hope R4+

RECHARGEABLE LI-ION LED LIGHTING SYSTEM



ENERGY STATUS BATTERY PACK

INSTRUCTION MANUAL

HLNR4ST - Standard (1 x 4 cell)
HLNR4EP - Lightweight (1 x 2 cell)

Light Source:	4 x Cree XM-L2 LEDs
Light Output:	1500 Measured lumens 2000 Generated lumens
Beam:	4 x Spot (+/- 10°) FWHM: 21°
Mounting:	QR bayonet style handlebar mount, helmet mount or head harness
Battery:	Li-Ion ES battery with fuel gauge 2 cell: Nominal capacity 3200mAh Minimum capacity 3100mAh 4 cell: Nominal capacity 6400mAh Minimum capacity 6200mAh
Charge Time:	2 cell: 3.5 hours 4 cell: 7.5 hours
Weight:	426g (Lamp unit and 4 cell battery)
Power Levels:	6 (Two sequences of three), including flash
Burn Time:	2 hours 30 minutes - 35:00 hours

WARRANTY

All Hope Technology lighting systems are covered for two years from original date of purchase against manufacturer defects in material and workmanship. Proof of purchase is required. Product must be returned to the original retailer to process any warranty claim. This warranty does not cover any damage caused through mis-use or failing to comply by the recommendations given in this manual. This warranty does not affect your statutory rights.

IMPORTANT INFORMATION

We strongly advise you read the following recommendations in order to prevent injury or damage to the lighting system.
NOTE: The battery is supplied only half charged. Please ensure that you fully charge the battery before first use (see 'Battery Charging' section).

WARNING

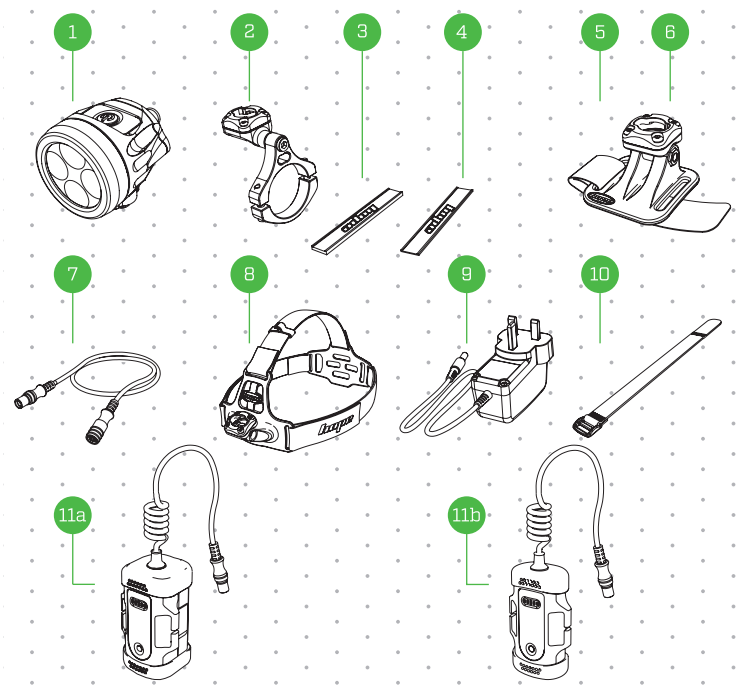
›› This lighting system will withstand harsh wet weather conditions. However, it is not designed to be submersed in water. If the light is fitted to a bike, please ensure that the light unit is removed from the bike before washing - particularly if using a high pressure jet wash.
›› Do not look directly at the beam, permanent eye damage could result. Consider other people when mounting the light on the head to avoid dazzling them.
›› Keep this light away from children.
›› This light unit can get hot when in use in maximum power mode. This is normal and should not be mistaken as a malfunction. Please use with caution.
›› Unlike unregulated LED lighting systems, this light unit will shut down suddenly after a period of time in low battery mode without any dimming of the light. Please bear this in mind when using at night.
›› Only use the battery charger that is supplied with the lighting system. Use of any other battery charger may result in explosion and serious injury.
›› Do not short-circuit the charging terminals. This can cause the battery to overheat and could result in fire or explosion.
›› The battery charger is designed for indoor use only and should not come into contact with water.
›› The battery charger contains dangerous voltages and the cover should not be removed. Any attempt to open the charger will invalidate the warranty.
›› This light unit conforms to the requirements of EC directive 2004/108/EC for electromagnetic compatibility.

DISPOSAL

When the equipment has reached the end of its life please dispose of the components in accordance with your local waste regulations. Lamps and batteries should be recycled where possible and not disposed of with regular waste.

