



# Pharos HD™

## Accessories Manual



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# Symbol Description

These important symbols may appear on your Long Island Technology Group Camera. Please note their meaning.



Attention: Read this owner's manual for all warnings, precautions and instructions for use.



CE marking of conformity indicates this device complies with Regulation (EU) 2017/745 on medical devices, Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment.



More information for this product can be found in this operating manual.

# Warnings and Cautions

Users of this product should be thoroughly trained in the appropriate medical procedures. Also they should read and understand this owner's manual for this camera and all equipment used with it.



**WARNING NEVER** direct the device light beam into the eyes of anyone. Strong light emitted from the device can cause damage or injury.



Read and understand the Device Operating Manual before using this device.



Avoid prolonged contact with the camera during use as it may be warm.



Standard Working Distance is 16 inches (40 cm) minimum. Use caution when operating at closer distances.



**DO NOT** use this device for direct illumination of the eye.



**DO NOT** use multiple units simultaneously to illuminate the same area. High intensity illumination can harm tissue.



Use Pharos HD™ only with BFW™/Long Island Technology Group™ products or accessories.



**DO NOT** subject the Pharos HD™ to strong shocks, which includes but is not limited to dropping the device on the floor.



**DO NOT** use this device for other than its intended use.



**DO NOT** modify this equipment.



**DO NOT** open this device. No serviceable components are inside this device.



Only Qualified Personnel should operate the Pharos HD™.



**DO NOT** submerge this device or any of its components in liquid.



Use only video output devices that have been tested to pass Low voltage regulations (IEC 60950 or IEC 60601-1). Failure to do so may decrease system performance and could result in non-compliance

# Warnings and Cautions



**USE ONLY** components and accessories listed on page 5 of this manual. Failure to do so may decrease system performance, may lead to unsafe operation, may negatively affect EMC performance and could result in non-compliance and could void the warranty.



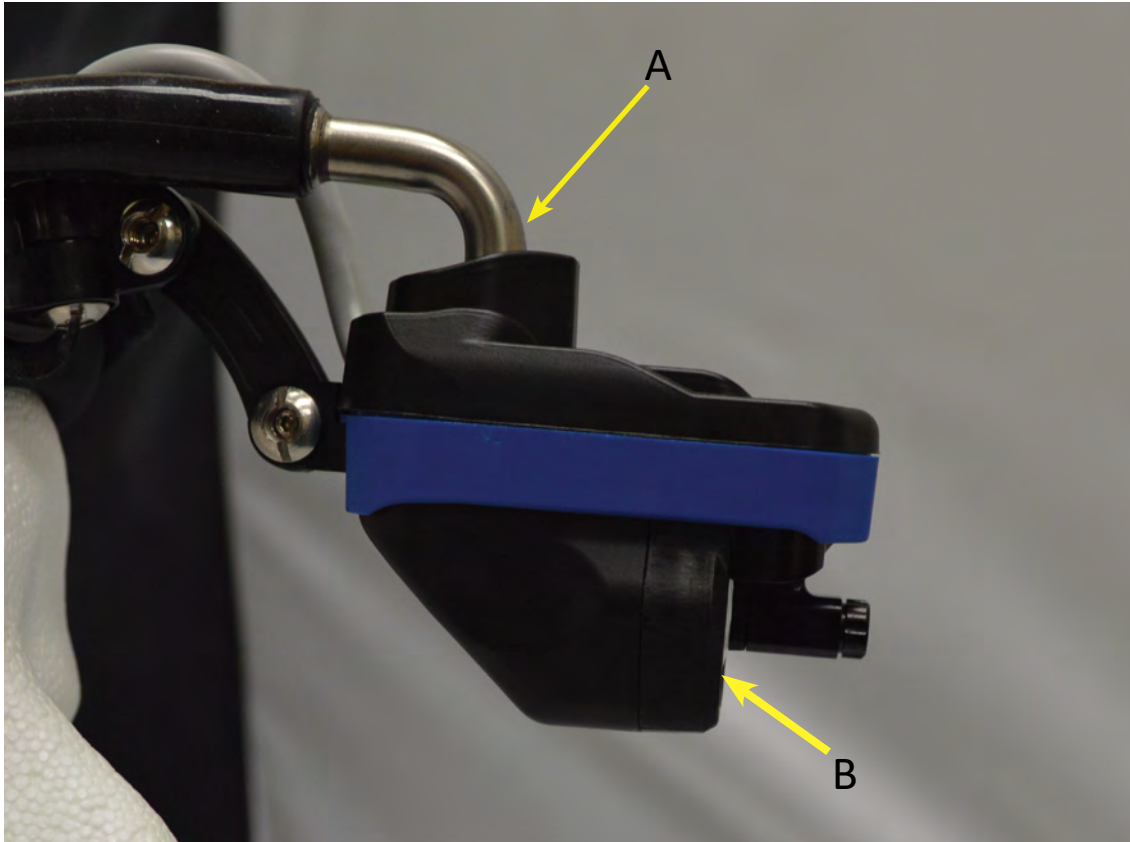
Stacking or placing close to other equipment may negatively impact EMC compliance.



