Ac-Y1-1a Quodr Liftracer

The Quodr Liftracer is a specialty aircraft produced by Ahmida Civiltech for use by racers and civilian couriers for various purposes. It is especially popular with the Eyr Ranr, who purchase and heavily modify units for extremely dangerous races hosted each year. While not conceived specifically for combat, the design itself is fairly sturdy and easy to outfit with a large array of after-market parts. Quodr are transatmospheric, but require either a booster unit or assistance from a MASC-based catapult system.



Ac-Y1-1a Quodr Liftracer

General Information

Organizations Using This Vessel: Government of the Astral Commonwealth, Eyr Ranr Civilians Type: GE Liftracer Class: Ac-Y1-1a Quodr Liftracer Designer: Ushano Biran Manufacturer: Ahmida Civiltech Production: Full Mass Production Pilots: 1 Maximum Capacity: 2 Humanoids (Driver + Passenger) Price: Appearance:

Speed

Maximum Speed (Vaccum): .05c Maximum Speed (Atmosphere): Mach 8 Cruising Speed: Mach 2 Acceleration: 90 m/s^2

Range: 7 Days STL (0.35 LD) Lifespan: 20 Years

Damage Capacity

Hull: 9 Shields: 9

Pricing

Standard Model 20, 000 KD Space Capable Model: 40, 000 KD Agridinn Plating Kit: 10, 000 KD Engine Upgrade[1)] and Inertial Compensator: 90, 000 KD

Zaiflar Supercapacitor: 400 KD

Interior Description

Main Controls and HUD

One of the first noticeable things is the rather elaborate HUD system which also houses the main controls for the communications equipment as well.

Everything from monitoring speed, power reserves, and even to adjusting the temperature of the seats is covered. This includes various menus to be used at the pilot's discretion to change, or tune various portions of the Liftracer's performance to their own individual tastes. The main controls of the Quodr are situated near the HUD, and are basically “Old School” Handle Bars coming out of the sides of the Main HUD control to give it that classic feel with grooved indention for comfort and gripping. Of course the throttle is included along one of the bars making one merely to 'twist' it forward or back to accelerate, or decelerate. Naturally pedals are included along the lower portion of the 'bubble' to control the flaps, and air brakes.

Seats

The interior is roomy enough to fit two people, a pilot and passenger. The pilot's seat is made of a conformal memory foam like material wrapped in soft Herdtitan Leather which also includes the option of being heated for that extra cozy, comfortable feeling during long trips. A second seat is included behind the pilot seat, but is smaller yet roomy enough to ensure some level of comfort for the passenger.

The "Bubble"

No expense was spared with the interior of the Quodr. Encapsulated inside of a Transparent Strodirn spherical bubble, the interior is rather fitting for a Lifracer, with a little expense and flair for good measure.

Note: Due to keeping the Quodr aerodynamically sound, half of this bubble-esque cockpit is buried inside of the Quodr.

The Exterior of the cockpit is covered in a reflective gold composite coating to shield against solar heat and light that may blind, or become harmful to the pilot, and or passenger. In the event of emergency, the Quodr's cockpit can be ejected from the main body, remaining intact and capable of supporting the pilot for several hours running on auxiliary power. With a passenger, this is halved.

Technical Information

Hull Systems

Strodirn Hull and Substructure

Substructure

When the Quodr was on the designing boards of Ahmida Civiltech, they had to take several key factors into account. Weight, expense, aerodynamics and strength of the materials used within the design since the Quodr was intended to be trans-atmospheric, provided it had assistance in managing to exit the atmosphere and re-entry. Strodirn was chosen as the primary material for both the hull, and substructure of the Quodr. The substructure itself utilizes a simplistic truss reliant frame for the overall body of the Quodr, and a little more complex truss framework for the wings of the craft, a strut style system were also utilized in the framework of the Quodr but was however kept relatively lightweight.

While overall the frame was fine for atmospheric flight, getting into, and out of the atmosphere was of a concern to Ahmida Civiltech due to the strain along several stress points along the frame of the body, and wings it would be subjected to while entering, and exiting the atmosphere. Therefore they reinforced these sections of the craft to alleviate these issues.

Overall, the Quodr was streamlined after several test models proved disappointing, and thus the design team was able to reduce as much drag as possible upon the Liftracer, and their pilot as possible, ensuring maximum speed, and stability/safety of the craft as well as the all important pilot.

Dispersion Shroud

Due to the Trans-Atmospheric nature of the Quodr, it was out of necessity that protection from

micrometeorite collisions be added. The 'Dispersion Shroud' as it is called, is merely a electrostatic bubble that encapsulates the Quodr, and Pilot, protecting them from such possibilities. Naturally the Shroud draws its power from the Capacitor Units and is then fed into the Electrostatic Field Emitters dotted about the Liftracer. This process is normally automatic as a safety precaution.

Electronics

Communications Suite

The Quodr comes with a basic communications suite. Like many other parts of the Quodr, the stock components can be replaced, or enhanced.

Communication System	Type	Broadcast Pattern	Range	Detectability
Laser	Visible EM	Directed, Requires Line of Sight	300 000 KM	Low
Radio	Visible EM	Radial	150 000 KM	Medium

Computer System

The Quodr comes with a stock Civilitech ANIOS that helps regulate the Liftracer's on board systems, everything from the Grav-Lift system to Capacitor Power Regulation and Dispersion Shroud monitoring and acts as a pilot assist. In the event of an emergency, or if the pilot is incapacitated, the system will enact safety protocols by taking control. The system has several useful tutorials on adding pilot preferred settings, or changing present ones including proper maintenance on several key components of the Liftracer itself.

Power Source

Due to the High-Performance Nature of the Liftracer, and the fact that the Leyflar Supercapacitor simply did not deliver the necessary power, two specially tuned Zaiflar Supercapacitors is utilized. While it is a heavier unit, it provides the necessary power for the Quodr, to save on weight, the casings wetr replaced with a radiation-proofed Strodirn material while the inner was of Agridinn for pilot safety purposes while maintaining performance and output. Both units are situated along the central mass of the Quodr, helping to balance the craft's overall weight distribution and as a space saving measure. In the event of needing to recharge the capacitor units, one merely needs to pop open the clearly marked ports and attach cables to either, or both capacitors.

Secondary Power/Emergency Power

Due to the need for backups, and outright safety, two dual packs of the Leyflar Supercapacitor are included inside of the cockpit itself. These are typically left de-activated and are typically used for emergency situations, or for use to provide a momentary 'Afterburner' effect to the main engines.

Propulsion

Due to the limitations on MASC Drives in size, and power consumption as well as feasibility upon a mere Liftracer, Ahmida went down a different road. Using a tried, and true system the GravElectric (GE) Lifter. Ahmida had to retool the GravElectric (GE) Lifter for both the sake of size, weight and outright performance for the Quodr. Despite the smaller size, the Lifter system retains its trade mark speed, and efficiency, but going a little bit further. They have ensured that a vast majority of the Quodr's systems can be modified, upgraded or tooled to one's specific tastes. A common, all bet somewhat dangerous practice is to syphon power from the Quodr's Leyflar Supercapacitors, and into the Lifter system, granting a performance increase of up to 14% for a short period of time. This however is a serious drain on them, leaving little, to no power left should it be used in such a fashion should an emergency arise.

1)

Up to .15c.

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