

# FireBalls® Comp Lighting System.

Congratulations on your purchase! You are now the owner of one of the world's finest bicycle lighting systems. Your Specialized FireBalls Comp has been designed to provide the best combination of brightness, run-time, durability, ease of use and installation.

**WARNING: BICYCLING IN THE DARK IS AN INHERENTLY DANGEROUS ACTIVITY.** No lighting system will guard you against inattentive motorists and other nighttime hazards. Always ride with extreme caution. Carry extra bulbs and some type of auxiliary light with you. Wear reflective clothing. Make sure your bicycle has the legally required reflectors and your helmet, ankles (or shoes) packs, panniers have reflectors or reflective patches. Specialized lights and lighting systems are not intended to replace your C.P.S.C. approved reflectors. Never remove the original reflectors from your bicycle. Always disconnect the battery pack and allow your light to cool before replacing it in the storage case.

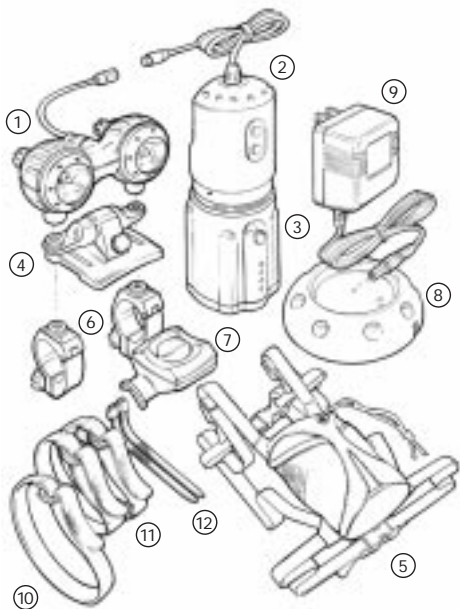
## The FireBalls Comp features:

- Retina Optical System – Allows Independent Adjustment of High And Low Beams
- Wireless Handlebar Transmitter
- Ultra High-Capacity Nickel Metal Hydride Battery with Integrated Fuel Gauge.
- 4 Output settings (6, 12, 20, 32Watt)
- Smart Battery Charger
- Broken Filament Sensing
- Die-cast A1 Premium Aluminum Housing
- Universal Handlebar Mounts
- Universal Helmet Mount
- Battery Backpack
- 20 Watt Halogen High Beam
- 12 Watt Halogen Low Beam
- Tail-light Port
- Water Resistant Housing
- 1 Year Warranty

The battery pack of your FireBalls Comp has been shipped discharged. It needs to be completely charged before your first ride. Charge the battery continuously for 14 hours before your first ride. After 14 hours, you may remove the battery from the charger (even if all 5 LEDs on the fuel gauge are not lit). After your first ride, allow the light to remain on until the battery is completely discharged and the light automatically turns itself off. This will help the fuel gauge to "learn" the battery's capacity. The fuel gauge will become more accurate after 2 or 3 complete charge/discharge cycles. Please see the sections titled "Battery Pack" and "Charging the Battery" for more information.

## What is included in your FireBalls Comp package:

1. Lamp Housing (1)
2. Electronic Housing (1)
3. Battery Pack (1)
4. Helmet Mount (1)
5. Battery Backpack (1)
6. Handlebar Mounts (2)
7. Transmitter (1)
8. Battery Charger (1)
9. Wall Transformer (1)
10. Long Velcro™ Strap (1)
11. Short Velcro Straps (2)
12. Cable Ties (2)



## MOUNTING THE FIREBALLS COMP

Your FireBalls Comp is designed to be mounted on your handlebars or on your helmet. Use a 3mm hex-wrench and the screws provided to install either the handlebar mounts or the helmet mount to the lamp housing.



**HANDLEBAR** – Attach your FireBalls Comp securely to the handlebars with the quick-release handlebar mounts. The lamp housing should straddle the stem and may be mounted above or below the handlebars. Always use

BOTH quick-release mounts. Slide the battery pack and electronics housing into one of your water-bottle cages. Use the long Velcro strap to secure the battery into the cage by wrapping it completely around the frame tube. Secure the power cable to your frame with the two short Velcro straps. Be sure to leave enough slack in the power cable so that it will not hinder the rotation of your handlebars. Plug in the electrical connector between the battery and lamp housing. Make sure the power cable cannot become entangled in any of the moving components of your bicycle.

