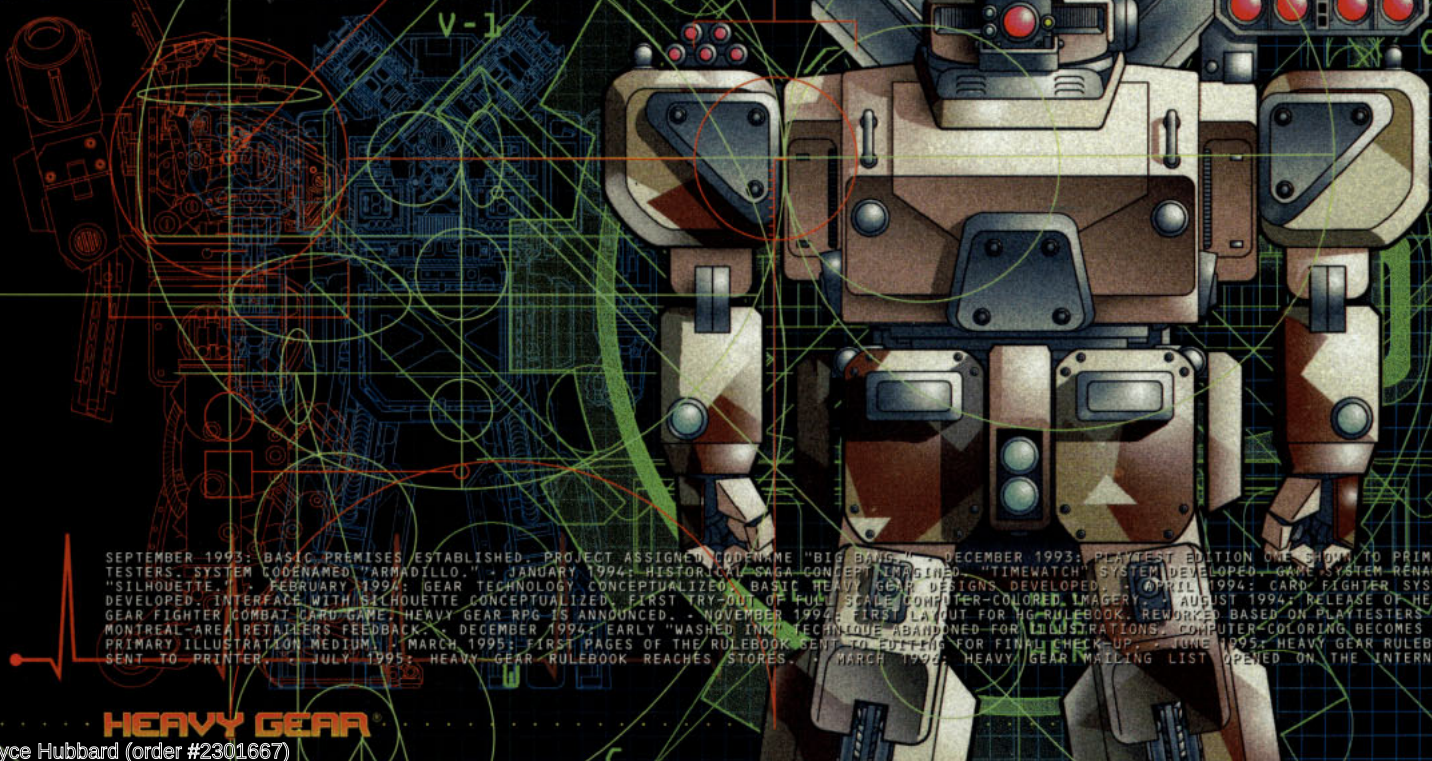
THE MAKING OF A UNIVERSE

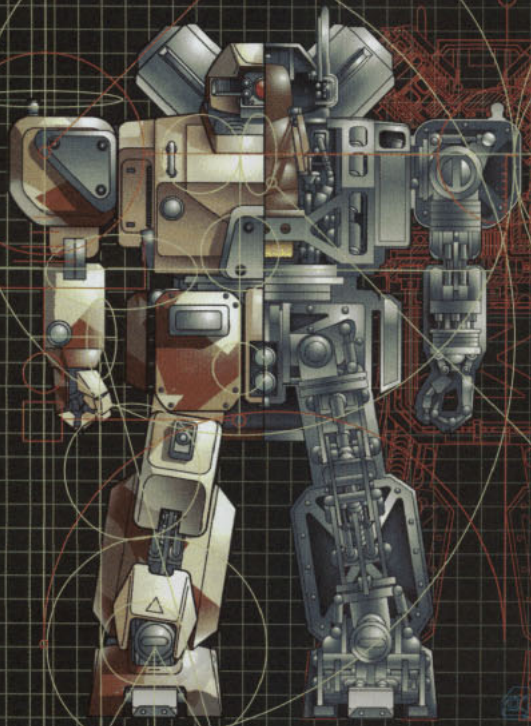
Heavy Gear Design Works



SEPTEMBER 1993: BASIC PREMISES ESTABLISHED. PROJECT ASSIGNED CODENAME "BIG BANG." • DECEMBER 1993: PLAYTEST EDITION ONE GIVEN TO PRIMARY TESTERS. SYSTEM CODENAMED "ARMADILLO." • JANUARY 1994: HISTORICAL SAGA CONCEPT IMAGINED. "TIMEWATCH" SYSTEM DEVELOPED. GAME SYSTEM RENAMED "SILHOUETTE." • FEBRUARY 1994: GEAR TECHNOLOGY CONCEPTUALIZED. BASIC HEAVY GEAR DESIGNS DEVELOPED. • APRIL 1994: CARD FIGHTER SYSTEM DEVELOPED. INTERFACE WITH SILHOUETTE CONCEPTUALIZED. FIRST TRY-OUT OF FULL-SCALE COMPUTER-COLORED IMAGERY. • AUGUST 1994: RELEASE OF HEAVY GEAR FIGHTER COMBAT CARD GAME. HEAVY GEAR RPG IS ANNOUNCED. • NOVEMBER 1994: FIRST LAYOUT FOR HG RULEBOOK. REWORKED BASED ON PLAYTESTERS AND MONTREAL-AREA RETAILERS FEEDBACK. • DECEMBER 1994: EARLY "WASHED INK" TECHNIQUE ABANDONED FOR ILLUSTRATIONS. COMPUTER-COLORING BECOMES THE PRIMARY ILLUSTRATION MEDIUM. • MARCH 1995: FIRST PAGES OF THE RULEBOOK SENT TO EDITING FOR FINAL CHECK-UP. • JUNE 1995: HEAVY GEAR RULEBOOK SENT TO PRINTER. • JULY 1995: HEAVY GEAR RULEBOOK REACHES STORES. • MARCH 1996: HEAVY GEAR MAILING LIST OPENED ON THE INTERNET.

HEAVY GEAR®

Heavy Gear Design Works



SEPT•93 - SEPT•97

"We are Pod. Resistance is futile. You will be entertained."

— The Pod People.

Credits

Produced by Dream Pod 9

Dedication

Dedicated to our hard-core fans, who've kept us on our toes and defended us in our times of need.

Legal

Heavy Gear Rulebook

Art Gallery

The Rulebook spearheaded the Heavy Gear line. We spent a great deal of time choosing the art style, finally opting for computer-colored illustrations. The original 256-page manual did not contain any color section, but it was lavishly illustrated nonetheless.

The pictures from that book look slightly dated now, after two years of publication and constant improvements. This is why a second edition is coming up, featuring revised artwork and brand new color pages.

Life On Terra Nova Sourcebook

Art Gallery

This book faced the monumental task of bringing the world of Heavy Gear to life. Naturally, there had to be a great deal of illustrations. We parsed through countless nature and geography books to create believable locales.

New art techniques were tried here for the first time, such as using photographs and painting for backgrounds. The book also established the looks of many Terranovan vistas; the amount of architecture sketches produced for this publication is staggering.

Into The Badlands Sourcebook

Art Gallery

In retrospect, Into the Badlands was probably one of the easiest books to design for. The Badlands are like the Far West, evocating images of vast deserts, immense mountains and hard-boiled inhabitants.

From an art standpoint, the book allowed us to further refine the computer techniques pioneered in previous publications. It also established many of the fashions which would appear in subsequent publications.

Tactical Air Support

Art Gallery

Ever since the first airplane was invented, the many types of aircraft have formed an important part of the armies of Mankind. The Tactical Air Support introduces the rules required to design and field aerial vehicles.

Most of the design works in that book was centered around the aircraft themselves. For the most part, we used existing modern planes as a base, they modified their looks and capabilities to fit the rest of the Heavy Gear world.

Technical Manual

Art Gallery

Science fiction implies technology, and Heavy Gear is particularly concerned in this regard. It made sense to dedicate a whole book to explaining the basic assumptions and principles on which the technology of the game universe is based.

The Technical Manual required more design work than any of the books done so far. It also forced us to sit down and work out the intricate details of the Gears, which helped make them more consistent and believable.

Duelist's Handbook

Art Gallery

The Duelist: a lone heroic figure, stepping forward to defend the lives and honor of his people. This terrific subject was bound to make a great book, and gave us the opportunity to delve a little more into the Terranovan culture and psyche.

Art-wise, the book features several Gears equipped with melee weaponry. The setting of the book also gave us the opportunity to work on some detailed maps, developing techniques that would come in handy later on.

Tactical Field Support

Art Gallery

Players are always clamoring for more rules and more options, so we had little choice but to give it to them. The Tactical Field Support manual contains additional rules to make the integrated battlefield an even deadlier and more complex place.

Apart from the plethora of new artillery and support vehicles, there wasn't a lot of design work to do for this one. That allowed us to spend a little more time on the illustrations and schematics, and it shows.

Design Works

Heavy Gear is the result of nearly two years of collective development. The foundations for the world of **Heavy Gear** were laid down in September 1993, when we sat down over coffee to jot down some notes and scribble sketches about a world that was waiting to come out. In the months that followed, the game designers worked on the Silhouette game engine while the writers and various creators brainstormed to merge everyone's ideas into one harmonious whole. Not much later, inspired by various excellent British TV series (Dr. Who, Blake's 7, Red Dwarf) and Babylon 5, we came up with the concept of the over-arcing storyline and developed ways to adapt it to a game universe in a consistent, believable manner.

The universe evolved rapidly. We knew we wanted "giant robots," but we wanted them to make sense. They had to be smaller than traditional Japanese mecha, more functional and built to last. We needed something closer to human proportions, something which would not dominate the battlefield but would turn an ordinary soldier into a sort of super-infantry. Something that would be closer to super-equipment, super-gear. From there, we were a step away from the name of those vehicles: Gears...

We wanted the Gears to be very cool, so we got started on them even before we knew exactly just how they would work. After viewing a tape on the real-world V-engine, we snapped our fingers and said, "THAT'S the perfect engine for a Gear! It's simple, it's reliable, it's easy to maintain and it runs on any combustible fluid." And so, the Gears came to have the V-engine in their backpacks. Sketch after sketch, the machines took shape. As the world evolved around them, we decided that hard, gritty science fiction would be the norm. The overall technology would be patchy and imperfect, but cool-looking. The Gears themselves are a perfect example of this: a super-advanced computer (actually, a neural net) in an old-tech body with nuts and bolts everywhere.

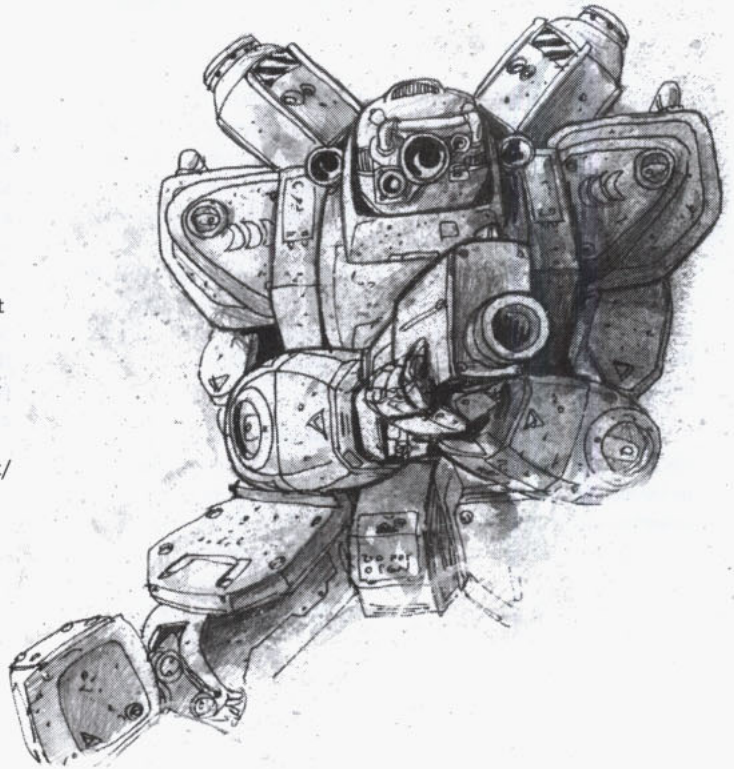
In order to create a consistent universe, a lot of material has to be developed, but customers only get to see the tip of the iceberg. This book contains selected sketches and never-before seen illustrations from our files, so that you may get a glimpse at the other material that was developed for **Heavy Gear**.

Developing the Artwork

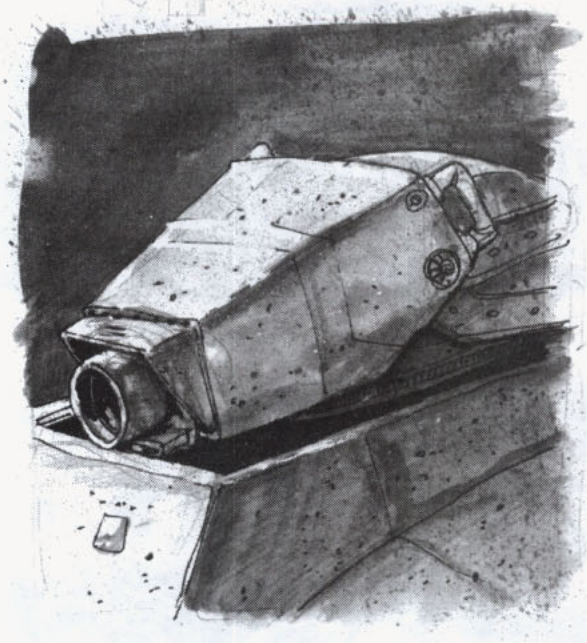


The first thing we had to find out was what was the best art medium to produce the style we wanted to give the book. One of the things we tried was what we refer to as the "ink wash" method. The drawing is first done in pencil, then lightly and roughly inked. Both the details and the shadows are created through repeated applications of diluted black China ink, with corrections and highlights being added later with white paint. Surprisingly, this method, although somewhat messy, requires little time; senior artist Ghislain Barbe got quite good at it, and managed to turn out about four to five pieces a day.

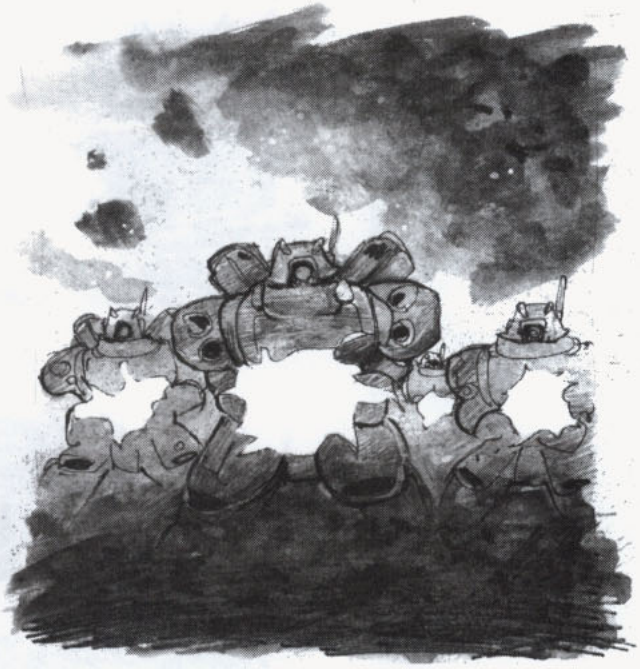
Upon placing them in the test layout, however, we didn't get the effect we wanted to achieve. Sure, it was gritty and war-like, but it didn't look very futuristic. There was also the problem of detail — in short, there was very little. So we went back to the combination line art/computer coloration method that was so effective for **Heavy Gear Fighter**. Many of the early ink sketches were later redrawn and computer colored, as you'll see in the following pages.



Ink Artwork



The head unit of a *Grizzly* fire support Gear. ▲

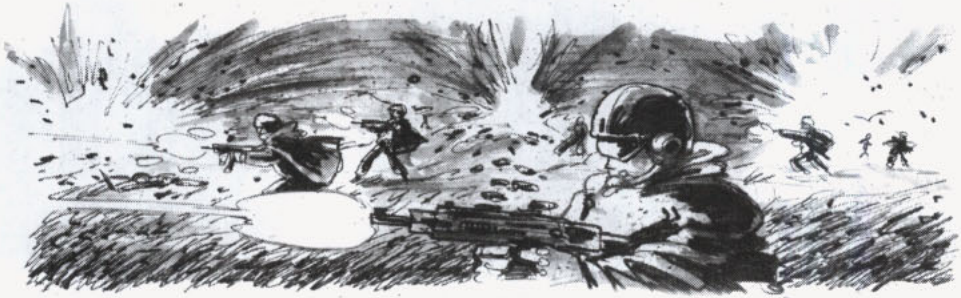


A cadre of *Black Mambas* opens fire on the enemy. ▲

Ink Artwork

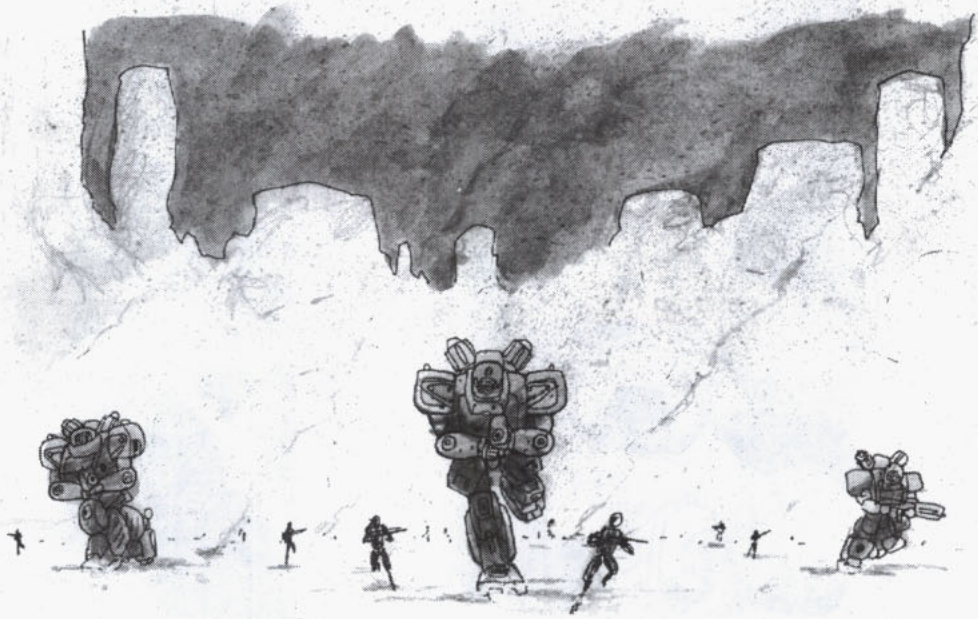
Gears traveling past a stonehead. ▲

Gears weather artillery fire during the War of the Alliance. ▲

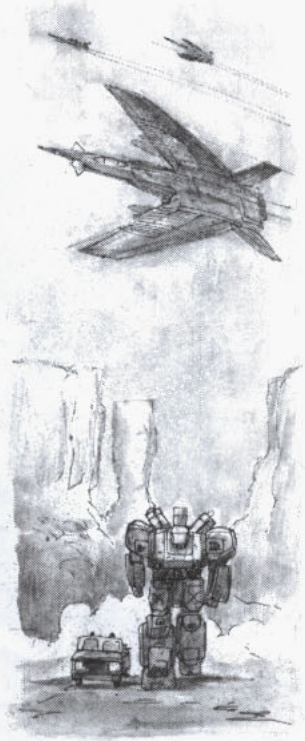


Infantry assaults an enemy position, again during the War. ▲

Ink Artwork



A mixed force of Gears and infantry spreads out in a Badlands desert. ▲



Redjackets flying over a *Grizzly*. ▲

Ink Artwork

The first *King Cobra* illustration. ▲

A *Jäger* is about to meet a sorry end. ▲

A *Black Mamba* in action. ▲

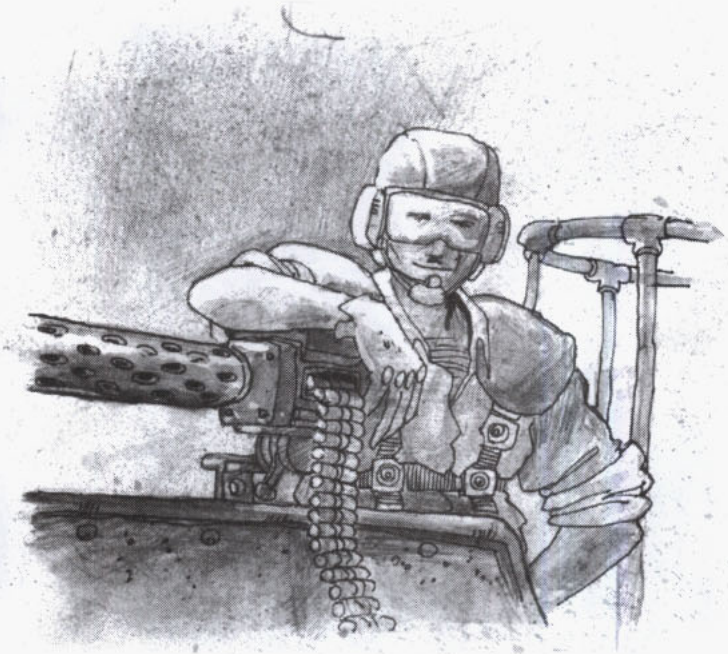
Ink Artwork

The first illustration of the *Kodiak*. ▲

An early design for the *Thunderhammer*. ▲

Ink Artwork

A young female Gear pilot. ▲



A tanker resting on his pintle-mounted weapon. ▲

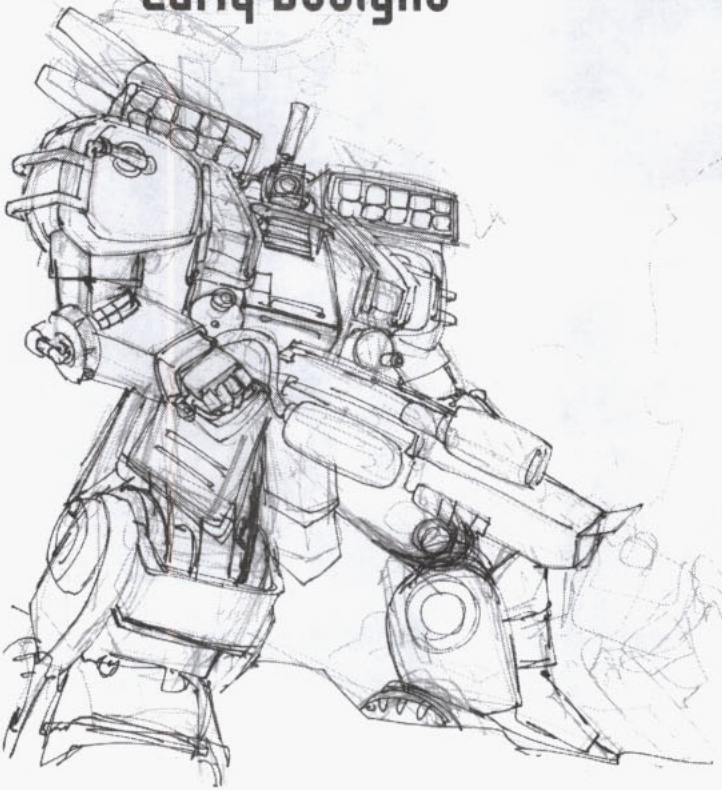
Ink Artwork

A Gear pilot in his cockpit. ▲

A technician at work on an *Iguana*. ▲

An infantryman springs into action. ▲

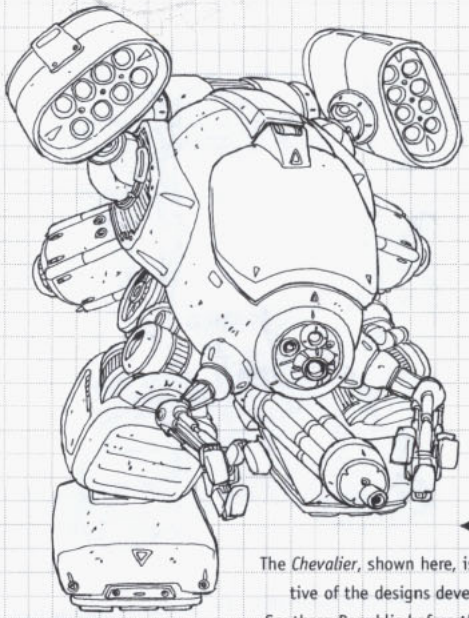
Early Designs



Developing the mechanical designs for the game was one of the first tasks we tackled, especially with regard to Gears (for obvious reasons). They had to look good, but they also had to make sense. Rather than just start dropping ideas on paper, we established a set of guidelines and requirements to help frame our efforts. The machine had to carry one crewman; it had to be roughly humanoid; it had to be a small as possible, to avoid presenting a large battlefield silhouette; and, most of all, it had to use believable (and, for many systems, existing) technologies.

The general looks of the machines evolved early on in many cases. With the aforementioned guidelines, we had a good idea of where we were headed, so there was much less reworking involved than we first thought. We had already decided that there would be two large alliances, both with multiple member-states sharing designs and technologies, so we took this into account. One side would field hard-edged, utilitarian vehicles which would feature mostly flat plates, while the other side would prefer rounded composite panels. Some of the components, such as the backpack generators, would share similar looks because they were, in effect, the same technology with the same function.

