

PROLITE IITM



OWNER'S MANUAL

Congratulations, on purchasing the PROLITE II™, the finest LED headlamp on the market. With proper care, this light will provide many years of dependable service.

1. Features

- a. Microprocessor controlled LEDs
- b. MAGFORCE™ On / Off Switch (pat. pending)
- c. 2 LED Settings
- d. LED Light output approximates daylight
- e. Powerful Xenon spot bulb
- f. Padded Elastic headband
- g. Waterproof construction
- h. Standard blade mounting
- i. One year limited warranty

2. Optional Equipment

- a. Helmet mounted battery
- b. Waist mounted battery
- c. Car charger
- d. AC wall adaptor for charger
- e. Custom Battery Packs
- f. Handlebar Bike Mount
- g. Water Bottle NiMH Bike Battery
- h. Economical Lead Acid Bike Battery

3. Safety Instructions

- a. Do not use this light until you thoroughly read and understand the instructions contained in this owners manual.
- b. Use approved battery packs only. (TAG® 6V sealed lead acid or 6V NiMH PROLITE™ Smart battery) Use of any other battery will void the warranty.
- c. Do not plug the light into or operate light from the charger. Serious damage or injury may result.
- d. Operate only when light housing is sealed to prevent damage to the light and protect against the possibility of electric shock.
- e. Do not look into the light when it is in operation. Serious eye damage or blindness can occur.
- f. Do not attempt any internal repair except for replacing the spot bulb. Any attempt to repair the electronics module will void the warranty.

4. Operation

(See Section 7a for additional operating characteristics)

- a. Connect the PROLITE II™ to approved battery pack battery only.
- b. Switch position description
 - i. First position is Low LED.
 - ii. Second position is High LED.
 - iii. Third position is both High LED and Xenon spot.
 - iv. Forth position is Xenon spot only.
- c. To operate switch, rotate the colored switch ring clockwise, when looking at the back of the lamp. **WARNING: Do not look into lamp when it is in operation. Serious eye damage or blindness can occur.**

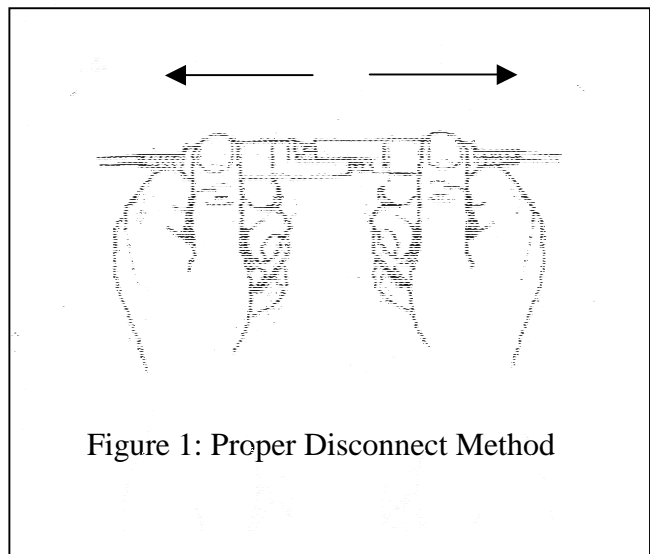


Figure 1: Proper Disconnect Method

- d. When the light is turned off, it is normal for the LEDs to glow for several minutes, even if the light is not connected to the battery.
- e. To prevent accidentally turning on the light, disconnect the light from the battery pack for storage or transportation.

- f. When disconnecting the light from the battery pack firmly grip the plug assembly on both halves of the connector, not the cord, and pull connector apart. See Figure 1.

5. Care & Maintenance

- a. Cleaning the exterior of your PROLITE II™ light.
- Clean exterior of light with a soft damp cloth.
 - Remove bezel, cover lens and switching ring. Do not remove inner lens. Clean thoroughly.
 - Remove any dirt from the housing that is located under the switching ring.
 - Reassembly. Do not over tighten the bezel.

