



HEAVY GEAR ASSAULT

DUELIST HANDBOOK

Spider's Web Arena Circuit

ITEM: v-01-54663:AF//908

TABLE OF CONTENTS

1	LORE PRIMER	4
1.1	Welcome to the Big Show Rookie!	4
1.2	WHAT IS A HEAVY GEAR?	5
1.3	V-ENGINES	6
1.4	TERRA NOVA.....	7
1.5	HOW TO TELL TIME ON TERRA NOVA	7
1.6	WHAT IS TEC?.....	8
1.7	GEAR DUELING	8
1.8	MAIN FACTIONS	9
1.8.1	CONFEDERATED NORTHERN CITY-STATES.....	9
1.8.2	ALLIED SOUTHERN TERRITORIES.....	10
1.8.3	NEW COALITION	10
1.8.4	PEACE RIVER	11
1.9	Major Corporations	11
1.9.1	PAXTON ARMS.....	11
1.9.2	NORTHCO	11
1.9.3	TERRITORIAL ARMS	12
1.9.4	TERRA NOVA SPORTS NEWS NETWORK	12
1.9.5	KRELLEN FOODS	12
2	CONTROLS.....	13
2.1	MOVEMENT	13
2.1.1	Walking.....	13
2.1.2	Secondary Movement Mode	14
2.1.3	Jumping and Jump Jets.....	15
2.2	INVENTORY	15
2.2.1	Weapons Management.....	15
2.2.2	Gear Resources	15
2.3	SHOOTING	16
2.3.1	Hand Held Weapons	16
2.3.2	Shoulder Mounted Weapons.....	18

2.3.3	Zoom	19
2.4	GEAR CUSTOMIZATION	20
2.4.1	Build.....	20
2.4.2	Painting.....	20
2.4.3	Loadout.....	21
2.5	MARKETPLACE	21
2.6	GAME TYPES	22
2.6.1	Team Death Match	22
2.6.2	Brune's Ball.....	22
2.6.3	Annexation	23
2.6.4	Wave Survival [PvE].....	23
3	QUICK REFERENCE GUIDE.....	24
3.1	Heads-Up Display	24
3.2	Default keyboard, mouse and gamepad layout	25

1 LORE PRIMER

1.1 WELCOME TO THE BIG SHOW ROOKIE!

I've seen them all kid. Many have tried and many have failed. Fresh faced like you who think they can take on the world. Well this is where dreams are born... and die... literally. Make no mistake, it's brutal in that arena. It's just you and your tin can you call a Gear. You're no invincible walking turret, like those striders, so use your speed and maneuverability to stay ahead of your opponent. When in doubt, keep shooting! And one last thing Rookie, don't forget to show off, it's a spectacle after all.

-Jamus Vaughn, Veteran Gear Duelist





1.1 WHAT IS A HEAVY GEAR?

The Heavy Gear is the pinnacle of Terra Novan military technology. It is an expression of the planet's culture; rugged, reliable and flexible. The Heavy Gear is the most ubiquitous fighting vehicle on the planet and is used by militaries, civilian agencies and private operators.

The origin of the Heavy Gear is bound in myth. A popular folk tale recounts the story of an unknown Badlands Homesteader who defended his moisture farm from raiders by strapping weapons on his construction walker.

The first actual combat Heavy Gear was developed by the United Mercantile Federation in TN1674 (5948 A.D.) under the aptly named Bipedal One-Man Tank (BOT) program. Agents from the Southern Republic quickly stole one of the prototypes and were able to reverse engineer it. For the next 200 Earth years, Heavy Gears have evolved into very specialized roles and proliferated across all Terra Novan factions.

At the heart of each Gear is a high efficiency rotary internal combustion engine known as a V-Engine. Located on the Gear's back, it provides power to all of its systems. This system requires both air and fuel to function. The fuel is stored in a specially armored "butt plate" armor skirt. Some high tech Gears have a superconducting power pack instead of a V-Engine.

