



Source Four XT HID Zoom 15° to 30°

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# User Manual

Production Dates: May 2011 - Present

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# Basic Assembly

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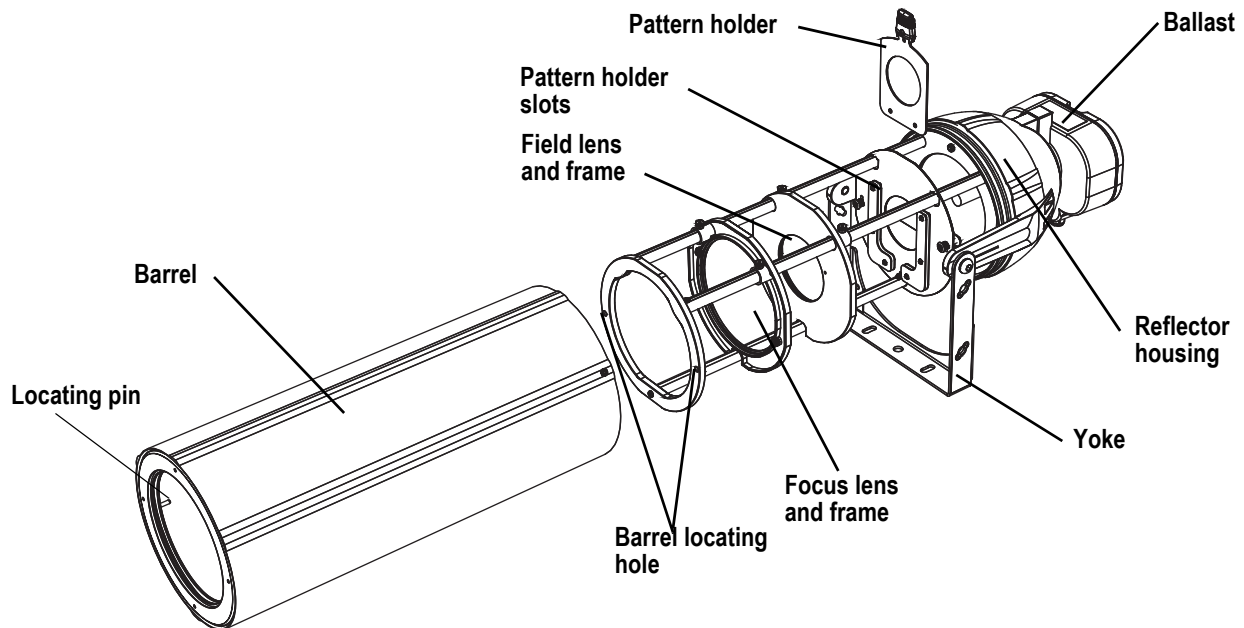


Figure-1 Components of the Source Four HID Zoom Fixture.



## **WARNING:**

***Please note the following safety warnings before use:***

***Do not use this fixture with a damaged power lead. If the power lead (cordset) is damaged, it must be replaced.***

***Do not mount the fixture on or near combustible surfaces.***

***Do not use this fixture if glass lens is deeply scratched or cracked. Damaged lenses must be replaced.***

***Do not operate the fixture for long periods of time without the barrel installed.***

***Remove foam packing from internal lenses before connecting power to your fixture.***

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## **Basic Information**

ETC's Source Four XT HID Zoom is a Source Four spotlight for all-weather use. Powerful Source Four optics, light output and energy savings in a sleek IP66-rated watertight and dustproof design. XT features ETC's Source Four Zoom 15° to 30° optical system plus our longlife 12,000-hour, 150W HID lamp. Hang by yoke, place on ground, attach to poles and other structures.

