

 **LOW LIGHT  
INNOVATIONS**  
2026  
**PRODUCT BOOKLET**



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# WHO WE ARE

Low Light Innovations is a night vision housing manufacturer based in East Greenwich, Rhode Island. Every product LLI ships is assembled, inspected, and quality-checked in-house by a dedicated production team in the United States.

LLI was founded in 2020 by Claude Riccoboni and Giuseppe LaPaglia, two night vision users who entered the industry with a direct understanding of the product from the consumer side. That perspective drives every design decision, every material choice, and every policy the company operates by. LLI builds products its founders would buy, use, and depend on.

The company began with 3D-printed MJF nylon housings that were hand-built, functional, and priced to be accessible. Community feedback shaped every revision. Users asked for lighter weight, more features, and better long-term serviceability. LLI listened, went back to the drawing board, and responded with machined aerospace-grade magnesium and titanium housings that retained the accessibility and added the performance.

That process has not changed. LLI's product development is driven by direct input from its user base and by the founders' own requirements as active users of the equipment. The result is a product line engineered around three commitments: material innovation, system modularity, and lifetime reliability.

Today, LLI manufactures a full ecosystem of night vision housings, power systems, mounting hardware, optical accessories, and filters. All of it is designed to work together and all of it is built to the same standard.

# THE FOUNDERS

## CLAUDE RICCOBONI

CO-FOUNDER · BUSINESS DEVELOPMENT & CUSTOMER RELATIONS

Claude comes from a professional sales background and has been an active night vision user for years. He manages LLI's business operations, strategic direction, and direct customer interface. Claude is the voice on the other end of every call. Not a representative. Not a department. He answers the phone personally because the people putting their trust into LLI's products deserve to speak directly to the person behind the company.

## GIUSEPPE LAPAGLIA

CO-FOUNDER · PRODUCTION & R&D

Giuseppe comes from a blue-collar, hands-on trade background and brings that discipline directly into LLI's production floor. He leads mechanical design, product engineering, and manufacturing, and he is personally involved in assembly and mechanical processes to ensure every unit that leaves LLI meets his standard. If it ships from LLI, Giuseppe has had his hands on it.

## BRAND COMMITMENTS

### MODULARITY

LLI's MH line of housings is designed as a configurable system. Components interchange across the MH product line, allowing monocular pods to become binocular channels, power formats to swap without modification, and replacement parts to be purchased individually.

### LIFETIME WARRANTY

Every LLI housing ships with an unconditional lifetime warranty. Secondhand buyers are fully covered under the same terms as original purchasers. LLI was the first night vision housing manufacturer to offer this level of coverage.

### ACCESSIBILITY

Aerospace-grade materials and precision manufacturing at a price point that does not exclude the end user. LLI exists to make high-performance night vision hardware available to the broadest possible audience.

# MH-1

ARTICULATING BINOCULAR NIGHT VISION HOUSING

**15.5**<sup>oz</sup>  
MIN WEIGHT

**21.3**<sup>oz</sup>  
MAX WEIGHT

**66**<sup>ft</sup>  
SUBMERSIBLE

**90**<sup>hr</sup>  
MAX RUNTIME

The MH-1 is LLI's flagship binocular housing. Machined from aerospace-grade magnesium and titanium alloys in East Greenwich, Rhode Island, the MH-1 is a fully articulating dual-tube night vision system with manual gain control, modular power, and full split-to-monocular capability through the MH-14 adapter.

Manual gain is achieved via a direct 4-pin ECAG plug-in without soldering, preserving the manufacturer warranty on the image intensifier tube. The modular power system supports CR123A batteries, AA batteries via the Universal Battery Compartment, and external power via the Fischer port.



