

So-O2-1A Haidan VAADW

The So-O2-1a Haidan VAADW is a small, lightly armored scout drone designed by [Solan Starworks](#) in [AR 922](#).

History and Background

During the midpoint of the [Second Outer System Conflict](#), it became increasingly necessary to keep track of rebel forces and maintain accurate data when fighting a guerrilla force that had decidedly maintained that it would engage the [Astral Vanguard](#) on its own terms. The Haidan VAADW began when the [Astral Vanguard](#) wished to develop a tough and versatile spotter unit for its artillery divisions, without risking any more living personnel on the front lines, especially if heavy weapons were concerned. Eventually the request was expanded to one for a scout and tracking unit as well.

The design needed to be able to operate in a relatively stealthy manner and still be quite maneuverable for its size and relatively low-tech design. Instead of looking to the new radical technologies of the day, the Haidan takes some of the best and most innovative technologies of the past, from the early orbital elevator solar panels to civilian propulsion systems that are still used today.

During the course of the war, the HV allowed for [Astral Vanguard](#) forces to keep the upper hand in planetary combat through the extensive use of Haidan VAADW allowed for pinpoint strikes and preemptive assaults on rebel assets with few civilian casualties. It also performed remarkably in combat, being more than a match for anything less than a rebel VANDR or VAHIN.

Haidan refers to the Saalsari term for hunter or force, while VAADW means VAnguard Autonomous Drone Weapon.



So-O2-1a Haidan VAADW

About the Haidan VAADW

The Haidan VAADW is lightly armored and armed, and not built for a head-on fight with dedicated military powered armor or frames, primarily equipped to combat light infantry or attack vulnerable stationary targets with its laser cannon, and can physically overpower and outmaneuver a majority in land-based confrontations as long as it is not taken out at a distance. Although no match for the superior armor and weaponry of powered infantry and frame units, its agility, stealth and physical strength can allow large numbers of VAADW to occasionally overpower units as large as an [Erla VANDR](#).

Statistical Information

Government: [Iromakuanhe Astral Commonwealth](#)

Organization: [Astral Vanguard](#)

Role: Scout/Skirmisher Auxiliary

Type: Organoid Drone

Class: So-O2-1a Haidan VAADW

Designer: [Solon Staryards](#)

Manufacturer: [Solon Starworks](#)

Production: Mass Production

Width: 43.32cm (2.07m in Aerial Mode)

Length: 1.73m
Height: 1.29m
Mass: 431.77kg

Range: Limited by sunlight and biomass availability. In nominal¹⁾ conditions, the unit may continue operate for the term of its full lifespan.

Lifespan: Approximately 8 years of continuous service, extended by repairs and storage in stasis.

Speeds

Ground Speed: 95 KPH
Air speed (Flight): 520 KPH

Damage Capacity

Hull: 3
Shields: 3 (1)

Weapons Systems

Integrated Weapons

(1): So-O2-W0922 "Searing Ray" CELB Laser Array

CELB (Compression-Enhanced Light Beam) Laser

Location: Head
Purpose: Anti-Vehicle/Anti-Starship
Secondary: Navigational Protection
Damage: MDR 3

Range: 10 KM in Atmosphere, 300 000 KM in Space
Rate of Fire: Beam can be maintained for up to 1 minute. Cooldown is 1/4 of projection time.
Muzzle Velocity: 1c

Other Weapons

Physical Abilities

For its size, the Haidan VAADW features immense physical strength, agility and flexibility due to its

construction from high-performance culture organic tissues and lack of a conventional skeletal system. It is able to lift up to ten times its own weight on its back, or spring forward with tremendous force without fear of damaging itself. Direct physical blows from infantry²⁾ may frequently be ineffective because the segmented bones and flexible tissues are able to warp with the shock without breaking or bruising.

- Recorded to leap over a hundred meters and safely land from two kilometer falls.
- May survive crashing into a wall while running in excess of eighty kilometers per hour.
- May safely lift up to four metric tons of mass on its front torso.

Natural Weapons

For the purposes of making it self-sufficient in the wild and improving its abilities in combat scenarios, the Haidan VAADW was engineered with the ability to adopt some of the attributes of species native to the [Iromakuanhe](#) homesystem. As a unit that might have the ability to hunt or harvest local fauna and flora to sustain its biomass, it features the jagged hexagonal beaks of [Hlaraian](#) avian species, from which it also borrows the shape of its retractable wings. The head also features a blunt Y-shaped prong rising from the top center that is primarily for lifting obstacles or gashing soft targets. Its feet have the ability to form into split hooves to traverse grasslands, clawed paws for broken terrain and even insectoid pointed stilts.