### **Applications**

- Houses of worship
- Theme parks
- Museums
- Outdoor signage
- Retail store logos and patterns
- Outdoor performance venues (non-dimming)
- Public sculptures

## Lamp and Ballast Information

### HID Lamps



**CAUTION:** Do not use lamps other than the HID in Source Four XT fixtures. **Use of lamps other than HID will void UL/cUL safety compliance and your warranty.**



**CAUTION:** *This fixture must be grounded.*



**CAUTION:** *The fixture is sold for either 120V or 220V, 230V (50Hz), 240V, 277V to match the power supply. Verify that the lamp and ballast voltage requirements matches your power supply. **Connecting the fixture to the wrong voltage voids the warranty.***

Ceramic Metal Halide								
Part number	Lamp code	Watts	Base	Bulb	Initial Lumens	Color temp.	CRI	Average rated life
RT157	CDM150/T6/830	150	G12	T6	14,000	3000°K	85	12,000 hours
RT158	CDM150/T6/942				12,700	4200°K	96	12,000 hours

### Ballast

- Acceptable voltage is either 120V or 220V - 277V ( $\pm 10\%$ ) 50/60 Hz **only**, depending on the model purchased.
- 120V (Nominal) Ballast:
  - 120V  $\pm 10\%$ , 60Hz
  - 1.5 Amps operating current
- 220V, 230V (50Hz), 240V, 277V (Nominal) Ballast:
  - 277V  $\pm 10\%$ , 60Hz
  - 220V, 230V, 240V  $\pm 10\%$ , 50Hz/60Hz
  - 0.61 Amps operating current at 277V
  - 0.69 Amps operating current at 230V
- 150 watt, high-power factor, fully encapsulated electronic ballast.
- Tilt-down ballast housing for lamp change, without disturbing focus.



**CAUTION:** Source Four HID fixtures are not dimmable. **Dimming will damage the ballast and void your warranty.**

## Compliance Information



Complies with Low Voltage Directive and EMC Directive. Tested to Standards: EN60598-1, EN60598-2-17, EN60922, EN55015, EN61000-3-2, EN61000-3-3, EN61547.

# Replacing the HID Lamp

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A lamp must be installed before you use the fixture. The lamp can be replaced without affecting the focus.



**WARNING:** *Do not replace the lamp when it is raining or snowing. Do not stand in water while replacing the lamp. Failure to follow this warning can result in serious injury or death.*

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**WARNING:** *Disconnect power and let the lamp cool before replacing.*

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**Note:** *Verify that the HID lamp you intend to install is suitable for your fixture's ballast. See [Lamp and Ballast Information, page 2](#). Operating HID lamps above their rated voltage reduces lamp life and can cause premature lamp failure.  
The facility's voltage must match the voltage of the fixture and its ballast.*

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- Step 1: Ensure power has been disconnected and the lamp is cool before replacing the lamp.
- Step 2: Loosen the screw securing the ballast.

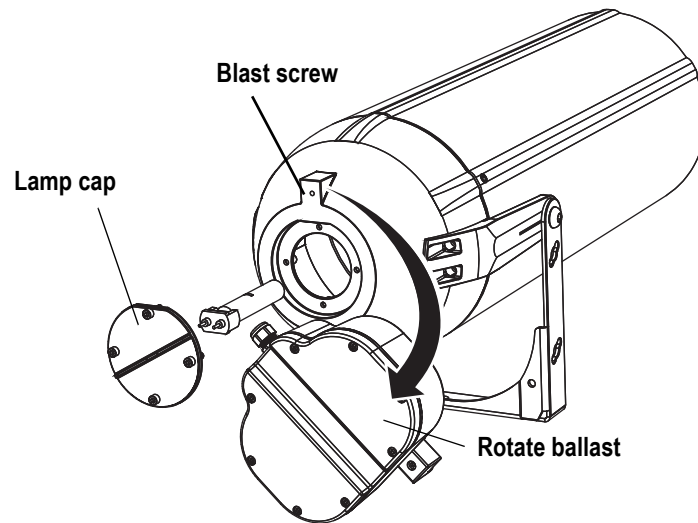


Figure-2 Ballast and Reflector Housing Base on the Back of the Fixture.

- Step 3: Rotate the ballast to reveal the lamp cap.
- Step 4: Loosen the four screws of the lamp cap.  
The screws are captive so they will stay in the cap.
- Step 5: Pull the lamp assembly straight out of the fixture.
- Step 6: Carefully pull the old lamp out of the ceramic base.
- Step 7: Holding it by the base, remove the new HID lamp from its box.



