



NiteRider
Technical Lighting Systems

HID + LED
Lithium Ion

M o a b



 USER GUIDE



DISCOVER THE NIGHT!

Thank you for choosing Moab™ from NiteRider, the innovator in technical lighting systems. Moab is the industry's most advanced action sports lighting system, providing twelve continuous hours of intense, natural light from a single battery charge. The Moab system includes:

- High-intensity discharge (HID) Solarc™ lamp for bright, white light
- Auxiliary light-emitting diode (LED) lighting for safety
- 12-hour Lithium-ion (Li-Ion) battery
- 4.5-hour Li-Ion charger
- Fuel (battery) gauge
- NiteRider's patented "smart" technologies that protect the battery and enhance safety
- Frame and helmet mounting

To get the most from your NiteRider light, we urge you to familiarize yourself with the following safety and operation instructions.

NiteRider and Moab are trademarks of NiteRider, Inc.

All other trademarks are the property of their respective owners. The information in this document is subject to change without notice.

RIDING AT NIGHT

While the Moab will improve your control and enjoyment of night riding, please remember that cycling at night is an inherently dangerous activity. In addition to using your lighting system properly and riding with extreme caution, NiteRider urges you to:

- never ride alone
- always let someone know where you are going
- wear a helmet and reflective clothing
- carry an auxiliary light and emergency supplies.

PROTECTING YOUR INVESTMENT

When not in use, always disconnect the headlamp from the battery. To unplug, grasp the connector, not the cable.

Properly charge your battery to maximize its lifespan (see “Battery Charging and Care” on page 11). To avoid damaging your system, only charge your NiteRider battery with the appropriate NiteRider charger.

While Moab will perform in wet weather conditions, submerging it in water will damage the system. If you need a submersible light, NiteRider manufactures industrial-grade dive light systems. For information, contact NiteRider Dive Lights at 858.268.3850 or visit www.niteriderdive.com.

SUPPORT

If you experience difficulties during product installation or operation, NiteRider provides free telephone support on weekdays from 8:00 AM to 4:30 PM (Pacific Time) at 800.466.8366, ext. 4. You may also e-mail us at support@niterider.com.

WARRANTY

NiteRider stands behind its products with the following warranties:

- Lifetime warranty on all mechanical components
- 1 year on cables and connectors, electronic components, printed circuit boards, and HID bulbs and ballasts
- 180 days on rechargeable Li-Ion batteries and chargers

To repair or replace your product while under warranty, return it (postage prepaid and insured with original sales receipt) to the address below. Out-of-warranty repair service is also available. For complete warranty information, please visit our website.

NiteRider, Inc.
8205 Ronson Road, Suite E
San Diego, CA 92111 USA
800.466.8366
www.niterider.com

Parts List and Identification	4
Quick Start	5
Mounting the Headlamp	6
Universal Handlebar Mount	6
Helmet Mount	7
Inserting the Headlamp	7
Mounting the Battery	8
Frame Mount	8
Pocket or Pack	8
Operation	9
HID Lighting	9
LED Auxiliary Lighting	9
Fuel Gauge and Automatic Shut Off	10
Battery Charging and Care	11
Using the 4.5-hour Li-Ion Charger	11
Smart Battery Protection	11
Storage	12
Run Times	Inside Back Cover

PARTS LIST AND IDENTIFICATION

Please verify the contents of your Moab system:

- A. High-output HID+LED headlamp
- B. 12-hour Li-Ion battery (pocket/frame-mount)
- C. Charger power cord
- D. 4.5-hour Li-Ion charger
- E. 20" handlebar cord
- F. Universal handlebar mount
- G. Helmet mount
- H. Velcro cable tie
- J. 52" helmet cord



1. Fully charge the battery before the first use. See “Using the 4.5-hour Li-Ion Charger” on page 11.
2. To mount the headlamp and battery, see “Mounting the Headlamp” on page 6 and “Mounting the Battery” on page 8.
3. Connect the battery to the headlamp with the helmet or handlebar cord.
4. Press and release the headlamp power button. The LEDs will come on in steady mode.
5. Press and release the power button again, and the HID lamp will come on.
6. After approximately ten seconds, you may cycle through three HID brightness levels (high, medium, and low) by consecutively pressing and releasing the power button.
7. To access the LED auxiliary light modes, see “Operation” on page 9.
8. To turn the system off, press and hold the power button for three seconds.