Material	Magnesium Alloy + Titanium
System Weight	15.5 oz (min) / 21.3 oz (max)
Power Source	Modular: CR123A, AA (UBC), Fischer External
Operation Time	25 - 90 hours
Magnification	1x
Field of View	40° standard, 50° with wide-angle optics
IPD Range	51mm - 78mm
Diopter	-6 to +2
Focus Range	9.8" to Infinity
Water Resistance	66 ft / 2 hours
Drop Test	NATO 1.5m drop test (pass)
Tube Compatibility	MX-10160 / MX-11769
Optics	PVS-14 Eyepiece & Objective
Colors	Black, FDE, OD Green
Warranty	Lifetime (including secondhand)

# MH-14

NIGHT VISION MONOCULAR

## 9.1<sup>oz</sup>

MIN WEIGHT

## 11.1<sup>oz</sup>

MAX WEIGHT

## 50<sup>+hr</sup>

RUNTIME (AA)

## 40<sup>°</sup>

FIELD OF VIEW

The MH-14 is a standalone monocular built from magnesium alloy and 7075 T6 aluminum. It is NATO 1.5m drop test certified. The MH-14 operates on a single AA battery with over 50 hours of runtime and features dual IR illuminators: a low-power setting for close-range administrative tasks and a high-power spot for extended range identification.

The MH-14 is fully compatible with all standard PVS-14 J-arms and integrates directly into the MH-1 ecosystem. A single MH-14 can serve as a standalone monocular entry point. Two MH-14 pods combined with an MH-1 bridge assembly form a complete articulating binocular system, providing a modular upgrade path that is unique to LLI.



Material	Magnesium Alloy + 7075 T6 Aluminum
System Weight	9.1 oz (min) / 11.1 oz (max)
Power Source	Single AA Battery
Operation Time	50+ hours
Gain Control	Manual (11769 / 3-pad)
IR Illuminators	Dual (low + high-power spot)
J-Arm	PVS-14 Compatible
Drop Test	NATO 1.5m drop test (pass)
Tube Compatibility	MX-10160 / MX-11769
Optics	PVS-14 Eyepiece & Objective
Colors	Black
Warranty	Lifetime

## MODULAR UPGRADE PATH

Purchase one MH-14 as a standalone monocular. Add a second MH-14 and an MH-1 bridge to upgrade to a full articulating binocular. Components are fully interchangeable across the MH product line.

# UH-1

MANUAL GAIN ARTICULATING BINOCULAR

**16.1**<sub>oz</sub>  
MIN WEIGHT

**20.0**<sub>oz</sub>  
MAX WEIGHT

**66**<sub>ft</sub>  
SUBMERSIBLE

**90**<sub>hr</sub>  
MAX RUNTIME

The UH-1 is a lightweight polymer binocular housing with a rigid metal bridge backer for structural integrity. It retains the core feature set of the MH-1 platform, including manual gain control, dual power IR illumination, modular power, and adjustable pod tension, while offering expanded electronics compatibility with both 3-pin and EGAC tube configurations.

Compartmentalized module construction simplifies field assembly and repair. The interlocking hinge mechanism provides enhanced articulation durability. The UH-1 runs on a modular AA battery power system, offering improved international availability over CR123A formats. Available in black only.

- Manual gain control with 3-pin and EGAC compatibility
- Dual power IR illumination for variable lighting conditions
- Rotational pod shutoff for individual tube control
- IPD stops for repeatable interpupillary distance settings
- Modular AA battery power for global battery availability



