

OI-M1-1A Ashigaru

History and Background

The M1 Ashigaru is the first in prospective series of Powered Frames by Origin Industries, designed to be sold to military and para-military groups as a multi-purpose combat platform. Originally intended to be a smaller ground combat system, The design was changed mid-way through, increasing it to it's current size and multi-purpose role. Origin Armor Works finished the Ashigaru in record time, going from an idea in mid YE 30 to becoming reality in early YE 31. Though some concerns were raised during it's design over the lack of an aetheric power source and the use of nano-muscle, these designs were brushed aside when it was shown that the advantages outweighed the risks. The Ashigaru in its current form is a highly effective and capable multi-purpose frame.







OI-M1-1A Ashigaru

About the Ashigaru

The Ashigaru is a powerful mobile weapon, both in space or on the ground. Designed for high-to-low intensity combat, the frame has ADNR reinforced Durandium alloy armor over a sturdy Nerimium Skeleton. A defensive Electromagnetic-Gravitic shield supplements the armor, deflecting away a fraction of the beam and ballistic attacks thrown at it. The Ashigaru's control system, a basic mind-machine interface, gives the pilot dexterous control over the movement of the frame and the use of its weapons.

A Heavy-Combat unit, the Ashigaru has a varied and powerful armament. In addition to the powerful handheld weapons available to the frame, the dual Ultraviolet Pulse Lasers in the chest give the frame a short ranged rapid fire beam armament, while its similar ballistic cousin, the Short Barrelled Autocannon on the left forearm can spew out accurate fire up to 500 meters. While more of a symbolic weapon, the Phased Array laser positioned on the armor's visor is a potent weapon in and of itself. Up close, the Ashigaru is a potent melee combatant, whether it is using its spear, or punching an enemy as a last ditch effort.

Despite enviromental concerns, the Ashigaru uses a Deuterium-Tritium fueled nuclear fusion reactor for power and propulsion, using the plasma generated as propellent, forcing it out of the thrusters at high speed. The plasma is also directed through the frame, by way of numerous plasma conduits, to outlet

plugs in the hands which connect to handheld plasma weapons to give them a supply of plasma. The Frame also uses a gravimetric drive system, allowing it to hover a little bit off the ground, and to maneuver in space without using up precious fuel.

Statistical Information

- Government: None. Utilized by various corporations and black market affiliated groups
- Organization: [Origin Industries](#), [HIGA Industrial Corporation](#)
- Type: General Combat Use Mechanised Frame, Black Market Spread Powered Frame
- Class: OI/HI-M1-1a Ashigaru
- Designer: Origin Armor Works
- Manufacturer: [Origin Industries](#), [HIGA Industrial Corporation](#), various groups with access to the black market and suitable resources for construction of a frame
- Production: 72 Produced Initially. Following the initial Origin Industries production run and the release of the plans on the black market, the total amount of produced frames became unknown
- **Cost:** 40,000 KS Initially, devalued down to 25,000 KS
- Crew: Operation is restricted to one Humanoid Pilot
- Maximum Capacity: The Life support systems are sufficient to keep two humanoid lifeforms inside the cockpit .

Appearance

- Width: 5.3 Meters
- Height: 8.5 Meters
- **Mass:** 31.2 Tonnes

Speeds

- **Ground speed(Running):** 35 KM/h
- **Ground Speed(Hover):** 100 KM/H
- **Air speed(Thruster Assisted Jump):** 200KM/H
- **Zero Atmosphere:** .125c
- Range: Intercontinental
- **Lifespan:** 10 Years

Damage Capacity

See [Damage Rating \(Version 3\)](#) for an explanation of the damage system.