**HELMET** – Attach your FireBalls Comp securely to your helmet by looping the Velcro strap through the vents. The angle of the helmet mount is adjustable. FireBalls Comp can be positioned on top or towards the front of your helmet. Secure the power cable to the back of your helmet with the two short Velcro straps. Drop the battery pack into the backpack. Be sure the fuel gauge lights can be seen through the slot in the backpack. Put on the backpack and make sure all of the straps are secure and cannot become entangled in any of the moving components of your bicycle. For the most comfortable fit use both the waist strap and the sternum strap.

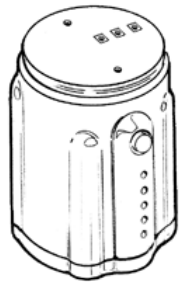
## BATTERY PACK



Your FireBalls Comp battery pack features an integrated fuel gauge that monitors the condition of the battery during use, while charging and in storage. Because it is located inside the battery housing, the FireBalls Fuel gauge will always give an accurate representation of the battery capacity. The five LED indicators show battery capacity in 20% increments. The lights will illuminate automatically when the light is in use and when the battery is charging. To check the capacity when the battery is in storage simply press the button on the battery. When the battery capacity is below 10% the first LED will blink. This is an indication that

the pack is very low and should be charged as soon as possible.

**Use extreme care to avoid a short-circuit across the battery contacts.** Never allow any metal objects to touch the contacts on the battery. In the event of a short-circuit, an Internal fuse will be tripped to avoid damage to the battery. The fuse will reset itself automatically when the short circuit is removed.



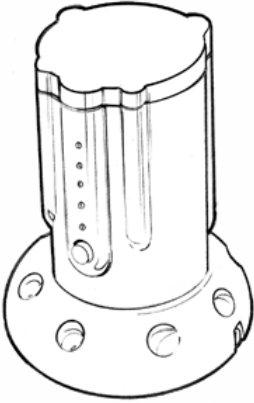
## CHARGING THE BATTERY

The FireBalls Comp features the most advanced charging system ever offered in a bicycle lighting system. The charge cycle is controlled by the fuel gauge located within the battery pack. The system is designed to allow the battery to be left on the charger indefinitely, without the risk of overcharging the battery. When the battery is fully charged, the fuel gauge will signal the charger to stop charging. In order to counteract

the battery's normal self-discharge characteristics during storage, the fuel gauge will occasionally turn on the charger to top-off the battery.

To charge your battery pack, plug in the wire from the transformer into the charger base, unscrew the battery from the electronics housing and drop it onto of the charger. Be sure the alignment pin of the charger base mates with the hole on the battery pack. The charger will automatically begin the charge cycle.

There is an LED Charge Indicator located on the front of the battery charger. While the battery is charging the Charge Indicator will be illuminated. After the charge cycle is complete the Charge Indicator will turn off and all 5 LEDs on the battery fuel gauge will be illuminated. It is normal for the Charge Indicator to flash occasionally after the charge cycle is complete.



There is a temperature sensor inside the battery pack that will disable the charger if the battery is hot. If you place the battery on the charge when it is hot (e.g. immediately after use or if it has been stored inside your car on a hot day), the charger will wait for the battery to cool and then automatically resume charging.

The Nickel Metal Hydride batteries in your FireBalls Comp need to be "exercised" in order to achieve their maximum capacity. Your burn times may be shorter than normal for the first few rides. After your batteries are charged/discharged about 5 times they will reach their full capacity.

The time to charge a fully discharged battery is approximately 12 hours. Your actual charge time will vary according to the condition of your battery.

#### OPERATION OF YOUR FIREBALLS COMP:

The FireBalls Comp light can be operated by two different methods, the Wireless Transmitter (See section titled "Wireless Transmitter" for more information) or direct operation of the buttons on the electronic housing. Each method offers a very simple two-button operation: one button turning the light on and increases brightness and the other dims the light and turns it off. The two methods may be used interchangeably.

*Note:* The buttons on the Wireless Transmitter are not marked UP or DOWN. You can choose which is up and which is down depending upon which side of the handlebar you choose to mount them on. For more information see the section titled "Wireless Transmitter."

To turn the light on, press the UP button (marked "+" on the electronics housing button) once. The light will enter the 6-watt "economy mode". If you press the UP button again it will enter 12-watt mode, the third push of the UP button will turn on the 20-watt bulb and the fourth push will turn on both bulbs.

To dim and turn the light off: Press the DOWN button (marked "-" on the electronics housing button). Each time you press the DOWN button the light will select the next lower output setting. The lamp will turn off if the DOWN button is pushed while in 6-watt mode. *Note:* If you are using the wireless transmitter, you must hold the DOWN button for three seconds to turn the lamp off.

