

U-1 Production Model Variable Mecha

The U1-02a is the production model of the [variable mecha](#) developed by the OSO in [YE 38](#). It is designed primarily to make the most of the [OSO's](#) limited ability to deploy ships by being able to fill multiple roles from interceptor, to bomber, ground based fire support, drop ship, sensor platform, Anti-Starship and package delivery.

About the U-1

U1-02a	
Class Overview	
Class	U1-02a
Organization	OSO
Manufaturer	Mothership "White Lament", OSO
Designer	Alex Patton, Dr. Aiesu Kalopsia (Ayetseu Karoupshea) L'manel
Mission Specialization	Multi-role Small Craft
Price	55,000 KS
General Characteristics	
Type	Variable Fighter
Lifespan	5 Years
Mass	13 metric tons dry, 18 metric tons standard takeoff, 30 metric tons maximum takeoff
Fighter Mode	
Length	14m
Width	See wingspan section, body is 4.75 meters wide
Height	3m (with landing gear extended)
Max Speed (Atmosphere)	Mach 4
Max Speed (No Atmosphere)	.3c
Hyperspace Fold	0.25ly/min
Mecha Mode	
Length	3m
Width	4.75m
Height	12.5m
Max Speed (Atmosphere)	Mach 1.7
Max Speed (No Atmosphere)	.27c
Hyperspace Fold	N/A
Wingspan	
Fully extended 20°	14 meters
Swept forwards 46°	11 meters
Overswept forwards 72°	8.25 meters
In stowage position at 122°	4 meters

U1-02a	
Class Overview	
Crew	
Pilot	1
Passenger	1
Defenses	
Tier	7, Mecha, Unarmored
Shield	Sphere
Detection	
Optical	Unlimited
Subspace	1 LY
Thermal	Unlimited
Stealth	N/A

The U-1 is not intended for any single purpose. It is highly modular to ease repair (All damaged arms/legs and heads can be swapped out with fresh ones in about an hour) and it has many hard points to mount weapons. The continual development of the [U-1's prototype](#) has provided the production model with a growing inventory of usable equipment and continued development of the fighter is intended to continue bolstering the roles the U-1 can take on.

The production model of the U-1 swaps out the salvaged and custom equipment added to the prototype in favor of homebrew technology. Adjustments to material composition and layout have also been made to reduce weight and generate an even more stripped-down version of the fighter craft. This stripped down base model can then have other features added in to customize the craft to the intended roll or pilot preference.

History

The U-1 began development after Operation Bright Venom, the operation to remove the NMX from the [I'ee](#) home system. [Alex Tasuki](#) pushed heavily for a variable fighter design, despite dislike for a variable mecha/fighter craft design from other designers helping OSO out... and indifference from Uso herself. Variable mecha are extremely complex machines, and though other engineers fell short Alex was able to get the basic design put together with help from [Dr. Aiesu Kalopsia \(Ayetseu Karoupshea\) L'manel](#), and took many of the components from his own mecha.

Uso didn't want to have to scrounge up an all new design for small attack craft, shuttles, ect... and ended up working with Wazu to develop additional modules for the U-1 to fill other needed roles for the organization. The organization soon found the U-1 quite able to replace shuttles, support craft, and a variety of other equipment. Rather than developing these additional craft for the organization it was decided to just build a production version of the U-1 that could be produced locally. This effort was started in [YE 39](#) and quickly finished. Wazu and the spacers would handle converting the U-1 design to the production model, leveraging experience with the [Phantasm Gunship](#) and the FA4 to build in modularity and avoid aerodynamic pitfalls.

Development of the U-1 didn't stop either. By late [YE 39](#) the craft had been updated to be able to carry an increasing arsenal of weapon systems. A technology sharing gentleman's agreement (as no official documentation was signed or agreed to by either party) between the [Frontier Service Corporation](#), [Independent](#), and Vier would open up new equipment and creature comforts for the design. Vier herself and Wazu would continue small tweaks and upgrades as well as continue to build up the electronics and payload options for the craft. The mecha even found its way into construction and utility work, making it the most widely deployed ship in the OSO's inventory.