MOUNTING THE HEADLAMP

The HID+LED headlamp can be mounted to the handlebar or a helmet.

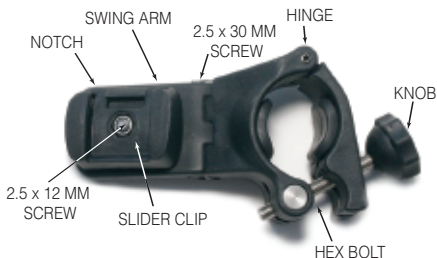
Universal Handlebar Mount

The Universal Handlebar Mount (UHM) is designed to fit on virtually any handlebar. Included with the mount is a 2.5-mm Allen wrench, a pair of black rubber bumpers already in place, and a thin rubber shim to customize the fit on large handlebars up to 32 mm in diameter.



Turn the knob counter-clockwise, allowing the hinge to swing open. Place the mount on the handlebar on the left side the stem, orienting the rectangular notch in the slider clip to the rear. Swing the hinge down to make contact with the handlebar. Swing the hex bolt up, seating the knob into its recess. Turn the knob clockwise to tighten and secure the mount to the handlebar.

The UHM can be adjusted to accommodate any handlebar angle. By loosening the 2.5 x 30 mm Allen screw, you can move the swing arm back and forth to straighten the headlamp. Tighten the 2.5 x 30 mm screw after the adjustment.



To pivot the headlamp, loosen the 2.5 x 12 mm screw located under the slider clip and swing arm and rotate the headlamp to the desired position. Make this adjustment before tightening the 2.5 x 30 mm screw.



Helmet Mount

1. Unclamp the straps on each side of the helmet mount and pull them free.
2. Position the plastic mounting plate as close to the centerline of the helmet as possible, orienting the parallel grooves on the slider clip to the rear.
3. Feed each strap into and out of two helmet vents, circling each strap back to the upper edge of the corresponding clamp.
4. Fasten the straps by inserting them into the clamps.



Inserting the Headlamp into the Handlebar or Helmet Mount

Insert the headlamp mount into the handlebar or helmet mount slider clip from the rear of the slider clip forward. Gently rocking the lamp as you slide it may help. Do not push the release lever when inserting the headlamp into the slider clip; let the lamp snap into place by itself.



Headlamp mount with release lever

To remove the headlamp, push the release lever and slide the lamp backward.

Note: After mounting the headlamp, adjust the headlamp so it illuminates the road properly without distracting oncoming riders.

MOUNTING THE BATTERY

The Li-Ion battery can be mounted to the bike frame or placed in a jersey pocket, hydration pack, or fanny pack.

Warning: For safety reasons, a cyclist should never be tethered to the bike. If the headlamp is mounted to the helmet, do not mount the battery to the frame. Conversely, if the headlamp is mounted to the handlebar, do not place the battery in a pocket or pack.

Frame Mount

1. Thread the wide Velcro strap through the slots on the top of the battery clip.
2. Attach the concave surface of the battery to a safe, convenient location on the frame (typically under the top or down tube), placing the Velcro strap over the tube but under any shift or brake cables.
3. Secure the handlebar cord to the frame using the thin Velcro tie. Make sure the cord does not interfere with any moving parts.



Pocket or Pack

1. Route the helmet cord through a helmet vent or along the outside of the helmet using the thin Velcro tie to secure the cord.
2. Connect the helmet cord to the battery, making sure the cord does not interfere with any moving parts.
3. Simply place the battery in a pocket or pack.



HID Lighting

1. Connect the battery to the headlamp with the handlebar or helmet cord. The auxiliary LED lights will briefly flash.
2. Press and release the headlamp power button located on the top of the headlamp. The LED lights will come on in steady mode.
3. Press and release the power button again and the HID lamp will come on. The HID lamp may flicker and change color as the bulb stabilizes. While the bulb is warming, the red and green indicator LEDs within the power button will flash. During this time no other light modes will be accessible.
4. After approximately ten seconds, the HID lamp will reach its full brightness and three HID brightness levels will be available: high, medium, and low. To cycle through brightness levels, consecutively press and release the power button.
5. To turn the lamp off, press and hold the power button for approximately three seconds.

