FALCONCLAW FC-M

NIGHT VISION MONOCULAR



OPERATOR MANUAL

REV 1.1 · NOV 2026 · FALCONCLAW.EU

FC-M

This manual provides operation, preparation and field-level maintenance instructions for the FC-M. To ensure operator safety and correct operation, read this manual carefully in its entirety before deployment or field use.

SAFETY SUMMARY

- **OPERATE ONLY IN LOW-LIGHT CONDITIONS.**

  The FC-M is a passive ambient-light device with no IR illuminator. Keep the objective covered in daylight.

- **HANDLE THE CR123A CORRECTLY.**

  Insert with plus (+) toward the eyepiece. Do not heat, puncture, recharge or incinerate. Replace any swollen cell.

- **SERVICE BEFORE SUBMERSION.**

  Inspect the battery-cap O-ring before every dive. The FC-M is rated 20 m / 30 min when serviced per this manual.

- **EXPORT IS CONTROLLED.**

  The FC-M is subject to export control. Users are responsible for adhering to all applicable export regulations prior to transfer, re-export, or international travel with the device.

FALCONCLAW.EU

CONTENTS

01 General Information · Specs 04
02 Standard Kit · Accessories 05
03 Controls & Product Layout 06
04 Configurations · FC Ecosystem 07
05 Preparation for Use 08
06 Operating Instructions 09
07 Maintenance 10
08 Troubleshooting 11
09 Warranty · Compliance · Contact 12

FALCONCLAW.EU

GENERAL INFORMATION

1.1 EQUIPMENT DESCRIPTION

The FC-M is Falconclaw's modular single-tube night vision monocular, built around an image intensifier tube and a 7075 aluminium housing. Tube type and performance depend on the version you ordered. Single-button control, passive operation, and a single CR123A for 40+ hours of runtime.

Deploy handheld, helmet-mounted (dovetail mount + QDM or QDB), bridged into a dual-tube setup, or combined with a Falconclaw thermal device.

1.2 MINIMUM SPECIFICATIONS

These are minimum guaranteed specs.

MAGNIFICATION	1.0×
FIELD OF VIEW	≥ 40°
APERTURE	F / 1.2
FOCUS RANGE	25 cm to infinity
DIOPTER RANGE	+2 to –5
EYE RELIEF	≥ 25 mm
DISTORTION	< 1%
BATTERY	1 × CR123A (3 V Lithium)
BATTERY LIFE	≥ 40 h @ 23 °C
WEIGHT (NO BATT.)	< 250 g
DIMENSIONS	105 × 65 × 60 mm
HOUSING	7075 aluminium, black anodised
OP. TEMPERATURE	–30 to +50 °C
STORAGE TEMP.	–40 to +60 °C
WATERPROOF	20 m for 30 min (serviced per manual)
COUNTRY OF ORIGIN	Made in Estonia

STANDARD KIT



1.3 STANDARD KIT

Included with every FC-M.

01 FC-M
02 Sacrificial lens
03 Bikini cover set
04 Rubber eyecup
05 Operator Manual
06 Hard transport case

1.4 OPTIONAL ITEMS

Sold separately — strongly recommended.

01 QDM mount adapter
02 QDB bridge adapter
03 Dovetail helmet mount
04 FC Monocular pouch
05 Thermal device

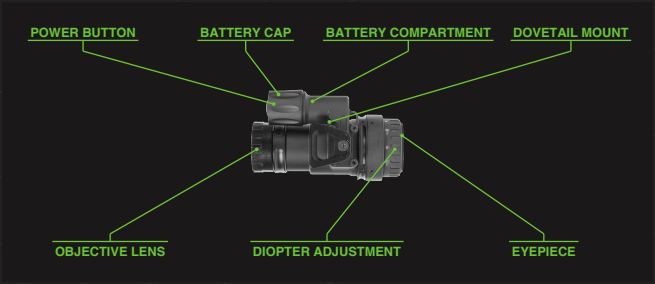
NOTE

Out of the box the FC-M can only be used handheld. To deploy on a helmet you need a QDM or QDB adapter AND a dovetail helmet mount — both are critical accessories sold separately.