When the battery is consumed to approximately 10% of the total capacity the FireBalls Comp will begin to cut-back the light output in order to extend its run time. For example, if you are in 32 watt mode the light will automatically switch to 20 watt mode, then to 12 watt mode. As the capacity is reduced further the light will switch to 6 watt economy mode. Typically there will be about 15-20 minutes of burn-time remaining once the light has entered economy mode. The light will turn itself off when the battery capacity is fully consumed in order to avoid over-discharging the battery.

In the event one of the bulbs of your FireBalls Comp light breaks, the other bulb will automatically light.

## WIRELESS TRANSMITTER

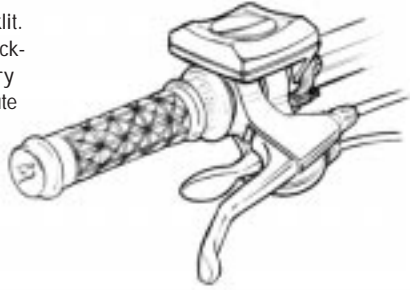
The Wireless Transmitter provided with your FireBalls Comp allows you to operate your light without removing your hand from the grips. The transmitter sends a unique digital code to the light. To eliminate interference with other FireBalls lights, there are 128 different transmitter codes.

The buttons of your transmitter are backlit. When you push one of the buttons, the backlight will turn on for 10 minutes. With every subsequent push of the button the 10-minute timer will reset itself.

The transmitter should be mounted as close to the grip as possible. You may mount the transmitter on either the right or left side of your bars depending upon your personal preference.

Your FireBalls will need to be trained to listen to your specific transmitter code. In order to train your light, press and hold the transmitter button you would like to turn the lights on and press and hold the UP (marked "+") button on the electronics housing. When one of the lamps flashes quickly, release both buttons. Next, press and hold the transmitter button you would like to turn the lights off and press and hold the DOWN (marked "-") button on the electronics housing. When one of the lamps flashes quickly, release both buttons. Your FireBalls are now trained to your transmitter code.

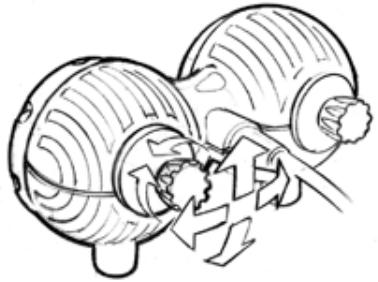
To replace the batteries in your transmitter, remove the transmitter from your handlebar and unscrew the phillips screw that secures the battery cover. Remove the old batteries and replace them with 2 new CR2032 lithium button cells. Be sure to note the polarity of the cells during installation.



## RETINA OPTICAL SYSTEM

The Retina Optical System is designed to allow you to aim both beams of your FireBalls Comp independently. Each beam has 20 degrees of angular adjustment. To adjust, loosen the thumbscrew on the back of the lamp by rotating it counterclockwise one-half turn. Aim the lamp by moving the thumbscrew side-to-side or up-and-down.

When you are satisfied with the direction you have aimed the beam, tighten the thumbscrew to lock the lamp in place by rotating the screw clockwise. Use caution not to over-tighten the thumbscrew.



## ELECTRONICS HOUSING

The electronics housing for your FireBalls Comp contains the electronics that control your light. There are no user-serviceable parts inside. Please do not open the electronics housing, as this will void your warranty.

There is a port at the top of the electronics housing that will supply power to Specialized taillights. Use only taillights that are designed specifically to work with the FireBalls headlights. **Never attempt to plug any other connector into this port.**

## TRANSPORTING

The safest way to transport your FireBalls Comp is to place them inside their steel carrying case. To prevent the light from being accidentally turned-on, always disconnect the battery from the electronics housing before transporting. Always allow the lamp housing to cool to room temperature before placing the light in the carrying case.

## REPLACING THE BULBS

**Always remove the battery pack from the electronics housing before servicing your FireBalls Comp.** Replacement bulbs are available from your local Specialized dealer.

To remove one of the bulbs, unscrew the bezel on the front of the lamp housing by rotating it counterclockwise. Carefully pry the bulb out of the housing with the tip of a small screwdriver. Replace the blown bulb with one of identical size, voltage and wattage. Insert the new bulb. Be careful to align the pins on the bulb with the holes inside the lamp housing. Re-install the bezel by rotating it clockwise.

