

CANTO USA FOLLOWSPOT OPERATING INSTRUCTIONS

90-240VAC. 50/60HZ

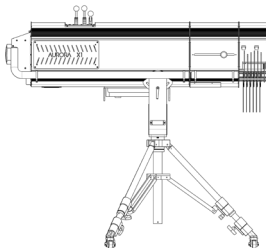
MODELS COVERED

XLED

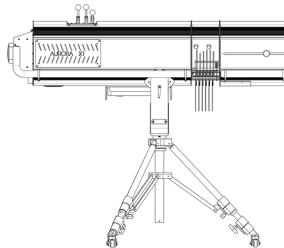
Aurora™ X1 Series - Short, Medium, Long

Thank you purchasing the Aurora™ X1 LED Followspot. We hope this product will meet your facilities or performances requirements, if for any reason this should not be the case, we ask that you contact us directly at **888-252-5912** to help address your needs. We work to provide our customers with the best products available. This product has been manufactured with maximum care in construction and choice of components. If you have received equipment that is damaged for any reason, please contact your local dealer who supplied the product within 72 hours after receiving our product.

Short Throw:



Medium Throw:



Long Throw:

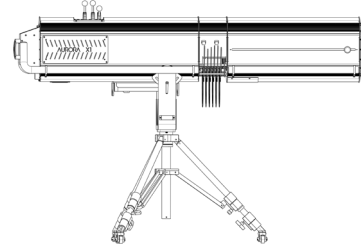


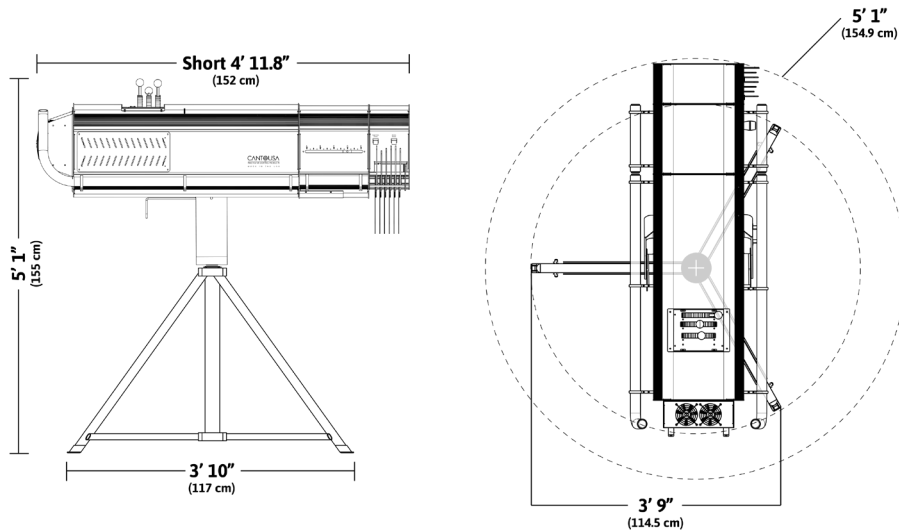
TABLE OF CONTENTS

Front Cover	1
Table of Contents	2
1: Specifications.....	3
2: Important Safety Protocols	5
3: Checking The Shipment (Per Fixture:).....	6
4: Aurora™ X1 Feature Overview	7
5: Aurora™ X1 Assembly	8
5.1: Tripod	8
5.2: Mounting the Yoke.....	9
5.3: Mounting the Base Body	10
For Medium Throw or long throw Configuration.....	11
(For Short Throw Configuration skip to 5.6)	
5.4: Medium Throw or Long Throw: Mounting the Gel Changer	11
5.5: Medium Throw or Long Throw: Mounting the Lens Tube	12
For Short Throw Configuration.....	14
(For Medium or Long Throw Configuration skip to 5.4)	
5.6: Short Throw Configuration: Mounting the Lens Tube	14
5.7: Short Throw Configuration: Mounting the Gel Changer	16
5.8: Mounting the LED Engine	17
5.9: Power Off or On Safety	21
6: Removing LED Engine (for Replacement or Service)	22
7: Re-Installing the LED Engine	26
8: Installing A Gobo! (AKA Projection Pattern)	30
9: Restoring Balance: Without Much Force.	33
10: Electrical Connections Matrix:	37
11: Gel Changer Overview and Operation	40
12: Control Panel Overview and Operation	41
13: Replacing the Fuse.....	42
14: Focusing the light.....	43
15: Cleaning and Maintenance	44
16: DMX/RDM	47
17: Changing a Gel Frame	48
18: Troubleshooting/Operation Guide	52
19: Spare Parts.....	54
20: Warranty.....	55

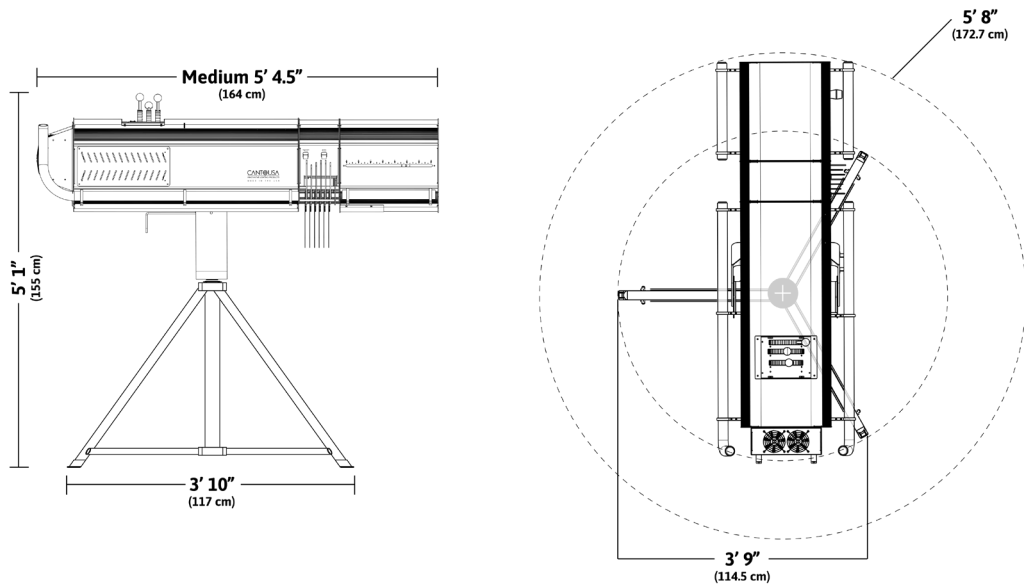
1: SPECIFICATIONS

Voltage	CRI	Full Power	Standby	Weight
90-240VAC 50/60Hz	90	7.7 A @ 120 VAC = 924 Watts	0.47 A	Long Head: 154 lb Medium Head: 138 lb Short Head: 132 lb Yoke assembly: 36 lb Tripod: 26 lb

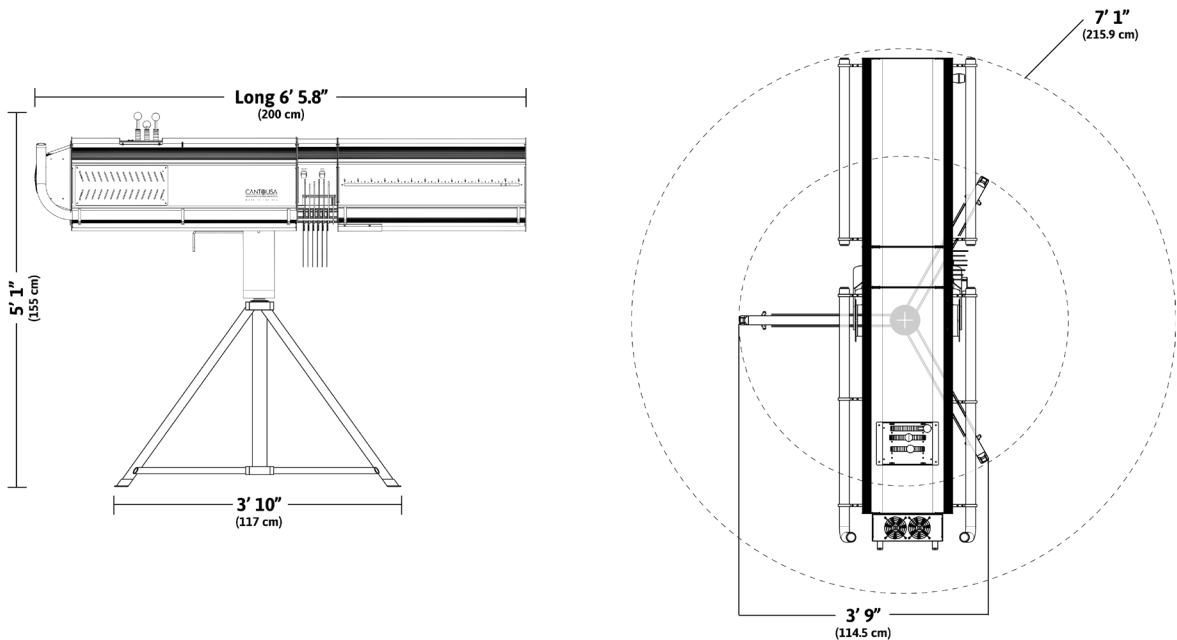
Short Throw Configuration:



Medium Throw Configuration:



Long Throw Configuration:



2: IMPORTANT SAFETY PROTOCOLS

CAREFULLY READ THE OPERATING INSTRUCTIONS BEFORE USING THIS FIXTURE.

These instructions are provided to ensure safe operation of this product. Failure to comply with the installation, operation, maintenance and safety procedures provided in this manual, as well as practices generally applicable to lighting equipment, may cause the fixture to not perform as expected.

Canto USA accepts no liability for direct, indirect, incidental, special, or consequential damages resulting from the customer's failure to follow the installation, operating, maintenance, and safety procedures described in this manual. These limitations extend to damages for personal injury, property damage, loss of operation, loss of profits, loss of product, or loss of time, whether incurred by the customer, the customer's employees, or third-party vendors or users.