Appearance

In Mecha-Mode the U-1 has an angular, blocky, humanoid shape. Some sections, like the arms between the shoulders and the forearms are sleek and rounded much like the head which also sports a unicorn like horn. The cockpit is also smooth and rounded, ending up folded against the chest when in mecha-mode.

In fight mode, the 'legs' with the engines enclosed are on either side of the main body, and extend backwards with a slightly larger than 3 meter gap between them where additional equipment is enclosed. It has a pelican style tail that extends to the rear to help balance the whole craft, and forward swept wings that are also located slightly behind the craft's center of mass. The craft's intakes also extend out from the main lifting body area slightly. Unlike the prototype U-1, the thrust-vectoring section of the production model is rectangular instead of tapered.

Interior

The interior of the craft varies depending on the mode it is in. In fighter mode, the cockpit is fairly standard.

However when in mecha mode, the cockpit shifts around, becoming more compact and armored as well as activating the analogue controls for the arms and legs.

Getting In and Out

To enter the U-1, the user sends a signal to the computer to open up the cockpit covers, which unfold to either side of the front fuselage, and then the cockpit opens upwards, allowing entry. A ladder also folds down to allow the pilot to climb in.

After entry, the cockpit folds back down and the cockpit covers fold back over the cockpit. Then, the displays are activated as well as a system that allows vision as if the cockpit covers were transparent.

Hardpoints / Weapon Systems

The U-1 has many hardpoints on which weapons, armor, thrusters or additional systems can be mounted. The hardpoints and the equipment that can be held there are listed below. Some equipment is so bulky that the U-1 is unable to transform between modes while it is equipped.

Head Hardpoint	
Forearm Hardpoints	x2
W3900 Arm mounted Gunpod	Uses both Forearm Hardpoints
W3900 Minimized Gunpod	
W3900 Rifle Gunpod	
U1 Shot Cannon	
U1 Spear and Shield	
Starfighter Primary Laser Weapon	
Upperarm Hardpoints	x2
Shoulder Hardpoints	x2
Chest Hardpoints	x2
Upper Leg Hardpoints	x2
Wing Hardpoints	x8
W3900 Minimized Gunpod	
W3900 Rifle Gunpod	
Hardsell Coilcannon	
Wing Tip Hardpoints	x2
Back Hardpoint	
Module Port	
Interior	

Armor Systems

The U1 is unarmored, however the craft can be up-armored through add-on armor packages.

U1-02a Armor Inserts

The [U-1 Production Model Variable Mecha](#) included the bare minimum of protection needed to function, but options were left in for up-armoring the vehicle by inserting armored plates into the spacing between the hull and key areas of the craft. Pilots can choose to swap back to the original protection levels of the prototype U-1 by adding inserts with heavy duty [Durandium Alloy](#) sandwiched between high strength composite materials. This reduces the U-1's overall top speed considerably because of weaker engines.

Stat Changes	
Tier 7, Light Mecha, Unarmored	Becomes Tier 7, Light Mecha, Medium Armor

Stat Changes	
Fighter Mode Speed .35c	Becomes Fighter Mode Speed .32c
Mecha Mode Speed (Atmosphere) Mach 1.7	Becomes Mecha Mode Speed Mach 1.2
Mecha Mode Speed (No Atmosphere) .27c	Becomes Mecha Mode Speed .23c

U1 External Armor Harness

The U1 can equip an external armor harness for added protection while in mecha mode.

Stat Changes	
Tier 7, light Mecha, Unarmored	Becomes Tier 7, Medium Mecha, Heavy Armor
U1 can not transition to fighter mode while equipped	
Mecha Mode Speed (Atmosphere) Mach 1.7	Becomes Mecha Mode Speed Mach 0.9
Mecha Mode Speed (No Atmosphere) .27c	Becomes Mecha Mode Speed .19c

Onboard Systems Descriptions

The U-1 has standard sensor, life support,power and thrust systems. It is also very durable and has many redundant systems to keep it in the fight even after extreme damage.