**DO NOT** use if packaging is damaged.

# Assembly and Operation

## Headlight



- A. Fiber Optic Cable Input
- B. Headlight Front Lens

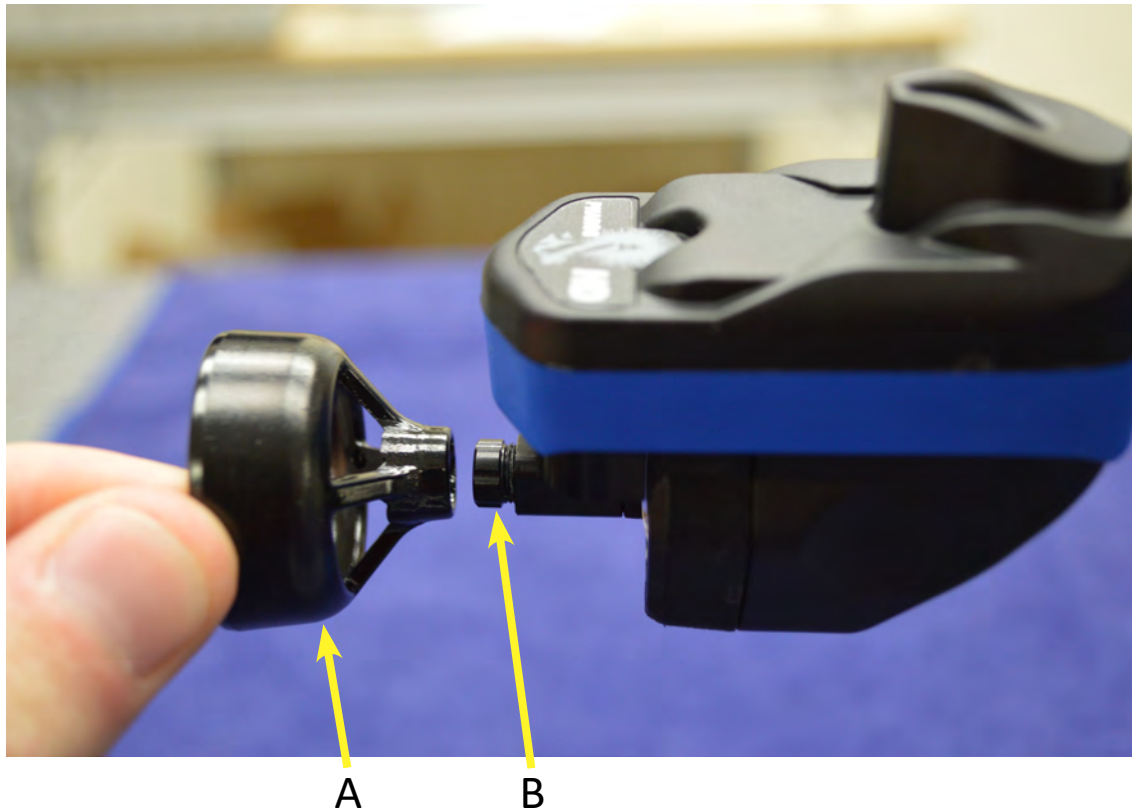
**CAUTION: PROXIMAL END OF THE CABLE MAY BE EXTREMELY HOT WHEN REMOVING FROM LIGHT SOURCE.**