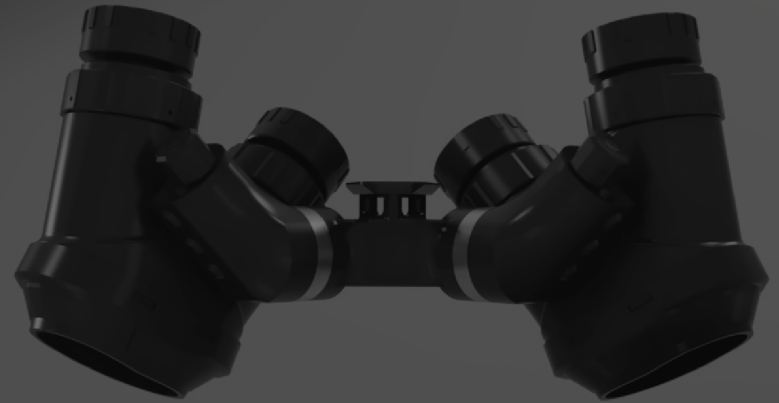
Material	Polymer + Rigid Metal Bridge Backer
System Weight	16.1 oz (min) / 20.0 oz (max)
Power Source	Modular AA Battery
Operation Time	25 - 90 hours
Magnification	1x
Field of View	40°
IPD Range	51mm - 78mm
Diopter	-6 to +2
Focus Range	9.8" to Infinity
Water Resistance	66 ft / 2 hours
Drop Test	NATO 1.5m drop test (pass)
Tube Compatibility	MX-10160 / MX-11769
Gain Compatibility	3-pin and EGAC
Colors	Black Only
Warranty	Lifetime

# MARS-1

NIGHT VISION HOUSING SYSTEM

COMING SOON

The MARS-1 is currently in development. Contact LLI directly for specifications, configuration options, and anticipated availability.



## MH-1 ADD-ONS

### POWER CONFIGURATIONS

- **Universal Battery Compartment (UBC)** — Modular battery system accepting CR123A and AA batteries (with AA Cap). Integrates Fischer port for external power. Swappable without tools.
- **Stand Alone Port** — Minimal-weight battery compartment replacement. Runs the system exclusively from an external power source via Fischer connection.
- **AA Cap** — Replaces the CR123A battery in the UBC with a single AA battery per side.

### MODULAR ACCESSORIES

- **Low Light Panning Arms (LLPA)** — Mechanical field-of-view adjustment system. Expands FOV from 40 degrees to 69 degrees. Pans each optical tube outward to pre-set detent positions. User-installable.
- **Extended Dovetail** — Longer dovetail rail for additional mounting clearance and helmet positioning options.
- **Monocular Adapter (MH-14 Power Supply)** — Converts a single MH-1 pod into a standalone monocular with manual gain, dual IR, and single AA power. PVS-14 J-arm compatible.



LLPA PANNING ARMS



LLDH DIOPTER HOUSING

- **LLI Diopter Housing (LLDH)** — Replacement eyepiece diopter housing. 25% lighter and 3x stronger than mil-spec equivalent. One unit per monocular channel; order two for binocular systems.
- **Low Light Battery Pack (LLBP)** — Low-profile external battery pack in 2x and 4x AA configurations. Fischer or LEMO connector options for extended runtime.
- **PVS-14 Filters** — Screw-on objective filters for PVS-14 compatible optics. Available in white phosphor, amber, and clear.
- **LLRS Retention Tether** — Retention system for securing night vision devices during operation. Prevents loss during movement or mounting transitions.
- **Blackout Filter** — Objective lens cover for PVS-14 optics that blocks most light transmission. Used primarily for highlight training scenarios.

# BUILD YOUR SYSTEM

Every LLI housing ships as a build-to-order system. Visit [lowlightinnovations.com](https://www.lowlightinnovations.com) to configure your housing, select your optics and tube combination, choose your power system, and see real-time weight and specification calculations for your exact build.

## ONLINE CONFIGURATOR

Select your housing, optics, image tubes, and accessories in one interface. The configurator provides live weight calculations and system compatibility checks as you build.

## WARRANTY

Every LLI housing is covered by an unconditional lifetime warranty. This coverage extends to secondhand purchasers with no proof of purchase required. LLI was the first night vision housing manufacturer to offer this policy.

## SERVICE & REPAIRS

LLI handles all warranty claims and service requests directly. Contact the warranty department with your issue, and LLI will provide diagnosis, a prepaid shipping label if applicable, and a resolution. Turnaround is handled as a priority.

WARRANTY [\[email protected\]](#)  
SALES [\[email protected\]](#)  
WEB [lowlightinnovations.com](https://www.lowlightinnovations.com)

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