Also of particular note, the vast majority of Gears have a secondary movement mode or SMS. These typically take the form of wheels or caterpillar treads on the feet and allow the Gear to move much faster than in walking mode at the cost of some maneuverability. Any successful Gear pilot knows how to optimally switch between both types of movement to gain the upper hand.

Coordinating the Gear's movement is a powerful and high tech computer known as an Optical Neural Net or ON-Net. The ON-Net is capable of learning and growing new crystalline connections. Although not a true AI, it can pick up on the inputs and habits of the pilot and adapt itself accordingly. Some have even been known to make rude gestures all by themselves. Next to the pilot, the ON-Net is considered the most valuable component on a Gear. Most pilots are trained to take the ON-Net with them when they evacuate a disabled Gear.

Because of the humanoid shape of Heavy Gears, they can take a wide variety of weapon loadouts as well as traverse dense terrain such as hills and urban environments with ease. In Terra Novan military doctrine, Heavy Gears are considered somewhere between heavy armored infantry and light armored fighting vehicles and are thus organized similarly to infantry regiments with specialized weapons squads.

This being said, Gears are nowhere as heavily armored or armed as tanks or the larger striders. A smart Gear pilot will always use their smaller size, speed and mobility to take full advantage of any available cover.

1.3 V-ENGINES

The V-Engine is a unique, compact reciprocating internal combustion engine (ICE). It is the most common form of powerplant used in the design and construction of Heavy Gears. The iconic V-Engines used on Terra Nova have their origins in experimental designs created at the University of Colorado in the later years of Earth's twentieth century, as well as the "Rotary Vee" designs that first appeared during the CE 1970s.



The primary component of the V-Engine assembly - and the component from whence it derives its name - is a large angled support axle fashioned from lightweight but incredibly strong steel alloys. It is truly only a bent bar of metal, and is the strongest part of the engine. Mounted on each arm of the support axle, and fed from a shared carburetor, is a multi-chamber cylindrical engine block resembling an enlarged revolver cylinder. Like the axial engines developed during the early CE 1900s, the cylinders (varying in number from as few as six to as many as twelve, depending on the particular make and model) are arranged in parallel around the output shaft rather than at 90-degrees angles as in traditional ICEs; the pistons themselves resemble smaller versions of the support axle, and rotate about the support axle while the engine is running, in the same fashion (and arrangement) as the so-called "elbow engines" popular with hobbyists of that era. The output shaft of each engine block, in turn, is connected to an assembly containing an axial piston pump (to provide power for hydraulic systems), a disc-shaped electric generator (similar to the alternators used in conventional motor vehicles), and an axial-flow fan (to provide cooling and ventilation). It is these components which are housed within the characteristic cylindrical pylons of a Heavy Gear's backpack assembly.

With a relatively small number of moving parts, this engine is perfectly suited to the Heavy Gear. It is rugged, easy to manufacture and repair, and capable of running smoothly on a wide variety of fuels (which are stored within a self-sealing tank located in the rear hip armor plate). The ideal (and standard) fuels used by Heavy Gears are refined vehicle-grade gasoline and kerosene, but there are known instances of Gears being able to run on natural gas, alcohol (including alcoholic beverages), machine oil, ammunition propellants, liquid rocket fuel, and industrial cleaning solvents.

1.4 TERRA NOVA

1.5 HOW TO TELL TIME ON TERRA NOVA



Navigating Heavy Gear lore can be daunting especially when it comes to its history.

Although Terra Nova is very similar to Earth in terms of environment, it is still an alien world. When the first survey teams arrived, and eventually the first colonists started to settle the planet, they tried to reconcile with the familiar system on Earth.

Terra Nova spins on its axis once every 37.2 Earth hours. To allow Terra Nova to use the same seconds and minutes as Earth, each Terra Novan hour is 62 minutes long. The Terra Novan day is thus 36 Terra Novan hours long with midnight being 00:00 and noon being 18:00. Most of the planet's polar inhabitants have adapted to the longer days by sleeping for ten hours every night and napping for two hours around noon.¹

Denizens of the Badlands usually split their day into two 18-hour half-days. Badlanders sleep in six-hour periods around noon and midnight, when the temperature is hottest and coldest, respectively.

