the latter, as it incorporates almost every aspect of the original story too. Clearly it is debatable whether what shown in the Vile's mode is effectively true or not, as the game mode itself is presented as a what-if scenario and hence not canonical. However since this is the only source of additional information about Vile's personality, and for most part of the mode Vile's personality matches with

the real one shown in the actual game, what shown about Vile's personality in his mode will be used in the document and considered to be true.

Clearly what said until now regards only the first game of the series, as there aren't any remake for the other games Vile appears in.

6.1 Before the war

It is unknown when Vile was created or who build him. What is sure, however, is that Vile was designed purely for combat, as Zero points to X during their first meeting with him¹, maybe specifically to work as a Maverick Haunter. Thanks to his equipment, Vile quickly became one of the highest-ranked Maverick Haunter of the 17th elite unit (the same as X, Zero and Sigma), with the Special-A (SA) rank, the same as Zero and Sigma, despite his bad attitude. According to information given, in fact, Vile have always behave with arrogance and superiority, only taking orders from himself², disrespecting superiors³ and working alone, not having anyone to consider friends and, on the contrary, disliking some of his comrades⁴, especially X. Although this he still has the respect of his commilitones, such as Sting Chameleon ("It's Vile... I used to have nothing but respect for you, you know." [104]).

It is with X, however, that Vile shows his worst. To him, in fact, X is only a weak reploid and nothing more, and thus he doesn't understand the reasons why people around him claim X to have incredible power. Because of this Vile develops a grudge and hatred for X, which in reality only covers his jealousy, and dedicates himself to the task of defeating and humiliating him for as much as he can, in order to prove himself and to others that he is the strongest reploids.

Vile's situation gets worse when a fault in his electronic brain occurs. Due to this fault Vile starts to enjoy much more the pleasure of haunting and destroying his target, almost to the point of being an obsession, making him ignore any collateral damage he could cause with his actions and aggravating his position inside the Haunter organization up to the point of being considered to be a borderline maverick. This leads the high command to preemptive arrest him, in waiting for a sentence on his destiny.

6.2 Mega Man X

Shortly before the beginning of the first game Vile is set free by a soon-to-be maverick Sigma, which asks for Vile help to defeat X as he fear X could interfere in his plans of changing the world⁵. Despite Vile's hate for taking orders, the

¹"X, you shouldn't expect to defeat him, he is designed to be a war machine."- Zero

²"I'll tell you one thing... I don't like working for others."-Vile [104]

³"You don't respect authority. You don't follow orders. I pity you"-Armored Armadillo [104]

⁴"I've always hated you, Storm Eagle. You and that smug face of yours"-Vile [104]

⁵"I need your help, to defeat X [...] in order to ensure our future and speed along our evolution"-Sigma [104]

idea of defeating X is sufficient for him to follow Sigma and help him with his plan. In reality, however, Vile's claimed objective is to follow Sigma only until X's defeat and then to turn against Sigma himself, defeating him to change the world as he desires, as he says to X after battling with him on the highway ("There's nothing you can do! I'll defeat you and Sigma! Then I'll change the world!" [5]). In this situation, however, Zero comes and saves X, damaging Vile's armor and forcing him to retreat (showing also that, despite his obsession, Vile still retains a tactical mind).

It is unknown what Vile does during most parts of the X game, as he only appears later, at the beginning of Sigma fortress. An hypothesis that could be formulated is that in the meanwhile Vile had worked and upgraded his ride-armor, as during his last encounter he uses a different, customized version of it, and setting up a trap to prevent Zero from stopping him again. This, however, is only a hypothesis without any confirmations.

Vile's final appearance is inside Sigma Fortress, where he attempts again to destroy X, this time capturing Zero first. He almost succeeds in doing it, but he underestimates Zero and X's potential as the first breaks free and destroys his armor, by sacrificing himself, and the latter takes him down. The same fate awaits Vile in his own game mode, but with the addition of a final dialogue between a dying Vile and Sigma. Here Vile's true intentions are finally revealed: he's sole purpose in life has always been defeating X and nothing more, as everything he claimed were only justifications for his actions. In fact, Vile has never had any idea of what to do had he managed to beat X:

SIGMA: What exactly did you plan to do, Vile? Would you stand before me as a Maverick Hunter? Kneel before me and place yourself at my mercy?

VILE: ...What did I.. plan to do? Heh... thinking about it now, I'm not actually sure

[...]

VILE: I don't care what happens to this world... By defeating X⁶, I've validated my own existence... and that's all that matters to me now.

⁶In Vile's game mode he manages to take down both Zero and X, only to be destroyed because of a surprise attack from Zero, immobilize him and gives X the time to hit him. Hence the reason why Vile claims to have defeated X

Chapter 7

Other Characters

Here other main characters will be described that don't have enough information to dedicate a whole chapter about, but that still play an important role in the Mega Man X saga.

7.1 Dr. Cain



Figure 7.1: Dr. Cain as he appears in *Day of Σ*.

