



# GENERAL LIGHTING



## FOCUS

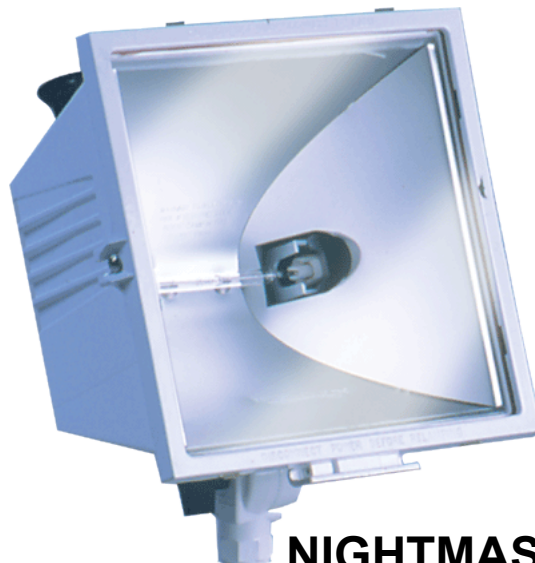
## NIGHTMASTERS



**OPTIMUM**



**FOCUS**



**NIGHTMASTER**

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# INTRODUCTION

## Overview

OPTIMUM Lampheads utilize a super-efficient design to offer a maximum transfer of light from bulb to scene. The newest addition to the FRC lighting series includes HIR and HID bulb options not available on classic Focus lights.

FOCUS Low Profile Lampheads introduced the concept of re-directing light with 50 parabolic curved and aimed surfaces. The innovative design directs light where it is needed. The low profile of the classic FOCUS offers mounting options that many other lights cannot.

NIGHTMASTER Lampheads are affordable scene lights that have a proven track record on emergency apparatus. Simple, functional, and available in multiple styles and mounting configurations.

## Features

**EFFICIENCY** The brightest and best designed lights in the industry. A unique reflector design transfers more light from the bulb to the scene.

**NO WASTED LIGHT** Focus 100% of the light directly where it is needed.

**RELIABLE and PROVEN** Manufactured from heavy duty, thick extruded aluminum for long life and many hours of dependable performance. Proven under actual emergency situations.

**COMPACT** Focus lights will not take up valuable space on your vehicle.

**ATTRACTIVE** Modern design and stylish look of all our lights enhances the appearance of emergency apparatus.

**VERSATILE** Choose from 70W to 1500W and from 12V to 240V capabilities.

**MOUNTING CHOICES** FRC lampheads can be mounted virtually anywhere as telescopic poles, portable, fixed, brow mounted, recessed, or under aerial.

**OPTIONS** Include multiple size mounting brackets, custom length poles, wire guard, on/off power switch, raised pole indicator, and no scratch for Focus.

**SAFETY TWIST LOCK** Easy to use and standard on all FRC telescopic poles, the locking mechanism has no metal to metal contact, it can not jam or be over tightened.

## Specifications

**Note:** All Optimum, Focus, and NightMaster lampheads are available separately or as part of a lighting assembly.

**Table 1. Lamphead Guide**

Series O=Optimum F=Focus L=NightMaster	Lamphead Style	Bulb Type	Watts	Volts	Amps
O, F	H70	HID	70	12	6.0
O, F	H15	HID	150	12	12.5
O	E70	HID	70	24	3.0
O	E15	HID	150	24	6.25
F	D15	Quartz Halogen	150	12	12.5
F	D30*	Quartz Halogen	300	12	25.0
F	H30	Quartz Halogen	300	24	12.5
L	DT0	Quartz Halogen	250	12	20.0
L	TC0	Quartz Halogen	300	12	25.0
O, F, L	S30	Quartz Halogen	300	120	2.5
O, F, L	S50	Quartz Halogen	500	120	4.2
L	P50	Quartz Halogen	500	120	4.2
O, F	S75	Quartz Halogen	750	120	6.3
O, F, L	M10	Quartz Halogen	1000	120	8.3
O, F	S72	Quartz Halogen	750	240	3.1
O	R90	HIR	900	240	3.75
O, F, L	M12	Quartz Halogen	1000	240	4.2
O, F, L	M15	Quartz Halogen	1500	240	6.25

\* Two 150 watt bulbs are installed.

### RESTRICTION NOTES

12/24 VDC lampheads are not available on 600 and 700 type mounts.

240 VAC lampheads are not available on 700 type mounts.

LT series lampheads are not available on 200, 230, 250, 300, 800, and 850 type mounts.

FOCUS HID lamphead is only available on 800 and 850 type mounts.

## SAFETY SUMMARY

FRC lighting products are engineered and manufactured with safety in mind. It is critical that FRC scene lights are installed, maintained, and operated correctly. Read and understand all instructions before installing, performing maintenance, or operating.

All components, equipment, and installation procedures shall conform to NFPA 1901, *Standard for Automotive Fire Apparatus* and NFPA 70 *National Electrical Code*.

The following safety precautions shall be observed while performing procedures in this manual.

### General Safety Precautions

Ensure power is off prior to connecting or disconnecting wires and plugs or performing maintenance.

Scene lighting lampheads are designed for outdoor use and will be extremely hot when operating. Do not use in areas of limited ventilation.

### Installation Safety Precautions

Ensure power is off prior to connecting wires or cable to the power source.

Connect only to the type of power source as indicated on the lamphead identification label.

Ensure an appropriate sized circuit protection device is installed (circuit breaker or fuse).

Use a minimum of 16 AWG wire to connect AC lights and 12 AWG to connect DC lights.

FRC lights are intended for mounting to a noncombustible surface only. Do not install insulation within 76 mm (3 in) of any part of the light, lighting fixture, or its components.

Install approved rubber or plastic grommets or bushings where wires or cable will pass through a surface.

Ensure all wire connectors or terminals provide a positive mechanical and electrical connection.

Electrical connections not enclosed in a box must be covered with an insulation equivalent to that on the conductors.

Lampheads will be extremely hot when operating, do not mount such that personnel or equipment could inadvertently come in contact with the lamphead.

Recessed lights require a minimum of 3 inch clearance between wall insulation and the light housing.

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## **Operation Safety Precautions**

Operate portable lighting products only from the type of power source indicated on the identification label.

During operation use the handle to move the light, the housing will be extremely hot.

Ensure that all lighting components are clear of obstructions when raising telescopic poles.

Ensure that telescopic poles are lowered and stowed before moving the vehicle.

## **Maintenance Safety Precautions**

Ensure power is off prior to removing the front glass or opening covers.

Do not operate the light with the front glass removed or cover opened.

Ensure replacement bulbs have the same voltage and wattage.

When handling a new quartz halogen, HIR, or HID bulb avoid touching it except on the flat seal at either end.

Use a clean soft cloth to wipe the reflector clean if necessary, do not use liquid or aerosol cleaners.

# INSTALLATION INSTRUCTIONS

## Install Lamphead on Telescopic Pole

Lampheads and telescopic poles are shipped apart and need to be assembled

**Note:** The 512 telescopic pole must be installed before the lamphead is attached if the small diameter hole is used. Refer to Install Models 510, 512 Top Mount Telescopic Poles.

1. Place the lamphead and the pole on a flat surface.
2. Connect the lamphead wires to the pole wires. (Refer to Figure 1.)
  - a. Ensure that 3/8 inch of bare conductor shows at the end of each wire.
  - b. Insert the wires in the butt connectors and crimp.

### For DC lights:

Connect black to black, white to red.

### For AC lights:

Connect black to black, white to white, silver braid to green.

3. Ensure the crimps are tight. (Test by lightly tugging on the wires.)
4. Loop the excess wire in a zig-zag fashion to take up the slack.

**Note:** Ensure that the wires are not caught and squeezed by the lip of the pole. If this happens the wire insulation may be cut and short the wires to the pole.

5. Slide the lamphead onto the pole tucking the wires into the pole.
6. Apply thread lock and tighten the set screws to secure the lamphead on the pole. (A medium strength locking compound like Loctite blue is recommended.)

