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**Warranty certificate and instructions for use of the light**

**FINNSUB BANG spot / FINNSUB BANG wide**

# Instructions for use

## 1. INTRODUCTION

Congratulations on your purchase of the FINNSUB BANG, which will accompany you on your adventures. You get a very compact dive light that is the perfect combination of size, weight, power and lighting time. All this is enhanced by the original way of control by tapping using dual software. The battery is recharged with a unique solution using magnetic contacts. Only fully-fledged materials and components such as durable plastic known as Delrin, aluminum alloy with elox, borosilicate glass, branded accumulator, gold-plated mono-alloy contacts and others are used during production.

The FINNSUB BANG models come in two basic designs - BANG spot (with reflector) and BANG wide (with diffusion optics). Your purchased model is marked on the packaging.

BANG Spot is designed for more advanced divers who dive in muddy waters where there is a need to glimpse the sediment and at the same time emphasize signaling that is more readable when done with a narrow light beam.

BANG Wide is designed for recreational and sport divers who dive especially in clean water and sea and want intense enlightenment of the largest possible area.

## 2. WHAT'S INCLUDED IN THE PACKAGE

- dive light
- charger
- soft handle
- user manual

## 3. BEFORE THE FIRST USE

**Carefully read the enclosed instructions and, in case of doubt, please contact your dealer!**

To avoid accidental switching on during handling and transport, the dive light is supplied with the battery in the discharge state. It needs to be fully charged immediately after delivery / purchase.

## 4. CHARGING

Charge the dive light at an ambient temperature not exceeding 25° C and in a dry environment. Never charge at high ambient temperatures, in direct sunlight or in frozen environment! **Contacts for charging both of the lamp and of the charger adapter must be completely dry and free of any salt residues and other debris! After a dive in salt water, it is necessary to rinse the lamp first in fresh water and then to dry it!**

**Charge the dive light only by the supplied charger with the charging adapter.** The adapter in its shape corresponds to the back of the lamp with the charging contacts, to which it is attached and held only by magnetic force. The polarity of the charging contacts is interchangeable, so there is no need to distinguish the position "+" or "-" of the pole. Do not connect any other devices, connectors, wires, voltage and current sources, measuring equipment, other accumulators or batteries, chargers, etc. to the charging contacts of the lamp or charging adapter. This may result in electric shock and irreparable damage to the lamp! In such cases, the warranty claim will not be accepted. **The charger adapter is not waterproof - water, especially salt, may cause irreversible damage. In this case, the adapter is dangerous for further use and should be immediately disconnected from the mains and from the lamp. In case of salt water**



contamination, service or replacement is necessary - therefore, avoid salt water penetration into the charging adapter!

**Charging procedure :**

- 1. Make sure that the charging contacts of the dive light are completely dry and free from any salt residues and other debris. Otherwise, rinse the contacts with fresh water and then dry with, for example, a dry cloth or by blowing.
- 2. Plug the charger into the power socket - the light is green. The supplied charger can be connected to a 220V or 110V supply. **Never connect the charger to a non-matching voltage! Be careful not to break the wires. If the conductors are obviously damaged, never use the charger.** This may result in electric shock and irreparable damage to the lamp! In such cases, the warranty claim will not be accepted.
- 3. Attach the charging adapter to the charging contacts of the dive light and make sure the charger light is red (uninterrupted) - the flashlight briefly flashes and the charger light is red, the battery is charging. When the light comes on green, the battery pack is charged at about 90%. To get full battery capacity, you can keep it charging (the complete charging cycle lasts for about 4 hours when the batteries are fully discharged). Do not move the light or the adapter while charging, let them lie loosely on a flat surface to avoid accidental interruption of the charging cycle.
- 4. Disconnect the light contacts from the charging adapter and then disconnect the charger from the socket, save the power. **When disconnecting the charger from the mains and disconnecting the light contacts from the charging adapter, never pull the charging cable, but hold the body of the charger and the charging adapter!**

**Important warning**

Li-ion sources do not have the so-called memory effect. **We recommend recharging the battery after every use, regardless of whether it is fully discharged or not.**

**5. LIGHT CONTROL, DESCRIPTION OF FUNCTIONS, USAGE**

Controlling the dive light, ie turning it on, switching off and switching power levels is done by tapping lightly into the BANG space on the lamp body. Unique Dual Software through an accelerometer analyzes and identifies states where the lamp is out of the aquatic environment or in the aquatic environment.



Outside the aquatic environment, it analyzes vibrations to minimize the possibility of accidental switching on the light, for example during car transport. For this reason, it may appear to the user that the dive light is harder to operate out of the aquatic environment.



Accelerometer control is optimized for underwater use, with gloves and the dive light attached to the other hand via the supplied bracket. With each change of hold, way of mounting the light, or place and direction of tapping, the response of the light changes. It means that each user must learn to intuitively handle his dive light, to "live with it". If there is no response to the fully charged dive light for a moment, there is no need to tap harder, but it is important to keep the correct rhythm and pauses between the taps.