Apart from the instructions given in this manual, all relevant safety and health standards of the appropriate local city and state electrical / safety directives must be complied with.

PLEASE SEE OUR GENERAL TERMS OF SALE AND WARRANTY CARD PROVIDED WITH YOUR NEW EQUIPMENT OR EMAIL US FOR A COPY.

IMPORTANT SAFETY NOTES

This product may reach high temperatures depending on the model ordered. Avoid any direct contact with its metal exhaust parts.

*** NEVER WORK INSIDE AN OPERATING UNIT WITHOUT IT BEING COOLED AND UNPLUGGED FROM POWER SOURCE. NEVER EVER WORK INSIDE A UNIT THAT IS TURNED ON.**

*These products use fan-assisted ventilation. Ensure the fans airflow is not obstructed at any time. Ensure the fans are working correctly at all times. In the event of a malfunction, such as no light or fan output, switch the fixture off immediately and carry out the necessary servicing.

*This product is rated IP 20 and is designed for interior use only.

*To replace the LED, make sure the LED is powered off and cold before attempting to remove it. To perform a correct installation of the LED module, please refer to the LED module's instructions included in the LED module box and the relevant chapters in this manual.

*Replacement of any part of the wiring system must be carried out by Canto USA authorized and trained technicians and be in compliance with the original wiring diagram and with components identical or compatible with those originally used in the product's construction. The replacement will be compliant with the safety procedures enforced in the country where the product is being used, with the relevant safety and health standards and only with original Canto USA components.

3: CHECKING THE SHIPMENT (PER FIXTURE:)

Here is what is included with every Aurora™ X1 fixture:

- ☐ 1 - Base Body Enclosure with Integrated LED Driver and Control Panel (Box Dimensions: 46.5" x 27.5" x 24.5")
- ☐ 1 - Yoke Assembly (28.5" x 26.5" x 14.4") (PN: XLED00009)
- ☐ 1 - Tripod Assembly (9" x 9" x 42") (PN: TRIP00256)
- ☐ 1 - Gel Changer Assembly (20" x 20" x 12") (PN: XLED00013)
- ☐ 1 - LED Engine Module - 90CRI 6000K (20" x 20" x 12") (PN: XLED00008)
- ☐ 1 - Lens Tube- Either Short Throw (PN: XLED00004), or Medium Throw (PN: XLED00005) or Long Throw (PN: XLED00006)
You will only receive one of these items, unless you purchased additional lens tubes, only one is provided)
- ☐ 1 - Accessory box (12" x 12" x 6") (PN: XLED00025 for Edison, PN: XLED00026 for L6-30, PN: XLED00027 for Bare Ends) which includes
 - ☐ a. Power Cable
 - ☐ b. T Handle
 - ☐ c. Nuts
 - ☐ d. Manual
- ☐ 1 - Tool Pouch (PN: XLED00017 sold as 1 per 2 units) which includes
 - ☐ a. Ratcheting Screwdriver
 - ☐ b. Flexible Shaft Bit Extender
 - ☐ c. Variety of Bits:
 - ☐ i. Phillips Screw Bit
 - ☐ ii. Security Bit TX27
 - ☐ iii. 3/16 Hex Bit
 - ☐ iv. Security Bit TX15
 - ☐ v. Flathead Screw Bit
 - ☐ d. Lens Wipes

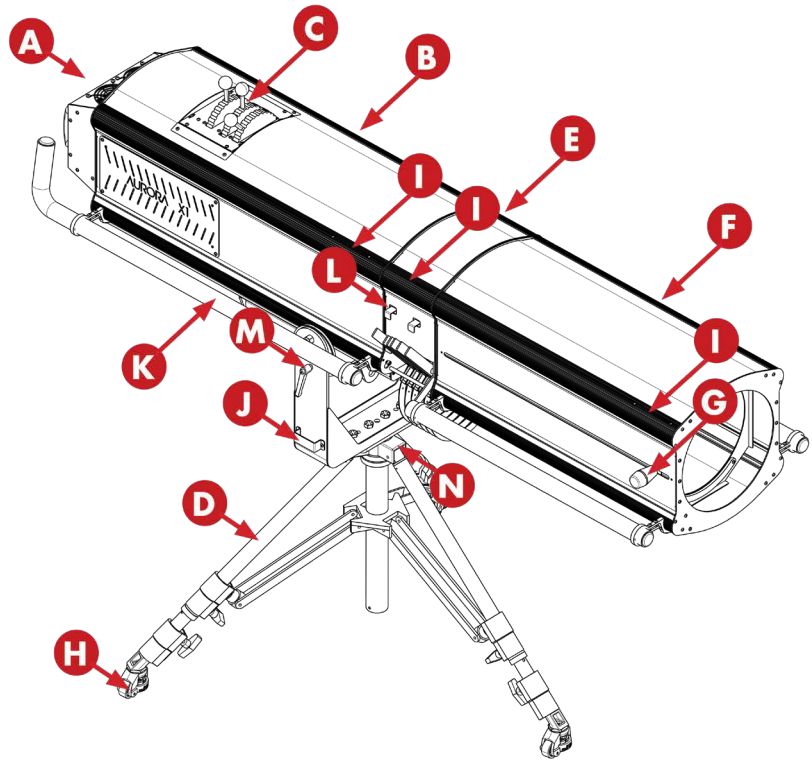
Please unbox and examine all items to determine that no damage to any of the sub-assemblies of the fixture have occurred.

All the boxes these items are inside of should be shrink wrapped and delivered on a 48-inch x 48-inch pallet. If any of these items are missing or damaged during shipping, please take pictures immediately and contact the dealer who provided this product.

4: AURORA™ X1 FEATURE OVERVIEW

Features

- A: LED Engine Module
- B: Base Body
- C: Control Panel
- D: Tripod
- E: Gel Changer
- F: Lens Tube
- G: Focus Handle
- H: Caster Wheels
- I: Tel Rad Mount Points
- J: Com Belt Pack Mount Bracket
- K: Operators Handle
- L: Gel Release Buttons
- M: Tilt Lock/Tension Handle
- N: Pan Lock/Tension Knob (Under Yoke)



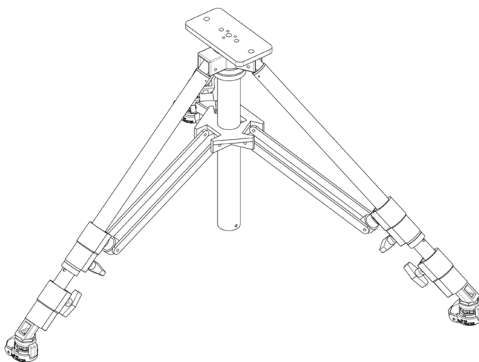
5: AURORA™ X1 ASSEMBLY

Upon completion of the checklist from page 7, it is time to assemble the Aurora™ X1 LED Followspot!

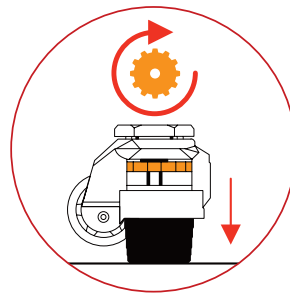
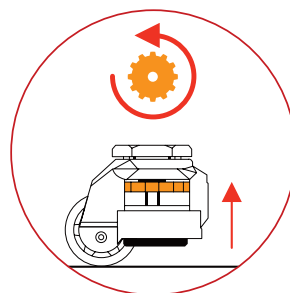
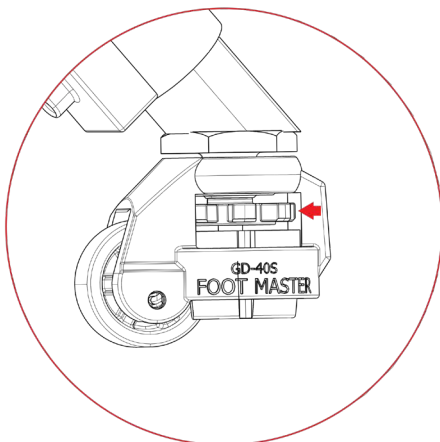
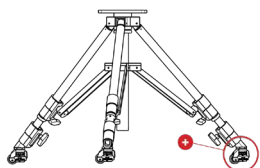
5.1: Tripod

Step 1: Tripod

Place the tripod in the location the followspot is to be positioned.



If the tripod was provided with caster wheels, ensure the rubber feet are extended all the way to the floor so the fixture cannot move during set up. This is done by adjusting the orange thumb wheel in a clockwise rotation until the pad touches the floor.