Dr. Cain is the brilliant scientist father of reploid's technology. Originally an archaeologist, Dr. Cain accidentally find Dr. Light's laboratory while searching from prehistoric plant fossils, with X's capsules and blueprints inside [7]-[102], whom he befriends with. By using X's help, Dr. Light's schematics and his knowledge of robotics, Dr. Cain manages to create his own version of a robots with free-will, which he label "Reploids". These new type robots greatly impacted on society, almost at the point of becoming necessary, in a very short amount of time and making Dr. Cain one of the most important person of his world. However although Dr. Cain's intention were surely good, aiming to achieve the same dream Dr. Light had to create a society where humans and robots can life together, his actions were also the cause of firsts Maverick attacks [40]. In creating reploids, in fact, Cain didn't manage to fully recreate

X's components, especially his "Distress Circuit" [103] and had to develop substitutes which were however prone to errors. Moreover these reploids' moral integrity wasn't tested for a period of time as long as X's one, making them more susceptible to taking a wrong path and going Maverick. Dr. Cain seems partially to acknowledge his error, as after first mavericks appear he tries to find the cause of these problems¹ develop more advanced reploids with more robust circuits to prevent errors, Sigma being the last of this series². However even his latest designed circuits didn't manage to keep Sigma safe from going Maverick. Once Sigma begins his assault, Cain remains powerless to watch the destruction his creation caused believing nothing could stop him, not even X or Zero. However he doesn't either stop them from trying, as he firmly believes something had to be done³.

A different fate is instead reserved to Dr. Cain's in the series remake, Maverick Hunter X. Here Cain's role remains the same up until Sigma's revolution, with the only difference of being much older and weaker, as he's connected to a life-support machine to extend his life for as much as he can. His only appearance is in the *Day of Σ* OVA, where he explains to a pre-revolution Sigma the power X possesses and how it manifests in his hesitations and empathy, thus making Sigma interested in him. Cain is then seen only at the end of the OVA, after Sigma declares his war by launching missiles onto Abel city. He is last seen in his house, right before a missiles strikes directly onto it presumably killing him, pondering if reploids, created by humans but with abilities far beyond theirs, were fruit of mankind's arrogance rather than their good intentions and wish for knowledge⁴.

7.2 Serges

Despite not playing a significant role in the game he appears, Serges character and his links to other characters in the series have to be appointed and discussed. In particular what is worth to talk about are the possible connections that subsist between him and Dr. Wily. By reading the original Japanese script for the X2 games and by studying also external sources which talk about Serges it is, in fact, possible to draw a line which connect these two character albeit said connection has never been explicitly appointed. In this small sections the main evidences regarding this theory will be given.

The first possible connection between Serges and Wily comes form the original script for the X2 game. As, in fact, explained at the beginning of chapter 2, the game underwent a massive localization causing an alteration in dialogues

¹"This is the third instance of this type of behavior and I still have no idea of what is causing it!" - Journal of Dr. Cain, 16th July

²"Sigma is one of the most intelligent reploids I've created and contains my latest circuit designs. His systems should be immune to any problems" - Journal of Dr. Cain, 20th November

³"I'm doubtful of their chances (X and Zero), but I won't stop him. Something has to be done", Journal of Dr. Cain, 4th July

⁴"Reploids... created by humanity, yet possessing abilities far beyond our own... [...] Mankind's arrogance?...No"-Dr. Cain, Day of Σ, scene 4

and the removal of some links in the finished product. In this context two are the main dialogues to focus on. The first one is the moment in which the X-Hunters contact X to challenge him in a fight. In the original script Serges open his phrase by first calling X by his “full” name⁵ of *Rockman X*, whereas no other character in the game addresses him in this way, Dr. Cain included. The second, and probably most important, dialogue to be examined is Serge’s final speech after being defeated the second time. In such occasion the original script report the following phrase:

SERGES: Am I to perish here? Defeated by Light’s memento robot again... how regretful... [58]

From this phrases Serges once again nods to the fact that he knows X and his origins more than any other. He not only, in fact, shows to know that X was built by Dr. Light, information only Dr. Cain knows, but also feeling regret for being defeated once more from a robot built by Light. This feeling of regret, combined with the knowledge about X’s past seems to point in the direction of Serges being, in some form, connected with Dr. Wily, the original antagonist of the classic series.

Beside the original script, there are also other evidences which seems to point in this direction. According to the information given by the Rockman X2 Collected Sourcebook Information [61], in fact, Serge’s surpasses even Sigma’s and tie with Dr. Wily’s one. Furthermore from the same source it is possible to know that Serges was also the responsible for the construction of Sigma’s new body (a hard task considering the original Sigma was Dr. Cain’s best work) but more importantly for the rebuilding of Zero’s body. Serges manages, in fact not only to fully reconstruct Zero’s body but also to upgrade it in its final form, such as by adding the shoulder pads, and also providing him with the signature Z-Saber. Beside the restoration, a task even Dr. Cain refused to do due how complicate Zero’s design his⁶, it the upgrade process the one on which pause. Except for Zero’s creator, in fact, no one would be able to know how upgrade Zero or how he should look like once completed, especially since no one could know that Zero was unfinished in first place. Since Zero’s creator had been confirmed multiple times over various game, some more canon than others, to be Dr. Wily (more details about this are given in chapter 4), this strengthens even more the connection between Serges and Wily. In particular in the game Mega Man 2: The Power Fighters, in Bass’ ending, a blueprint of Zero with his aspect from the X2 games onward appears, labeled as Dr. Wily’s new robot in development. The theory of Serges and Wily being the same thing would also allow to explain how Sigma, in his final speech, acknowledge Zero’s origins⁷, which Sigma could not known if not for someone (such as Serges) had previously told him about.

