

# 2011-2012 Light & Motion Seca 800 & 1400 Instruction Manual



**LIGHT &  
MOTION**



**Congratulations!** You've purchased what we consider the best single-emitter bicycle lighting system available – the Light & Motion Stella. We hope that your new light will inspire you to leave your car at home, rediscover your old stomping grounds, and ride your bike year-round.

To receive maximum benefit from your new Light & Motion system, please take a moment to familiarize yourself with your new light by reading the following instructions.

## Caution

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- A good lighting system can make cycling in the dark safer, but the best way to be safe is to ride defensively.
- When not in use, ALWAYS unplug the light head from the battery. When unplugging the light head cable from the battery, always pull the connector, not the cable.
- ONLY use Light & Motion chargers to charge your Light & Motion batteries. Failure to do so will void the warranty and damage the system.

## Warranty

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Light & Motion provides warranties against manufacturer defects for 1 year starting from the date of purchase. While the warranty is non-transferable and does not cover failures from misuse, damaged lights can usually be repaired for a nominal fee.

## Returning Products for Warranty Evaluation & Repair

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Should your system malfunction for any reason, submit a service request to the Light & Motion service department at:

[www.bikelights.com/support](http://www.bikelights.com/support)

We will contact you the following business day to finalize the arrangements for your repair. When returning your system, please make sure to unplug the battery from the light before shipping. All warranty and repair products should be returned, with proof of purchase from an authorized dealer to:

Light & Motion  
RMA# \_\_\_\_\_  
300 Cannery Row  
Monterey, CA 93940

International customers please contact your local bicycle dealer for warranty and return instructions.



“That thing throws some serious light. It was like my bike had high beams.”

Jeremy Spencer, Senior “Outside” Editor



## Seca Lighting Systems

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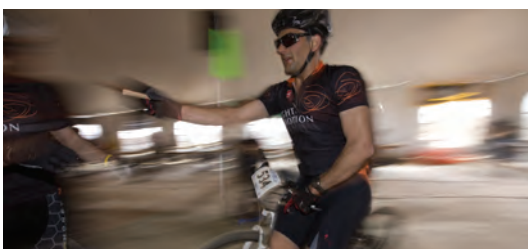
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# Seca Lighting Systems

Please take a moment to verify the contents of your Light & Motion lighting system.

## Seca 1400:

- 1a. Seca 1400 LED light head (white cooling fins)
- 2a. 11.1V, 6 Cell Li-ion battery
- 3a. Light & Motion Mini L 1.5 Charger
4. Helmet Mount
5. Velcro Battery Strap



Figure 1a: Photo of Seca 1400

## Seca 800:

- 1b. Seca 800 LED light head (red cooling fins)
- 2b. 11.1V, 3 Cell Li-ion battery
- 3b. Light & Motion Mini L Charger
4. Helmet Mount
5. Velcro Battery Strap



Figure 1b: Photo of Seca 800



Figure 2a: Photo of 6Cell Li-ion battery



Figure 3a: Photo of Mini-L 1.5 Charger



Figure 2a: Photo of 3Cell Li-ion battery



Figure 3a: Photo of Mini-L Charger



Figure 4: Helmet Mount



Figure 5: Velcro Battery Strap



Figure 4: Helmet Mount



Figure 5: Velcro Battery Strap

# Charging



Always fully charge your battery before its first use. Batteries are shipped only partially charged and must be fully charged to achieve the proper run time. Take this time to familiarize yourself with our smart charger and what the status indicator LEDs mean.

**Note:** All of our Li-ion chargers are ONLY compatible with Light & Motion batteries.

The battery may be left on the Mini L 1.5 or Mini-L charger indefinitely, without harming the battery.

**Note:** We only use smart chargers. That means you can leave the battery on the charger after it is done charging, with no harm to the battery. To maintain optimum battery performance, please take the battery off the charger after it is done charging. **For long term storage, we recommend storing your Lithium-ion battery with a 40-60% charge. Every three months, run the battery down using the light head and then charge it back up to 40-60% charge. Then fully charge the battery before you ride.** An acceptable alternate method of extended storage is giving the battery a top-up charge once a month.

