

# LUPINE®

LIGHTING SYSTEMS



## PASSUBIO XL

### Instruction Manual

(Read before use!)



#### Content of package:

- 22W Halogen Lighting System (SR-Bulb) with PCS V3.3 remote controller,
- Li-Ion rechargeable battery** in soft case 7.5 Ah, 7.2 V
- Lupine Micro-Charger , Velcro straps
- Helmet Mount with 1,2 m extension cord
- Instruction Manual (this document)
- Technical Information PCS v3.3
- Instruction Manual Helmet Mount

# **1.) READ BEFORE USE!**

## **General:**

Congratulations! You have just bought a state-of-the-art lighting system.

Out of the box, the light and charger are ready to use! Please read this instruction manual fully, to familiarise yourself with all 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 Passubio XL to individual settings please read "*Technical Informations PCS V3.3*".

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.

## **Rechargeable Battery:**

The battery is supplied with a very small amount of charge. Before use **it must be fully charged** (see chapter 4 "Charging"). The rechargeable Li-Ion battery will reach its full power after 1 charge/ discharge cycles.

## **It might become hot!**

The Passubio XL is not a simple torch. The lamp housing can become very hot, if used without airflow. Do not touch the lamp during or immediately after use.

## **Dazzling:**

The Passubio XL is a powerful lighting system. Always use it with care and with respect for others (especially when mounted to a helmet). Do not look directly into the light.

## **Waterproof?**

All components of the Passubio XL are waterproof and will withstand even the most extreme conditions. However it is not a diving lamp and is not suitable for use under water.

## **Warranty:**

The 2 year warranty covers only defects in materials or workmanship. Bulbs and batteries are not covered by this warranty. Modifications to the light or improper use also voids this warranty.

## 2.) MOUNTING

### **Lamp:**

Mounting the lamp with the O - ring on handle bar:

For mounting on helmet mount please see the additional manual.

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)



fig.1



fig.2

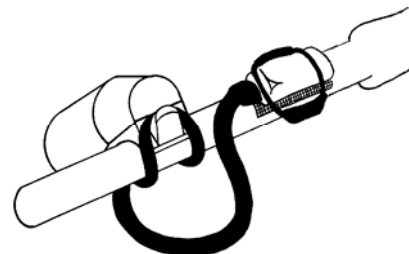


fig.3

### **PCS v3.3 switch :**

The PCS v3.3 is designed for use on the right hand side of the lamp (see fig.3). Before attaching the Velcro strip to the handlebar, 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 to fix the switch to the handlebar see the separate information sheet "*Technical Information PCS v3.3*".

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.

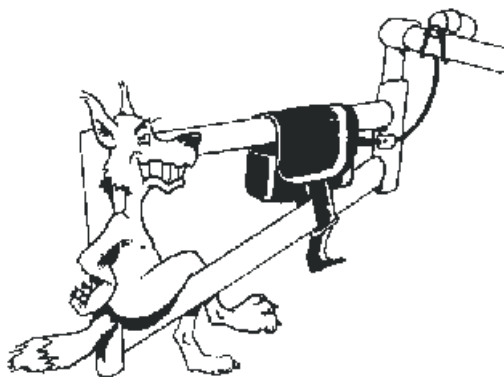


fig. 4

Now plug the rechargeable battery to the lamp and your Passubio XL 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 1 x short flashes of its LEDs and bulb).

The Passubio XL is ready to work now. (for more details see: "*Technical Information PCS v3.3*")

#### **Switching on:**

Pressing the switch turns the lamp on. 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.

#### **Switching off:**

Press and hold the button for 2 seconds until the light switches off.

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

The electronics of the PCS v3.3 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 LEDs.

When the yellow LED lights:	Significant amount of the capacity is gone!
Red <b>and</b> yellow LEDs lights:	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 or High; see "*Technical Information PCS v3.3*").

**Hint:** When the yellow and red LEDs light up you can increase the remaining burn time with economical use of the high beam.

