

Important notice!
***It is obligatory to register the flashlight
warranty on manufacturer's website!***



UNDERWATER FLASHLIGHT INSTRUCTION MANUAL

RAY

The **HunterProLight RAY** flashlight is a high-tech device containing advanced electronic boards and components. To ensure reliable and long-term operation, please read this user manual carefully.

Attention!!!

For consultation and flashlight reprogramming, we recommend contacting the manufacturer at: hunterprolight@gmail.com

Intended use

The **HunterProLight RAY** is a universal, multi-purpose flashlight designed for a wide range of tasks and operating conditions, providing flexibility and convenience in various situations both on land and underwater. The maximum tested operating depth is **70 meters**.

This flashlight model is designed exclusively with **Carclo TIR** optics, making it suitable for universal use: underwater hunting, diving, caving, tourism, military applications, emergency services, search and rescue operations, and more.

Contents of Package

- HunterProLight RAY flashlight - **1 pcs.**;
- 21700 Li-Ion battery / 5000 mAh (25A) - **2 pcs.**;
- USB charger 5V / 2A - **1 pcs.**;
- USB car charger 12-24V - **1 pcs.**;
- USB / Type-C silicone cable - **1 pcs.**;
- Spare parts kit (O-rings 31×1.5) + 5 gram lubricant - **1 pcs.**;
- Instruction manual - **1 pcs.**;
- Durable cardboard box with foam insert ensuring secure fixation of the flashlight and accessories during transportation.

Technical Characteristics

- Body material: **AL 6082 alloy** (marine-grade aluminum);
- Coating: **Hard anodizing HA II/III**;
- Beam formation: **Carclo TIR optics (18°) - 1 pcs.**;
- Light source: LED cluster - **12 pcs.**;
- Electrical power - Max. Boost - **Center 32 W.**;
- Electrical power - Max. Boost - **Halo 30 W.**;
- Maximum light intensity Boost - **Center 25000 Cd.**;
- Maximum luminous flux Boost - **Halo 2900 Lm.**;
- Center color temperature (fixed) - **4000K / 5000K / 6200K**;
- Halo color temperature (adjustable) - **3000K / 4000K / 5000K**;
- Light control - Microprocessor based (**boost step-up driver, developed by hunterprolight**);
- Li-Ion battery - **21700 / 5000 mAh., (25A) - 1 pcs.**;
- Battery protection - **Software based**;
- Control - **Magnetic button without fixation** (Hall sensor);

- Control - gesture/motion control (built in accelerometer and gyroscope);
- Weight: **With battery - 200 g., without battery - 130 g., in water - 90 g.;**
- Dimensions - **Length 132 mm., Diameter: 31 mm.-handle, 39.6 mm.-head.**

Components of the Flashlight

- Body;
- Acrylic glass - 5 mm thick;
- LED heat sink;
- LED cluster (*hunterprolight* design);
- Step-up driver v4.0 with gesture/motion control (*hunterprolight* design);
- Carlo TIR optics (18°);
- Battery case (*hunterprolight* design);
- Li-Ion battery, unprotected, type 21700 / 5000 mAh. (18.2 Wh.), 25A;
- Magnetic back button;
- Sealing: O-rings (31×1.5).

Principle of Operation

The primary light source is a high-intensity **Cree LED cluster** consisting of **9 Main LEDs** and **3 Amber LEDs** used for **MoonLight** mode and system status indication. The LED cluster is powered by the v4.0 Boost step-up LED driver (*hunterprolight* design). Flashlight control is performed via a magnetic button or through gesture/motion control using the integrated **accelerometer and gyroscope**.

The driver is powered by a single high-current **21700**-format Lithium-Ion cell (**25A**). Battery replacement is performed by the user.

The flashlight is designed for operation at ambient temperatures from **-20°C to +55°C**.

When the ambient temperature decreases, the battery capacity decreases. This should be taken into account when calculating the estimated working time. At increased air (water) temperature, it may be difficult to remove heat from LEDs and the driver at capacities close to maximum. In this case, the protection will be activated and brightness will automatically decrease to a safe level, or the second level of thermal protection will be activated and the flashlight will be automatically locked.

Functional Features

Flashlight brightness adjustment (**3, 5, 8 levels or smooth adjustment**).

Programming and selection of different glow temperature versions (**7 glow scenarios**).

Selection of glow brightness at intermediate levels when the light is turned on from lower to higher or from higher to lower light levels.

Activation of the **Boost** lighting mode using a timer (**20, 40, 60 seconds**).

Selection of **Boost** lighting scenarios (**Center or Halo**).

Selection of preset **MoonLight** scenarios (**4 scenarios, timer-controlled shutdown or full deactivation**).

Smooth **MoonLight** brightness adjustment.

Perform enabling and disabling of the smooth lighting of the main illumination according to the timer (**5, 10, 15, 20, 25 seconds**).

Alert with commands: **Friend-or-Foe**, **Amber-beacon**, **Strobe-Shocker**, Battery Discharge status announcement (**by holding or pressing the button**).

Warning about half-discharged battery (**single announcement**).