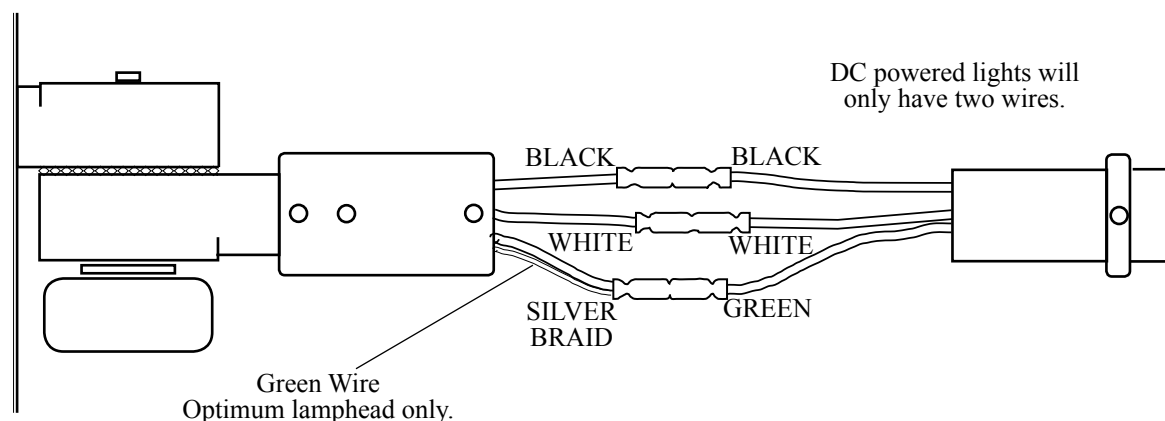


**For DC Powered Lights:**

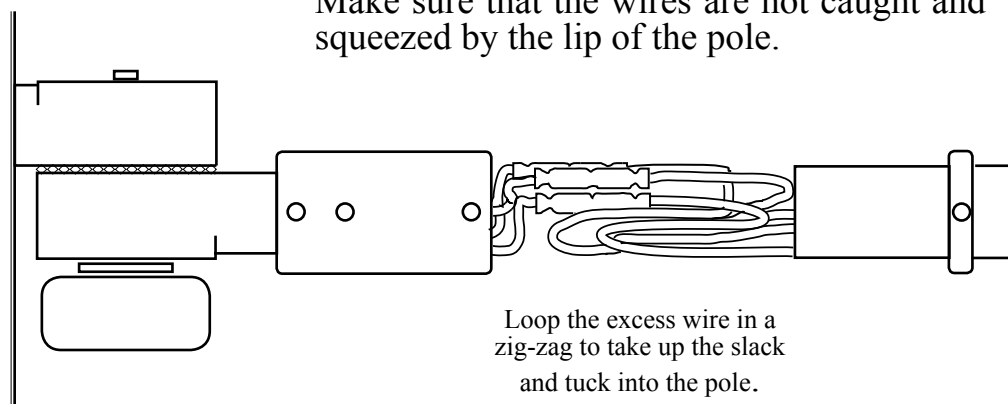
Connect black to black, white to red

**For AC Powered Lights:**

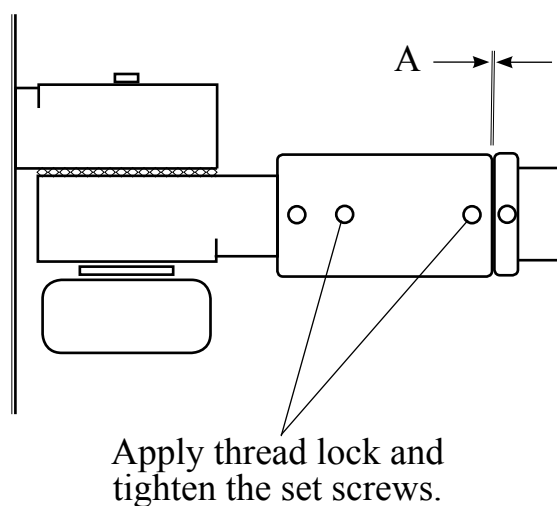
Connect black to black, white to white, silver braid to green.



Slide the lamphead assembly onto the pole. Make sure that the wires are not caught and squeezed by the lip of the pole.



Dimension A should be less than 0.015" (The thickness of a folded piece of paper). If A is larger, a wire is probably caught. Disassemble and check for wire insulation damage. If there is no damage, reassemble.



**Note:** The 512 telescopic pole must be installed before the lamphead is attached if the small diameter hole is used. Refer to Install Models 510, 512 Top Mount Telescopic Poles.

**Figure 1. Assemble Lamphead and Telescopic Pole**

## Install Recessed Mount Models 200, 230, 250

1. Measure and mark mounting location for cutout.
2. Cut out mounting hole.
3. Place the light in position to check for fit and mark mounting screw locations.
4. Double check the clearance around and behind the light housing. Recessed lights require a minimum of 3 inch clearance between wall insulation and the light housing.
5. Drill mounting screw holes.

**Note:** Wires may need to be connected before installing the recessed light.

6. Ensure that approved strain relief for the wiring is installed.
7. Secure the housing with mounting screws.

### Wiring

#### 12/24 VDC

Connect the BLACK wire to GROUND.

Connect the RED (or WHITE) wire to POWER.

#### 120/240 VAC

Connect the SILVER BRAID or GREEN wire to chassis GROUND.

Connect the WHITE wire to RETURN.

Connect the BLACK wire to POWER.



FCA200



OPA200, OPA230

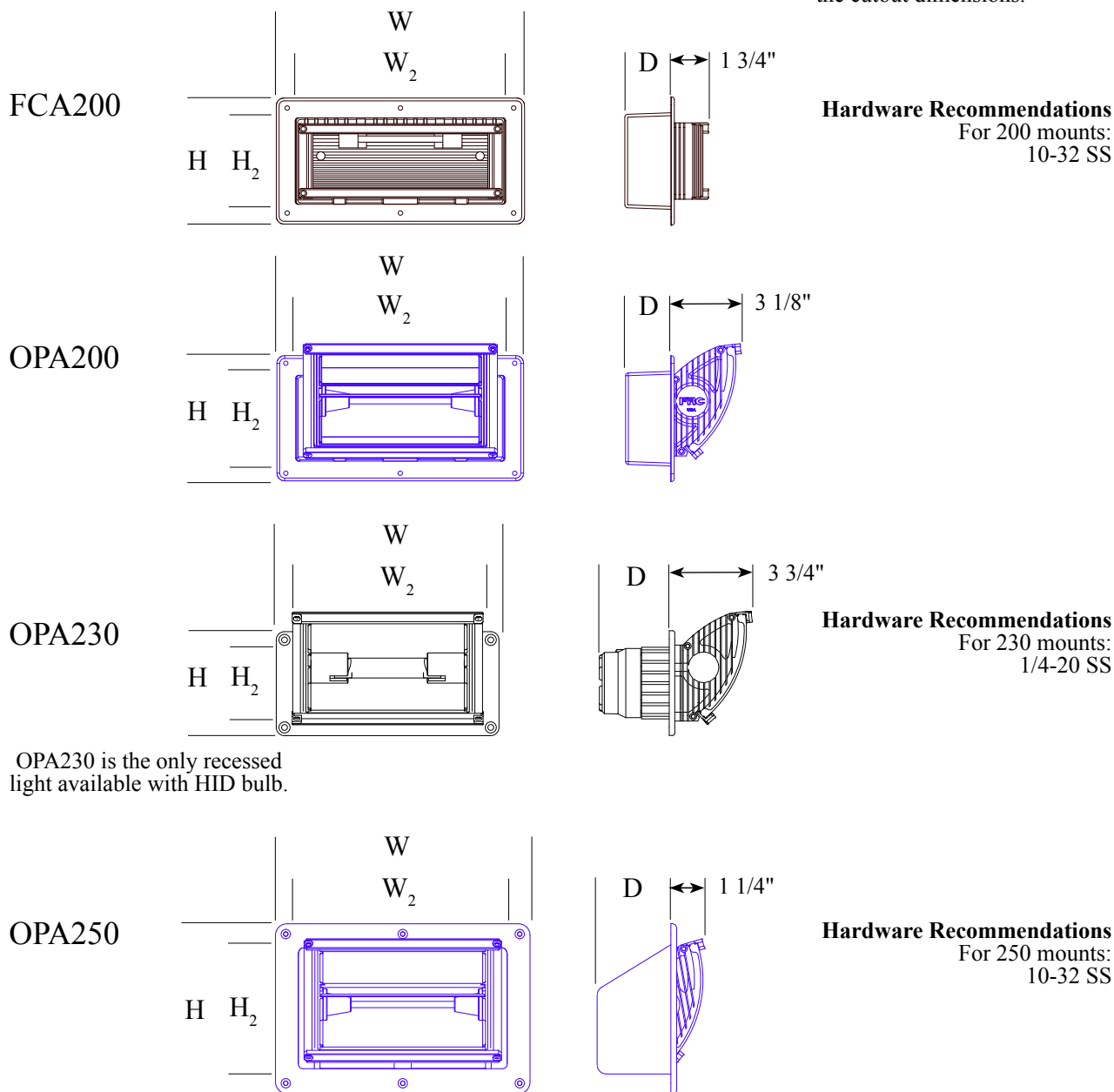


OPA250

**Table 2. Recessed Mount Dimensions**

Model	W	D	H	W <sub>2</sub>	H <sub>2</sub>
<b>FCA200-</b>					
D15, H30, S30, S50, S72, S75	11	2	5 5/8	9 3/4	4 1/4
D30, M10, M12, M15	17 1/2	2	5 5/8	16 1/8	4 1/4
<b>OPA200-</b>					
S30, S50, S72, S75	11	2	5 5/8	9 3/4	4 1/4
M10, M12, M15, R90	17 1/2	2	5 5/8	16 1/8	4 1/4
<b>OPA230-</b>					
E15, E70, H15, H70	10 3/16	3 1/4	4 3/4	8 3/4	3 7/8
<b>OPA250-</b>					
S30, S50, S72, S75	11 3/16	4 1/8	7 1/2	9 9/16	5 3/4
M10, M12, M15, R90	16 9/16	3 1/4	7 1/2	15	5 3/4

**Note:** W<sub>2</sub> and H<sub>2</sub> will be the cutout dimensions.

**Figure 2. Install Recessed Mount**

## Install Aerial Mount Models 300

Before mounting check the identification label on the lamphead for specific voltage and current requirements. Check that the length of the power cord is correct.

**Note:** Before drilling holes place the light in position to check for fit. Ensure that the lamphead will clear all obstructions.

1. Place the light in position.
2. Mark the mounting hole locations and through hole for the wiring. Use the lamphead and attached brackets as a template.
3. Drill mounting holes.
4. Secure the mounting bracket(s). Use 5/16-18 SS hardware.
5. Ensure that approved strain relief for the wiring is installed.
6. Adjust the lamphead angle by loosening the nuts at the bracket pivot point, set at desired position and tighten nuts.

### Wiring

#### 12/24 VDC

Connect the BLACK wire to GROUND.

Connect the RED (or WHITE) wire to POWER.

#### 120/240 VAC

Connect the GREEN wire to chassis GROUND.

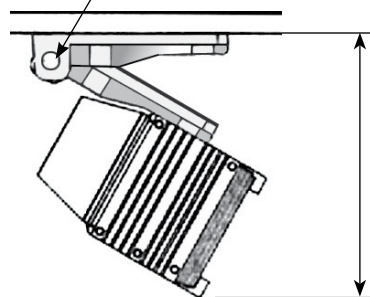
Connect the WHITE wire to RETURN.

Connect the BLACK wire to POWER.



FCA300

Adjust the lamphead angle  
by loosening the nuts at the  
bracket pivot point.



Required Clearance	
Aimed directly forward	4 inches
Aimed at 30° downward	6.5 inches
Aimed at 45° downward	6.75 inches
Aimed directly down	7.5 inches

**Note:** It is best to use the lamphead and attached brackets as a template to mark mounting holes.

**Hardware Recommendations**  
For 300 mounts:  
5/16-18 SS

**Figure 3. Install Under Aerial Mount**

## Install Top Mount Telescopic Pole Models 510, 512

When positioning a telescopic pole ensure that the lamphead will clear all obstructions and the twist lock will be accessible.