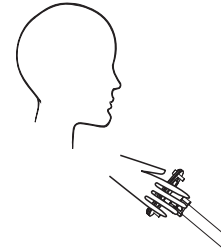
**CAUTION:**

*Use caution when installing or replacing any lamp.*

*When installing or replacing lamp, be sure to point the lamp away from your face and away from others before inserting it firmly into the assembly.*

*This may prevent injuries if the lamp should break.*

INCORRECT



CORRECT



**Note:**

*To avoid premature lamp failure, do not touch the lamp glass. If you do, clean it carefully with isopropyl alcohol and a clean lint-free cloth. Allow to dry before operation.*

Step 8: Align the flat sides of the lamp base with the lamp retaining clips on both sides of the socket.

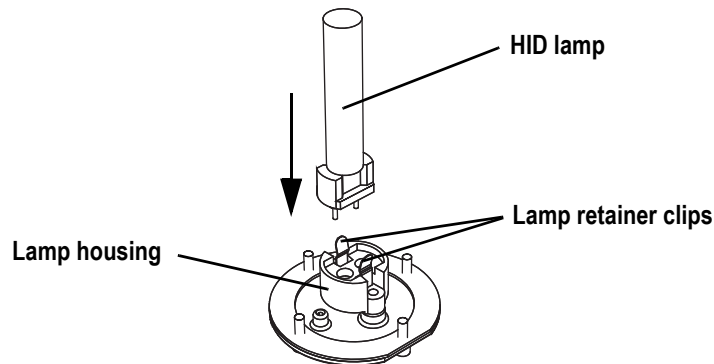


Figure-3 Inserting the Lamp into the Lamp Housing.

Step 9: Push down on the lamp base until the lamp seats firmly. When properly installed, the base of the lamp will be secured by the lamp retaining clips.



**CAUTION:**

*Improperly installed lamps cause premature lamp failure and socket problems.*

Step 10: Reinstall the lamp assembly by aligning the lamp cap with the fixture. Ensure the wire is pushed aside and not touching the lamp.

Step 11: Tighten the screws in a zig-zag pattern.

# Installation

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Install on a suitable, rigid permanent base with secured bolts. This can include poured concrete pads, factory-supplied pole-top and wall-mount brackets, and other attachments which meet the published weight and wind-load requirements for the fixture. Use the full-sized template that is included in the installation instructions or download the template at [www.etconnect.com](http://www.etconnect.com).

- Weight: 39 pounds, exclusive of accessories and/or color filters and patterns.
- Wind Load: 1.4 cubic feet of effective projected area (EPA).



**WARNING:** *Do not use this fixture with a damaged power lead. If the power lead (cordset) is damaged, it must be replaced. Failure to follow this warning can result in serious injury or death.*

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**WARNING:** *All third-party mounting hardware should be corrosion-resistant and designed for use where installed.*

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## Electrical



**CAUTION:** *The fixture must be grounded and wired in accordance with national, state and local electrical codes. Failure to do may result in serious personal injury.*

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The fixture is completely pre-wired at the factory, and there is no need for entry into the ballast housing.

## Removing and Installing the Barrel

The barrel can be removed for adjustments, focusing, installing patterns, and cleaning the lenses.



**WARNING:** *Do not remove the barrel and expose the interior of the fixture to water, such as rain or snow. Do not stand in water while installing or servicing the fixture. Failure to follow this warning can result in serious injury or death.*

### **To remove the barrel:**

- Step 1: Loosen the three 4mm hex screws around the barrel.  
Do not remove the screws but loosen enough to clear the reflector housing.

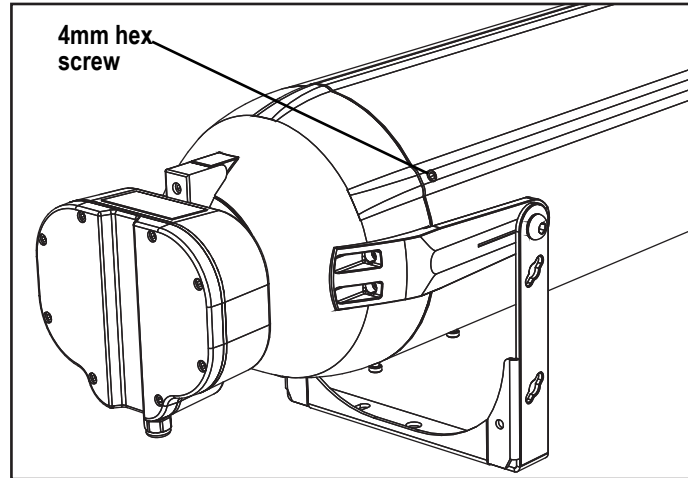


Figure-4 4mm Hex Screws on the Barrel.