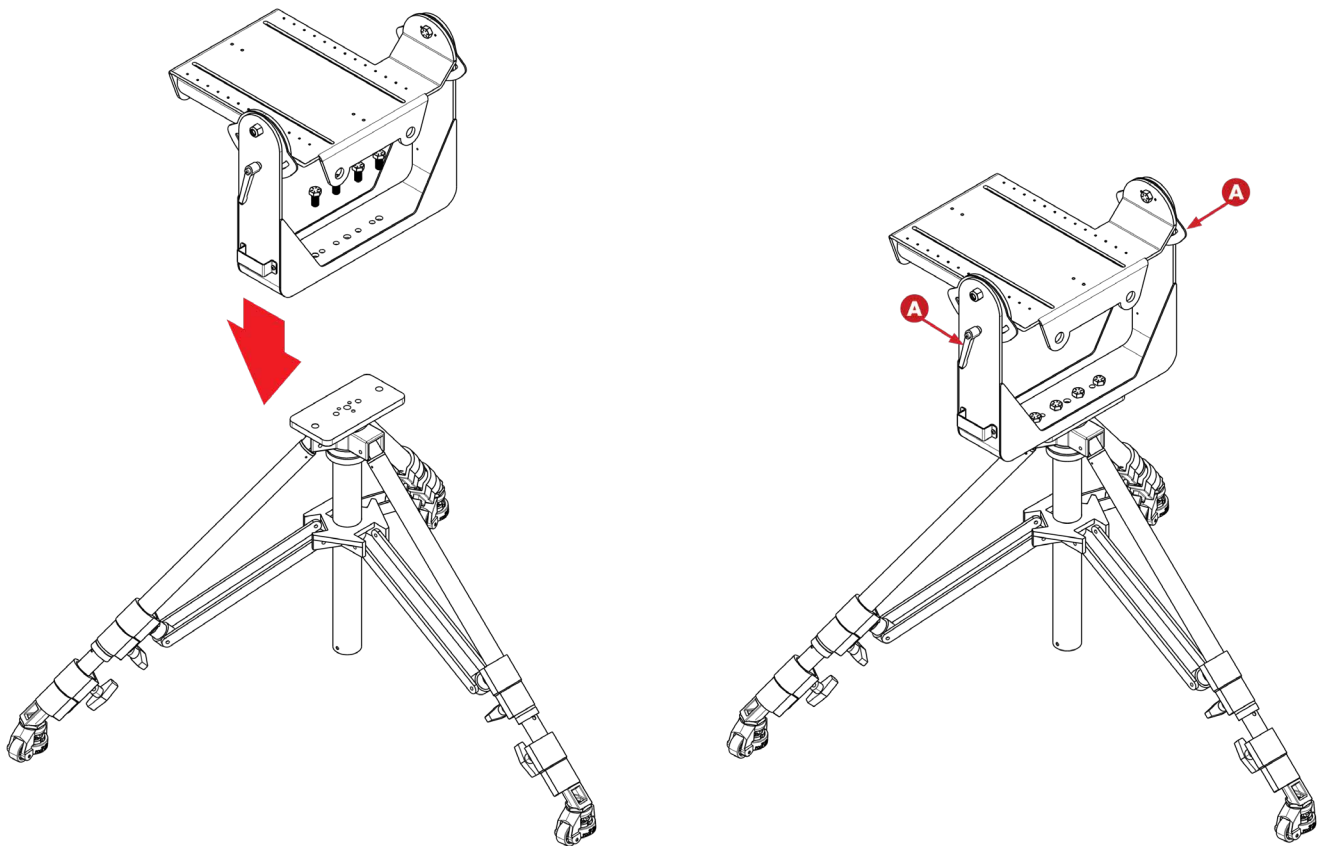


5.2: Mounting the Yoke

Step 2: Mounting the Yoke

Remove the bolts and washers (4) and nut and washer (1) from the plate of the tripod and set them aside. Once completed, place the yoke assembly on top of the tripod plate. Secure the yoke with the bolts and washers (4) and nut and washer (1). Use a wrench to tighten down the yoke to the tripod mounting plate.

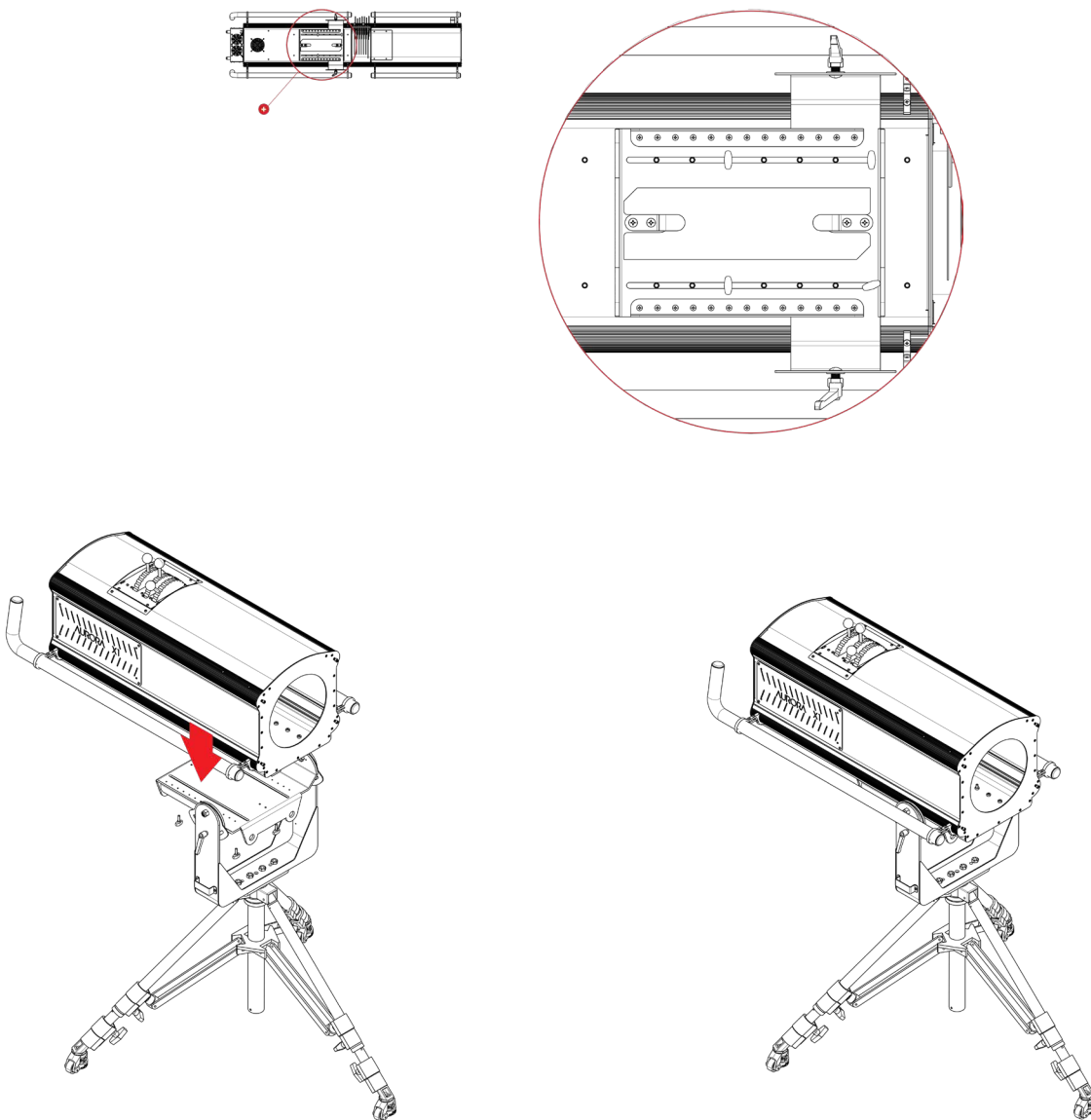
Once the bolts and nuts are tightened, orient the yoke tray parallel with the floor. Tighten both tilt handles (A) on the yoke until the yoke tray cannot move when weight is applied to the surface furthest away from the center bolt of the yoke.



5.3: Mounting the Base Body

Step 3: Base Body

Once the yoke is secured to the tripod, with the assistance of another person, mount the base body assembly to the top of the yoke plate. Use the included (4) T handle screws and washers to secure the base body assembly to the yoke via the threaded inserts on the bottom plate of the base body assembly. Be sure to spread the screws at least two or more holes apart to evenly distribute the weight on the yoke plate.



The front of the fixture should be close to flush with the front edge of the yoke tray.

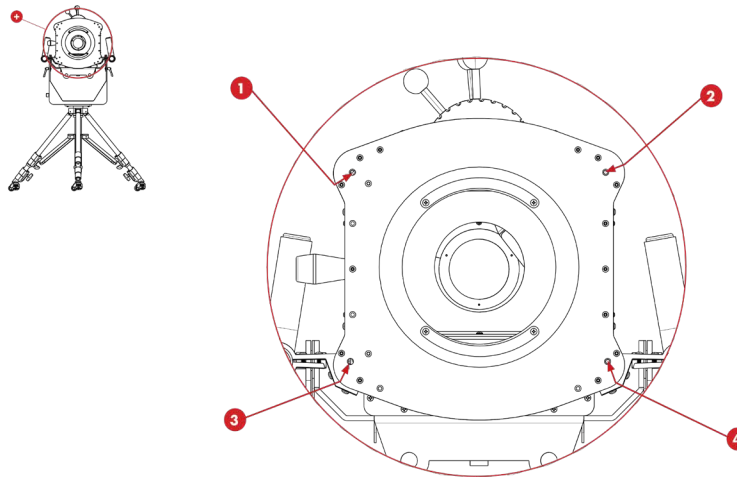
CAUTION: AT THIS POINT THE FIXTURE WILL BE UNBALANCED AND UNSTABLE. PROCEED WITH CAUTION UNTIL THE GEL CHANGER, LENS TUBE, AND LED ENGINE ARE INSTALLED.

FOR MEDIUM THROW OR LONG THROW CONFIGURATION

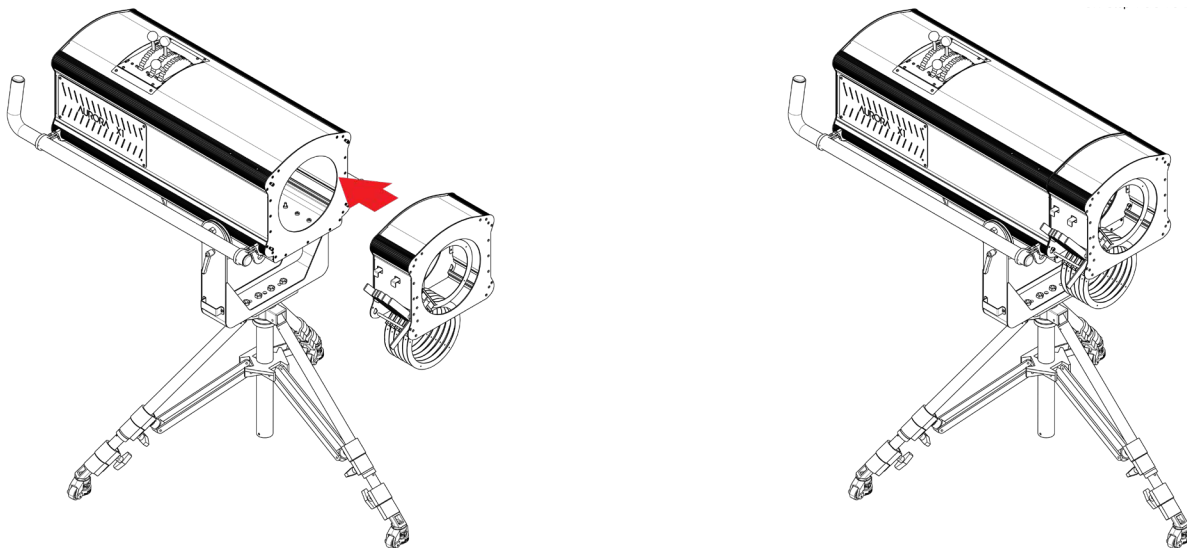
5.4: Medium Throw or Long Throw: Mounting the Gel Changer

Step 4: Mounting the Gel Changer

Loosen the 4 hex screws on the front of the base body so that there is about ¼ inch of space between the base of the screw head and the front plate.