⁵ *Serges: crrrk. . . . bzzzt. . . . Rock. . . E. . . cks. . . - Serges, [58]*

⁶ A truth which will hold up to X6 and beyond, where X and Zero’s body will be considered a mystery

⁷ *But, Zero, why. . . he’s. . . the last of. . . Wi. . . num. . . ers. . . -Sigma [61]*

It is however to underline that despite the evidence presented, the relationship between Serges and Wily is and will remain a mystery since, as stated in the Mega Man X Official Complete Works by Inafune himself, “*this is one of those things that is best left without an official comment*” [26].

Appendix A

Vehicles

- **Death Rogumer:** An Aerial battleship made for the Maverick Hunter's air cavalry. Originally made in order to hold down reploid rebellions, Sigma converted it as a fortress for his army, entrusting the command to the former leader of 7th Airborne unit, Storm Eagle [27].

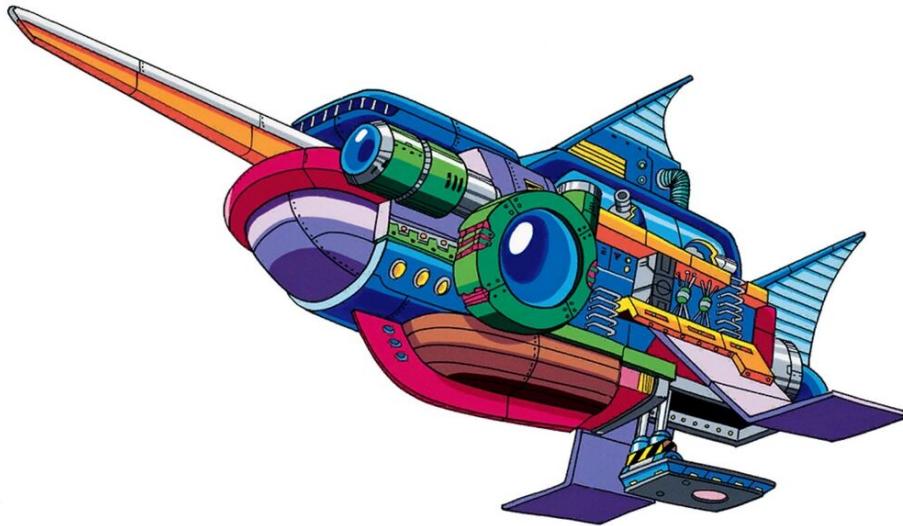


Figure A.1: Death Rogumer

- **Ride Armor:** Ride Armors are mechas similar to tanks with attached hands and feet. Originally these machines were made intended to be used in engineering [27], but were later used also for fighting, as they greatly increase the power of their user due being able to dash, walk over spikes, deliver powerful attacks and receive damage in place of their pilot.

Starting from this base version many others will be created, focused more on combat power. Vile himself uses two modified Ride Armors in his confrontation with X, although both of them were destroyed by Zero.

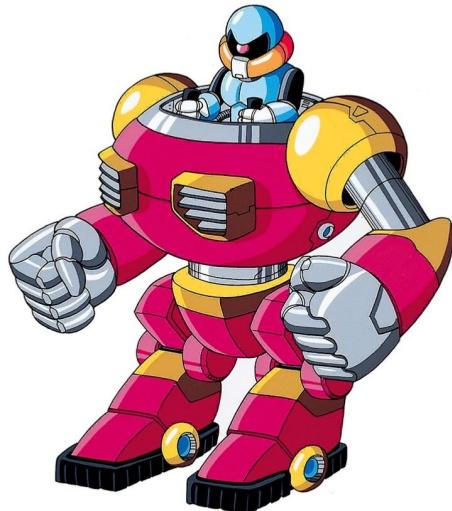


Figure A.2: Ride Armor's artwork (with pilot)

- **Ride Armor EG-2 custom “Rabbit”:**
- **Ride Chaser ADU-T400 turbo “Cheval”:**

Appendix B

Enemies

Here a list of all enemies with a short description is given. Enemies information are obtained from:

- X1: [27],[105],
- X2: [61],

while all artworks come from [26].

B.1 Mini-Bosses

- **Anglerge:**

- **HP:** 64 (0.15 seconds of Iframe, Boomerang Cutter, Sting Chameleon and Rolling Shields hit for 8 damage)
- **Damages:** 4 (contact), 2(snakes)
- **Description:** Anglerge are angler-type mechaniloids that work to cleaning the seabed floor, with a motion sensor attached to its “lantern” part. Anglerge’s attack are only four: send four snake-like robots toward X (two upward and two downward), which travel horizontally and descend when above (or below) X; a vacuum attack to push or pull X toward a spike pit; a (rare) energy beam from the angler (which can be disabled if the lamp is broken via an attack).

- **Bee Blader:**

- **HP:** 32 (No Iframes)
- **Damages:** 4 (contact), 2(missiles), 1 (machine gun)
- **Description:** A large bee-type helicopter which was created in order to carry [Ball de Voux](#). It is equipped with a vulcan machine-gun and homing missiles. This mechaniloid has been created for guerrilla

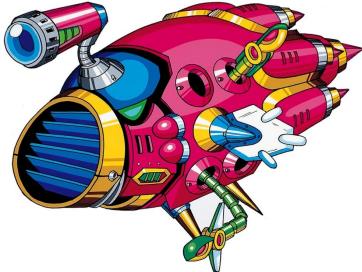


Figure B.1: Anglerge's artwork

operations in forests and cities. While they don't appear formidable enemies, they can be rather dangerous, especially if X defeats them while standing below, as they will fall and crush him instantly.