First Steps in the Design Process

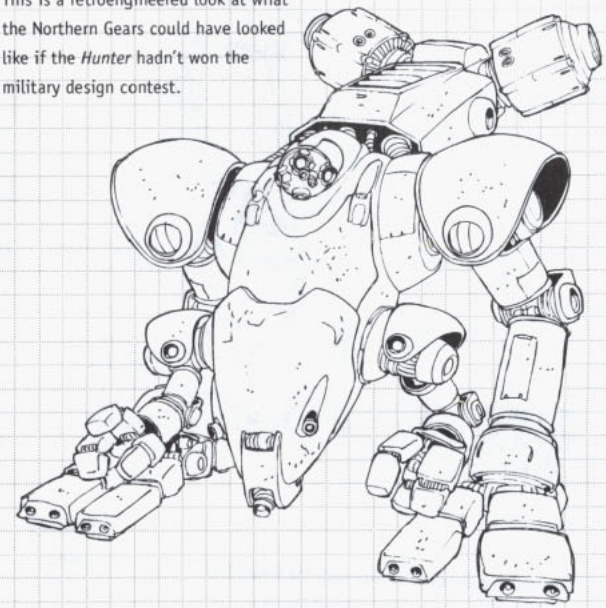


◀ Chevalier

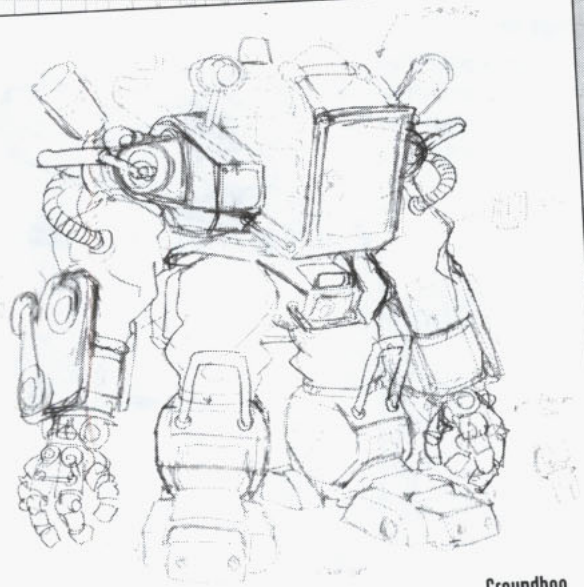
The *Chevalier*, shown here, is representative of the designs developed by the Southern Republic before they got their hands on a *Hunter* prototype.

Raccoon ▶

This is a retroengineered look at what the Northern Gears could have looked like if the *Hunter* hadn't won the military design contest.

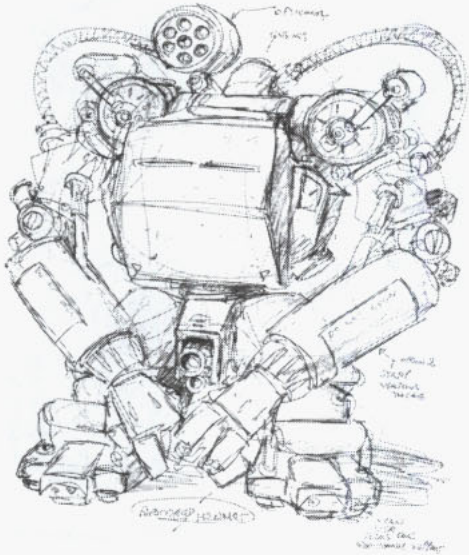


First Steps in the Design Process



Groundhog

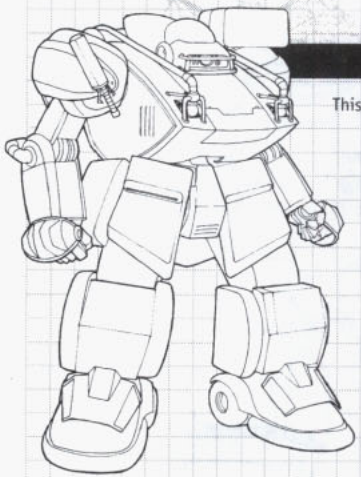
The *Hardhat* eventually evolved into the *Groundhog*, a Terranovan construction vehicle. It features many of the details developed for the *Hardhat*.



Hardhat

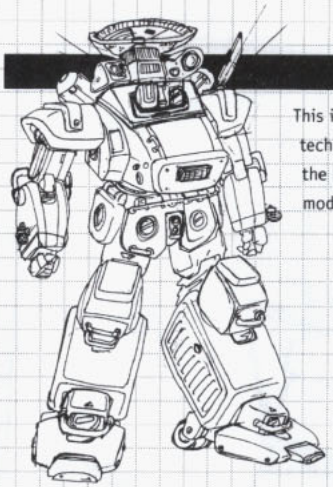
This is a rough sketch of the *Hardhat*, the construction machine from which the Gears would eventually evolve. At the time this was done, we had already decided upon the general look that the Gears would share.

First Steps in the Design Process



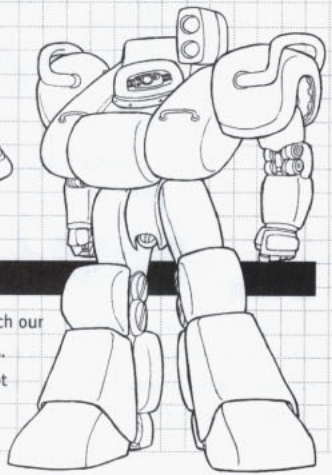
Hunter

This is one of the early looks of the *Hunter*. It's blocky and angular to show how primitive it is, and sports the infamous football-style helmet.



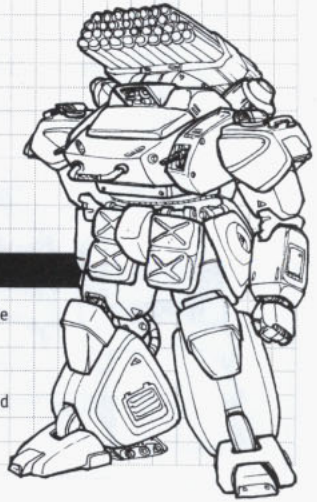
Weasel

This is the first sketch of the *Weasel*. Our technical illustrator later decided to use the body style of his own popular *Ferret* model instead of the more conventional one shown here.



Jäger

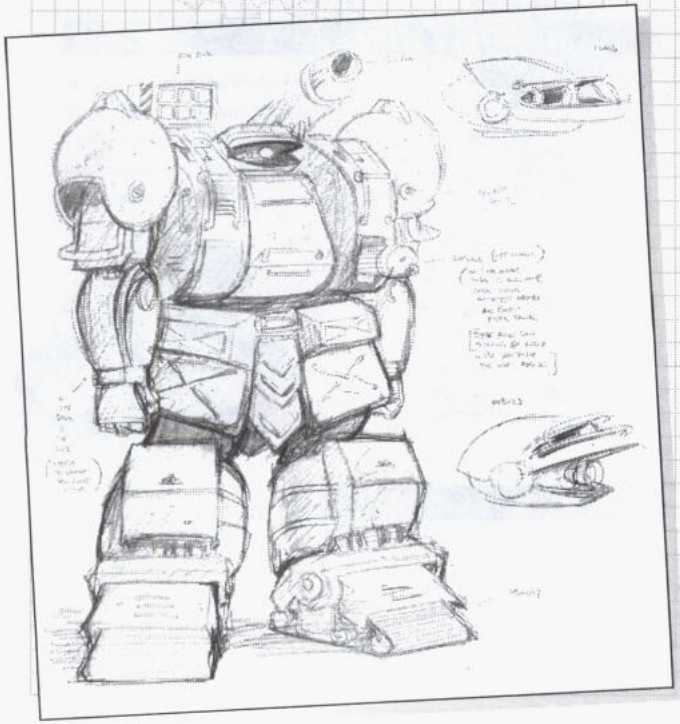
This is a quick conceptual sketch which our lead artist did for the Southern forces. Nicknamed "the Doughboy," it was not threatening enough and abandoned.

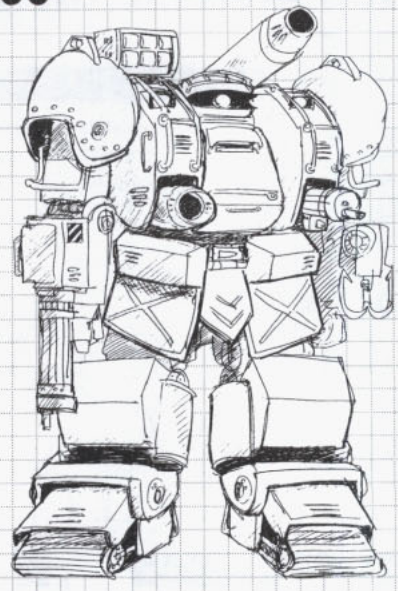


Mad Dog

A fire support Gear concept for the North, the *Mad Dog* lost out to the *Grizzly*. It was later reused to represent an older Gear design, though the proportions were slightly modified before we reached the final look.

First Steps in the Design Process

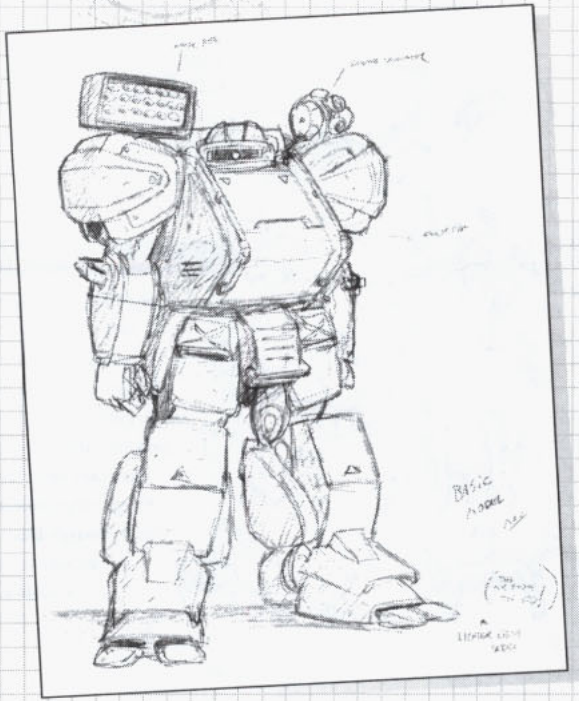


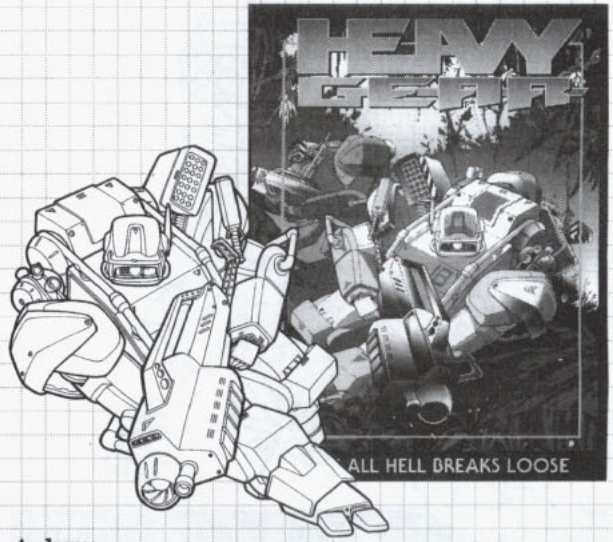


▲ Grizzly

This sketch is one of our first attempts at a fire support Gear design. It would eventually evolve into the *Grizzly*. The V-engine wasn't part of the Gear concept yet, but there are many elements here that were used in the final model: the treads on the feet, the anti-personnel machinegun, the heavy armor.

First Steps in the Design Process

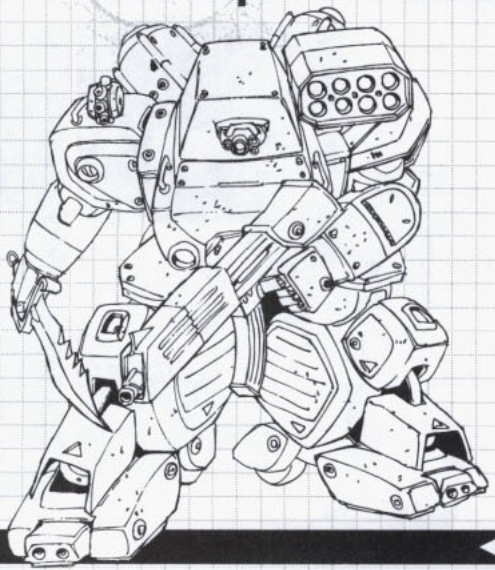




▲ Jaguar

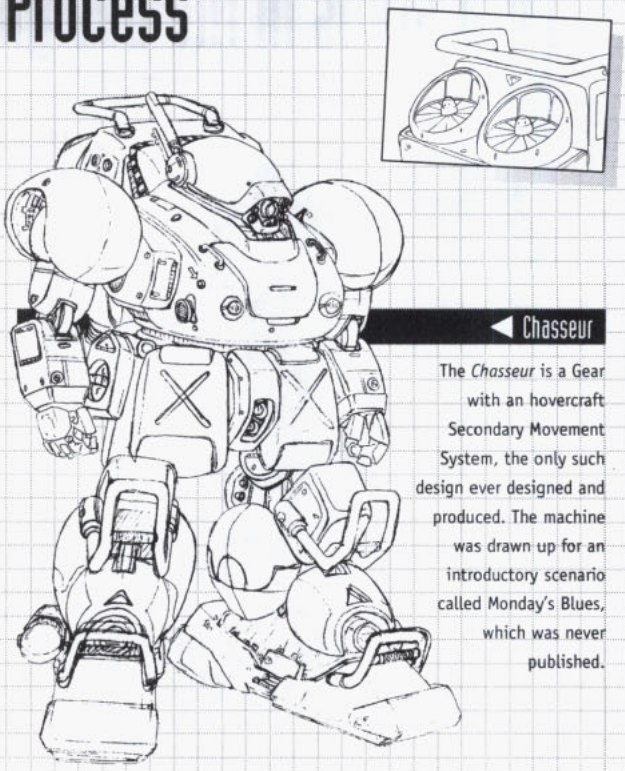
This *Jaguar* concept almost made it to the final version of the game. It was used in the very first **Heavy Gear** advertisement poster (see above), now nearly impossible to find. Like the *Grizzly* on the previous page, this machine does not feature a V-engine yet and still has the "football" helmet.

First Steps in the Design Process



◀ Blocker

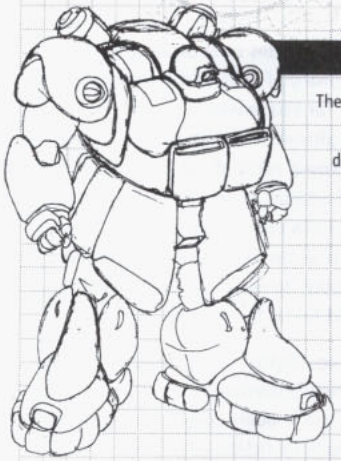
One of the near final Gear designs, the *Blocker* was put together for a playtest in a small gaming convention. All the *Hunter* elements were already featured, except the head, so it was reused as one of the *Hunter* prototypes. This picture is an illustration based on the original sketch, now lost.



◀ Chasseur

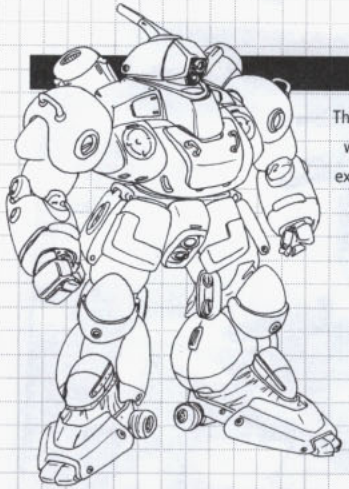
The *Chasseur* is a Gear with an hovercraft Secondary Movement System, the only such design ever designed and produced. The machine was drawn up for an introductory scenario called Monday's Blues, which was never published.

First Steps in the Design Process



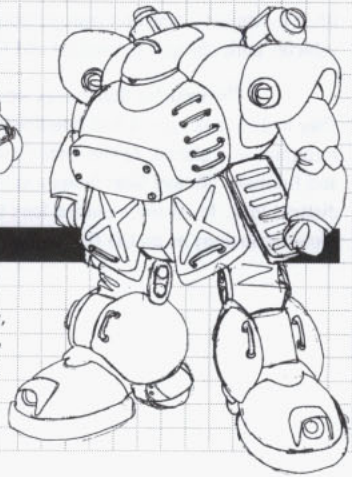
Anaconda

The *Anaconda* was an unfortunate brother to the *Python* and was never published. The design, like the others in the "constrictor" series, features thick armor. This one was also supposed to be amphibious.



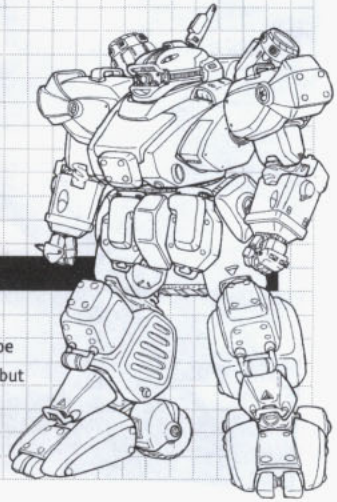
Sidewinder

This illustration represents early design work for the *Sidewinder* Gear. We were experimenting around with proportions and auxiliary systems, trying to find new visual looks.



Boa

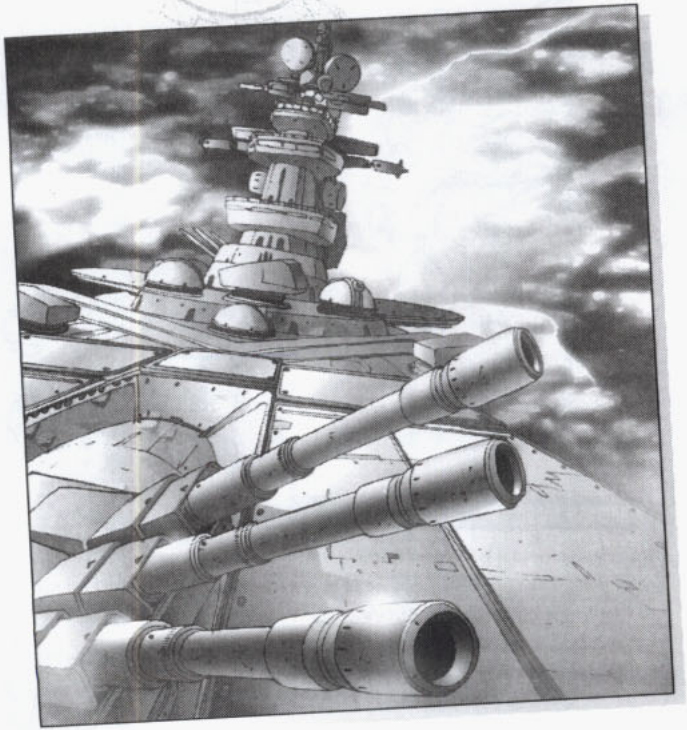
The *Boa* is the second third of the "constrictors," made up of the *Boa*, *Anaconda* and *Python*. It is a fairly finished model that may reappear somewhere.



Command Jaguar

The *Command Jaguar* is a design that was never used. It was originally supposed to be the Northern equivalent of the *Razorfang*, but it was cut out of the Vehicle Compendium due to lack of space.

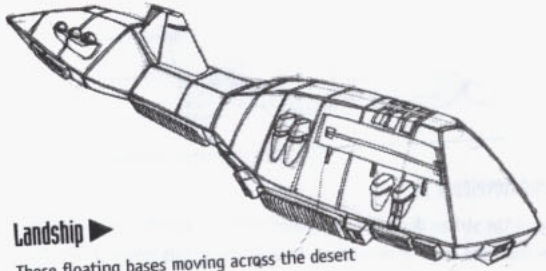
Vehicle Design



Gears are only some of the vehicles used on Terra Nova. There are many other tasks to be fulfilled, many of which are unsuitable for a Gear — air superiority, for example. For this reason, we had to create a large variety of ground vehicles and aircraft to field beside our walker units. In order to save time, we employed many of the same techniques that are used to engineer real world vehicles. A set of requirements was first drawn up, then a specific design was conceived to match those specifications. Specialized roles, such as field engineering, would be filled by variants based on multipurpose frames and hulls, making the vehicles both cheaper to produce and easier to maintain.

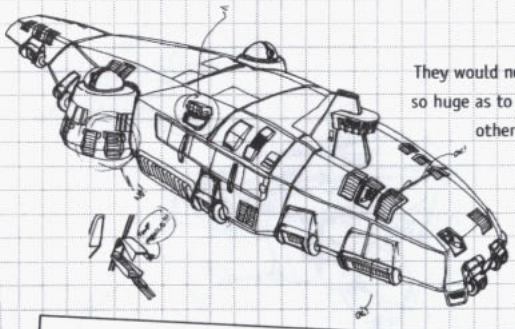
The vehicles themselves were both easy and hard to design. They had to look rugged and functional, something that you can recognize at a glance. At the same time, though, they had to look cool and futuristic (**Heavy Gear** being a science fiction game) and have a distinct look. To ensure a unified look to the game, we used much the same technology as on the Gears whenever possible.

Vehicle Design



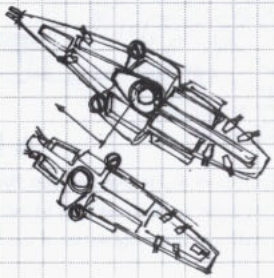
Landship ▶

These floating bases moving across the desert are certainly nothing new in science fiction, but it made sense to include them on a planet where the oceans are made of sand.



◀ Landship

They would not, however, be so huge as to overshadow all other fighting units.



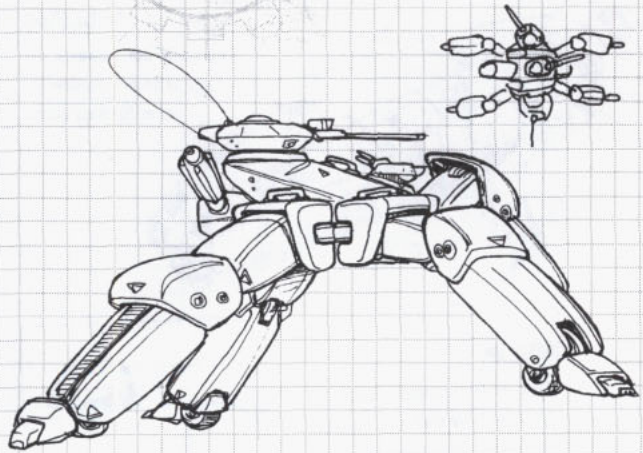
◀ Hulls

The biggest visual inspiration for these vessels came from World War II battleships, which were literally loaded with thick armor and more guns and turrets than you could count.

Thrusters ▶

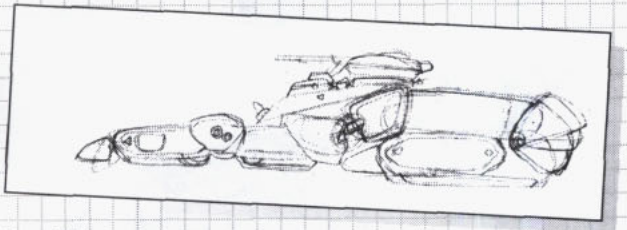
We knew we wanted them to be some kind of hovercraft, so many of the early designs featured large ground-effect skirts that ringed their base. We then hit upon the idea of making them float a little above the ground. We added the drive thrusters a little later.

Vehicle Design



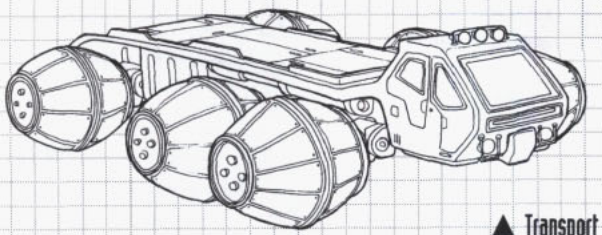
Strider ▲

Walker technology was a prominent feature of the new game world, and all sort of walking vehicle designs were drawn up to explore different looks. Once the separation between the humanoid but small Gears and the larger striders was decided upon, we allowed ourselves to go a little wilder on the latter. The strider shown above has not been used so far, but might see the light of day in a future publication. Note the oversized V-engine mounted at the rear.



Ground Movement ▲

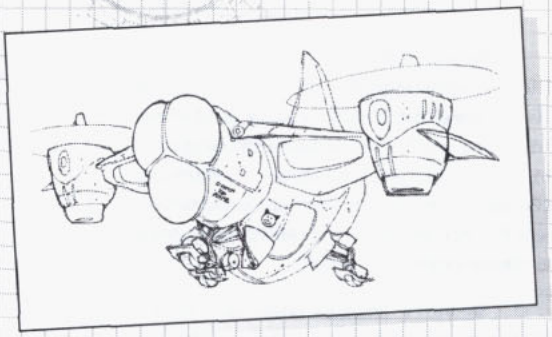
Many of the strider designs were studied with the intention of giving them more than one mode of movement. In most cases, this involved folding the legs up and using underslung treads or wheels.



▲ Transport

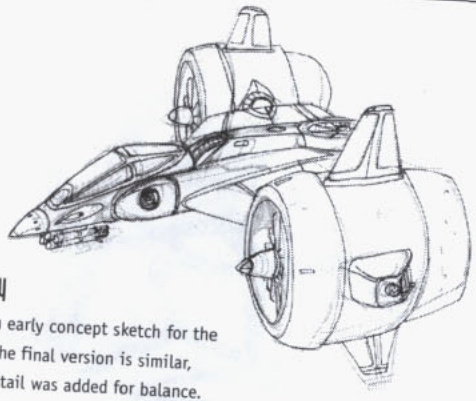
This is an early all-purpose transport truck design that was later dismissed in favor of the *Camel*. It's somewhat larger and features large balloon tires for traveling in the sandy wastes of the Badlands.

Vehicle Design



Grasshopper ▲

This is the first version of the common Grasshopper VTOL. It featured rotors instead of ducted fans.

