AMX-102 WINTER

Complementary Articles

- Limb & Systems Layout (Comprehensive art coming soon)
- In-Depth update information

History and Background

The Winter series of powered-frames was fielded prematurely in the form of the AMX-101 Winter, a high speed atmospheric defensive armor, intended to repel possible SMX invaders. The AMX-102 is the identification code for updated AMX-101 units with the X-102 software and hardware package.

About the Winter

Set to become standard issue to AMX-101 units, the X-102 update package replaces a number of smaller critical parts, including the internal skeleton. These modifications grant the unit space warfare & tactical ability, seriously improving the unit's stability and efficiency. The upgrades also allow the newly designated AMX-102 to wield the Compressed Packet Rifle (an otherwise crew-servicable weapon) alone and with great ease.

To make up for the large target profile, physical strength and key tactical abilities (primarily armor suppression systems) have been added, making the 102 a natural enemy to any armor smaller in size.

The unit is also able to dynamically shift its size, though it becomes bulkier as it's height is reduced, allowing it to fight indoors.

Stats

Ownership

Government: Lorath, LSDF Organization: LSDF Type: Multi-role assault platform Power-Frame

Production & Design

Original Designation: LO-AMX-W-102 Production Designation: LM-PA-“Winter”-001A Designer: Leal 'Rebirth' Tur'lista Manufacturer: Lorath Matriarchy Production: Mass production Added Note: Overhaul of AMX-101 - New classification: 102

Crew:1 Maximum Capacity: 2

Width: 1.2 Meter Minimum Width: 1 Meters Height: 4 - 4.5 Meters Minimum Height: 2.2 Meters Mass: 550 Lbs

Speed

Ground speed: 750 MPH (Thruster assist) Air speed: Mach 10.2 (Interception) Air speed: Mach 5.3 (Cruising configuration) Zero Atmosphere: .425c Maneuverability: High

Mobility

Madaq Rotation [1)]: 0.25 seconds Madaq Switch [2)]: 0.4 seconds Assisted Switch & Risk [3)] : 1.1 Seconds, Low to moderate Mardaq Combat Recovery [4)]: 3 seconds (best case scenario) Escape Time [5)]: 24 seconds

Range: Interplanetary Lifespan: 30 years with semi-regular maintenance and upgrade cycles

Weapons Systems

Augmented Subspace Field Assisted Rail cannon

Utilizing pre-existing technological concepts, the Subspace Field Assisted Rail Cannon utilizes complex magnetic and subspace fields to propel a projectile from the weapon at which border luminal velocities.

The weapon is located on the right primary arm and is integrated into the Frame's structure, but can be removed if required.

Thanks to an overhaul and careful calibration of the targeting software and hardware, the useful range of the SFARC has more than doubled, with every aspect of the firing mechanism adjusted to ensure the round meets it's target, though the rate of fire suffers during attacks beyond 100 Km atmospheric, since the whole assembly needs time to calibrate and calculate the trajectory of the round. This makes it ideal for trans-orbital surgical strikes, augmenting it's existing scope of ability. The hip-fin mounted guns have a somewhat limited range, unless telescopic mounting arms holding the weapons are extended (putting them at risk). The loadout of the hip guns is typically better suited to high-speed combat whereas that of the arm is better suited to long-ranged engagement and sniping.

Depending on the requirements of the mission, the SFARC can be exchanged with an LGC or vica-verca on any of the four slots (two wrist, two hip). Standard issue units carry a single SFARC in the right arm.

Location: Primary Arm (Right), Internally mounted. An additional pair can also be hip-mounted. Purpose: Anti-Armor Effect: Various depending on rounds used. Range(Atmosphere): Up to 200 Km Rate of Fire: 2 Rounds per second. Delayed to 0.5 per second beyond 100 Km (Atmospheric only) Payload 100 Note: Technology based on: L-Mark-Two

Ammunition

Ammunition for the rail cannon is provided by an externally mountable container which attaches to the upper section of the primary arm equipped with the rail cannon. Through the use of gravity manipulation, the ammunition container for the Winter has been granted a near feather-weight, even while carrying a full load of ammunition. Ammunition for the weapon is fed through a link less feed system.

This weapon utilizes 100 rounds of 30mm ammunition

Linear Gatling Cannon

Located on the left primary arm of the Winter, the linear gatling cannon is an integrated version of the FMS-1 Linear Rifle "Stalwart Special". This weapon is a linear accelerator which is used to propel high velocity needle-like rounds at an intended target. The ammunition for this weapon is held in an external container which like the subspace rail cannon's ammunition container, has a gravitational control device which reduces the weight of the ammunition to feather-like weights. Depending on the requirements of the mission, the LGC can be exchanged with an SFARC or vica-verca on any of the four slots (two wrist, two hip). Standard issue units carry a single LGC in the left arm.