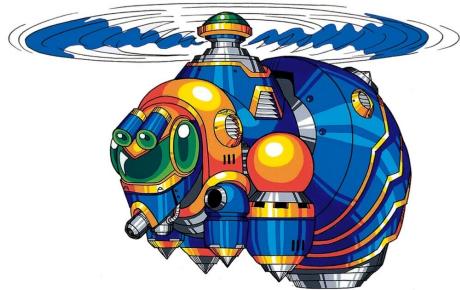


Figure B.2: Bee Blader's artwork

- **Chop Register**

- **Cruiziler:**

- **HP:** 64 (resist most weapons but no Iframes, meaning a Storm Tornado is a guaranteed kill)
- **Damages:** 3 (bombs)
- **Description:** Whale mechaniloid who patrols the sea with its powerful weapon. Some kind of mistake caused it to lose its sea navigation, its attack circuits began running wild, and communications were lost. Its body is totally invincible, save for its core on top.

- **Magna Quartz**

- **Mole Borer:**

- **HP:** 60 (~0.083 seconds of Iframes. Fire Wave deals 3 damage each 2 frames)



Figure B.3: Cruiziller's artwork

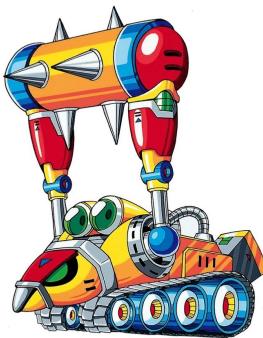


Figure B.4: Mole Borer's artwork

- **Damages:** Insta-kill (roller), 2 (contact)
- **Description:** Mechanoid used to open up paths in mines, using a rotary roller to destroy rocks that obstruct his path. Its armoring can take a lot of damage, while the roller is completely invincible and can instantly kill X. The only way to deal with it is to attack from behind, although several shots are needed to take it down. Using the Fire Wave is the best option, as its continuous damage can dispose of it quickly.

- **Old Robot**

- **Paraloid S-38**

- **Raider Killer**

- **RT-55J:**

- **HP:** 64 (0.5 second of Iframes, resist most weapons. Boomerang Cutter deals 3 damage instead of 2)
- **Damages:** 2 (contact), 2 (arm)
- **Description:** In times of peace, it was a professional robot sumo wrestler and a popular Yokozuna (sumo grand champion) in the “Robot Grand Sumo Tournament”. Moved in the forest, it now guards X’s Chest Parts. Its certain kill technique, the “Kagizume

Beam Hand,” strikes and tosses its opponents but only if it is in his claw’s reach range. Otherwise he’ll just jump at it to close the gap.

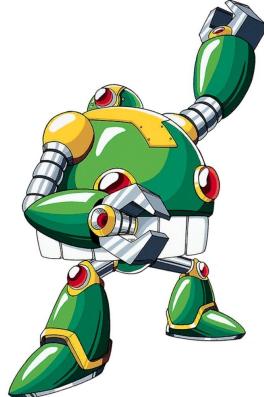


Figure B.5: RT-55J’s artwork

- **Sea Canthller**

- **Thunder Slimer:**

- **HP:** 48 (0.116 seconds of Iframes, Storm Tornado hits for 9-10 damage)
- **Damages:** 5(contact), 4(thunders)
- **Description:** Thunder Slimer was born from a single question: “How large can a single cell become?” This monster was born from said experiment. Its body is over three times as large as X, but may require approximately 10 years before it reaches full growth. It has settled in the power plant, where he absorbs electricity and uses it to perform electric attacks against X.

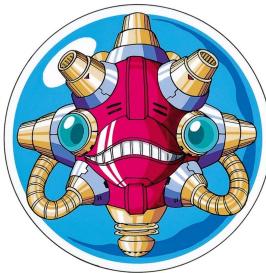


Figure B.6: Thunder Slimer’s artwork

- **Utuboros:**

- **HP:** 72 (no Iframes, Boomerang Cutter hits for 3 damage instead of 2 and Storm Tornado kill it in a single shot)
- **Damages:** 4 (contact)
- **Description:** Serpent-type mechaniloid made to explore the ocean floor. Thanks to its flexible body it can zig-zag into difficult under-water areas, and burrow underground. His body is totally invincible and can work as a platform, while only the head and tail are vulnerable and can damage X.



Figure B.7: Utuboros's artwork

B.2 Minor enemies

- Aclanda



Amenhopper:

- **HP:** 2
- **Damages:** 1 (bombs), 2(contact)
- **Description:** Originally designed for farm work, it was used to sow fertilizer across the land. Now, it's been remodeled into a bomb-dropping battle type mechaniloid.



Armor Soldier:

- **HP:** 3 (on foot), 16 (Ride Armor)
- **Damages:** 2 (contact, on foot), 3(contact-Armor)

- **Description:** Lowest class of soldier reploids, used in military affairs. Riding in their Ride Armor, they do destruction work under Sigma's orders.