Terra Nova orbits Helios once every 168.2 days (260.7 Earth days). The 168-day cycle is divided into four 42-day long seasons: Winter, Spring, Summer and Autumn. Each season is divided into six 7-day weeks. The days of each week are labeled in the same manner as Earth weeks, beginning with Sunday and progressing towards Saturday. Approximately once every five cycles, a leap year occurs and one extra day is added to the end of the cycle. This day, called the Interannum, is a universal holiday across Terra Nova.

Although each region celebrates the holiday in a different manner, most Interannum festivities resemble frenzied New Years parties. Terra Novan dates are expressed by day of the season, season, and cycle. Day 1 of Cycle 1 in the Terra Novan calendar is April 3, 4752, the first winter solstice after Terra Nova's discovery less than a month before.

¹ Life on Terra Nova, 2nd edition, pg5:

1.6 WHAT IS TEC?



Before the formation of the Polar Leagues, each City-State minted their own currency based on available resources. With the integration of local economies, a need to reconcile wildly different currencies and to facilitate trade was recognized.

Soon enough, both Polar Leagues instituted their own universal currency. The Confederacy of Northern City-States adopted the Mark, while the Allied Southern Territories adopted the Dinar.

Peace River on the other hand, continued to trade in their own currency, the Peace River Dollar. The Dollar was used within the city-state and the surrounding Badland communities.

Prior to the War of the Alliance, trade on Terra Nova was highly localized within the major political blocs, with very little if any interpolar trade. Trading with outlying Badland communities were in the dominant Polar currencies.

It wasn't until the war that major logistical coordination between all Terra Novan powers necessitated the creation of a universal exchange unit to facilitate cooperation between themselves. Through a series of secret high level conferences, the Polar leagues and Peace River adopted an electronic unit of value called the Terra Novan Economic Credit or TEC.

Originally only meant as an emergency measure to fix exchange rates between the different currencies and streamline logistics during the war; it became a de facto currency by the end of the War of the Alliance.

Following the reconstruction period, TEC took on an even more important role in inter-league trade.

Today, TEC is the most commonly used currency in the dueling circuits as it provides the various dueling teams with a universal and stable economic unit that allows them to source resources from across the planet without worrying about managing different currencies.

That being said, regional physical currencies, such as the Mark, The Dinar, Mekong Coins, the NuCoal Lith and the Peace River Dollar are still widely used on the planet

1.7 GEAR DUELING

Dueling has always been part and parcel of Terra Novan culture and an accepted method of resolving dispute. Over time, the militaries of Terra nova adopted the practice and sometimes, military objectives are settled by opposing regimental duelists.

Eventually, Gear dueling became adopted into commercial circles and became a hit sensation among the civilian population. Arenas, legal and underground, began popping up all over the planet.

Today, this gladiatorial combat spectacle is the go to sport on Terra Nova with thousands of teams in dozens of leagues across the planet.

1.8 MAIN FACTIONS

1.8.1 CONFEDERATED NORTHERN CITY-STATES



Formed by:

- Norlight Confederacy
- United Mercantile Federation
- Western Frontier Protectorate

The northern hemisphere is united under the CNCS, a relatively equal partnership between three nations: the Northern Lights Confederacy (NLC), the United Mercantile Federation (UMF) and the Western Frontier Protectorate (WFP). There are occasional border disputes and squabbles between these leagues, but they generally cooperate, bound by a mutual fear of the expansionist South and common cultural bonds.

Most Northerners are members of the Revisionist Church, a faith born on Terra Nova during the long Reconstruction after Earth abandoned the colony. Both fear and religious fervor are running high in TN 1935 thanks to the assassination of a prominent Revisionist leader and a Southern military build-up. The CNCS military is the Northern Guard (NG), a professional all-volunteer force made up of soldiers drawn from the regular militaries of the three member-leagues. Each League maintains its own independent army. The Norlight Armed Forces are by far the largest and are extremely zealous, the UMF Army is the best-equipped thanks to the massive manufacturing might of the Mercantile city-states, while the WFP Army is neither large nor well-equipped but is very well-trained, with considerable field experience.