Warning about low battery (**double announcement**).

Warning about battery discharge (**3, 6, 9 times, continuously or OFF**) only after the first power ON of the flashlight.

Monitor the battery charge status.

Automatically switch to emergency-standby illumination (**MoonLight scenario selection and smooth brightness adjustment limited to 30% are available**) when the battery is deeply discharged.

Automatically turned OFF when the battery is deeply discharged.

Automatic block of flashlight in (**5, 10, 15, 30 minutes, 1, 2, 4, 8 hours**) when the flashlight is turned OFF - **the Don't forgetter**.

Automatic power OFF in MoonLight mode after (**1, 2, 3, 5, 10, 15, 30 minutes, 1, 2, 4, 8 hours**).

Automatically turned OFF when the battery is critically discharged (**announced by a sharp flash when the button is pressed**).

Turns OFF when the flashlight is ON after time of non-use is set (**5, 10, 15, 30 minutes, 1, 2, 4, 8 hours**).

Heat removal temperature control in order to ensure a safe temperature mode of the LEDs (**two levels of thermal protection**).

Flashlight is locked if critically overheated (**thermal blocking function**).

Adjustable speed of brightness level selection (**from 0.3-1.0 seconds, with 0.1 seconds interval**).

Saving and restoring the user's individual configuration profile (**button on the battery cassette**).

Reset the flashlight to factory settings (**button on the battery cassette**).

Configuration (**enable/disable**) of **Gyroscope** and **Accelerometer** command sets (**button on the battery cassette**).

Flashlight control via [gesture/motion](#) commands (**5 control commands, integrated accelerometer and gyroscope**).

Flashlight is automatically locked when the batteries are first installed in the cassette (**prevents accidental switching ON**).

Automatically turn OFF the flashlight in charging mode through the **USB Type-C** port.

Lock the flashlight button from accidental activation.

Flashlight Control via Magnetic Button - Command List

The flashlight is operated using a magnetic button. A **Click** is defined as a press without a return stroke. Activation and deactivation is carried out by **Clicking** the button;

Click - short pressing (**less than 0.3 seconds**), **Press** - long pressing and hold (**more than 0.6 seconds**);

Hidden commands are used for service configuration of the flashlight and are indicated by a 4-second activation signal of the **Main LED**.

Magnetic Button

Designed magnetic button adjusted on the basis of **Hall sensor**: *without mechanical contacts, complete absence of wear, high switching frequency without rattling, resistant to temperature changes*, this solution allows more informative control of flashlight.

The LED installed on the flashlight's battery cassette confirms proper button operation when a magnetic field is detected (**e.g., when a magnet is brought near**).

Control Commands

Flashlight OFF:

1 Click (less than 0.3 seconds) - Turning ON the flashlight;

1 Long Click (more than 0.3, but less than 0.6 seconds - button accompaniment) - flashlight silently switches on at the last glow level;

Press - Turning the flashlight at minimum - maximum glow level;

1 Click + Press - Turning Strobe ON;

2 Clicks - Instant activation of the **MoonLight** mode;

2 Clicks + Press + 4-second hold - Enables/Disables the **MoonLight** mode and its automatic shutdown timer.

Flashlight Locked:

3 Clicks - Unlocks the flashlight (**control available only via the magnetic button**);

5 Clicks - Unlocks the flashlight (**control available via both gesture/movement control and the magnetic button**).

Flashlight ON:

1 Click - Turning the flashlight OFF (switching to **MoonLight** mode);

Press - Scrolling glow up or down;

Press (stop at the last glow level) + **hold for 4 seconds** - ON / OFF smooth lighting and its timer;

1 Click + Press - Turning Strobe ON;

2 Clicks + Press - Enumeration of working glow scenarios;

2 Clicks - Boost mode ON;

3 Clicks - Flashlight blocking;

3 Clicks + Press + 4-second hold - Entering channel selector to select operating scenarios;

4 Clicks + Press + 4-second hold - Switches between brightness adjustment methods (**3, 5, 8 discrete brightness levels, or smooth adjustment**);

Flashlight ON in Boost Mode:

1 Click - Switches to continuous illumination mode;

2 Clicks - Switches to continuous illumination mode;

2 Clicks + Press + 4-second hold - Selects the **Boost** illumination scenario (**Center or Halo**);

3 Clicks - Flashlight blocking;

4 Clicks + Press + 4-second hold - Selects the **Boost** automatic shutdown timer (**20, 40, or 60 seconds**).

MoonLight Mode ON:

1 Click (less than 0.3 seconds) - Turning flashlight OFF;

1 Click + Press - Turning Strobe ON;

2 Clicks - Switching to previously used glow level;

2 Clicks + Press - Enumeration of scenarios of glow **MoonLight**;

Press - Smooth adjustment of **MoonLight** brightness.

Brightness Adjustment

When the flashlight is ON, you can change the brightness by pressing and holding the Press button. At the same time, brightness begins to change. When the required brightness is reached, simply release the button. During further operation, the flashlight will turn ON and OFF exactly at this level of brightness. Brightness adjustment follows the previously selected mode (**3, 5, 8 discrete levels, or smooth adjustment**), configured using the command **4 Clicks + Press + 4-second hold**.