Axe Max:

- **HP:** 8
- **Damages:** 3 (contact, on foot), 2(flying log)
- **Description:** Woodcutter reploid from the forest, remodeled for brutality. Swinging his large axe, he attacks by sending the chopped wood flying.



Ball De Voux:

- **HP:** 2
- **Damages:** 1 (contact)
- **Description:** Equipped with 2 soft-treading feet, this mecha can move over any topography. Inside the sphere there is a camera and a sensor which can even see in the dark.

- Bar Waying
- Barite Lastar
- Barrier Attacker



Batton Bone:

- **HP:** 1
- **Damages:** 1 (contact)
- **Description:** Bat mechaniloids with a taste for humans. They dwell in forests and caves.

- Batton Bone type G



Batton M-501:

- **HP:** 2
- **Damages:** 1 (contact)
- **Description:** Bat type mechaniloid which the [Batton Bone](#) series is based on. It is a very unusual mechaniloid, made over 30 years ago.

- Beetron
- Blecker



> **Been:**

- **HP:** 2
- **Damages:** 2 (contact), 1 (bomb)
- **Description:** Small bee-modeled helicopter used for land mines scattering. Able to infiltrate any area, it can set up land mines anywhere.

• **Cannon Driver**



Crag Man:

- **HP:** 8
- **Damages:** 2(contact),2(rock fall)
- **Description:** Crag Men were made to clear rock debris during landslides. They work actively with the aerial mechaniloid [Sky Claw](#).

• **Crash Roader**



Creeper:

- **HP:** 1
- **Damages:** 1 (contact)
- **Description:** An insect-type mechaniloid. It's unknown what it was made for. It is pecked out from the insides of trees by the [Mad Pecker](#).

• **Croak Hopper**



Crusher:

- **HP:** 2
- **Damages:** 4
- **Description:** Construction mechaniloid used for knocking down buildings. It drops its steel-made weight to scrape down the highway.



Dig Labour:

- **HP:** 4
- **Damages:** 2(pickaxe), 3(contact)
- **Description:** The greatest pickaxe worker in the world. He is a diligent reploid who works in the robot factory.

• **Disk Boy 08**



Dodge Blaster:

- **HP:** 3
- **Damages:** 2 (contact), 2(shots)
- **Description:** Latest model of mobile cannon with “self-defense function”, which makes it possible to avoid energy attacks before they can even get near it.

• Fishern



Flamer:

- **HP:** 6
- **Damages:** 3 (contact), 2(fire)
- **Description:** High-temperature blaze-blowing flamethrower machine. A remodeled airport fire extinguisher mechaniloid, turned into a weapon which tries to spread fires.



Flammingle:

- **HP:** 8, 4-saw
- **Damages:** 3 (contact), 2(blade)
- **Description:** Flamingo-type mechaniloid taken from the robot zoo. It attacks by spinning its head and releasing the saw.

• Garakuta Robot



Gulpfer:

- **HP:** 10
- **Damages:** 2 (contact), 2-32 (eating)
- **Description:** Once the ornamental mascot mechaniloid of a seaside Chaya teahouse, it escaped and was converted for catching ocean fish. It was originally based on an old children’s toy.



Gun Volt:

- **HP:** 16
- **Damages:** 3 (contact), 2(sparks), 2(missiles)
- **Description:** Mechaniloid developed for military use. A tank made for terrestrial combat, it attacks with missiles and high voltage bullets.

- Hanged Reploid



Hoganmer:

- **HP:** 8
- **Damages:** 3 (contact), 2(spike ball)
- **Description:** Fighter in the future grappling show “Robot Coliseum.” It blocks the attacks of enemies with its shield, and attacks by swinging its iron ball and chain.



Hotarion:

- **HP:** 1
- **Damages:** 2 (contact)
- **Description:** A mechaniloid for nighttime patrol, it was made to save the firefly appearance from extinction. Shining, it flies through the sky.

- Installer



Jamminger:

- **HP:** 2
- **Damages:** 1 (contact)
- **Description:** Mechaniloid that attacks any enemies who enter a forbidden area. An odd robot who laughs after attacking.

- Jelly Seeker



Ladder Yadder:

- **HP:** 3
- **Damages:** 2 (contact)
- **Description:** Originally a mechaniloid supervisor of the forest regions. It would locate any poachers, and report the forest’s temperature and humidity to the woodland protection center.



Lift Cannon:

- **HP:** 2
- **Damages:** 3(contact), 2(shot)

- **Description:** Rotary-type cannon attached to a tube-like stand. Originally, a fire-fighting robot for control towers and any other high places in the airport.



Mad Pecker:

- **HP:** 6
- **Damages:** 2 (contact)
- **Description:** Woodpecker-type repliroid who chops trees in the forest. Tries to follow [Planty](#), without success.

- **Mecha-Arm**



Mega Tortoise:

- **HP:** 16
- **Damages:** 4(contact),3 (bombs)
- **Description:** A turtle-type mechaniloid originally meant for rescuing humans from maritime disasters. From its back, it now produces bombs in place of floating devices.



Metal Wing:

- **HP:** 1
- **Damages:** 3 (contact)
- **Description:** A reconnaissance mechaniloid. When it spots dangers, it raises its flying speed in a great rush to get news to its master.