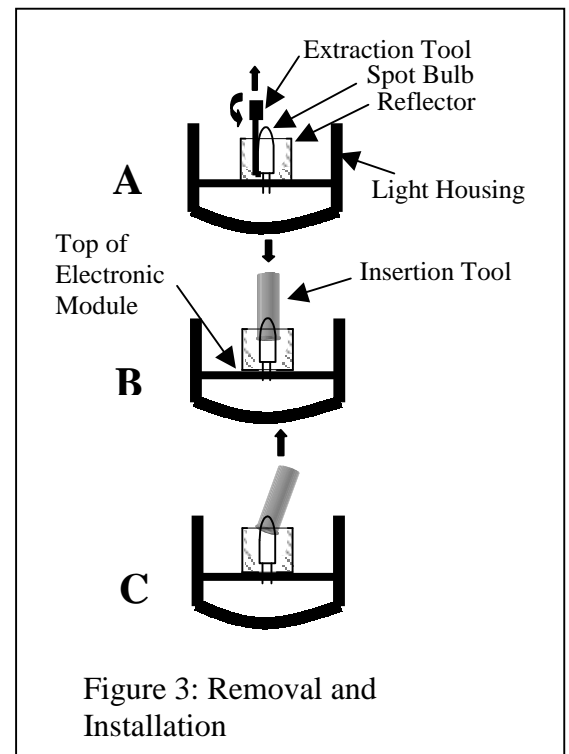
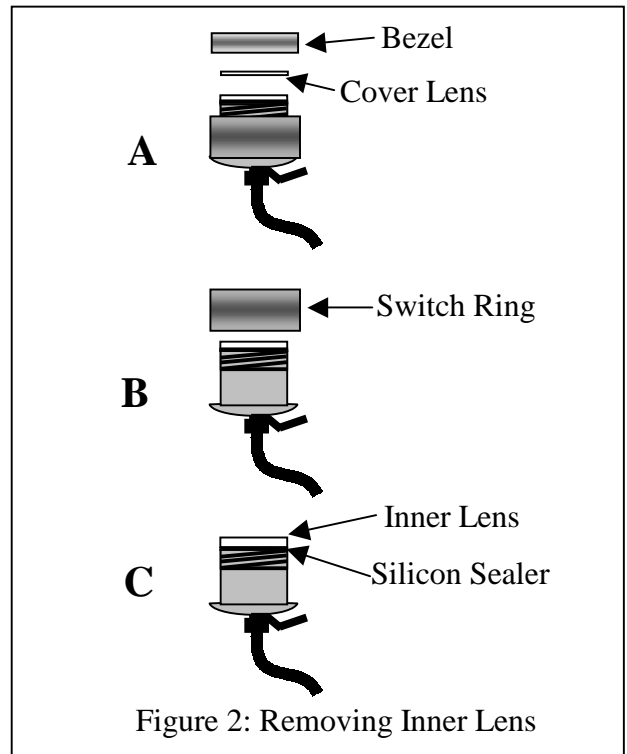
- b. Do not store the light in wet conditions. Even though the light is waterproof, it is possible for water vapor to enter the light through the interior of the power cable.

- c. Replacing the cover lens.

- Unscrew the bezel.
- Remove old cover lens.
- Replace with new cover lens.
- Reassemble. Do not over tighten the bezel.

- d. Replacing the Xenon spot bulb. Since the spot bulb is used primarily to illuminate distant objects, it should last for a long time under normal conditions. If you should find it necessary to replace the bulb, follow these directions carefully in order to maintain the light's waterproof integrity.

- Unplug the PROLITE II™ from the battery. (See Section 4f.)
- Clean exterior of light. (See Section 5a.)
- Remove bezel, cover lens and switch ring. See Figure 2A and 2B.
- Carefully remove lens by cutting silicon sealer between housing and lens with a razor blade. See Figure 2C.
- Remove all remaining sealer from the housing and lens.
- Remove old bulb by inserting extraction tool between the reflector and the spot bulb, rotate the tool so hook is seated underneath the light bulb, and then pull upward. See Figure 3A.
- Install new bulb. Insert bulb into bulb insertion tool approximately ¼ inch. Using the bulb insertion tool, align the pins on the bulb with sockets on the top of the electronic module, and then gently push the bulb into the sockets. See Figure 3B. Hint: Do not push bulb all the way in to begin with, this will make it easier to focus. To



- disengage the bulb insertion tool, gently tilt the tool to one side and lift. See Figure 3C.
- viii. Focus Bulb See Section 5e.
- ix. Replace inner lens. See Section 5f vi.

