



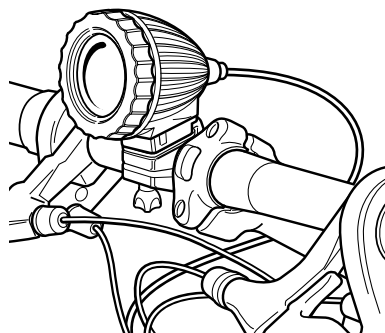
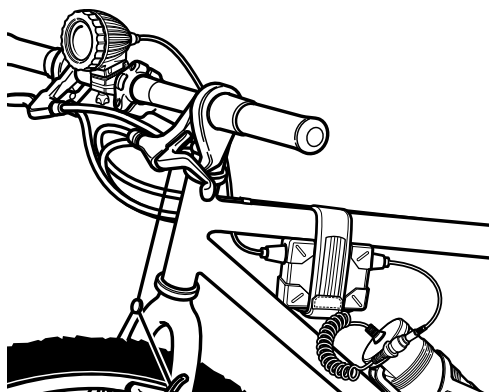
# METAL HALIDE STADIUM LIGHT 3 HL-MH310

**CATEYE**  
Metal Halide Lighting System  
**STADIUM LIGHT 3**  
HL-MH310  
**INSTRUCTION MANUAL**

U.S. Pat. No. 5735441 and Design Patented  
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Printed in Japan MH31W-011120 [0688540] 3

**CE**

**Battery: Ni-MH 12V** **Ni-MH 12V**



**Mounting Example**

## INTRODUCTION

### Read all instructions before first use

Thank you for purchasing the CAT EYE STADIUM LIGHT Model HL-MH310. Designed for high performance night cycling, this rechargeable lighting system adopts powerful metal halide technology - the same lighting system used for sports arenas. This is a unique high power 12 volt system. Before operating, thoroughly familiarize yourself with this manual so that you understand the light's safe and correct operation. Please keep this manual, along with the warranty card, for future reference.

### NAMES

Make sure that the following parts are included in the package.

Labels in diagram:  
Lamp Body  
Ballast  
AC Adapter  
Bracket(H-27)  
Cord  
Supporter  
Stopper  
Rubber Pad  
Battery Belts  
Bottle Battery

## FOR SAFE OPERATIONS (IMPORTANT)



### Warning!!!

- Pace maker users should never use this device.
- The lamp body becomes extremely hot when turned on. Never touch the lamp body or lens until thoroughly cooled. Injury may result.
- Never gaze at the light when it's turned on. It may harm your eyesight.
- Do not use this light on public roads. The light output is equal to an automobile's halogen bulbs. Adjust the light accordingly so as not to blind oncoming traffic.
- Stop using the light at once if the lamp unit, cord or bottle battery has broken. Hazards may result due to a high voltage system.
- Never short-circuit the terminal of the bottle battery and the plug of the AC adapter. It may cause the battery to over heat, resulting in fire or damage of the components.
- Safely and properly dispose of the old Ni-MH batteries according to your local regulations. To remove the battery, turn the bottom part of the bottle battery counter-clockwise.
- Never place it within children's reach.



