

# LUPINE<sup>®</sup>

LIGHTING SYSTEMS



## EDISON 5

### Instruction Manual

(Read before use!)



#### Contents of package:

10/16 W Metal-Halide Lighting System with PCS V4.1 remote controller,  
Lithium-Ion battery in soft case 6.8Ah / 7.2V ,  
Lupine microprocessor controlled charger "Charger One", 12V input adaptor,  
Helmet Mount with 1m extension cord  
Instruction Manual (this document)  
Technical Information PCS v4.1  
Technical Information Charger One

# 1.) READ BEFORE USE!

## General:

Congratulations! You have just bought the most advanced lighting system available. The combination of the dimmable HID bulb with integrated ballast and a powerful Li-ion battery provides unrivalled performance at an unbeatable weight.

Out of the box, Light, Battery and Charger are ready to use! Please read this instruction manual fully, to familiarise yourself with all of the functions. Try out the system at home first, before hitting the trails, to prevent any surprises while riding. For further details about using the Edison 5 and the Charger One to individual settings read "*Technical Information PCS V4.1*" and "*Technical Information Charger One*".

As with any other electrical device, there is a slight chance of failure at any time. Be aware, and use with caution.

Lupine accepts no liability for any injuries or other damages arising from the use of this product.

## It might become hot!

The lamp housing can become hot enough to cause serious injuries, if used without airflow. The Edison 5 is equipped with an active temperature control. To avoid damage caused by overheating, the power will be reduced automatically when necessary. In the unlikely event of this happening, the light cannot be switched between high and low beam. When the temperature has cooled down sufficiently, switching between high and low beam will be possible again. In low beam mode it is possible that the light may flicker during use, this is normal and is not a defect with the lighting system.

## Dazzling:

The Edison 5 is a very powerful lighting system. Always use it with care and with respect for others (especially when mounted to a helmet).

**Warning!** Never look directly into the light. It may cause serious injury. Also, do not shine directly into the face of another person.

## Waterproof?

The Edison 5 lamp housing and the PCS switch are fully sealed. However **do not use underwater**. It is not suitable for diving purposes! If water does get inside the lamp unit please contact the place of purchase. Do not use the light.

## Opening the housing:

**Do not open the lamp unit** (risk of electrical shock)!! Lupine does not accept any warranty or liability for lamps that have been opened by the consumer. If the bulb has to be replaced please send the lamp unit to the place of purchase or contact Lupine directly.

## Shock resistance:

The bulb is mounted in vibration proof housing and will withstand normal use.

**Do not drop the lamp onto a hard surface. This could damage the bulb and Lupine cannot accept warranty for such damage.**

## Lifetime :

The lifetime of the bulb is approx. 500-700 hours. However this is limited by the number of times the lamp is switched on and off. In order to maximise the bulb life, only switch the lamp on and off when necessary. Switching the lamp between high and low beam does not affect the life of the bulb.

## Warranty:

The 2 year warranty covers only defects in materials or workmanship. Batteries are not covered by this warranty. Modifications to the light or improper use also void this warranty. The bulb is covered by warranty for 1 year from the date of purchase.

## 2.) MOUNTING

### **Lamp:**

Mounting the lamp with the O - ring :

If you are feeling strong, use the finger hook method (see fig.1). For others, who prefer the less strenuous method, hold the O-ring with one finger, and push the lamp back until the O-ring can be secured on the hook of the lamp. (fig.2)

**Hint :** The holder is turnable for 7 ° in each direction . Tighten the screw with moderate force for easy adjustment and fixing in the desired position.

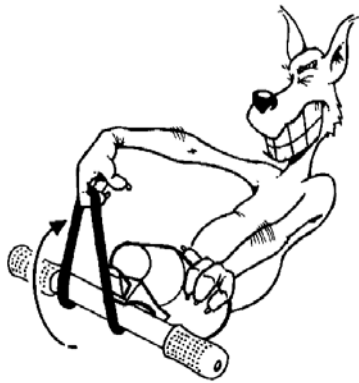


fig.1



fig.2

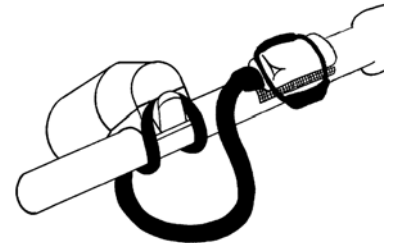


fig.3

### **PCS v4.1 switch :**

The PCS v4.1 is designed for use on the right hand side of the lamp (see fig.3). Before attaching the velcro strip to the handle bar, ensure that the surface is free of dirt and oil. The velcro strip should be applied at room temperature, colder temperatures will cause the adhesive not to work.

For applying the O-Ring of the switch to the handlebar see the separate information sheet "*Technical Information PCS v4.1*".

An optional upgrade mounting bracket is also available for the switch (Peppi V3).

### **Battery:**

Mount the rechargeable battery to the frame as shown in fig.4. Loop the Velcro strap around the top tube and adjust it carefully. Secure the battery pack on the frame by adjusting the length of the strap (before closing it!!) and fix it around the down tube.