- Step 2: Slide the barrel off the fixture.  
Step 3: Use the two studs on the barrel to hang it on the side of the yoke while you work.

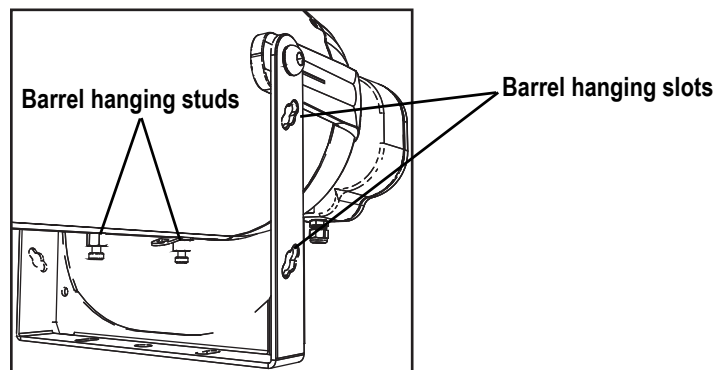


Figure-5 Barrel Hanging Studs and Slots on Yoke.

- Step 4: Use the safety loop and the optional safety cable to secure the barrel if needed.

### **To install the barrel:**

- Step 1: Slide the barrel down over the lens rails, aligning the three ridges of the barrel with the ridges on the housing.  
Step 2: With the barrel down as far as it will go, rotate it until the internal locating pins go in the locating holes.





**Note:**

*The barrel will not seal properly until the internal locating pin goes through the locating hole.*

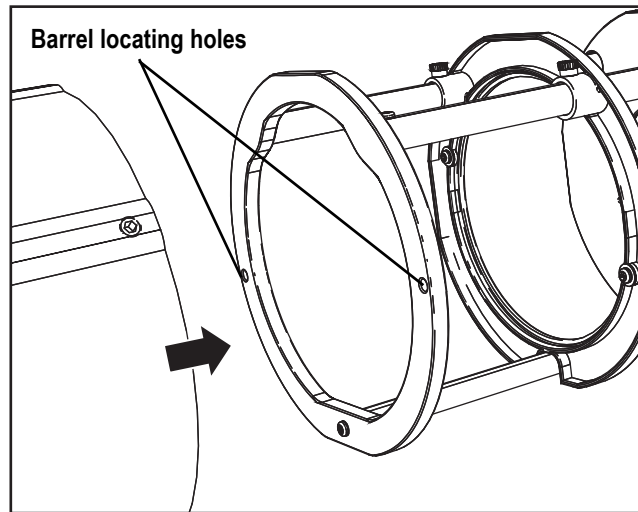


Figure-6 Internal Locating Holes in Top Ring.

- Step 3: Tighten the three 4mm hex screws around the barrel. It is recommended to partially tighten each screw, working around the barrel until all are snug. Tightening the screws draws the barrel down to the self-sealing gasket.

# Adjustments

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## Focusing the Beam

Two internal lenses control the size and focus of the light beam. Each lens is mounted in frames and these frames slide along the rails. The lens frames are secured in the desired location with two knurled thumb screws.

- The field lens is nearest the lamp and controls the width of the beam.
- The focus lens is furthestmost from the lamp and controls the focus of the beam.

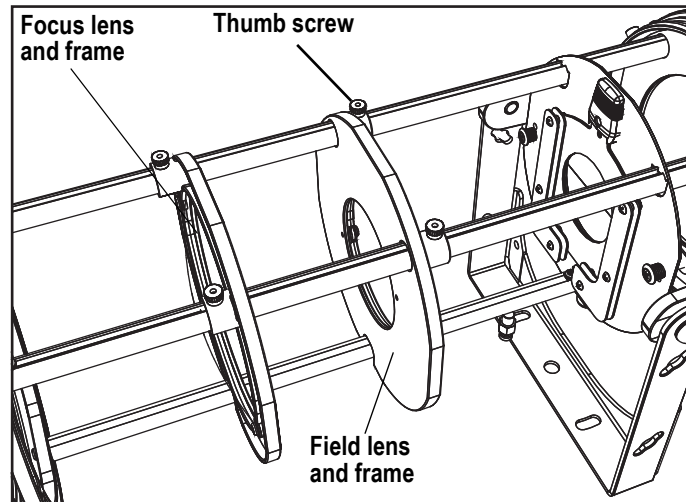


Figure-7 Lens Arrangement.