Metall C-15:

- **HP:** 2
- **Damages:** 2 (contact), 1(bullet)
- **Description:** Reploid who watches factories. From the former series that worked in factories, now they are advanced enough to be placed as chiefs.

- **Morgun**

- **Pararoid R-5**

- **Pararoid V-1**



Planty&Iworms:

- **HP:** 2 (Planty), 1 (Iworm)

- **Damages:** 3 (contact-Planty), 1(contact-Iworm)
- **Description:** Planty is from the Mettool family and watches over the forest. From its head, it can manufacture the earthworm-type, soil cultivation reploid, Iworm.



Ray Bit:

- **HP:** 2
- **Damages:** 4 (contact), 3 (laser)
- **Description:** Rabbit-type mechaniloid taken from the robot zoo. It skips and jumps, using the laser cannon in its ears to attack.



Ray Trap:

- **HP:** -
- **Damages:** -
- **Description:** Mechaniloid devices which await the false steps of intruders.

- **Refleczer**

- **Rideroid G**

- **Rightod**



Road Attackers:

- **HP:** 12(total), at 7/12 the pilot dies; at 3/12 the engine explodes
- **Damages:** 2 (contact), 1 (shot)
- **Description:** A destructive reploid gang of hot-rodders, riding for Sigma's rebellion. Large beam cannons have been attached to the bonnets of their sports cars.

- **Road Riders**



Rolling Gabyoall:

- **HP:** 1 (Immune to all but Rolling Shield)
- **Damages:** 3 (contact)
- **Description:** Intruder repulsion robot. It Appears to be a simple mechaniloid, but truthfully, it possesses the human-like mind of a reploid.



Rush Roader:

- **HP:** 6
- **Damages:** 2 (contact)
- **Description:** Leaders of the robot gang of hot-rodders. To get revenge on the Maverick Hunters who once chased them down, they became Sigma's subordinate.

- **Sabottein**

- **Scrambler**



Scrap Robo:

- **HP:** 4
- **Damages:** 3 (contact), 2(laser))
- **Description:** A pathetic upper body of a robot, made to become a car driver. Although it passed part of the humans' expectations, without a driver's license, it has been turned into scrap.

- **Scriver**



Sea Attacker:

- **HP:** 2
- **Damages:** 2 (contact)
- **Description:** Seahorse-type mechaniloid created as a novelty for humans' homes. Its body somersaults as it charges.



Sine Faller:

- **HP:** 1
- **Damages:** 2 (contact)
- **Description:** Aerial mechaniloid made with the idea “Quality from quantity”. It flies and turns, acting as a hindrance.



Sky Claw:

- **HP:** 2
- **Damages:** 2 (contact), 3(self-destruct)
- **Description:** A robot who removes obstacles, originally designed for the “Crane Game” which was popular in Japan during the later half of the twentieth century.

- **Sky Farmer**

- Slidame



Slide Cannon:

- **HP:** 3
- **Damages:** 2 (contact), 2(shot)
- **Description:** Defensive artillery, set up to attack aerial enemies.
Designed after the German anti-aircraft cannons of the 1940s.



Snow Shooter:

- **HP:** 4
- **Damages:** 3 (contact), 2(snowball)
- **Description:** Bad-natured mechaniloid who toss balls of white iron
as if they were snowballs. They are Chill Penguin's guardians.

- Sole Solar



Spiky:

- **HP:** 2
- **Damages:** 2 (contact)
- **Description:** Monocycle which bears sharp spikes in its tire. Very
dangerous, its main attack technique is to slide over and self-destruct.

- Tiranos



Tombot:

- **HP:** 1
- **Damages:** 2 (contact)
- **Description:** A dragonfly-type glider. When taking off, it cuts and
releases the jet propulsion units. Then, slowly riding the wind, it
flies through the sky.

- Tubamail Generator

- Tubamail-S



Turn Cannon:

- **HP:** 5
- **Damages:**
- **Description:** Robot once designed as a sprinkler for domestic use,
but was defective until the water was replaced with cannon shells.

- Weather Crystal

Appendix C

Timeline

Here a timeline of all events concerning the Mega Man X series in chronological order. Events which happens at a precise date have it clarified on the right.



Since most of events presented here don't have a precise date, the order they're placed is only according to writer's preference. Any other decision about event's ordering has been taken according to Part II preface, or will be explicitly addressed.

20XX

- 29th March 20XX: Dr. Thomas Light begins pondering the idea of a robot capable of choosing his own path in life.
- Dr. Light begins to construct X.
- Dr. Light finishes to build X, but seals him away in a capsule which can run the thirty-year required tests in autonomy. He than leaves a warning message for whoever will find X.
- Dr. Light dies. His consciousness, however, lives on inside and AI which continue to work on the X project developing the First Armor.
- The Batton M-501 mechaniloid series is discontinued, in favor of the newer Batton Bone one.

21XX

- The Met series is upgraded with the introduction of Metall C-15.
- 10th April 21XX: Dr. Cain accidentally finds Dr. Light's laboratory buried underground while in a archaeological expedition.
- 13th April 21XX: Dr. Cain finds X's capsule.
- 14th April 21XX: X awakens.
- 15th April 21XX: Dr. Cain, alongside X and Light's schematics, moves to his laboratory in order to try create a new type of robot following Dr. Light's designs.