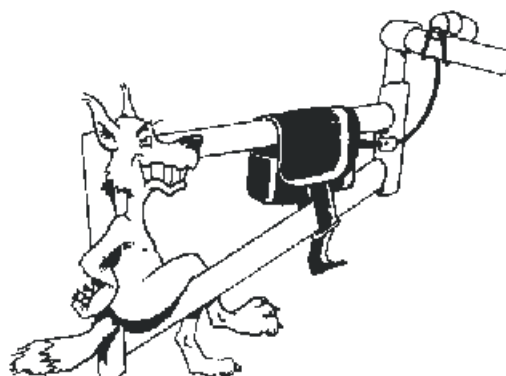


fig. 4

Now plug the rechargeable battery to the lamp and your Edison 5 is ready to go.

### 3.) USING THE LIGHT

#### **Initialising:**

Plug the lamp to the fully charged battery. The software of the PCS remote controller will do a self test (signalled by a short flash of three LEDs).

The Edison 5 is ready to work now. ( for more details see: "*Technical Information PCS v4.1*").

#### **Switching on:**

Pressing the switch turns the lamp on. The light will glow a reddish colour and flicker for the first few seconds. After a few seconds the beam will turn bright white. It will operate on high beam. (signalled by the blue LED on the switch).

#### **Dimming:**

Pressing the button once, after the light has stabilised, will switch the light to econo mode (the blue LED is off). By pressing the button again the light will return to high beam mode. After switching between beam settings and in econo mode itself, some flickering of the light might occur if lamp is used without airflow. This is normal and barely visible.

**Caution ! If used without airflow temperature control will reduce light power as much as necessar to prevent serious damages. The light may become unstable and can turn off without any warning !**

#### **Switching off:**

Press and hold the button for 2 seconds until the light switches off. The green LED on the switch unit will fade until it is almost invisible.

**The light cannot be switched on while the green LED still fading and the blue backlight LED lit on!**

#### **Switching on again:**

Metal Halide lighting systems need some time to reach suitable conditions before restarting. This takes approximately 8 seconds for the Edison 5. This is signalled by the fading green LED and the blue backlight . **It is absolutely necessary to wait until the green LED is almost invisible and the blue backlight LED turned off before switching the light on.** If this is not done, and the button is pressed too quickly, the lamp will try to start again and might cause an break up start. A new start will be necessary.

#### **Controlling the remaining light time:**

The electronics of the PCS v4.1 not only control the high and low beam but also protect the rechargeable battery against over discharge and includes a low battery indicator.

Low battery is signalled by the yellow and the red LED.

When the yellow LED lights:	Significant amount of capacity is gone!
Red <b>and</b> yellow LEDs light:	Light will automatically switch off in a few minutes!

It is a matter of experience to interpret exactly how much time is left after the LEDs light up. Remaining burn time depends on the battery's age and capacity, the operating temperature and the capacity gauge program (Low, Middle, High; see "*Technical Information PCS v4.1*").

When the yellow **and** red LEDs light up the light automatically switches to low beam (10W). There is only a few minutes burn time left.

#### **Reserve tank:**

When the battery is almost empty (yellow **and** red LEDs have been lit for several minutes already) the lamp switches off automatically. By "double clicking" the switch it activates the reserve tank which provides some additional minutes of emergency light on low beam (10 Watts). A flashing red LED signals the reserve tank has been activated. Its duration also depends on the battery condition.

When the reserve tank is empty the light will switch off and should not be restarted.

**Caution!** Switching on is not possible at this point. If you unplug the battery and then re-attach it, you will damage the battery by over discharging it! Also, storing a discharged battery will cause over discharging. Recharge the battery as soon as possible!

**Meaning of the LEDs:**

Blue LED lights:	High beam (Maximum Power)
Green LED lights:	Low beam (Econo mode)
Green LED glows weakly	Ready to switch on again
Yellow LED lights:	Significant amount of burn time consumed
Yellow + Red LED light:	Rechargeable battery almost empty <b>Caution!</b> Light will switch off very soon without further notice – Stop!
Red LED flashes:	Reserve tank activated
Blue backlight LED :	Time reminder for restart

**Programming :**

You can adapt the PCS of the switch to your needs. This programming is explained in detail in the "*Technical Information PCS v4.1*" and is done exclusively using the switch and LEDs.

## 4.) CHARGING THE RECHARGEABLE BATTERY

**Components:**

The charging system of the Edison 5 consists of two components:

- AC/DC adaptor
- Charger One

The Charger One was developed for use Lupine's high current Li-Ion rechargeable batteries, but it is also fully compatible with all other Lupine rechargeables (Ni-MH as well as NiCd).

**Connection:**

Plug the AC/DC adaptor into the mains. Plug the adaptor into the socket of the Charger One. After a short initialisation the display will show: "Li Ion ready for charge".



**Charging:**

The Charger One is now ready to charge. Plug the rechargeable battery into the Charger One and charging will start automatically. The first line of its display shows: "Li Ion charge". The information displayed on the second line are explained in the "*Technical Information Charger One*".



