

FEATURES

- Two lightweight headlights for road/cyclo-cross bicycles.
- All materials are made with aviation-grade aluminum and CNC-machined with a durable, hard-anodized surface.
- To meet various lighting conditions, front and back lights can be connected to a multifunctional clamp.
- Cyclocomputers, photography equipment, lights, and more can be connected to the multifunctional clamp.
- With Ferei's patented quick-release clamp, lights can quickly and easily be mounted across the bicycle handlebars.
- Ferei's patented battery holder can be positioned close to the water bottle holder underneath the bicycle. The battery holder and the water bottle holder conveniently share the same screw, which provides faster mounting in just 3 seconds, less wind resistance, and good stability.
- Ferei's patented concave reflector lamp disc designed with anti-glare technology.
- IPX4 waterproof rating.
- A durable back-lit on/off button.
- Two CREE XM-L2 LEDs providing up to 100,000 hours of lighting and up to 1,560 lumens in brightness.
- 10 levels of brightness. Brightness can be customized from 10% to 100% power.
- Four flash modes: slow flashing, rapid flashing, police flashing, and SOS.
- Three red lights display the battery level to indicate the amount of battery charge remaining.
 - An intelligent circuit provides a temperature-control system for overheating and protects against overcharging and discharging the battery.
- Two 18650 lithium batteries (3,400 mAh) for a BP2872R power supply that provides up to 4.5 hours of bright lighting.

USAGE INSTRUCTIONS

- 1 Press the switch at the end of the flashlight to turn it on/off.
- 2 BL900 provides three lighting options:
 - Maximum brightness: 100% output.
 - User-defined brightness: ten selectable modes ranging from 10% to 100% output.
 - Strobe / SOS modes: slow strobe, fast strobe, police strobe and SOS.
- 3 Operation instruction:

To turn the BL900 on, briefly press the power switch. The default setting is maximum brightness (100% output).

To access user-defined mode: with the BL900 turned on (in either max or user-defined mode), hold the power switch down for more than 2 seconds and the BL900 will cycle through 10 levels of output.

When a desired output is displayed simply release the button to set the brightness. (The brightness of user-defined mode is memorable).

The BL900 has 4 hidden SOS / strobe modes.

To access any one of these modes, with the BL900 switched off, simply hold down the switch for 2 seconds and release.

To cycle to the next mode, once again hold the switch for 2 seconds and release.

To exit strobe mode press the switch once briefly.
- 4 Battery indication:

The lamp's switch is equipped with the three indicator lights which blink in accordance with the battery's state of charge as described below:

 - 100%-75% charge: 3 indicator lights on
 - 75% - 50% charge: 2 indicator lights on
 - 50% - 25% charge: 1 indicator light on
 - Below 25% charge: 1 indicator light is blinking and the brightness is automatically reduced to low lumens (about 50 lumens).
- 5 Low battery shut off:

When the battery capacity gets very low, the lamp will shut of automatically. It should be recharged before next use.

HEADLIGHT DIAGRAM



INSTRUCTIONS FOR MOUNTING HEADLIGHTS ON CYCLO-CROSS BICYCLES

- 1 Select an appropriate rubber gasket (1 mm, 2.5 mm, 3.5 mm, or 4.1 mm in thickness).
- 2 Insert the rubber gasket to the inner side of the holder of the clamp.
- 3 Fasten the holder of the clamp to the desired position on the handlebars of the bicycle.
- 4 Lock it in place by pressing the small fastener on the clamp, attaching it to the handlebars of the bicycle.