**Note:** The 512 telescopic pole should be installed before the lamphead is attached. Two set screws allow the flange to be removed and the pole will fit up through a 1 5/8" hole. To install a fully assembled 512 pole down through the roof, a 2 1/2" hole will be needed so the handle and twist lock will fit through.

1. Check the light position for fit and freedom of operation
2. Mark the footprint of the mounting flange.
3. Drill mounting holes.

**Note:** The 512 requires a bead of RTV or similar sealant be applied between the mounting surface and the bottom outer edge of the flange.

4. For 512 apply a bead of sealant around the bottom outer edge of the flange.
5. Secure the mounting flange. Use 1/4-20 SS hardware. Install a backing plate if necessary for a sturdy mounting.
6. Ensure that approved strain relief for the wiring is installed.

### Wiring

#### 12/24 VDC

Connect the BLACK wire to GROUND.

Connect the RED wire to POWER.

#### 120/240 VAC

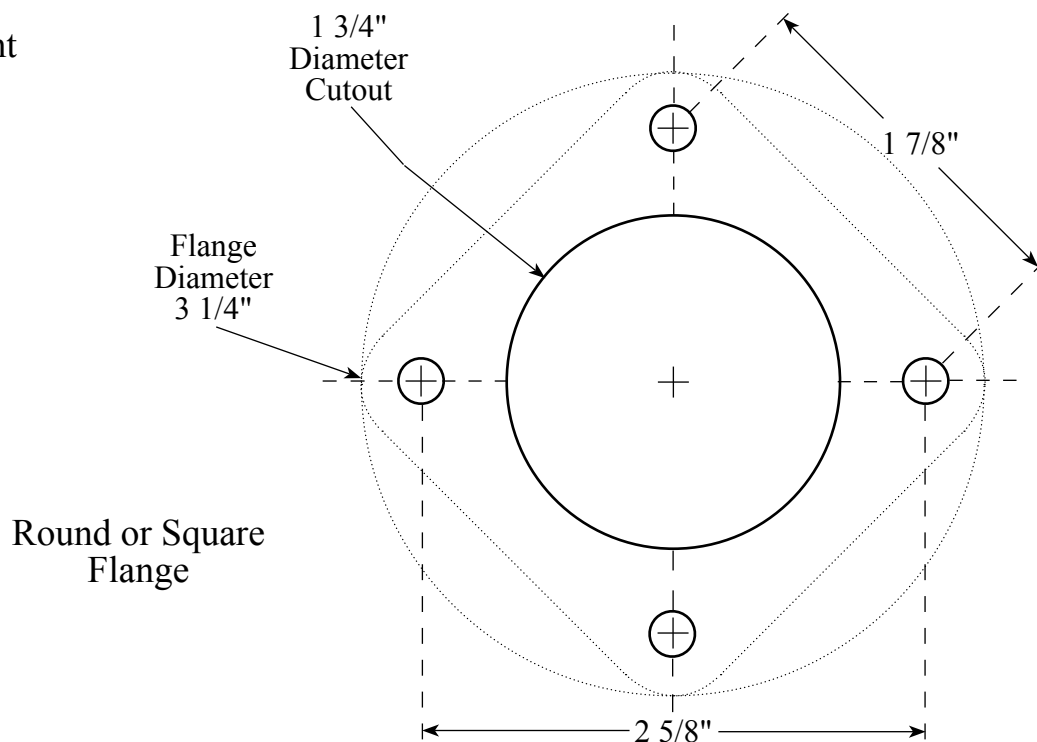
Connect the GREEN wire to chassis GROUND.

Connect the WHITE wire to RETURN.

Connect the BLACK wire to POWER.



# 510 Top Mount

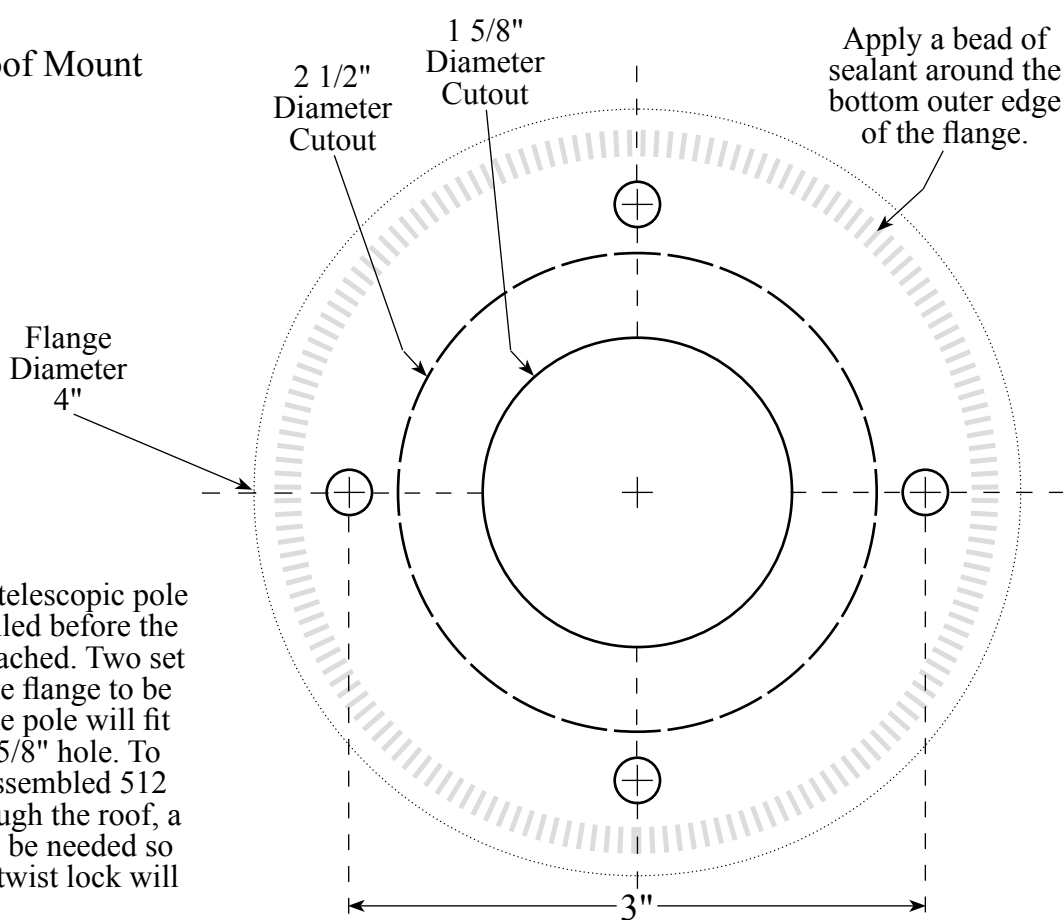


Drawings may not be to scale.  
DO NOT USE AS A TEMPLATE

## Hardware Recommendations

For 510, 512 mounts:  
1/4-20 SS

# 512 Thru-The-Roof Mount



**Note:** The 512 telescopic pole should be installed before the lamphead is attached. Two set screws allow the flange to be removed and the pole will fit up through a 1 5/8" hole. To install a fully assembled 512 pole down through the roof, a 2 1/2" hole will be needed so the handle and twist lock will fit through.

**Figure 4. Install Top Mount Telescopic Pole**

## Install Side Mount Telescopic Pole Models 530, 540, 542

When positioning a telescopic pole ensure that the lamphead will clear all obstructions and the twist lock will be accessible.

1. Place the light in position to check for fit and freedom of operation.
2. Slide the brackets up or down into required position. The set screws may need to be loosened.
3. Tighten set screws.
4. Mark the footprint of the mounting bracket(s).
5. Drill mounting holes.
6. Secure the mounting bracket(s). Use 5/16-18 SS hardware. Install a backing plate if necessary for a sturdy mounting.
7. Ensure that approved strain relief for the wiring is installed.

### Wiring

#### 12/24 VDC

Connect the BLACK wire to GROUND.

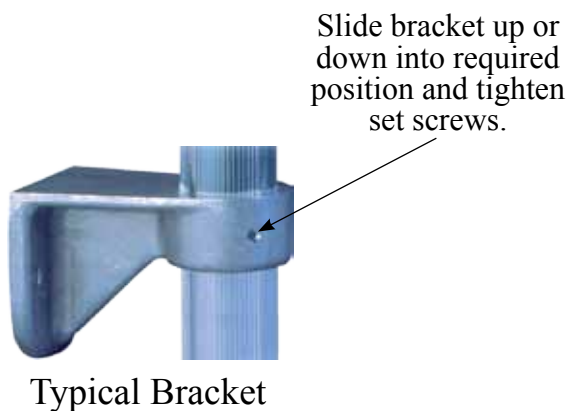
Connect the RED wire to POWER.

#### 120/240 VAC

Connect the GREEN wire to chassis GROUND.

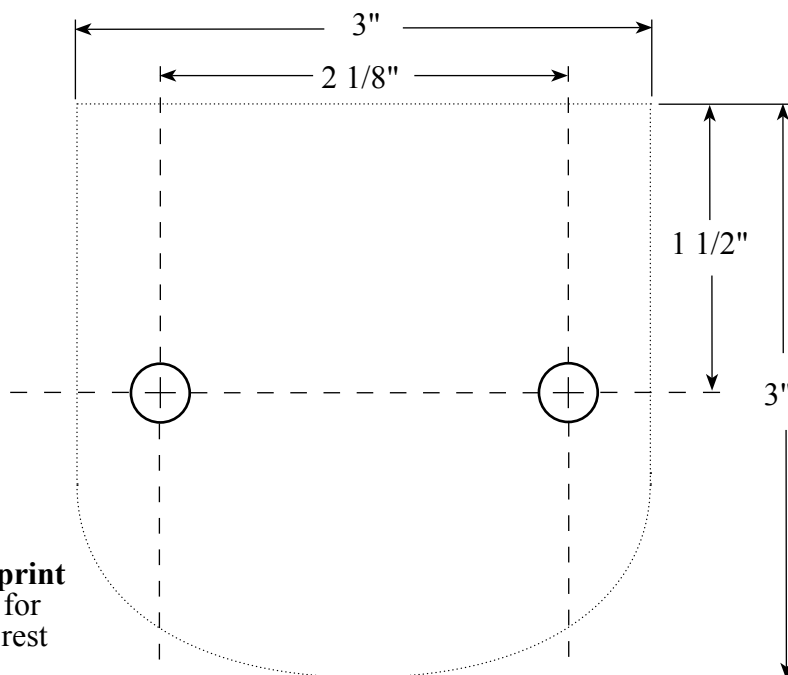
Connect the WHITE wire to RETURN.