Align the gel changer and four screw slots on the back and hang the gel changer off those screws. The gel changer should rest on the screws body.



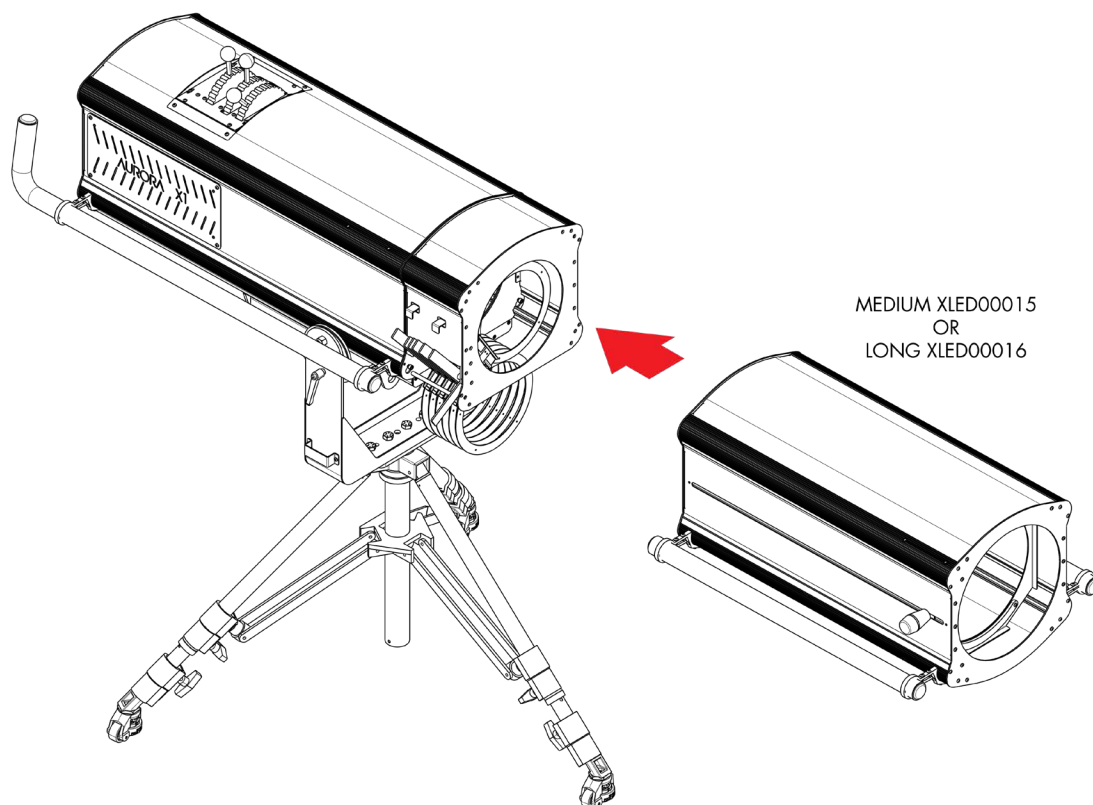
Using the provided ratcheting screwdriver along with the flexible bit extender and the 3/16" hex bit to reach inside of the gel changer and tighten those same screws as tight as possible. Ensure a firm, hi-torque connection. Gently attempt to lift the unit by wiggling the front of the gel changer front plate. If the gel changer does not move it is correctly installed. If it moves more tensioning is needed.

5.5: Medium Throw or Long Throw: Mounting the Lens Tube

Step 5: Mounting the Lens Tube (Medium Throw or Long Throw)

Loosen the hex screws on the front of the gel changer to be $\frac{1}{4}$ inch from the base of the screw head to the front plate.

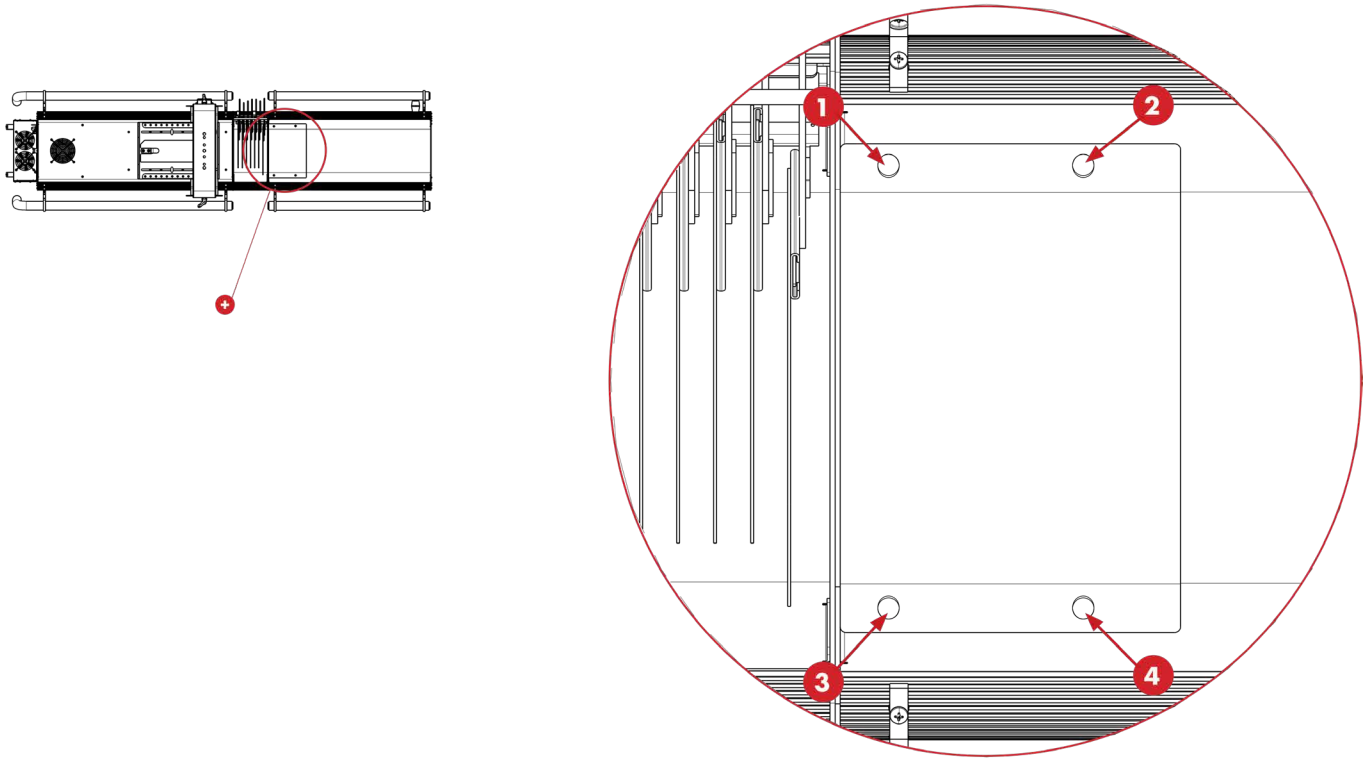
The long throw lens tube may require assistance from an additional person to help with lifting. Align the 4 screw holes on the tube with the hex screws. Mount the lens tube in such a way that the lens tube is resting on the threads of the screw.



5.5: Medium Throw or Long Throw: Mounting the Lens Tube

Step 5: Mounting the Lens Tube (Medium Throw or Long Throw) (Continued)

Remove the bottom access panel via the 4 x thumbscrews.



Once the access panel is removed switch the screwdriver over to the 3/16 inch hex bit with the flexible bit extender. Tighten the 4 hex screws which the lens tube is sitting on until tight.

After the hex screws are tightened down securely, re-install the bottom access panel.