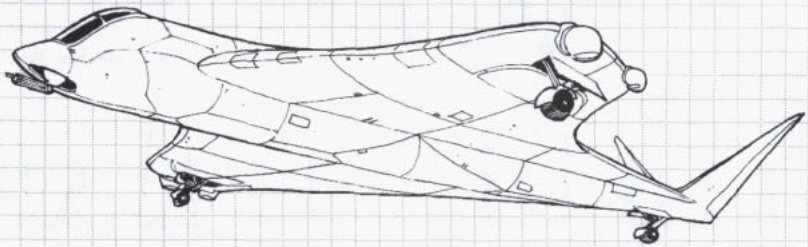


Dragonfly

This is an early concept sketch for the hopper. The final version is similar, though a tail was added for balance.

Orca ▶

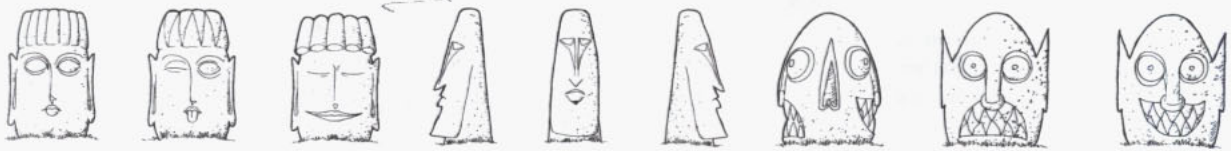
The original *Orca* was drawn up for a playtest game, well before any of the **Heavy Gear** designs had been finalized. It's been substantially modified since and has gained the ability to transport Gears.



Setting Design

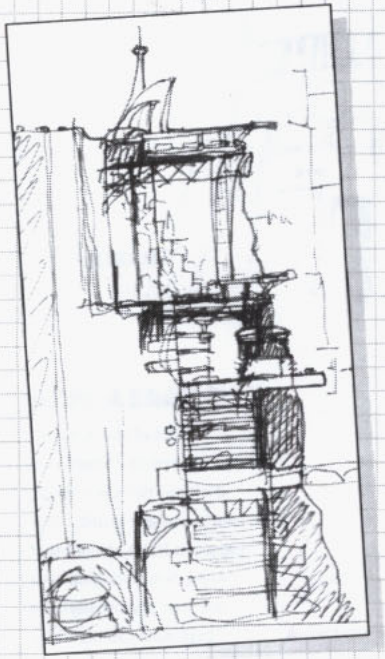
Nothing exists in a vacuum. We had all those neat people, vehicles and technology, but what did the world they lived in look like? We already knew that Terra Nova was a world of extremes, with large deserts giving way to endless savannahs merging in turn with immense forests, jungles and mountain ranges. An entire solar system was conceptualized, along with the geology and natural history of the planets it contained. Ideas and concepts were suggested, discussed, and either incorporated or discarded.

We hit the reference books again for images of vast natural vistas. Canada and Western Europe became the North; South America became the South; and the deserts and savannahs of the American Mid-West and Africa became the Badlands. A side effect of all this visual research was the creation of the stoneheads: while hunting for jungle images, we stumbled upon Central America and its civilizations. There were several pictures of Olmec stoneheads lying about, near roads, in the field, and just about anywhere.



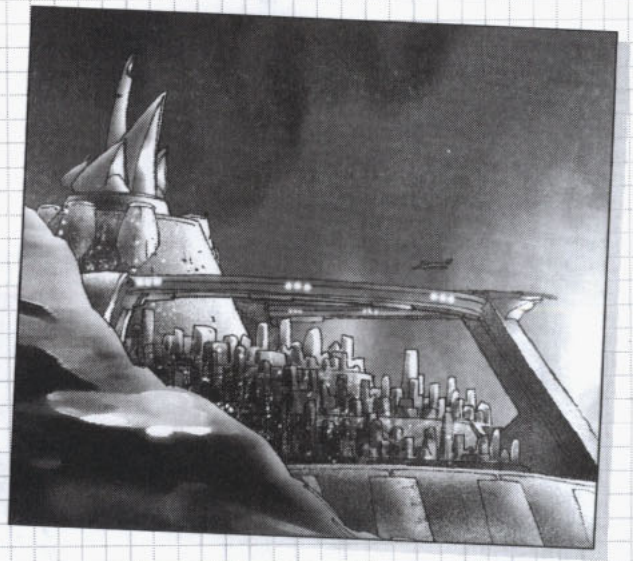
Illustrator Ghislain Barbe having fun with stoneheads, including the Easter Island look.

Peace River Design



◀ Early Concepts

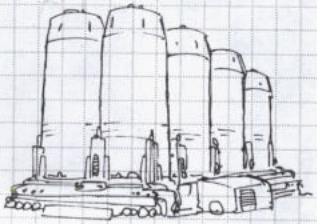
The Badlands city-state of Peace River was conceived from the beginning as being built into a gigantic desert mesa. In its first incarnation, the city clung to the wall, like artificial moss. An armored corporate quarter, located on the very top of the mountain, was partly inspired by the Sydney Opera House. The result wasn't impressive enough, for only a large window and the corporate sector on top hinted that an entire city was buried there.



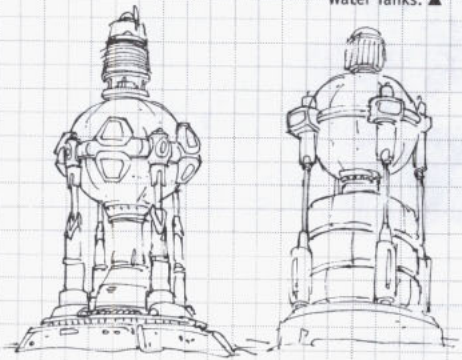
▲ Final Version

The final illustration of Peace River is very different from the sketch at left. The storm shutters and support pillars came a little later, but their addition gave yet another futuristic twist to this hi-tech city.

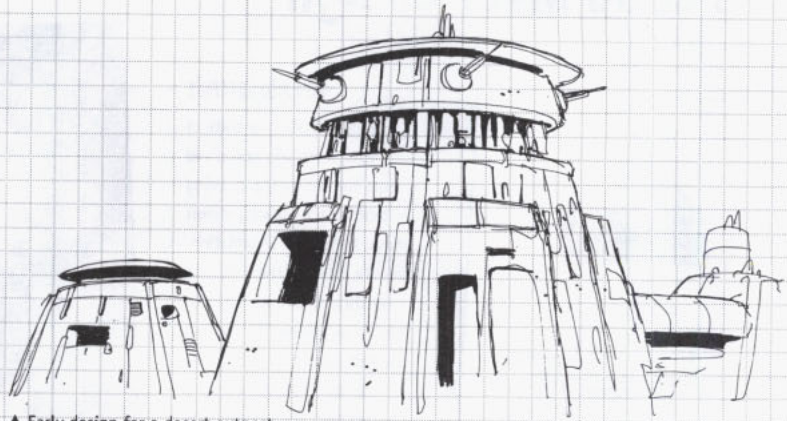
Setting Design



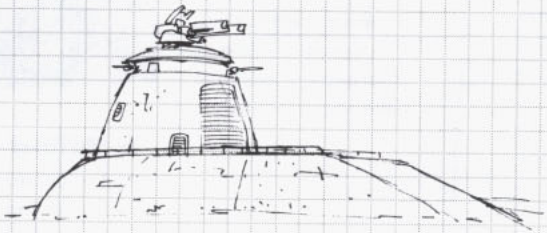
Water Tanks. ▲



Two types of moisture traps. ▲



▲ Early design for a desert outpost.

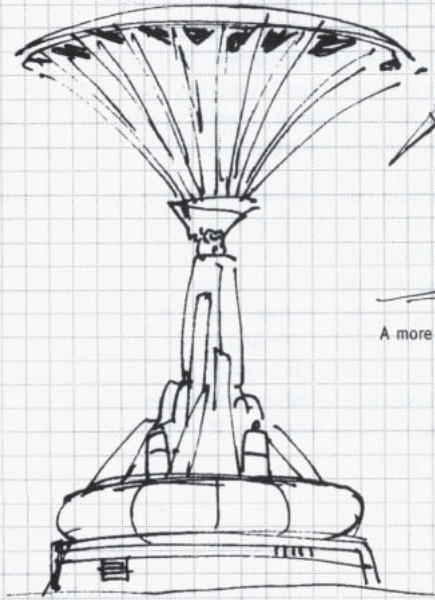


A defense outpost, with hangar to store vehicles. ▲

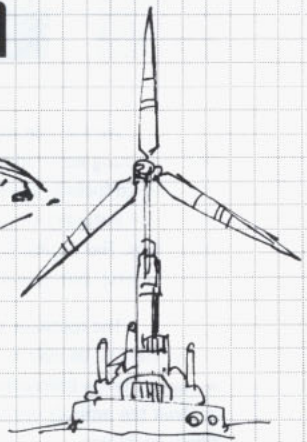
◀ Badlands Architecture

Most of the Badlands' buildings and equipment were designed to have a tough, weather-beaten quality. They suggest a harsh environment where tempests whip sand and dust against anything that stands in their way.

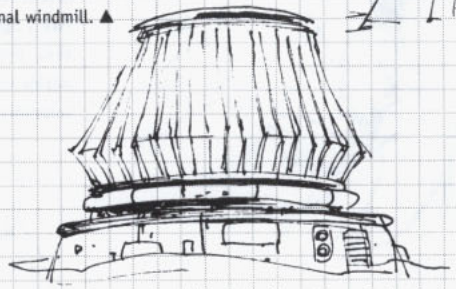
Setting Design



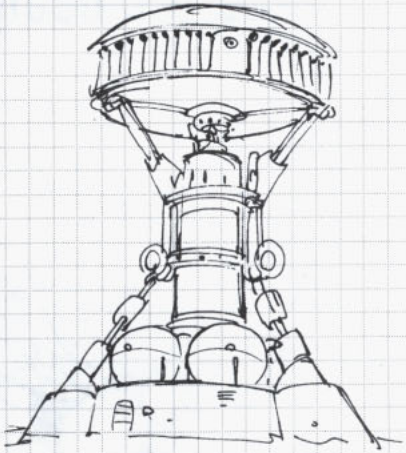
An advanced windmill design. ▲



A more conventional windmill. ▲



This windmill uses low winds. ▲



A variation on the first design. ▲

Creature Design

We had the world, we had the people, we had the technology. But something was still missing. In order to have a believable planet, you have to include a believable ecosystem. Terra Nova being a young planet, we naturally turned to Earth's own early history for ideas and ran from there. The vegetation would be primitive (ferns, lichen, underdeveloped flowers), but immense. The creatures would be built accordingly.

The reptilian motif was the most obvious choice. We wanted our settlers to be able to eat the creatures with little accommodation, so we gave them a biochemistry that was very similar to our own. We slowly evolved the animals according to the ecological niches that had to be filled: herbivores, carnivores, scavengers, etc. Early on, shared characteristics appeared: the three fangs; the faceted eyes; the rugged, knobby skin; the defensive spines. As more creatures were needed, it became easier to design them. We just followed Nature's own principle: don't innovate, just modify existing organisms. It's evolution in action.

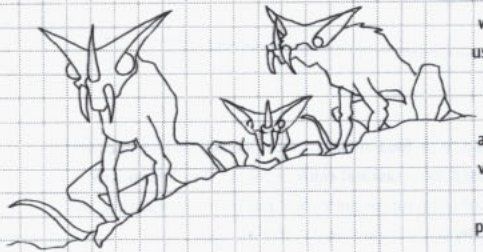
Creature Design

▲ Dawg Physiology

The wolves of Terra Nova, the canine-looking dawgs also make excellent (if grumpy) pets when domesticated. Once the three-toothed look was established, this sketch was made to study how the jaw would work. The fangs immobilize the target while the inner teeth rip the meat off the prey.

Dawgs in Action ▲

Naturally, images of real wolves and dogs were used to get the stance right. The dawg, like other Terranovan animals, would spawn variations such as the Great Dawg, which is patterned after a lion.



Creature Design

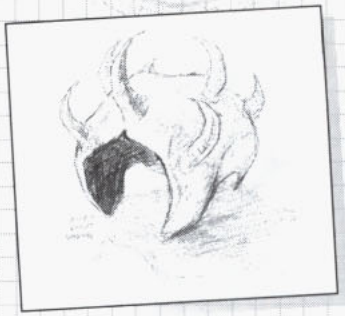
▲ **Hoppers**

Hoppers were intended to be food animals, much like rabbits and chickens. They would also be used for occasional comic relief, so they had to look a little funny. Instead of using fur for protection and thermal regulation, the hopper have long fleshy tendrils growing out of their neck.

▼ **Long Fang**

It made sense that a carnivorous species would evolve out of the peaceful hopper, using its appearance as a lure.

Creature Design



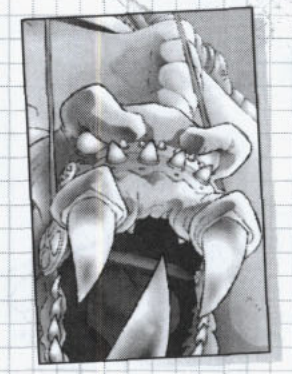
▲ Springer

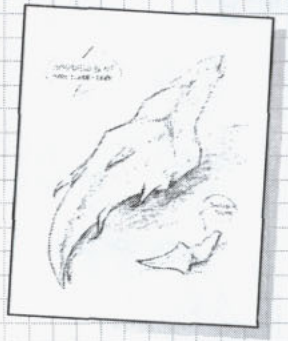
The Terranovan's main meat animal, the springer is a reptilian buffalo/cow. Another versatile animal design, the sturdy springer was evolved to fit a series of ecological niches, including mountainous environments (like the rock springer, above). Leaner variants were even used as horse-like mounts in some illustrations.

▲ Domestic Springer

The various species and variants of springers are peaceful herbivores, so no special jaws and teeth designs were needed. Most of the variations are found in the shape of the main torso carapace.

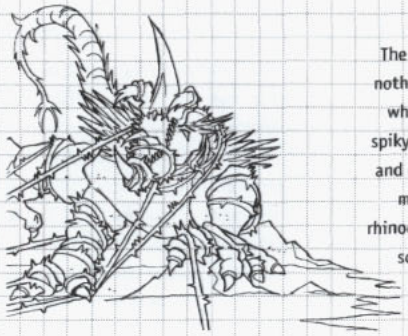
Creature Design





▲ Barnabies

One of Terra Nova's best known animals, the Barnaby was one of the first creatures designed. Most of the details and features of Terranovan ecology were already in place, such as the triple-toothed jaw and the beady, composite eyes.



▲ Armadillo Beast

The Armadillo Beast is really nothing more than a Barnaby which has evolved a tough, spiky exterior for self-defense and developed an attitude to match. It's the Terranovan rhinoceros, a good creature to scare lost characters with.

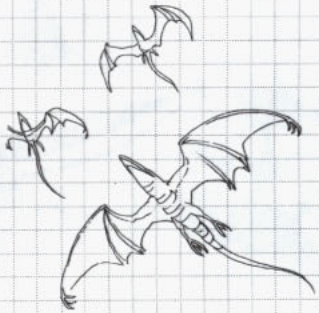
Creature Design

▲ Grassrunners

Terra Nova's answer to the rabbit, the many species of grassrunners were intended to serve both as comic relief and as a source of food for stranded characters. The long, powerful legs and widely separated eyes indicate a prey that runs away from predators.

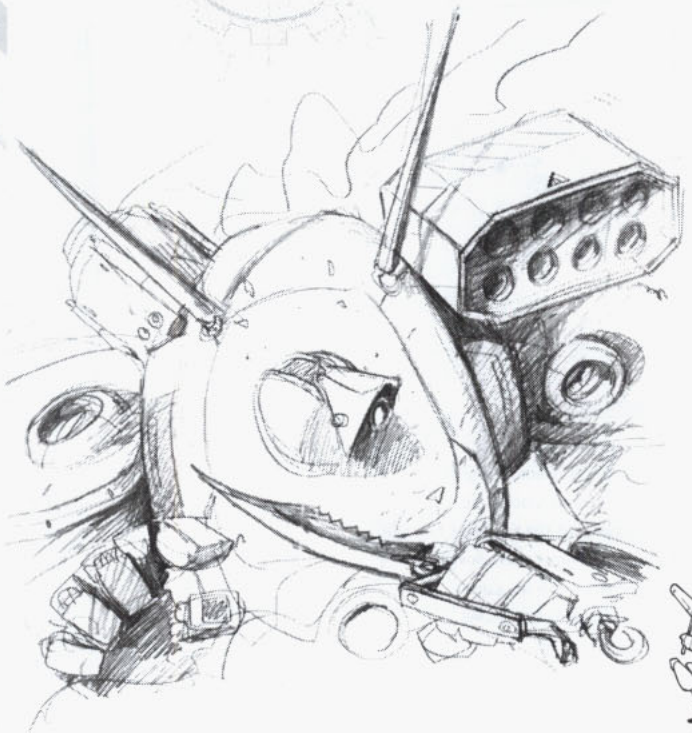
▲ Toussains (Oaks)

The flying creatures of Terra Nova use membraneous wings for flight. We naturally looked at pterodactyls, but the body was shaped following the Terranovan model. Pretty much the same body was used for the ground-based Bank's Monitor.



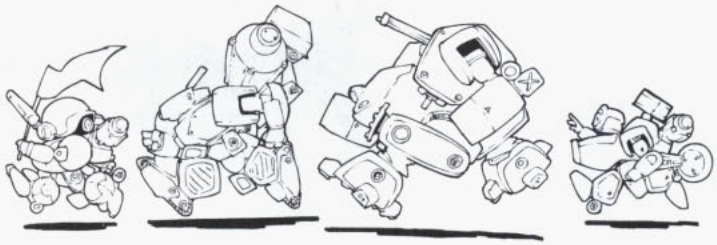
Gear Showcase





Gears are both war machines and a knight's armor, so their colors may vary from the most utilitarian camouflages to a gaudy parade livery, depending on the illustration. We have developed a set of guidelines that tells us when and how to use a specific color scheme. These were later used in game sourcebooks — see the Vehicle Compendiums. In most cases, we opted to keep weapons and mechanical systems in their natural metallic tints in order to better define the overall shape of the machine. Realistically, the entire Gear should be painted, but aesthetics have their place too, especially in a game.

Each and every piece of artwork produced for **Heavy Gear** is done in full color using specialized computer programs, starting from a detailed line art drawing which is then scanned and digitized. Texture maps of an entire range of camouflage patterns, in a variety of colors, are already available in computer storage for both consistency and ease of use.



Hunter

HACS-01MG-MP

The *Hunter* is the workhorse of the CNCS' armies. Due to its modular design that allows for quick repairs, its low production cost and its varied weapons loadout, the *Hunter* is assigned to nearly all new pilots while they get the feel of using a walker in the field.

Manufacturer:	Northco
Use:	trooper Gear
Height:	4.3 meters
Standard Operational Weight:	6,627 kg
Armor Material:	durasheet w/alloy
Average Armor Thickness:	45 mm
Running Speed:	42 kph
Rolling Speed:	72 kph
Deployment Range:	500 km
Base Sensor Range:	2 km
Base Communication Range:	10 km
Powerplant:	S-V950A V-Engine
Horsepower:	450 Hp

HACS-01MG

Jaguar

HACS-02MG-MPS

As the elite trooper Gear of the Northern forces, the *Jaguar* is assigned to pilots and missions that require a superior Gear. *Jaguar* pilots usually have several cycles of experience under their belts. The regular assignment of experienced pilots to these machines is purely fiscal; the Guard cannot afford to lose many of these machines.

Manufacturer:	Northco
Use:	general purpose Gear
Height:	4.6 meters
Standard Operational Weight:	7,123 kg
Armor Material:	durasheet w/alloy and ceramic
Average Armor Thickness:	51 mm
Running Speed:	53 kph
Rolling Speed:	81 kph
Deployment Range:	550 km
Base Sensor Range:	3 km
Base Communication Range:	15 km
Powerplant:	S-V1110 V-Engine
Horsepower:	620 Hp

HACS-02

Cheetah

HACS-01LG-SCT



The *Cheetah* is the standard scout Gear of the Northern armies. In this capacity, it can use its superior speed and maneuverability to avoid the first salvo of attacks and continue to dodge the enemy's fire while relaying coordinates for the heavier weapons its squad-mates carry. The *Cheetah*'s small size helps prevent it from being seen.

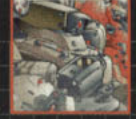
Manufacturer:	Shaian Mechanics
Use:	scout/recon Gear
Height:	4.1 meters
Standard Operational Weight:	5,230 kg
Average Armor Thickness:	20 mm
Armor Material:	durasheet w/alloy
Running Speed:	65 kph
Rolling Speed:	91.6 kph
Deployment Range:	600 km
Base Sensor Range:	5 km
Base Communication Range:	25 km
Powerplant:	S-V820S V-Engine
Horsepower:	425 Hp

HACS-01

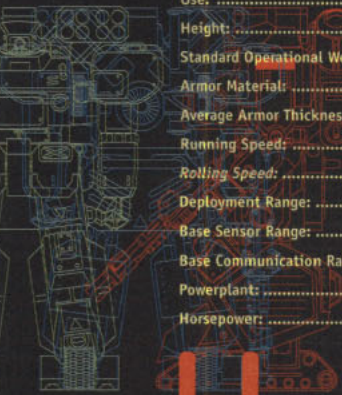
Grizzly

HACS-01HG-MPS

The *Grizzly* is the standard fire-support walker unit found in Northern armies. It carries assault weapons such as a heavy autocannon and medium rocket pod as well as a light artillery piece, usually a guided mortar. *Grizzlies* are rarely deployed without an escort of some sort. A *Grizzly* that is caught alone by an enemy unit is still a dangerous foe.



Manufacturer:	Northco/Shaian Mechanics
Use:	close fire support Gear
Height:	5.1 meters
Standard Operational Weight:	9,210 kg
Armor Material:	durasheet w/alloy and ceramic
Average Armor Thickness:	70 mm
Running Speed:	38 kph
Rolling Speed:	65 kph
Deployment Range:	400 km
Base Sensor Range:	2 km
Base Communication Range:	10 km
Powerplant:	S-V2200Z V-Engine
Horsepower:	956 Hp



HACS 01

Spitting Cobra

OACS-01H/SU

The *Spitting Cobra* is a Gear usually assigned to the fire support position in an assault cadre. It is the machine of preference for most Southern pilots due to the thick armor that surrounds the cockpit. Duelists and soldiers who seek great personal honor will often shun this machine because it rarely sees action.

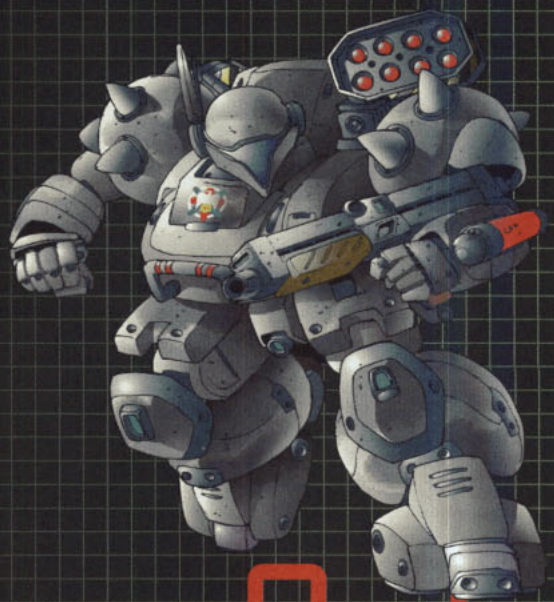
Manufacturer:	Territorial Arms
Use:	fire support Gear
Height:	5.0 meters
Standard Operational Weight:	8,990 kg
Average Armor Thickness:	90 mm
Armor Material:	armoplast w/alloy and ceramic
Running Speed:	35 kph
Rolling Speed:	62 kph
Deployment Range:	400 km
Base Sensor Range:	2 km
Base Communication Range:	10 km
Powerplant:	WV-1500TC/A V-engine
Horsepower:	940 Hp

OACS-01

Iguana

OACS-01L/SC

Iguanas are the most common scouting Gears in the Southern forces; the machine fulfills its role well, combining small size and high mobility. The *Iguana* also serves well in the capacity of forward observer where the target designator it carries can mark targets for friendly artillery to decimate.



Manufacturer:	Territorial Arms/Skavara Heavy Industries
Use:	scout/recon Gear
Height:	4.1 meters
Standard Operational Weight:	5,100 kg
Average Armor Thickness:	40 mm
Armor Material:	armoplast w/ alloy
Running Speed:	52 kph
Rolling Speed:	84.2 kph
Deployment Range:	700 km
Base Sensor Range:	4 km
Base Communication Range:	30 km
Powerplant:	WV-750TC/B V-engine
Horsepower:	360 Hp

OACS-01

Black Mamba

OACS-05M/SU

The *Black Mamba* is seen among units that have high-profile assignments such as the home guard of some cities and the border patrol battalions that see significant action against rovers. Commanders of less prestigious units and units stationed at backwater posts have just begun to receive these machines.

Manufacturer:	Territorial Arms
Use:	soldat Gear
Height:	4.6 meters
Standard Operational Weight:	6,230 kg
Average Armor Thickness:	56 mm
Armor Material:	armoplast w/composite
Running Speed:	55.4 kph
Rolling Speed:	84 kph
Deployment Range:	500 km
Base Sensor Range:	3 km
Base Communication Range:	12 km
Powerplant:	WV-930TC V-engine
Horsepower:	630 Hp

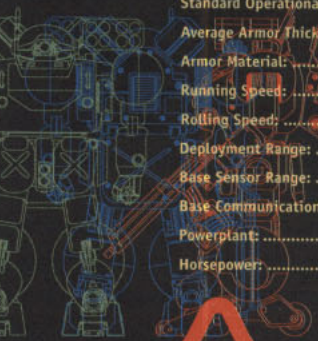
OACS-05

Jäger

OACS-01M/SU

The *Jäger* is the old standby of the Southern military and has been used since the original designs of the *Hunter* machine could be obtained and examined. While it is not a particularly tough machine by the standards of today's technology, it is a well-rounded vehicle that can hold its own in a fight against other general purpose Gears.