Connect the BLACK wire to POWER





530, 540, 542  
Side Mount Brackets



**Side Mount Bracket Footprint**

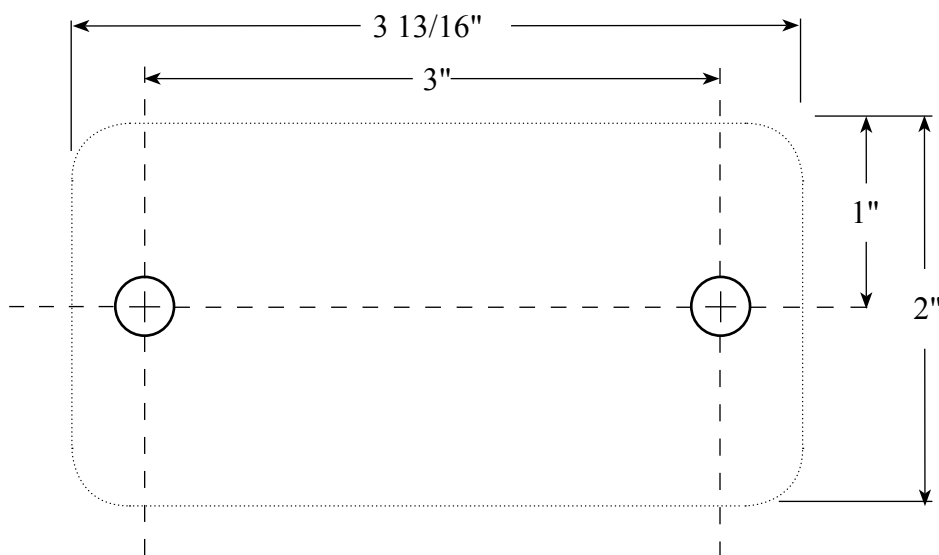
The footprint is the same for all side mount and steady rest brackets.

Drawings may not be to scale.  
**DO NOT USE AS A TEMPLATE**

**Hardware Recommendations**

For 530, 540, 542 mounts:  
5/16-18 SS

530, 540, 542  
Flush Mount Brackets



**Figure 5. Install Side Mount Telescopic Pole**

## Install Pedestal Mount Models 570, 580

When positioning a pedestal mount light ensure that the lamphead will clear all obstructions.

1. Place the light in position to check for fit and freedom of operation.
2. Mark the footprint of the mounting flange/bracket.
3. Drill mounting holes.
4. Ensure that approved strain relief for the wiring is installed.
5. Secure the mounting flange/bracket. Use 5/16-18 or 1/4-20 SS hardware. Install a backing plate if necessary for a sturdy mounting.

### Wiring

#### 12/24 VDC

Connect the BLACK wire to GROUND.

Connect the RED (or WHITE) wire to POWER.

#### 120/240 VAC

Connect the SILVER BRAID or GREEN wire to chassis GROUND.

Connect the WHITE wire to RETURN.

Connect the BLACK wire to POWER.

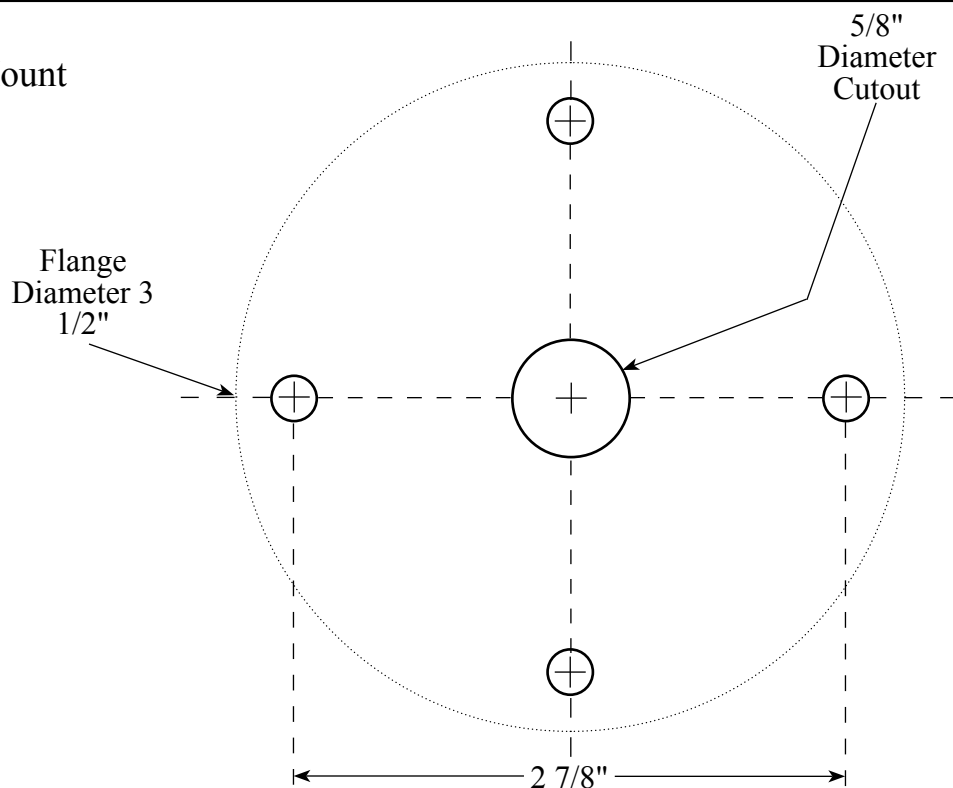


OPA570



FCA580

570  
Pedestal Mount



**Hardware Recommendations**

For 570, mounts:  
1/4-20 SS

Drawings may not be to scale.  
**DO NOT USE AS A TEMPLATE**

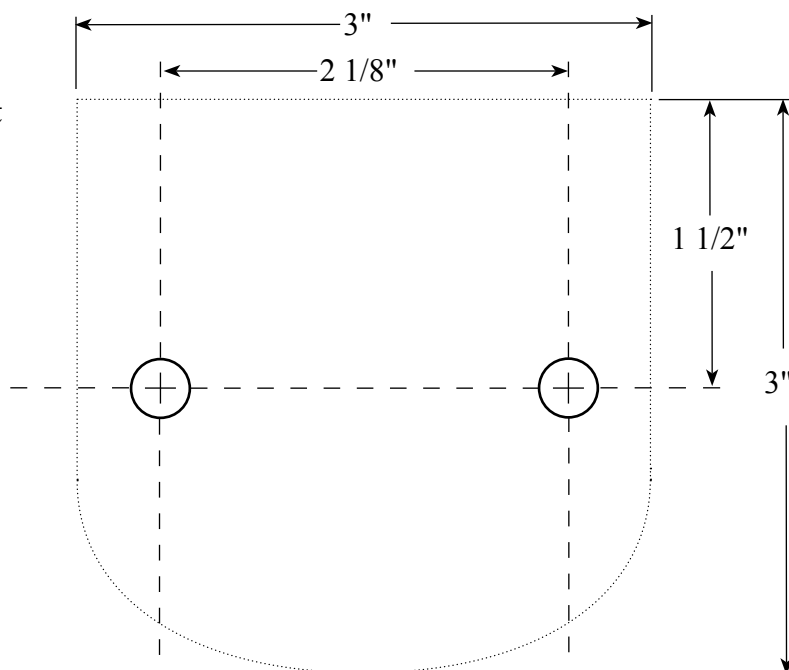
580  
Side Mount Brackets

**Hardware Recommendations**

For 580, mounts:  
5/16-18 SS

**Side Mount Bracket Footprint**

The footprint is the same for  
all side mount and steady rest  
brackets.



**Figure 6. Install Pedestal Mount**

## Install Quick Release Bracket Set for Tripod Models 600, 642, 656

The quick release mounting bracket set will hold an FRC tripod securely on the vehicle. The mounting bracket set consists of a lower base into which the bottom of the tripod legs rest, and an upper locking bracket, which has a quick release knob on the right side.

1. Place the tripod in position to check for fit.

**Note:** The mounting brackets are aligned left and not centered on each other.

2. Mark the mounting hole locations.
  - a. Align the left sides of the brackets and the left side mounting holes for the tripod to fit correctly.
  - b. The upper bracket is mounted with the pull knob to the right side.
  - c. Use the brackets as templates.

**Helpful Hint:** Mount the bottom bracket first. Attach the quick release bracket to the hole on the upper slide casting of the tripod. Rest the tripod legs in the base, and push the upper bracket in position flush to the mounting surface. Mark the top bracket hole locations.

3. Drill the mounting holes. The mounting brackets are predrilled for 1/4-20 hardware.

**Note:** Tripods with Focus lampheads require that 3/4" spacers be installed between the mounting surface and the brackets so the back of the lamphead will clear the mounting surface.