Warning: HID headlamps require adequate airflow during operation (as in riding conditions). NiteRider discourages use of the light in stationary conditions as excessive heat retention can damage the lamp.

LED Auxiliary Lighting

The LED auxiliary lights increase your visibility in different situations while conserving battery capacity. Three LED modes are available:

- **Steady** mode is useful when facing a cyclist in close proximity at night and is intended for non-riding situations.
- **Daylight** flash mode pulses the beam at a rate that is highly visible to motorists during daylight hours. For maximum visibility, aim the light at eye or rear-view mirror level.

- **S.O.S.**, the universal distress signal in Morse code, can be used during the day or night.

To access the LED lighting modes, first turn on the HID lamp per the HID lighting instructions. Then press and hold the power button for approximately six seconds until the HID bulb goes out and the LEDs come on in steady mode.

To cycle the LEDs through daylight flash, SOS, and steady modes, consecutively press and release the power button. To turn the LEDs off and the HID bulb back on, press and hold the power button for approximately six seconds. Or to turn the lamp off, press and hold the power button for approximately three seconds.

Note: Should the HID lamp become damaged or fail while riding, the LEDs will light automatically as a safety feature.

Fuel Gauge and Automatic Shut Off

The fuel (battery) gauge is a series of five indicator LEDs within the headlamp power button, four of which are green and one of which is red. When all green LEDs are brightly lit, the battery is fully charged. As the battery discharges one-fourth increments of its capacity, the green LEDs will go out one by one. When the battery is near depletion, the red LED will illuminate. At this time, the headlamp should be turned off and the battery recharged.

If use continues, the HID headlamp will automatically shut off to avoid overly discharging the battery. As a safety feature, the LED auxiliary lights will automatically turn on when the HID lamp shuts off. The LED lights consume minimal power and will run for several hours.

BATTERY CHARGING AND CARE

Rechargeable batteries can last years with proper care. Most importantly, fully charge your battery:

- before the first use
- after each use
- before storing
- every 45 to 60 days when not in use.

Using the 4.5-hour Li-Ion Charger

Note: The charger will charge a fully depleted battery in approximately 4.5 hours.

1. Plug the power cord into the charger and then the wall socket. The charger will conduct a self-diagnosis and the charging indicator light (located on the back, upper-left corner of the charger) will illuminate green, then amber, and then back to green.
2. Connect the charger cable to the battery. If the battery is not fully charged, the indicator light will turn amber, signifying fast-charge mode. If the light flashes when you first plug in the battery, the charger is preparing an overly discharged battery for fast charging.
3. When the battery is fully charged, the indicator light will turn green and charging will shut off automatically.
4. Unplug the charger from the battery and wall socket, grasping the connectors rather than the cables. (Leaving the battery and charger connected indefinitely will not harm the cells.)

Smart Battery Protection

Moab's "smart" battery incorporates thermal protection circuitry that turns the battery off when it overheats from charging, external heat, or a short circuit. When the thermal protection circuit is activated, the system will lock and the fuel

BATTERY CHARGING AND CARE CONTINUED

gauge will become dark. To clear the system and return it to normal operation, unplug the light from the battery and allow the battery to cool.

Similarly, intelligent lamp technology protects the battery from overly discharging by turning the lamp off at the appropriate time.

Storage

Rechargeable batteries perform better and last longer if they are brought to a complete charge before storing and every 45 to 60 days when not in use.

Disconnect the battery from the headlamp, and store the system in a cool dry place.



RUN TIMES

Setting	Run Time (hours)
HID	
High	7:15
Medium	9:00
Low	11:15
LED	
Steady	720:00

At the high setting, the HID bulb operates at full power. The medium and low settings provide slightly less light output but extend run times.

The above run times are based on a fully charged battery.

Run times are approximations and will vary.



NiteRider
Technical Lighting Systems

NiteRider, Inc.
8205 Ronson Road, Suite E
San Diego, CA 92111 USA
800.466.8366
www.niterider.com