FALCONCLAW.EU

CONTROLS & LAYOUT

The FC-M uses a single-button control philosophy. One click powers the device on, a second click powers it off — there is no IR illuminator, no mode switch and no gain knob on the body. Adjustments to image quality are made through the diopter and the objective focus ring.



2.1 CONTROL REFERENCE

POWER BUTTON
Rubber button on the left face of the battery cap. One click powers ON with an audible click; one more click powers OFF.

BATTERY CAP
Aluminium screw cap on top of the unit. Unscrew counter-clockwise to access the battery compartment.

BATTERY COMPARTMENT
Houses 1 × CR123A. The cap's O-ring is part of the watertight seal.

DOVETAIL MOUNT
Integrated dovetail on top of the housing. Native fit with QDM and QDB adapters.

OBJECTIVE LENS
Front lens with integrated focus ring. Rotate to focus on the scene.

DIOPTER ADJUSTMENT
Rear ring with +/- scale. Focuses the intensifier image to your eye.

CONFIGURATIONS

The FC-M is designed for the Falconclaw ecosystem. Buy one today, add another later, then add a thermal overlay — the platform grows with you.



01 STANDALONE · SINGLE FC-M

One FC-M on an F25 dovetail helmet mount with a QDM adapter. The base loadout — passive, lightweight, wobble-free.

KIT: F25 helmet mount + QDM + FC-M



02 DUAL · TWO FC-M BRIDGED

Two FC-Ms bridged through a single QDB onto an F25 helmet mount — streamlined dual-tube setup.

KIT: F25 helmet mount + QDB + FC-M ×2



03 COMBINED · FC-M + THERMAL

FC-M bridged with a Falconclaw thermal device on a G24 helmet mount — identification (NV) and detection (thermal) on one platform.

KIT: G24 helmet mount + QDB + FC-M + Thermal device (w/ QDA)

NOTE

If you buy two FC-Ms together, Falconclaw can collimate the pair before shipping. Request collimation in your order notes.

FALCONCLAW.EU

PREPARATION FOR USE

4.1 BATTERY INSTALLATION

WARNING
Do not heat, puncture, disassemble, short-circuit, incinerate, or attempt to recharge the CR123A. Inspect for bulging before use — discard any swollen cell.

1. Unscrew the battery cap counter-clockwise.
2. Check the O-ring is seated and undamaged.
3. Insert 1× CR123A — plus (+) toward the eyepiece.
4. Tighten the cap clockwise for a watertight seal.

4.2 EYECUP & SACRIFICIAL LENS

1. Press the rubber eyecup onto the eyepiece.
2. Screw the sacrificial lens onto the objective until tight.
3. Fit the bikini cover set when the device is not in use.

4.3 MOUNT INSTALLATION (QDM / QDB)

1. Slide the QDM or QDB onto the FC-M dovetail — it locks in place automatically.
2. Confirm there is no rotational play between adapter and housing.
3. Attach to your dovetail helmet mount; adjust tilt, height and distance until the image is a perfect circle.

OPERATING INSTRUCTIONS

WARNING

Direct daylight exposure with the objective uncovered will permanently damage the image intensifier tube. Operate only in darkened conditions and keep the objective covered in daylight. The FC-M has no IR illuminator and relies on ambient light from the moon, stars and night sky.

5.1 POWER ON / OFF

1. **Verify the CR123A is installed and the cap is tight.**
2. **Press the power button once — audible click = ON.**
3. **Press again — second click = OFF.**

5.2 FOCUS & DIOPTER (STANDARD NV)

1. **Power on under a clear night sky.**
2. **Rotate the OBJECTIVE focus ring until the stars look sharp. This is INFINITY FOCUS — everything from ~7 m to infinity stays in focus. Keep this as your default setting.**
3. **Rotate the DIOPTER ring until the image is sharpest for your eye. Note your +/- setting.**
4. **Only readjust the objective focus if you need to see closer than 7 m.**

NOTE

Diopter markings may not be accurate to the real diopter scale — use them only as a reference and adjust according to image sharpness, not the diopter scale.