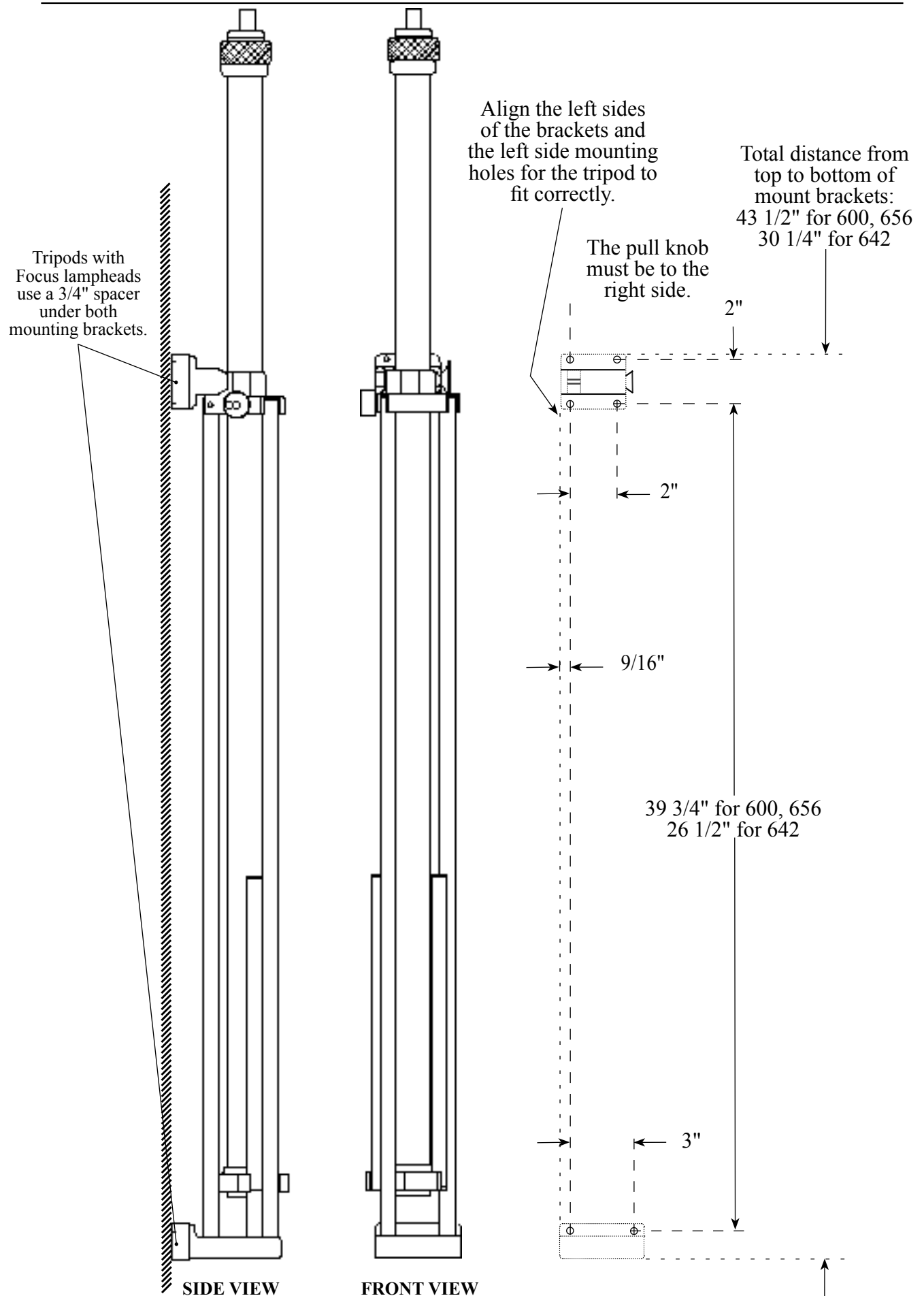
4. Install the mounting brackets (and spacers with Focus lamphead).



Quick Release Bracket Set  
(Shown with Focus lamphead spacers.)



642  
Tripod  
w/Focus  
Lamphead



**Figure 7. Install Tripod Quick Release Bracket Set**

## Install Quick Release Bracket for Portable Model 700

The quick release brackets will hold an FRC portable lamphead securely to the vehicle or a telescopic pole. Pull the quick release knob to install or remove the portable light.

### 703 Quick Release Bracket for Flat Surface Mounting

1. Place the 703 bracket in position to check for lamphead fit.
2. Mark the mounting hole locations. Use the bracket as template.
3. Drill the mounting holes. The mounting bracket is predrilled for 5/16 hardware.
4. Pull the quick release knob to install the portable light on the bracket.

### 705 Quick Release Bracket for Pole Mounting

**Note:** If the 705 quick release is to be retrofit onto an existing pole the lamphead to pole adapter P/N LT100 must be removed and replaced with the 705 adapter P/N X-LT214-705.

1. Place adapter on top of pole and tighten two set crews.
2. Place the 705 into the adapter and tighten the set screw.
3. Pull the quick release knob to install the portable light on the bracket.



Optimum  
OPA700

Focus  
FCA700



703 Quick Release Bracket  
for Flat Surface Mounting



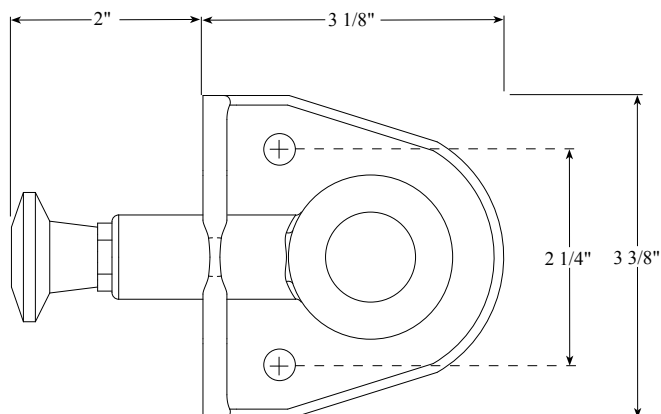
705 Quick Release Bracket  
for Pole Mounting



NightMaster  
LTA700

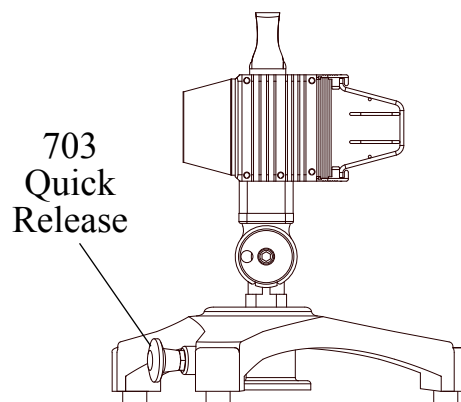
# 703 Quick Release Bracket for Flat Surface Mounting

**Hardware Recommendations**  
For 703 mounts:  
5/16-18 SS

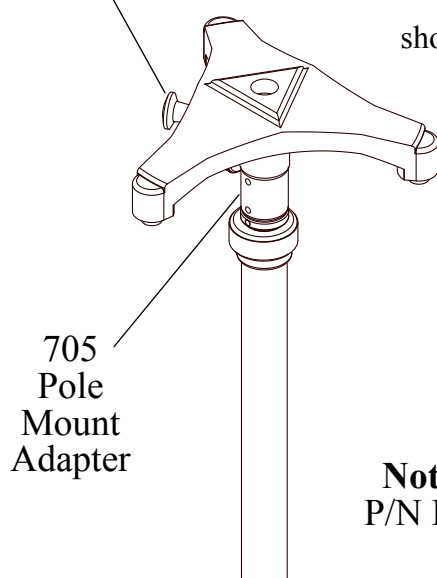


Drawings may not be to scale.  
DO NOT USE AS A TEMPLATE

Base with Focus lamphead  
shown on a 703 quick  
release bracket.



705  
Quick  
Release



Base (lamphead not shown)  
shown on a telescopic pole with a  
705 quick release bracket.

**Note:** For a retrofit the lamphead to pole adapter  
P/N LT100 must be removed and replaced with the  
705 adapter P/N X-LT214-705.

**Figure 8. Install Portable Light Quick Release Bracket**

## Install Brow Mount Models 800, 850

Before mounting check the identification label on the lamphead for specific voltage and current requirements. Check that the length of the power cord is correct.

**Note:** Before drilling holes place the light in position to check for fit. Ensure that the lamphead will clear all obstructions.

1. Place the light in position.
2. Mark the mounting hole locations and through hole for the wiring. Use the lamphead and attached brackets as a template.
3. Drill the mounting holes. The mounting brackets are predrilled for 1/4-20 or 5/16-18 hardware.
4. Place the four rubber washers in position at each mounting hole.
5. Secure the light.
6. Ensure that approved strain relief for the wiring is installed.

### Wiring

#### 12/24 VDC

Connect the BLACK wire to GROUND.

Connect the RED (or WHITE) wire to POWER.

#### 120/240 VAC

Connect the GREEN wire to chassis GROUND.

Connect the WHITE wire to RETURN.

Connect the BLACK wire to POWER.