*Charge your battery immediately after a ride, remove it from the charger for storage, and then top it up the day of your next ride.*

## Charging with the Mini L 1.5 Charger

1. Plug the power cord into the charger and then into the appropriate wall socket.
2. Attach the battery to the Mini L 1.5 Charger by aligning the colored arrow on the plug from the charger with the red dot or arrow on the Li-ion batteries, inserting the plug into the battery's socket.
3. Once the battery is attached to the Mini L 1.5 Charger, an orange LED will illuminate on the right side and a green LED will illuminate on the left side of the charger indicating the battery is receiving a charge.
4. When both LEDs illuminate green, this is an indication the battery is fully charged.

An alternating orange/green LED indicates an error. If this happens, remove the battery and unplug the Mini L 1.5 Charger from the wall and wait about 5 minutes. Then try to charge the system again. If you see the same error, please contact the Light & Motion service department. If no indicator light comes on, make sure the connector is fully seated. We have the most water-resistant connector in the industry, and sometimes you need to "burp" the air trapped under the connector.

The Mini L 1.5 Charger will charge a fully depleted battery in about the following times:

<b>3 cell</b>	<b>1:45hrs</b>
<b>6 cell</b>	<b>2:00hrs</b>



# Charging Cont'd

## Charging with the Mini-L charger

1. Plug the charger body into a wall socket
2. Attach the battery to the Mini-L charger by aligning the colored arrow on the plug from the charger with the orientation indicator on the battery (red dot, or groove), inserting the plug into the battery's socket.
3. A red LED will illuminate, indicating the battery is receiving a charge.
4. When the indicator LED turns green your battery is fully charged.

A quick flash (0.1 seconds every second) indicates the battery has very low voltage, and the charger is attempting to recondition the battery for charging.

A slow blink (0.5 seconds every 4 seconds) indicates a defective battery, and you should contact the Light & Motion service department. If no indicator light comes on, make sure the connector is fully seated. We have the most water-resistant connector in the industry, which requires a firm insertion to burp the trapped air and complete the sealed connection. If the LED on the charger still does not illuminate, the charger does not recognize the attached battery as valid for charging (older NiMH batteries).

The Mini-L Charger will charge a fully depleted 2 or 3 cell battery in about 6 hours.

# Installation of Seca & the Battery



## Installing Seca onto your bike

Your Light & Motion Seca light head comes with a universal bar/helmet mount. To install on your handlebar, determine the best place on the bar to mount as it relates to your specific brake & shifter layout. Ideally, Seca should be mounted as close to the stem as possible. After determining the proper location, wrap the strap under and around the handlebar, pulling it up and over the mounting post in front of the light (fig 15).

Note: Tighten the strap only enough to prevent slipping around the bar. Pulling the strap too tight can eventually cause a premature failure

To remove, simply release the strap from the locking post



Figure 15: Seca on bar (strap over post).

## Installing Seca onto You

The Helmet mount is designed to be mounted on any standard, vented bicycle helmet. Position the base of the helmet mount on top of the helmet, in the middle and slightly forward of center. Slide the hook and loop strap down through the proper vent, back up through the opposing vent, and finally through the slot in the base of the mount. Pull the strap tight and slide it back down the vent and affix it to the "loop" side of the strap inside the helmet (fig 17). Now install Seca just like you would on a handlebar (see instructions "Installing Seca onto your bike").



Figure 17: Mount tight on helmet.

## Installing the Battery

### Frame mounted battery:

All Light & Motion batteries are designed to mount on a bicycle frame tube or seat post. Figure 18 shows battery curve on the 3-cell and 6-cell batteries which are designed to rest against a bicycle tube. Pull tightly on the strap and affix the end of the strap to itself via the hook-and-loop mounting surface. Wrap any excess around the battery until the entire strap is secured. There should be enough tension on the strap to prevent the battery from moving freely on the tube or seat post.



Figure 18: Battery Curve.

When routing the plug, you may choose to loosely coil the excess cable around the frame (fig 20). Make sure the cable has enough slack to move freely when your handlebar is turned in the furthest position. This can be accomplished by first running the cable over the handlebar, then back to the battery. This will prevent damaging your light head in a crash.



Figure 20: Cable coiled on frame.



# Installation Cont'd

## **Body mounted battery:**

The battery pack is designed to be carried in a jersey pocket or hydration pack. Hint: running the power cord through one of the back vents of your helmet before connecting it to your battery will keep the cord from sliding from side to side.

**CAUTION:** – NEVER attach a helmet mounted light to a frame mounted battery, or a frame mounted light to a body mounted battery



Figure 20:  
Cable coiled on frame.