#### **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 (9 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!

#### **Explanation of the LEDs:**

Blue LED lights:	High beam (Maximum Power)
Green LED lights:	Low beam (Econo mode)
Yellow LED lights:	Significant amount of the capacity is gone!
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

### Programming :

You can adapt the PCS of the switch to your needs. This programming is explained in detail in the "*Technical Information PCS v3.3*" and is done exclusively using the switch and LEDs.

## **4.) CHARGING THE RECHARGEABLE BATTERY**

### Components:

The charging system of the Passubio XL consists of two components:

- AC/DC adaptor
- Micro-Charger

The Micro-Charger was developed for use with Lupine's high current Li-Ion rechargeable batteries from AC/DC adaptor or with additional available 12 V car adaptor.

### Connection:

Plug the AC/DC adaptor into the mains. Plug the adaptor into the socket of the Micro-Charger. After a short green flash the Micro-Charger flashes orange and will be now ready to charge.

### Charging:

Plug the rechargeable battery into the Micro-Charger's connector and charging will start automatically. The orange LED and the blue LED light.

**Keep the rechargeable battery plugged into the Micro-Charger until the green LED lights.**

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

### Reading the charged capacity:

After disconnecting the battery the Micro-Charger will indicate the charged capacity as follows:

**First, the orange LED will blink 1 time per complete ampere hour, then the green LED will blink 1 time per 1/10 ampere hour.**

Example: The orange LED blinks 3 times and the green LED 5 times = the charged capacity is around 3,5 Ah. This information will help you to judge the actual condition of your rechargeable battery before use.

**Hint:** You don't have to wait for the whole voltage information to be shown in order to use your charger again. You can stop the charge information at any time by connecting the battery.

### Caution!!

Micro-Charger is designed to charge only Li-Ion batteries!

**You must not use this charger with Ni-MH batteries or unchargeable batteries!! They will explode!!**

Micro-Charger should not be opened by the user as this will invalidate the warranty.

### Explanation of the LEDs:

Orange and blue :	Charging
Green:	Rechargeable battery full

## **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.

### **Replacing the Bulb/Reflector:**

Remove the stainless ring with your fingernail or a small flat screwdriver. Remove the glass (Warning, it is **real** glass!). Unscrew the bolt underneath the lamp holder with a screwdriver. Remove the handlebar holder and the O-ring. Push the wire into the lamp body and move the bulb-reflector out of the shell.



Pull the pins of the bulb-reflector out of the terminal block. Slide the pins of the new bulb carefully into place. Adjust the bulb-reflector as before and replace the glass and ring. Insert the holder and tighten the screw with moderate force. Your Lupine is now finished and ready to blaze the trails again.

### **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 **only** with the Lupine Dutch Grease. Pre-treatment and Dutch Grease are PTFE ( Teflon ) based and not compatible to other greases. **Do not** use contact-sprays or any other 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. Store the battery for longer periods of time in a near by half fully charged state ( approx 50 % ) on a **cool** place.

## **6.) TROUBLESHOOTING**

<b>Failure</b>	<b>Caused by</b>	<b>Solution</b>
<b>Lamp does not light <u>and</u> the LEDs on the PCS <u>do not</u> flash during initialisation.</b>	Over discharged battery.	Charge!
	Battery is not or not correctly plugged into the light.	Check all connections
<b>Lamp does not light, LEDs of the PCS <u>do</u> flash during initialisation.</b>	Bulb has blown	Replace bulb
<b>Burn times are too short.</b>		Check chargers functions
	Battery is new.	Replace with new battery
	Battery is very old	Keep the battery warm
	Cold temperatures	Replace charger
	Charger is defective	

## **7.) TECHNICAL DATA**

### **Lamp:**

Weight complete with rechargeable battery:	450g
Capacity of rechargeable battery / Voltage:	7.5 Ah 7.2 V Li-Ion
Burn time 22 W:	2,15 hours
Burn time 8 W:	6 hours
Temperature range:	- 25°C - +70°C
Beam angle:	18°

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

### **Charger:**

Input:	12-14 V =
Charging current:	2 A max.
Suitable batteries:	Li-Ion 2 cells 7,2 V
Display:	Control of charging by green and orange LED

## **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 Passubio XL as well as of the PCS are protected by worldwide patents.

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