Manufacturer:	Territorial Arms
Use:	general purpose Gear
Height:	4.3 meters
Standard Operational Weight:	6,637 kg
Average Armor Thickness:	45 mm
Armor Material:	armoplast w/alloy
Running Speed:	41 kph
Rolling Speed:	74 kph
Deployment Range:	500 km
Base Sensor Range:	2 km
Base Communication Range:	10 km
Powerplant:	WV-950A V-engine
Horsepower:	450 Hp



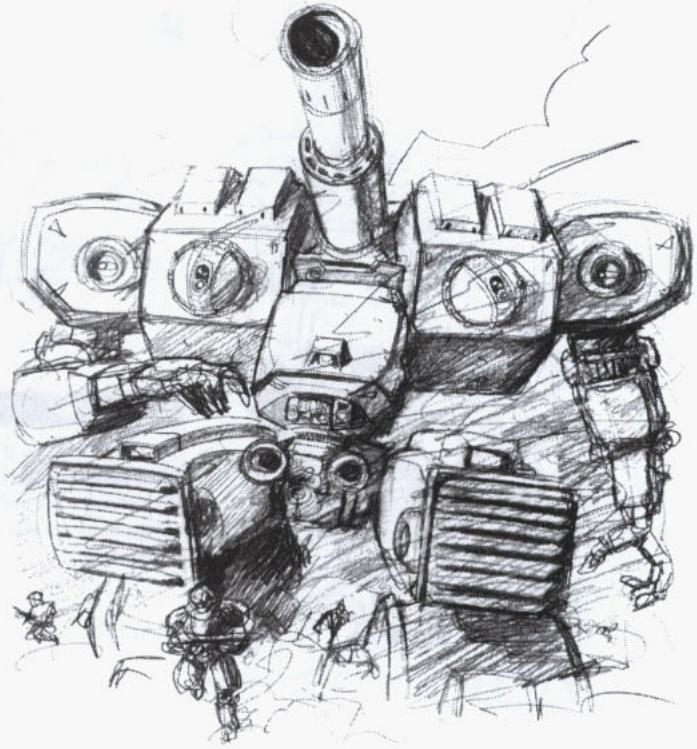
OACS-01

Final Designs

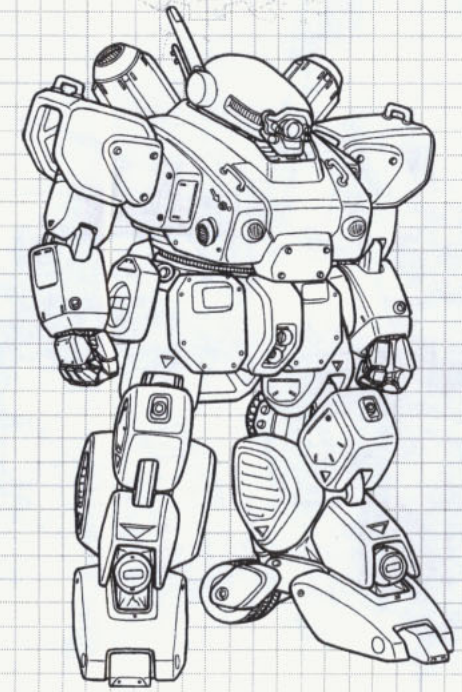


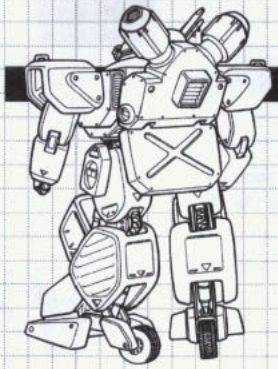
All the research work had paid off, and we finally had some solid designs to work from. These would be further modified along the way to produce variants and special vehicles, but the basics were all in place. We thus went into the second phase of the project and produced a series of black and white line art illustrations to serve as reference material. These would also be used, through computer manipulations, as base for many of the books' color pictures.

The following section contains the original line art illustrations of most of the current vehicles of **Heavy Gear**. These images were scanned in at high resolution before being painstakingly colored and assembled in dedicated graphics programs. Some were modified either during or after the coloration to better fit the overall illustration. The drawings shown here are the original ones. Whenever possible, we've added a short explanation of the reason behind the design concept that was used.



Northern Gears



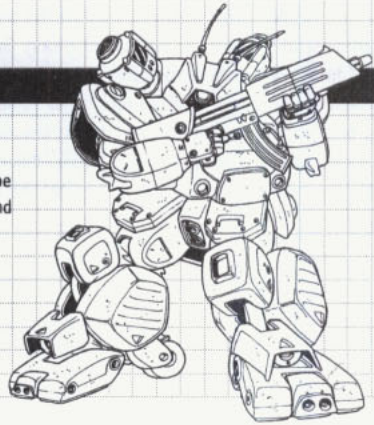


Hunter

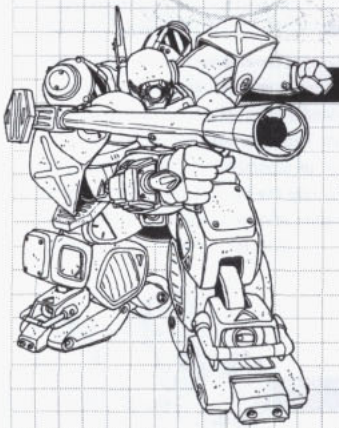
The *Hunter* was to be the workhorse of the Heavy Gear universe, so it was deliberately made to look somewhat "chunky" and low-tech. Its inherent simplicity would also make it easier to modify the basic design into battlefield variants. Weapon hardpoints would be added later to fulfill our needs. In mid-1996, the semi-rounded head was changed to a more complex one made of flat panels, though the former head still appears in many illustrations.

Headhunter

For aesthetic reasons, it was important to be able to differentiate the squad leader from his men; hence the different head. In a real combat situation, this would be suicide; the unit leader would be recognized as such and taken out first!



Northern Gears

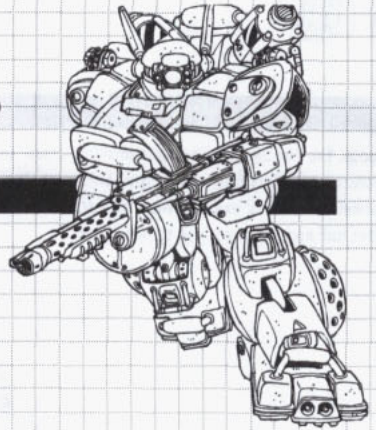


Hunter Commando

The *Commando* was intended to be a "macho man" Gear, so we gave it large square shoulders and a fearsome-looking bazooka. An armor vest/parachute rig helps to make it look bulkier.

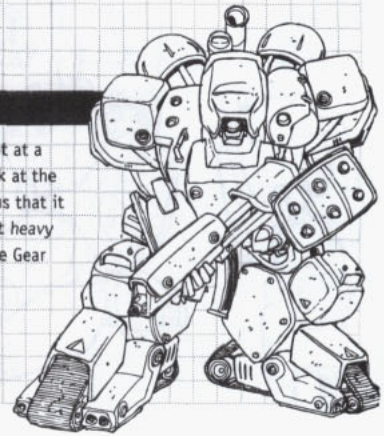
Hunter Spearhead

This is a field command Gear, so we gave it lots of extra sensor and communication equipment. The name was immediately suggested by the shape of the Gear's head. To make sure it could defend itself, we gave it a heavy autocannon.



Hunter Paratrooper

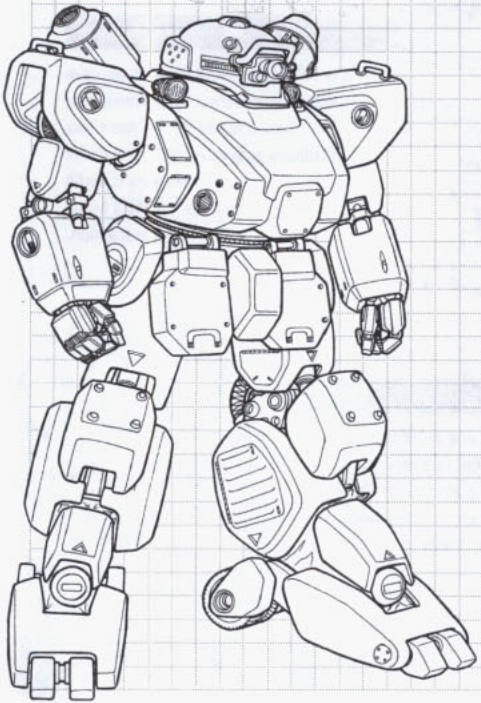
Paratroopers jumping in the middle of a combat zone are a staple of war movies, and we just couldn't ignore that. Apart from the parachute rig and specialist gun, the most distinctive feature are the airbrakes on each leg.

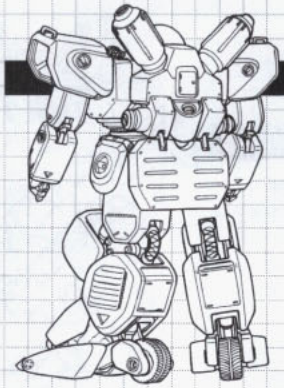


Armored Hunter

The *Armored Hunter* was one attempt at a more powerful Gear design. One look at the design, however, immediately told us that it would be way too slow, with all that heavy plating, so we made it an ineffective Gear in the story.

Northern Gears



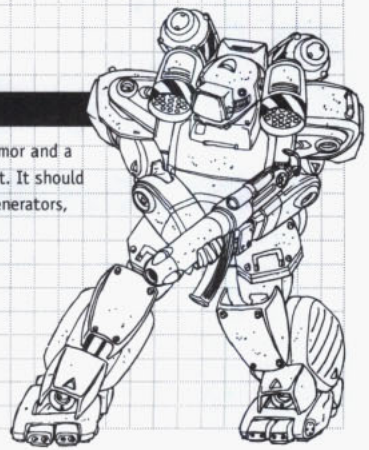


Jaguar

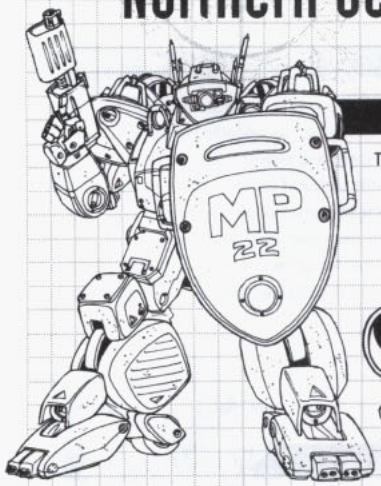
The *Jaguar* is a much more advanced development of the *Hunter*. We naturally started with the *Hunter* frame and "evolved" it. The legs were made longer and more slender to suggest increased speed and maneuverability, and the engine backpack was enlarged as well. The head is more complex, incorporating additional sensor and communication equipment. Like the *Hunter*'s own, the head will eventually be upgraded to a more advanced-looking one with more room for markings and insignias.

Fire Jaguar

A *Jaguar* with rocket pods, the *Fire Jaguar* received additional armor and a visor-like device to protect its sensors from the rockets' backblast. It should have deflectors to channel the rockets' exhaust away from the generators, but we figured the latter had enough armor not to need them.

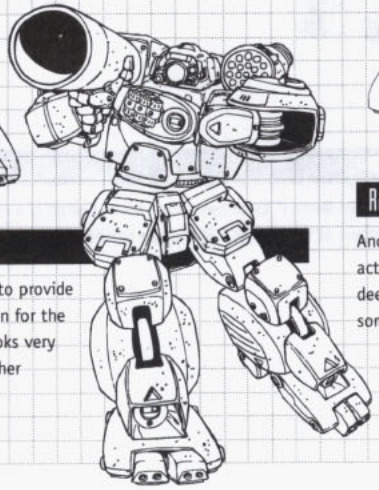


Northern Gears



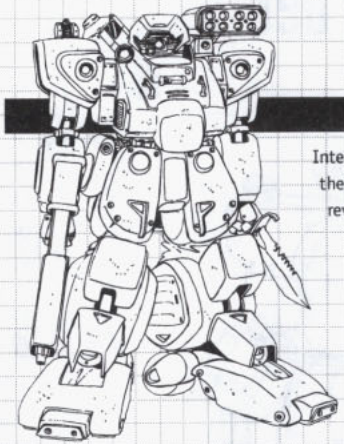
Jaguar MP

The MP is a clear warning of what will happen to designers if they watch too many cop shows. The visor, riot shield and shotgun combo works pretty well, though.



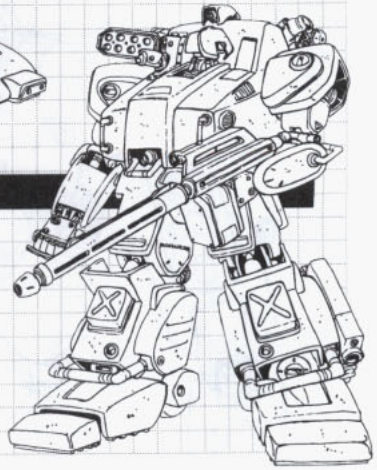
Strike Jaguar

The Strike is an assault unit designed to provide a fast and heavy punch. The real reason for the design, however, was that a *Jaguar* looks very cool with a bazooka. There were no other changes.



Tiger

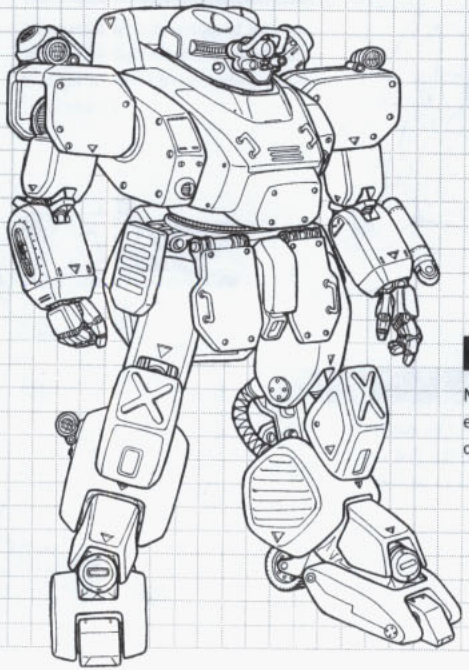
Intended to represent a predecessor of the *Jaguar*, the older *Tiger* was simply reverse-engineered from the *Jaguar*'s current look.

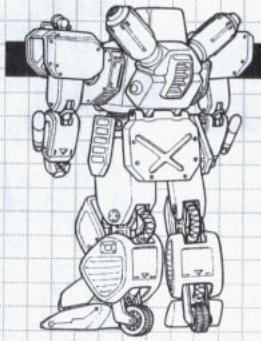


Razorback

Another old machine, this vehicle is actually an earlier design that was deemed "too cool not to be used somewhere."

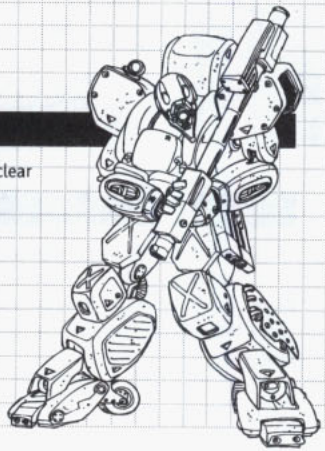
Northern Gears





Cheetah

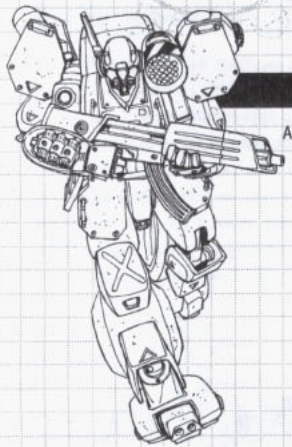
The *Cheetah* was to be a typical scout: good sensor capabilities, high speed, minimal armament. As a result, we oriented the design toward anything that would suggest speed and maneuverability. The legs were made long and slender, with plenty of room for the articulations to move. The torso is highly streamlined, forcing the pilot to lean back. Unlike other Gear designs, the head does not form part of the cockpit, being filled with advanced sensor systems. The target designator on the left arm was patterned after aircraft equipment.



Strike Cheetah

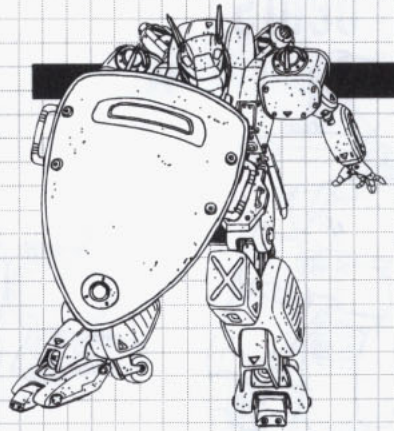
Nicknamed the "Shaian Demon" by players, the *Strike Cheetah* is a clear example of the dangers of combining anime-style combat and overengineering.

Northern Gears



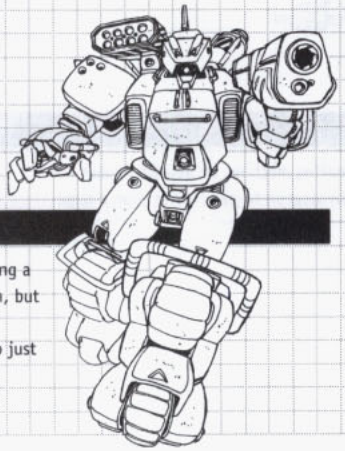
White Cat

A dedicated electronic warfare Gear, the *White Cat* has customized shoulders and head unit that are filled with ECM and ECCM devices.



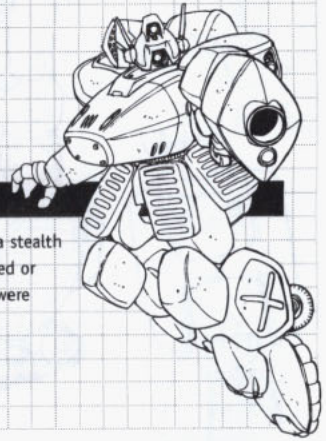
Cheetah MP

Another police Gear, following much of the same design concepts as the larger *Jaguar MP*. The shield seems almost too big to carry!



Bobcat

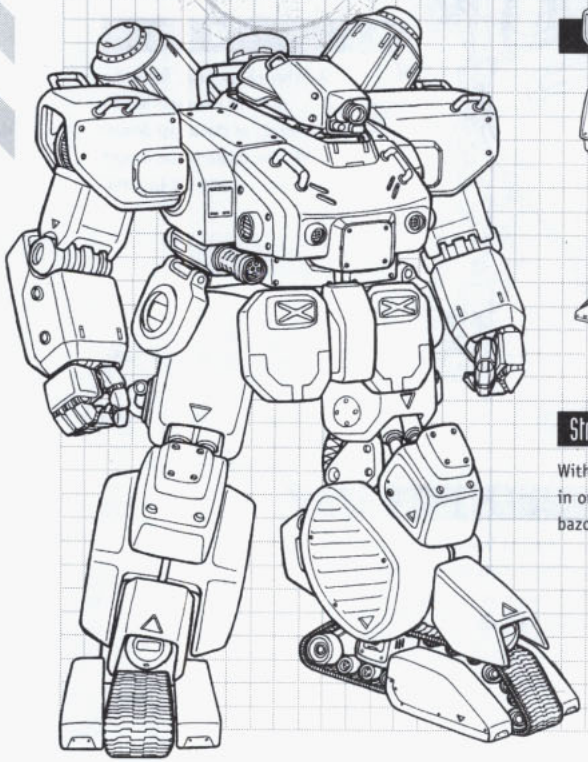
One of the first attempts at designing a scout. It didn't look modern enough, but the "kneeling" wheeled movement system was too interesting for us to just discard it.

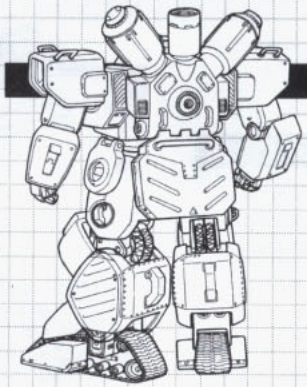


Black Cat

The *Cheetah* was a natural frame to base a stealth scout on. Many of the details were removed or obscured, and both weapons and engine were reworked for a stealthier look.

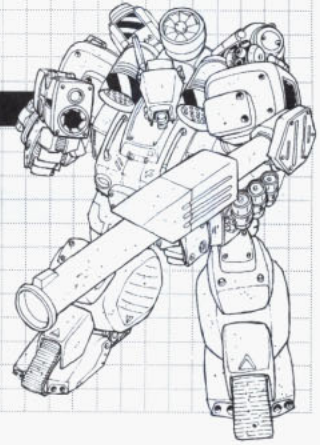
Northern Gears





Grizzly

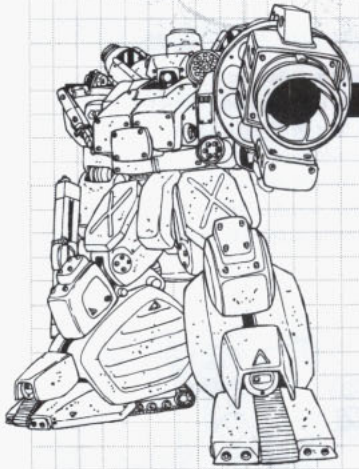
The *Grizzly* fire support Gear can trace its ancestry as far back as the very first design attempts (see page 22). It was extensively reworked to appear more modern, yet with a heavy, cast-iron look. We made sure to include many hardpoints or flat surfaces to mount weapons. Though it could technically carry two machineguns, we decided to use just one — it helped keep the cost down. When it was determined that it would be able to tow field artillery, an engine cooling tower was added to the backpack between the two generators.



Strike Grizzly

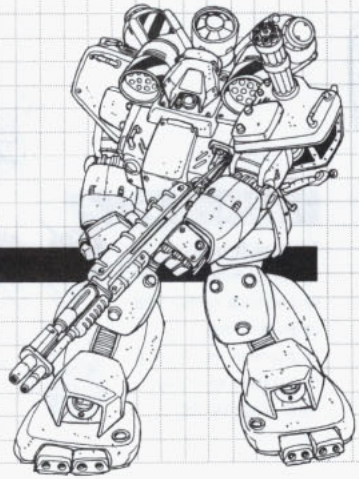
With such a fearsome-looking machine, an assault version was in order. And what better weapon to pair it with than a huge bazooka?

Northern Gears



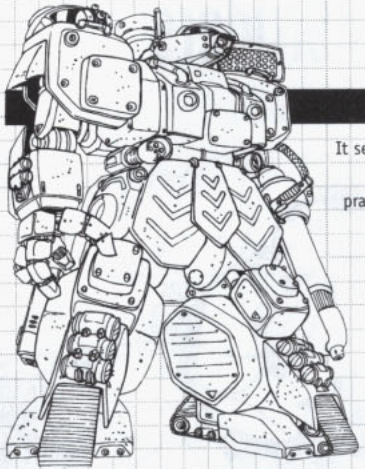
Rabid Grizzly

A War of the Alliance variant, the *Rabid Grizzly* has additional armor plates bolted on its torso for increased survivability.



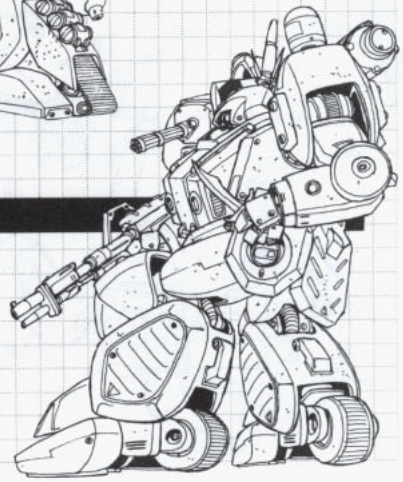
Bear

The *Grizzly*'s predecessor was reverse-engineered from the basic *Grizzly* sketches. Wheels were used instead of treads to show its age.



Kodiak

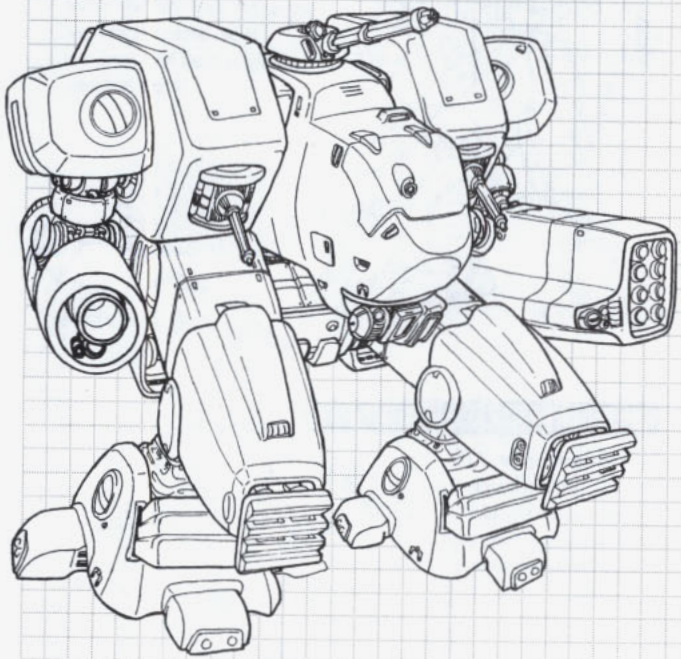
It seems that the *Kodiak* was meant to be, because it emerged practically by itself from numerous *Grizzly* sketches.



Den Mother

The command variant of the *Bear* was simply redesigned to incorporate new shoulder blocks and a new head, both with additional electronic equipment.

Northern Striders

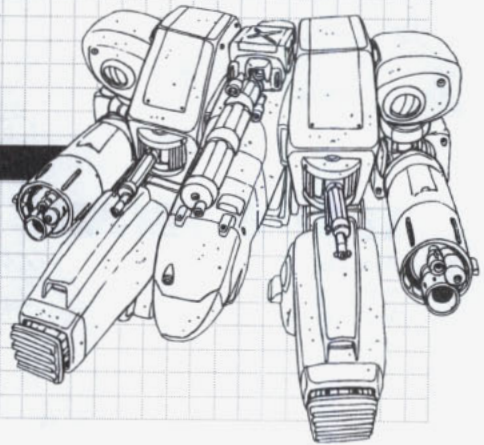


◀ Mammoth

The *Mammoth* was derived from a one-page doodle showing a mechanical demon with malevolent-looking gun arms and goat legs. Additional armor plates were later added to the legs, but the basic lines were in place from the beginning. In retrospect, maybe the armor plates should have been omitted; they obscure the zig-zagging leg structure, and thus makes it difficult to see how the *Mammoth* could walk! Though the armament is mainly carried on the arms and top turret, the side torsos can be easily modified to include weapon systems.