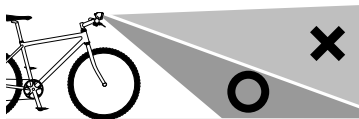
### Important Note

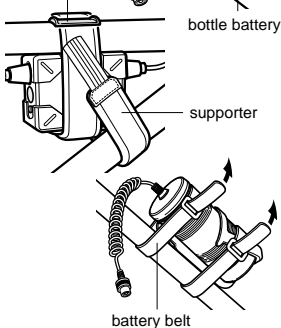
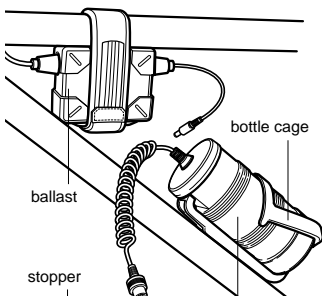
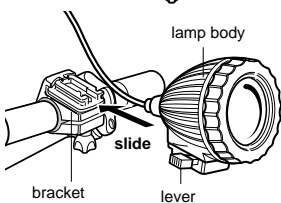
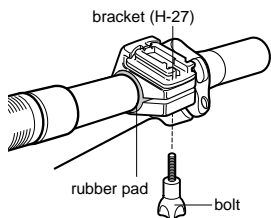
- Although the lamp body and the battery are water-resistant (under normal weather conditions of rain, etc.), never intentionally submerge them under water.
- The battery used with the Stadium Light is 12 volts. Never attempt to alter this lighting system. Never use the battery with any other lighting system.
- Never disassemble the lamp body, ballast and battery.
- The battery has unique characteristics. The light output will remain high until the batteries run out, and will drop suddenly. Always pay attention to the remains of the charge and take precautions by preparing a spare light.
- Never replace the bulb unit by yourself. It is not user-replaceable. It can never regain its best performance.
- Never touch the metal halide bulb with bare-fingers; natural skin oils can cause the bulb to over heat and break.
- Never touch or wipe the inside of the reflective mirror. This may degrade the quality of the light output.
- The ballast is loaded with sensitive electronic components. Severe impact may result in malfunction.
- The AC adapter is only for indoor use. After charging the battery, be sure to unplug it from the power outlet.
- Never use the bottle battery for other equipment.
- A long period of non-use will lower the voltage of the battery due to natural self discharge. Always charge the battery before using.
- Overdischarge (leaving the light on after the power is completely gone) shortens the performance life of the battery.
- If the lamp body or parts become dirty with mud, etc., gently wipe it away with a dish towel which is moistened with mild soap. Never apply paint thinner, benzene or alcohol; damage will result.

### How to Adjust the Angle of Beam

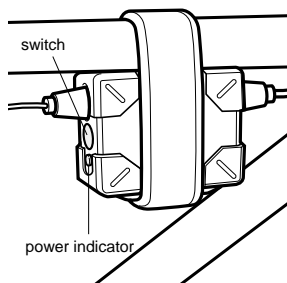
Switch on the light at night in flat place, and adjust the angle vertically. It can also be adjusted 10° horizontally. To adjust it, loosen the screw of the bracket a little.

**Warning!!!** In addition to its high brightness, the beam is widely diffused. In case you should use this light on public roads, be sure to adjust the angle downward so as not to blind oncoming traffic.





run-time is **3** hours



## HOW TO MOUNT

Mount the lamp unit to the bracket, the ballast to your frame and bottle battery to your bottle cage. Then connect the jack of the bottle battery with the plug of the ballast.

### Installing Bracket

1. Attach the bracket to the handlebar using the appropriate rubber pads. Hand-tighten the bolt.
2. Before tightening the bolts securely, adjust the angle of the beam and the position of the lamp body. (See "How to Adjust the Angle of Beam" in the "Important Note".)
3. Tighten the bolt securely. (For a more secure fit, use a screwdriver.)

### Mounting Lamp Unit

**Warning !!! Never touch the lamp body until it is thoroughly cooled. You may get burnt.**

- To mount the lamp body, slide it backward onto the bracket until it clicks into position.
- To remove the lamp body, slide it forward while pushing the lever.

### Mounting Ballast

Attach the ballast under the top tube and round the belt. If it is not secure, use the supporter and stopper as shown in the figure. If your frame is Y-frame, attach the ballast at the side of the frame.

**Note !:** Be sure that the ballast is tightly attached to the frame.

### Installing Bottle Battery

Insert the bottle battery into your bottle cage. Secure it with the battery belts.

**Note !:** The bottle battery might jump out of the bottle cage during ride. Be sure that it is tightly and firmly fixed.

### Connecting Cord

Connect the jack of the bottle battery's cord and the plug of the ballast's cord. Wind the cord round the frame so that it will not hinder riding.

**Note:** Securely connect the jack to the plug.

## HOW TO USE

The continuous run-time is 3 hours from the fully-charged condition.

**Note !:** When the temperature is very high or low (even within the operating temperature range), the operation time might become shorter than the standard time due to the characteristics of the battery.

- To switch on/off, press the yellow button on the ballast. When the light is on, the GREEN power-indicator turns on.
- After switched on, it takes about 30 seconds for the light to reach its full brightness.
- Because of the characteristics of the bulb, the beam may flicker or discolor during operation due to change of the temperature or fluctuation of voltage.

**Note !:** In case the light does not turn on, switch it off once and wait for more than 15 seconds; then try again.

After switching off, wait more than 15 seconds until switching on again.