Li-Ion

CONTENTS



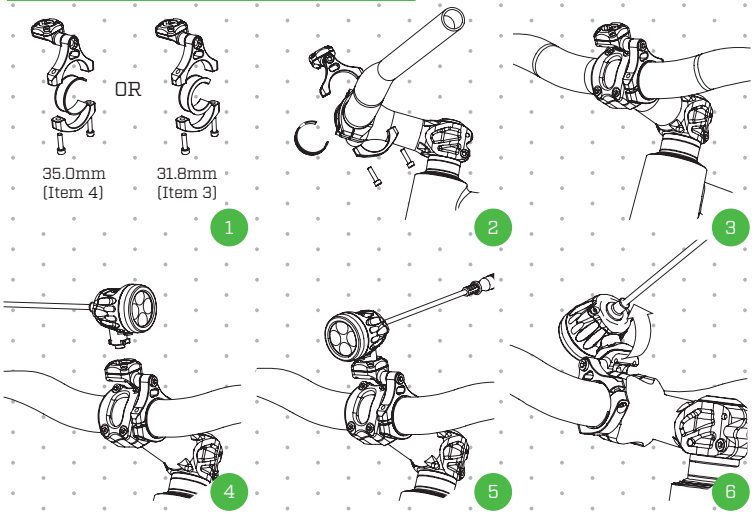
1: R2 lamp unit
2: QR bayonet handlebar clamp
3: 31.8 handlebar spacer (Thick)
4: 35.0 handlebar spacer (Thin)
5: Helmet mount
6: QR bayonet mount adapter
7: Extension cable
8: Head harness
9: Battery charger
10: Battery strap
11a: Rechargeable 4 cell ES battery pack
11b: Rechargeable C cell ES battery pack

Hope Technology (IPCO) Limited

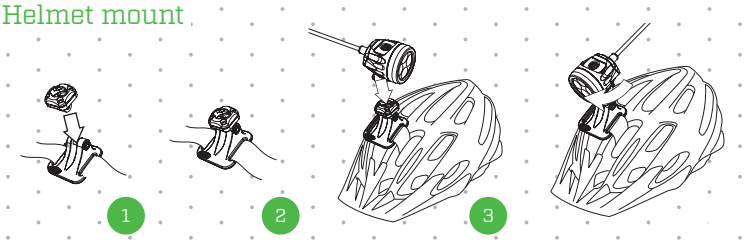
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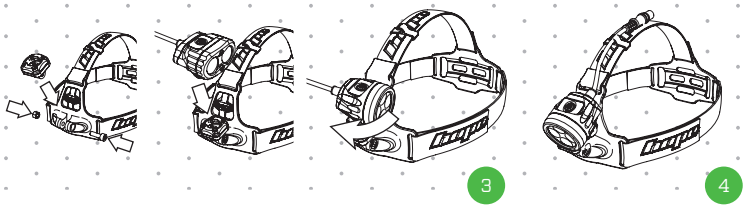
MOUNTING INSTRUCTIONS



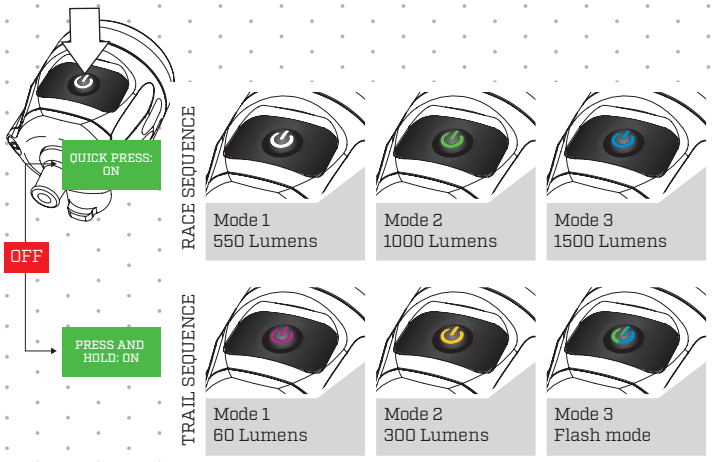
Helmet mount



Head harness



OPERATION OF THE LAMP



PRESS AND HOLD AT ANY TIME TO TURN OFF

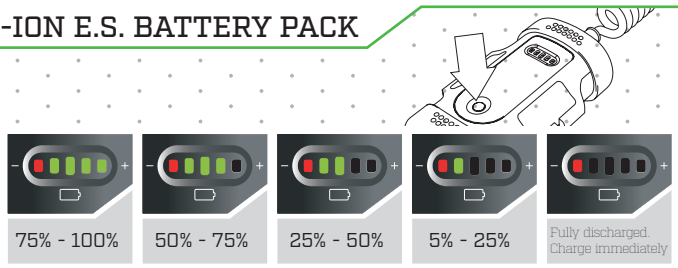
NOTE: The R4+ lamp includes an 'Energy Preserve' feature whereby the power will automatically drop down from mode 3 to mode 2 towards the end of the battery discharge cycle (i.e. after approximately 2 hours 30 minutes in mode 3 with the 4 cell battery, depending on conditions). The switch illumination will change from blue to green at this point. This is to prolong the remaining energy within the battery. If you attempt to re-select mode 3 during the energy preserve period the lamp will immediately fade back down to mode 2 and block theselection of mode 3 in order to maximise the remaining battery life. Operation of the lamp then continues with only modes 1 and 2 remaining active with each subsequent press of the power button. Mode 3 is no longer selectable. This is a deliberate characteristic of the drive circuit and should not be interpreted as a malfunction.
The R2 also features a low battery warning mode. When the battery is almost at the end of it's discharge cycle the lamp will drop down into low power mode, the switch will illuminate red, and the lamp will flash twice every 30 seconds to warn you that you are running low on battery life. Once the lamp unit has dropped into low battery mode, no other modes are selectable. Pressing the power button will only turn the lamp off or on.