- e. **Focusing Xenon Spot Bulb.** A properly focused bulb will provide a sharp, central “hot” spot with good wide area illumination. **WARNING: DO NOT LOOK INTO THE LIGHT WHEN THE LIGHT IS IN OPERATION, SERIOUS EYE INJURY OR BLINDENESS CAN OCCUR. CAUTION: THE BULB TEMPERATURE CAN REACH 300°C (572°F). DO NOT TOUCH THE BULB WITH YOUR BARE SKIN. SERIOUS BURNS CAN RESULT.**

- i. Replace the switch ring.
- ii. Plug the PROLITE II™ into the battery.
- iii. Turn the PROLITE II™ to the spot beam only position.
- iv. Shine the beam against a wall or ceiling. Hint: Ceiling works well. The light pattern should look like the picture in Figure 4. The hot spot should be 3-4 inches across 5-6 feet from the light.
- v. If the light pattern does not appear as it does in Figure 4, then move the bulb in, out or to one of the sides until the suitable light pattern is reached. Use the bulb extraction tool to pull up if necessary and the wooden handle to push the bulb in or to the side. Note: You may need to remove the bulb and bend the leads if a larger side-to-side adjustment is necessary. See Figure 5. **CAUTION: DO NOT TOUCH LIGHT BULB. SERIOUS BURNS CAN RESULT.**

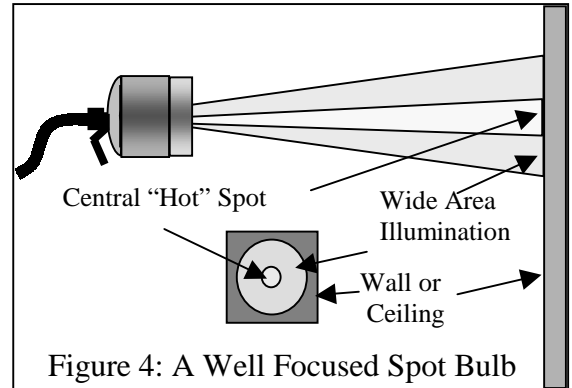


Figure 4: A Well Focused Spot Bulb

- f. **Re-assembly and replacement of inner lens.** Note: Follow these directions carefully in order to maintain the light’s waterproof integrity.

- i. Unplug the PROLITE II™ from the power supply. (See Section 4f.)
- ii. Clean exterior of light (See Section 5a.)
- iii. Remove bezel, cover lens, and switch ring.
- iv. Carefully remove lens by cutting the silicon sealer between housing and lens with a razor blade. See Figure 2.
- v. Remove all remaining sealer from the housing and lens.
- vi. Apply a small bead of silicon sealer to housing. See Figure 6A.
- vii. Place the lens on the sealer. See Figure 6B.
- viii. Gently apply pressure to seat lens against sealer and housing. See Figure 6C.
- ix. Clean off excess sealant.
- x. Let silicon sealer (Type 270) cure for 4 hours.
- xi. Replace switch ring, cover lens and bezel. Do not over tighten the bezel.

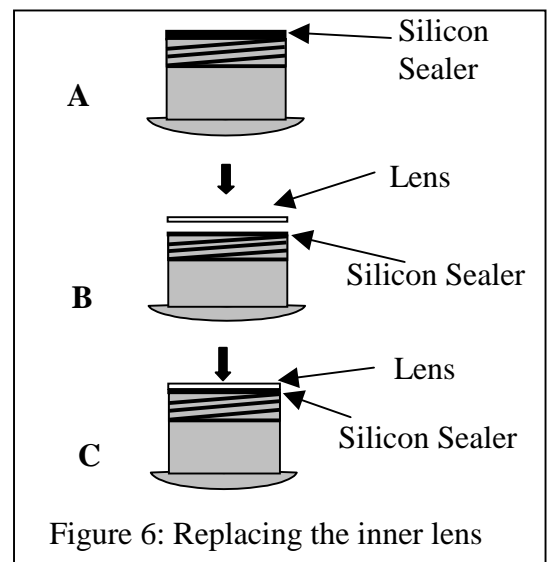
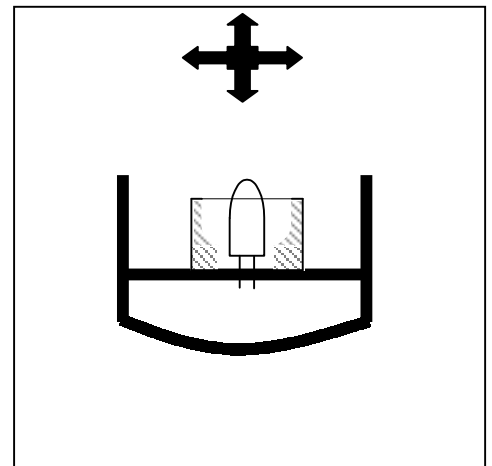


Figure 6: Replacing the inner lens

6. Run Time

- a. The run times listed in the Chart 1 are typical run times. The actual run time may vary depending on the amp hour rating of the battery and the slight differences in the components used to assemble the light. Higher amp hour ratings result in longer run time. Higher voltage results in more light output.