When the flashlight is OFF, you can press and hold the button to turn ON the flashlight at minimum brightness. If you continue to hold the button, the flashlight will switch to maximum brightness in a second.

To lock the flashlight's button: while the flashlight is ON, perform **3 quick Clicks**. The driver will confirm the command with three bright LED flashes. To unlock the flashlight, perform **3 quick Clicks (magnetic-button control) or 5 quick Clicks (gesture/movement + magnetic-button control)**.

The flashlight will turn ON and the lock will be released.
The flashlight can be turned ON or OFF without setting the lock.

Channel Selector, User Scenarios, Glow Time

Channel selector is responsible for selection of scenarios, which allows you to select operating number of user glow scenarios out of **7** existing in desired sequence.

Main scenarios



Channel Selector for User Scenarios

Only when the light is ON, press **Click** 3 times shortly and hold **Press** for 4 seconds, **Main LED** flashes exactly 4 times (**4-second hidden command**), **Halo** starts announcing by changing the temperature of the

flashlight - the channel selector has been entered. Each short press of **Click** allows us to select the desired scenarios in the sequence we need, thus creating a working number of user scenarios.

Each repeated passage of the channel selector in a circle is announced with **10** quick alerts, which allows you to add previously missed scenarios. Holding **Press** saves selected scenario, repeat **Press** - you exit channel selector. A working number of user scenarios are saved and available. Selection of working scenarios is available with the command: 2 short presses **Click** and hold **Press** only when the light is on.

Sorting user work scenarios

Only when the flashlight is turned ON, press 2 times shortly **Click** and hold **Press**. You review previously selected glow scenarios consistently with an interval of **1.5 seconds**, if you press again and continue to hold the button, the scenarios will be reviewed in the reverse direction.

After releasing the button, the selected scenario is saved as permanent.

All flashlight adjustments, announcements, warnings will take place exclusively in the scenario you selected.

Runtime in Different Scenarios and Brightness Levels ±5%

HPL RAY Runtime at 8 Brightness Levels

Center + Halo (10 000 Candela - Center / 970 Lumens - Halo)

- Level 8 – 50 minutes
- Level 7 – 1 hour 10 minutes
- Level 6 – 1 hour 35 minutes
- Level 5 – 2 hours 20 minutes
- Level 4 – 3 hours 30 minutes
- Level 3 – 5 hours 45 minutes
- Level 2 – 10 hours 30 minutes
- Level 1 – 24 hours

(super-comfort)
(comfort)

Center (18 000 Candela)

- Level 8 – 45 minutes
- Level 7 – 1 hour 05 minutes
- Level 6 – 1 hour 30 minutes
- Level 5 – 2 hours 10 minutes
- Level 4 – 3 hours 20 minutes
- Level 3 – 5 hours 30 minutes
- Level 2 – 10 hours
- Level 1 – 24 hours

(super-comfort)
(comfort)

Halo (1940 Lumens)

- Level 8 – 50 minutes
- Level 7 – 1 hour 10 minutes
- Level 6 – 1 hour 35 minutes
- Level 5 – 2 hours 20 minutes
- Level 4 – 3 hours 30 minutes
- Level 3 – 5 hours 45 minutes
- Level 2 – 10 hours 30 minutes
- Level 1 – 24 hours

(super-comfort)
(comfort)

HPL RAY Runtime at 5 Brightness Levels

Center + Halo (10 000 Candela - Center / 970 Lumens - Halo)

- Level 5 – 50 minutes
- Level 4 – 1 hour 30 minutes
- Level 3 – 2 hours 50 minutes
- Level 2 – 6 hours 30 minutes
- Level 1 – 24 hours

(super-comfort)
(comfort)

Center (18 000 Candela)

- Level 5 – 45 minutes
- Level 4 – 1 hour 25 minutes
- Level 3 – 2 hours 40 minutes
- Level 2 – 6 hours 15 minutes
- Level 1 – 24 hours

(super-comfort)
(comfort)

Halo (1940 Lumens)

- Level 5 – 50 minutes
- Level 4 – 1 hour 30 minutes
- Level 3 – 2 hours 50 minutes
- Level 2 – 6 hours 30 minutes
- Level 1 – 24 hours

(super-comfort)
(comfort)

HPL RAY Runtime at 3 Brightness Levels

Center + Halo (10 000 Candela - Center / 970 Lumens - Halo)

- Level 3 – 50 minutes
- Level 2 – 2 hours 50 minutes
- Level 1 – 24 hours

Center (18 000 Candela)

- Level 3 – 45 minutes
- Level 2 – 2 hours 45 minutes
- Level 1 – 24 hours

Halo (1940 Lumens)

- Level 3 – 50 minutes
- Level 2 – 2 hours 50 minutes
- Level 1 – 24 hours

Maximum Light Output in Boost Mode

Boost Center - 2200 Lumens / 25 000 Candela

Boost Halo - 2900 Lumens

MoonLight Mode and Its Control, Scenarios, Automatic Shutdown Timer, Full Enable/Disable

The **MoonLight** function is used as peripheral light, auxiliary illumination, masking light, etc., and serves as an intermediate state between turning the flashlight ON and OFF.