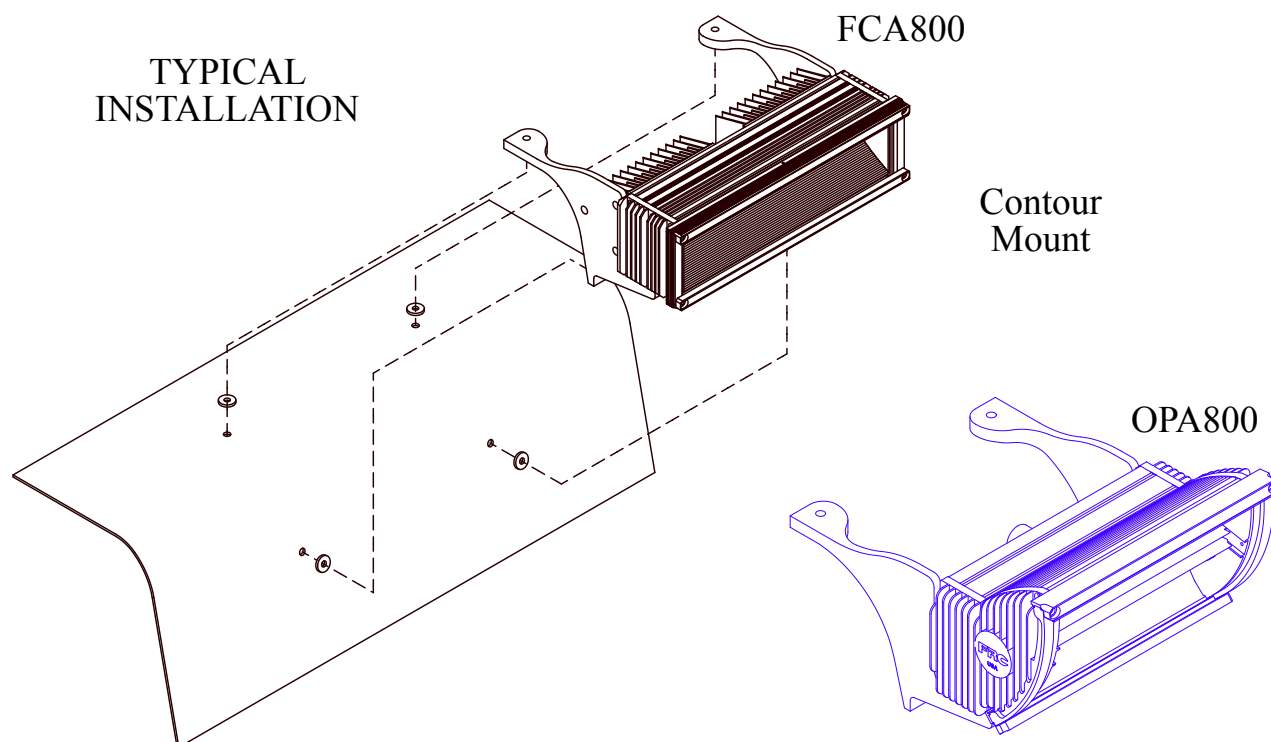
OPA800  
Contour  
Mount

## FOCUS

FCA850  
Flat  
Mount



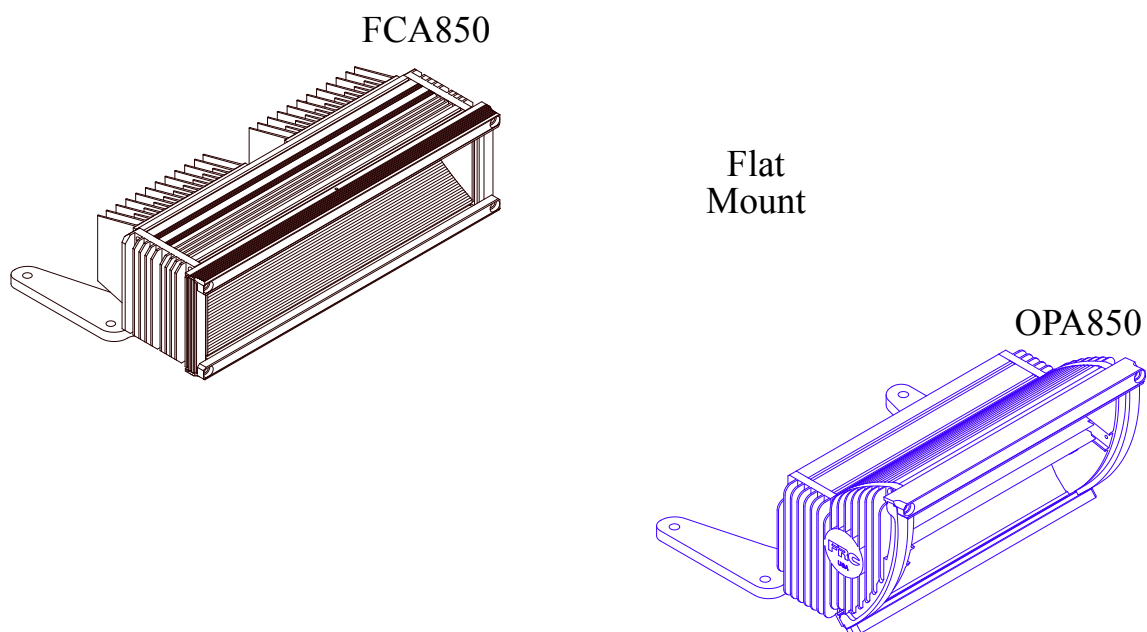




**Note:** It is best to use the lamphead and attached brackets as a template to mark mounting holes.

**Hardware Recommendations**

For 800, 850 mounts:  
1/4-20 or 5/16-18 SS



**Figure 9. Install Contour and Flat Brow Mounts**

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# MAINTENANCE

## Bulb Replacement Optimum and Focus

1. Ensure power is OFF and the lamphead is cool to the touch prior to replacing the bulb.
2. Ensure the replacement bulb has the same voltage and wattage rating. (If there are two bulbs installed, each bulb will be half the listed wattage.)
3. Hold the glass in place while removing the bezels. Remove the four cap head screws and remove the bezels. Remove the glass.

**Note:** Optimum gasket is attached, the Focus gasket may come off.

4. Slide the bulb sideways into the spring contact and lift it out from the opposite side.

**Note:** When handling the new bulb avoid touching it except on the flat seal at either end. (Grease or oily fingerprints can cause damage the quartz bulb.) If the bulb is accidentally touched, gently wipe it clean with alcohol.

5. Check both lamp base contacts to be sure they are perfectly clean.
6. Push one end of the bulb into the spring contact until the other end can be placed into the opposite contact. Rotate the lamp back and forth about its axis to ensure adequate seating of contacts.

**Caution:** Do not operate the light with the front glass removed.

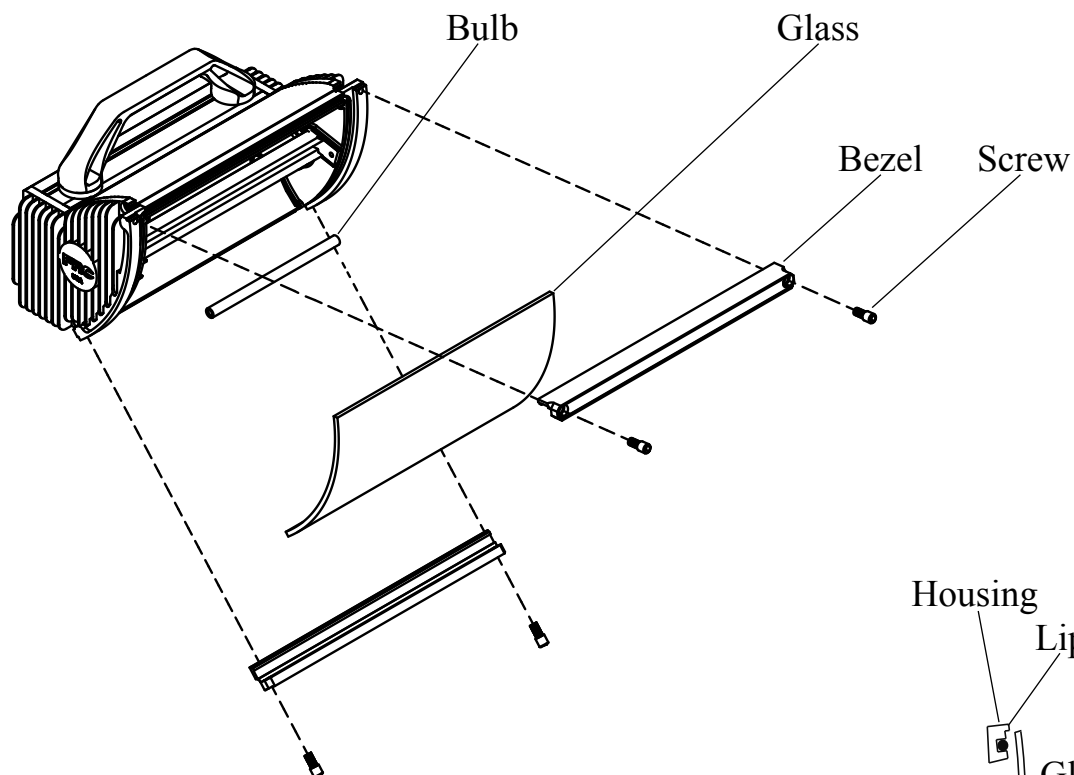
7. Insert the Focus gasket in the groove with the splice positioned down.
8. Hold the glass in position. Ensure the glass is inside the lip on all four sides.
9. Install the bezels and secure with the four screws.

**Note:** Bulb life is extended when the lamphead is mounted so the bulb is in a horizontal position.

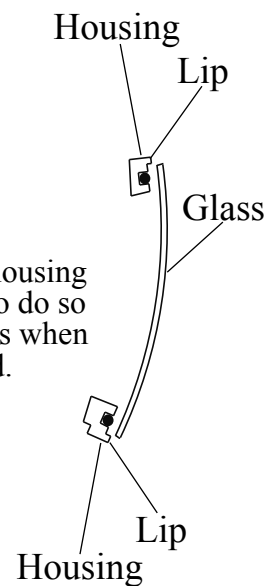
## Cleaning

High intensity lights may, over time, develop a powdery white film on the reflector. If this happens remove the glass (see bulb replacement procedure) and gently wipe the reflector clean with a soft cloth.

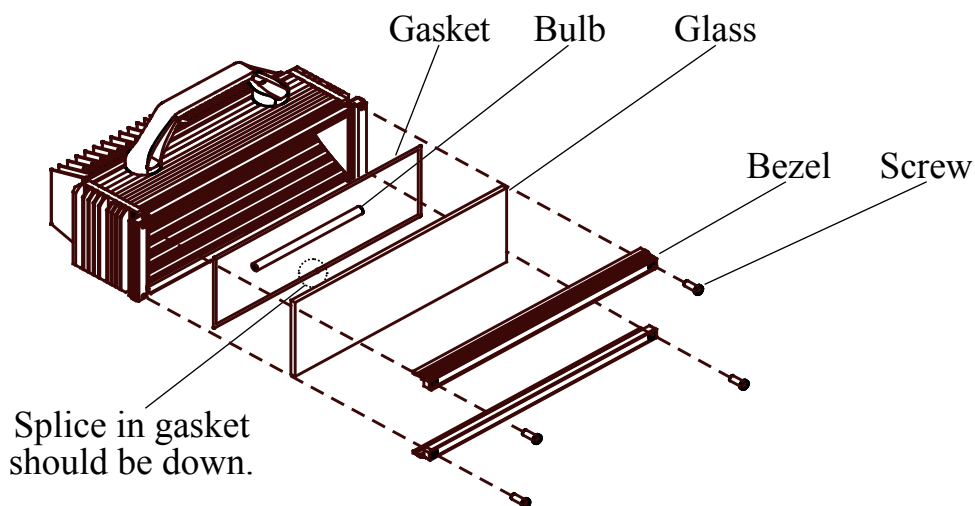
# OPTIMUM LAMPHEAD



**CAUTION**  
Position the glass inside the housing lip on all four sides. Failure to do so may result in racking the glass when the screws are tightened.