**Note !:** If the light does not turn on although you have tried several times, charge the battery.

**Note !:** In case there are frequent failure when switching on, the bulb needs to be replaced.

### Power Indicator

The light goes off in about 10 minutes after the RED power indicator turns on. Switch off the light and charge the battery, or use a spare battery.

**Note !:** The indicator is only an estimation of the battery life.

## HOW TO CHARGE

Use only the included AC adapter with an AC outlet.

1. Turn the battery cap counterclockwise and remove it.
2. Connect the plug of the AC adapter to the charging jack inside of the bottle battery.

**Warning!!! Never connect the plug of the AC adapter to the output jack. It may cause fire or damage of the components.**

3. Plug the AC adapter into an AC outlet. During quick charge, the charging indicator inside of the bottle battery turns on. When charging is completed, the indicator turns off. Unplug the AC adapter.

**Note !:** The standard charging time is 3 hours if no charge is left in the battery. (The charging time varies depending on the battery condition.) Avoid charging the battery for the excessive period of time.

**Note !:** After charging, close the battery cap. Pay attention so that the o-ring does not catch any objects.

**Note !:** After charging, unplug the AC adapter.

**Note !:** If the battery does not serve the proper run time even if it is fully charged, it might be at the end of its useful life. Disconnect the output jack and connect it to a new battery.

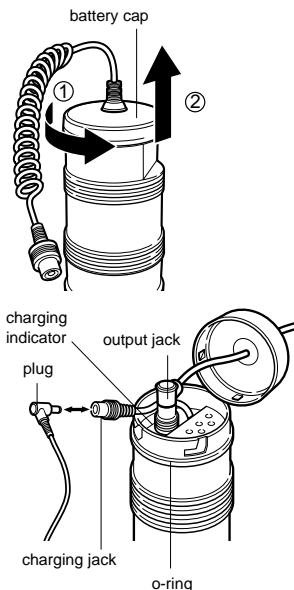
## SAFETY SYSTEM (AUTO-RESET FUSE)

When a malfunction or short-circuit occurs in the circuit or the temperature of the battery rises, the auto-reset fuse blows as a safety system and the circuit will be cut off. In this case, turn off the light, find the cause of the malfunction and remove it. After being left for a while, the fuse will automatically recover.

**Note !:** If the fuse continues to blow or does not recover even after the malfunction is removed, call the appropriate service center for assistance.

## ABOUT THE BULB UNIT

The bulb unit is not user-replaceable. If it is burned out or comes to the end of its useful life, please return it to us, along with the ballast. We will replace it for pay.



charging  
time is **3** hours

## SPECIFICATIONS

- Bulb: 21W Metal Halide Bulb  
Battery: Bottle battery /12V-4500mAh Ni-MH Battery  
Charger: CATEYE AC Adapter for Charger (12V AD1622)  
Operation Time:  
    approx. 3 hours of continuous use  
Charging Time:  
    approx. 3 hours  
Operating Temperature Range:  
    Charging 0°C - 40°C (32°F - 104°F)  
    Operating -15°C - 45°C (5°F - 112°F)  
Recharge/Discharge Number of Times:  
    at least 500 (until rated capacity drops to 50%)  
\* The specifications and design are subject to change without notice. For the information of the products, please also see CAT EYE website.

## LIMITED WARRANTY

**2-Year Warranty: Only Lamp Unit, Ballast and AC Adapter (Excluding bulb and battery)**

If trouble or damage occurs during normal use, the product will be repaired or replaced free of charge. Type your name, address, date of purchase and the situation of trouble clearly, and send it back to the appropriate service center together with the product. Insurance, handling and transportation charges shall be borne by the customer. After being repaired or replaced, the product will be shipped back to the customer.

**Address for service:**

**For United States Consumers:**

**CATEYE Service & Research Center**

1705 14th St. #115 Boulder, CO 80302

Phone: 303-443-4595 Toll Free: 800-5CATEYE

Fax: 303-473-0006

URL: <http://www.cateye.com>

**CAT EYE CO., LTD.**

**Japan Office**

2-8-25 Kuwazu, Higashi Sumiyoshi-ku Osaka 546-0041 JAPAN

Attention: CAT EYE Customer Service Section

Phone: 81-6-6719-7781 Fax: 81-6-6719-2362

## Registration

Please register your HL-MH310 to validate the warranty. Registration of the product will bring you free technical and customer service support as well as updates and information on new products. Register today (online at our web site, or) by completing the registration card included in the package.