With the flashlight OFF, perform 2 short **Clicks** - it will instantly switch to **MoonLight** mode.

With the flashlight ON, perform 1 short **Click** - it will switch to **MoonLight** mode, the next short **Click** will turn the flashlight OFF. This cycle repeats continuously.

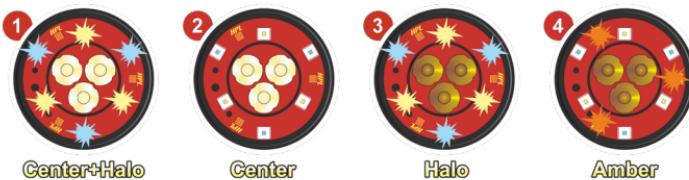
While in **MoonLight** mode, performing 2 short **Clicks** instantly returns the flashlight to its previous ON state, restoring the last brightness level and the selected scenario.

While in **MoonLight** mode, performing a **Press** activates smooth **MoonLight** brightness adjustment.

Сценарии MoonLight

There are 4 preset **MoonLight** scenarios:

Moonlight scenarios



While in **MoonLight** mode, perform 2 short **Clicks** and hold **Press** - the flashlight will begin cycling through the **MoonLight** scenarios in a loop. If an additional **Click** is made while continuing to hold the button, the cycling direction will reverse. Releasing the button saves the currently selected scenario.

Turning MoonLight ON and OFF Completely

Only when the flashlight is turned OFF, we make 2 short presses of **Click** and hold **Press** for 4 seconds, the **MoonLight** led flashes 4 times (**4-second hidden command**), **MoonLight** should turn ON and light up. Pressing again with the flashlight OFF, 2 short **Clicks** and holding the **Press** for 4 seconds will turn OFF **MoonLight**.

MoonLight Runtime at Minimum / Maximum Levels

MoonLight runtime is up **to 10 days**, depending on the selected scenario and brightness level.

MoonLight Auto shutdown Timer

This function is useful for limiting or fixing the operating time while in **MoonLight** mode.

The user can manually program the **MoonLight** automatic shutdown timer.

Timer programming is performed exclusively during MoonLight activation.

With the flashlight OFF and MoonLight not yet activated, perform 2 short **Clicks** and hold **Press** for 4 seconds, the **MoonLight** led will flash 4 times (**4-second hidden command**) and **MoonLight** will turn ON. Continue holding for another 4 seconds, **MoonLight** will begin indicating: **1 flash - 1 minute, 2 flashes - 2 minutes, 3 flashes - 3 minutes, 10 flashes - continuous operation**. A short **Click** and holding **Press** will reverse the timer selection direction.

Releasing the button saves your selection, and **MoonLight** will automatically turn OFF according to the configured timer.

Enabling and disabling the **MoonLight** function can be performed cyclically without reprogramming the automatic shutdown timer (**do not hold the additional 4 seconds used for timer setup**), the previously configured timer value remains permanently saved.

Smooth Lighting, Setting its Timer, ON/OFF

Smooth lighting is a function that allows the human eye to adapt to the light, avoids an instant sharp flash, and also increases the flashlight's operating time.

Smooth lighting is applied only when the flashlight is turned ON and ramps up to the previously used brightness level. A short **Click** immediately switches the flashlight to steady illumination, cancelling the smooth lighting process.

While in **MoonLight** mode, 2 short **Clicks** return the flashlight to the previously used brightness level (without smooth lighting).

To enable **smooth lighting** and configure its timer (**5, 10, 15, 20, 25 seconds**), turn the flashlight ON at any brightness level, then **Press** and hold the button while moving toward either the minimum or maximum brightness level. Continue holding for 4 seconds, the **Main LED** will flash 4 times (**4-second hidden command**), then the **Main LED** will announce **smooth lighting** activation with a double flash. If the button continues to be held for another 4 seconds, the **Main LED** will begin announcing: **1 flash - 5 seconds, 2 flashes - 10 seconds, 3 flashes - 15 seconds, 4 flashes - 20 seconds, 5 flashes - 25 seconds**. A short **Click** while holding **Press** reverses the timer selection direction. Releasing the button saves your selection, the **smooth lighting** function and its timer are now activated.

To disable **smooth lighting**, turn the flashlight ON at any brightness level, then **Press** and hold the button while moving toward either brightness limit. Continue holding for 4 seconds, the **Main LED** will flash 4 times (**4-second hidden command**), then the **Main LED** will announce **smooth lighting** deactivation with a single flash.

Smooth lighting can be enabled or disabled cyclically without reconfiguring the timer (**do not hold the additional 4 seconds used for timer setup**), the previously configured **smooth lighting** time remains permanently saved.

Alerts and control

The **Strobe-Shocker** is used as a protective tool with a blinding and disorienting effect, intended for self-defense against aggressive individuals or wild animals.