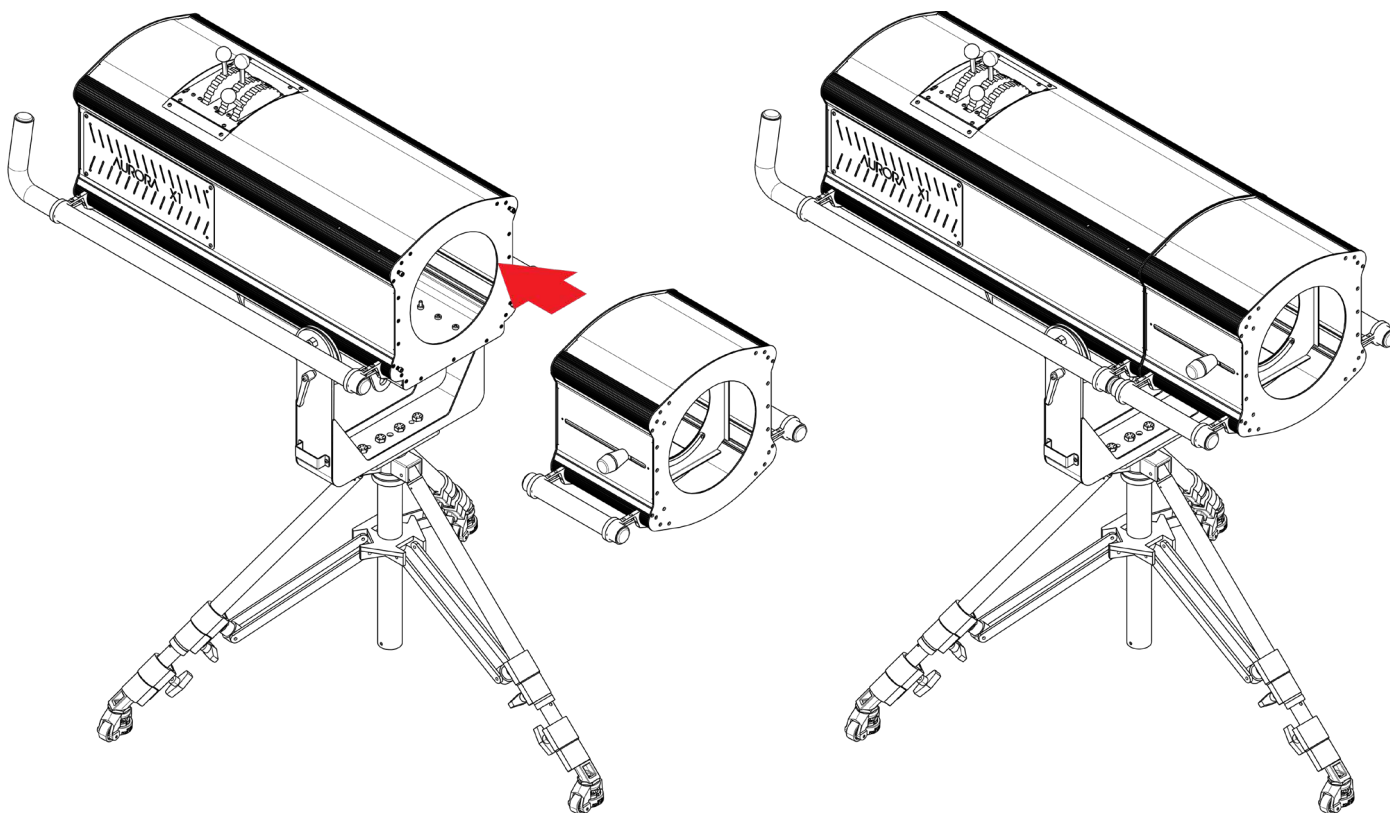
FOR SHORT THROW CONFIGURATION

5.6: Short Throw Configuration: Mounting the Lens Tube

Step 4: Mounting the Lens Tube

Loosen the hex screws on the front of the gel changer to be $\frac{1}{4}$ inch from the base of the screw head to the front plate.

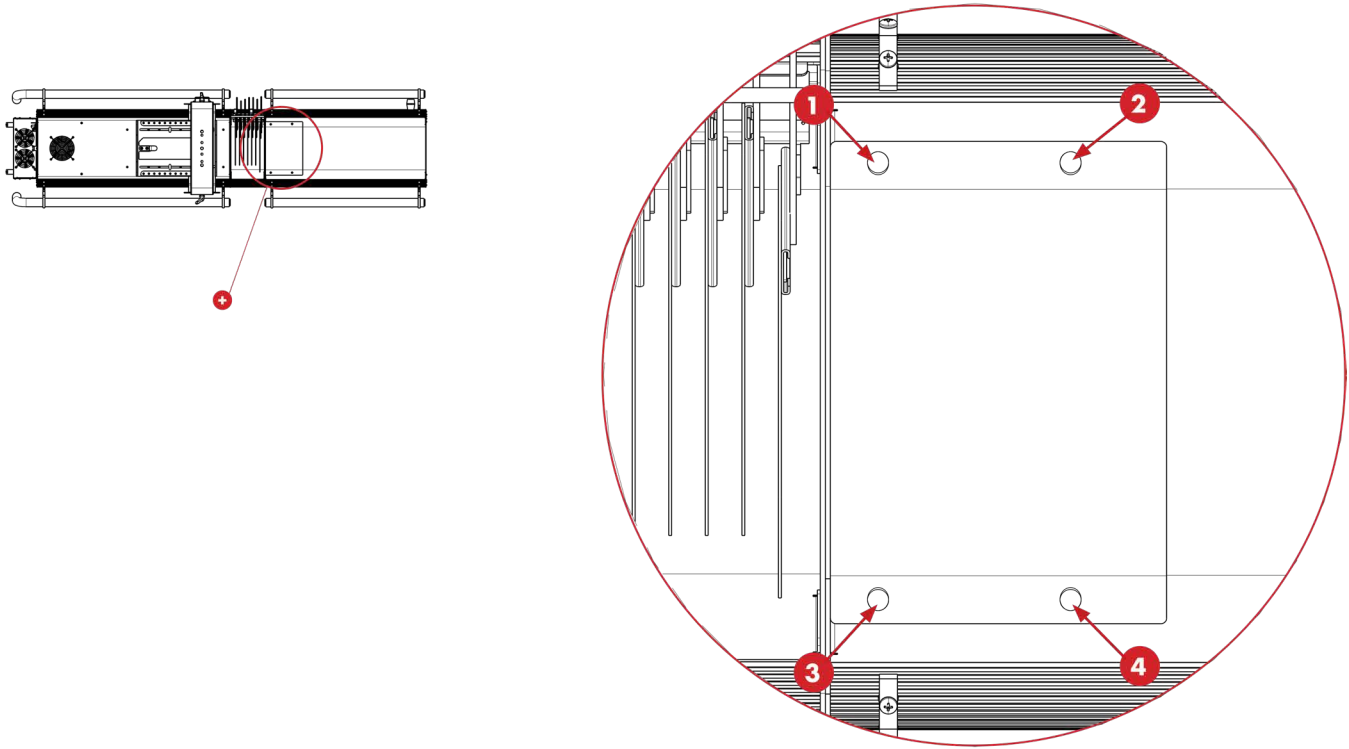
Align the 4 screw holes on the tube with the hex screws. Mount the lens tube in such a way that the lens tube is resting on the threads of the screw.



5.6: Short Throw Configuration: Mounting the Lens Tube

Step 4: Mounting the Lens Tube (Continued)

Remove the bottom access panel via the 4 x thumbscrews.



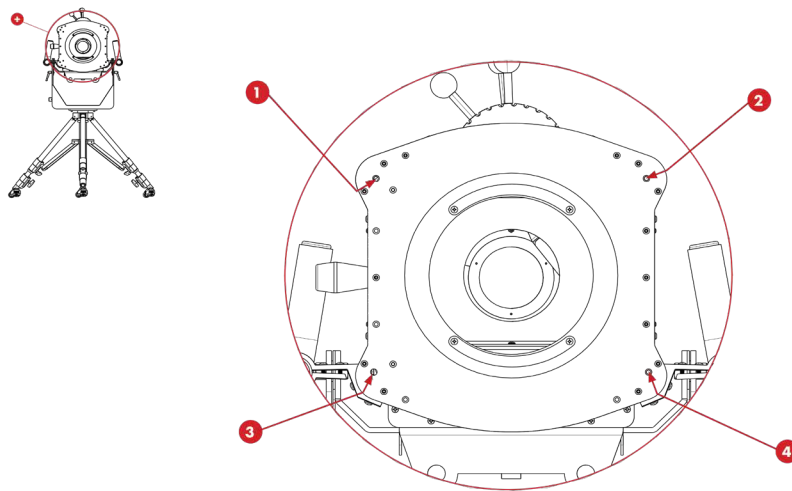
Once the access panel is removed switch the screwdriver over to the 3/16 inch hex bit with the flexible bit extender. Tighten the 4 hex screws which the lens tube is sitting on until tight.

After the hex screws are tightened down securely, re-install the bottom access panel.

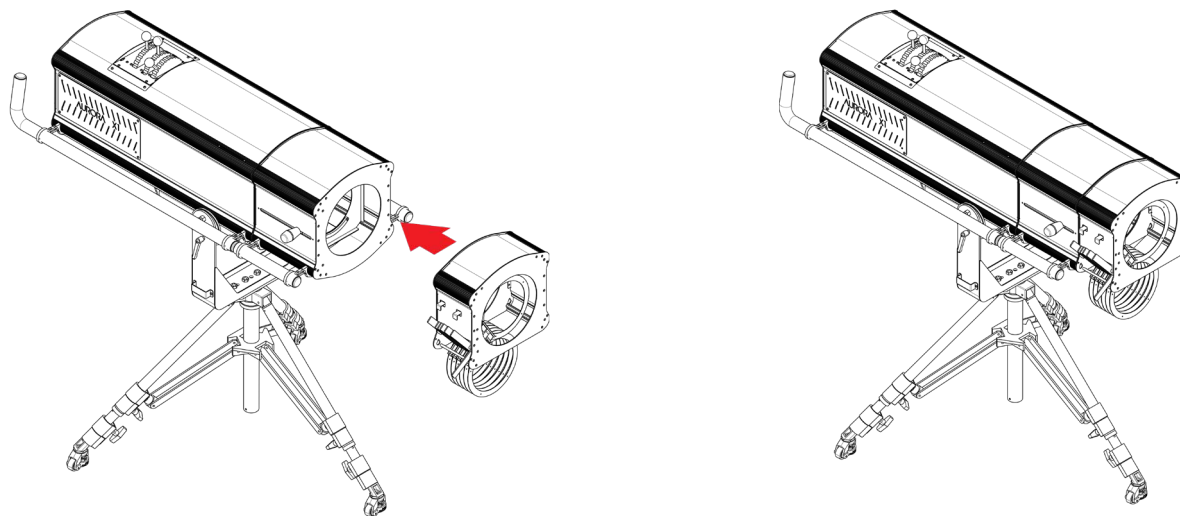
5.7: Short Throw Configuration: Mounting the Gel Changer

Step 5: Mounting the Gel Changer

Loosen the four hex screws on the front of the base body so that there is about ¼ inch space between the base of the screw head and the front plate.