Low battery warning

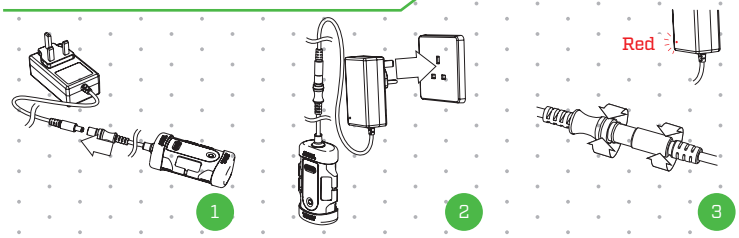
*Although every effort is made to state accurate burn times, battery life is dependant on various factors and environmental conditions. Therefore, actual burn times may vary from those shown.

LI-ION E.S. BATTERY PACK



The ES (Energy Status) battery pack features a 5 stage fuel gauge. Press and hold the 'TEST' button to activate the LED display. This gives a visual indication of the remaining capacity within the battery cells.

BATTERY CHARGING



DANGER: Use only the 7.4v Li-Ion battery pack supplied with the lighting system. Any attempt to use or charge another battery pack may result in explosion and serious injury.The battery charger is designed for indoor use only and should not come into contact with water. The mains socket should be easily accessible. In the event of any operational error the plug should be immediately removed from the mains supply. The battery charger contains dangerous voltages and the cover should not be removed. Any attempt to open the charger will invalidate the warranty.

NOTE: The rechargeable battery pack is supplied with a small charge for testing purposes only. Therefore, please ensure that the battery pack is fully charged before first use. To correctly charge the battery pack, ensure these steps are followed in order:

›› Disconnect the battery pack from the light unit by pulling apart the two mating DC connectors. Always grip the connector heads when disconnecting, not the cables.

›› Plug the charger into the battery pack before connecting it to the mains supply (1).

›› Once the battery pack is connected to the charger it can then be plugged into the mains power supply (2). The charger's LED indicator will show as red during the charging process. We recommend that the two mating connectors are rotated at this point (3) to ensure that a good connection is made between the battery pack and charger, and that the LED indicator turns red.

›› When charging is complete, the charger's LED indicator will turn green. Disconnect from the mains power supply before disconnecting the battery pack from the charger.

NOTE: If you attempt to place the battery pack on charge after only a short period of use (ie. with the remaining capacity at around 75% or higher, with four indicators lit on the LED display), you may notice that the battery pack will not begin charging. This is not a fault. It is simply due to the software communication between the battery pack and charger. The charger is looking for a battery voltage of lower than 8v before it will begin the charge process.
If this happens, simply connect the battery pack to the lamp unit and run the lamp for a short while to further discharge the battery pack. It will then charge successfully.

CHARGE TIMES: A fully discharged 2 cell battery should take approx 3.5 hours to fully recharge. A 4 cell battery should take approx 7.5 hours.

STORAGE AND TRANSPORTATION

In order to prevent any malfunction within your Li-Ion battery pack and to preserve the capacity as much as possible, there are a number of procedures which must be considered when storing your battery pack for long periods while not in use (ie. over the summer months).
STORAGE AND TRANSPORTATION: Never carry the lighting system by the cable. This could result in damage to the electrical connections and will invalidate your warranty.
Always disconnect the lamp unit from the battery pack when not in use. When the lamp unit and battery pack are connected there is a small amount of power constantly running through the circuit which could – over a period of time – over discharge the battery pack resulting in loss of battery function and capacity. This will also prevent the lamp unit accidentally switching on and potentially overheating, which could cause permanent damage to the lamp and battery. In extreme cases, overheating could cause fire and/or death.
STORAGE TEMPERATURE: The battery pack should be stored within the temperature range of -20°C to 25°C in order to preserve cell capacity. Ideally in a cool, dry room such as a cellar or garage.
OVER DISCHARGING: As with most battery cells, Li-Ion cells may discharge if they are not used for a long time. In order to prevent over discharging fully charge the battery pack before you store it. Also, charge the battery pack periodically (ie. once every 3-4 weeks) to maintain the voltage between 6.8v to 7.6v. Over discharging may cause loss of cell performance, or damage battery function.

If these few procedures are followed correctly, you can be sure that when the dark nights creep back in your HOPE VISION battery pack will be fit and raring to go!