***Aeronautical Forces***

**Drakengarde Mark 1 Air Superiority Fighter**

The mark one Drakengarde air superiority fighter is an unconventional design intended to be deployed with extreme rapidity to defend and secure airspace while faced with an enemy force that holds superior numbers. This vessel measures at 15 meters in length, 12.4 meters in wingspan, 4.6 meters for height which can be adjusted to an increase of 0.8 meters at max or a decrease of 0.3 meters, and a variable wing area of 40 square meters. It has a TWR of 7.2 on a light load, and can adjust both the wings and the tail for different configurations in flight. It is also built to be rail launched, furthering the speed of deployment. The empty weight is 4,886kg and it can be filled for an optimal weight of 8,000kg to 12,000kg, with a max of 18,000kg.

The fighter has a maximum nominal thrust of 980kN when in air-breathing + afterburning mode. When just air-breathing however, it has an average nominal thrust of 242 kN. The vessel can hit Mach 15.4 in upper atmosphere and Mach 5.5 in tropospheric conditions. It hosts a direct range of 13,800km as well, though maneuvering capabilities decrease massively well before such aerodynamic conditions. For flight ceilings, it maxes out at around 40,000 meters assuming it is in Earth-like conditions, has a full lox tank, and is semi-ballistic. In comparison, the average flight ceiling for air-breathing and Earth-like conditions is 30,000 meters.

The Drakengarde fighter, instead of having a biological pilot, is entirely autonomous and has no real limits in the G-force it can take as a result. Using a photon-computation system with recognition capabilities, an AI is provided that can self-learn and respond to nearly any spot in combat without errors. Upon returning to base, whatever it has calculated to be a more effective response to a given situation is also looked over, granting a sentient check to its understandings while also giving each fighter a soft capability to become an “ace pilot” given enough time. This is all augmented with a detection system suite potent enough for the ranges of AW-01 missiles as well, enabling long-distance combat.

For armaments, the Drakengarde has a primary VP-15 rotary autocannon with variable ammunition loads that enable it to perform strafing runs and engage in direct combat with other fighters. For more advanced armaments however, the Drakengarde fighter has an empty weight of 4,866 kilograms, and can bring itself to a max weight of 18,000 kilograms with ordnance. The optimal weight range is 8,000 to 12,000 kilograms however, with performance suffering when larger loads are placed on it. This enables it to work as either CAS or as a long-range dedicated fighter though, with the ordnance being placed in an underhang measuring to be 1256.6 cubed meters in its volume. Notably, despite having such a large cargo volume for ordnance at the front, one can still fire missiles at high mach thanks to dynamic straking which reduces vortex drag while being in such a position that does not interfere with the airfoil.

**Olban-Mark 3 Stealth Bomber**

The Olban is built from suborbital dropship designs, and was designed to eliminate any strategic target. It has a cockpit with bare minimum life support as such, and internals outside of an array of oxidizer and fuel tank extension spheres have been swapped out for an ordnance deployment system. This takes the form of the Olchiv system, which uses a hydrolox ignition de-orbiter and fairing setup. The max weight is 15Mg, and the system can be, with difficulty, modified to carry smaller loads for specialized runs. Otherwise, the Olban usually carries a single MOP IV, with no external armaments being available. This deployment device works rather uniquely, with it rotating to expose the muzzle in the craft’s ceiling, at which point it awaits an optimal sub-orbital trajectory where it can pressurize a set of flexible heat-resistant pillows to lock the payload in place. Once in place, an ignition in the rear chamber occurs, enabling extended flight and de-orbiting while granting high accuracy against even minute targets.

To enable its stealth, the Olban starts by using high-grade radar absorbent materials that can entirely eliminate its radar signature to anything but exceptionally advanced detection systems. To add on, the Olban also has an exterior thermal control system which can let coolant flow below the outer skin to adjust its signature for matching the surrounding environment. The outer skin is also sometimes built with minute photo-panels that can accurately shift the image of the craft for active camo, finalizing its defenses against detection.

**Oluvik-Mark Seven Orbital Drone**

The Oluvik is a strategic intelligence gathering drone designed for gathering of strategic intel and general cartography. Designed with an incredibly light-weight frame, the Oluvik is launched out of a rail device into low orbital altitudes at which point its own insertion thrusters will fire at the apoapsis to circularize the orbit and maneuver into the assigned route. This alone grants defenses against detection and interception as its small frame keeps it relatively hidden, though its stealth capabilities do not end there. Utilizing the same materials as the Olban, the Oluvik can entirely negate all but the most advanced radar as it also uses a thermal adjustment system to reduce the visibility of its heat signature. However, due to the detection suite it has on itself, it can not use active camo photo-panels to negate long ranged visual detection.