Align the gel changer and 4 screw slots on the back and hang the gel changer off those screws. The gel changer should rest on the screws body.

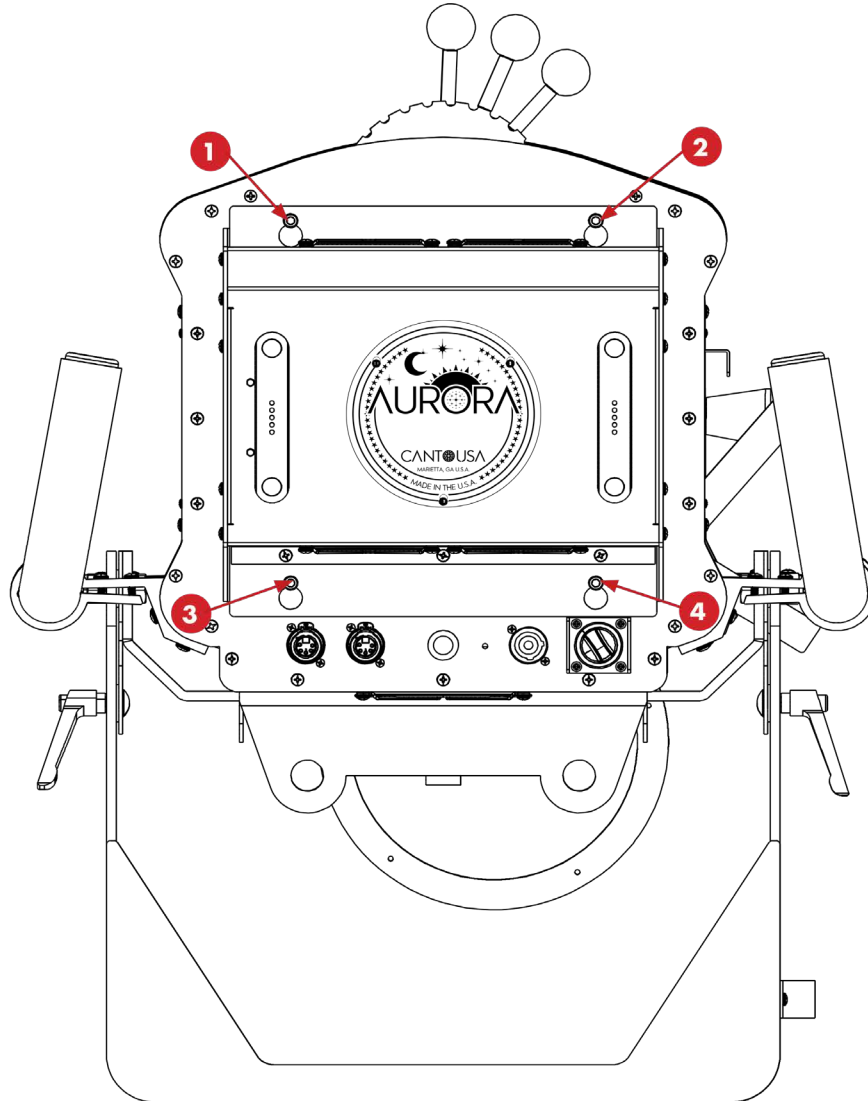


Using the provided ratcheting screwdriver along with the flexible bit extender and the 3/16" hex bit to reach inside of the gel changer and tighten those same screws as tight as possible. Ensure a firm, hi-torque connection. Gently attempt to lift the unit by grabbing the front of the gel changer front plate. If the gel changer does not move it is correctly installed. If the changer moves or seems loose more tensioning is needed.

5.8: Mounting the LED Engine

Step 6: Mounting the LED Engine

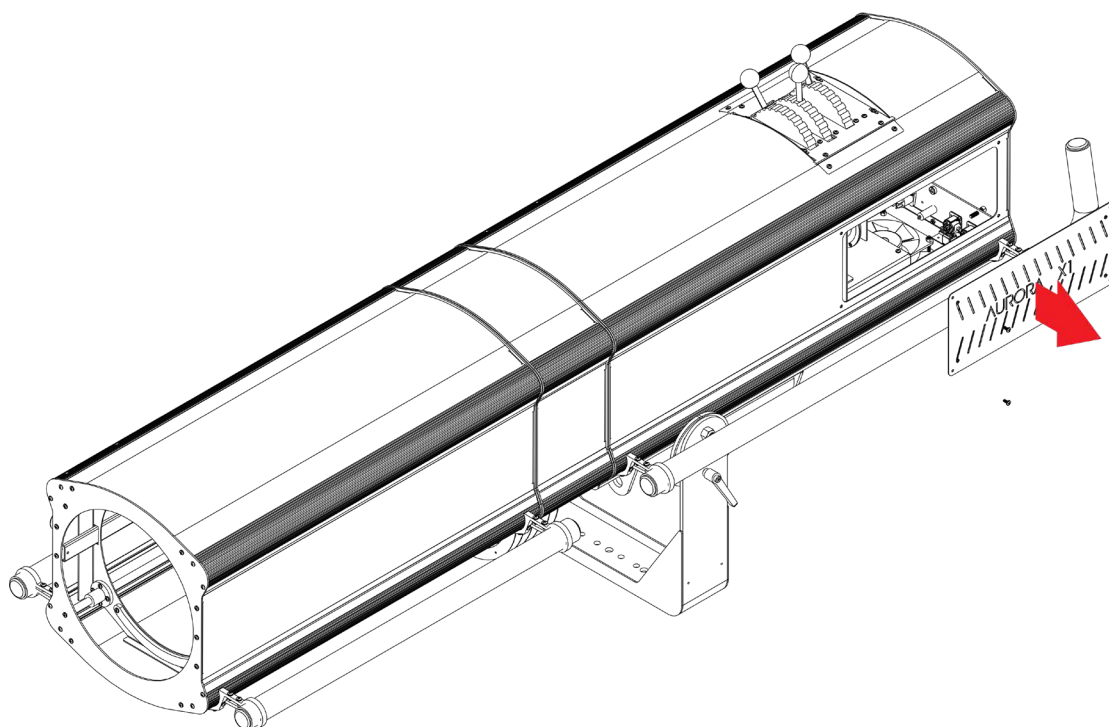
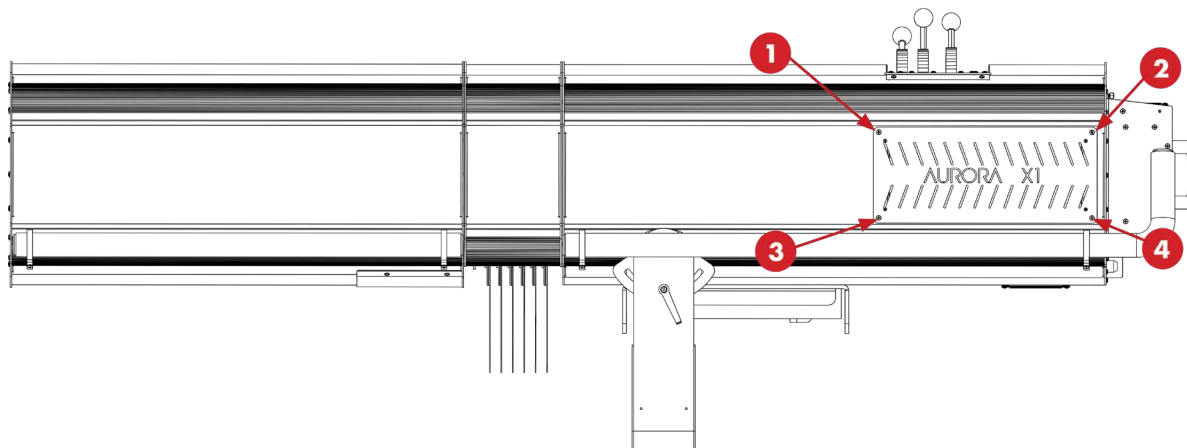
At the rear of the fixture, using the supplied ratcheting screwdriver along with the #2 Phillips or TX27 bit, depending on which version you have, loosen the 4 screws till there is about 1/4 inch of space between the head of the screw and the back panel of the base body.



5.8: Mounting the LED Engine

Step 6: Mounting the LED Engine (Continued)

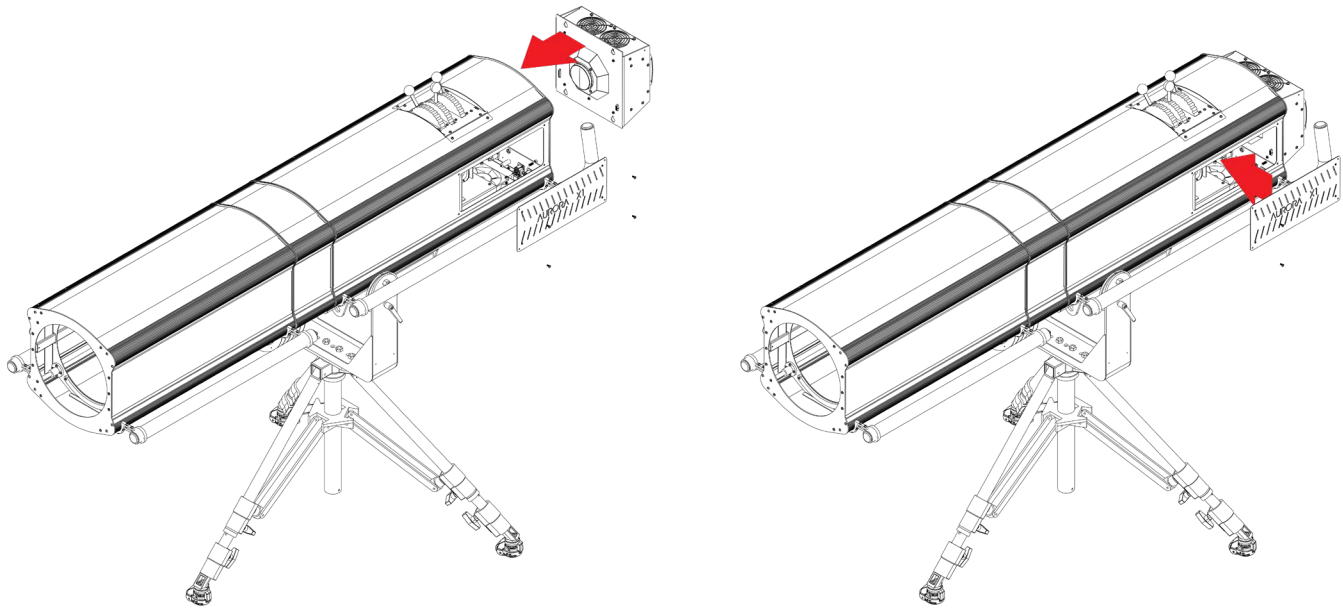
There is a panel on the left non-operator side of the unit for service access. Utilizing the thumbscrews or a TX27 security bit, depending on which version you have, remove the side panel of the base body to access the wire harnesses that are attached to the LED driver enclosure on the bottom of the base body assembly.