The flashlight generates powerful concentrated flashes of the **Central LED** at **14 Hz (14 times per second)**, producing a blinding effect and temporary disorientation.

Friend-Foe mode is used for team identification and participant differentiation, as well as for signaling one's location.

Real-time battery discharge indication is provided by **pulsed flashing (1 flash ~ 100%, 2 flashes ~ 75%, 3 flashes ~ 50%, 4 flashes ~ 25%)**, allowing quick and clear estimation of the remaining battery capacity during flashlight operation.

The **Amber Beacon** is used to mark location in low-visibility conditions (**underwater, fog, caves, etc.**). The flashlight generates short blinking pulses of the **Amber LED** at a uniform interval, creating a highly visible signal.

Battery discharge status



With the flashlight **ON**, perform one short **Click** and hold the button **Press** for about 2 seconds (*protection against accidental activation*). This triggers the **Strobe-Shocker** announcement. If **Press** is performed again, the flashlight switches to the real-time battery charge indication using pulsed flashing (**1 flash ~ 100%**, **2 flashes ~ 75%**, **3 flashes ~ 50%**, **4 flashes ~ 25%**).

The next **Press** switches to the **Friend-Foe** announcement, and the cycle continues, always returning through the real-time battery charge indication.

With the flashlight **OFF** or in **MoonLight** mode, perform one short **Click** and hold the button **Press** for about 2 seconds (protection against accidental activation). This triggers the **Friend-Foe** announcement. If **Press** is performed again, the flashlight switches to the **Amber Beacon** announcement, the next **Press** switches to **Strobe-Shocker**, and the cycle continues, always returning through the **Amber Beacon** announcement.

Alert is on without holding the button.

Short press of the **Click** brings the flashlight to stop alerts and returns it to its initial condition.

Saving and restoring the individual user profile. Reset to factory settings

After fully configuring the flashlight for specific operating conditions, the user can save their individual settings and restore them when needed. The **save/restore** function button is located on the flashlight's battery cassette.

Saving the user's individual profile is performed only when the flashlight is OFF or locked by making 2 short **Clicks** and holding the button **Press** for 4 seconds (**the Amber LED remains constantly ON**). Confirmation of correct saving is provided by two announcements from the **Main LED**, the flashlight will automatically lock.

Restoring the user's individual profile is performed only when the flashlight is OFF or locked by making one **Press** and holding it for 4 seconds (**the Amber LED remains constantly ON**).

Confirmation of correct restoration is provided by five announcements from the **Main LED**, the flashlight will automatically lock.

Factory reset (**restoring the default flashlight configuration programmed by the manufacturer**) is performed only when the flashlight is OFF or locked by making 5 short **Clicks** and holding the button **Press** for 4 seconds (**the Amber LED flashes 5 times**). Confirmation of the reset is provided by 4 announcements from the **Main LED** (firmware version number v4.0). The previously saved user profile will be deleted, and the flashlight will automatically lock.

Flashlight Control via Gestures/Movements, Command Description, Gesture/Movement Control Configuration (Enable/Disable)

The flashlight is equipped with an integrated accelerometer and gyroscope, allowing control through gestures/movements. **Five** commands are available, adapted for both **right-handed** and **left-handed** users.

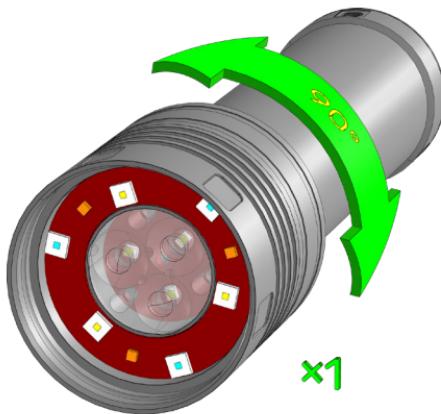
For safety reasons, gesture/movement control does not allow switching the flashlight OFF or locking it.

To activate gesture/movement control, unlock the flashlight by performing 5 short **Clicks**. After successful unlocking, the **Amber LED** will fade ON and OFF smoothly, and the flashlight will turn ON. From this moment, the flashlight can be controlled both by gestures/movements and by the magnetic button. To lock the flashlight, use the standard command - 3 short **Clicks** while the flashlight is ON.

Control is performed by rotating the flashlight around its axis (around the body) by 90° and returning it back without delay, based on the principle of a rotary switch.

The total time required to perform the rotation must not exceed **0.6** seconds.

1 Rotation with return - enables and disables Boost.



Boost is an adaptive extreme illumination mode in the **Center** or **Halo** channel (depending on the user-selected scenario). Operating power range: **20-32 W**. Power adjustment is performed automatically and smoothly based on the battery charge level.

Boost Scenarios

Switching between the **Center** and **Halo** scenarios is performed with the command **2 Clicks + Press (hold for 4 seconds)**.

Boost - Center: maximum power is concentrated in the **Central beam** for long-range illumination.

