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*SL-POLICE/SECURITY*



SERFAS<sup>®</sup>

**Night Vision Systems**

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## USER GUIDELINE

Thank you for choosing a Serfas True series headlight!

\* For using this product safely, conveniently and keeping it well-preserved, please read this manual carefully before using. Please keep this manual for future reference.



Tool Free



Lithium Ion  
Battery



Battery  
Low Indicator



Horizontally  
Adjustable



Water  
Resistant



Air Vent Cooling  
System



Cree XM-L  
LEDs



**Do Not Dispose  
of in Trash**

# CONTENTS

## CONTENTS INCLUDED

- \* TSL-POLICE/SECURITY Head
- \* Rechargeable Battery Pack 6600mAh (BAT-4)
- \* Wall Charger (S-TSL-CHARGER)
- \* Wired Remote Switch (S-TRIGGER)
- \* 3 Foot Extension Cable (S-EXT-2)
- \* 1 Foot Extension Cable (S-EXT-3)
- \* Serfas Handle Bar Bracket (S-UNIHEAD)
- \* Serfas Helmet Bracket (S-UNIHELMET)
- \* Manual
- \* Carrying Case
- \* Battery Strap (S-STRAP-BAT)

## SPECIFICATIONS

### TSL-POLICE/SECURITY

- \* High Performance Cree LEDs
- \* Alloy / Nylon Body
- \* Precision Optical Lens
- \* Ram Air Venting for Cooler Operating Temperatures
- \* 3 Functions: Pursuit /Standard/Tail Light Only
- Pursuit: 3 modes, Standard: 3 modes, Tail Light: 1 mode
- \* Over Heat Protection System
- \* Low Battery Indicator
- \* Port for TL-80 Tail Light

### BAT-4

- \* Rechargeable Lithium Ion Battery (7.4V 6600mAh)
- \* Low Battery Indicator
- \* USB Power Port for Accessory Charging



TSL-POLICE/SECURITY



S-UNIHEAD



S-TRIGGER



S-TSLCHARGER



S-EXT-3



BAT-4



S-UNIHELMET



S-STRAP-BAT



S-EXT-2



TL-80

# HEAT SINK AND COOLING

## HEAT SINK AND COOLING SYSTEM

The high powered output of the TSL-POLICE/SECURITY creates a lot of heat. The cooler the LED's run they will have a longer lifetime. Your light will also produce more light.

To reduce the heat generated by the running LEDs, the TSL-POLICE/SECURITY was designed with an aluminum alloy body and equipped with Serfas' Ram Air cooling system.

The Ram Air cooling system lets air flow through the light body when riding.

When possible, do not run light while bike is stationary. To properly cool the unit, it must have airflow.



FRONT VIEW

Ram-Air vent system



BACK VIEW

Aluminum heat sink



Copper plate LED board increases the LED heat transfer rate and enhances the light's performance.



## HANDLEBAR MOUNTING

### UNIVERSAL BRACKET INSTRUCTIONS:

Open bracket by pulling thumb lever down, then unclip the thumb lever from the cam hook to open. Adjust the rubber strap length to fit bar by moving the strap up or down the rungs located under the swivel light mount. Once the length of strap is adjusted for best fit, install around handle bar or seat post by inserting thumb lever into cam hook, then rotate thumb lever upwards towards swivel mount to lock. If light still moves on the bar open thumb lever and shorten strap by moving the rubber strap up to the next rung.



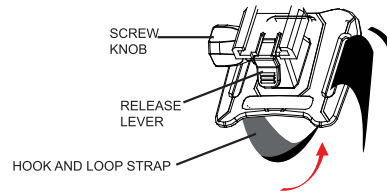
To adjust the horizontal beam, spin the headlight left to right for your best side to side beam angle. To adjust the vertical beam angle, loosen the mounting and rotate the light up and down to your best vertical beam angle, then tighten the mounting.



## HELMET MOUNTING

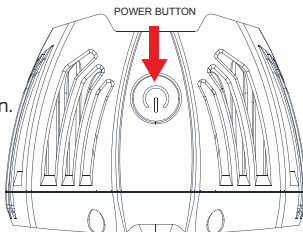
### HELMET BRACKET INSTRUCTIONS:

1. Remove hook and loop strap from one side of the helmet mount.
2. Put helmet mount in desired location on helmet (top center works best).
3. Insert strap through nearest air vent on top of helmet and loop around inside of top of helmet to the next closest vent to the open strap hole on the helmet mount.
4. Put hook and loop strap through open hole on helmet mount and pull snug and attach hook and loop to itself.



## HEAD LIGHT OPERATION

1. A short press of the button from off will always put light into pursuit function.
2. Holding button down for 2 seconds puts light into standard function.  
Holding button down for 4 seconds puts light into tail light only function.
3. Press and hold the on / off button around 1 second to turn off the light.



## TL-80 TAIL LIGHT OPERATION

1. Plug connector from tail light into connector A on figure 1.
2. When plugged in the TL-80 functions based off of the setting of the head light.
3. Off switch on TL-80 is only used to turn tail light on or off.



