

Cat. No. G93 HT-LA HT-LK

High Transmission  
Fiberoptic Light Cord,  
Light Adapter,  
and Light Kit

Operating and  
Maintenance  
Manual

**CIRCOR ACTI**

## CIRCON ACMI

High Transmission Fiberoptic Light Cord Cat.No.G93

High Transmission Light Adapter Cat. No. HT-LA

High Transmission Light Kit Cat. No. HT-LK

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## 1.0 General Description

The G93 high transmission fiberoptic light cord and HT-LA high transmission light adapter are designed to optimize illumination in all rigid and flexible CIRCON ACMI endoscopes using detachable light cords.

The G93 light cord and HT-LA adapter are recommended for use with CIRCON ACMI video cameras and video cameras of different manufacture.

The G93 high transmission light cord and adapter are sold together in kit form and also available as individual catalog items. For best results the G93 light cord and HT-LA adapter should be used together.

G93 High Transmission Fiberoptic Light Cord (4mm, Autoclavable)

HT-LA High Transmission Light Adapter -- fits all CIRCON ACMI endoscope light posts.

HT-LK High Transmission Light Kit. Includes:  
1 ea. G93 High Transmission Fiberoptic Light Cord  
1 ea. HT-LA High Transmission Light Adapter

## 2.0 Cautions

1. The G93 high transmission light cord and HT-LA adapter should be handled only by informed personnel. They are precision devices and can be inadvertently damaged.
2. Study this manual and other labeling accompanying this product thoroughly prior to any procedure.
3. Connect your endoscopic light source only to a properly wired, grounded receptacle.

4. Perform inspections and tests regularly to assure continued satisfactory operation.
5. Keep the G93 high transmission light cord away from flammable, particularly dark colored, materials. The high intensity light can ignite such materials.
6. Do not remove the G93 high transmission light cord from the light source receptacle by pulling on the flexible portion of the cord. The light cord is composed of glass fibers which will break if subject to abuse. Always grasp the black connector housing to remove the light cord from the light source.
7. Use only the G93 or other non-conductive CIRCON ACMI or equivalent light cords with CIRCON ACMI instruments.
8. Never look directly into the light emitted from the endoscopic light source, light cord, light adapter or endoscope. Eye damage can result.
9. Do not use these devices connected to a light source in the presence of flammable anesthetics.

### **3.0 Unpacking and Initial Inspection**

To avoid inadvertent damage, study this Operating and Maintenance Manual thoroughly before handling these devices.

Visually examine the shipping carton and instruments for any damage. Any breakage or other apparent damage should be noted, the evidence retained and the carrier or shipping agency notified.

Verify that the shipping carton contains the product listed on the packing list.

Inspect the instrument in accordance with Section 3.1 of this manual.

Notify the CIRCON ACMI Territory Manager, Authorized Dealer or CIRCON ACMI Customer Service immediately of any discrepancies.

### **3.1 Inspection of G93 High Transmission Light Cord**

Inspect the G93 high transmission light cord prior to each procedure. Hold one end of the cord towards a light while viewing the opposite end. Damaged fibers are indicated if the circular field contains black dots or dark gray areas. Damaged fibers reduce light transmission. Light cords should be replaced if 15-20 percent of the fibers are broken.

### **4.0 Mounting the HT-LA High Transmission Light Adapter to Endoscope Light Post**

The HT-LA adapter is attached to the G93 light cord as follows:

1. Carefully unscrew and retain the knurled nut on the light post of the CIRCON ACMI endoscope. (See Figure 1)
2. Screw the HT-LA adapter carefully and securely onto the telescope light post threads vacated by the light post nut. (Screw the HT-LA adapter all the way down onto the post and finger tighten.) (See Figure 2)
3. Screw the knurled nut removed from the endoscope light post onto the threaded portion of the HT-LA adapter. (See Figure 3)
4. Check to make sure that the HT-LA adapter is not loose. It should be securely attached to the telescope light post.
5. Once the HT-LA adapter is mounted on the endoscope, carefully snap on the G93 light cord. (Figure 4)

**NOTE:** Although the HT-LA adapter can be used with other CIRCON ACMI light cords, the G93 cord is recommended for best results.

Figure 1

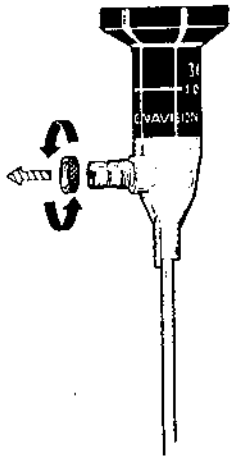


Figure 2

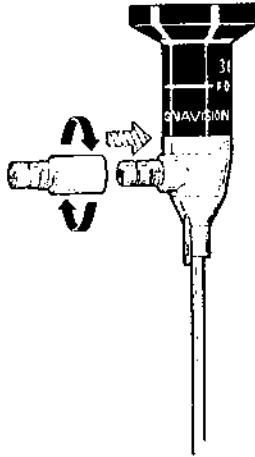


Figure 3

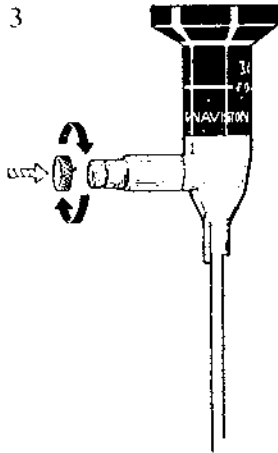
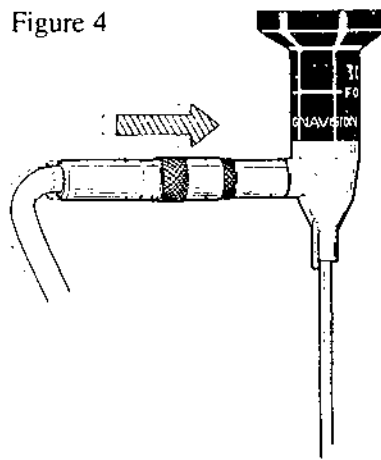