## **Plugging Seca into the Battery**

Plug the light head cable into the socket on top of the battery by aligning the cable's arrow to the battery's orientation mark (a dot, groove, or arrow). Due to the high quality seal of our connector, occasionally air compressed within the battery socket can push the cable back out. Make sure the socket has "burped" this air for the reliable, trouble free connection Light & Motion lights are known for.



# Seca Light System Operation



## Normal Operation

The Light & Motion Seca LED lights all have one switch on the top of the head that controls power. A brief button push activates “Cruise” mode where you will find 4 settings: High, Medium, Low, and Flash. A single click cycles through each of these settings. Because our riders are versatile cyclists, we design our lights to accommodate those needs. Seca also has a “Race” mode you can enter by pushing and holding the button to turn on. Race mode has only 2 settings: High and Low, with a single click cycling between them. In either mode, pushing and holding the button for 1-2 seconds will turn off the light.

**Note:** The LED emitters and supporting circuitry used in Seca emit a weak electromagnetic field and may interfere with some wireless cycle computers and heart rate monitors.

## Aiming your light

Light & Motion creates lights with optics designed to reflect the maximum amount of light and direct to where a rider needs it most. Seca takes this one step further and introduces our proprietary Gem-Beam footprint of light, which clips light from where you don't need it and redistributes it where you do.

For best results at lower speeds, position your light so that you get ample fill/peripheral light in front of the tire from the flood portion of the beam. For faster speeds, you can position it slightly higher so that the spot portion of the beam shoots farther down the road giving you enhanced depth perception and a long line of site.

## Battery Discharge Protection

All Light & Motion lights incorporate a battery discharge protection circuit. If the battery becomes discharged, the light head will automatically dim down to try and preserve battery life, and eventually shut off to protect the battery.

### Low Battery:

Seca lets you know your battery is low in three ways:

1. a drop in light output,
2. a slow steady blink from the indicator light in the button,
3. a warning flash from the main LEDs.

Once in low battery mode, the indicator light will blink for the remainder of the ride, and the main LEDs will flash every 3 minutes as a warning (which can be seen when your light is helmet mounted). You can easily over-ride this main LED warning flash by simply pressing the button. All of these warning signals are to alert you so that when the battery is finally dead and your light shuts off you are not surprised.



# Seca Operations Cont'd / Recycling

## Auto-Shutoff

When Seca can't stay on any longer without damaging the battery, it will shutoff with a slow fade out to give you time to hit the brakes and stop safely.

## Seca Run Times



### Seca 1400

	Lumens	6 Cell
<b>High</b>	1400	2:30
<b>Med</b>	700	5:00
<b>Low</b>	350	10:00
<b>Flash</b>	-	100+



### Seca 800

	Lumens	3 Cell
<b>High</b>	800	2:00
<b>Med</b>	400	4:00
<b>Low</b>	200	8:00
<b>Flash</b>	-	100+

## Recycling Instructions

This product contains components that may not be disposed of as unsorted municipal waste and must be reused or recycled per the requirements of the European Union Directive 2002/96/EC on waste electrical and electronic equipment (WEEE). The logo on the battery indicates that the product must be returned for the reuse or recycling.

Please contact the store where your product was purchased to determine how and where to return the product for recycling.

Light & Motion thanks you for helping us manage the recycling of these components in order to keep the environment clean.

# L&M Parts & Accessories



<b>Batteries</b>	
804-0065	11.1v 6-cell Li-ion Battery
804-0087	11.1v 3-cell Li-ion Cub Battery
<b>Chargers</b>	
804-0090	Mini L 1.5 Turbo Charger
804-0107	Mini L Smart Charger
804-0056	DC to AC Car Adapter
804-0122	Int'l Adapter Kit for Mini L Charger
<b>Accessories</b>	
826-0291	Seca 1400 Light Head only
826-0308	Seca 800 Light Head only
826-0312	Stella 600 Dual Light Head only
826-0311	Stella 300 Light Head only
826-0267	Stella 120N Light Head only
804-0108	Seca/Vega Spare Bar Mount
804-0110	Stella Spare Bar Mount
804-0120	Seca/Vega Spare Strap
804-0119	Stella Spare Strap
804-0129	Seca Low Profile Spare Bar Mount 2010
661-1327	Seca Low Profile Spare Strap
804-0109	Helmet Mount (Seca/Stella)
804-0133	Adventure Head Strap 2010
804-0095	Multi-Sport Head Strap (Seca/Stella)
804-0111	Travel/Storage Case
634-0012	Battery Strap (Velcro)



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