### **Headlight Operation:**

1. Install the Distal end of the Fiber Optic Cable into the Fiber Optic Cable Input (A).
2. When installing the cable into the headlight be sure to insert firmly until a distinct click is heard and felt.
3. **ASSURE THE DISTAL END HAS COOLED PRIOR TO TOUCHING.** Gently bend the Distal end of the fiber to help remove it from the headlight.

# Assembly and Operation

## Focusing Tool



- A. Focusing Adjustment Tool
- B. Focus Adjustment

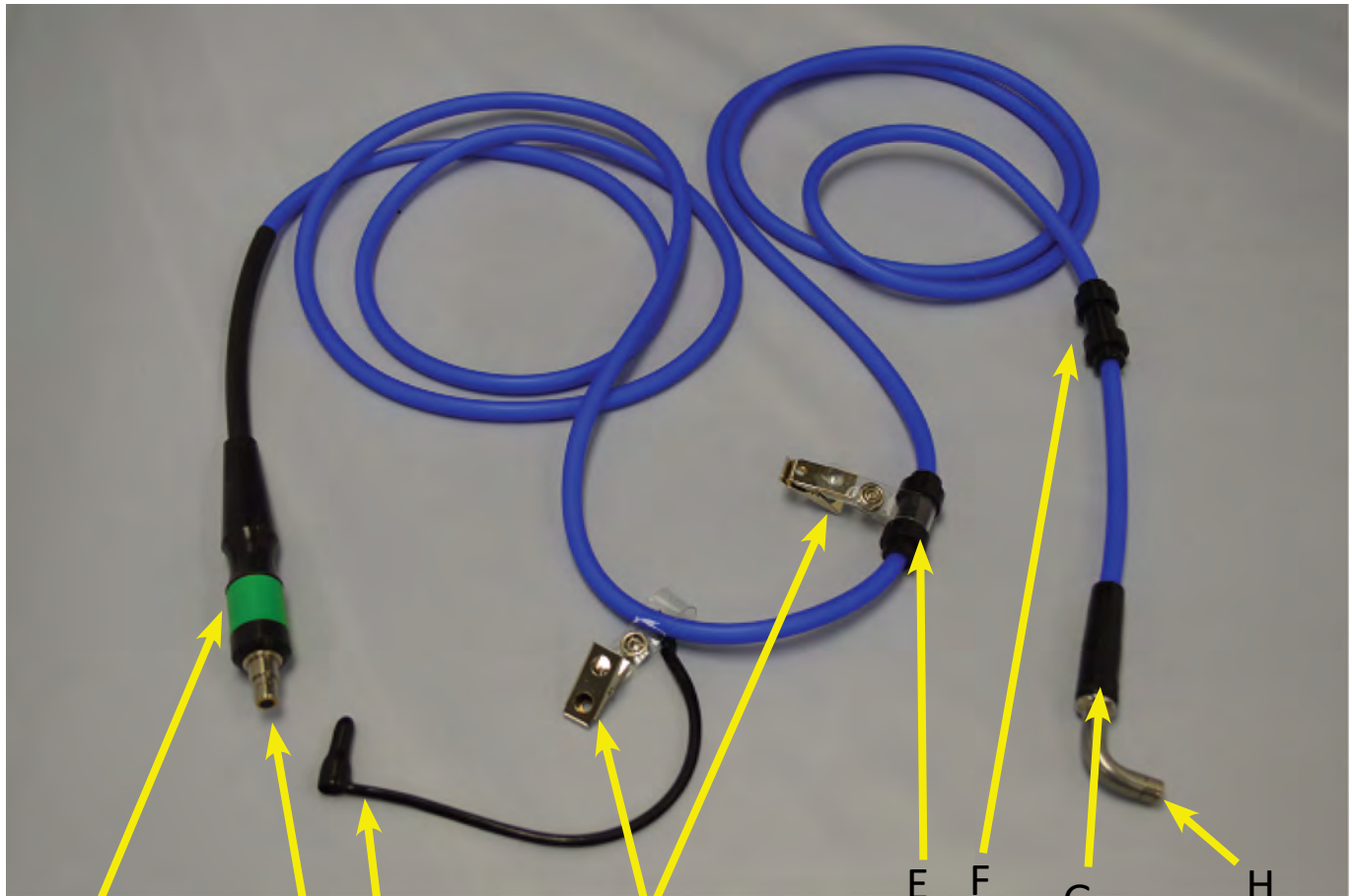