5.8: Mounting the LED Engine

Step 6: Mounting the LED Engine (Continued)

Holding the LED engine, align the screws with the 4 holes on the LED engine and then resting the engine on the screw threads on the body of the LED engine.



Tighten the screws utilizing the TX27 or #2 Phillips, depending on which version you have, on the back panel of the LED fixture. With the left side panel open, locate the plastic cover on the LED engine. There will be a thin plastic cover protecting the LED engine's glass. Remove the plastic cover and save all these items and the boxes and foam inserts in case items need to be serviced and sent back to the factory in the future. Each followspot part is shipped with every box and insert that is needed.

5.8: Mounting the LED Engine

Step 6: Mounting the LED Engine (Continued)

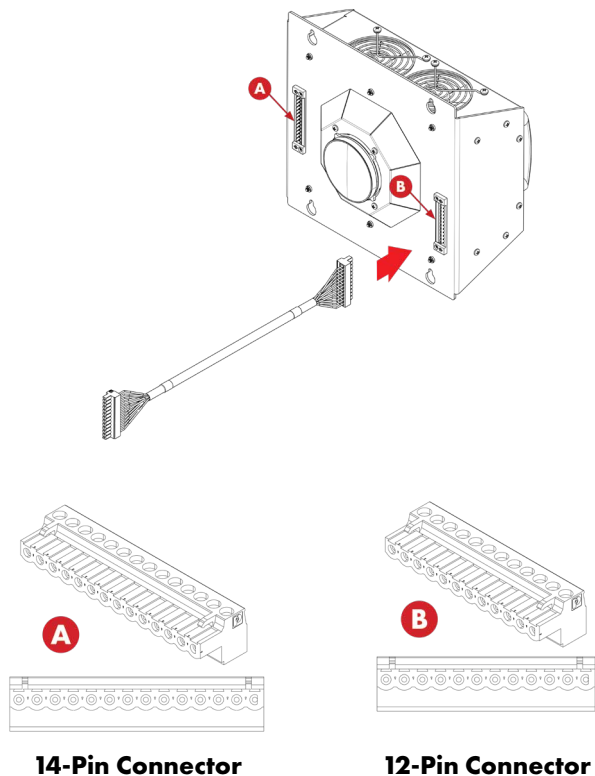
X1: Manufactured before 6/1/23

Plug the two harnesses "A" and "B" into their appropriate ports on the LED Engine. The polarity of the connectors is not reversible. The connectors will easily plug into the proper ports. If a connection is difficult to insert it may be the wrong port which means the LED engine is upside down.

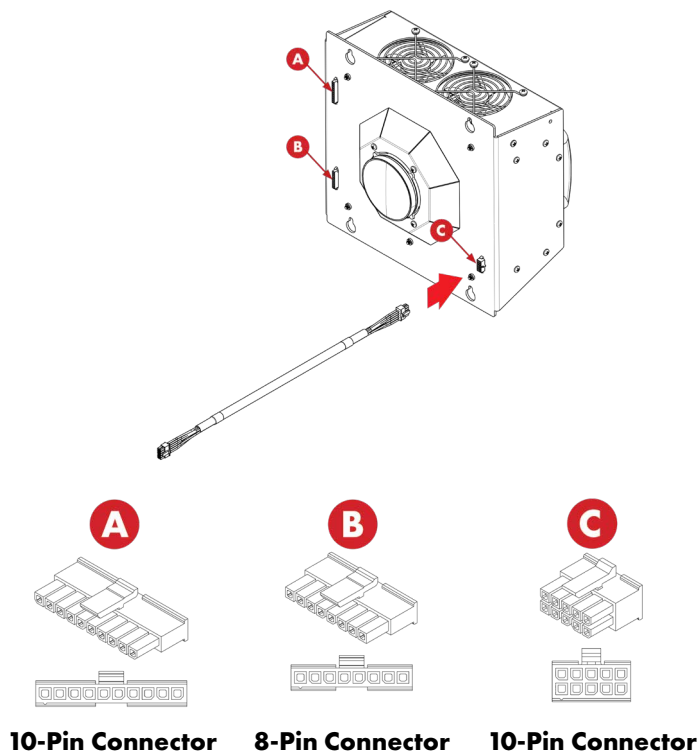
X1+DMX: Manufactured after 6/1/23

Plug the three harnesses "A", "B", and "C" into their appropriate ports on the LED Engine. The polarity of the connectors is not reversible. The connectors will easily plug into the their proper ports. If a connection is difficult to insert it may be the wrong port or may mean the LED engine is upside down.

X1: Manufactured before 6/1/23



X1+DMX: Manufactured after 6/1/23



NOTE: REFER TO THE ELECTRICAL CONNECTIONS MATRIX SECTION FOR FURTHER DETAILS IF NECESSARY.

Once the cables are plugged in, properly secured, and dressed so they are not in the light path re-install the side panels.

NOTE: BEFORE CLOSING UP THE SIDE PANEL, PLEASE CHECK ALL ELECTRICAL CONNECTIONS INSIDE THE FIXTURE, BOTH THE CONNECTIONS MADE DURING INSTALLATION AND NOT. THIS IS TO ENSURE NOTHING LOOSEENED DURING SHIPMENT OF THE FIXTURE OR DURING THE INSTALLATION PROCESS.

5.9: Power Off or On Safety

Step 7: Power

Check the power switch on the back panel of the base body and make sure that it is switched to OFF.

Using the provided power cord, plug the Neutrik True One Top Connector into the connector on the back panel of the fixture.

Connect the plug of the power cord (either Edison, Twistlock or other) to the source of power (100-240VAC 50/60hz)

NOTE: IT IS ALWAYS RECOMMENDED TO TEST THE PROVIDED POWER BEFORE PLUGGING THE POWER CONNECTOR IN TO ENSURE THE VOLTAGE IS CORRECT AT THE RECEPTACLE AND THERE IS NOT ANY MISWIRING.

Congratulations, it is now time to power on the Aurora™ X1 fixture!

Step 8: LIGHT THE FIXTURE!

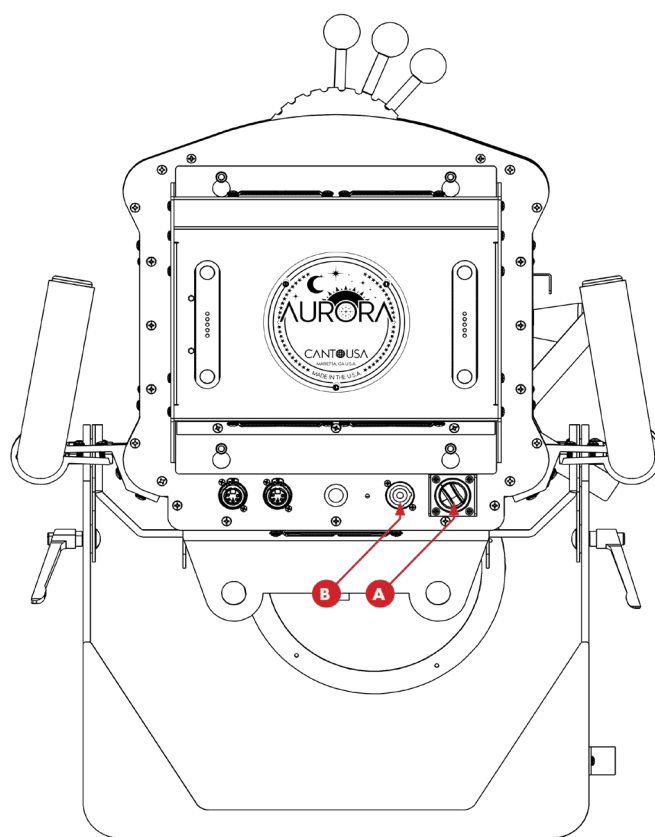
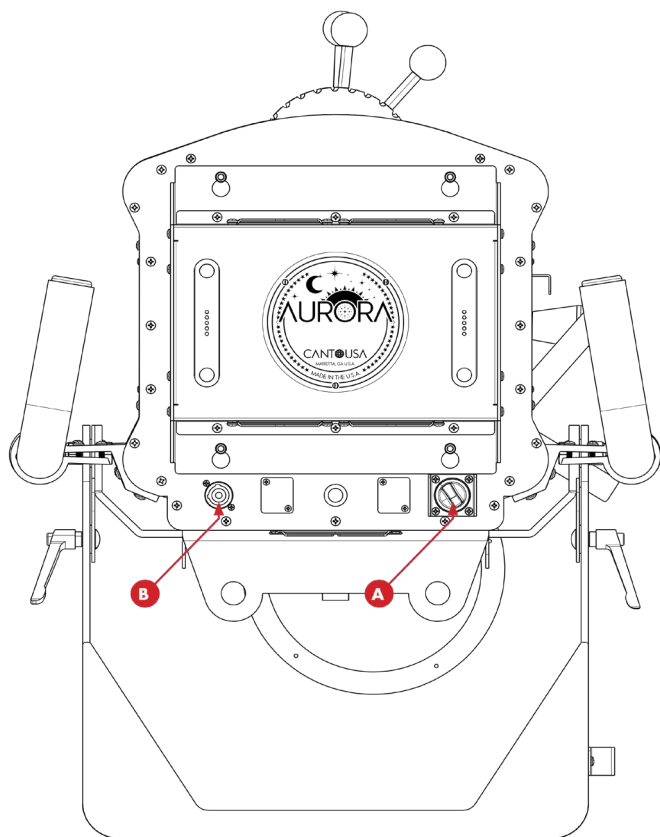
6: REMOVING LED ENGINE (FOR REPLACEMENT OR SERVICE)

Step 1: Power off fixture (A) and unplug power cable (B) from the back of the fixture.