Figure 4



## 5.0 Cleaning, Disinfection and Sterilization

### 5.1 Cleaning

1. The G93 light cord and HT-LA adapter should be soaked in a solution of protein solubilizing soap and warm tap water immediately after each use.
2. The G93 light cord should always be looped in a large radius in the cleaning basin. The HT-LA contains an optical element, and as such, should also be treated with care.
3. Rinse components thoroughly in warm sterile water.

**NOTE:** The HT-LA adapter can be left on the light post of the endoscope during cleaning and disinfection or removed depending upon user preference.

### 5.2 Disinfection

1. The G93 light cord and HT-LA adapter can be immersed in a 2 percent activated alkaline glutaraldehyde solution for no longer than 30 minutes in accordance with the disinfectant manufacturer's recommendations for lensed instruments.
2. Thoroughly rinse components in sterile water to remove all traces of the disinfectant and dry.

### 5.3 Sterilization

1. The G93 light cord can be placed in a steam autoclave or ethylene oxide sterilizer whose environments are controlled to the following parameters:

**Autoclave:**  
Temperature: 275°F (Max.)  
Time: 20 minutes (Max.)

**Ethylene Oxide**  
Temperature: 145°F (Max.)  
Vacuum: 28 " Hg  
Pressure: 12 psi

2. The HT-LA light adapter is **not** autoclavable. It can be placed in an ethylene oxide sterilizer controlled to the parameters outlined above.

## 6.0 Maintenance

1. Do not bend, stretch, pull or tightly coil the G93 light cord. This can damage the glass fibers.
2. Do not pile instruments or cables on top of one another, this can cause damage.
3. Do not pick up or handle instruments in groups. Handle all instruments individually.
4. To guarantee maximum light transmission, periodically clean the lens surfaces of the endoscope and light post face, (Figures 5-6), light cord (Figures 7-8) and light adapter (Figure 9). Use a cotton swab moistened in 70 percent isopropyl alcohol.

Figure 5

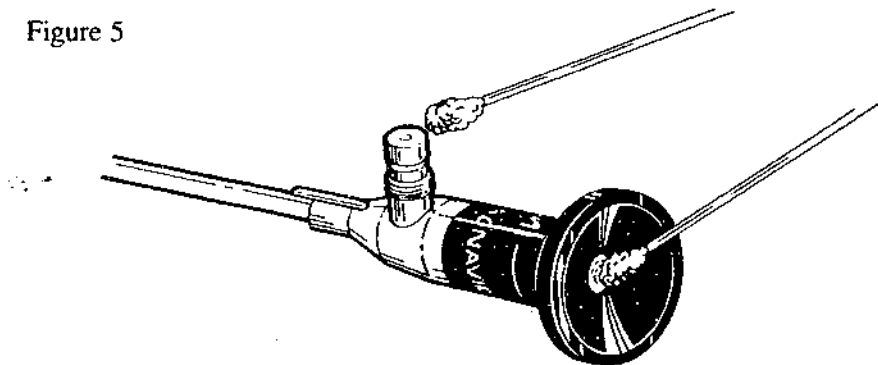


Figure 6

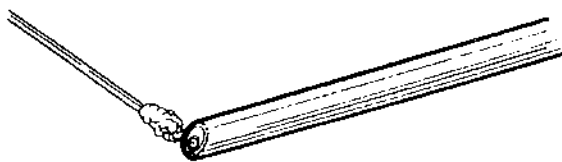




Figure 7

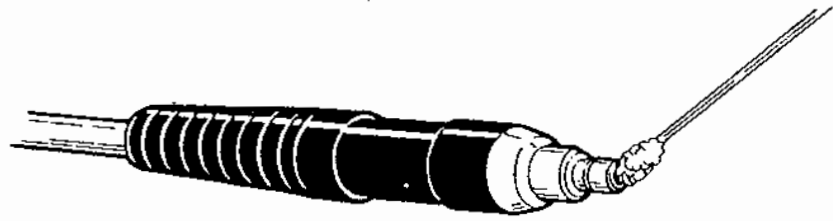


Figure 8

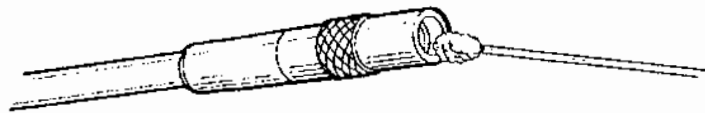
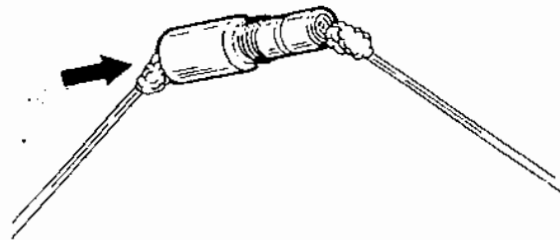


Figure 9



## 7.0 Storage

When not in use store the G93 light cord and HT-LA adapter in a clean, dry location. Do not pile cables and adapter on top of one another, this could result in damage.