Location: Primary arm (left), internal. Primary Purpose: Anti-Armor (point defense) Secondary Purpose: Anti-Personnel Damage: Tier 4, Light Anti-Armor Payload 2500 .05 Caliber Ceramic composite linear rounds. Payload Note: Standard payload of ammunition is delivered by externally mounted container, 400 rounds are held internally. Rate of Fire: 700 Rounds Per Minute Notes: Internally mounted variant of FMS-1 Linear Rifle "Stalwart Special"

Compressed Packet Technology Compatible Plasma Vent Strips

An augmented form of the original Plasma Vent Strip which takes advantage of various new plasmic engine augmentative technologies, the plasma vents now remain dense at a much greater range, requiring less plasma to create an effective weapon. Either a shotgun like cloud can be released or a highly intense and thin “beam” of plasma can be directed precisely to targets up to 100 meters away in any direction, though the stream does not change direction instantaneously.

- Location: Located upon the frontal torso, thigh fin tips, back of the neck and shoulders.
- Primary Purpose: Missile & drone defense solution
- Secondary Purpose: Close-quarters suppression & Surgical strikes
- Damage: Tier 7
- Payload 30 Second bursts. Five second recharge
- Rate of Fire: Semi-auto, three second burst, stream.
- Notes: Lorath Plasma Arc Disruptor

Magnetically Contained Charged Plasma Sabers

There are two types of MCCPS - Internal and external. Internal are designed for cutting and parrying roles (with the exception of those mounted into the thumbs) while external are designed for assault. Each unit has its own stores of plasma, the cartridges identical to those found within the Magnetically Contained Charged Plasma Saber. This hand-held plasma saber is meant to produce a high strength projection of plasma, the power for the hand-held unit is delivered by its own plasma generating system and gas collection system but can be fueled by the unit if need be.

- Number: Three units, two units in hands with three emitters each, one hand held unit
- Location: Mounted within the index, middle fingers and thumbs of the primary arms, and one hand held unit.
- Primary Purpose: Armor Cutting, melee
- Secondary Purpose: Thermobaric attack
- Damage: Tier 9, Heavy Anti-Mecha
- Payload When attached to Winter reactor, three hours.
- Rate of Fire: Stream
- Note: Magnetically Contained Charged Plasma Saber

Optional Payload

Compressed Packet Rifle

Up to two Compressed Packet Rifle with external fuel generator and capacitor pack. While two can be carried and wielded simultaneously, it hampers the mobility of the Winter substantially. Usually, one is carried within each hip fin and used on demand, the other delivered to an armor crew or kept for use incase of the destruction of the original.

Systems Descriptions

Movable Frame:

Serving as the internal structure, the Movable frame consists of the following:

Primary Structure

- Cockpit - Enclosed around the pilot to provide a safe atmosphere, the Interface Hive consists of points and joints in a polygonal form comparable to a honey-comb (see Structural Meshing). One size fits all as the hive is able to stretch, tighten, loosen, provide motion feedback, soften and even harden all for protection of the pilot. Within each “honey comb”, a liquid based display screen screen and protective cushioning are suspended beneath a gel sheath which provides comfort for the pilot. The protective hive can be isolated and ejected in a basic emergency, on pilot command.
- UPDATED - Endoskeletal Chassis with -An update to the skeletal endoskeletal chassis of the 101, the 102 is *not* static and is able to dynamically change shape (though it is typically locked to a specific size). This allows the Winter to engage targets within tightly compressed spaces and reduces it's size during transit.

Structural Layering System

The structural meshing technology is a breakthrough in graviton control systems and is to be debuted with the Winter. This system is the reason for the Winter's substantially larger size over its potential competitors. It is expected that in the future it will give the Winter a tactical edge. More information can be found at: Structural Layering System

The following layers are used:

- Mounting Mesh
- Armored Mesh

Structural Points: 15

Structol Augmentation:

A number of software calibrations and the addition of a structol strength amplification layer around the elbows, shoulders, wrists and calves and about the smaller chest-mounted arms allow the AMX-102 to lift greater loads and grant it a greater prowess in close combat. While using weaponry, this system reduces the majority of recoil to nil and allows the 102 to wield the Compressed Packet Rifle effectively.

Mounting Plugs

64 retractible plugs lay under the skin of the Frame, tied in directly with the structural layering system. They allow for mounting of external armour, engines or other systems, doubling as hard-points. Each is no larger in size than a finger. During maintenance, these plugs also act as anchors against a support frame allowing the Frame to literally be turned inside out while holding it safely for work-crews.