1.8.2 ALLIED SOUTHERN TERRITORIES



Formed by:

- Southern Republic
- Humanist Alliance
- Mekong Dominion
- Eastern Sun Emirates

The southern hemisphere is ruled by the Allied Southern Territories (AST), a puppet alliance used by the powerful Southern Republic (SR) to rule their vassal-states. The Mekong Dominion (MD), Eastern Sun Emirates (ESE) and Humanist Alliance (HA) were conquered in fact if not in name by the SR long ago. The leaders of these nations have more to gain by working with the Republic than against it, but the ordinary people are less happy, as they have no common ties of culture or economics to their oppressors and often must be kept in line by force. Recent cycles have seen an upswing in rebellions, requiring an increase in the size of the Southern armed forces to re-pacify their cities. The North has been fanning the flames of rebellion and many Southerners are crying for war to punish them for their meddling. The common defense of the AST is handled by the MILICIA, composed primarily of conscripts drawn from throughout the South and those the League forces no longer want, including criminals. The real might of the South is the merciless Southern Republican Army (SRA). The other leagues are allowed to maintain their own armies, but with strict limits on their sizes, deployment and equipment. The Mekong Peacekeepers (MP) are superbly trained and focused on operations in dense urban and jungle areas, the ESE has no army of its own with each Emir maintaining his or her own retinue, and the Humanist Alliance Protection Force (HAPF) are a small but fanatical force with high-tech weapons, sometimes reverse-engineered from CEF designs.

1.8.3 NEW COALITION



The New Coalition represent a series of major settlements in the Barrington Basin and around Westridge in the inhospitable Badlands region. One of these cities include Port Arthur, the site of the Colonial Expeditionary Force's former FOB during Earth's first invasion. Another major city is Khayr-ad Din, home of the infamous Spider's Web Gear Dueling Arena. Formed initially as an economic alliance, NuCoal eventual evolved into a military alliance to ward off both Northern and Southern aggression.

1.8.4 PEACE RIVER



Nowhere else on Terra Nova will you find a city-state quite like Peace River, a symbol of pride for the whole of the Badlands. The city is built into the side of a large mesa and protected by 350 meter tall defense shutters that can close in a matter of minutes to repelling even the worst Badlands Tempests and, incidentally, bombardment from anything short of an orbital nuclear strike. To further this image of strength and power, the city is topped by a mighty airfield whose runways form a peace sign. Towering over the airfield and the rest of the city are the executive offices, the original oasis tower purchased by the city's founder, Ebert Paxton. The whole city is a massive symbol of Paxton's military, monetary and emotional power.

1.9 MAJOR CORPORATIONS

1.9.1 PAXTON ARMS



Founded in the Badlands centuries ago, the once massive global arms dealer has struggled to return to its previous glory. Part of the marketing revenue for the massive corporation has gone to Dueling teams in a variety of circuits in order to generate visibility and properly demonstrate the quality of the company's product. While sponsorship is easy to come by, Paxton has been less apt to give the teams access to their higher tech.

1.9.2 NORTHCO



The crown jewel in the United Mercantile Federation's industry, Northco manufactures an array of products not the least of which are the numerous Gears, which the North uses regularly to defend itself. Among the more popular lines the company produces include the venerable Hunter, the top of the line Jaguar, and heavy hitting Grizzly. With the bulk of the Northern military forces supplied by the UMF based corporation, rival Gear manufacturers rarely find a means to break into the market. Among their few competitors, Shaian is Northco's only real competition.

The massive corporation has had a long running feud with the Northern Lights Confederacy's top Gear producer, Shaian, for decades even though their rival manufactures components for the Northco manufactured Grizzly. On the planet, the only corporation that can really rival the immense Northco is their Southern counterpart, Territorial Arms. The two corporations tend to co-evolve to match each other's performance, which leads to a relative level of parity between the North and the South's military technology.