Assault Mammoth ▶

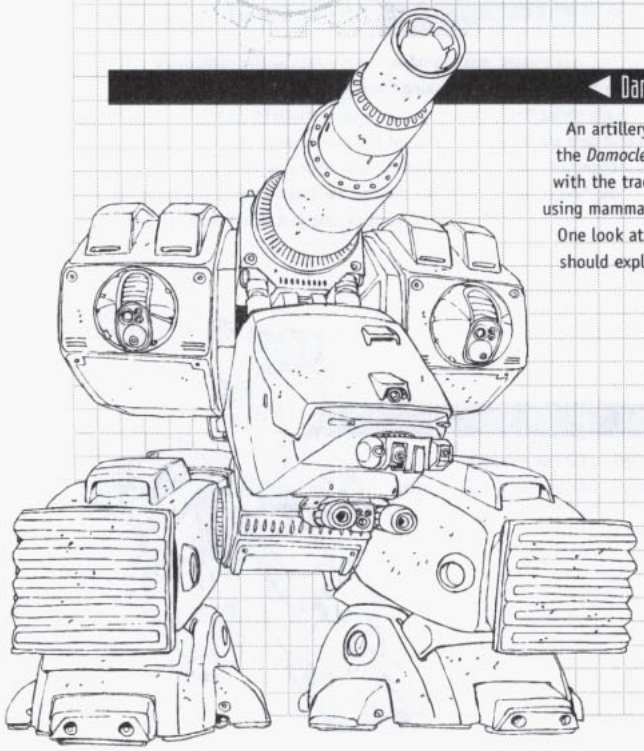
The assault variant trades its missiles for a second snub cannon and upgrade its top autocannon, making it a devastating adversary in close-range combat.



Northern Striders

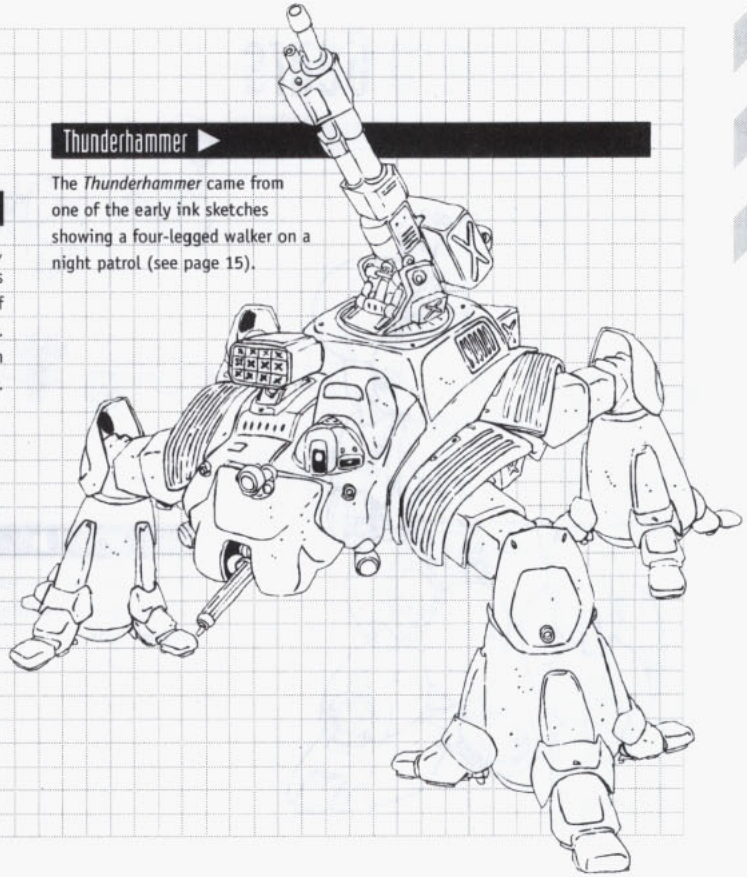
◀ Damocles

An artillery carrier, the *Damocles* breaks with the tradition of using mammal names. One look at the gun should explain why.

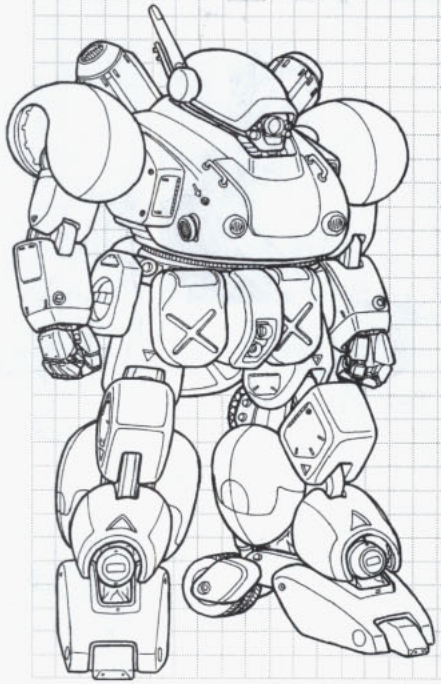


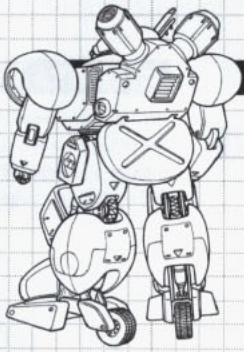
Thunderhammer ▶

The *Thunderhammer* came from one of the early ink sketches showing a four-legged walker on a night patrol (see page 15).



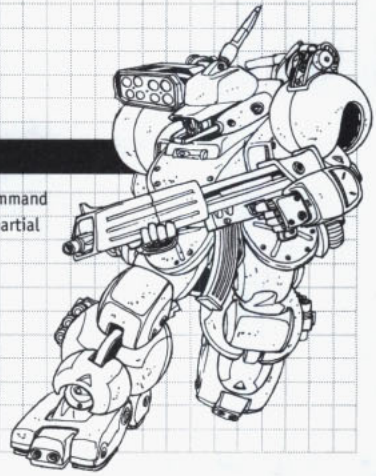
Southern Gears





◀ Jäger

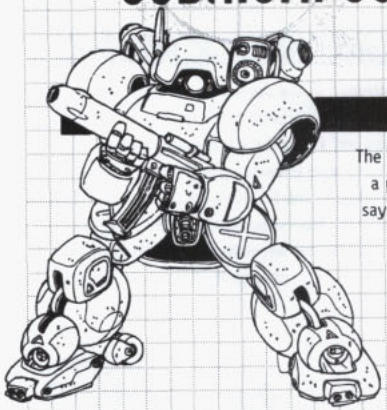
The Southern trooper was intended to have exactly the same game stats as the Northern machine, making them ideal for the first time player. It made sense, then, to use much the same frame to create the design. Great care was taken to round out the armor panels while still keeping a recognizable structure. Certain details suggested themselves, such as the "visor" above the main sensors. We opted against changing the arms — a rounded look just didn't work for them.



Jäger Command ▶

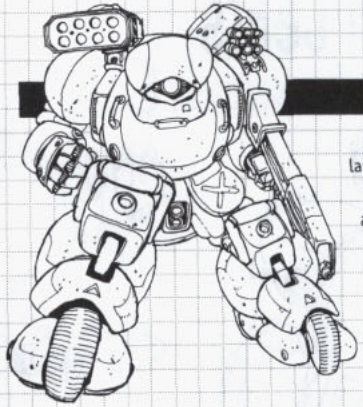
We followed the same design strategy as for the northern command Gear and gave it a different head unit. This one has a very martial "helmet" look.

Southern Gears



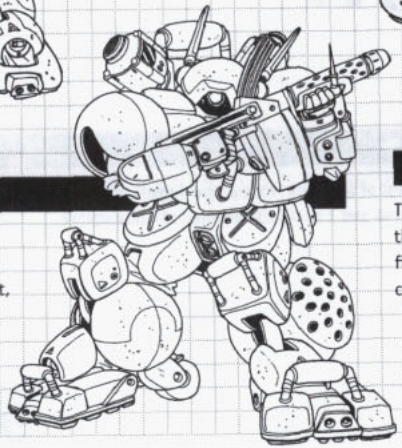
Blitz Jäger

The Blitz replaces the usual rockets with a powerful anti-tank missile. The rules say it could carry three, but we deemed one was enough.



Dartjäger

This one is basically a racer, with large wheels in the feet. We wanted to make the head somewhat aerodynamic, hence the "bug-eye" look of the antennae blisters.



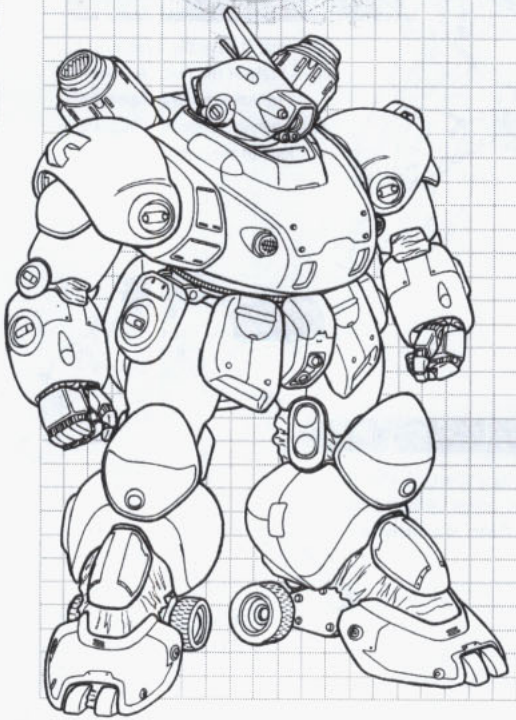
Jäger Paratrooper

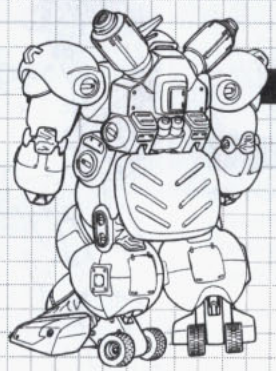
The *Paratrooper* is similar to the standard model, with just a few improvements such as rugged feet, airbrakes and parachute rigs.

Flammjäger

The design was visually unchanged, though the articulations were covered with quilted fire-proof cloth. The flamer is entirely self contained.

Southern Gears





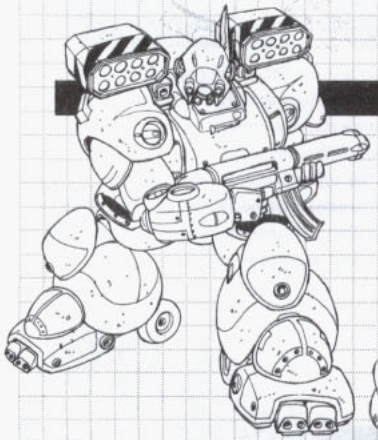
◀ Black Mamba

The southern counterpart of the *Jaguar* had to look sleek and deadly. Its game stats suggested speed and cunning, so complex compound curves and an almost aerodynamic look were *de rigueur*. The articulations were covered up with cloth, like many of the other southern designs. The fin-like antenna can be found on either side of the head, depending on the production series. The *Black Mamba* features numerous hardpoints for weapons, though it rarely uses them all.

Razorfang BM ▶

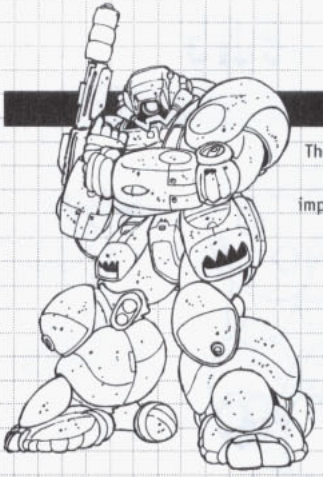
A command variant of the *Black Mamba*, the *Razorfang* features some armor reinforcement and a backpack-mounted satellite uplink.

Southern Gears



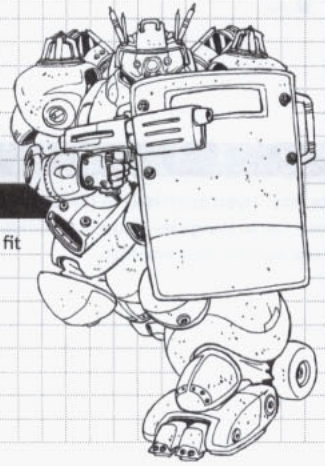
◀ Long Fang BM

The *Long Fang* is little more than a standard *Black Mamba* with twin rocket pods, similar in form and function to the northern *Fire Jaguar*.



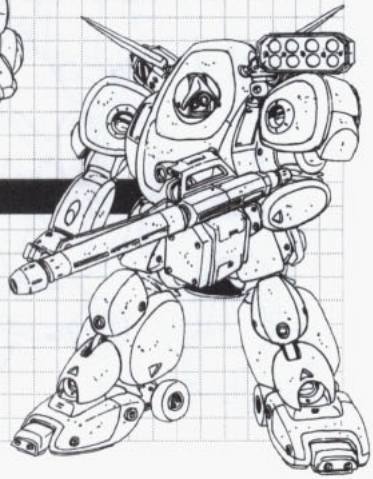
◀ Snakeye BM

Though still technically a *Black Mamba*, the *Snakeye* received a number of improvements, among which a new head and different hip armor plates.



Black Mamba MP ▶

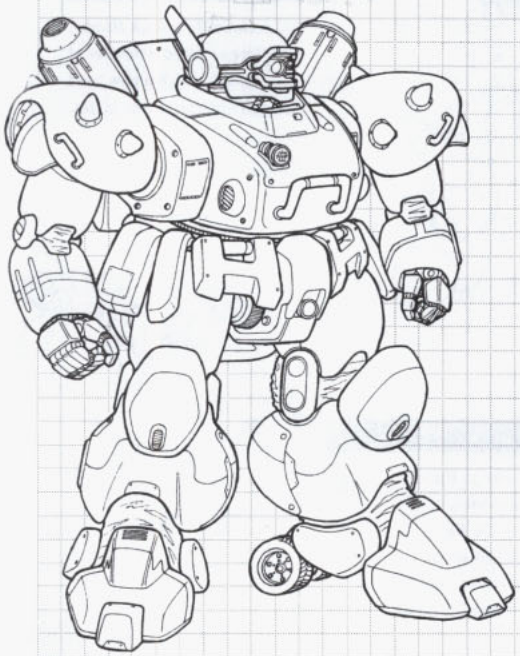
The usual police visor was impossible to fit on this one, so we had a to design an entirely new head almost from scratch.

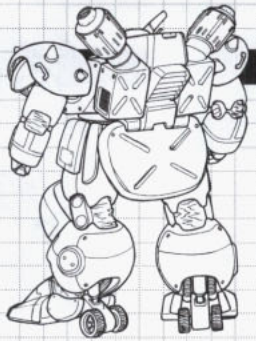


Black Adder ▶

The *Black Adder* is a design that was derived from the *Sidewinder*, itself retro-engineered from the *Black Mamba*. Its dense cockpit armor makes it a tough adversary, and the snub cannon makes it even more so.

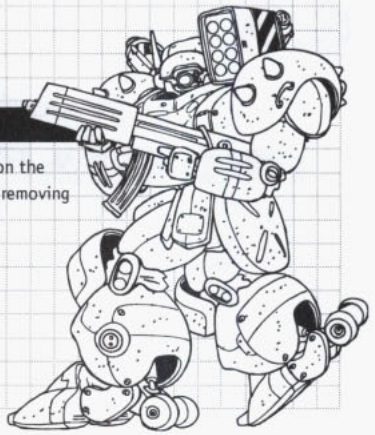
Southern Gears





Iguana

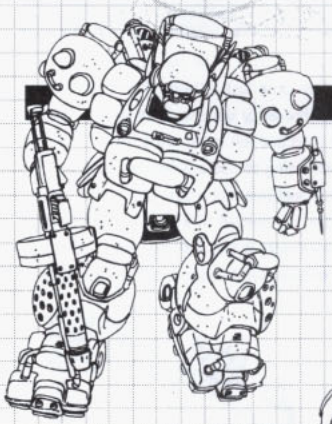
Designing the *Iguana* was a little more challenging than the northern scout. The machine was supposed to serve a double purpose: a reconnaissance machine, capable of providing forward information to the rear echelon, and a light skirmisher capable of holding its own against the opposition. It was made small, like the other scouts: the pilot is crammed underneath the head unit, almost lying down on the engine. The centurion-like waist armor plates and the shoulder spikes were put in to give it a martial look.



Blitz Iguana

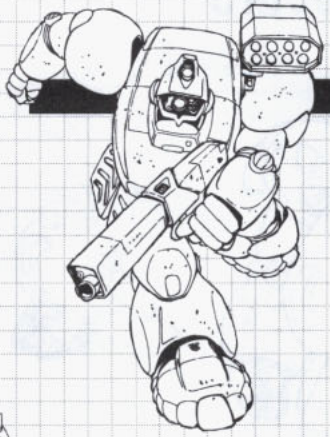
The *Blitz* foregoes the scout aspect completely to concentrate on the skirmisher role. We only had to change the weapon load, since removing some electronic systems wouldn't show externally.

Southern Gears



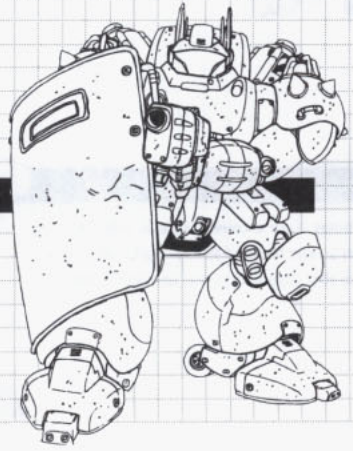
◀ Iguana Paratrooper

Following the paratrooper motif already established, this *Iguana* was equipped with reinforced legs, airbrakes and a parachute rig.



◀ Chameleon

The stealth version of the *Iguana* turned out looking quite different from the standard model. Only the limbs are still recognizable.

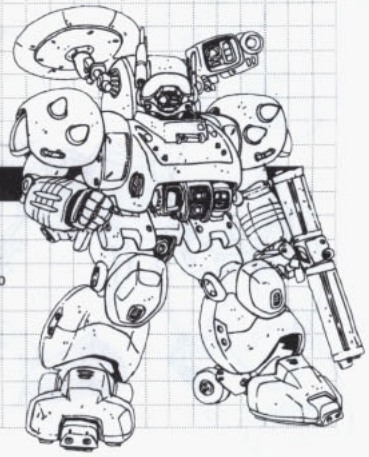


Iguana MP ▶

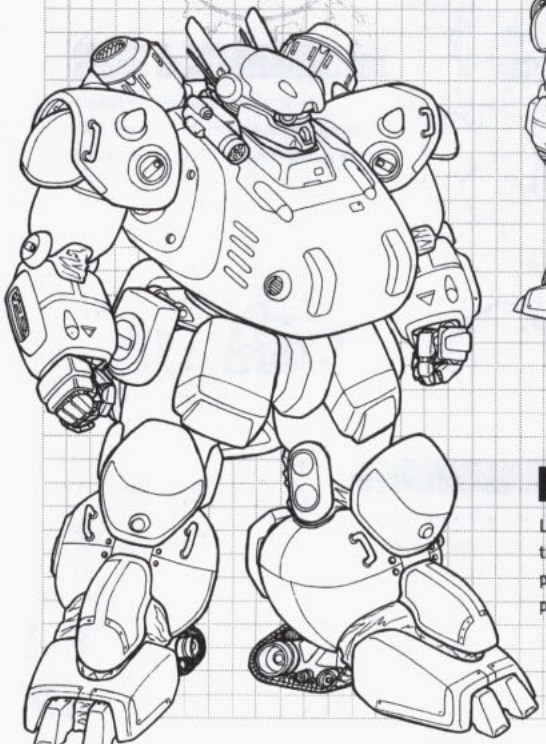
Another police unit, this one looks especially fearsome with its featureless helmet visor. The shield and riot shotgun are both standard issue.

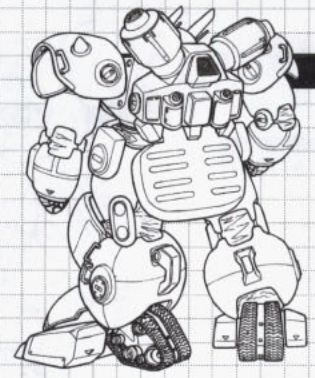
Chatterbox ▶

A dedicated electronic unit wasn't very hard to do. The *Iguana* frame took well to the added sensors, though we had to reverse the V-engine in order to make room for them.



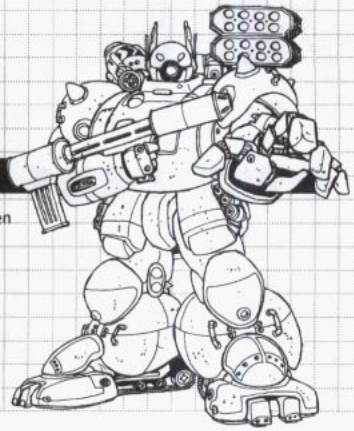
Southern Gears





Spitting Cobra

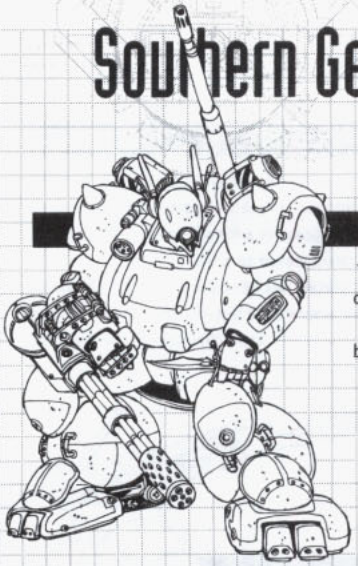
The *Spitting Cobra* was intended to be the counterpart of the Grizzly, so it was designed to be just as large. This one emerged pretty well defined from the early sketches, and it has changed very little since. Rather than use full tread units for the feet, we though it would be interesting to use a half-track system, with wheels in front. Its surface features numerous attachment points. The engine's extra radiator is mounted in a box-like apparatus at the top-rear of the backpack. It was also decided to use twin blade antennae, as the helmeted head was a little featureless.



Striking Cobra

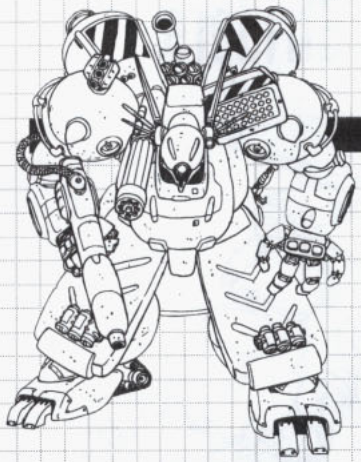
Large, hulking machines make excellent assault vehicles when they are plated with as much armor as the "Spit." Adding a powerful weapon, in this case a bazooka, completes the package.

Southern Gears



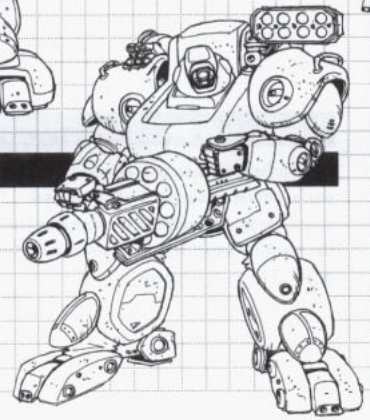
Support Cobra

This mean machine was designed for one thing only: show off the massive Junglemower autocannon. The backpack field gun was added almost as an afterthought.



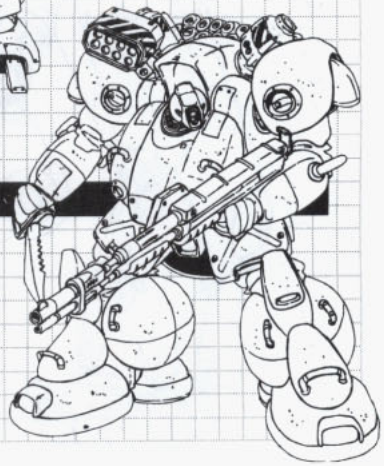
King Cobra

Another ink sketch that was turned into a final design (see page 14), the *King Cobra* was intended to be the southern counterpart of the *Kodiak*.



Desert Viper Mk II

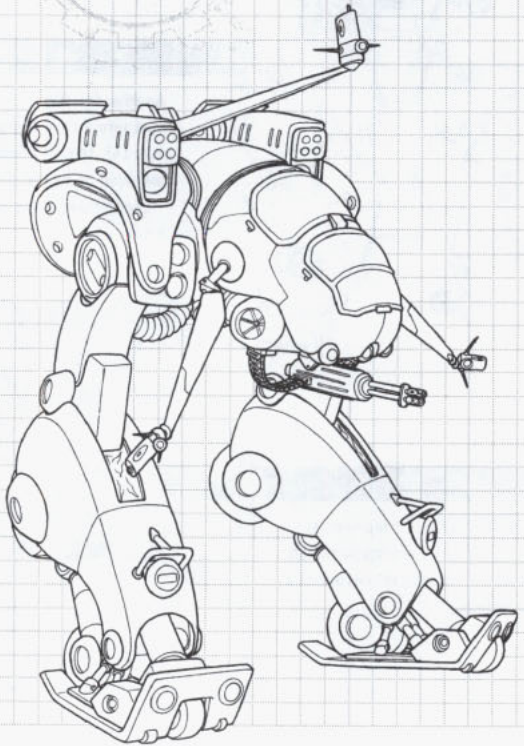
A derivative of one of the early Gear sketches, the *Desert Viper* underwent some additional changes before making it into the books — hence the Mk II.



Python

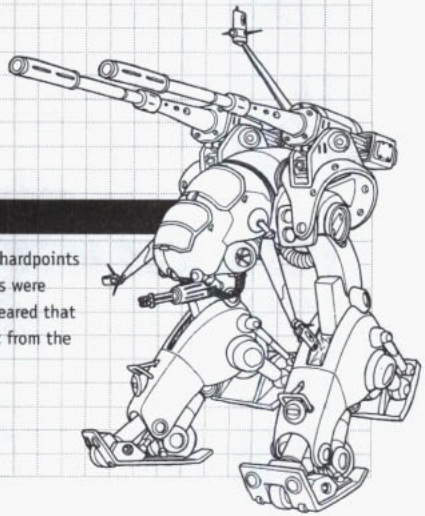
Much like the Gear it represents, this was an older prototype sketch that was eventually retooled into a final design.