- 22nd November 21XX: Dr. Cain complete his first reploid.
- Cain Industries begins reploids' mass production.
- The first instance of a reploid going maverick occurs.
- Cain creates Sigma, a strong reploid equipped with last-design brain circuits.
- 20th November 21XX: The Council decides to set up a special organization, named "Maverick Haunters" with the specific task to haunt down and stop mavericks. Sigma is appointed as the leader.
 - Sigma is appointed leader of the 17th Elite unit.
 - Launch Octopus joins the 6th Fleet.
 - Chill Penguin joins the 13th Polar Division, stationed in the South Pole.
 - Armored Armadillo is appointed commander of the 8th armored force.
 - Flame Mammoth becomes captain of the 4th Land Unit stationed in the Middle East.
 - Storm Eagle becomes leader of the 7th Airborne Unit.
 - Boomer Kuwanger and Spark Mandrill join the 17th Elite Unit.
 - Sting Chameleon is assigned to the 9th Special Force (Ranger Unit).
 - Vile joins the 17th Elite Unit¹.
- 10th December 21XX: Maverick Haunter have been operating for about two years. X is still seeking his place in life.
- Zero joins the 17th Elite Unit
- X joins the 17th Elite Unit.
- Sigma begins to actuate his plans.
- A fault in Vile's brain circuit makes him unstable and borderline-maverick. The high ranks of the Maverick Haunter decides to jail him waiting for a judgment.
- Sigma calls back Chill Penguin from the South Pole, making him join temporary the 17th Elite unit. Before coming back, Chill Penguin eliminates his former superior.
- Flame Mammoth is recalled too, but he doesn't join the 17th Elite Unit.

Day of Σ and beginning of the war

- Vile is arrested, suspected of being a maverick.
- Sigma frees Vile, asking him to take care of X.
- 4th July 20XX: Sigma attacks a missile base. X and Zero try to stop him, but they fail. Sigma fires missile onto Abel City, effectively starting the war. During the fight X hit Sigma, causing him scars onto his eyes.
- Storm Eagle and his troops attack Sigma, trying to take him down. Sigma wins, putting him under his rule. Storm Eagle is than entrusted with the control of the Death Rogumer.
- Sigma's subordinate conquer various strategical points.
- Launch Octopus sets up a base in the ocean, to cut down naval transports.

¹Here the fact that all mavericks joins the organization from the beginning is only author's flavor as no information about these events are given

- Chill Penguin occupies a base in a nearby mountain to cause avalanches on the city.
- Flame Mammoth occupies a factory and convert it for mass producing weapon needed for the war. However none of his subordinates follow him due to his bad attitude as commander.
- Boomer Kuwanger captures the tower symbol of Abel city.
- Spark Mandrill seizes the power plant, to redirect electricity onto Sigma's facility.
- Sting Chameleon occupies a front-line bases set inside the forest.
- Sigma sets up his fortress where he leads the operations.
- Scientists create Bospider to be a large-scale crusher with an invincible body, but a mistake causes its core to exposed after a shock. Sigma decides to use it as guardian to his fortress.
- Rangda Bangda is created to crush enemies who enter Sigma's fortress.
- Scientists begin the construction of a giant dinosaur-based mechaniloid and a wolf-based mechaniloid capable to combine with Sigma to further enhance his power.
- Zero is appointed as leader of the 17th Elite unit and of the entire Haunter organization, being the highest in rank remained to oppose Sigma.

Mega Man X

- Sigma's troops launch an attack on Abel city's highway. X intervenes to stop the fight.
- Vile attacks X on the highway, but Zero's intervention forces him to retreat. In the battle his ride armor is damaged.
- Zero entrusts X with dealing with the eight mavericks. Meanwhile he starts searching for Sigma's hideout.
- X manages to defeat all eight mavericks that were threatening Abel city. In the meanwhile he also find capsules from which Dr. Light AI gives him first armor pieces, now completed.
- Vile repairs and upgrades his ride armor, while also setting up a plan to take down both Zero and X.
- Sigma recovers defeated mavericks' dead bodies and resurrect them as an additional line of defense for his fortress.
- Zero finds Sigma's hideout, and ask X to reach him to begin the final assault.
- X and Zero enter Sigma's fortress but are ambushed by Vile, which captures both of them. However both Zero and X manage to break free from their prison and to take down Vile. Zero, however, dies in the fight too.
- X continues traveling through the fortress. Scientists, worried, accelerate the development of the tyrannosaurus mechaniloid mounting its head onto a moving platform, thus creating D-REX, which is however destroyed by X.
- Sigma manages to separate his mind from the body. His mind flee, while his original body remains back to fight X.

- X finally reaches Sigma, and the two fight. X defeats Velguarder first and Sigma immediately after. Sigma decides than to combine himself with the still incomplete wolf-mechaniloid built for him and became Wolf Sigma. X, however, manages to destroy him again. After Sigma's defeat, his fortress began to collapse and falls into the ocean. X teleports outside.
-

Appendix D

Damage Tables

Here are reported damage tables for every weapons and every main bosses per game. For each sub-weapon two values are reported, standing for regular and charged shots (except sub-weapons which don't deal damages), and values refer to damage per single hit, not counting eventual multiple hits. For the X-buster four values are reported, one for each level charge included the one given by the arm parts.