Hull: 15 Shields: 14 (Threshold 2)

Interior Descriptions

Cockpit

The Ashigaru's cockpit is a near perfect spheriod, with the walls covered with a 360 degree panoramic monitor, linked to the main camera and other backup optical sensors. The part of the monitor directly in front of the pilot is lined with semi-transparent status displays, allowing the pilot to focus on his surroundings without having to look away from the monitor. The Pilot's seat is form fitting, lined with foams and gels designed to absorb impacts, with a five-point harness going across the chest to keep the pilot from jerking around. The chair's headrest, and the orbs at the end of the hand-rests serve as link ups to the mind-machine interface. There is a small storage space underneath the chair for storing weapons, ammo, or clothing.

Weapons Systems

Optional Weapons

The M1 Ashigaru can use a number of optional hand-held weapons. The average loadout is a [OI-M1-W3101 Armor Killer Rail Gun](#) and a [Oi-M1-W3102 Frame Spear](#). [Powered Frame Accessories](#)

Secondary Weapons

Reinforced Hand-To-Hand

The Ashigaru's physical strength is almost unmatched in the realm of modern armor, mostly due to the leanings of it's design team. The Frame is suprisingly powerful and agile for its size, giving it the edge in melee combat. Furthermore, the Ashigaru's armor has been reinforced in key points such as the knuckles, elbows, shoulders, knees, and shins, to allow it to do that much more damage in a melee.

(1): Phased Array Laser Visor

[Origin Phased Array Laser](#)

Location: Visor **Purpose:** Anti-Mecha **Secondary:** Anti-Missile **Damage:** Tier 3, Heavy Anti-Personnel
Range:10 KM in Atmosphere, 300 000 KM in Space **Rate of Fire:**Can sustain a solid beam for 10 seconds, and can sweep the beam across the array. **Requires a 6 second recharge time between shots.** **Muzzle Velocity:** 1c

(1) Single Barrel Autocannon

Oi-M1-W3103 Single Barrel Autocannon

Purpose: Anti-Armor, Anti-Vehicle **Location:** Right Forearm **Damage:** Tier 5 or Tier 6, Medium Anti-

Armor or Heavy Anti-Armor ( **Fix Me!**): Staff needs to determine which) Range: 500 meters in atmosphere, Theoretically unlimited in vacuum Rate of Fire: 150 RPM Muzzle Velocity: Mach 1.2 Payload 200 round drum magazine

(2) Dual Ultraviolet Pulse Laser

OI-M1-W3104 Ultraviolet Pulse Laser

Purpose: Anti-Armor **Location:** Left and Right upper Torso **Damage:** Tier 5 or Tier 6, Medium Anti-

Armor or Heavy Anti-Armor ( **Fix Me!**): Staff needs to determine which) Range: 200 meters in atmosphere, 100,000 KM in space Rate of Fire: Two pulses a second Muzzle Velocity: 1c Muzzle Flash: The Ultraviolet pulse laser's discharge is a short, purpleish beam.

(2): Rotary Missile Launchers

The Ashigaru has two fifteen round rotary missile tubes, located in the calves of the armor. This is a full list of possible [Missiles and Rockets](#) that can be used in the launcher.

Systems Descriptions

Hull and Hull Integrated Systems

Hull and Chassis

The Ashigaru is heavily defended, with a resilient ADNR-Durandium alloy outer armor, and a sturdy Nerimium internal Skeleton. Though heavy in comparison to powered armor, the Ashigaru's designers concluded that the lack of speed of was more than made up for by the defensive capability of the frame.

ADNR reinforced Durandium Alloy Outer Armor with electromagnetic field&heat dissipating coating The Ashigaru's outer armor is composed of ADNR impregnated Durandium, layered in plates over the frame's skeleton. The Armor is neither heavy nor light, but offers superb protection. The outer armor is electrically charged, generating a tight, form fitting electromagnetic field, separate from the shielding system. This electromagnetic field isn't powerful enough to completely deflect incoming attacks, but it does weaken kinetic impacts and damage from Particle Plasma and Laser weapons, up

until the point where the charge wears off. The armor also has a layer of heat-dissapating paint, which ablates off when exposed to high-temperatures, leaving the armor under it unharmed. **Armor Type:** Medium **Structural Points:** SP 5