INSTRUCTIONS FOR MOUNTING THE POWER SUPPLY OF THE BATTERY HOLDER

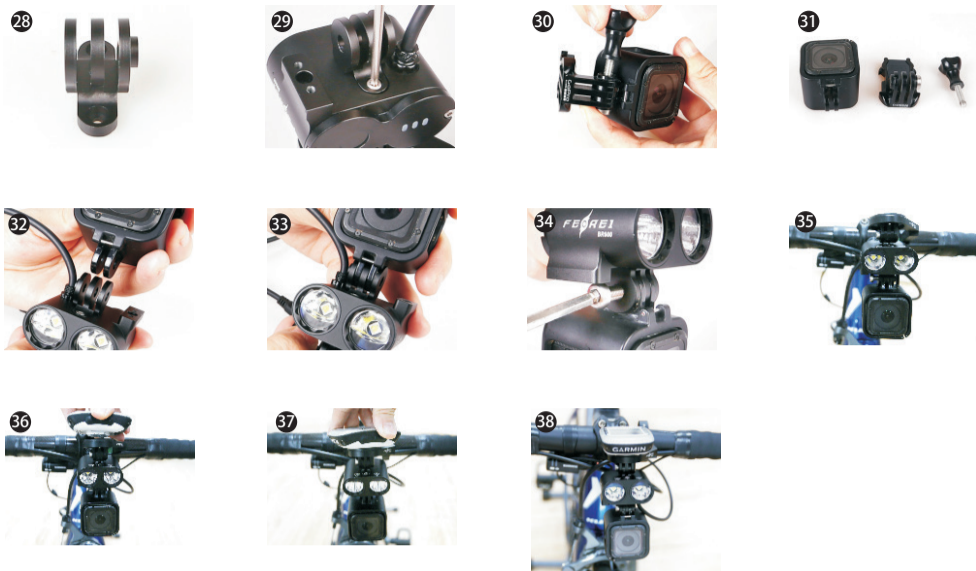
- 5 Remove water-bottle holder screws and fasten the two HQ28 Quick-Release Clamps of the battery holder to the screw holes shared by the battery holder and the water bottle holder.
- 6 Move the small buckle of the battery holder's HQ28 Quick-Release Clamps.
- 7 Once the battery holder is inserted with the two HQ28 Quick-Release Clamps, press down on the buckle to lock in place.
- 8 Insert the DC plug of the light wire into the DC socket of the battery holder to connect the light to the power supply.
- 9 Push and rotate the fixed sleeve of the DC plug clockwise on the battery holder.
- 10 Check that the light is firmly mounted to the handlebars of the bicycle.

INSTRUCTIONS FOR MOUNTING HEADLIGHTS ON ROAD BICYCLES

- 11 Unscrew the HQ90 Quick-Release Clamp from the light body to using a 2-mm L-shaped hex wrench and screws (M2.5 x 6 mm).
- 12 Separated the light body, HQ90 Quick-Release Clamp, and M2.5 x 6 mm screws.
- 13 On top of the light body are slots for mounting the HQ32 Multifunctional Clamp.
- 14 Remove the CNT003 Adapter.
- 15 Place the CNT003 Adapter above the light body's mounting slots, aligning the screw holes.
- 16 Fasten the CNT003 Adapter to the light body using a 2-mm L-shaped hex wrench and screws (M2.5 x 4 mm).
- 17 Make sure that the CNT003 Adapter is fully locked to the light.
- 18 Align the slot and holes of the HQ32 Multifunctional Clamp with the slot and holes of the CNT003 Adapter.
- 19 Fasten the HQ32 Multifunctional Clamp for the road bicycle to the CNT003 Adapter using a 4-mm L-shaped hex wrench and screws (M5 x 16 mm).
- 20 Select an appropriate rubber gasket (1 mm, 2.5 mm, 3.5 mm, or 4.1 mm in thickness).
- 21 Insert the rubber gasket to the inner side of the holder of the HQ32 Multifunctional Clamp.
- 22 Make sure that the rubber gasket is successfully attached to the HQ32 Multifunctional Clamp.
- 23 Secure the HQ32 Multifunctional Clamp to the desired position on the left handlebars of the road bicycle.
- 24 Place screws (M3 x 12 mm) into the two screw holes of the HQ32 Multifunctional Clamp.
- 25 Fasten the HQ32 Multifunctional Clamp using a 2.5-mm L-shaped hex wrench and screws.
- 26 Make sure that the HQ32 Multifunctional Clamp is firmly attached to the handlebars.
- 27 Fasten the power supply of the battery holder to the screws shared with the water bottle holder in the same way as fastening the battery holder of the cyclo-cross bicycle (see Fig. 7-11).