**WARNING:** *Do not remove the barrel and expose the interior of the fixture to water, such as rain or snow. Do not stand in water while installing or servicing the fixture. Failure to follow this warning can result in serious injury or death.*

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- Step 1: Remove the barrel as described in [Removing and Installing the Barrel, page 6](#).
- Step 2: Turn the Source Four XT on and aim it at a flat surface.
- Step 3: Pull the shutters outward so that the aperture is fully open. Refer to [Adjusting Shutters, page 11](#).
- Step 4: Loosen the two knurled thumb screws on the field lens holder.

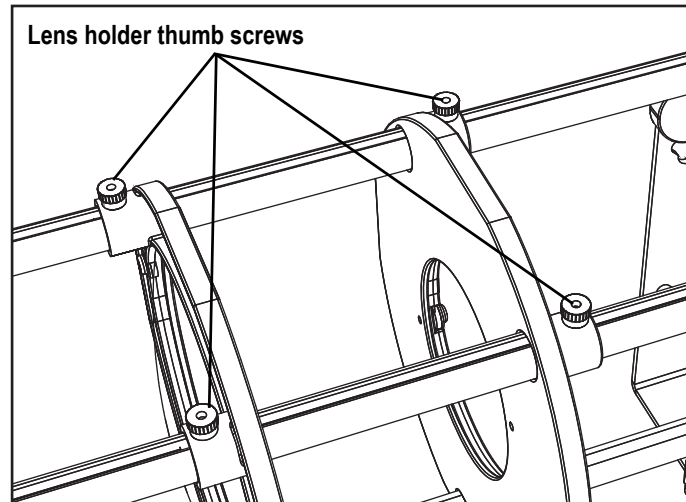


Figure-8 Thumb Screws.

- Step 5: Gently slide the field lens back and forth on the rails until you get the desired width of the beam and then finger-tighten the thumb screws.
- Moving the lens towards the lamp narrows the field angle of the beam.
  - Moving the lens away from the lamp widens the field angle of the beam.
- Step 6: Loosen the two knurled thumb screws on the focus lens holder.
- Step 7: Gently slide the focus lens back and forth on the rails until you get the desired focus of the beam and then finger-tighten the thumb screws.
- Moving the lens towards the lamp sharpens the focus so that the edges are hard.
  - Moving the lens away from the lamp softens the focus so that the edges are soft.
- Step 8: Shape the beam with the shutters and install a pattern if needed. See [Shaping the Beam, page 10](#).

## Shaping the Beam

The beam can be shaped using patterns and the shutters. The beam can also be colored with colored glass in the pattern holder.



**Note:** *The projected beam is the inverse of the inserted patterns and shutter adjustments. That is, for a pattern to be projected right side up, it is inserted upside down and backwards. Likewise, moving a shutter affects its opposite image.*

### Pattern and Color Projection

The two pattern holder slots are inside the fixture and immediately in front of the shutters. The holder slots accommodate B-size and glass pattern holders. The holder holds 2.5 and 2.75 inch diameter patterns. One pattern holder for steel patterns is supplied with the fixture. Additional glass or steel pattern holders are available from ETC.

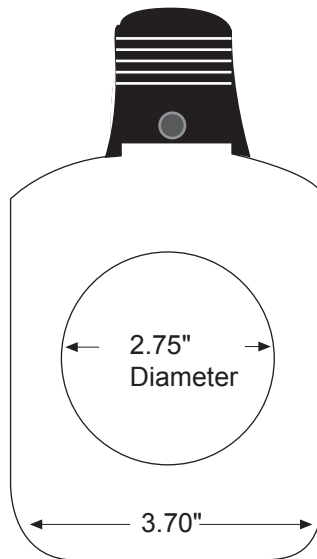


Figure-9 Pattern Holder Dimensions.

- Step 1: Remove the barrel as described in [Removing and Installing the Barrel, page 6](#).
- Step 2: Insert the pattern into the pattern holder upside down and in reverse of the desired projection.