Southern Striders



Naga

We knew we wanted to have a least one "chicken walker" somewhere, so there were a few sketches made. The first recognizable *Naga* had no missiles and carried its autocannon above the main body, in a forward mount. The missiles were then added and the autocannon moved to a more helicopter-like chin mount. An additional wheel was placed just behind the knee for additional support in rolling mode. The sensor arms were a last-minute addition to give more character to the machine.



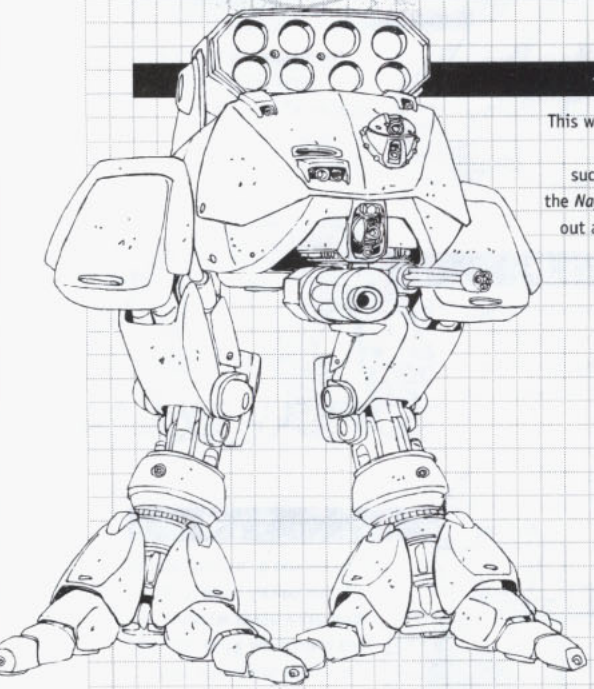
Long Fang Naga

Putting field guns on the weapon hardpoints was a natural evolution. Stabilizers were added because it immediately appeared that the machine would fall on its back from the recoil of the top-mounted guns.

Southern Striders

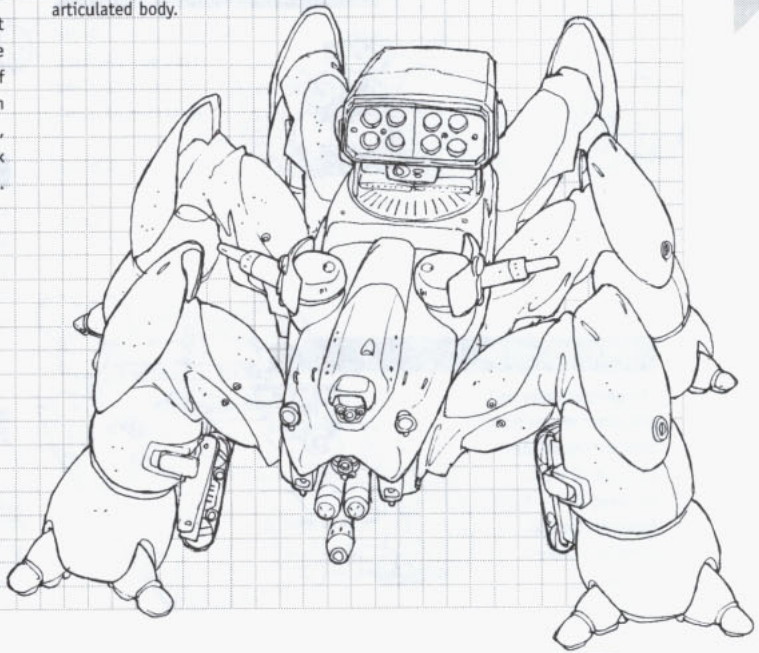
◀ Sagittarius

This was an attempt at reproducing the successful design of the *Naga*. It didn't turn out as nice this time, but it does look different.

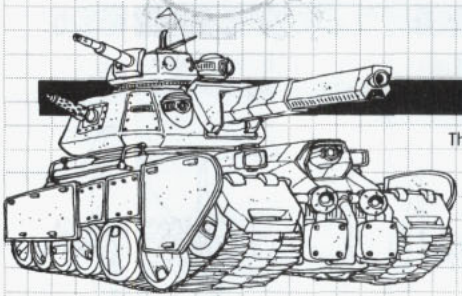


Fire Dragon ▶

Why confine ourselves to two or even four legs? For extra stability in the southern marshes and jungles, we gave the *Fire Dragon* six legs and a semi-articulated body.

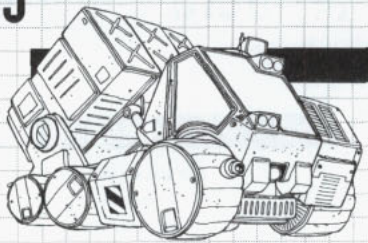


Northern Ground Vehicles



Aller MBT

The main northern battle tank was originally turretless and segmented. It didn't work as well as we had hoped, so the hull was reshaped to form a turret.

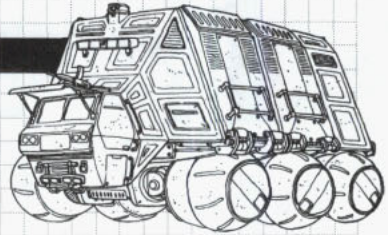


Stinger Artillery Vehicle

The *Stinger* is just a modified *Camel* utility truck. It was inspired, of course, by twentieth century fire support trucks.

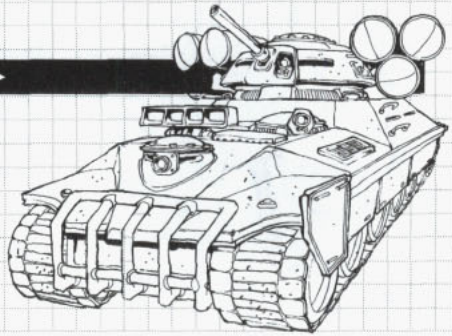
Behemoth Transport

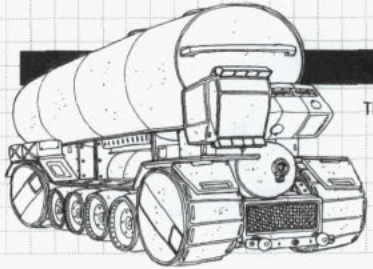
The shape of this transport vehicle was inspired by a camping tent: Gears would exit through folding side panels. These were eventually changed to ramps.



Klemm Light Tank

The general shape and armament of this light tank was established early on. It went, however, from a highly futuristic look to something more utilitarian.

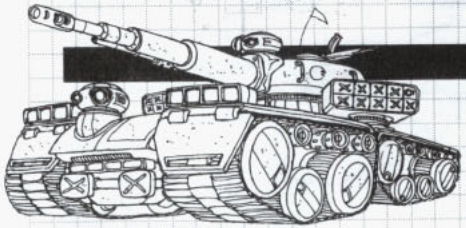




Tanker

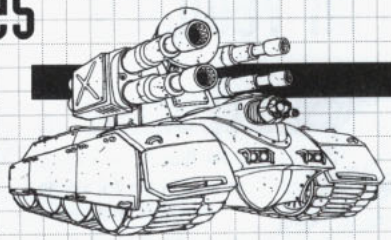
The tanker was a "no-frill" vehicle design quickly made up for an illustration about refueling. For that reason, the game stats and the design don't quite match...

Southern Ground Vehicles



Visigoth MBT

Although fairly standard in design as far as tanks go, the *Visigoth* was given four tread systems to give it a more futuristic look.

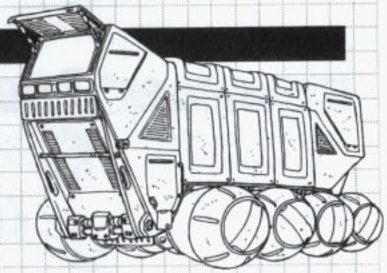


Artemis AA Vehicle

The *Artemis* was supposed to share the same hull and movement system as the *Hun*, but the final design ended up with its own hull.

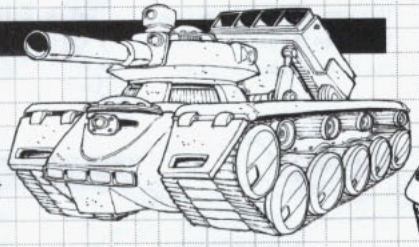
Barnaby Transport

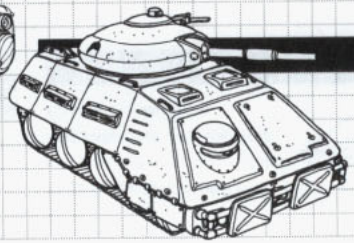
This monster is little more than a box on wheels with a forward control cabin and large ramps for unloading Gears and other equipment.



Hun Light Tank

Like its northern counterpart, the *Hun*'s layout and armament was rapidly agreed upon, then the appearance reworked for a more military look.

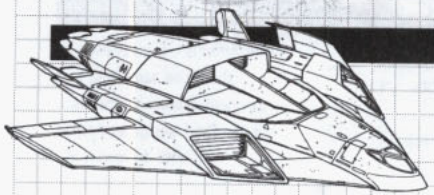




Caïman IFV

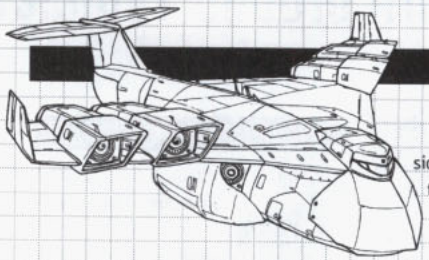
This Infantry Fighting Vehicle was heavily inspired by the *Bradley*, a current American IFV. It didn't change much between first and final design.

Northern Air Vehicles



◀ Buzzard Bomber

The *Buzzard* was partially inspired by the B-2 Stealth Bomber. A large engine section was later added on.

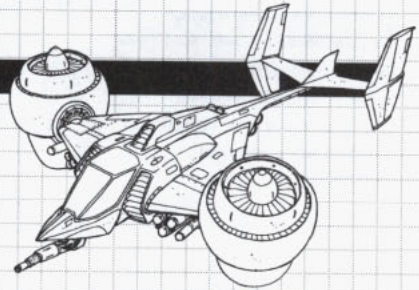


◀ Goliath Transport

The *Goliath* originally had two booster engines per side. One had to be removed to make room for the main landing gear.

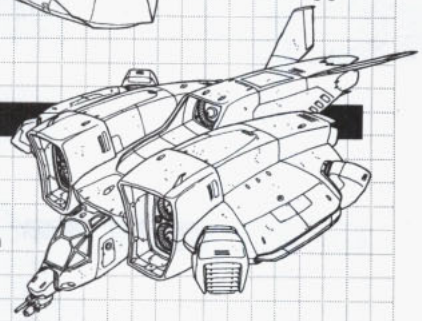
Dragonfly VTOL ▶

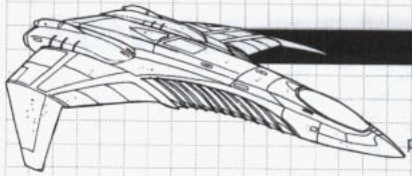
The *Dragonfly* is an hybrid between an early VTOL fighter jet design and a standard light combat helicopter.



Orca VTOL Transport ▶

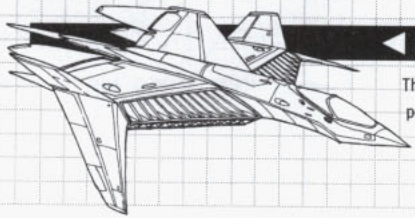
The *Orca* is the final evolution of one of the first sketches that were made for Heavy Gear, back when the game was only a few notes scribbled on paper.





◀ Eagle Interceptor

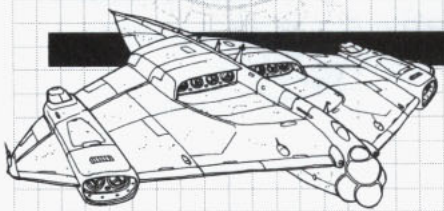
The *Eagle* was actually designed for a pre-Heavy Gear project, where it appeared in a corner page illustration.



◀ Redjacket Fighter-Bomber

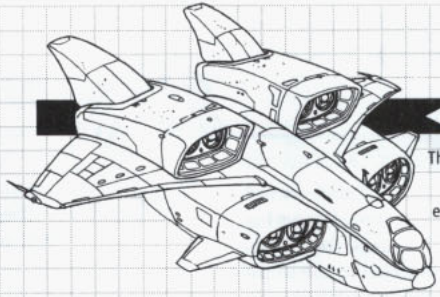
The *Redjacket* is a larger, more powerful version of the *Eagle*. The position of the engines may lead to a VTOL version.

Southern Air Vehicles



Azrael Bomber

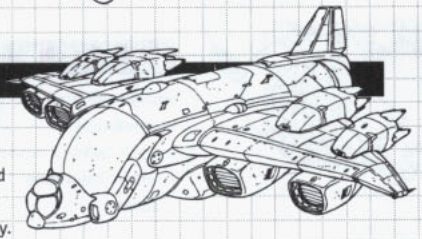
This large bomber follows the flying wing style established previously by the *Buzzard*.



Walfish STOL Transport

This aircraft was designed as a STOL, thus the large engines and air intakes. The fuselage is roomy and spacious to fit an entire cadre.

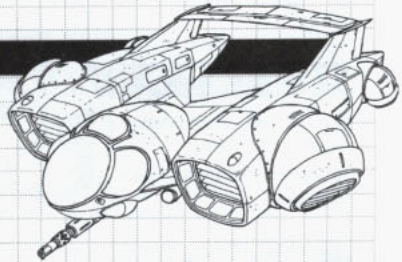
Bacchus Transport

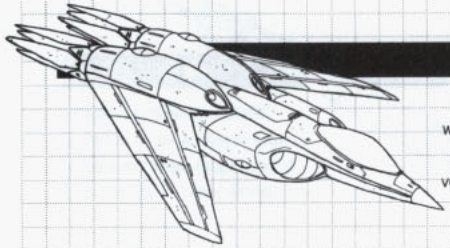


Yet another giant transport craft, this one got its name from its bloated fuselage and its gaping maw. The moving cockpit module is noteworthy.

Varis VTOL

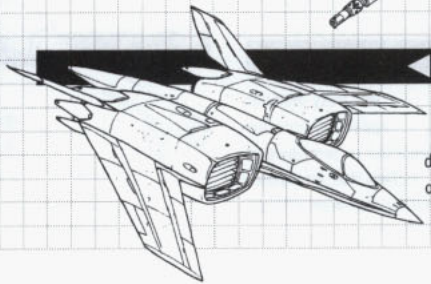
The *Varis* was designed around its twin engine booms. It was intended to serve as a police vehicle as well, hence the large bubble windows.





Aspic Interceptor

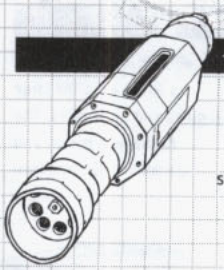
This sleek-looking fighter was partially inspired by the experimental X-29. Thrust-vectoring fins were added to balance the silhouette.



Quetzal Fighter-Bomber

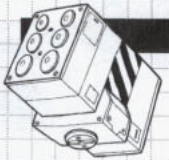
This fighter-bomber uses the same technologies and design principles elaborated on the smaller *Aspic*, but on a slightly larger scale.

Weapons



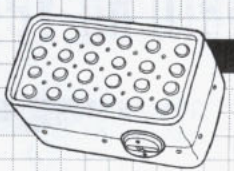
Heavy Machinegun

The *Grizzly*'s armored gatling machinegun has an ammo feed on top, shell ejection port on the side and cooling louvers around the barrels.



Anti-tank Missiles

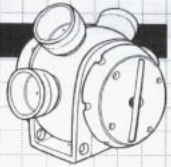
Anti-tank missiles are among the most powerful weapons available to battlefield units. They are generally guided to their prey by a laser designator.



Medium Rockets

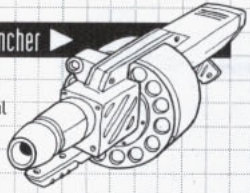
Medium rockets work on the same principles as their smaller brethren but pack a stronger punch.

AP Grenade Launcher



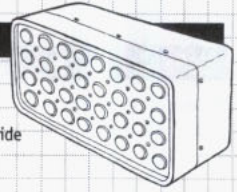
This small but deadly rotating launcher fires small fragmentation grenades over a large area.

Light Grenade Launcher

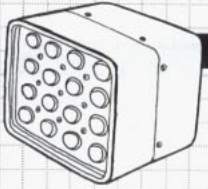


This low velocity cannon lobs powerful grenades either directly or in arcs above obstructions.

Heavy Rockets

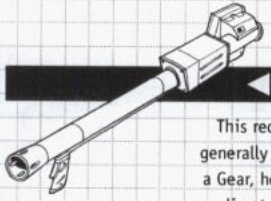


Heavy rockets are generally used in massive racks to provide effective blanketing firepower.



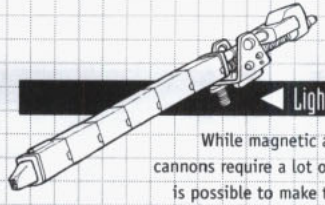
Light Rockets

This boxy modular apparatus contains unguided or semi-guided rockets that are ripple-fired for maximum effects.



Light Bazooka

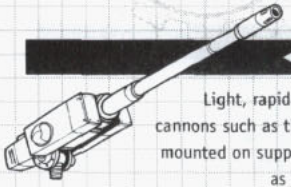
This recoilless cannon is generally shoulder fired by a Gear, hence the name. A clip at the rear contains extra projectiles.



Light Railgun

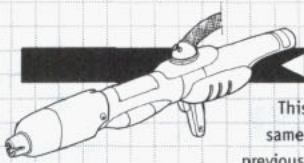
While magnetic accelerator cannons require a lot of power, it is possible to make them small enough for even a Gear to carry.

Weapons



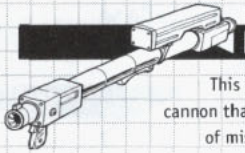
Autocannon

Light, rapid-firing automatic cannons such as this one are often mounted on support vehicles such as jeeps and trucks.



Particle Gun

This is roughly the same weapon as the previous one, though it is carried by the *King Cobra* Gear.

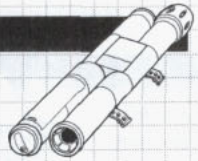


Rapid-fire Bazooka

This is a recoilless missile cannon that uses the same type of missile fired by infantry anti-armor weapons.

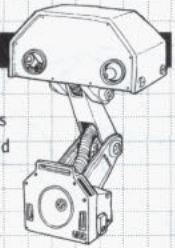
Guided Mortar

A low-velocity howitzer firing guided shells in high arcs toward the target. The tube on the left contains the ammunition.



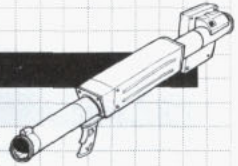
Anti-Gear Missiles

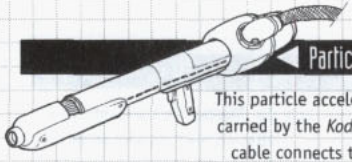
This extendible launcher was inspired by a similar apparatus used on American Hammerhead tank hunters.



Heavy Baooka

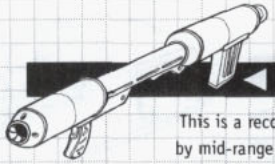
This is the heaviest example of recoilless cannon carried by Gears. The center section contains the targeting and firing mechanisms.





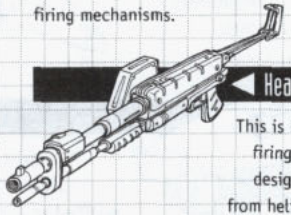
Particle Gun

This particle accelerator is carried by the *Kodiak*. The cable connects to banks of superconductors in the Gear's backpack.



Medium Bazooka

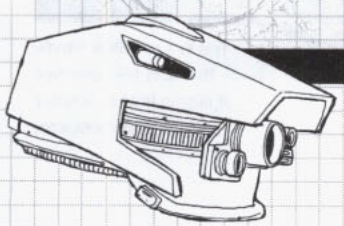
This is a recoilless cannon used by mid-range and heavier Gears. Additional rounds are stored in the clip located at the rear.



Heavy Autocannon

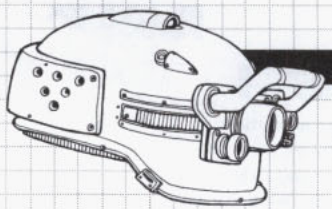
This is basically a rapid-firing *chaingun*. Some design elements came from helicopter guns, the rest from support machineguns.

Gear Heads



Prototype Jaguar

This is a prototype illustration of what the new head of the *Jaguar* might look like. In addition to being easier to model, there is more room for insignias and markings.

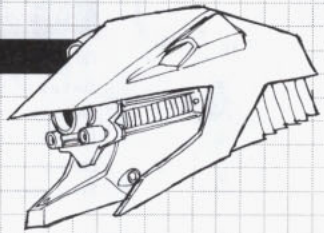


Standard Jaguar

The standard *Jaguar* head has numerous small sensor blisters. Unlike other Gear designs, it doesn't feature an antenna — rather, the entire rear panel acts as a pickup.

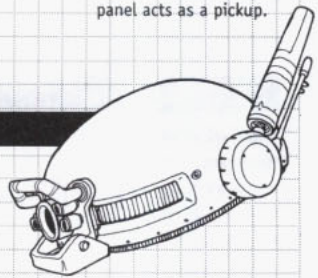
Cheetah Fang

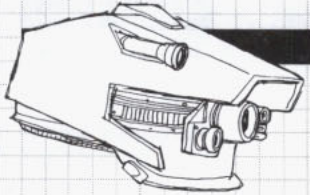
We wanted to do something different for the combat variant of the *Cheetah*, so we developed this new head. It's so nice, it might even become the new standard.



Standard Hunter

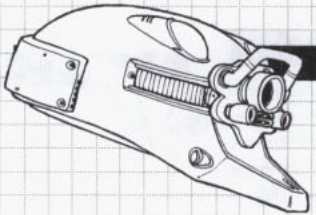
The standard *Hunter* head is a no-frill component, cast as a single piece and then fitted with the necessary equipment.





Predator Jaguar

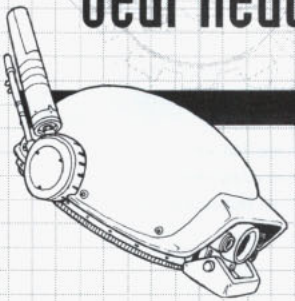
The jungle-fighting variant of the *Jaguar* has extra sensors, so we modified an armored head to include a larger sensor mount.



Cheetah

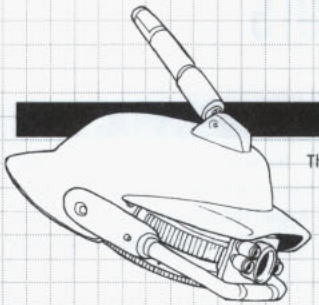
Like the *Jaguar*, the standard *Cheetah* relies on flush panels rather than antennae. The twin blisters on top house yet more sensors.

Gear Heads



◀ Jäger

The *Jäger*'s head is very similar both in form and function to the *Hunter*'s. We added a thin armor "visor" to help differentiate the two.

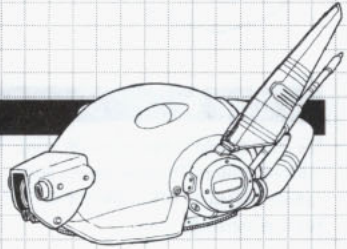


◀ Jäger Command

The obvious inspiration for the command variant of the *Jäger* was a German infantry helmet. The antenna and chin guard are later additions.

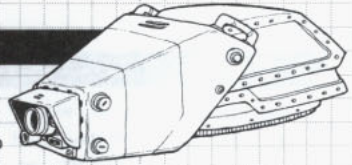
Black Mamba ▶

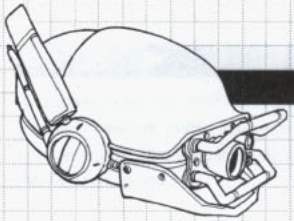
The head of the *Black Mamba* houses multiple sensors, hence the profusion of antennae, blisters and camera pickups.



Grizzly ▶

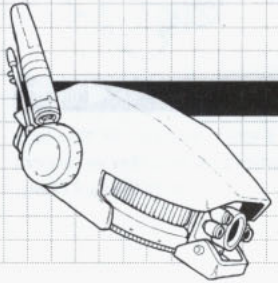
The *Grizzly*'s head is one of the few that actually open. The front section (which contains the sensors) can flip up on hidden hinges.





◀ Iguana

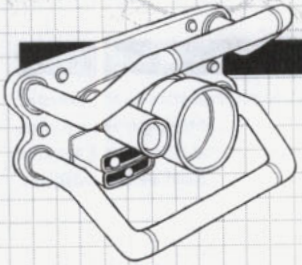
The *Iguana*'s head features fixed sensors, since the entire unit is not part of the cockpit and can thus move more freely.



◀ A2 Hunter

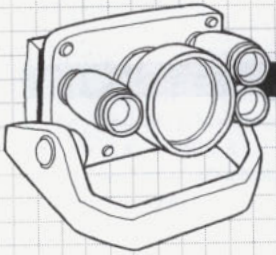
This is the more recent *Hunter* head, colloquially called the "A2" type. It fits better with the rest of the Gear and offers more surface for markings.

Gear Sensors



Iguana

The face plate of the *Iguana* actually contains few sensors, but they are quite fragile. The twin crash bars ensure that they will not be damaged by collisions.

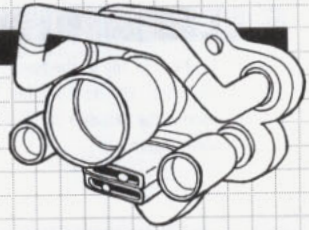


Hunter

The *Hunter* has a basic, serviceable sensor array. The auxiliary cameras and range finders are clustered around a standard omnicamera.