BL900 - PRODUCT SPECIFICATIONS															
LED	2 x CREE XM-L2 LED (COOL WHITE)														
ANSI/FSC	MAX	USER-DEFINED										POLICE STROBE	SLOW STROBE	FAST STROBE	SOS
LIGHT PER	100%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	100%			
OUTPUT (LM)	1560	156	312	468	644	780	966	1092	1248	1404	1560	1560			
LED	2 x CREE XM-L2 LED (NEUTRAL WHITE)														
ANSI/FSC	MAX	USER-DEFINED										POLICE STROBE	SLOW STROBE	FAST STROBE	SOS
LIGHT PER	100%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	100%			
OUTPUT (LM)	1300	130	260	390	520	650	780	910	1040	1170	1300	1300			
RUNTIME (INDOOR STATIC TESTING AT 28°C AT MAX OUTPUT)	5 HOURS														
RANGE (M)	> 180 METERS														
MAXIMUM INTENSITY	8100 CD														
WATERPROOF RATING	IPX4														
ANTI-DROP	1M														
DIMENSIONS	48.8 x 38 x 33.5 MM (EXCLUDING BRACKET)														
BATTERY TYPE	BP2872R (7.4V)														
WEIGHT	88 G (EXCLUDING BATTERY AND BRACKET)														
NOTE: THE ABOVE PARAMETERS WERE TESTED BY USING 1 PCS 3400 MAH 18650 LI-ION BATTERY															

INSTRUCTIONS FOR MOUNTING LIGHTS, CAMERAS, AND CYCLOCOMPUTERS



- 28 Take out the CNT004 Adapter.
- 29 Fasten the CNT004 Adapter to the slot below the light body using a 2-mm L-shaped hex wrench and screws (M2.5 x 4 mm).
- 30 Remove the original GoPro Camera holder.
- 31 Separate it from the GoPro Camera.
- 32 Attach the GoPro Camera to the CNT004 Adapter on top of the bicycle headlight.
- 33 Make sure to align the round holes of the adapter.
- 34 Fasten the GoPro Camera to the CNT004 Adapter using a 4-mm L-shaped hex wrench and screws (M5 x 16 mm).
- 35 Fasten the headlights and the holder of the GoPro Camera to the handlebars of the bicycle (see Fig. 7-11).
- 36 Align the bottom of the cyclocomputer against the slot of the multifunctional clamp.
- 37 Rotate the cyclocomputer clockwise to lock it into the slot of the headlight holder.
- 38 The headlight, cyclocomputer, and camera are joined together.

INSTRUCTIONS FOR MOUNTING A SEPARATE CYCLOCOMPUTER TO THE HQ32 MULTIFUNCTIONAL CLAMP



- 39 Mount the multifunctional clamp onto the handlebars using a 2.5-mm L-shaped wrench (see Fig. 20-26 for mounting instructions).
- 40 Rotate the cyclocomputer clockwise to lock it completely into the slot of the headlight holder.
- 41 Figure shows a cyclocomputer mounted to the multifunctional clamp.

INSTRUCTIONS FOR MOUNTING A SEPARATE GOPRO CAMERA TO THE HQ32 MULTIFUNCTIONAL CLAMP



- 42 Insert the connection slot of the HQ32 into the slot of the adapter, aligning the holes.
- 43 Fasten the GoPro Camera to the HQ32 Multifunctional Clamp using a 4-mm L-shaped hex wrench and screws (M2.5 x 6 mm).
- 44 Figure shows a GoPro Camera mounted to the multifunctional clamp.