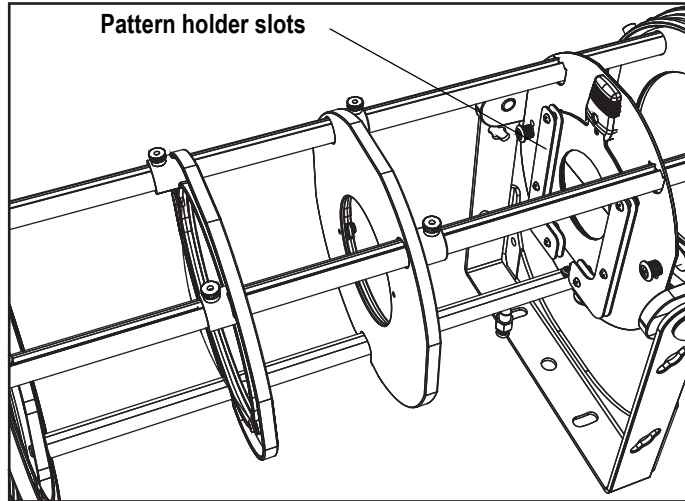


Figure-10 Pattern Holder Location.

Step 3: Adjust the focus lens if needed. See [Focusing the Beam, page 8](#).

Step 4: Reinstall the barrel.

### Adjusting Shutters

Use the shutters to shape the light beam. For example, you may want to use them to block the light from falling on part of a building. Or you may want to frame a sign. The shutters are held in place by a spring shutter retention system. You do not need to tighten or loosen the screws to make adjustments.

Step 1: Remove the barrel as described in [Removing and Installing the Barrel, page 6](#).

Step 2: Turn the Source Four XT on and aim it at the structure you are illuminating.

Step 3: Pull the shutters outward so that the aperture is fully open.

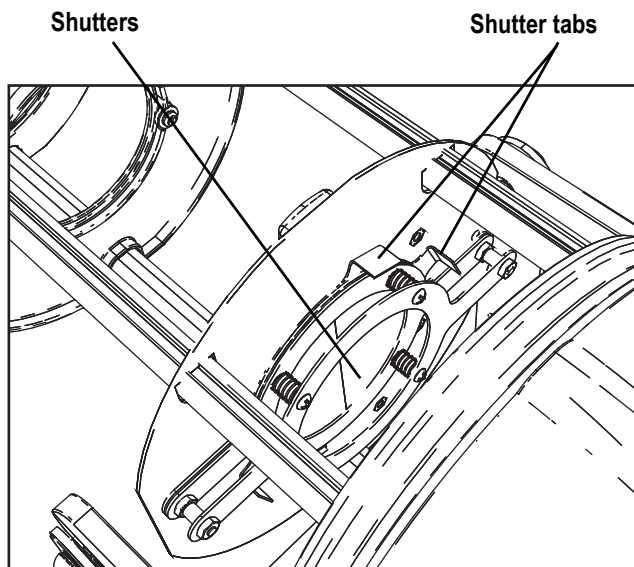


Figure-11 Shutters and Their Tabs.

Step 4: Use the tabs on the shutters to move them to block the beam as needed. Keep in mind that the blocking is reversed.

Step 5: Reinstall the barrel.

## Adjusting the Angle

The Source Four XT provides the capability to adjust the fixture angle.

- The standard yoke provides +12 to -7° horizontal tilt when ground-mounted.
- The standard yoke provides +45 to -40° when bracket or pole mounted.
- The optional long yoke allows +90 to -35° fixture angle, including straight up or down aiming.

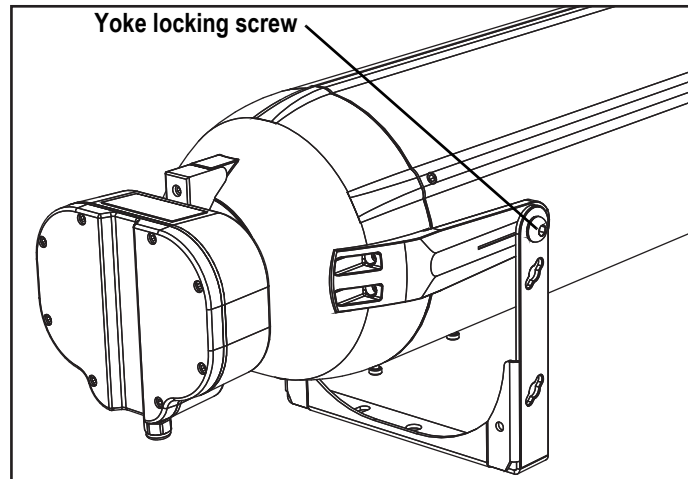


Figure-12 Yoke Locking Screw.