1.9.3 TERRITORIAL ARMS



The South's counterpart to Northco is the monolithic Territorial Arms. Nearly the entirety of the Southern military forces rely on Gears manufactured by Territorial Arms. Most of the business that Territorial Arms earns comes from lucrative government contracts emanating from the Southern Republic Army, but largely paid for by client state militaries in the Allied Southern Territories, who only marginally benefit from the arrangement. While the company has managed to secure the lion's share of the business for itself, Territorial Arms does have a few

competitors in the South. Two companies that have given the corporation headaches in the past, Dynamic Systems and Mandeers, have recently merged in order to bring newer units to the market and threaten Territorial Arms' virtual monopoly.

1.9.4 TERRA NOVA SPORTS NEWS NETWORK



TNSNN is the premier Gear Dueling sports broadcasting network on the planet. Streaming live matches from across the planet in HD trideo over the Hermes72 satellite network, TNSNN has the angle on all the up and coming Duelists.

1.9.5 KRELLEN FOODS



A large and global presence on Terra Nova, Krellen Foods distributes food products all across the planet from their Mekong Dominion location. The company is most famous for their fast food chain, Weird but Tasty. The exotic cuisine is consumed by millions of Terra Novans in places as diverse as Port Oasis in the Southern Republic, Fort James in the Western Frontier Protectorate, and even by GRELS in Port Arthur in the Badlands. Krellen's marketing division enjoys one of the largest budgets on the

planet. Their Weird but Tasty jingle is so well known, kids from the North and South can sing it in a variety of languages and still recognize it. Krellen Foods enjoys the wide recognition, and as part of their aggressive marketing campaign, the company looks for total market saturation, which includes dueling venues.

2 CONTROLS

2.1 MOVEMENT

2.1.1 Walking

Gears are capable of humanoid bipedal movement. Switch between walk and run mode with [Ctrl]. Pilots can choose between Standard (FPS style) and Advanced (Mech style) controls. In Standard mode the legs follow the reticle so the Gear is always facing its target. In Advanced mode the torso can twist allowing the legs to move in an independent direction from where the weapons are aiming. Like a tank's turret, a Gear can track its target and run circles around it.

This is why we recommend advanced mode to more experienced pilots.



2.1.2 Secondary Movement Mode

The Sprint key [Shift] enabled and disabled the Secondary Movement System (SMS). This is a propulsion system mounted in the feet for additional speed. Like a gigantic roller-skater, a Heavy Gear would be able to switch its movement systems while on the run, going from a running charge to being propelled by a self-contained motive system.

SMS mode can achieve higher straight speeds than walker mode, but at the cost of maneuverability. It also has slower acceleration than walker mode.



2.1.3 Jumping and Jump Jets

Gears are able to jump short distances and clear obstacles [spacebar]. Jump Jets are more common in the arenas. Jump Jetting Gears are fast but predictable targets. Simply press the jump key [spacebar] again to ignite it. Jump Jets are directional, you can control their trajectory using the strafe keys.



2.2 INVENTORY

2.2.1 Weapons Management

Gears can equip handheld weaponry to their manipulators. There one handed and two handed weapons. To equip a weapon select the number associated with it in the inventory (the list of weapons mounted on hardpoints) and assign it to a dominant manipulator by pressing the related trigger. For example to equip the Heavy Autocannon to the left hand press 1 and Left Mouse Button.

To holster the weapon you last equipped press [X]. To drop it on the ground use [Alt+X]. If you want to pick up a dropped weapon just look at it and press the Activate Object key [F]. It will automatically equip it to a free manipulator.