b. Chart 1

| Battery Type and Size | Low LED Setting | High LED Setting | Combination Setting | Spot Setting |
|---------------------------------------|-----------------|------------------|---------------------|--------------|
| 6V 1.5 Ah NiMH | 50 hrs | 4 hrs | 1.5 hrs | 2 hrs |
| 6V 4.2 Ah Lead Acid Bike Battery | 140 | 10.5 | 4.2 | 5.6 |
| 6V 7 Ah Sealed Lead Acid | 230 hrs | 18 hrs | 7 hrs | 8.75 hrs |
| 7.2V 1.5 Ah NiMH | 33 | 2.9 | 1.25 | 1.9 |
| 7.2V 3.7 Ah Water Bottle Bike Battery | 82 | 7.1 | 3.1 | 4.6 |

7. Trouble shooting

- a. Normal Operating Characteristics of the PROLITE II™
- i. LEDs glow after lamp is turned off.
 1. This glowing is a result of the circuit bleeding off a stored charge.
 - ii. The light is still lit at low setting even though light is turned off
 1. Switch ring not fully turned to off position
 2. Due to the circuit design this can happen when the light is very cold. The light should automatically shut off in a couple of minutes.
 - iii. LEDs turn on for brief period when light is first plugged into the battery pack.
 1. This can occur, usually in cold weather, because of residual charge left in the electronic circuit. This is considered normal operation.
 - iv. The LEDs pulse when set on the low setting.
 1. This usually occurs when the light is very cold. This is considered normal operation. The LEDs should stop pulsing once the light warms up. To accelerate the warm up process, turn the light to the high LED setting for several minutes.
 - v. The light is turned off or on when brought into contact with a second ProLite II™.
 1. The activation magnets from the second light activate the switch(es) in the first light.
 - vi. Spot bulb runs for extended period of time and then goes out.
 1. The actual run time will depend on temperature. At 70°F, the spot bulb should run for approximately 1.5 hours and then shut off. This is an energy conservation and safety feature. To reactivate the spot bulb, turn the switch so both the LEDs and spot bulb are on. This will then reset the spot bulb timer circuit.
 2. The spot bulb has burned out.
 - a. Follow instructions on replacing bulb. (See Section 5d.)

- b. Actual problems
 - i. LEDs light but spot bulb does not light.
 - 1. Switch not fully turned to spot position.
 - 2. Burned out spot bulb. Follow instructions to replace bulb. (See Section 5d.)
 - 3. Broken internal contact.
 - ii. Spot bulb lights automatically, in any switch position, when light is plugged into power cord. LEDs do not light in any position.
 - 1. Light plugged into wrong polarity battery.
 - a. Plug light into correct polarity battery.
 - 2. Damaged LED control circuit.
 - a. Send light into manufacturer for repairs.
 - iii. Spot bulb lights but then fades out. LEDs do not light.
 - 1. Discharged or defective battery.
 - a. Recharge or replace battery.
 - 2. Bad or intermittent contact at connector.
 - a. Clean contact at the connector.
 - b. Send light to manufacturer to have power cord replaced.
 - 3. Broken wire in power cord.
 - a. Send light to manufacturer to have power cord replaced.
 - 4. Failed LED circuit.
 - a. Send light to manufacturer for repair.
 - iv. The light output from LEDs does not seem as bright as when the light was new.
 - 1. Dirty cover lens.
 - a. Clean or replace lens. See Section 5c.
 - 2. Dirty main lens.
 - a. Clean or replace lens. See Section 5f.
 - 3. Surrounding surfaces are absorbing the light. Such surfaces include lava tubes, black mud, etc.
 - 4. Battery is not fully charged or is not holding a charge.
 - a. Recharge or replace the battery.
 - v. When the light is turned to a setting, the light does not respond.
 - 1. Make sure switch is fully turned to desired position.
 - 2. Missing switch magnet(s)
 - a. Replace magnet(s). Contact factory for replacement magnets and installation instructions.
 - b. Send light to manufacturer for repair
 - 3. Broken or defective internal switch(es)
 - a. Send light to manufacturer for repair
 - vi. The light does not light.
 - 1. Discharged or defective battery.
 - a. Recharge or replace the battery.
 - 2. Corroded connector or broken power cable.
 - a. Clean the connector.
 - b. Send light to manufacturer for repair.
 - 3. Missing switch magnets
 - a. Replace magnet(s). Contact factory for replacement magnets and installation instructions.
 - b. Send light to manufacturer for repair.
 - 4. Broken or defective internal switch(es).
 - a. Send light to manufacturer for repair