DIFFERENT COMBINATIONS OF MOUNTING A CYCLOCOMPUTER AND A GOPRO CAMERA TO THE HQ32 MULTIFUNCTIONAL CLAMP



- 45 HQ32 with headlights and a GoPro Camera.
- 46 HQ32 with headlights and a cyclocomputer.
- 47 HQ32 with a cyclocomputer and a GoPro Camera

INSTRUCTIONS FOR CHARGING AND MOUNTING THE BATTERY HOLDER



- 48 Take out the BL900 battery holder.
- 49 Unscrew the battery cover clockwise as shown, following the direction of the arrow, and screw the battery cover counterclockwise to tighten.
- 50 According to the battery direction indicated by positive and negative markings, load two 18650 lithium batteries (3.7V) correctly into the battery holder.



- 51 Insert the charger's DC plug into the battery holder's DC socket.
- 52 To charge the battery, the charger may be plugged into a 110V or 220V socket.
- 53 When the indicator of the charger is red, the battery is charging. When the indicator is green, the battery is fully charged.

WARNINGS & TIPS

In order to avoid accidents, please pay attention to the following tips:

- Recharging is finished when the LED indicator turns to green.
- The battery pack remains at a normal temperature during recharging. If it gets unusual hot, do stop recharging
- Do not disassemble the charger kit by yourself if the battery couldn't be recharged.
- The battery can be used at any time once being recharged. If it is left unused for long periods, it should be recharged for 6-8 hours every three months. After being charged they should be slightly discharged for 10-20 minutes before storage.
- Be sure to always recharge the battery pack in a safe place and do not leave unattended while charging.

INTELLIGENT TEMPERATURE CONTROL INSTRUCTIONS

This product is designed with a temperature control circuit.

The LED is a heating device that is sensitive to temperatures, especially high levels of power and brightness. High temperatures will easily damage or shorten the life of the LED. Ferei designs its products with an intelligent temperature-control circuit. It measures the temperature within the LED filament. As the structure of the lamp differs, the thermal conductivity of the entire lamp is not the same. In general, the constant surface temperature of the lamp is 50°C to 60°C. When it exceeds its programmed temperature, it will automatically reduce its power to cool down, and the brightness decreases by small steps. After cooling-down (provided that battery voltage is sufficient) the power with brightness increases again. The process of improving its brightness is relatively discrete and will not produce a flashing effect.

This stepping goes cyclically to maintain the user's safety and the light's functionality. In conditions of good air-cooling the lamp delivers light without stepping down even in high levels brightness mode. There are no preset timers for stepping, but real-time active temperature measurements, So the actual runtime of the lamp base on active temperature control to faster or slower battery discharge, may be slightly longer or shorter runtime than the lamp of data provided.

MAINTENANCE

- Using a soft cloth clean the glass lens periodically to keep an efficient penetration (never use corrosive cleanser).
- Keep water, dirt, sand and debris out of the cable connections and light body.
- Unplug the battery pack from the light when not in use to help extend battery life.
- When riding in damp weather dry the light and battery immediately after use.

WARNING

- It is a lighting tool, not a toy. Keep it away from children.
- It should not be aimed directly at the eyes of humans or animals.
- Aim the beam down when riding on the road to avoid blinding oncoming vehicles.
- The lens and front area of the light can get hot while in use. Avoid touching these areas.
- Do not dismantle the light or the battery pack, this will break the waterproof seal and void warranty.
- The BL900's power source is a 7.4V lithium-ion battery pack coupled with a protection circuit board. Should the battery pack ever fail to charge or cease normal operation be sure to contact your local Ferei dealer and under no circumstances attempt self-repair.
- Dry the lights surface with a soft cloth after exposure to water or any corrosive substance.

Patented product, counterfeiting not allowed.

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