Telescopic arms

Beneath the armor lie a series of retractable telescopic arms which are able to grasp objects and manipulate them (fore-arms, knees & hips) which are able to act as hard-points for missiles or even rifles. They are also able to extend from the body to perform high precision action, such as docking or even holding heavy objects. In testing, common uses for this system during combat have involved grabbing objects such as armor plating or foliage and using it to a great tactical advantage, an outcome not foreseen by designers who then enhanced the ability of these small claw-like arms to hold objects delicately without crushing them or exert forces of up to 120PSI (Via slow pressure-release structol memory alloy). There are a total of six, each no larger than three human fingers. Normally, they sit beneath the external layer of armor and are invisible. These arms also allow the Winter to lift and grip across surfaces without the assistance of the gravity repulsion capabilities of the structural layering system and give it a far more graceful recovery in the event it topples over.

Power

- Bacterial Charge Packs - These power cells deliver power to the Winter's less demanding systems such as computing systems, life support, and communication systems.
- Miniature Antimatter Reactor - Provides power to the majority of the Winter's systems.
- External Power Source socket - The Winter is able to attach itself to an external power source through the use of a 50 yard stonethread and structural mesh lined power cable. It can draw power or provide it for other units and systems in case of emergency.
- The AMX-102 has been upgraded with QNC power cell technology.

Pilot Systems

Cockpit

- Life Support Systems - Provides protection and a breathable environment. Includes a water-lung and tube-system to feed/hydrate the pilot and a liquid and solid waste sanitization, disposal and recycling system. The breathable environment is also doctored to administer drugs to the pilot (for example, preventing shock, bleedout, etc). There is enough air, water and food between two weeks to one month of frugal use (if the pilot eats a full meal or water is collected via the body, the existing matter can be ejected and the filtration system started over, resetting the air/water/food limits). *It is suggested to pilots that they lower the lower half of their uniform, or open ports of skin-*

tight uniforms to allow for the waste disposal enclosure to be sealed into place properly.

- Ejection/Escape mechanism - In the event of a failure of the Winter's systems, the piloting enclosure can be ejected from the frame of the Winter. Includes basic plasmic thruster reserve, backup power for up to 6 months of emergency mode and the sub-space coil. The portions of the thighs containing hand-held weaponry and cargo also fall away with the escape pod.
- Enhanced Neural Interface System - A complex neural interface system, able to monitor both existing neural patterns and active brainwaves to detect neurological activity and emergent patterns. The system works by recognizing pilot intent, coupled with motor activity to produce a desired outcome and also feeds information directly to the pilot. Information is then sent back via manipulation of brainwaves and neuro-electrical stimulus that feed information directly to the pilot, from the onboard ARIA. The experience is likened to “sensing a ghost in the system”. A good synopsis: *Act Without Doing* .
- Augmented Combat Awareness Onboard ARIA produces a high-speed strategic model of the battlefield then feeds it back to the pilot via the neural interface, granting a clear image of what is happening in three dimensions with a direct understanding of distance and scale previously unavailable due to the limitations of the humanoid mind by providing relative comparisons and forging new neural pathways by educating the pilot psionically. It should be noted that Yamataian pilots would not gain many benefits in regard to utilizing the system, considering their computerized brain structure. Continued use of the system will refine organic pilot capabilities over time and will improve reaction times and reflexive responses to tactical situations.

Avionics & Data

Computing

- ARIA - An extremely sophisticated and powerful neurological starship ship control system & processing engine available in both a humanoid and non-humanoid form.Responsible for the majority of a Winter's cognitive, psionic analysis and information processing capabilities. For more in depth information regarding the ARIA, see ARIA Ship Control System
- Neural Gel System - Acts as an off-set and emergency backup.

Communication & Data Exchange

- Communications System Includes hyperspace, subspace, radio, laser, subspace laser, quantum, psionic transmission, wired,and touch-contact communications capabilities. 100% PANTHEON compatible.
- Starship Independent Navigation System Able to identify it's current location and plot navigation paths for STL and FTL routes, taking into account strategic intel. This makes the unit ideal for deep-penetration and assault missions.
- Diagnostic and repair System - Able to recognize software/hardware intrusion and seal hull breaches.
- Soft Mounting Plugs - For mounting mission comprisable & disposable systems externally.

Sensors

Included in the Winter are several sensor packages which are designed to provide the optimal range of sensor perception possible while maintaining a small size profile:

- Conventional Sensor Systems - Includes Visual, IR, UV, Thermal, light-pulse and sonar. Provides bare minimum of sensor perception.
- Multi-Space Monitoring System - Detects subspace/hyperspace, quantum, spacial and empathic disturbances. Broad spectrum. Serves as passive monitoring system.
- Hyperspace - Able to monitor movements of armors and starships and plot courses based on distortions. Used for early warning & Intercept.
- subspace pulse - Able to monitor objects moving at super-luminal speeds or subspace objects. Used for early warning & Intercept.
- Quantum - Measuring m-brain stress and ambient subatomic systems. Able to detect unusual gravitational behavior and pinpoint hyperspace folds.
- Dimensional - Able to pinpoint events such as aetheric tapping, TDD, transposition cannon discharges and pocket-dimension locations.
- Empathic - Able to detect unshielded alpha and delta-waves of organic life-forms. Unreliable at times but life-saving, used properly.
- Forearm mounted sensor cluster (optional) - Augments the precision of arm integrated and hand-held weapons. Ideal for surgical strikes and sniping.
- Ejectable Active Tracker/Scout Sphere - Situated between the collar-bones. Provides greater situational awareness. Can be detached to see around corners.