# FOCUS LAMPHEAD



**Figure 10. Bulb Replacement Optimum and Focus**

## Bulb Replacement NightMaster

1. Ensure power is OFF and the lamphead is cool to the touch prior to replacing the bulb.
2. Ensure the replacement bulb has the same voltage and wattage rating.
3. Loosen the two screws on each side of the lamphead. Open the glass cover (the gasket may also come off).
4. Slide the bulb sideways into the spring contact and lift it out from the opposite side.

**Note:** When handling the new bulb avoid touching it except on the flat seal at either end. (Grease or oily fingerprints can cause damage the quartz bulb.) If the bulb is accidentally touched, gently wipe it clean with alcohol.

5. Check both lamp base contacts to be sure they are perfectly clean.
6. Push one end of the bulb into the spring contact until the other end can be placed into the opposite contact. Rotate the lamp back and forth about its axis to ensure adequate seating of contacts.

**Caution:** Do not operate the light with the front glass removed.

7. Ensure the gasket is in place. Close the glass cover and tighten the two screws. Do not over tighten the screws.

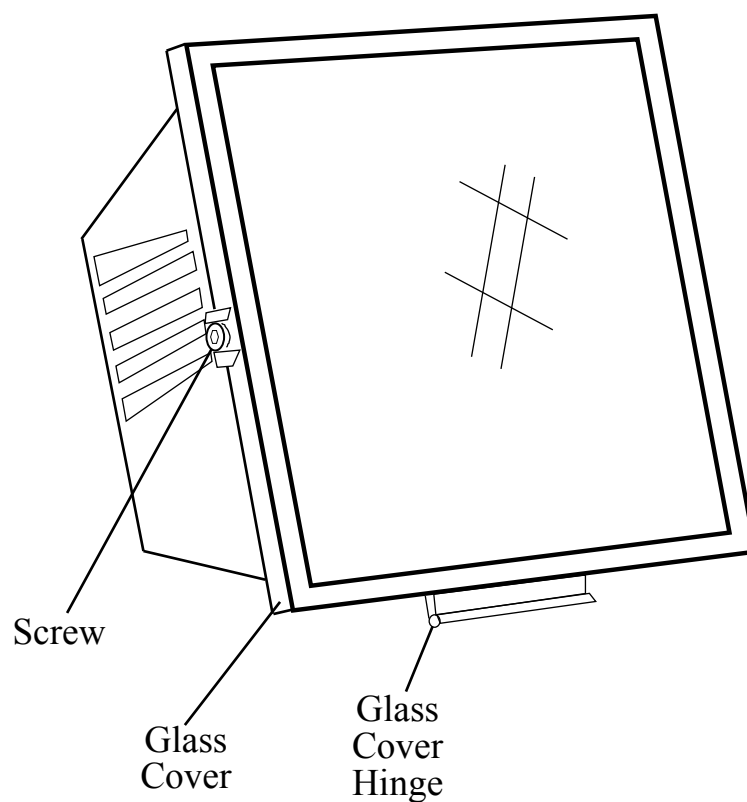
**Note:** Bulb life is extended when the bulb is mounted in a horizontal position.

## Bulb Replacement Triple Cluster

### 12 Volt, 100 Watt, PAR 46 Bulb

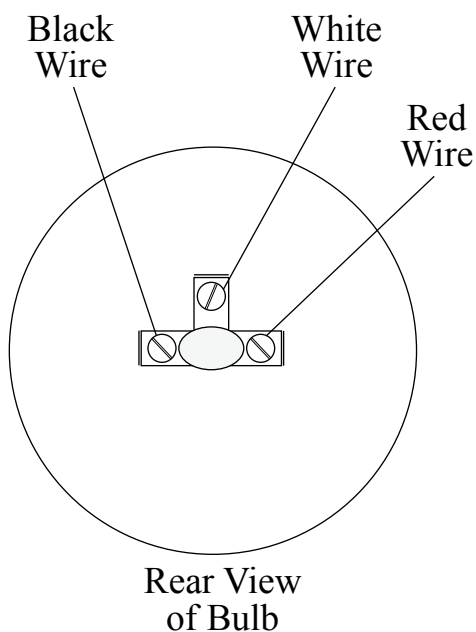
1. Ensure power is OFF and the lamphead is cool to the touch prior to replacing the bulb.
2. Ensure the replacement bulb has the same voltage and wattage rating.
3. Remove the three screws (newer installations have one screw) and the collar that hold the bulb in place.
4. Remove the three wires one at a time from the bulb and connect them to the same terminal on the new bulb.
5. Put the new bulb in position and set the collar in place.
6. Install and tighten the screw(s).

## NIGHTMASTER LAMPHEAD



Smaller NightMaster lampheads will have two screws on the side.  
Larger lampheads will have two screws on the top.

## NIGHTMASTER Triple Cluster PAR 46 Bulb



**Figure 11. Bulb Replacement NightMaster**

# NO-SCRATCH FOR MODEL 530 TELESCOPIC POLE

## Install No-Scratch Guide Collar and Guide Rail

1. Install the telescopic pole according to instructions for side mount telescopic pole.

**Note:** It is recommended that the Steady Rest Bracket be installed with the No-Scratch option.

2. Use the guide rail as a template and mark the mounting holes.

**Note:** The slot in the guide collar has to engage the guide rail when the pole is in the down position. The collar mounts on the handle of the pole, ensure the guide rail will be in the correct position before drilling mounting holes.

3. Drill holes and secure the guide rail.
4. Place the guide collar in position on the pole handle. Before tightening the two screws ensure that when the slot engages the rail the lamphead is in the correct position.
5. Tighten the screws.

## Install No-Scratch Rubber Bumpers (Focus Lamphead Only)

The rubber bumpers help prevent scratching and denting by eliminating any metal-to-metal contact between the rear of the lamphead and the apparatus body surfaces when the pole is lowered.

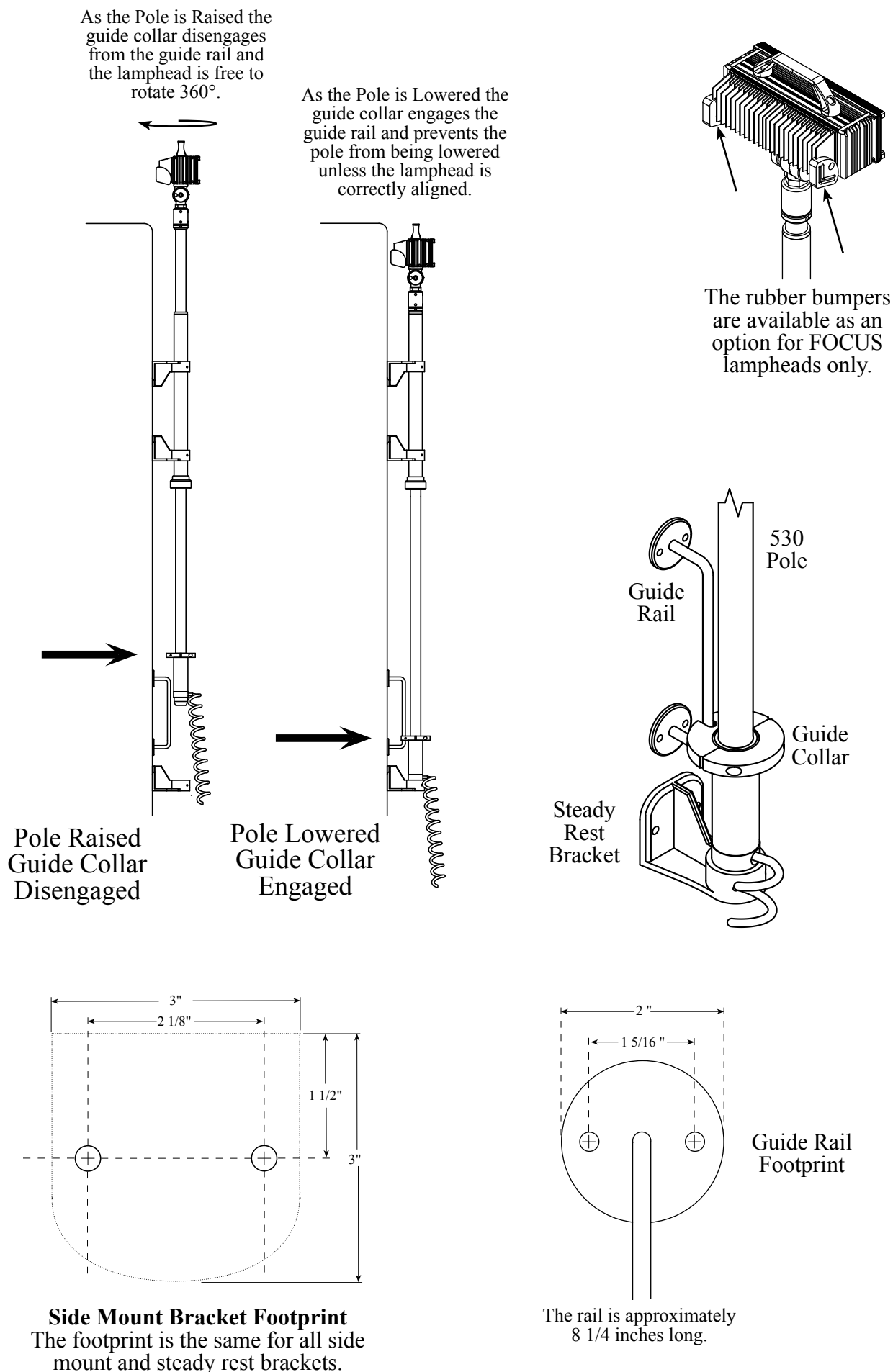
1. Place the rubber bumper in position on the bottom of the end cooling fin.
2. Using the bumper as a guide, drill a hole through the cooling fin with a number 30 bit.
3. Place the backing plate on the rivet and insert the rivet thru the bumper and mounting hole.
4. Secure the bumper with the rivet.