Figure 1

Connector A

TL-80

Off Button

## OVERHEAT PROTECTION



The overheat protection circuitry in your light ensures that it operates at safe temperatures to insure a long life. Continued heat build up is the biggest enemy of LED's and causes lower lumen output and lifespan when operated too hot. Under proper operating conditions your LED should last 50,000+ hours. (See battery info for battery lifespan)

When your light is on many factors can cause it to get too hot (inadequate airflow, mud, dirt, walking up that hill). When this happens the circuitry in this device will automatically go into "Standard" mode. Once the air flow over the light has improved and the running temperature is reduced the circuitry will kick the light back into the previous mode.



## REMOTE SWITCH

### REMOTE SWITCH OPERATION (Fig. 1)

Equipped with a remote switch, allows you easier on the fly control of your light. You can mount the switch close to the grip area of your bars so that your hands don't have to leave the bar to change settings. It is also mountable on your helmet for easier to reach control.

1. Open the rubber cap on the back of the light.
2. Then plug in the controller wire.
3. Make sure it has been completely connected.

\* When unused, please ensure the protective cap is closed to avoid water getting in the light body.



Fig. 1

### REMOTE SWITCH MOUNTING (Fig. 2)

1. Put one of the ends of the hook and loop strap around the handle bar.
2. Align to the controller button and pass through open eyelet on switch base.
3. Pull the hook and loop ends tightly.

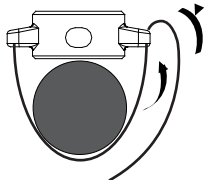


Fig. 2

### REMOTE SWITCH HELMET MOUNTING

1. Put one end of the belt go through the helmet hole.
2. Align to the controller button and pass through.
3. Pull the hook and loop ends tightly.



## BAT-4 BATTERY OPERATION



INPUT : 8.4VDC  $\equiv$  1.5A  
 RATING : 7.4V  $\equiv$  6600mAh  
 48.84 Whr  
 RATING : 3.7V  $\equiv$  13200mAh  
 OUTPUT : 5.0VDC  $\equiv$  1A

It is normal that the battery may reach high temperatures during charging (up to 104°F/40°C), as there is a chemical reaction happening in the battery.

Several factors can influence the battery's durability and lifespan: type of cell strain, the maintenance routine, the temperature and etc.

The battery capacity may become less effective; having about 80% of its capacity after 300-500 charge/discharge cycles. The battery may have 3 years or more life span under good care.

The battery voltage and capacity decrease at low temperatures, especially near or below freezing point. The capacity decreases 5% - 10% at freezing. Around 0°F, the capacity decreases 30%. The battery performance will return normal when the temperature gets to 70°F/20°C.

The battery will lose around 1% of its capacity per day when you store the battery at normal room temperature. Battery temperature should never exceed 104°F/40°C, it will lose about 5% of its capacity per day.

Fully charge the battery before storing. When not in use, we suggest a cool and dry place for storage.

Li-Ion batteries are volatile. Failure to read or follow the instructions may result in fire, personal injury or damage to property. Do not leave batteries unattended during charging or use. Dispose of battery pack properly if there is any noticeable damage to casing.



## BAT-4 BATTERY OPERATION

### BATTERY CONNECTION

1. USB Port
2. Charging Port
3. Low Battery Indicator



### BATTERY OPERATION

1. Plug S-EXT-3 or S-EXT-2 cable into charging port. Then plug into cable connected to TSL-POLICE/SECURITY head.
2. To charge accessory using USB port, simply plug into USB port [1].

\* Make sure the cover is closed, when not in use.

### Charging

1. Carefully open rubber dust cover on top side of battery, exposing charging port.
2. Insert charging cord into charging port.
3. Plug supplied wall charger into wall outlet.
4. Charge indicator on charger will turn red when charging and solid green when fully charged.



\* Do not leave battery unattended while plugged into charger or while in use.

### Low Battery Indicator

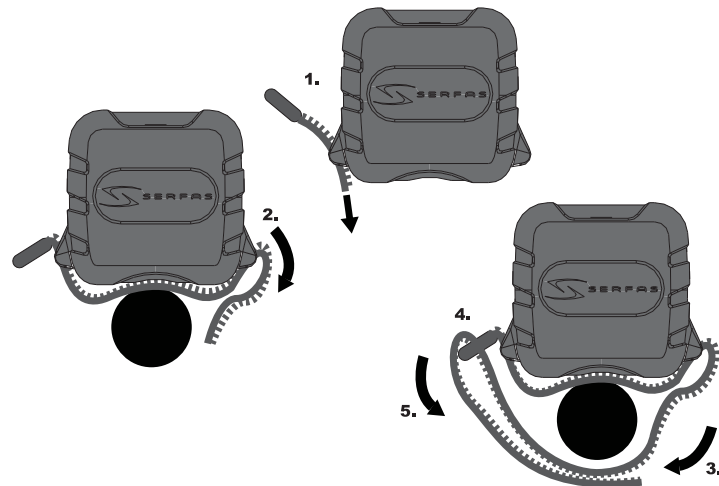
1. When the battery capacity is down to the supply limit, the Low Battery Indicator will blink red.
- \* Battery will automatically stop charging when full charge is achieved.  
Remove battery from charger and reinsert rubber pull tab into USB port to keep out water and dirt.

