Star Army Field Laboratory Type 43

The Type 43 Field Laboratory is a prefabricated laboratory designed for the Star Army of Yamatai. It became available in YE 43.

History and Background

In YE 43 an extensive initiative was launched by Ketsurui Zaibatsu to expand the tool set for Star Army Science Officers. In the aftermath of Kuvexian War, the Star Army of Yamatai was facing peacetime operations which increased the demand for the new equipment. After the launch of the Multi-Role Science Drone Type 43, Star Army Science Pad and Kit Type 43, and the new Star Army Combined Sciences Laboratory, the cooperative of designers that had worked on them collaborated for the design of a field lab that could be deployed to a planet's surface.

Several design ideas were passed back and forth, but an idea came when a previous design from Kage Yaichiro was brought up. During the reconstruction of Tokyo, Standard Starship Cargo Containers had been converted into ships and buildings, such as the Hauler-class Logistics Ship and SSCC-XL Living Complex. Since Standard Starship Cargo Containers were used to carry Cargo on Star Army of Yamatai ships, it was agreed on that it would be easy to accommodate the new prefabricated lab in the cargo bay, or shuttle bay, until it was ready to be deployed.

Type 43 Star Army Field Laboratory			
Year of Creation	YE 43		
Designer	Ketsurui Zaibatsu, Kessaku Systems, and Star Army Research Administration.		
Nomenclature	Ke-P8-1A, Also Type 43		
Alt. Nomenclature	None		
Manufacturer	Ketsurui Zaibatsu		
Fielded by	Star Army of Yamatai		
Availability	Mass Production		
Price	100,000 KS		

Passengers

Crew: 04 personnel, generally Star Army Science Officers.

The length of time the crew can be supported is dependant on the delivery of supplies and if the collapsable greenhouse is in use. It also depends on the conditions of the planet it is deployed to. Under the right conditions, the crew could be supported indefinitely.

Appearance

The Star Army Field Lab is a modified rectangular SSCC-XL. There are two airlocks, one located at each of the narrow ends of the unit that have an extendable ramp for easy unloading and offloading. They have been painted in Star Army of Yamatai colors of cornflower blue, and gray panels with black trim. Some units have extendable awnings and a collapsable outdoor onsen. (See Outdoor Add-Ons). Telescopic support legs support the structure when it has landed.

Name	Length	Width	Height
SSCC-XL	15m (49.2')	2.5m (8.2')	3m (9.84')

Inside the Star Army Field Lab

The Star Army Field Lab has two levels.

Layout				
Level 1 - 2m high	Lab and Living Area			
Level 2 - 1m high	Cargo Crawl Space and Systems Hold			

Level One: Labs and Living

The laboratory stations and living area. The two compartments are side-by-side, with two airlocks with extendable ramp egress for easy unloading and offloading at the ends of the structure.

Living and Accomodation

The living and accommodation area of the Star Army Field Lab is equipped to make living in the field comfortable.

- Two, two-level Star Army Bunk Bed, Type 40.
- Four Storage Lockers.
- A Star Army Sofa, Type 39.
- A small kitchen with food storage, refrigeration and freezer drawers, stove.
- Eating table with four chairs.
- A small bathroom with shower, sink and storage.
- Virtual Collective Experience and entertainment options.

Drone Storage

There is a drone storage area suspended along with the ceiling. It accommodates five Multi-Role Science Drone Type 43.

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Lab Stations

Each of the four stations has access to traditional controls (for non-Nekovalkyrja crew), isolated volumetrics for visualization and presentation, and a stand for the Type 43 Science Pad. Overhead units suspend sensor pods for scanning purposes.

Under-counter storage includes room for equipment such as:

- Retort stands with multiple clamps and ring-holder accessories.
- Non-Reactive Glasswear including Interfaced Glasswear like beakers, flasks, testtubes and vials. Glasswear is stored in secured Yarvex Foam inserts to prevent breakage.
- Nano-scale laboratory-grade tools produced in the fabricators, like forceps, tweezers, tongs, glass stirring rods, and other handheld tools.
- Storage for any other Star Army Minor Science Equipment.
- Counter mounted, interior-grade Scalable Graviton Beam Projector for the movement of hazardous substances or heavy objects. (Also used in assistance of cleaning up broken glasswear.)
- Hemosynthetic filter kit, and Hemosynthetic decontamination and recycling kit.
- Forcefield projector for low-level containment.
- Protected storage of needed chemicals.
- Shelf for Star Army Science Pad and Kit Type 43 storage.

Level Two: Cargo Crawl Space and Systems Hold

The lower level is a cargo crawl space for storage and houses the systems for the Star Army Field Lab.

- Mostly accommodates SSCC-Small and other smaller crates and totes.
- Accessible from the outdoor hatchs and interior floor hatches.

Outdoor Add-On Options

Outdoor Add-On Options, can include:

- Exterior Retractable Awning (8m)
- Collapsible Star Army Onsen. Stored in Cargo Crawl Space during transport.
- Outdoor furniture (4 Chairs, Table)
- Collapsible Greenhouse. Modified transparent SSCC-Medium. Stored in Cargo Crawl Space during transport. (For Long-term Missions, to grow food).

Subsystems

The subsystems included in the Star Army Field Lab.

Hull Construction

The Star Army Field Lab is constructed within a SSCC-XL.

Integrated Hull Systems

The Field Lab has integrated:

- Nodal Liquid Conduit System for Star Army Standard Life Support Systems and Universal Hemosynthetic Fabrication System Type 43.
- A Dorsal Hatch and Launch System has been added for the launching of Multi-Role Science Drone Type 43.

Power Systems

The Star Army Field Lab has a Aether generator and capacitor system. It is also equipped with a secondary power solar power array. Maneuvering Thrusters (ion thrusters) are used primarily for attitude adjustment, docking, and station keeping.

Propulsion System

The Star Army Field Lab has a simple anti-gravity propulsion system for easy delivery and pickup from a planet's surface.

Electronics Suite

The Star Army Field Lab is equipped with Compact Integrated Electronics System (CIES) for its suite of sentient computing, communications, and sensors.

OOC Notes

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Approval Thread

Star Army Logistics
Supply Classification Class N - MISC

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