- Step 1: Using an 8mm hex wrench, loosen the two yoke locking screws. **Do not** remove them.
- Step 2: Tilt the fixture to the desired position.
- Step 3: Tighten the two yoke locking screws to secure in position.

# Cleaning the Lenses and Reflector

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**WARNING:** *Do not use ammonia-based or other harsh commercial cleaners. Clean lens and reflector only as directed.*

*Commercially available glass cleaning agents should be avoided as they may contain ammonia, other harsh chemical detergents or abrasive agents. These cleaners may damage the glass surface and the Anti-Reflective coatings. Do not immerse or soak the glass in any cleaning solution.*

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Replace lenses if they contain visible damage (cracks or deep scratches) that may impair their effectiveness.

## Cleaning Glass Lenses

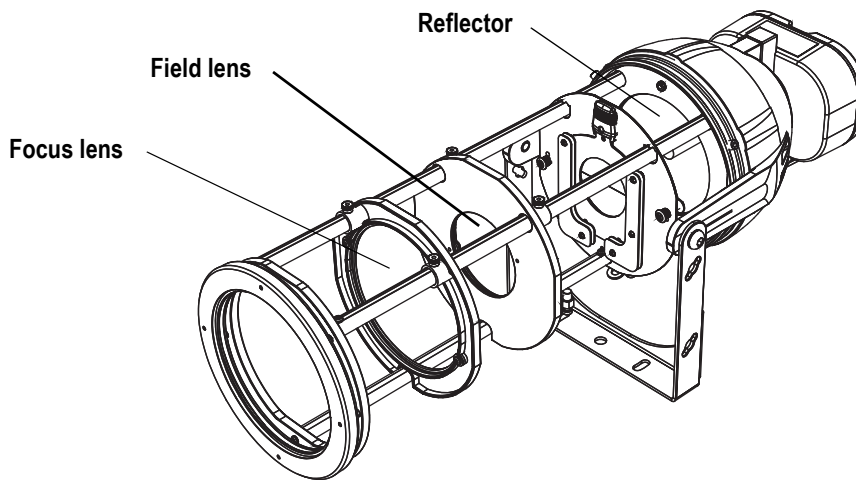


Figure-13 Internal Glass Lenses.

- Step 1: Remove the barrel.  
Refer to [Removing and Installing the Barrel, page 6](#).
- Step 2: If needed, move the lenses to access both sides of the lenses.
- Step 3: Remove dust with a blast of oil-free air or wipe with a clean, lint-free cloth. Isopropyl alcohol, distilled water or a 50%-50% mixture of each can be used to clean the glass surface.
- Step 4: If the reflector needs to be cleaned, refer to [Cleaning the reflector, page 14](#).
- Step 5: Return the lenses to the required positions if needed.
- Step 6: Replace the barrel.

## Cleaning the reflector

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**WARNING:** *Disconnect power and allow the lamp to cool down before attempting to clean the reflector.*

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To quickly clean the reflector, remove the lens tube and clean the dust from the reflector with a blast of oil-free air. You may also wipe the reflector with a clean lint-free cloth. If either method is not sufficient, follow these steps. Refer to [Figure-13](#).

Step 1: To protect the lamp during cleaning, remove the lamp assembly. Refer to [Replacing the HID Lamp, page 3](#).

Step 1: Remove the barrel.  
Refer to [Removing and Installing the Barrel, page 6](#).

Step 2: Remove dust with a blast of oil-free air or wipe with a clean, lint-free cloth. Isopropyl alcohol, distilled water or a 50%-50% mixture of each can be used to clean the glass surface.

Step 3: Gently wipe the reflector.

Step 4: Reinstall the barrel.

Step 1: Reinstall the lamp assembly.











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