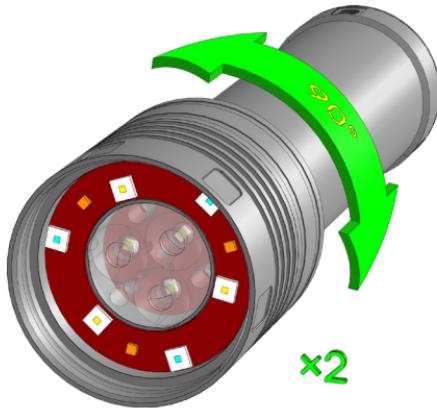
Boost - Halo: extreme output is shifted to the **Halo** (side) zone, providing wide and uniform illumination of the near-field area.

Boost Automatic Shutdown Timer

The **Boost** automatic shutdown timer is set to **20, 40, or 60 seconds** using the command **4 Clicks + Press with a 4-second hold**. The **Main LED** indicates the selected timer value with flashes (**1 flash - 20 seconds, 2 flashes - 40 seconds, 3 flashes - 60 seconds**).

A short Click while holding the button reverses the timer selection direction. Releasing the button saves the chosen value.

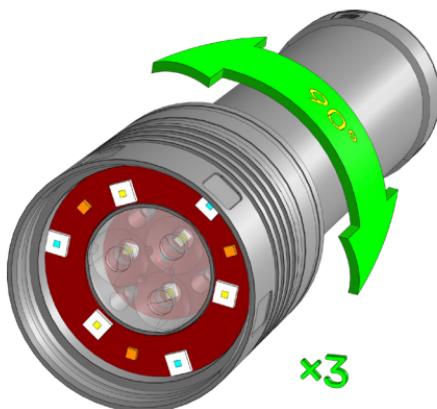
2 Rotations with return - activates Main illumination, switches to MoonLight, and back



Activation of the flashlight in **Main illumination** mode is performed with a **2-rotation** gesture when the flashlight is OFF. Repeating the **2-rotation** gesture switches the flashlight between **Main illumination** mode and **MoonLight**.

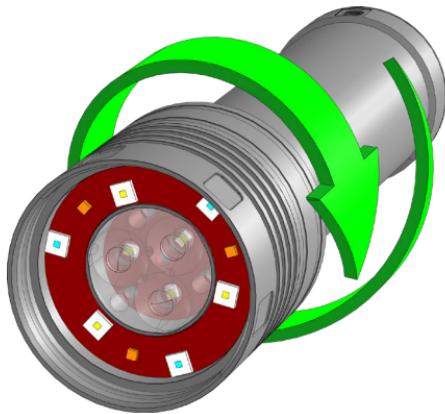
For safety reasons, gesture/movement control does not support turning the flashlight OFF or locking it.

3 Rotations with return - smooth brightness adjustment for Main illumination and MoonLight



Smooth brightness adjustment is performed with the **3-rotation** gesture. For more precise control, reduce the rotation speed after executing the command. After **1 second** of inactivity, the selected level is automatically saved and confirmed with a light signal. Brightness adjustment is available both in **Main illumination** mode and in **MoonLight** mode.

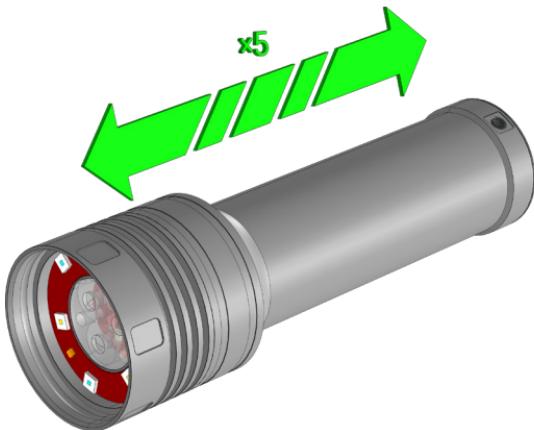
360° Rotation - selection of Main illumination and MoonLight



Scenario selection for **Main illumination** or **MoonLight** is performed by rotating the flashlight around its axis by **360°**. Scenario scrolling begins after the first full rotation (**safety zone**).

After **1 second** of inactivity, the selected scenario is automatically saved and confirmed with a light signal.

Shaking more than 5 times in a row - activation and deactivation of the **Shocker-Strobe** mode



From any state (**OFF, ON, or MoonLight**), performing more than **5 short shakes** enables or disables the **Shocker-Strobe** mode. Deactivation of the **Shocker-Strobe** mode returns the flashlight to the previous illumination mode or switches it to the OFF state.

Gesture command configuration - allows enabling or disabling flashlight control via gestures/movements

Using the button located on the flashlight's battery cassette, the user can manually enable or disable gesture commands.

Configuration is performed only when the flashlight is OFF or locked.

To enter configuration mode, perform **3 short Clicks** and then hold **Press for 4 seconds**. The **Amber LED** will blink **3 times**, after which the flashlight will begin demonstrating the available commands sequentially (**3 series for each**).

Use a short **Click** to confirm selection. One or multiple commands can be chosen. If the user makes no selection, all gesture commands will be saved automatically.