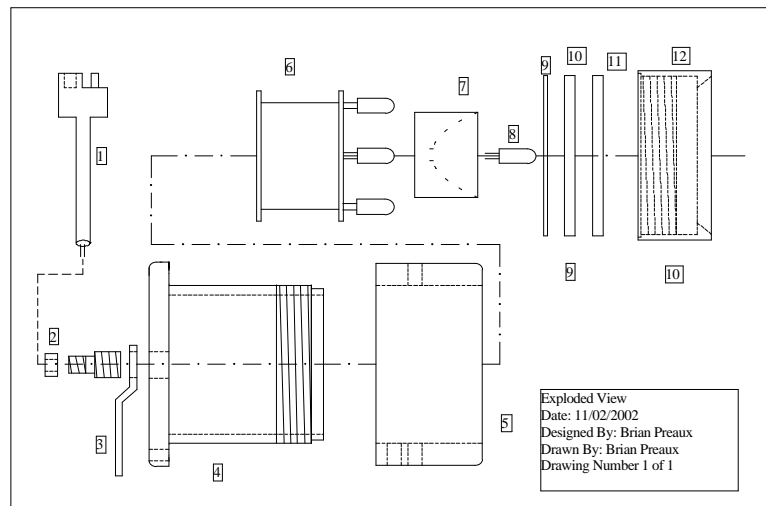
8. Advanced users:

DO NOT ATTEMPT TO MAKE THESE CHANGES WITHOUT FIRST CONTACTING THE FACTORY. SERIOUS DAMAGE, INJURY OR DEATH CAN RESULT FROM IMPROPER MODIFICATION. WARRANTY IS VOID IF MODIFICATIONS ARE NOT MADE BY THE FACTORY. This section deals with some advanced features that some users may find helpful. One advantage that the PROLITE II™ has over other LED lights on the market is the ability to easily change to a different input voltage or battery size to meet your particular needs. By changing the input voltage the light output can be dramatically increased. By changing the battery size the expected run times can be dramatically increased. Another advantage is the ability to reset the low LED setting. You may find this useful if you want more light output on the low setting, this would translate into a shorter run time, or less light output from the low setting with a longer run time. These unique features make the ProLite II™ an excellent choice for expedition caving.

- a. Low LED can be factory reset for your particular needs. Contact the manufacturer for cost.
- b. Special battery packs, input voltages and spot bulbs are available by special request. Contact the manufacturer for specifications and availability.

9. Parts List

| Reference Number | Part Number | Description |
|------------------|-------------|--------------------------|
| 1 | PLC14 | Power Cord |
| 2 | S2507 | Cable Grip |
| 3 | PL2B | Bracket |
| 4 | PL2H | Housing |
| 5 | PL2SR | MAGFORCE™ Switching Ring |
| 6 | PL2EM | Electronics Module |
| 7 | 1585 | Reflector |
| 8 | 1167 | Xenon Bulb |
| 9 | Type 270 | Silicon Sealer |
| 10 | CL2 | Inner Lens |
| 11 | CL2 | Cover Lens |
| 12 | PL2BZ | Bezel |



10. Limited Warranty

- a. This light is warranted for a period of one year from the original purchase date against defects in parts or workmanship. The manufacturer will replace or repair the light at the manufacturer's discretion after inspection has determined the cause of failure. The registration card must be filed with the manufacturer along with a copy of the original sales receipt for the warranty to be valid. This warranty is valid only to the original owner and is non-transferable. Naturally, normal wear and tear, misuse, neglect or dissatisfaction with the product choice are not manufacturing defects and thus are not covered by this warranty. No other warranty is implied.
- b. The manufacturer and their agents are not liable for any incidental or consequential damages, including, but not limited to, property damage, lost time, loss of use of a covered product, or any damages resulting from the breakdown or failure of a covered product, or from delays in replacement of a covered product.
- c. If the product falls within the warranty guidelines, the manufacturer will cover repairs. Shipping to and from the repair center is the responsibility of the consumer. If it is necessary to ship, please send the light prepaid, insured, and in a carton. Enclose an 8 ½ x 11 sheet of paper with your name, address, telephone number, email address and a brief description of the problem to ProLite, % Brian Preaux.

11. Contact Information

For additional information about PROLITE II or any other PROLITE products, or warranty or non-warranty repairs contact PROLITE at:

- a. Email: Emailsupport@proliteii.com
- b. Phone: (571) 344-5793
- c. Mailing Address: See website for address