D.1 X1

Damage chart provided by the *Mega Man Knowledge Database* [106]

Launch Octopus	1-2-3-3	1-2	1	3-4	0-0	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	32	
Chill Penguin	1-2-3-3	1-2	1	1-2	3-4	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	32	
Armored Armadillo	1-1-1-1	1-2	1	1-2	0-2	0-2	3-6	1-2	1-2	1-2	1-2	1-2	1-2	32	
Flame Mammoth	1-1-2-2	1-2	1	1-2	1-2	3-4	1-2	1-2	1-2	1-2	1-2	1-2	1-2	32	
Storm Eagle	1-1-2-2	1-2	3	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	32	
Boomer Kuwanger	1-2-3-3	3-4	1	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	32	
Spark Mandrill	1-2-3-3	1-2	1	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	3-4	1-2	32	
Sting Chameleon	1-1-2-2	1-2	1	1-2	1-2	1-2	1-2	1-2	3-4	1-2	1-2	1-2	1-2	32	
Vile	1-2-4-4	3-3	2	4-4	1-1	1-4	2-6	2-6	2-8	2-8	2-8	2-8	2-8	32	
Bospider	1-2-3-3	1-2	1	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	3-4	1-2	32	
Rangda Bangda	1-1-2-2	1-2	3	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	11 per eye		
D-Rex	1-1-2-2	1-2	1	1-2	1-2	1-2	1-2	1-2	3-4	1-2	1-2	1-2	1-2	32	
Velguarder	1-2-3-3	1-2	1	1-2	1-2	1-2	1-2	1-2	3-4	1-2	3-4	1-2	3-4	32	
Sigma	1-1-1-1	1-1	1	1-1	1-1	1-1	2-3	1-1	1-1	1-1	1-1	1-1	1-1	32	
Wolf Sigma	0-0-0-1	0-0	0	2-2	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0	

Table D.1: Damage chart for main bosses in Mega Man X1.

D.2 X2

Damage chart provided by the *Mega Man Knowledge Database* [107]. Please note that:

- For X-buster the fourth value is the damage dealt only by the second shot when fired at full power.
- For Shoryuken damage reported in applied every two frame of contact, the first number represent the damage dealt to a boss without invincibility frame (i.e the first hit) and the second the damage dealt trough invincibility frames (check sec. 2.5 for detail on how damage dealt is calculated).
- For Silk Shot the first set of data is related to the boss' original stage, while the second one refers to the boss rematch, which always result in scrap metal to be tossed. The only exception are X-Hunters, that can be possibly faced in each stage and hence are subjected to each variant of the silk shot. In this case only the main weakness is reported. However this does not apply for their rematches, as the arena is fixed just like the other bosses.

Giant Mechaniloid CF 0	3-5-8-	-	-	-	-	-	-	-	-	-
Wire Sponge	1-1-2-4	0-0	1-1	1-1/1-2	1-1	2-5	1-1	1-2	2-1	2
Morph Moth	1-1-2-4	0-0	1-1	1-1	1-1	1-1	1-2	3-6	2	16-8
Flame Stag	1-1-2-4	0-0	2-2	1-1/1-1	1-1	2-2	1-1	1-1	1-1	2/3 8-8
Magna Centipede	1-1-2-4	0-0	1-1	2-4	1-1	1-1	2-2	1-1	1-1	2
Overdrive Ostrich	1-1-2-4	3-0	1-1	2-2/2-2	1-1	1-1	1-1	1-1	1-1	16-8
Bubble Crab	1-1-2-4	0-0	1-1	1-1/1-1	3-4	1-1	1-1	1-1	1-1	2
Wheel Gator	1-1-2-4	0-0	2-1	1-1	1-1	1-1	3(5)-5	1-1	1-1	2 16-8
Crystal Snail	1-1-2-4	0-0	1-1	1-1/1-1	1-2	1-1	1-1	3-4	1-1	2 16-8
Violen	1-1-2-4	0-0	2-2	3-5(leaf) 1-1 other	1-1	2-2	1-1	1-1	1-1	2 -
Neo-Violen	1-1-2-3	0-0	2-4	0-0	0-0	0-0	0-0	0-0	2	-
Serges	1-1-2-4	0-0	1-1	1-2(rocks) 3-5(crystal) 1-1 (other)	1-1	2-5	1-1	1-2	2-1	2 -
Serges Tank (main body)	1-1-2-3	0-0	1-1	1-2	0-1	2-5	1-1	1-1	2-1	2 -
Agile	1-1-2-4	0-0	1-1	3-5(rocks) 1-1	1-2	1-1	1-1	3-4	1-1	2 -
Agile Flyer	1-1-2-3	0-0	0-0	0-0	0-0	0-0	0-0	2-2	0-0	2 16-8
Zero	0-1-2-3	0-0	0-0	0-0	0-0	0-0	0-0	0-0	2-1	0 16-8
Neo-Sigma	1-2-2-4	0-0	0-0	0-0	0-0	2-4	0-0	0-0	0-0	3 16-8
Sigma Virus	0-0-1-3	0-0	0-0	0-0	0-0	0-0	2-1	0-0	0-0	0-0 16-8

Table D.2: Damage chart for main bosses in Mega Man X2.

¹If Wheel Gator is hit by the Strike Chain when flashing, the damage dealt will count as 5 instead of 3

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