5.3 HELMET-MOUNTED OPERATION

1. **Lock the QDM/QDB adapter into your dovetail helmet mount. No wobble.**
2. **Set eye relief, height and tilt at the mount — not on the FC-M.**

MAINTENANCE

6.1 CLEANING THE HOUSING

Wipe the exterior with a moist, clean cloth. Avoid touching optical surfaces with bare fingers. Do not use solvents or abrasive cleaners on the aluminium housing — they will damage the anodised finish.

6.2 CLEANING THE OPTICS

Blow loose dirt and grit away before any contact. Lightly moisten a lens tissue with water or approved lens-cleaning fluid and wipe in a circular motion from centre outward. Discard each tissue after one use. If contamination remains, use a cotton swab lightly moistened with lens fluid.

6.3 INSPECTION

After every use, inspect: the housing for cracks or impact damage, the battery compartment for moisture and corrosion, all optical surfaces for scratches or condensation, and the mount dovetail for wear. The FC-M optical assembly is field-replaceable — contact Falconclaw if damage is found.

6.4 WATERPROOFING, O-RINGS & NITROGEN PURGE

To retain the full 20 m / 30 min waterproof rating, send the FC-M in for the re-waterproofing service every 6 months. The technician performs a full nitrogen purge, replaces the O-rings, applies lubricants and grease, inspects the housing for cracks, runs pressure tests and refreshes the QC chart.

The service can be carried out by Falconclaw or by a Falconclaw-approved dealer equipped for it.

If the device is left unserviced, Falconclaw still guarantees a minimum of 2 m for 30 minutes — the housing and seals are watertight by design.

Before any submersion, inspect the battery-cap O-ring for cracks, deformation or contamination. After saltwater exposure, rinse with fresh water and dry before storage.

NOTE

Book the 6-month re-waterproofing service, find an approved dealer, or report impact / submersion damage at info@falconclaw.eu.

TROUBLESHOOTING

The table below lists common malfunctions and corrective actions. If the issue persists after the corrective action, contact Falconclaw.

MALFUNCTION	INSPECT FOR	CORRECTIVE ACTION
Unit will not power on	Battery missing, inverted, depleted or swollen.	Reinstall a fresh CR123A. Plus (+) toward the eyepiece. Inspect contacts for corrosion.
Image is dim or unfocused	Lens dirty; focus or diopter out of range.	Clean per 6.2. Set objective to infinity using stars, then dial in the diopter. If the issue persists, contact Falconclaw.
Image flickers / cuts out	Loose battery or low voltage.	Reseat the cap firmly. Replace the CR123A with a fresh cell.
Mount play / wobble	Adapter not fully seated or worn dovetail.	Reseat the QDM/QDB. Inspect dovetail and adapter for wear.
Moisture inside unit	Seal compromised.	Do not operate. Return to Falconclaw for service.

NEED HELP?

If the malfunction is not listed above, or if the corrective action does not resolve it, do not operate the device. Email info@falconclaw.eu with the serial number and a short description — we will issue an RMA and service the unit.

FALCONCLAW.EU

WARRANTY · COMPLIANCE

8.1 WARRANTY

Falconclaw OÜ warrants the FC-M against defects in material and workmanship:

- Image intensifier tube — 1 year from receipt by customer.
- Housing and mechanical components — 2 years from receipt.

Warranty excludes consumables, normal wear and damage from misuse, modification or accident. Falconclaw will, at its option, repair or replace defective units returned under the RMA process.

8.2 RMA PROCEDURE

1. **Email info@falconclaw.eu with the serial number and fault description.**
2. **Pack the FC-M in its hard case; write the RMA number on the carton.**
3. **Ship to the address in the RMA confirmation — do not return without it.**

8.3 EXPORT & DISPOSAL

The FC-M is an export-controlled item. The buyer is responsible for complying with all applicable export control regulations governing export, re-export, and transfer of the device.

Dispose of spent CR123A cells per local regulations — do not incinerate. Return end-of-life units to Falconclaw or a designated WEEE collection point per EU Directive 2012/19/EU.

MANUFACTURER

FALCONCLAW OÜ

Saarma tee 18, Uuesalu küla, Rae vald

Harju maakond 75331, Estonia · Made in Estonia

info@falconclaw.eu · www.falconclaw.eu

REV 1.1 · NOV 2026 · © FALCONCLAW OÜ 2026

FALCONCLAW.EU