Important to know!!!

The amber LED confirms the correctness of executed commands: save, restore, factory reset, and gesture/movement configuration. If the command is invalid, the LED does not light.

*The save/restore/reset/configuration button is also disabled when the flashlight's battery is deeply discharged (**below 3 volts**).*

Flashlight Preparation for Use

Before shipping, the flashlight undergoes multiple tests. The battery is also tested (internal resistance measurement and 3 full charge/discharge cycles).

A pressure-based waterproof test is performed as well, so the user does not need to perform any additional actions (such as installing O-rings). Only spare O-rings are included in the package.

Before using the flashlight, the battery must be charged to achieve the specified performance parameters.

Remember that the battery has a natural self-discharge effect.

If the flashlight is not used for an extended period, perform a **charge/discharge** cycle every 4 months. To prolong the **Li-Ion** battery lifespan, we recommend storing the flashlight with **at least 80%** charge.

Battery Replacement and Installation

Unscrew the flashlight body. Perform installation or replacement of the battery on a flat surface.

Pull the battery toward yourself until it comes out **halfway across its diameter**.

Then press the battery body toward the spring contact until it stops, pull the battery straight toward yourself without tilting, and remove it. Do not apply excessive force to avoid damaging the battery's insulating wrapper.

After installing the battery, the flashlight will announce each LED channel (**presentation**) and will automatically lock. The flashlight is ready for operation.

Charging

Charging can be interrupted at any stage. The battery has no memory effect. For long-term and reliable flashlight operation, the charging sequence must be followed.

In winter, charging is only possible after the battery has warmed up to positive (**room**) temperature.

Plug the **USB** charger into a wall outlet.

Connect the **USB/Type-C** cable: one end to the charger, the other to the flashlight (the **Type-C** port is located under the body). A green LED on the flashlight will illuminate, indicating the start of charging.

When the **USB/Type-C** cable is connected while the flashlight is ON, it will automatically turn OFF. Lock mode is not activated, and flashlight control remains available after charging is complete and the cable is disconnected.

To activate gesture control, the flashlight must be unlocked again by performing 5 Clicks.

After the battery is fully charged, the LED on the flashlight cassette will turn OFF.

(According to battery manufacturer recommendations, the flashlight may be used 10 minutes after charging is complete.)

Disconnect the **Type-C** cable from the flashlight first, then unplug the charger from the outlet.

« *Full charging time of the flashlight battery is approximately 3 hours.* »

The HunterProLight RAY flashlight does not support *Fast USB chargers*. We recommend using the included charger.

Battery Status Indication

Only when the flashlight is turned on (as soon as the microcontroller has detected the discharge), a short-term alert is automatically starts to indicate battery status.

When the batteries are half-discharged, the driver will warn with **one** quick alert. Each time the light is switched on, a new alert is made, and repeated **3 times**.

At the same time, work should be continued in mode set.

A low battery warning occurs every time the flashlight is turned on. Each time the light is turned on again, **two** short alerts are made, and repeated **6 times**. At the same time, normal work is possible.

When the battery becomes fully discharged (**deep discharge**), the led driver will warn exactly one minute later with **5 short** indications and will switch the flashlight into emergency standby mode, managed by **MoonLight**. **MoonLight** scenario selection and smooth brightness adjustment (limited to **30%**) remain available. All other flashlight functions are disabled.

At critical battery discharge, the led driver shuts the flashlight OFF without warning, any button **Press** results in a short flash. Flashlight operation is no longer possible - the battery is completely discharged!

A full recharge of the flashlight is required!

Important to know!!!

When switching from MoonLight to the previously used brightness level without fully turning the flashlight OFF, battery discharge indication is not performed.

Flashlight maintenance and storage

The flashlight does not require special care. Check the seals for cleanliness when **disassembling / charging** the flashlight. In case of mechanical damage to the seals, in order to avoid depressurization of the flashlight, it is necessary to replace them.

Do not place titanium parts, copper alloys, or other materials capable of forming a galvanic pair with aluminum in direct contact with the flashlight. Do not use detergents when washing the flashlight body.

If you attach the flashlight to the gun with insulating tape, use **silicone** or **rubber** glue **ONLY** that does not corrode the anodized coating in water.

All rubber seals (**O-rings**) are made of oil and gasoline resistant rubber, we recommend using only **Litol-24** for lubrication.

For storage and transportation, keep the flashlight **switched OFF** and **locked (3 Clicks)** while the flashlight is ON will lock it).

Important to know!!!

After using the flashlight in salt water, a desalination procedure is recommended: rinse the flashlight thoroughly under running water, submerge it in fresh water for 60 minutes, then rinse again under running water.

Recommendation for use of the flashlight in winter time

In winter, in order to avoid freezing of the end button of the flashlight after leaving the water, we recommend blocking the flashlight, and while holding the button pressed, drain the water through the drainage holes. Unlock the flashlight and continue using.