The torch is switched on / off after 3 consecutive taps with a time span between each stroke of 0.3 to 0.8 seconds. If the rhythm is correct, the dive light blinks briefly after the second tap.

Switching power levels is done after 2 consecutive taps with a time interval between each stroke of 0.3 to 0.8 sec.

- Level 1 = 30% of the power (366 lumen)
- Level 2 = 100% of the power (1100 lumen)

ON/OFF	BANG!	<u>0,3-0,8s</u>	BANG!	<u>0,3-0,8s</u>	BANG!
30/100%	BANG!	<u>0,3-0,8s</u>	BANG!		

If the user taps out of set time intervals (does not observe "rhythm" or intensity), there is a time delay of 0.8 seconds, when the dive light ignores another tap and any further tap in this delay prolongs the delay for another 0.8 sec until the light is at 0.8 sec at rest. It is an effective method of eliminating accidental impacts caused, for example, by transport. If the rhythm or tapping intensity is outside the set limits, the torch does not respond - just leave it for about 1-2 seconds at rest and try to repeat the switching procedure.

### **Overheating protection:**

It has two functions - to protect the lamp against damage and the user at the same time from the possible consequences of using full power outside the aquatic environment. When the critical temperature is reached (approx. 55-60 ° C on the surface of the light head), the lamp itself switches off. When the lamp is tapped to switch on again, it lights up to level 1, and again if the temperature is still high, the lamp switches off. It is possible to switch the light on only after the temperature drops to a safe operating level.



This dive light is not designed to be out of the water at full power. Only level 1 can be used outside the aquatic environment. **WARNING** - In case of direct sunlight and high ambient temperatures, the LED can be damaged even in level 1, therefore never switch on the light at these conditions outside of the aquatic environment! Claim of the burnt LED due to use in direct sunlight and high ambient temperature outside the aquatic environment will not be covered by warranty!

### **Emergency mode:**

Emergency mode ensures that the user does not remain in a critical situation without a light source, such as in a closed or night dive, and had enough time to safely stop the dive.

As soon as the battery pack is in a state close to full discharge, the lamp automatically switches to intermittent lighting (blinking) at 10% power (110 lumens) at 1s on, 0.5s off. This function does not have a specified operating time, it is in the order of several tens of minutes according to the previous used power level, ambient temperature, battery status, etc.).

## **6. TRANSPORT AND HANDLING, MAINTENANCE, STORAGE**

When transporting the lamp, make sure that no shocks (such as strikes on the fixed parts or the objects in the car trunk) cause it to be accidentally switched on.

Before each dive, make sure that the battery is properly charged and the dive light is working. Also, check the condition of the lamp with emphasis on the parts that have a major influence on the watertightness of the lamp - the damage of the glass on the light head, e.g. when the dive light falls on the stone, etc., a significant mechanical damage to the body of the light, e.g. its cracking caused by putting the cylinders on the lamp. In the event of a fault or a doubt about the status of the dive light, do not use it again and consult a specialist service!

Claim of the dive light damaged by the penetration of water due to its mechanical damage will not be covered by warranty!

After each use, especially in salty water, rinse the dive light thoroughly with fresh water and then dry it. Particular care should be taken to remove salt residues from the charging contacts - these could cause an electrochemical reaction that can lead to damage of charging contacts when charging the battery, especially in conjunction with humidity (typical situation when charging the dive light on the boat).

**If you are not using the dive light, it is necessary to charge the battery before storing!**

At the latest every 6 months, discharge the battery and recharge it fully! Discharge the dive light by switching it on and lighting it in an aquatic environment, e.g. in a cold water container.

The optimal storage temperature is 15-18 ° C in a dry and shady place. At higher and especially lower minus temperature, there may be an earlier need to recharge the battery.

Do not keep the dive light at higher ambient temperatures in direct sunlight (e.g. on a dashboard in a hot car) - there is a risk of its destruction, burns and fire!

Avoid the situation when you leave a fully discharged dive light in a frosty environment (e.g. in winter overnight in the car trunk) - there may be a significant drop in the battery capacity (shortening of the running time of the light) or its complete destruction!

Do not store the dive light in a location where it could be shaken, which could cause the lamp to turn on accidentally and discharge the battery.

## 7. TECHNICAL SPECIFICATION

Light flux: 1100 Lumen

Light temperature: 7000 K (cold white light)

Light intensity:

- BANG spot: 14000 lux/1m
- BANG Wide: 7000 lux/1m

Light beam angle:

- BANG spot: 5°
- BANG Wide: 10°

7000k



366 lm	4300 lux/1m	1100 lm	14000 lux/1m
30%	10 hrs	100%	2 hrs

366 lm	2150 lux/1m	1100 lm	7000 lux/1m
30%	10 hrs	100%	2 hrs

Type of cells : Lithium-ion

Input voltage: max. 4,2 V

Input current: max. 2000 mA

Running time:

- level 1 (30% of power): 10 hours
- level 2 (100% power): 2 hours

Weight:

- 250 grams at the surface
- 70 grams under water

250g

70g

The dive light is intended for use up to a maximum depth of 100 m.