In orbit, the Oluvik unfolds a high powered telescope intended for visual recon. Acting as what amounts to a military stealth satellite, the Oluvik can capture extreme resolution images at thousands of frames to accurately assess areas found on land and water. Such image capturing can be done stupendously fast, enabling a fast return to base, most often before the enemy realizes they were spied upon. With this, the Oluvik can provide an understanding of a planet’s infrastructure, major defensive points, strategic sites, populated zones, and routes to such areas which avoid hardened enemy defenses. If kept in orbit, it can maintain the provision of such intel as well, though without any active defenses or armor, it is easily disabled if spotted.

**Semso-Mark Nine Stealth Drone**

The Semso is a lightly built drone craft intended to rapidly provide intel for troops locally while remaining undetected. It uses another lightweight frame derived from the Oluvik that is smaller than a standard aircraft by a good degree while also using radar cross-sectioning designs for a reduction of its overall signature. Zero armament is included, and it can push itself to just barely reach high atmosphere if given an initial rail launch as a boost. Its raw speed makes up for this however, as it reaches Mach 7 reliably due to its low weight, marking it as a hypersonic aircraft which is difficult to track and intercept. It has an operational range of just over 600 kilometers, however, only extended by an initial rail launch. Adding onto this, the radar absorption materials found on craft like the Olban are used to entirely negate its signature to lesser detection systems while a thermal minimization system is also included to equalize the heat signature. Photo-panels are present as well, though they can not reach some of the extending antennas, making it appear as a thin line at times.

The detection suite of the Semso is built to be far more in-depth than the norm. Its place being near the planet’s surface enables it to carry a thermal detection array which can pick out and track heat signatures of enemy soldiers, vehicles, or otherwise in the field, while sometimes also noting ambient increases of temperature that could represent large-scale energy flow of a strategic site. High resolution cameras constantly recording from the underbelly also grant info for a tactical level as needed, sometimes providing strategic information in the event of - for example - a hidden bunker door being spotted out from under a hill. Variants of the Semso sometimes also mount a radar system which can pick up moving air forces from a distance, though said radar is entirely passive to prevent an enemy from easily detecting it. Thanks to the integrated AI, the Semso can also fly entirely free of communication, helping ensure its stealth without compromising any flight capability. The absence of weapons and defenses makes this drone easy to disable however, forcing it to rely on avoiding detection.

**V-1 Cheb Attack Helicopter**

The V-1 Cheb is the standard attack helicopter of the Vogeial forces, and relies on rapid speed along with its heavy weapons to make up for relatively light armor. The profile for this heli is made to be reduced to also help boost survivability, and its auditory signature is also lowered thanks to the usage of a recessed, high-frequency turboshaft rotor engine that uses modulated feather-based blades to minimize harmonics. A Kessel engine fuels this craft, making it quite efficient as it can reliably move across hundreds of kilometers before finally being forced back to a home base for refueling. The design inherently makes it incapable of transporting excessive cargo however, and it can at best have a few soldiers or be lightly retrofitted to carry a minimal amount of supplies. It also mounts a detection and camera suite for active tracking of targets, which can all sync with missile payloads to accurately strike enemy forces, reinforcing its role as an attack helicopter for areas that jet aircraft or tanks have difficulty with.

Though relatively fast, the V-1 Cheb helicopter can not afford much for actual defenses. Armor for the V-1 Cheb helicopter ordinarily consists of a peltor alloy layer measuring 15 to 30 millimeters thick as such, rendering small-arms and some heavy caliber weapons useless. Ballistic silk padding is sometimes attached as well for softening impacts, though otherwise the heli is forced to fly light. A few variants do mount a VP-17 APS autocannon with 1,000 rounds to help negate enemy rocket fire however, radically increasing survivability. For actual weapons however, a rotating Mark 49 rotary gun is placed near the nose while two sets of four-count VP-03 missile pods are placed on either wing. Up to four AW-01 missiles can sometimes be attached as well, with medium load AW-05 bombs being swappable onto the hardpoints.