### **Focusing Tool Usage:**

1. Place the Focusing Adjustment Tool (A) onto the camera Focus Adjustment (B).
2. Rotate the Focus Adjustment Tool (A) clockwise to focus farther away and counter-clockwise to focus closer.



# Assembly and Operation

## Fiber Optic Cable



- A. Strain Relief
- B. Proximal End
- C. Dust Cap
- D. Gown Clips
- E. Strain Relief

- F. Headband Strain Relief
- G. Strain Relief
- H. Distal End

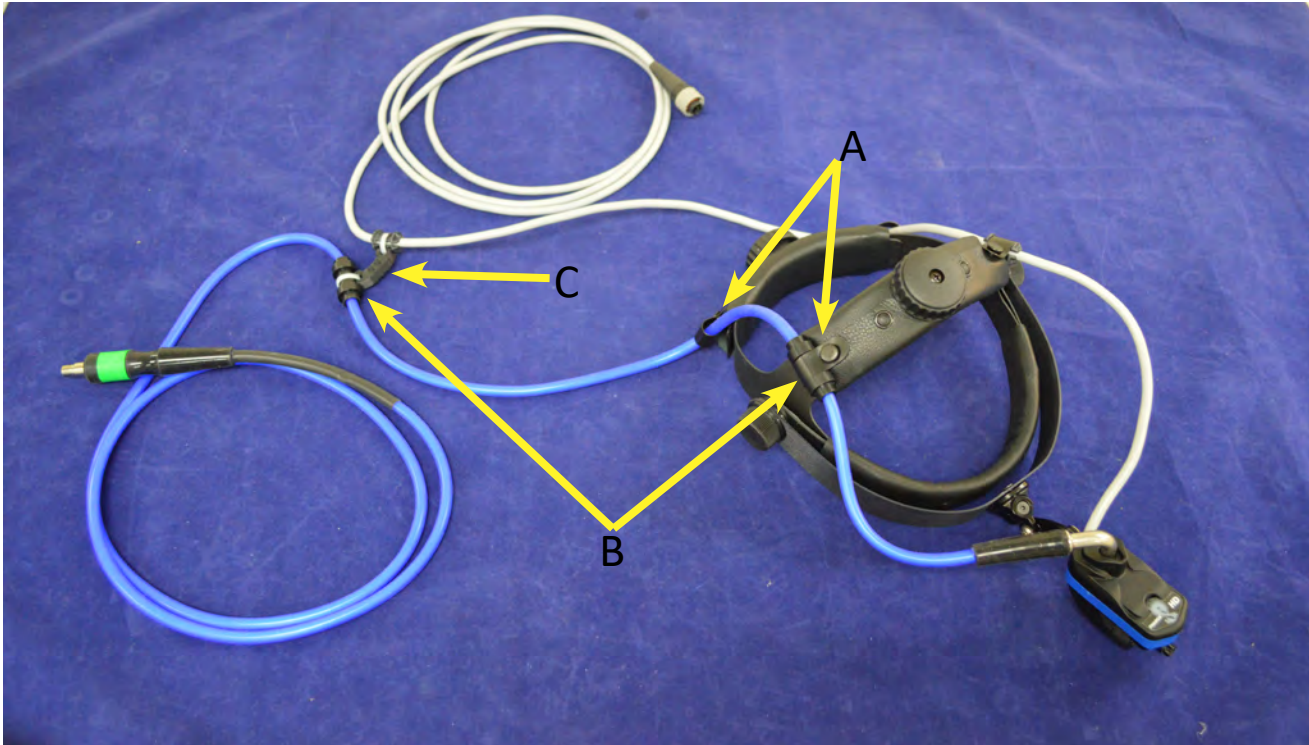
Fiber Optic Cable Types:  
BFW™ 9860 7' Fiber Optic Cable  
BFW™ 9865: 10' Fiber Optic Cable  
BFW™ 9866: 10' Armored Cobra  
Coil Fiber Optic Cable