Propulsion Systems

Plasmic

- Plasma Thruster System - Heart of the plasmic drive-train.
- P-DCT - Prepares & stores plasma

X-102 Optimizations

- Thermic Cycler - A system for recycling wasted thermal energy. Lowers thermal profile and raises engine efficiency.
- Ion Rings - Allows careful plasma management. Augments engines dramatically.
- Revolvic Plasma Chamber - Burst maneuvering system. Ideal for evasive and rapid emergency maneuvers.
- FAECS - Very smart engine optimization software. Raises efficiency & safety dramatically.
- MPD Plasmic Engines (6) - A serious augmentation to the basic plasma_thruster_system.

Other

- Gravitational Manipulation - Reduces weight, allows low-energy consumption flight at low speeds.
- Subspace Field Coil - Specially designed for vacuum combat: allows Winter to reach near-light speeds (.375c)
- Mag Skimmers - Allows Winter to attach itself to surfaces or skim across the ground for high-mobility ground combat.
- Rollers - Magnetically driven rollers which provide mobility on the ground. Used during low-power consumption and stealth ops.
- Structural Locking system - Every joint of the Winter is capable of being locked into place to prevent jarring from impacts or by atmospheric friction.

External Optional Thruster System

An optional thruster system can be attached to the back of the Winter which resembles a pair of metallic Lorath wings. These wings utilize a large number of plasma vents which deliver a wider range of thrust which allows for superior maneuvering, greater control at higher speeds. The wings also include a stronger subspace field bubble generator which allows for the Winter to reduce it's mass by far greater amounts, resulting in greater maneuverability and acceleration. They are given only to act pilots and supplement the existing clamshell system.

Defensive & Tactical Systems

- Full Spectrum Barrier System (FSBS) - Shielding solution. Provides a DR-4 defense while active. First strike survival capability.
- Combined Shield System - A burst-shielding system, able to create a DR-6 for up to 20 seconds.
- Psionic defense scrambler - Provides defense against psionic attack. Limits psionic communication to 20 meters.

- Wire Anchors/grappling hooks - Launched from the index knuckle or under-side wrist of the arms, these wire anchors can be set to either penetrate a target with razor-sharp nerinium prongs, to wrap and grapple a target or to release slowly and form a hook in place of a prong. The number of uses is immense, particularly within an atmosphere. The wires are DR3 though they are incredibly resilient to stretching and heavy loads and will not buckle without the use of energy weapons or highly specialized cutting equipment.
- Tactical Surpression Gel - A new type of round for the Subspace assisted rail-cannon, Tactical gel rounds are another result of structol technology. Upon hitting a target, the solid round decompresses to form a gel solution which then splashes over a target and hardens into a complex metalloid composite. Tactical gel rounds are DR3 and are incredibly resilient to stretching and heavy loads and will not buckle without use of energy weapons or highly specialized cutting equipment.

- Silent Running - By disengaging more complex systems and winding the power-systems down to minimal levels, the sensor output of the Winter drops dramatically to match ambient background levels - to the point where another Winter can only detect it via optical/audio cues, tracks, smoke, etc. This is ideal for gaining first-strike capability or vanishing from sensors if combined with proper

stealth technique. Unfortunately, this denies the Winter flight, limiting it to capabilities similar to those of most standard Nepleslian armors (rollers, basic movement, climbing, etc).

OOC Information

This page was made by Osaka/Osakanone on 2016/10/31 07:32.

- No approval information was found in the forum search.

1)
A standard test of maneuverability: 180 degree pitch @ Mach 1 and upwards within an earth-like atmosphere
2)
A standard test of engine strength: The time it takes to invert direction in a vacuum with classic thrusters alone from a velocity of mach 1
3)
A test of propulsive force: The time it takes to invert direction within a vacuum using all available non-FTL engine systems from a velocity of 500 meters/second (1,118 mph) & the risk upon a pilot from enacting this maneuver
4)
The time it takes to recover from a violent spin of 500 degrees a second upon all three axis at 500 meters/second (1,118 mph) and for onboard sensors to recover their navigation and targeting bearings
5)
The time it takes to achieve orbit upon an earth-like planet from sea-level with no unusual weather conditions