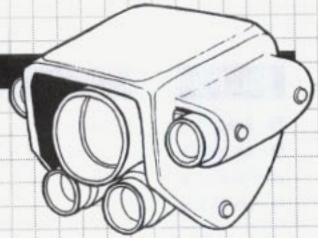
Jaguar

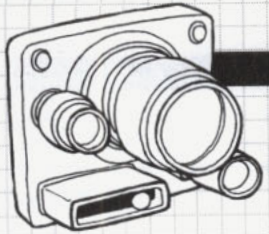
The *Jaguar* pilot has access to a wide range of sensor types. While they are not all equally powerful, this versatility does raise the machine's Sensor rating.



Black Mamba

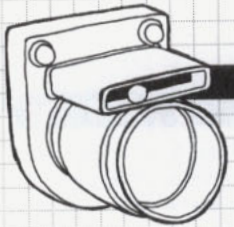
The *Black Mamba* is equipped with many different sensors. The twin stereoscopic cameras placed on either side of the head are especially useful.





Grizzly

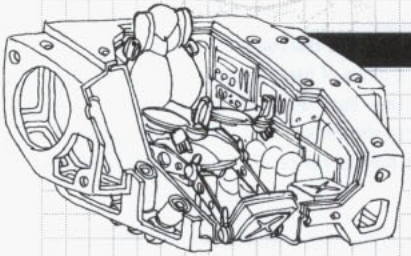
The *Grizzly*'s sensors do not have crash protection bars, since they are recessed inside the head casing.



Spitting Cobra

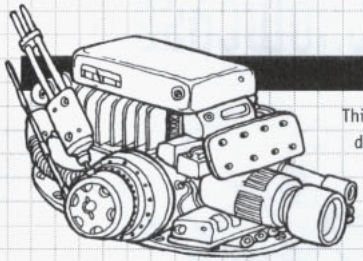
Many of the Spitting Cobra's sensors are located elsewhere within the head casing, so the face plate features only the omnicamera and a laser sweeper.

Gear Systems



Cockpit

This is an early sketch of the main body framework. Sensors are distributed throughout the frame.

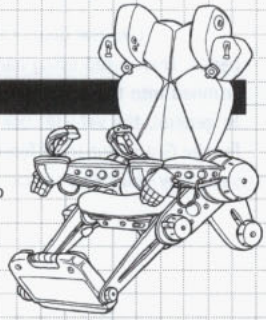


Early Iguana Head

This is one of the early internal head designs for the *Iguana*. Most of the electronics are self contained to facilitate maintenance and repair.

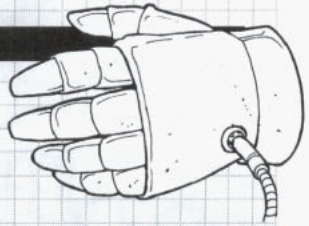
Pilot Seat

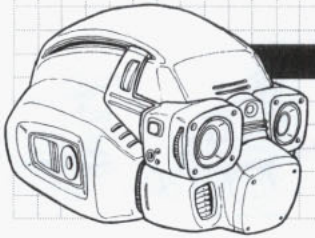
The seat contains most of the control apparatus that is used to drive a Gear. Apart from classic pedals and joysticks, there are also waldoes for fine manipulator control.



Waldo Glove

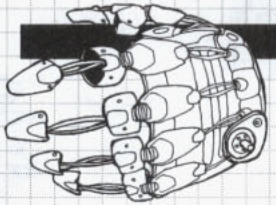
This is the first close-up sketch of the waldo that controls the Gear's manipulators. It is normally attached just beside the armrest, within easy reach.





Pilot Helmet

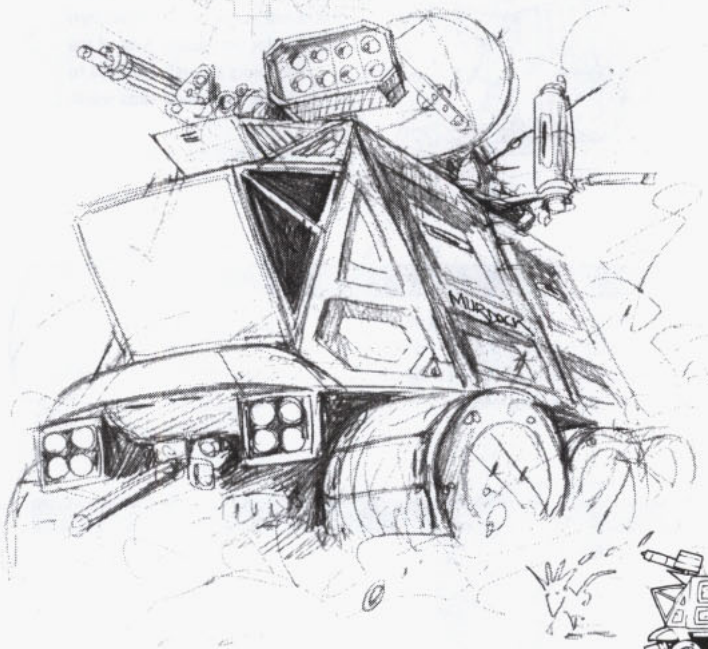
Apart from a small screen located just in front or to the side of the pilot, the helmet and its laser-crystal visor are the only source of information.



Streamlined Waldo

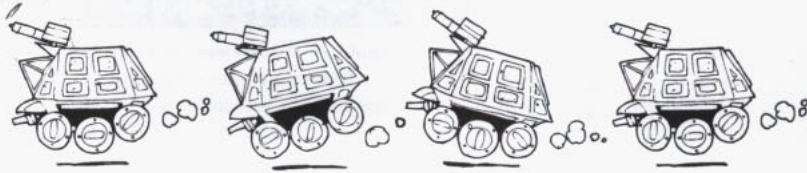
The final version of the control waldo can be either worn on its own or fitted inside the armored glove shown above.

Vehicle Showcase



In **Heavy Gear**, no vehicle is the complete king of the battlefield. It's very much like a game of rock, scissors and paper. One type of vehicle may defeat another, but there's always somebody standing over your shoulder with the vehicle that is just right to burn you right off the surface of the planet. Hence, the large variety of tanks, armored transports and flyers.

Like the Gears themselves, these vehicles are first drawn in pencil, then inked using mechanical drafting pens. The artwork is then scanned into the computer and colored with the appropriate programs. In general, the vehicles use the same camouflage textures that are used for the Gears, but in different ways. You don't paint a fighter aircraft the same way you paint a main battle tank.

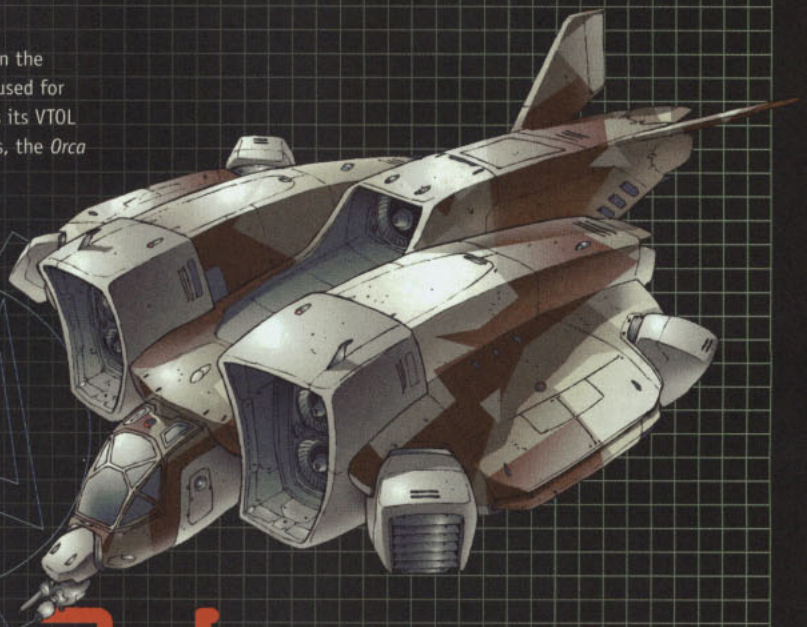


Orca

T-626

The *Orca* is the most common Gear aerial transport in the northern hemisphere, though it is occasionally modified to be used for tank or vehicle transport. The greatest advantage of the *Orca* is its VTOL capability. Used in about every military conflict involving Gears, the *Orca* is often a welcomed sight for battle-weary troops.

Manufacturer:	Northco/Pegasus Avionics
Use:	vehicle transport
Length:	32.4 meters
Wingspan:	27.2 meters
Standard Operational Weight:	100,500 kg
Average Armor Thickness:	225 mm
Armor Material:	durasheet w/alloy and ceramic
Flying Speed:	628 kph
Deployment Range:	1000 km
Base Sensor Range:	10-100 km
Base Communication Range:	45-450 km
Powerplant:	5 x jet turbine
Horsepower:	2400 Hp x 4, 1900 Hp



T-626

Walfish

T-45

The *Walfish* is a large STOL transport vehicle used to ferry troops and material out to the front line. The aircraft has been part of the Southern Republic's inventory for nearly 100 cycles. The thrust of the engines is channeled through louvers, giving the plane the ability to take off and land on extremely short runways.

Manufacturer:	Avco Aerodyne
Use:	aerial Gear transport
Length:	17.2 meters
Wingspan:	17.6 meters
Standard Operational Weight:	49,000 kg
Average Armor Thickness:	10 mm
Skin Material:	bonded composite
Flying Speed:	360 kph
Deployment Range:	2800 km
Base Sensor Range:	4-40 km
Base Communication Range:	20-200 km
Powerplant:	8 x jet engines
Horsepower:	8 x 2090 Hp

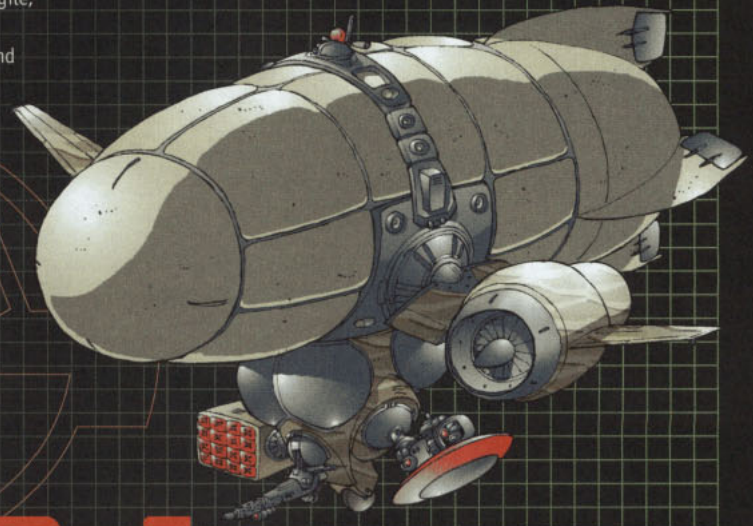
T-45

Floater

Badlands Transport

Floaters are small, lighter-than-air craft used by Badlands communities as surveillance and defense vehicles. Although quite fragile, they are inexpensive and readily available, with hundreds of known variants and designs. Floaters are remarkably stealthy for their size and technical simplicty.

Manufacturer:	various
Use:	observation/defense
Length:	25.3 meters
Width:	29.1 meters
Standard Operational Weight:	8,000 kg
Average Armor Thickness:	10 mm
Skin Material:	durasheet, bonded composite
Flying Speed:	60 kph
Deployment Range:	200 km
Base Sensor Range:	15-150 km
Base Communication Range:	50-500 km
Powerplant:	gas turbine
Thrust:	500 kg



NF-01

Aller

NT-3

The *Aller* is the pride and joy of the armies of the Norlight Confederation. A hulking main battle tank equipped with the largest railgun currently in use, the *Aller* has served the Confederation and its allies faithfully for the past 34 cycles. Almost all armored Northern Guard units are equipped with it, with only a few exceptions.

Manufacturer:	Brok Motor
Use:	main battle tank
Height:	3.6 meters
Length:	8.5 meters
Standard Operational Weight:	67,880 kg
Average Armor Thickness:	370 mm
Armor Material:	durasheet w/ceramics
Rolling Speed:	61 kph
Deployment Range:	580 km
Base Sensor Range:	2 km
Base Communication Range:	20 km
Powerplant:	2 x AGP-865 gas turbines
Horsepower:	2 x 2000 Hp

NT-3

Visigoth

ST-12

The *Visigoth* has been the Southern Republic's mainstead workhorse for close to three generations. The tank has been part of almost all the major battles fought by the Republic since it first entered service in TN 1786. The *Visigoth* relies extensively on automated systems to assist the minimal two-man crew.

Manufacturer:	Republican Tank Arsenal
Use:	main battle tank
Height:	3.03 meters
Length:	8.2 meters
Standard Operational Weight:	58,300 kg
Average Armor Thickness:	325 mm
Armor Material:	armoplast w/alloy webbing
Rolling Speed:	61 kph
Deployment Range:	550 km
Base Sensor Range:	2 km
Base Communication Range:	20 km
Powerplant:	4 x electric motors, 2 x gas turbines
Horsepower:	4 x 500 Hp, 2 x 1000 Hp

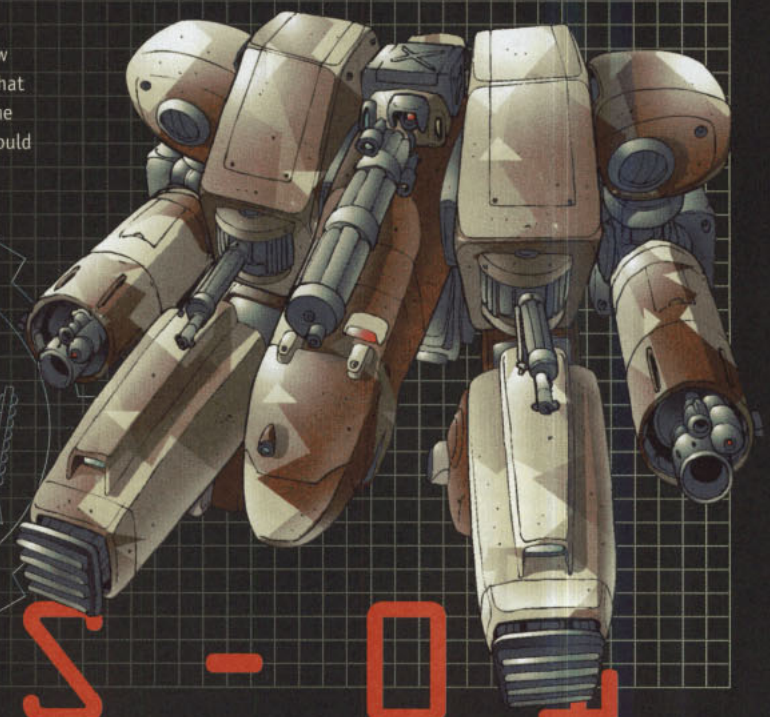
ST-12

Assault Mammoth

WACS-01FS-AST

The distinctive look of the *Mammoth* ensures that the few people who survive a fight with one help to spread the reputation that the machine has earned. It carries enough explosives to demolish the average city block. If not for its poor dodging ability, this strider would have little to fear from any other ground vehicle.

Manufacturer:	Hartmore Motor Co.
Use:	fire support/assault strider
Height:	6.8 meters
Standard Operational Weight:	21,880 kg
Average Armor Thickness:	145 mm
Armor Material:	durasheet w/ceramic
Running Speed:	31 kph
Rolling Speed:	n/a
Deployment Range:	320 km
Base Sensor Range:	3 km
Base Communication Range:	12 km
Powerplant:	S-V2700T V-engine x 2, ceramic IC x 1
Horsepower:	1200 Hp x 2, 200 Hp x 1



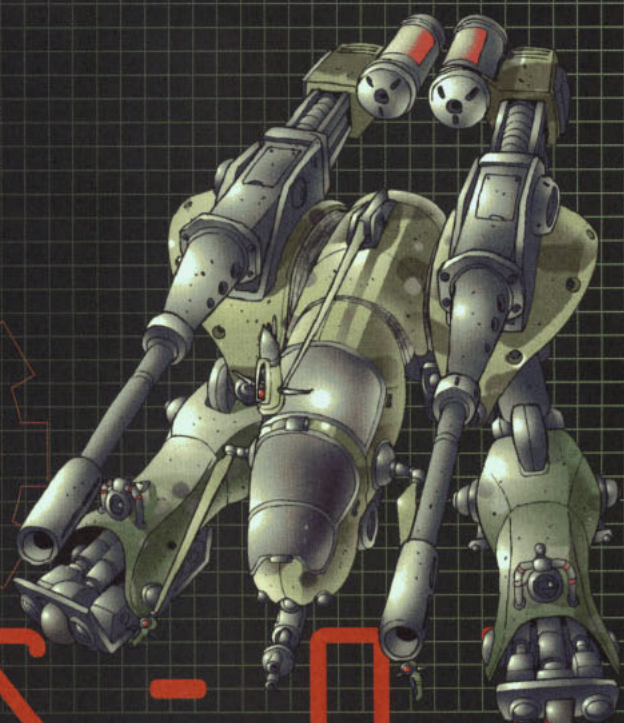
WACS-0

Long Fang Naga

OWCS-01FS

The *Naga* is the most common strider in the Southern forces. Used as a heavy combat unit and equipped with deadly weapons, the Naga is an ungainly looking machine. The limited supply of ammunition it carries is the strider's biggest drawback. When deployed in the field, Nagas are usually incorporated as part of a cadre.

Manufacturer:	Republican Heavy Industries
Use:	fire support strider
Height:	7.1 meters w/sensors
Standard Operational Weight:	15,340 kg
Average Armor Thickness:	106 mm
Armor Material:	armoplast w/alloy webbing
Running Speed:	42 kph
Rolling Speed:	72 kph
Deployment Range:	400 km
Base Sensor Range:	4 km
Base Communication Range:	12 km
Powerplant:	gas turbine x 2
Horsepower:	910 Hp x 2



OWCS-01

Red Bull

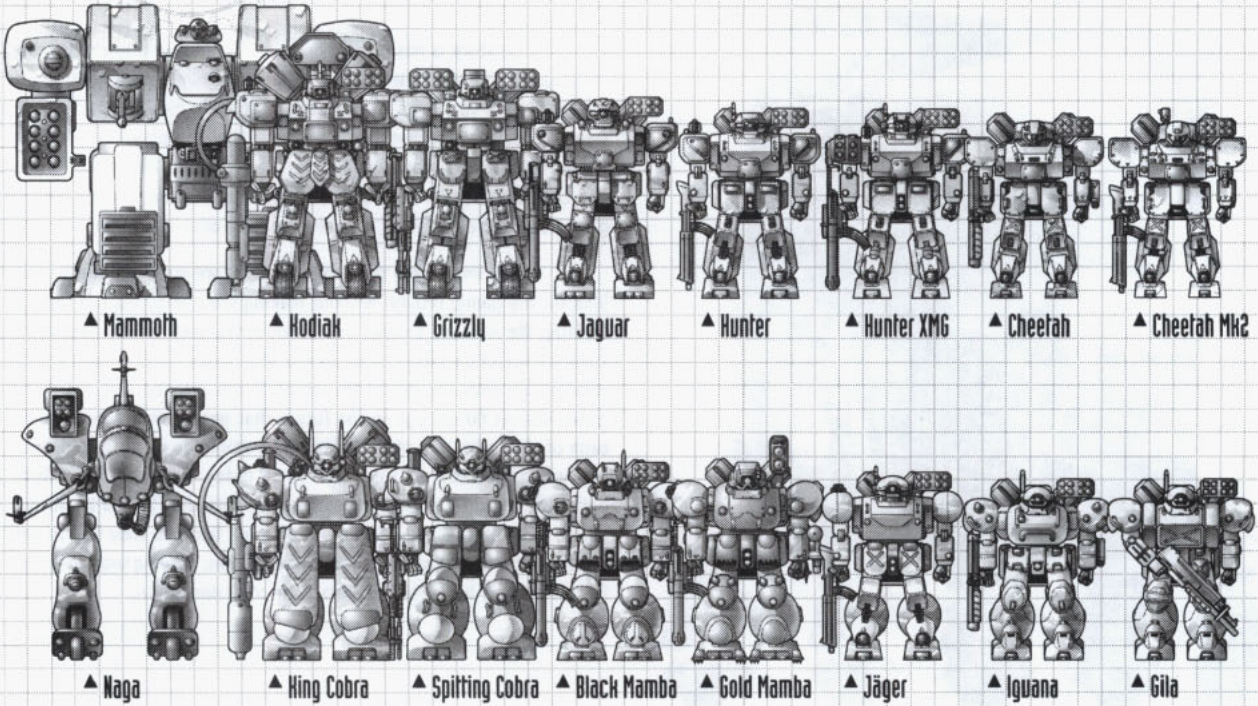
PAW-12

The *Red Bull* artillery strider is intended to put gun batteries into hard-to-reach spots, regardless of the location chosen. Its massive clawed feet enable the vehicle to handle the trickiest of ground, giving the vehicle above average mobility in broken terrain. Its limited speed, however, restricts the range of missions to which it can be assigned.

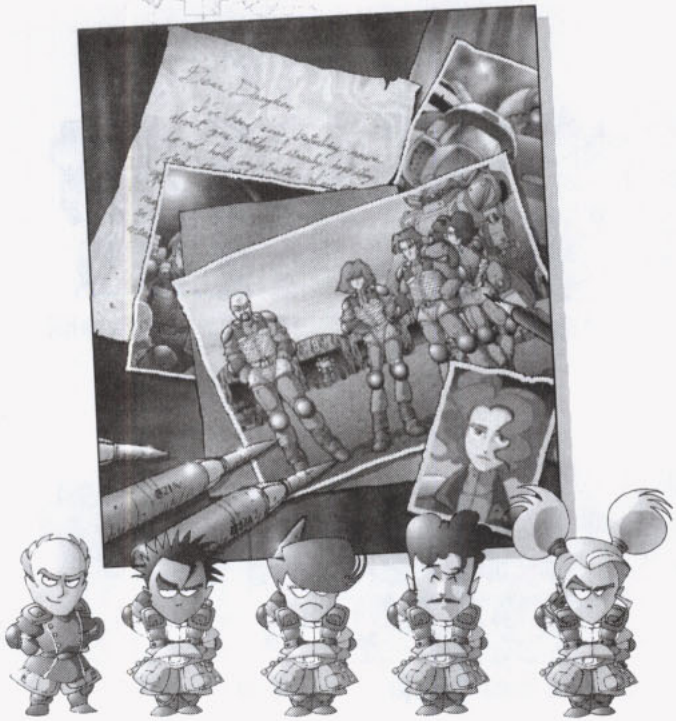
Manufacturer:	Paxton Arms
Use:	artillery strider
Length:	12.4 meters
Height:	6.6 meters
Standard Operational Weight:	47,500 kg
Average Armor Thickness:	320 mm
Skin Material:	durasheet w/composite
Running Speed:	31 kph
Deployment Range:	250 km
Base Sensor Range:	5 km
Base Communication Range:	15 km
Powerplant:	2 x gas turbines
Horsepower:	2 x 1700 Hp

PAW-12

Vehicle Recognition Chart



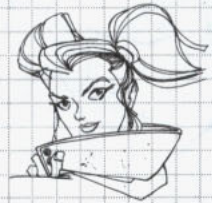
Character Design



A story is nothing without characters. Despite all the cool technologies, despite the terrific, well-detailed and consistent setting, it's the people you come to know and ultimately care about. Since **Heavy Gear** is a game world, we have to assume that the players will be the heroes of the story; however, a larger storyline also needs its own heroes and characters, and a large cast evolved over the years as the book line grew. You can see a few of the more popular ones in the following pages.

We knew from the beginning that we wanted a fairly serious look for the game, though without making the characters too realistic looking. We also had to take into account the lead artist's natural style, since he would be called to do all the illustrations and needed to be comfortable with the feel of the world. It was decided early on that the game was set far enough in the future that people would look similar in term of skin color and other traits. There would be variations, of course, but not to the extremes we see on Earth today. That made the artists' job both simpler and harder. Simpler, because they didn't need to worry about racial origins and background. Harder, because they had to create a cast of thousands without going to extremes, playing around with factors such as build, complexion, hair color and so on.

Miranda Petite



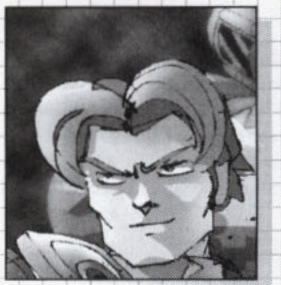
◀ Miranda Petite

Once the cute teenage mascot of the **Heavy Gear Fighter** combat card game (see middle illustration, above), Miranda has been forced to grow up rapidly by her enrollment in the SIU. A little older, a little wiser, she still keeps her favored teenage looks, however.

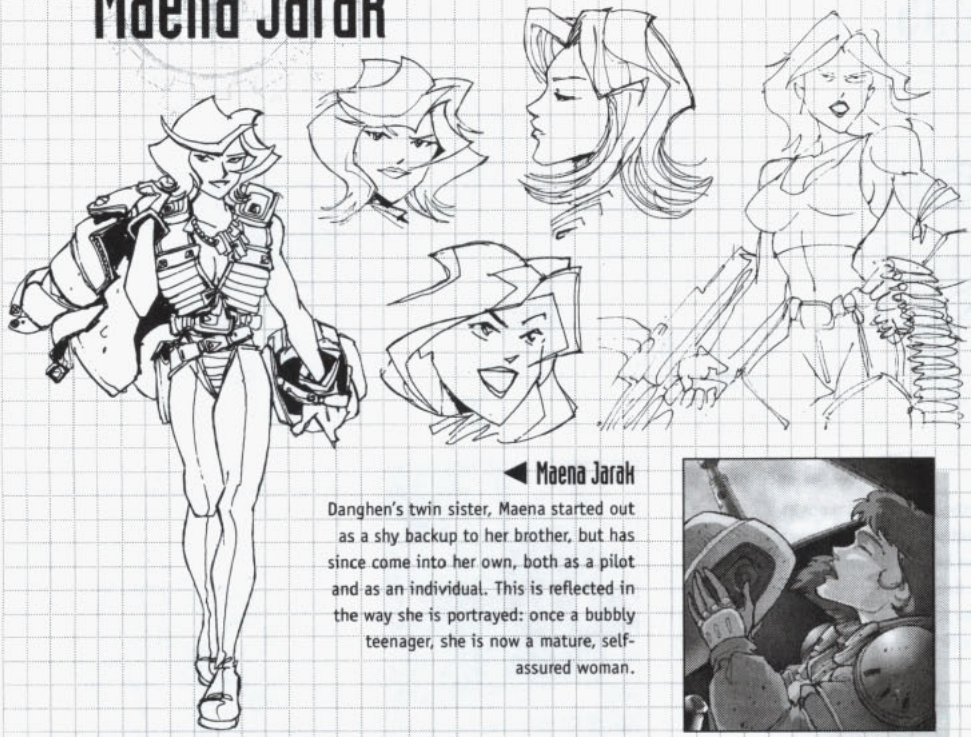
Danghen Jarak

◀ Danghen Jarak

The archetypal Gear pilot, Danghen was designed with the square jaw, broad shoulders and concerned frown of the classic action hero. His features have become sharper over time, make him appear more rugged and tragic.