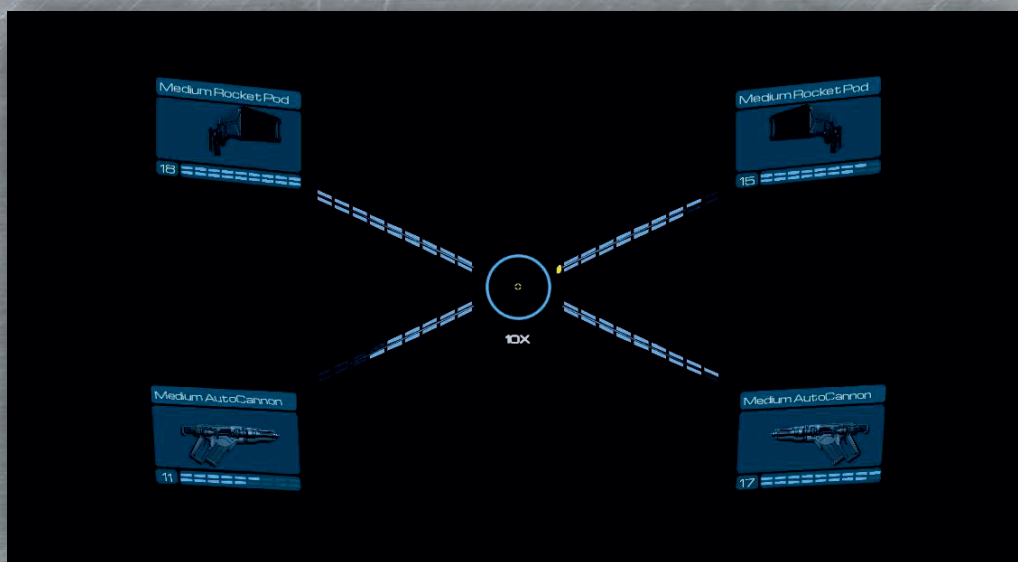
2.2.2 Gear Resources

The HEF resource bar is located underneath the damage display on the HUD. These are the resources provided by the Gear's power plant mounted as a backpack assembly and the armored fuel tank located in the skirt underneath. Namely Hydraulics, Electricity and Fuel. Your resources are limited so keep an eye on them. Walking, running, and jumping use Hydraulics. SMS uses Electricity. Fuel is used for Jump Jets and to recharge Hydraulics and Electricity. Damage to related systems can drain them in an instant. V-Engine's need oxygen input therefore they are unable operate underwater for too long.

2.3 SHOOTING

2.3.1 Hand Held Weapons

You can keep track of the ammunition of your currently equipped weapons on their respective weapon cards in the inventory and around the reticle in the center. Each weapon has its own bar positioned accordingly. To fire your handheld weapon use the corresponding manipulator's trigger. In case of two handed weapons the dominant hand's fire button will act as the trigger.



Example 1: You have a Medium Autocannon in your left hand and a Light Pulse Laser in your right hand. Press [Left Mouse Button] to fire the Autocannon and [Right Mouse Button] to fire the Pulse Laser.



Example 2: You have a two handed Snub Cannon equipped to your right hand. Press the [Right Mouse Button] to fire it.

2.3.2 Shoulder Mounted Weapons

These can be fired independently from handheld weaponry. A typical example of such are the Rocket Pods. Multiple Rocket Launcher System is basically a glorified weapon rack with a high damage potential. The Pods hold a certain amount of rockets that can't be reloaded during the match. You can switch between weapon groups and fire individual pods directly, set them to sequential mode (SEQ) or link them together (ALL) with [Alt+T]. Pods can queue rockets and release them in a salvo. Do this by holding down the [R] key and release it to launch.

Tip: Unleash a devastating Alpha Strike by unloading everything you got at the same time.



2.3.3 Zoom

Currently every Duelist Gear has a built in Zoom sensor (**Disclaimer:** this will change as soon as sensor systems are implemented). With settings of 1X, 2.5X, 5X and 10X it is an ideal tool for sniping. Use the mouse wheel to zoom in and out quickly.



2.4 GEAR CUSTOMIZATION

2.4.1 Build

You can mix and match different parts. Each plate has its own armor value and affects speed. Don't forget to save!