### Fiber Optic Cable Usage Notes:

1. Remove the Dust Cap (C) from the end of the fiber optic cable.
2. Ensure the Gown Clips (D) are in place and securely fastened.
3. When removing the fiber optic cable from light source, grasp Strain Relief (A) to avoid damage to cable.  
**CAUTION: PROXIMAL AND DISTAL ENDS OF THE CABLE MAY BE EXTREMELY HOT.**
4. If the fiber optic cable is not going to be used for a long period of time, replace the Dust Cap (C) before storing to prevent dust build-up.

# Assembly and Operation

## Pharos HD™ Headband



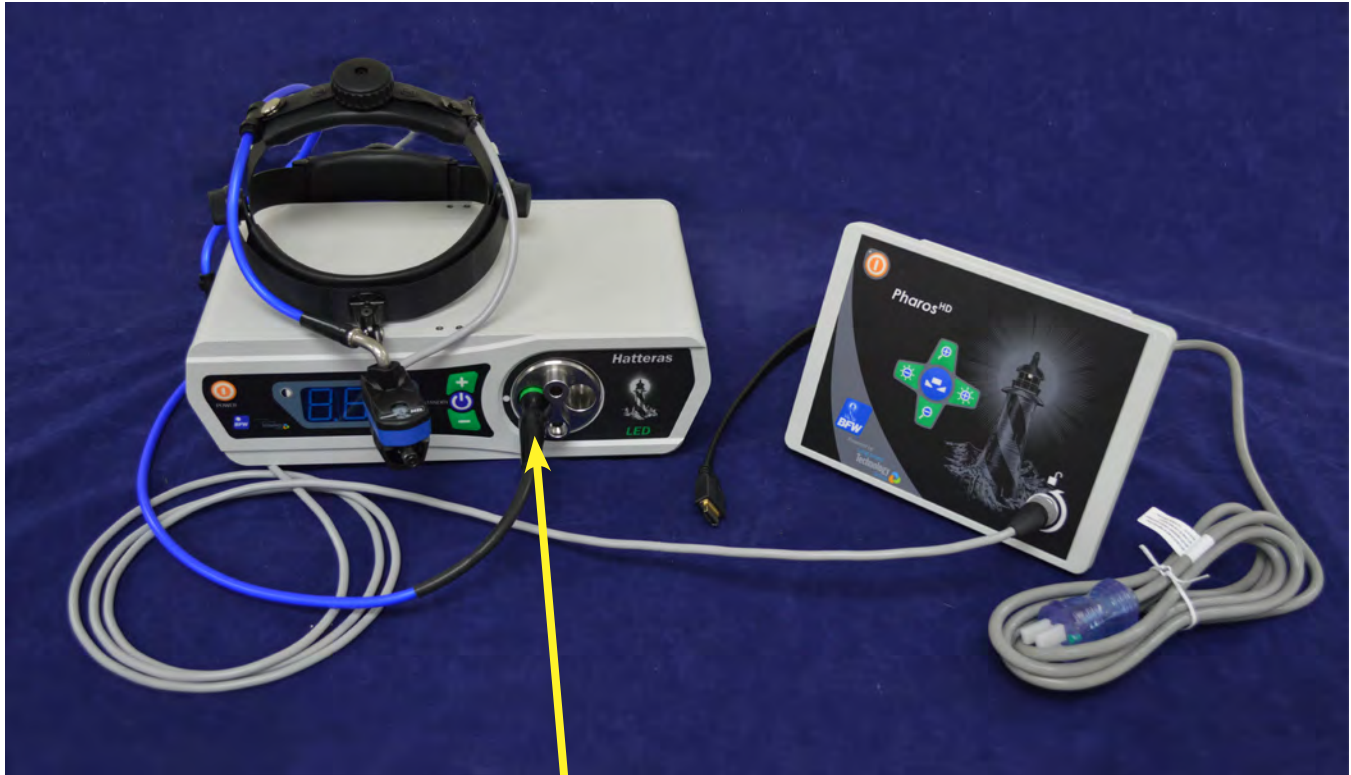
- A. Retaining Straps
- B. Strain Relief
- C. Bifurcator