Nerimium Internal Skeleton The frame's internal skeleton is constructed from Nerimium for a sturdy build. The skeleton's joints are flexible enough to mimic human movement, a magnetic coating applied to the joints to decrease friction; a few changes have been made to it's structure in order to compensate for size. Armor, electronics, and other systems are mounted directly to the skeleton, with plasma conduits running along it. The cockpit, nuclear fusion reactor, and main computer are located inside a protective 'ribcage'. The Frame moves it's limbs with numerous nano-muscle clusters, each one enhanced by hydraulics and electric motors. This system gives the Ashigaru the ability to move its limbs, and without it the Ashigaru would just be a big statue.

Armor Type: Light **Structural Points:** SP 10

Life Support

The Ashigaru has a standard life support system, with a pressurized cockpit, oxygen scrubbers, and a temperature-humidity regulation system. The Ashigaru also has an inertia control system to keep the g-forces on it's pilot to a minimum.

Fuel Binders

The Ashigaru has three Fuel Binders, with the large one on it's lower back, and the smaller ones on the back of each shoulder. The Fuel Binders have a dual usage, both acting as extra limbs to assist in AMBAC movement, and as fuel-storage. In the role of extra-limbs to assist in AMBAC, the Fuel Binders are connected to the Ashigaru by highly flexible joints, which allow the Binders a 90 degree range of movement. In the fuel storage role, the Binders each contain an hour's worth of Deuterium-Tritium liquid fuel, with fuel lines leading to the Fusion Reactor. The reason the Binders also serve as fuel-tanks is to increase their mass, which assists in AMBAC movement. The Fuel-Binders are detachable from the Frame, though they are only detached if they are damaged to the point where they are more of a hindrance to the armor.

Shields

In keeping with its role as a heavily armored battle platform, the Ashigaru has two types of shields, electromagnetic and gravitic, layered with each other. Each shield is generated from two tandem generator pairs within the frame. The two shield systems work in concert, allowing the frame to survive large amounts of damage

Electromagnetic & Gravitic Shielding

The [Electromagnetic shield generator](#) is located in the Ashigaru's lower torso. The shield generator creates a powerful field, which hugs close to the frame like a tight bubble. The [Gravitic shield generators](#) are located in the Ashigaru's shoulders, creating a spherical gravitic shield around the entire frame.

Locations: Lower Torso and Shoulders **Shield Points:** SP 14 (2) **Runtime** Operative as long as power is available

Power

Primary Power

Owing to its large size, the Ashigaru uses a powerful Nuclear fusion reactor, located in its chest, to generate the majority of its power, as well as to generate plasma for propulsion. The Ashigaru's reactor requires Deuterium-Tritium liquid fuel in order to operate. The Ashigaru carries enough fuel for six hours of operation

Plasma Conduit System

In order to transfer the plasma from the nuclear reactor to hand-held weapons and auxilliary thrusters, the Ashigaru a series of Plasma Conduits which transfer plasma from the nuclear fusion to the smaller auxilliary thrusters which line the back of the frame's legs. Plasma conduits also lead to plugs in the frame's hands, which connect to handheld weapons to supply them with plasma, or to be used a last ditch weapon (The plasma only goes out to half a meter, but does Tier 5 or Tier 6, Medium Anti-Armor or

Heavy Anti-Armor ( **Fix Me!** : Staff needs to determine which) damage to anything it connects with).

Secondary Power Sources

As a backup, the Ashigaru has five stirling radioisotope generators (SRG), which in normal use supply backup power to the frame's electronics. During an emergency, the RTGs can be used to power the entirety of the frame, though there is not enough power for combat operations.

Electronics and Propulsion

The Ashigaru uses the [Pawn](#) to assist the pilot, easing his workload and making him that much more effective in combat.