No-Scratch Guide Rail  
and Guide Collar for  
530 Telescopic Poles

Shown with a Steady  
Rest Bracket Installed



**Figure 12. No-Scratch**

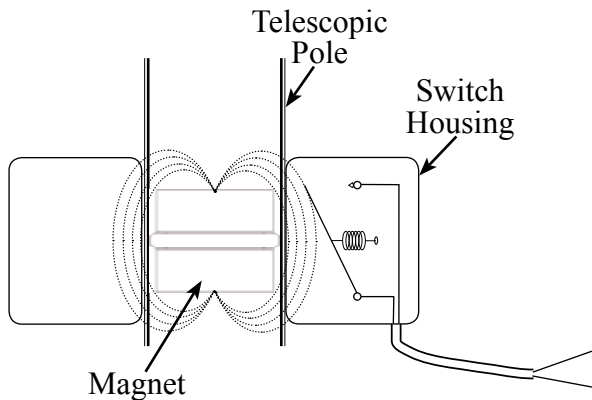
# RAISED POLE WARNING SWITCH AND INDICATOR

## Overview

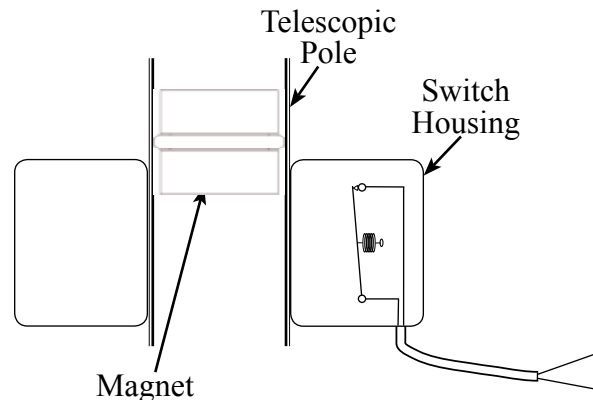
The raised pole warning switch is a normally closed magnetic switch mounted on the outer pole. A magnet, mounted on the inside of the inner pole, keeps the switch contact open when the pole is in the down position (see Diagram 1).

When the light is raised the magnet moves with the inner pole away from the switch and the contact closes (see Diagram 2).

This completes the electrical circuit to turn on the raised pole warning indicator. (Refer to the Wiring diagram.)



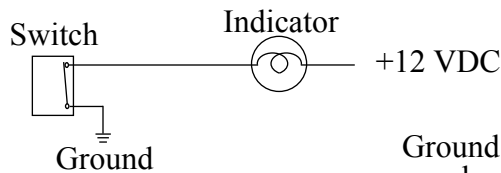
**Diagram 1. Pole Down; Magnet Holds Switch Open**



**Diagram 2. Pole Moves Up with Magnet; Switch Closes**

## Wiring

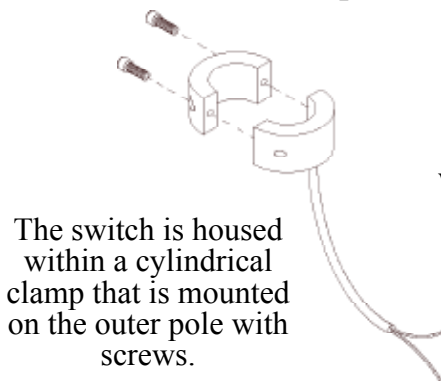
The switch is shown with pole in the up position.



Ground and +12 VDC can be swapped as required for installation.

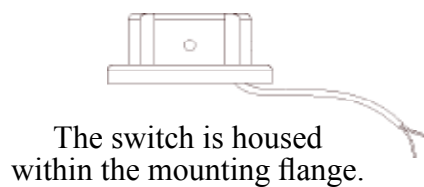
## Three Types of Switch Housings

Side Mount Pull-Up Poles and Thru-The-Roof Push-Up Poles



The switch is housed within a cylindrical clamp that is mounted on the outer pole with screws.

Top Mount Pull-Up Poles



The switch is housed within the mounting flange.

Side Mount Push-Up Poles



The switch is housed within a PVC holder that is mounted in the bottom steady rest bracket.



## Description

### Specifications

#### Switch

Contact	Single Pole Single Throw (SPST)
Position	Normally Closed (NC)
Current	0.25 AMPS
Power	3 WATTS

**CAUTION:** If the switch is to be used with a higher current application a relay must be provided to avoid switch failure.

#### Indicator

Type	1891
Voltage	+ 14 VDC
Current	0.25 AMPS

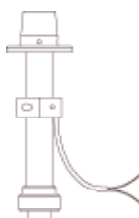
### Switch Housing Locations

If the switch housing is removed during installation, care should be taken to remount the switch in the correct position. Raise and lower the pole and ensure that the switch opens and closes correctly.

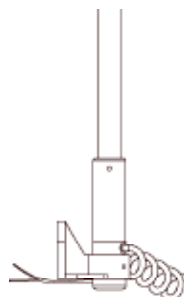
Models 510  
Top Mount  
Pull-Up Poles



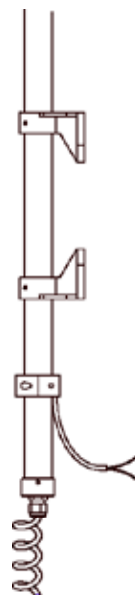
Models 512  
Thru-The-Roof  
Push-Up Poles



Models 530  
Side Mount  
Push-Up Poles



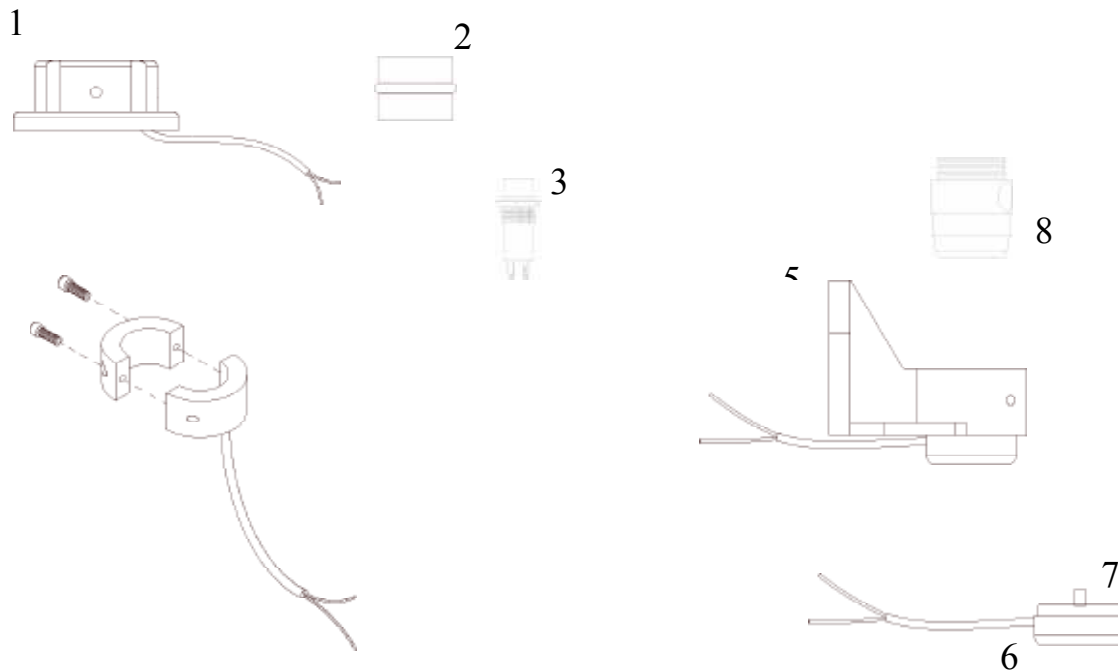
Models 540, 542  
Side Mount  
Pull-Up Pole



**Figure 13. Raised Pole Warning Switch Housing Locations**

## Parts List

	Part Number	Description
	<b>LT-S100</b>	<b>Kit, Raised Pole Warning, 510 Poles</b>
1	. LT-S347SW	. Switch Assembly, Top Flange, Magnetic, NC
	. LT-S347C-SW	. Switch Assembly, Top Flange C/E, Magnetic, NC
2	. LT-S337	. Magnet, Inner Pole
3	. LT-SZL606	. Indicator Assembly
	<b>LT-S101</b>	<b>Kit, Raised Pole Warning, 512, 540, 542 Poles</b>
4	. LT-S336SW	. Switch Assembly, Donut, Magnetic, NC
2	. LT-S337	. Magnet, Inner Pole
3	. LT-SZL606	. Indicator Assembly
	<b>LT-S102</b>	<b>Kit, Raised Pole Warning, 530 Poles</b>
	<b>-LT-S102-B</b>	<b>Kit, Raised Pole Warning, 530 Poles, 5" Bracket</b>
	<b>-LT-S102-C</b>	<b>Kit, Raised Pole Warning, 530 Poles, 7" Bracket</b>
5	. LT-S304SW	. Switch Assembly, Steady Rest,
-5	. LT-S305SW	. Switch Assembly, Steady Rest 5"
-5	. LT-S306SW	. Switch Assembly, Steady Rest 7"
6	. . LT350C	. . Switch Holder, PVC
7	. . LT-808-2000	. . Switch, Magnetic, NC
8	. LT-S318C	. Magnet, Pole End w/Strain Relief
3	. LT-SZL606	. Indicator Assembly



**Figure 14. Raised Pole Warning Switch Parts List**

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