## TROUBLESHOOTING

### **Light doesn't turn on.**

- Make sure your battery is fully charged. Push the button on the battery pack and note how many of the lights on the fuel gauge illuminate. If no LEDs turn on you need to charge the battery.
- Check the batteries in your handlebar transmitter. Does the backlight in the transmitter turn on when you push one of the buttons? If not, replace the batteries.
- Is your FireBalls Comp programmed to your transmitter code? Follow the instructions under the section titled "Wireless Transmitter"
- Is one or both of your bulbs blown? Replace the questionable bulb with a known-good one.

### **Battery won't charge**

- Is your battery pack hot? Allow the pack to cool. The charger will automatically begin the charge process as soon as the pack cools.
- Is the transformer plugged into the wall and into the charger base?
- Is there power at the wall outlet into which the transformer is plugged?

## IMPORTANT!

- Pay attention to traffic and road conditions at all times. Your first obligation is to be attentive and to ride safely.
- During use, the housing will become quite hot. Use caution not to touch the lamp housing while the lamp is on.
- Never put your FireBalls light away hot. Always allow the lamp housing to cool before placing it in the storage case.
- In cold weather (below 50°F or 10°C) the capacity of your battery pack may be reduced. Plan your ride accordingly.
- Do not submerge your FireBalls under water. It is designed to be water-resistant, not waterproof.
- Do not drop your FireBalls light. Dropping it can cause it to fail prematurely.
- Do not disassemble your FireBalls lighting system.
- Keep the lights and all of their components tightly attached, and check them regularly. If any of the components loosen, it could become tangled in your spokes and cause an accident.
- See your authorized Specialized dealer if you have any trouble installing or maintaining your lights.
- Clean the unit with a mild detergent and a soft dry cloth. Never use any kind of solvent or alcohol.
- The FireBalls Comp is intended for use on bicycles only and should not be used on any motorized vehicle.
- Never look directly into the light beam.

## SPECIFICATIONS

Battery Voltage	14.4 Volts DC (nominal)
Battery Capacity:	59 Watt/Hours
Charge time after full discharge	≈12 hours
Idle current	<18mA
Voltage Regulation Method:	Pulse-Width-Modulation (PWM)
Battery Fuse	3.5A self-resetting
Low Beam Lamp	12 watt halogen
High Beam Lamp	20 watt halogen
Transmitter Batteries (2)	CR2032 Lithium
Transmitter Battery life	Approx. 100hrs
Transmitter Frequency	315 Mhz USA, Canada, South America 433.92 Mhz Europe, Asia
Ambient Operating Temperature	40°F to 104°F (4°C to 40°C)

*Specifications subject to change without notice.*

### The following replacement parts are available from your Specialized dealer:

<i>Description</i>	<i>Part#</i>
NiMH Battery	499-3250
Handlebar Mounts	499-3252
12 Watt Halogen Bulb	499-3202
20 Watt halogen Bulb	499-3201
Wireless Transmitter	499-3204
Transmitter Battery	481-3004

## ONE YEAR LIMITED WARRANTY

Specialized Bicycle Components Inc. warrants the Original Purchaser of this product that the product is free from defects of material and workmanship under normal use and service for a period of one (1) year from the date of the original purchase. If within one (1) year from the date of that original purchase, this product is found to be defective in material or workmanship under normal use or service, Specialized Bicycle Components Inc. will, at its sole option, repair or replace the product without charge; provided that the Original Purchaser returns the product, securely packaged, postage prepaid to: Specialized Bicycle Components Inc., 15130 Concord Circle, Morgan Hill, CA. 95037, Attn: FireBalls Warranty. Be sure to include a letter indicating the specific reasons for returning the product and proof of date of purchase.

THIS WARRANTY DOES NOT APPLY TO, AND IS VOID AS TO, DEFECTS OR PHYSICAL DAMAGE RESULTING FROM ABUSE, NEGLIGENCE, IMPROPER REPAIR, IMPROPER FIT, ALTERATIONS, MODIFICATIONS OR USE CONTRARY TO THAT INTENDED BY THE MANUFACTURER. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE IS LIMITED IN DURATION OF THIS LIMITED WARRANTY. SPECIALIZED BICYCLE COMPONENTS, INC. SHALL NOT BE LIABLE FOR ANY ACCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING FROM ANY BREACH OF ANY EXPRESSED OR IMPLIED WARRANTY ON THIS PRODUCT. THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, AND ALL OTHER REMEDIES, GUARANTIES OR LIABILITIES ARISING BY LAW OR OTHERWISE.

*NOTE:* This warranty does not pertain to bulbs or batteries.

No person or representative is authorized to assume any liability on behalf of Specialized Bicycle components, Inc. in connection with the sale of this product. Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.