**V-3 Cheb Transport Helicopter**

The V-3 Cheb serves as the transport helicopter for Vogelian forces. Built to have a high level of modularity, the V-3 Cheb can be outfitted to either be a general transport for supplying cargo lines and delivering troops or have multiple weapon mounts aboard to instead provide direct firepower. To this end, it uses a Kessel engine that powers tandem rotors, enabling a high lift capacity that can have its cargo room downsized in exchange for armor. The exposed nature of such rotors make it still a relatively easy target to bring down even if armored though, making most focused on transport capacity, with just enough armor being added to make small-arms worthless. The V-3 Cheb also has a notably sleek, horizontally sloped design which grants it additional aerodynamic lift, with the rotors being able to shift 90° when off the ground, allowing it to switch into a prop-driven airplane for a rapid movement over long distances. It can not land in such a form though, forcing a usage of ladders and quick-drops in the event cargo or troops have to dismount within the field.

For weapons, the V-3 Cheb always has at least one Mark 49 portable rotary gun that has a variable ammunition load and an auto-feeder. Additional Mark 49 rotary guns can be mounted or simply placed at open cargo bays as well though, and VP-03 pods with four missiles in each can also be mounted amongst various spots. Some soldiers will have said missile pods hooked to their own targeting systems in the cargo bay, providing a “rain” of missiles over an area that the V-3 Cheb passes. Hardpoints can be manually attached to the underneath as well, granting some variants the ability to drop heavy load AW-05 bombs or fire AW-01 missiles. A VP-17 APS autocannon is almost always included however, staving off enemy missile attacks, with softkill measures sometimes being included as well to throw off tracking.

**V-9 Cheb Heavy Assault Helicopter**

The V-9 Cheb helicopter is a rarely deployed aircraft intended for brutal conditions that a tank can not be present for, though heavy weaponry is still needed. For this to be accomplished, the craft uses a layered single-cast and slow cooled hull supported by six armored rotors and specialized draft control vanes to successfully withstand extreme strains over an extended period of time. It also uses a rather bulky, fuel hungry Kessel engine, making the already expensive vehicle quite inefficient as well. The basic chassis thusly weighs 81Mg, and is prone to simply being produced in the field as transporting it onto a planet’s surface in a significant quantity tends to be a costly ordeal. To somewhat offset the cost however, a closed-circuit AI is used for piloting the vehicle, removing the need for any life support functions. To support such a heavy vehicle though, an assembly of coaxial twin rotor blades are magnetically coupled to an array of internal hydrogen fuel cells, creating an exhaust directly into the rotor downdraft. This maximizes thrust capacity as a result, while also providing protection from the armor directly to the modes of movement, cementing the assault role.

The armor itself is robustly built, and made entirely composite. The first layer consists of 75mm of peltor alloy, which is then followed by a dragonscale layer, 25mm of peltor alloy, 10mm of magnidar, 25mm of peltor alloy, and ferrofiber reinforcement around the internals. If struck in a 45 degree slope, this then proceeds to offer 450mm of protection against KE penetrators and 900mm of protection against HEAT rounds, making it capable of outright ignoring light tanks and most infantry-based rockets. Additional protection is then offered by a VP-17 autocannon being placed on either side of the craft with 1,500 rounds being supplied to each. An infrared spotlight and independent smoke generator then help in obscuring visual, thermal, and infrared lock-ons from enemy forces. Sixteen-count VP-03 missile pods are also present on either side, and turret mounted Mark 49 rotary guns with 5,000 rounds each are mounted on either end. Both AW-05 bombs and AW-01 missiles can also be mounted externally, providing excessive heavy fire.

**C-2 Nym Orbital Dropship**

The C-2 Nym dropship is an orbital-level form of deployment for troops and light vehicles designed for planetary invasion, redeployment, and precision strikes. The aircraft itself is rather heavy and blunt, with small wings being offset towards the rear and top. It mounts five primary flight engines and a pair of concurrent-feed pellet solid rocket boosters underneath the primary dual mode hydrolox and airbreathing engine cone to handle over capacity takeoffs. Four added engines are also included in the form of high-altitude aerospike scramjets intended to force the aircraft out of a planetary atmosphere and into orbit. These engines are placed on rigs that are then organized into the sets of alpha, beta-2, and beta-4, enabling independent rotation for each of them while also enabling shifting along the axis, up to 80° off horizontal. A special remounting port in the forward section then allows for the corresponding set to be rotated an additional 30°+ for hovering and local maneuvers. RCS thruster nodes are not included however, cutting back both on mass and maneuverability of the craft. An unfortunate flaw is that the craft actually has issues with light loads, as a nose-heavy design was implemented to emphasize a larger cargo volume and high-capacity performance. Such a design is rather difficult to fly however, forcing a black box AI to be included for general vehicular handling and avoidance of destabilization. For protection, a full 40mm peltor alloy skin is included, and a dual set of VP-17 point defense guns with variable ammunition loads keep it safe during insertions.