Computing

The heart of the Pawn suite is an extremely advanced quantum computer, capable of performing nearly endless amounts of data-churning and possessing untold memory. Quantum computers, unlike old computers which could only process 1 and 0, can process an effectively infinite range of digits. Unlike its larger brethren, the Pawn suite does not have a very large memory for data storage, and must be more or less purged once a year to remain effective. The Ashigaru's computer is located in an armored box, just below the cockpit

Sensors

The pawn suite has sensors which, in passive mode, can detect things up to 1,000 miles away, and in active mode can detect and provide information (Heading, velocity, size, ship type, energy signatures) on objects up to 550 miles away. All of the Ashigaru's sensors are located inside the frame's head, while the main visual sensor is the large 'Visor' on the frame's face, secondary optics are on both sides of the head, in the chest and back shoulders. The Ashigaru has a variety of sensors including:

- Electromagnetic sensors
- Electrogravitic sensors (scalar)
- Unified field mass/energy sensors (Field of force sensors (Ie, Gravity, Radioactivity, and Energy))
- Neutrino sensors (nuclear reaction sensors)
- Aether detectors
- Visual sensors
- Mass Detectors

Targeting control

The Pawn Suite has a targeting control system that can give detailed information (Heading, velocity, size, ship type, energy signatures) on ten targets, as well as position and orientation (IFF) on up to 25 more targets.

Communications

Laser

For close-range transmissions, it is more difficult for the enemy to intercept, because they have to be in the area of the beam. Also limited to light-speed.

Radio

Full spectrum, Dual-Modulation, range theoretically unlimited except by interference. Practical range is short, since the waves only travel at light-speed.

Control Systems

The Ashigaru uses a Mind-Machine interface control system, linking the pilot up to the Frame directly. Interface is achieved when the pilot sits in the control seat, the seat itself being the centerpiece of the interface system. The mind-machine interface is a step above manual controls, and allows for pilots transferring to the Ashigaru to have a shorter time to learn how to pilot it. The Interface also gives the frame faster movement and quicker reactions times.

Active Mass Balance Auto Control (AMBAC)

Active Mass Balance Auto-Control (AMBAC) is a program in the Ashigaru's Pawn AI suite that allows for thrusterless manoeuvring in the zero-G environment of space by means of precise movement control of their limbs. AMBAC works by leveraging the Third Law of Motion (when there's an action there is an equal and opposite reaction) with regard to inertia to effect changes in direction. AMBAC is by its nature limited to re-orienting the Ashigaru about its center of mass, and is not a substitute for propulsion.

Automatic Stability Management

Another design feature on the Ashigaru, the ASM is four gyroscopes, one in each shoulder, and one in each of the Frame's thighs. The gyroscopes serve to keep the Ashigaru steady during aiming and maneuvering. A unique feature, the ASM helps to improve the Ashigaru's frame while it's on the move.

STL Propulsion

The Ashigaru uses a Nuclear-Thermal Plasma Rocket system, which uses the Plasma generated from its nuclear fusion reactor to generate thrust, and a secondary gravimetric drive. The main thruster unit is on the Ashigaru's back, and is connected directly to the fusion reactor. The thrusters use electromagnetic to push the plasma out at high speeds. The rear of the Ashigaru's legs are covered with additional thrusters, which are connected to the main reactor through a series of plasma conduits. These secondary thrusters provide additional thrust, and assist in jumping and high-speed movement on the ground. The Gravimetric drive system both generates limited anti-gravity to keep the Ashigaru mobile in terrestrial environments, allowing it to hover and use the plasma thrusters to propel itself forward as a sort of secondary movement system; and as a secondary propulsion method, causing the frame to make 'controlled falls' in order to accelerate. As a propulsion method, the gravimetric drive is used to slow down and change the ashigaru's direction, which when combined with the AMBAC system, gives the frame a greater maneuverability than it would have without it.

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Last update: **2024/02/24 07:37**