## BAT-4 BATTERY MOUNTING



### MOUNTING THE BATTERY

1. Thread the hook and loop strap counterclockwise through the 2 slots at the side of the battery. The hook surface of the hook and loop strap should face the battery.
2. Place the battery on the frame where it is safe and convenient.
3. Wrap the hook and loop strap over the tube.
4. Thread the hook and loop strap through the slot on the top end of the strap itself.
5. Pull the hook and loop strap and attach it tightly and firmly.



# TSL-POLICE/SECURITY RUNTIMES

## TSL-POLICE Light Runtimes Battery: 7.4v 6600mAh

Mode	Functions	Head Light	Tail Light	Runtime (hrs.:min.)	Front Lumen
1	Pursuit	Low White+ Blue Flashing + Red Steady	Blue/Red Alternating Flashing	7:55	130
2		Low White + Red Steady	Blue/Red Alternating Flashing	9:50	110
3		Blue Flash + Red Steady	Blue/Red Alternating Flashing	9:15	57
4	Standard	Overdrive	Single Red Steady	3:10	1000
5		High	Single Red Steady	4:15	750
6		Flash	Single Red Steady	10:40	500
7	Tail Light	Off	Single Red Steady	40:30:00	...

## TSL-SECURITY Light Runtimes Battery: 7.4v 6600mAh

Mode	Functions	Head Light	Tail Light	Runtime (hrs.:min.)	Front Lumen
1	Front & Tail Light Security Mode	Low + Right Flashing + Left Steady	Alternating Flashing	8:20	140
2		Low + Left Steady	Alternating Flashing	10:00	100
3		Right Flashing + Left Steady	Alternating Flashing	9:30	80
4	Front & Tail Light Normal Mode	Overdrive	Single Red Steady	3:10	1000
5		High	Single Red Steady	4:15	750
6		Flash	Single Red Steady	10:40	500
7	Tail Light Mode	Off	Single Red Steady	40:30:00	...

## TROUBLESHOOTING

### 1. Problem: The headlight does not power up.

- \* Make sure the power button was firmly pressed.
- \* Make sure battery is securely connected with the headlight.
- \* Make sure the battery is fully charged.

### 2. Problem: The tail light does not power up.

- \* Make sure it is properly plug in.
- \* Make sure button on TL-80 is not in off position.



When riding at night, please follow the guidelines below:

- \* Use caution when handling, the light may get hot.
- \* Unplug the battery and headlight if not in use.
- \* Unplug the battery and charger if not in use.
- \* Unplug connector by the plug end, never by pulling on the cable.
- \* Do not amend or replace any parts with Non-Serfas parts.
- \* Do not dismantle the headlight or battery case.
- \* Provide sufficient airflow to the headlight for cooling during use.
- \* Do not use submerged under water.
- \* Do not look directly at light.
- \* Do not leave the light on and unattended.
- \* Keep headlight and battery away from fire and combustible materials.
- \* Do not store head unit when hot or straightway after use.
- \* Unplug the USB cable when fully charged.
- \* This light is for bicycle use only.

## CARE

- \* Make sure to clean the dust and dirt on the light with soft damp cloth after every ride.
- \* Water resistant is for rain water only. Do not submerge the battery or the whole light into water when cleaning.

## WARRANTY

Serfas warrants to the original purchaser of this product that the product is free from defects in material and workmanship for the lifetime of the product. This warranty does not apply to damage due to heat, physical damage (crashing) resulting from abuse, neglect, improper repair, improper fit, or alterations of the fixture. This warranty is in lieu of all other agreements and warranties, general or specific, express or implied and no representative or person is authorized to assume liability on behalf of Serfas in connection with the sale and use of this product.

Serfas reserves the right to request the return of any product submitted for warranty consideration. All customers should contact Serfas directly for warranty service.

To make a claim, please e-mail [warranty@serfas.com](mailto:warranty@serfas.com).

- \* Please include your full contact information (name, address, phone number, and e-mail [if applicable]), and a description of the issue.
- \* Address items to:

Serfas  
2333 W. Utopia Rd.  
Phoenix, AZ 85027

Serfas batteries are covered by a ONE YEAR LIMITED WARRANTY from the date of purchase. This covers the battery and battery internal.

For more information please contact us at [info@serfas.com](mailto:info@serfas.com).

International consumers please contact your local distributor, complete list distributors can be found at: <https://www.serfas.com/sitepages/view/8>

Please file claims with Serfas directly.  
Do not take to retailer for warranty issues.