It is forbidden to

Store or transport the flashlight at temperatures below **-20°C** or above **+40°C**;

Dry the flashlight at temperatures above **+40°C**, or dry the flashlight in a microwave oven;

Subject the flashlight to shock loads;

Disassemble or assemble the flashlight with wet hands, in the rain, or underwater;

Do not use any parts of the flashlight not for their intended purpose;

Use any elements in the flashlight (**sleeves, washers, magnets, etc.**) that were not approved for its design;

Use charging devices not intended for this flashlight model;

Use faulty or damaged charging devices;

Operate the flashlight with signs of leakage: fogging, broken glass, visually damaged body seals, glass, etc.;

Apply brute physical force when tightening the flashlight body.

Possible malfunctions and ways to eliminate them

The flashlight does not turn on.

Cause: The flashlight is locked.

Solution: Click 3 times to unlock. The flashlight will unlock and turn on.

Cause: The battery is completely discharged.

Solution: It is necessary to charge it.

Cause: The battery is installed incorrectly in the cassette. Polarity reversed.

Solution: The batteries must be installed correctly.

The flashlight switches automatically to MoonLight (emergency standby mode).

Cause: Deep battery discharge.

Solution: Charge the battery.

The flashlight is automatically locked after N-minutes (N-minutes according to the manufacturer's preset settings), (when the flashlight is off, but not locked). Do-not-forget function (alert: 4 flashes).

Cause: Do-not-forget function of is activated.

Solution: Unlock the flashlight with 3 Clicks.

The flashlight automatically turns off without alert after N-minutes (N- according to user settings), (when the flashlight is in the MoonLight mode).

Cause: MoonLight shutdown timer is set.

Solution: Turn ON the flashlight by pressing the button.

The flashlight does not turn on, when the button is pressed, there is a short flash.

Cause: Critical battery discharge.

Solution: Charge the battery.

[Charger does not charge.](#)

Cause: Type-C connector is broken or contact is missing.

Solution: Disconnect the plug of the charger and connect it correctly.

[The glass sweats.](#)

Cause: Small amount of moisture inside the housing.

Solution: Check the cleanliness of seals. Check the presence and integrity of the glass seal, as well as the integrity of the glass. If necessary, replace damaged seals. Allow the flashlight to dry and carefully reassemble.

[Be sure to contact the manufacturer to obtain more detailed recommendations.](#)

[The flashlight somewhat reduces brightness after long-term work in the air.](#)

Cause: Triggering of thermal protection of the LEDs and the led driver.

Solution: Does not require any action, the flashlight should cool down.

[The flashlight somewhat strobos + flashes 3 times and is locked after long-term work in air or in water.](#)

Cause: Activation of the second stage of thermal protection of the LEDs and the driver.

Solution: Check water access to the radiator of the flashlight (remove the insulation of the mounting from the radiator, clamp, tape, foam) to remove the heat from the LED-heated radiator. The flashlight must cool down.

[The button to save / restore individual user settings and reset to factory settings is not active.](#)

Cause: The flashlight is operating in **Main illumination** or **MoonLight** mode, and the battery is in a deep-discharge condition (**below 3 volts**).

Solution: Turn off the flashlight and charge the battery.

Individual user settings are not restored after pressing the button.

Cause: Your profile is not saved in the flashlight.

Solution: Saving the user's individual profile is performed only when the flashlight is OFF by making 2 short **Clicks** and holding the **Press** button for 4 seconds (**the Amber LED remains steadily illuminated**). Correct saving is confirmed by two announcements from the **Main LED**, after which the flashlight will automatically lock.

Gesture/movement control does not work.

Cause: Flashlight is in thermal protection or currently in standard mode (magnetic button control only).

Solution: Allow the flashlight to cool. Lock with **3 Clicks**, unlock with **5 Clicks**. The flashlight must cool down before use. Lock the flashlight using the **3 Click** command, then unlock it with the **5 Click** command. The **Amber LED** will fade in and out smoothly and the flashlight will turn ON, *gesture/movement* control and magnetic-button control will now be available.

Warranty obligations

We guarantee trouble-free operation of the product for **1 year** from the date of sale, provided that the standard requirements applicable to electronic devices are met.

Depressurization of the flashlight, battery damage (short circuit, critical discharge, physical damage) caused by the user is not covered under warranty and is evaluated individually in each case.

In case of water ingress, it is recommended to disassemble the flashlight, pour out the water, remove all batteries, unscrew the flashlight blind, remove the lenses, and leave the completely disassembled flashlight to dry (at ambient temperature) for several days.

Be sure to contact the manufacturer to obtain more detailed recommendations.

For consultation or support, contact us through the manufacturer's website www.hunterprolight.com or by e-mail: hunterprolight@gmail.com

For more detailed explanations of each flashlight function, visit our **YouTube** channel:
<https://www.youtube.com/channel/UC9GGT3HUL-37JrJqACo6WTq>



Register products on manufacturer's website www.hunterprolight.com for additional benefits! At the same time, you will not only receive prompt service, but also be able to receive the latest news about new products.

The manufacturer of the flashlight reserves the right to make changes to its design, driver specifications and broaching any time without prior notice.