Because all of these components are made of strong [Aerudirn](#) alloy, the unit is able to slice or claw through low-grade materials such as simple steel alloys, commercial composites and can even wear or buckle [Durandium](#) plating with enough time.

- Jaw has sharp hexagonal 'teeth' made to slice or grind all types of organic matter.
- Head has prong to toss or gouge out obstacles when moving.
- Feet can shift into clawed feet, hard hooves or pointed stilts.

Systems Descriptions

Hull and Hull Integrated Systems

Hull and Chassis

[Aerudirn Armor Colonies](#)

Aerudirn consists of living colonies that grow out into thick, smooth sheets of a high durability, that are have been bred to be resistant to damages from radiation and can charge themselves with an electrostatic field to enforce their surface tension, thereby inhibiting penetration by weaker solid-ammunition weapons. Should the shell be damaged, the colonies underneath, which are dense enough on their own to survive exposure to vacuum can quickly have other sections stretch to accommodate tears, and regenerate completely with enough time.

[Organoid-type Substructure](#)

Highly resilient organoid tissues form the remainder of the body, including an endoskeleton, muscles and primitive organs. The tissues have exceptional toughness compared to those of normal species, and can even survive in vacuum conditions should the entirety of the upper armor layer be destroyed. Given the living nature of the organoid, the frame will retain the ability to move its limbs, even in the event of power failure.

Shields

So-O2-S0784 KORD System

So-O2-S1922 Resistor Barrier Shield

Power Generation

Main

So-O2-G0922 Photoreceptor Skin System

Using early Commonwealth solar collection technology and applying it for military purposes, the Photoreceptor Skin System is a solar energy system which generates power through the use of quantum dot and nanoantenna photovoltaic components. In tandem with the unit's natural bioelectric fields, they provide enough power to sustain all systems except for high-speed flight and combat. The receptors are able to retract into the chassis during combat situations or to improve stealth.

Capacitor

So-O2-G1922 Zaiflar Supercapacitor

Powered by the G0922 system, the Haidan features a single Zaiflar that is able to store enough power for several days of [GE Lifter](#) flight or several hours of combat using the unit's laser cannon.

Propulsion

So-O2-P0922 GE Wing System

The GE Wing system of the Haidan VAADW is comprised of a pair of retractable hollow [Aerudirn](#) wings wrapped around dense, thin muscular rods that unfurl as the wings exit the back and spread out to give the unit an impressive wingspan of a little over two meters. In these wings are numerous small liftspheres which generate Lorentz force interactions which allow the unit to float around like a stealthy hovercraft, negate gravity and allow it to fly like a bird or both at once for performance similar to light aircraft, using the movable segments in the wing as a rudder system.

The wings are sturdy enough to support the full weight of the unit and allow it to glide even when not utilizing either component of its GE Lifter, allowing the unit to traverse difficult terrain such as mountain ranges exclusively with mechanical power.

Electronics

Computer

So-O2-E0922 Drone ANIE

Communications

So-O1-E1922 Drone Scout Type Communications Package

The communications package found on the So-O2 is roughly equivalent to those used by powered frames and heavy drone fighters, due to it potentially operating at a significant distance from supporting fleets. A quirk in the design requires that the unit stand upright and stretch its wings upwards to engage [MASC](#)-based communications.

Includes

- Radio
- Laser
- [MASC-Assisted Radio](#)
- [MASC-Assisted Laser](#)

Passive Sensors

So-O2-E0922 Haidan VAADW Warning Sensors

The warning sensors of the Haidan VAADW were integrated into the chassis for the purposes of detecting phenomenon in orbit over a world such as the movement of fleets or the usage of distortion engines by hostile forces on the planet.

Includes:

- [Vector Wave Sensors](#)
- [Subspace Mass Sensors](#)

Active Sensors

So-O2-E0922 Haidan VAADW Monoeye Array

The monoeye array of the unit consist of specially-designed organoid eyes with infrared and low-light vision. More conventional electronic thermal sensors have been included to improve the detection and avoidance of lifeforms.

Includes:

- Thermal Sensors

So-O2-E0922 Haidan VAADW Scanning Array

The scanning array of the So-O2 is a deployable radome that retracts into the back of the unit, designed to make accurate scans of a target area and analyze it for potential targets of interest for artillery.

Includes:

- RADAR
- LADAR
- MASC Particle Scanner

¹⁾

Yamatai, Nepleslia or Maekardan-like

²⁾

Including super-soldier species such as ID-SOLs and Nekovalkryja.

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