### Directions For Use:

1. Route the fiber optic cable around the left side of the Headband.
2. Capture the first Strain Relief (B) on the fiber optic cable with the first Retaining Strap (A) on the left side of the headband.
3. Capture the fiber optic cable in the second Retaining Strap (A) on the left side near the back of the headband.
4. Capture the second Strain Relief (B) in the Bifurcator (C).

# Assembly and Operation

## Setup



A. Proximal End

### Directions For Use:

1. Plug the Proximal End (A) of the fiber optic cable into an approved Fiber Optic Light Source (Hatteras™ Shown) (not included with Pharos HD™).

# Specifications

Performance	
Illumination Spot Size	4.5" Diameter
Approved Fiber Optic Cable (not included with Pharos HD™)	BFW™ 9860, 9865, 9866
Approved Light Source (not included with Pharos HD™)	BFW™ Hatteras™, ChromaPro™

# Troubleshooting and Service

Symptom	Possible Issue	Solution
No Light Output	Fiber Optic Cable Not Connected	Connect Fiber Optic Cable*
	Fiber Optic Cable is Broken	Replace Fiber Optic Cable*
	Light Source is Off	Turn On Light Source
	AC Power Cable is not Connected	Connect AC Power Cable
	AC Power Cable is Broken	Replace AC Power Cable
	Pharos HD™ is Broken	Send Pharos HD™ for repair
Low Light Output	Damaged Fiber Optic Cable	Replace Fiber Optic Cable
	Light Source Output is Low	Replace Light Source
	Dirt or Dust in the Lens	Clean Pharos HD™
	Pharos HD™ is Broken	Send Pharos HD™ for repair

\*Use Only Approved BFW™ Fiber Optic Cables (not included with Pharos HD™)

## Warranty and Service

Warranty against manufacturer's defects applies to the following components of the Pharos HD™ under normal use for one (1) year from the date of sale from Long Island Technology Group (includes parts and labor).

- Optics & Camera
- Control Unit
- Headband
- Mounting Linkage

The warranty does not cover products damaged by the following:

- Accident, misuse, abuse, or alteration
- Servicing by unauthorized persons
- Use with unauthorized accessories
- Connecting to incorrect light source

In all cases Long Island Technology Group, reserves the right to determine the cause of all malfunctions and at its sole discretion will determine the damage and/or repairs that are covered under this warranty.

Send All Inquires To:

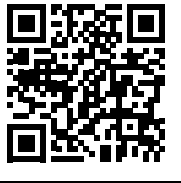
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