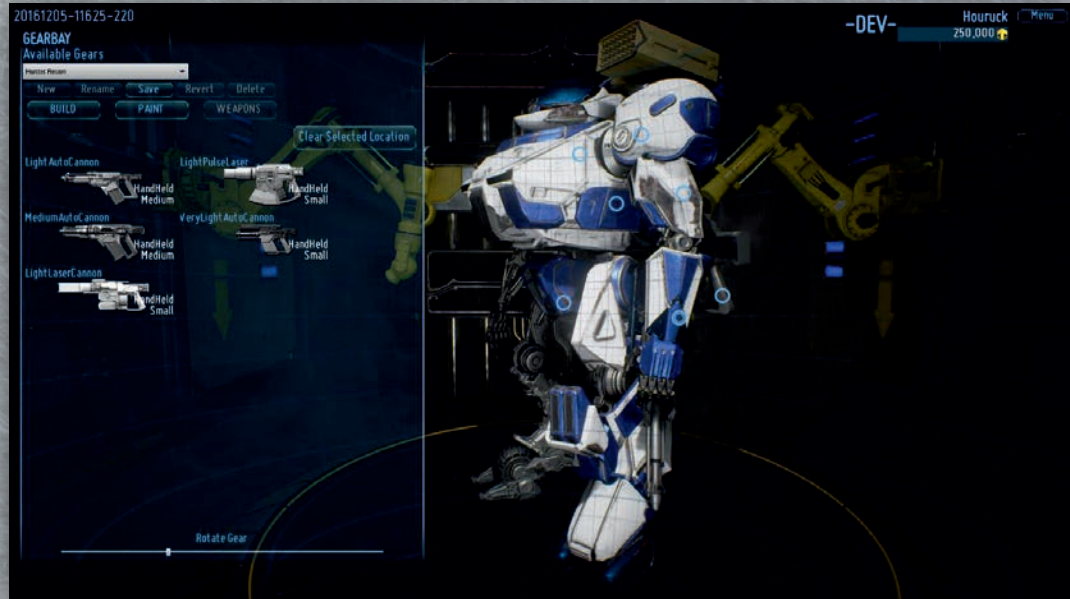
2.4.2 Painting

Each Gear has three layers you can further customize. Use the color picker and apply a material that affects the look of the Gear. Don't forget to save!



2.4.3 Loadout

Select the circled hardpoints to get the list of eligible weapons on the left. Use the [Clear Selected Location] button to remove weapons. Don't forget to save!



2.5 MARKETPLACE

With the current build, we have included the building blocks of what will be a full market economy based on the lore of Heavy Gear.

2.6 GAME TYPES

2.6.1 Team Death Match

The most straightforward game mode in which two competing teams fight against each other and score points by eliminating enemy Gears.

2.6.2 Brune's Ball

Each team has a pedestal at their base containing a keg explosive device otherwise known as Brune's Ball. To score, the team has to work together to unlock and steal the enemy's Ball and take it home. Gears carry the ball as a weapon and are able to throw it.



2.6.3 Annexation

Teams add to their score by capturing and holding generators across the map. The longer a team holds a generator the more point it accumulates. To capture an enemy generator damage it and repair it.



2.6.4 Wave Survival [PvE]

Fight against hordes of unrelenting AI controlled Gears.



3 QUICK REFERENCE GUIDE

3.1 HEADS-UP DISPLAY

- 01 Inventory** - Fuel Tank Hardpoint, Left Leg Hardpoint, Right Leg Hardpoint, Hip Hardpoint
- 02 Equipped weapons** - Left Shoulder, Left Hand,
- 03 Resources** - Hydraulics, Electricity, Fuel
- 04 Damage Display** - Armour plates and V-Engine
- 05 Match information** - Team Scores, Time, Game mode
- 06 Scoreboard** - Teams and highest ranked players
- 07 Equipped weapons** - Right Shoulder, Right Hand
- 08 Dashboard** - Radar, SMS
- 09 Torso twist indicator** - Torso direction compared to legs
- 10 Zoom** - Magnification
- 11 Speedometer** - Kilometers per hour
- 12 Radar contact** - Enemy
- 13 Distance from target** - In meters
- 14 Elevation indicator** - Horizontal orientation of the torso



3.2 DEFAULT KEYBOARD, MOUSE AND GAMEPAD LAYOUT