## 8. BATTERIES, LIFE TIME AND REPLACEMENT

The dive light is equipped with branded accumulator composed of Li-ion batteries. Battery life is up to 600 charging cycles, subject to proper handling, storage, and maintenance conditions. If you give your light a proper care, it will reward you with a long life and lots of beautiful night dives.

Li-ion batteries are designed for a certain number of cycles – it means full charge and then full discharge. But it will never happen in real conditions. Approximately calculate what the 600 full cycles mean. If you use the lamp every third day and each time you discharge it half, you make about 60 full cycles per year, 600 cycles will take you over 10 years. Even after this time, the battery will have a maximum capacity of 70% of the original capacity. Sounds good, do you think so?

Unfortunately, the batteries are naturally aged even without use. However, it is still true that 5 years or more of a good battery is a real reachable time, if you follow the basic principles for using it.

Two of them are very important. Never leave fully discharged batteries, recharge them at least partially. And secondly, do not expose the battery to temperature below 0 ° C (preferably below 10 ° C). In a frosty environment, of course, it is possible to carry the charged lamp and store it in the short term, and it will not do any harm to it. However, it is not recommended to use the dive light with a frozen battery.

However if you are not satisfied with the running time after the natural decrease of the accumulator capacity, contact the specialist service center. **The battery is not user-replaceable, the replacement can't be carried out without destroying the delrin body and the entire lamp can be destroyed by improper interference! Expert service will replace your battery at a favorable price, including replacing the delrin body with a new one.**

**Do not try to rotate the contacts intended to charge the dive light - it can damage the watertightness of the lamp and completely destroy it. Expert service will detect this user intervention and claims in such cases will not be covered by warranty!**

## **9. DISPOSAL OF AN OLD DEVICE**

Please dispose of the old and not working dive light and a charger in a proper way and in accordance with the local regulations for electronic waste and batteries. Take into account that this dive light is an electronic waste with Li-Ion batteries. Do not dispose of the lamp in communal or mixed waste, but dispose of it free of charge at designated collection points. If you wish you may return it to your nearest FINNSUB dealer.

Proper disposal of this product will help to conserve natural resources and to prevent potential negative impacts on the environment and human health.

## **10. AIR TRANSPORT**

Air transport of Li-Ion batteries is regulated by ICAO (International Civil Aviation Organization) and IATA DGR (International Air Transport Association). **However, it is always necessary to consider the minor differences in the regulations of individual airlines and to study their conditions before departure!**

In general, personal portable electronic devices containing lithium-ion batteries (rechargeable batteries) for example in watches, calculators, cameras, mobile phones, laptops, video cameras, shaving machines, etc. can be transported in their hand luggage if their performance does not exceed 100 Wh.

This product has an integrated Li-Ion battery that is the part of the torch and can't be removed. The capacity of the battery is 5.2 Ah and its nominal voltage is 3.7 V. **The battery output in watthours is 19.24 Wh.**

# Warranty certificate

## We warrant this product under the following conditions:

1. FINN SUB s.r.o. shall perform free of charge defects and damage to the product under the conditions set out in points 3 to 8, caused by proven material defects or by production if they are reported immediately upon detection within the specified warranty period. Derogations in a tolerant design and having no effect on safety and usability as well as chemical damage or unusual environmental conditions are excluded from the warranty.

2 The product for which a warranty claim is required in accordance with this Warranty Certificate will be handed over to your authorized FINNSUB dealer, complete with the warranty certificate duly completed or send it with a fault description and your contact details at:

FINN SUB s.r.o., Rakovecká 35, 635 00 Brno.

3. The warranty claim expires if repairs or interventions are performed by persons who are not for this purpose by FINN SUB s.r.o. determined. The claim also expires if the products are provided with additional parts or accessories not intended for this product. The claim also expires if a claim is made without a warranty card duly completed by an authorized reseller, with a clearly marked date of sale.

4. FINN SUB s.r.o. undertakes to inform the customer, through an authorized FINNSUB distributor, of the recognition or non-recognition of the claim, within 30 days of the Customer's claim. In the event of a recognized claim, FINN SUB s.r.o. undertakes to settle the claim within a maximum period of 30 days.

5. During the warranty period, we provide a warranty without charge of any additional charges (postage and packing) when sending the device back to the customer.

6. Additional claims are excluded unless the law specifies otherwise.

**Model** ..... **Serial no.** .....

**Customer** .....

**Address** .....

**Date of sale.** .....

**Shop** .....

Stamp of the seller:



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