Keep the rechargeable battery plugged into the Charger One until the display reads: "Li Ion full".



Charging is now complete; the battery is full and is ready for use.

### **Programming / Reset:**

It is possible to modify the charging properties of the Charger One to your individual settings. For details see the "*Technical Information Charger One*"

This programming can be done using the small "select" button on the Charger One. If this button is not pressed the Li Ion program will be the default settings and will be used every time you connect the Charger One to the AC/DC adaptor. By pressing the select-button you can toggle between the different charging programs for the different types of rechargeable batteries.

For Li Ion batteries only use the Li Ion program (Display: "Li Ion ready for...charge")!

**Note:** The Charger One always defaults to the program that was selected when the charger was unplugged from the power supply.

If the select button is pressed for a period longer than 3 seconds you will access the programming mode. If this has been done by error and the settings have been changed, please do the following:

Unplug the Charger One from the AC/DC adaptor. Do not have the battery connected to the Charger One! Now plug the Charger One to the AC/DC adaptor while holding down the select button. The Charger One display will show its name and version number. Release the button. The Charger One has now been reset to the default setting.

Ensure the display shows "Li Ion ready for...charge". If it does not, toggle to Li Ion mode by pressing the select button (repeatedly).

### **Caution!!**

The Charger One can be used to charge all types of Lupine rechargeable batteries.

**You must not use this charger with unchargeable batteries!! They will explode!!**

The Charger and AC/DC adaptor should not be opened by the user as this will invalidate the warranty.

## **5.) CARE AND STORAGE**

### **Lamp:**

All components should be cleaned with warm soapy water, but do not use a high pressure spray or hose to wash the system. To get out all water out of all areas of the housing etc. turn the light on for a few minutes.

The battery pack is water resistant. Unlike other lighting systems, it is easy to open. If used in very wet conditions, please take the battery out of the softcase and let the case and battery dry separately.

### **Connectors:**

In normal conditions, the connectors do not need special attention. **However if you use the light in very humid and/or corrosive conditions they should be greased with the included Dutch Grease. Do not use contact-sprays or contact-greases!** They contain corrosive ingredients that will damage the connectors.

**Transport:**

If you are transporting your light inside a bag or box, or in a situation where the button may accidentally be pressed: **Always unplug the battery from the lamp unit.**

**Storage:**

Store the battery for short periods of time in a fully charged state. **Disconnect it from the lamp unit.** Charge the battery fully before using the system again.

**For long periods of storage please read additional manual Charger one 50% Lion to charge the battery half full automatically.** Store in a cool, dry place.

**6.) TROUBLESHOOTING**

Failure	Caused by	Solution
<b>Lamp does not light <u>and</u> the LEDs of the PCS <u>do not</u> flash during initialisation.</b>	Over discharged battery.	Charge! (Also read "battery is not charging" below!
	Battery is not or not correctly plugged to the light.	Check all connections
<b>Lamp does not light, LEDs of the PCS <u>do</u> flash during initialisation.</b>	Bulb has blown	Return to place of purchase for bulb replacement
	Switched on too soon after switching off	See " <i>Switching on again</i> " in chapter 3 " <i>Using the light</i> ".
<b>Burn times are too short.</b>	Battery is very old	Replace with new battery
	Cold temperatures	Keep the battery warm
	Charger is defective	Replace Charger One and/or AC/DC adaptor
<b>Battery is not charging:</b>  <b>When plugged into the battery, the charger does not start charging but continuously displays "Li Ion ready for... charge"</b>	The electronics in the battery have swithed off the battery to prevent over discharge. The Charger One now needs a certain period of time to overcome this and start charging.	Keep the battery plugged to the charger and <b>be patient!</b> It may take up to 60 minutes until the Charger One is able to start charging.

## **7.) TECHNICAL DATA**

### **Lamp:**

Weight complete with rechargeable battery:	450g
Capacity of rechargeable battery/ Voltage:	6.8 Ah 7.2 V Lithium-Ion
Burn time 16 W:	3 hours 15 min
Burn time 10 W:	5 hours
Charging time:	4 hours max.
Temperature range:	- 40°C - +70°C
Beam angle:	18°

Burn times may vary depending on battery's age, condition and temperature.

### **Charger:**

#### AC/DC adaptor:

Input:	100 – 240 V~, 50-60 Hz
Output	12V=, 2A

#### Charger One:

Input:	12-14 V=, >= 2A from adaptor or in-car adaptor.
Charging current:	2,5 A max.
Discharging current:	0.1 – 0.5 A
Suitable rechargeable batteries:	Li-Ion 7.2 V, NiMH / NiCd 2-6 Cells
Display:	2 x 16 characters, illuminated.
Connectors:	In- and output reverse protected.

## **IMPORTANT NOTES:**

Use of this lighting system might be limited differently from country to country depending on the purpose you use it for. Please do inform yourself about possible restrictions in your country.

The mounting device and the design of the Edison 5 as well as of the PCS are protected by worldwide patents.

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