Computer

The U-1 production model uses a cluster of scale datapads for computing power. This hardware comes with an suite of programming tools to help adjust the behavior of the U-1, setting systems to automatically deploy under certain conditions, automatically take defensive action, and generally assist with piloting and maintaining the craft.

Hull / Internal Structure

The Hull of the U1 is composed of high-end composite materials. The internal supporting structure is made of durandium tubes, maximizing the weight reduction without compromising strength of the internal structure. Nearly all of the armor of the U-1 Prototype was stripped away, leaving the craft with the bare-minimum amount of protection to function in space.

Under [Damage Rating \(Version 3\)](#), the U-1 Production model counts as unarmored.

Propulsion\Power Plant

The U-1 uses a pair of powerful engines for propulsion, power, and gravity manipulation. This version of the U-1 also includes a series of inset RCS style thrusters and reaction control wheels to help with precision maneuvering.

Life Support

The U-1 production model uses a pair of [Liquid Ally](#) life support systems, one under each chair in the cockpit. Each is remotely controled, and provides enough oxygen to support two people for about a month without needing to be cleaned / let out to play. The liquid allies are remotely controlled to provide an optimal environment for the crew, with oxygen and inert gasses adjusted accordingly to improve performance and alertness.

Sensors

The U-1 production model uses a subspace radar built into the nose to detect objects, exotic particles, and space-distortion at extreme range in a 270 degree arc infront of the craft while in flight mode, and 170 degrees infront while in mecha mode. Small Optical and Thermal sensors are built into the legs, eyes, and chest of the mecha, providing a constant 360 degree view of the craft's surroundings.

Shields

A basic shield generator is installed along the spine of the craft, and generates a wide range electrostatic field that can slow and block projectiles as well as ward off harmful radiation. The U-1's engines are also used to generate a powerful gravity distortion field to help shield the craft against scalar attacks.

Transformation

The major system of note is the transformation system. The transformation of the U1 is based on a simple concept: The hull being built around a single "spine" piece. This piece acts as a truss, pushing the legs further back in fighter-mode and bringing them to bear against the nose of the U1 in its frame-configuration.

The transformation begins by breaking the shoulder of the frame behind its front intakes, which are linked to its hips - which unlock from the underside of the body. The legs, supported on the spine-truss swing down to lock against the underside of the fuselage.

The shoulders (resembling the "normal wings" of a craft directly behind the intakes but before the large forward swept wings) slide forward, rotate and lock against the body providing support while the back-plate rotates 90 degrees - making the shoulder-plates much smaller and providing mounting-trusses for the shoulders themselves to dock into.

The long forward swept wings sweep backward into a fork-like housing, becoming finlets on the hips - and the large rudders are rotated 180 degrees and angled rearwards to avoid contact with the ground.

The arms of the fighter are housed directly beneath its bulky engines - with the four nozzles above becoming part of its backpack and the arms below on segmented rail locking to the shoulder-housing.

At this point the intakes now on the hips tilt and shut, sealing the engines off.

It should be noted that a second pair of “arms” are located inside the knees, commonly used with the fore-arms and rotating rear engine-pods to tilt down as a VTOL lift system in flight configuration.

In addition, the forward swept wings can lock forward into a delta-formation for high speed forward flight during fighter mode operation.

The space between the two engine pods is designed for a bespoke mission operation package which in the transformation sits between the two engine-pods becoming the backpack of the frame on the armature which hangs between the two which in transformation becomes a 'tail' of sorts.

This whole process can be completed within 10 seconds.

Cockpit

The cockpit of the U1 has a full set of volumetric projectors for interior displays, along with a [FMS Aerospace Seating System](#) for the pilot and co-pilot to sit in. It is normally equipped with the rocket style ejection system, but this can be swapped out.

The cockpit contains the following equipment:

- First Aid Kit
- [Liquid Ally](#) Container.
- [Modonafil](#) Tablets

OOC Information

Alex, Osaka, and Zack made this.

Approval Thread: <https://starmy.com/roleplay-forum/index.php?threads/u-1-again.60026/>

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