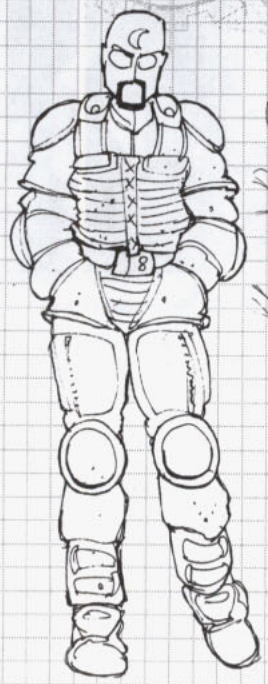
Maena Jarak

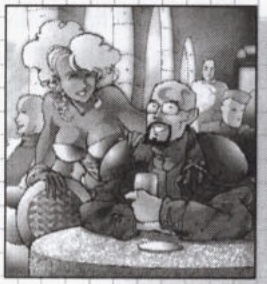


◀ Maena Jarak

Danghen's twin sister, Maena started out as a shy backup to her brother, but has since come into her own, both as a pilot and as an individual. This is reflected in the way she is portrayed: once a bubbly teenager, she is now a mature, self-assured woman.

Naed Stamens

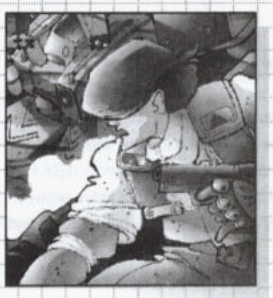




◀ Naed Stamens

Although he started out as a well-bred, polite young Duelist (see above), Naed has become harder both in outlook and behavior over the years. His greatest claim to fame is the fact that he was the very first character to wear the tattoo of the Blue Crescent.

Lussian Salban



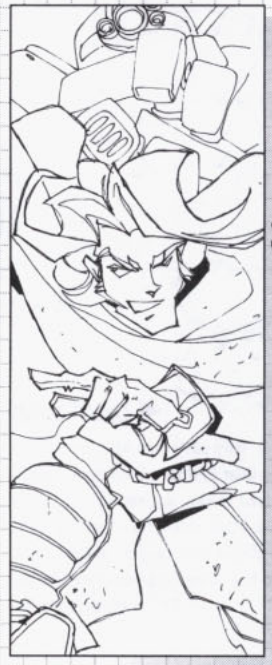
◀ **Lussian Salban**

Originally patterned after one of the **Heavy Gear Fighter** playtesters, Salban has evolved to take a greater place in the story. Like other older characters, he went from a simple look (middle above and at right) to a more hard-edged one better fitting his personality.

Cornice Dafnae & Dayvid Starr

◀ Cornice Dafnae

Like Maena Jarak, Dafnae went from a timid-looking Duelist to a more confident-looking, mature young woman. The illustrations above show best the drastic evolution of the drawing style that occurred in the three years between **Heavy Gear Fighter** (upper picture) and the more recent releases.



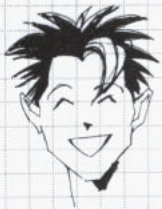
◀ Dayvid Starr

Starr went from a dedicated holovid actor (**Heavy Gear Fighter**) to a vain, selfish holovid star in the more recent products. Accordingly, his looks have become more ornate, with extravagant suits and sunglasses accessorized with lots of jewelry. His hair style seems to reach new heights with every new illustration.

Katja Sez & Alia Muna-Habib

◀ Katja Sez

The cheerful technician Player Character from the Operation: Jungle Drums set has become sort of a cult figure among **Heavy Gear** fans. For this reason, she appears time and again in various sourcebooks, clad in her trademark tank top and shoulder tool rig.



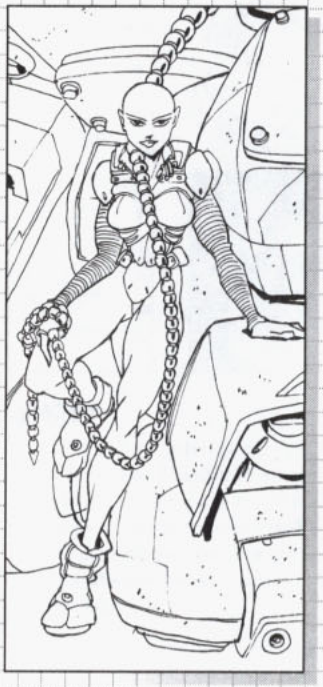
◀ Alia Muna-Habib

Another Operation: Jungle Drums Player Character, Alia has made a few guest appearance in other books of the series. Her looks have changed little since the first time we saw her, though she has gained some muscular mass.

Spider & Lash

◀ Saddik "the Spider" Jahmoon

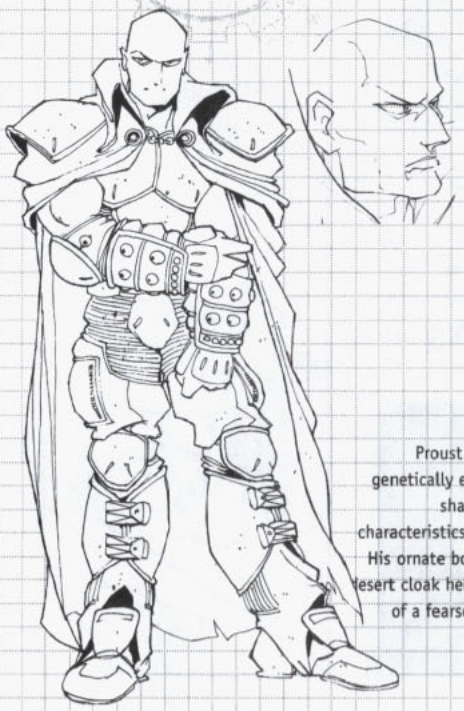
The Spider was first introduced in the Badlands sourcebook. One of the criminal overlords of the trash city of Khayr ad-Din, he wears the typical Badlander outfit. The more recent drawings (above) picture him as a prematurely aged man, burned out by a life filled with too much fear, too much pain and not enough love.



◀ Gaitan "Lash" Alani

Another character introduced in the Badlands sourcebook, Lash is the typical "bald babe" clad in body armor. One of the reasons for her baldness is to tie in with her background (some people mistake her for a GREL) and to make her stand out among the other women.

Colonel Proust & Soldier Roskiman



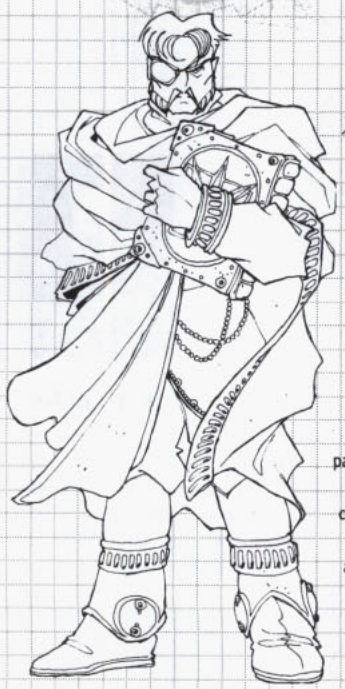
◀ Colonel Proust

Proust was easy to design: a genetically engineered trooper, he shares the same face and characteristics as others of his race. His ornate body armor and flowing desert cloak help reinforce the image of a fearsome, ruthless warlord.

◀ Soldier Roskiman

This unassuming GREL uses the same design elements as other genetically engineered troopers: the broad frame, bald head, heavily set features and purplish skin. Roskiman will be called to play a part in the upcoming storyline.

Thor Hutchison



◀ Thor Hutchison

The Revisionist religious leader is a passionate, intense man of faith, and these elements are reflected in the character's design. His flowing robes and heavy holy book give him the allure of a monk of old, and the eye patch hardens his features.

Milani DuBeau-Slovensky & Katryne Sanz

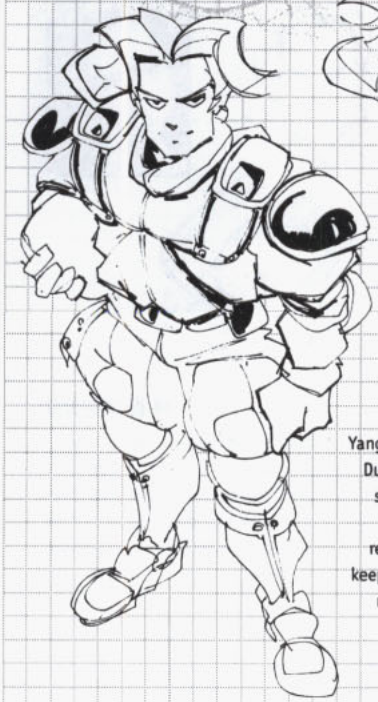
◀ Milani DuBeau-Slovensky

Paxton's "Head Exec" was originally designed with much softer traits (see above right). Upon completing the character's write-up, however, her portrait was revised to reflect a *much* more hardened woman than first anticipated.

◀ Katryne Sanz

Sanz started out as a rugged veteran Gear trainer in the first sketches, but her features were softened and her trademark braids were added for the version that ended up in the rulebook.

Yang Jownz



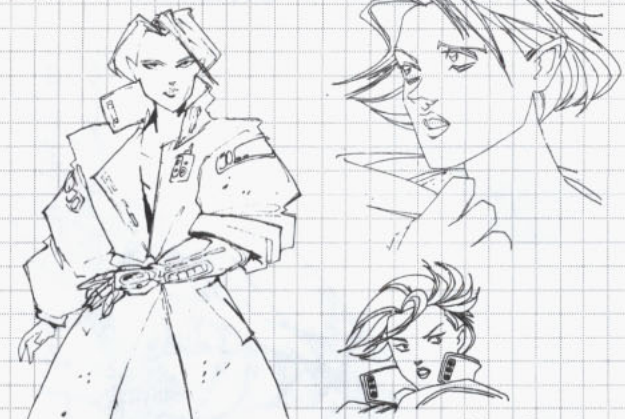
◀ Yang Jownz

Yang went from a dashing, red-haired Duelist to a brooding, introspective samurai-like soldier. The character design got darker and sharper to reflect this change (though he will keep his trademark wild red hair). He may appear time and again in the **Heavy Gear** storyline.

Maya Fajil & Nicosa Renault

◀ Maya Fajil

Reverend Mother Maya Fajil is one of Hutchison's allies in the Prophet's Shield organization. She was drawn as a fairly typical "dark" mother figure, but for some reason she appears to get bigger in every subsequent illustration.



◀ Nicosa Renault

The Terranovan superspy was designed as a pretty but ordinary-looking woman. As she takes her place into the storyline, her appearance has become more refined and detailed.

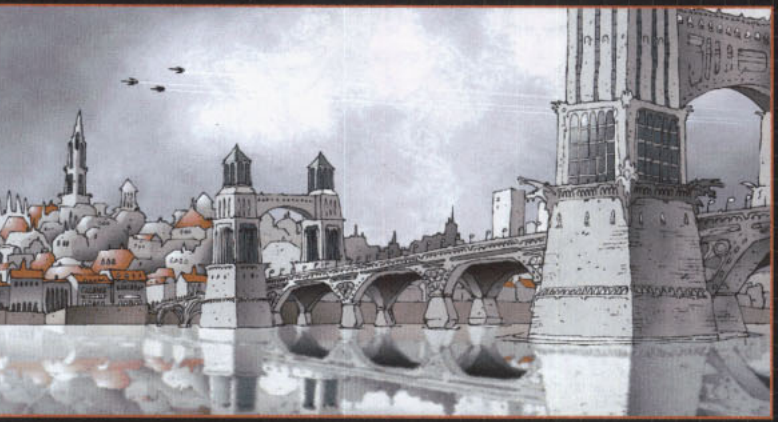
Settings & Characters

In many ways, how the characters look is the "voice" of the universe. Give them a funny look, and you've got a comedy. Make them tragic and angst-ridden, and you've turned the same story into a tragedy. Their clothes and uniforms are also part of the setting, and will help blend them into the rest of the world. When these have to be designed, the artists generally favor brown and green tones if the characters that will be wearing them are military personnel or from a remote region. For city-dwellers, more colorful attires are the norm. In all cases, we are careful to include at least one piece of technology somewhere in the costume. We also tend to give them rugged footwear.

Likewise, the settings had to look right too. If the buildings had been overly simple, or the architecture plain — or even worse, inconsistent — it would take away some of the credibility of the world. Great care was taken to ensure that the details made sense, that the colors were right both for the materials used in the construction and to fit with the surroundings. The illustration format that we would eventually select to show these locations in the sourcebooks is similar to a movie widescreen, which is quite intentional.

Valeria

Capital of the Norlight Confederacy



The city-state of Valeria was somewhat patterned after London, though with a more Gothic edge to the architecture to reflect the influence of Revisionism. The city is irrigated by many rivers, which gave us room to design elaborate bridges. Suits and casual garbs are the norm here, though religious clothing is not uncommon (see right).

Sorrento

Center of the Revisionist Faith

As a major hub of religious sentiment in the North, Sorrento drew a lot of imagery from medieval religious buildings. The gigantic Chruch of the Third Miracle that forms the core of the community is especially reminiscent of the Gothic cathedrals in moden Europe. Their devout culture gave us a lot of opportunity to develop religious garbs.

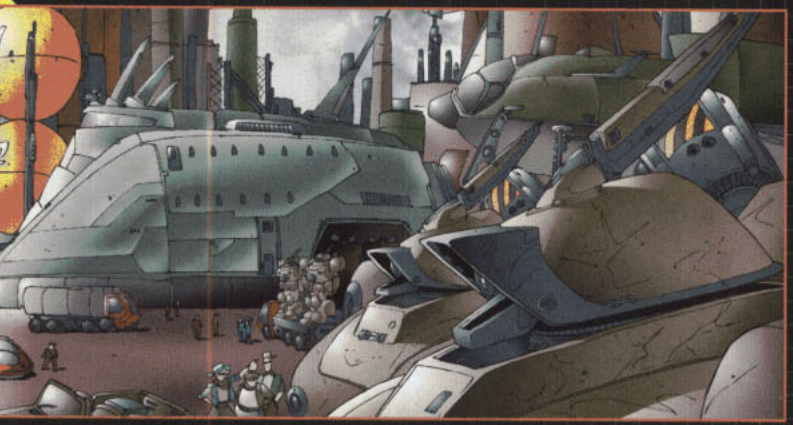
Port Oasis

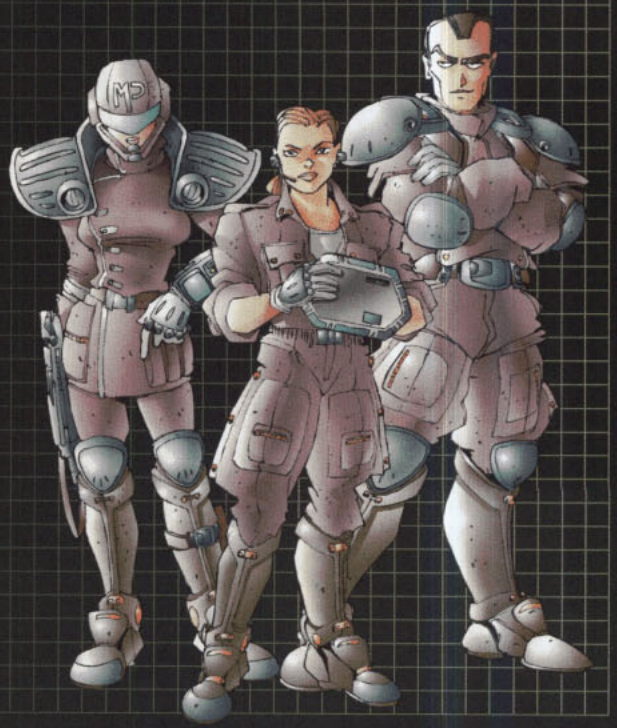
Capital of the Southern Republic

As befits one of the main centers of imperialism on the planet, the architecture of Port Oasis had to be completely over the top, with impossibly high statues and bridges, immense highways and towering skyscrappers. The most obvious inspiration is, of course, Gotham City, though Metropolis was also an influence.

Timbuktu

Industrial Center of the South





Timbuktu has been designed around a concentric pattern, with large buildings in the center surrounded by defense systems. The many companies located there give a corporate look to the downtown area, with clean, neat buildings. Immense factories as well as the communication roads to feed and supply them form the outer quarters.

Zagazig

Shipyards of the North

Zagazig is primarily (from a visual standpoint) a manufacturing city. The Norlight military shipyards were inspired by modern shipbuilding facilities: countless cranes and heavy equipment surround the hulls of half-completed warships. The city itself is fairly ordinary, following the circular pattern common to Terranovan city-states.

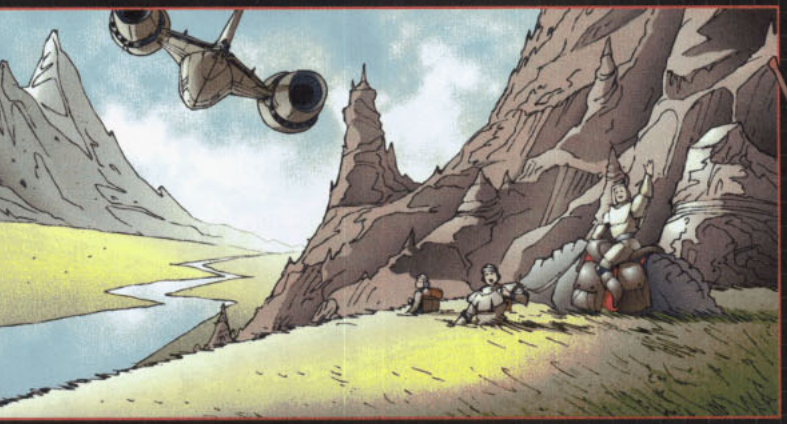
Khayr ad-Din

The City of Trash

Khayr ad-Din is literally a collection of locales taken from popular science fiction and adventure movies: the seedy bars, the underground arenas, etc. The looks of the desert city-state were heavily inspired by the junkyard in the Japanese manga *Gunnm* and the nightmarish industrial cities of movies such as Metropolis and Mad Max.

Irrian Plains

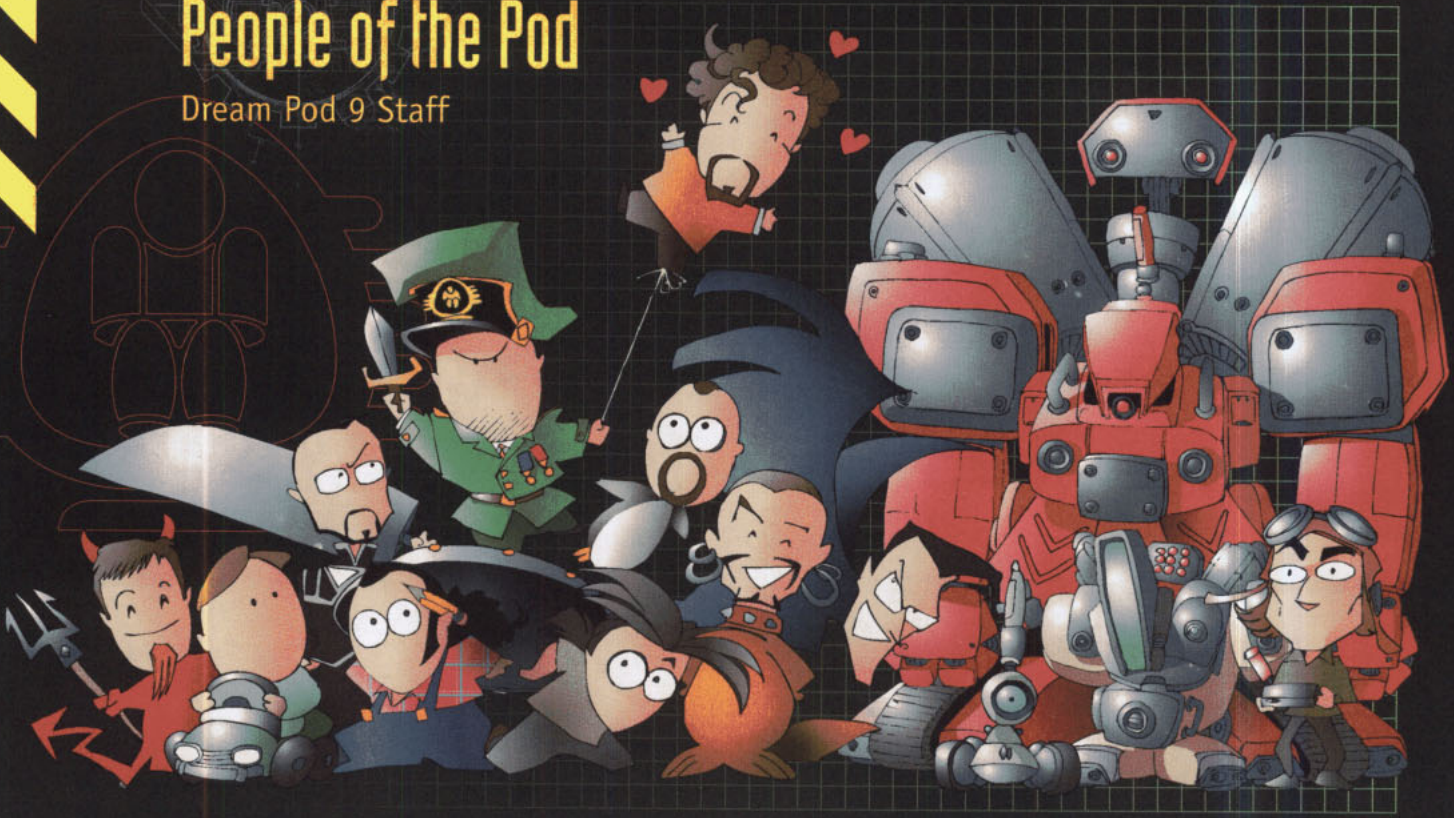
Granaries of the North

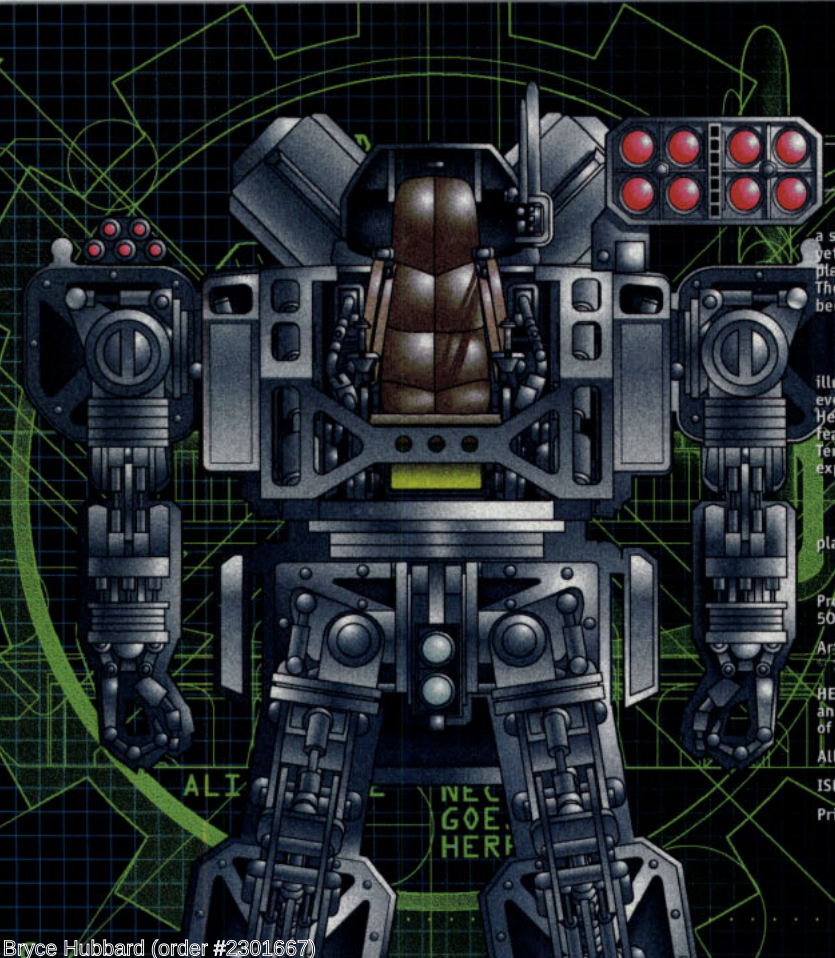


These luxurious, apparently neverending plains ondulate under countless plants, most of them tall variations of johar grass. The obvious inspiration here are the plains of that form the center of North America. We've added the occasionnal river or rock outcropping for the regions that are nearby the Serpentine Range.

People of the Pod

Dream Pod 9 Staff





THE MAKING OF A UNIVERSE

Heavy Gear Design Works

The Heavy Gear universe is one of the richest settings ever designed for a science fiction game. Countless hours were spent developing a coherent, complex yet believable world that would capture the imaginations of casual readers and players alike. Only a tiny portion of the material created was ever shown, however. The *Heavy Gear Design Works* intends to remedy this by giving fans what they've been clamoring for: a "behind the scenes" look of the Dream Pod 9 works.

The *Design Works* showcase development sketches and out of print illustrations. Page after page of blueprint-like sketches and drawings display the evolution and functions of the principal vehicles and mechanical systems of the Heavy Gear universe, including the Gears themselves. Even the planet itself is featured through a series of breathtaking panoramic shots of the most famous Terranovan vistas, all presented in full color. Throughout the book, the design team explains the context, origin and function of all illustrations.

This manual is a must-have reference for all Heavy Gear readers and players, and will please all fans of serious, well-developed science fiction.

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