*** NEVER WORK INSIDE AN OPERATING UNIT WITHOUT IT BEING COOLED AND UNPLUGGED FROM POWER SOURCE. NEVER WORK INSIDE A UNIT THAT IS TURNED ON.**

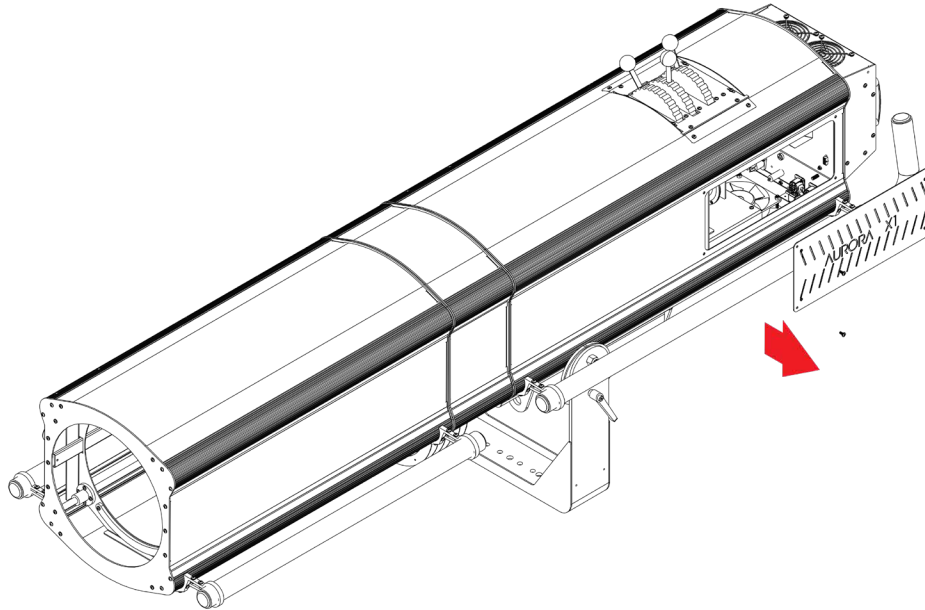
X1: Manufactured before 6/1/23

X1+DMX: Manufactured after 6/1/23



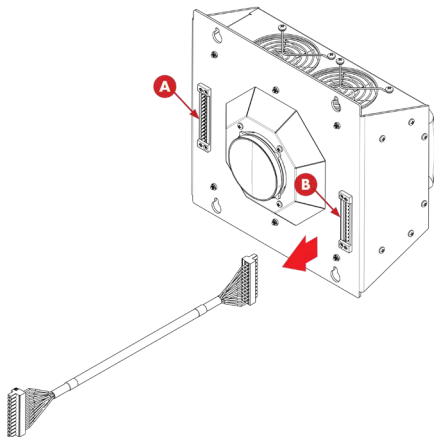
NOTE: LOCK DOWN BOTH TILT HANDLES BEFORE INSTALLING OR REMOVING LED ENGINE FOR IT MAY CAUSE FIXTURE YOKE TO BECOME OUT OF BALANCE, WHICH MAY CAUSE HARM TO FIXTURE OPERATOR.

Step 2: Remove lefts side panel on the base body using the thumbscrews or the provided screwdriver and security bit TX15, depending on which version you have.

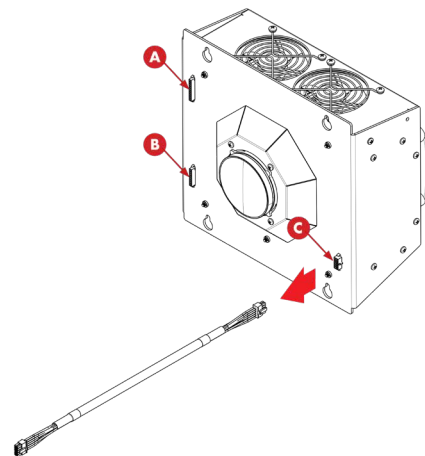


Step 3: Unplug harnesses from the LED engine inside the base body.

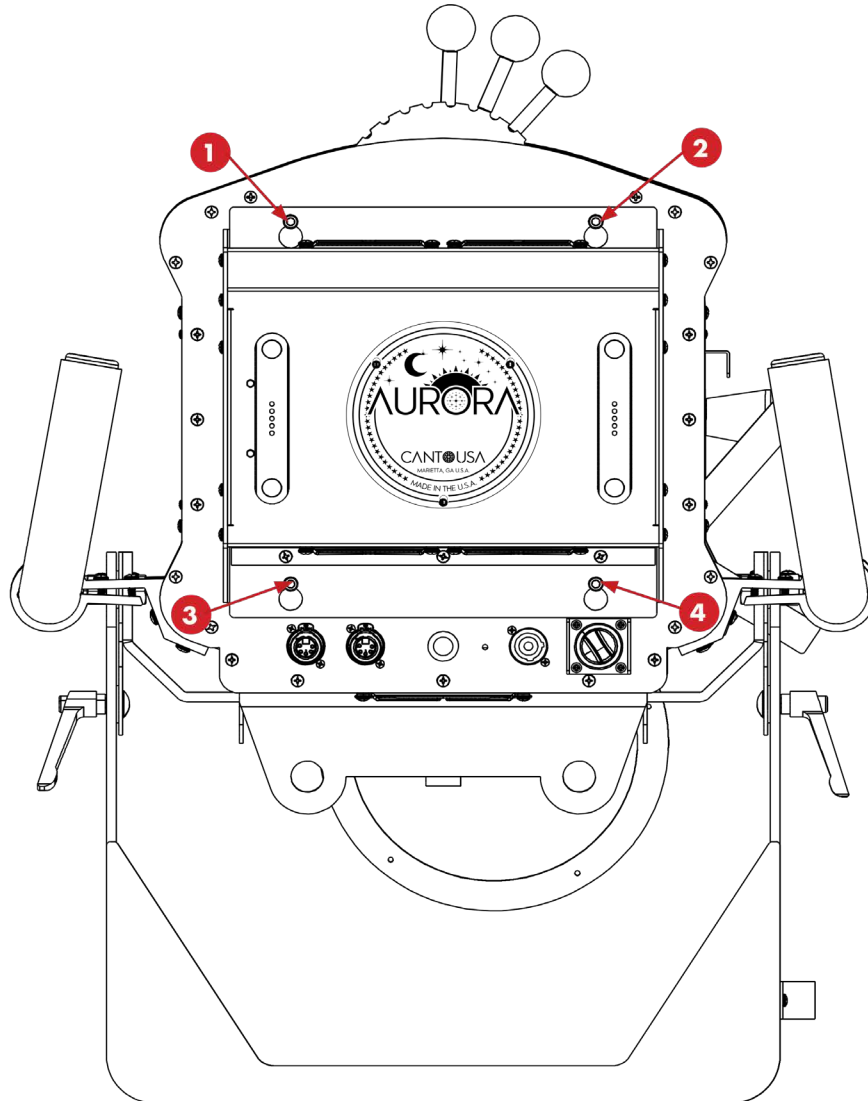
X1: Manufactured before 6/1/23



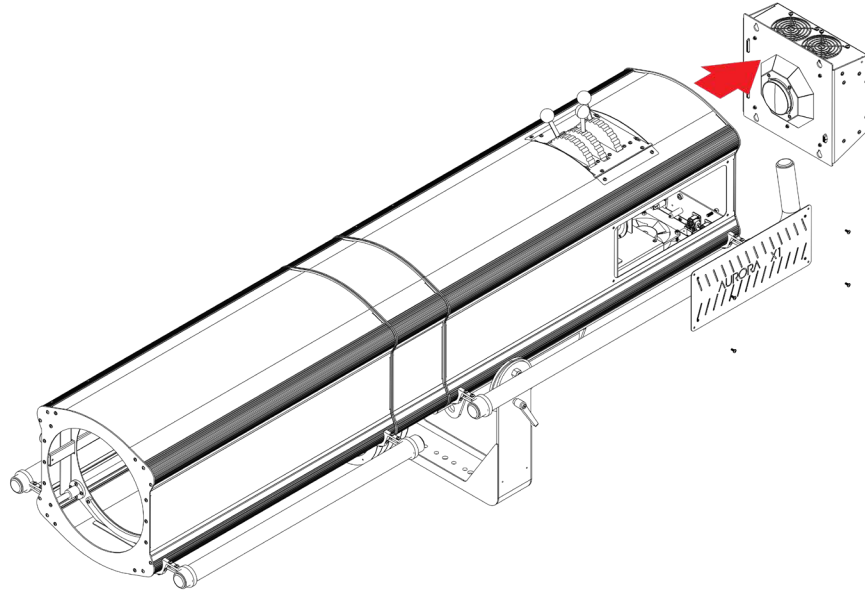
X1+DMX: Manufactured after 6/1/23



Step 4: Loosen the four screws using the provided screwdriver with a #2 Phillips or TX27 bit, depending on which version you have, to back out the screws about ¼ inch, leaving the remainder of the screw installed in the unit.



Step 5: Lift up on the LED Engine using the two back handles and remove the engine from its mount screws.



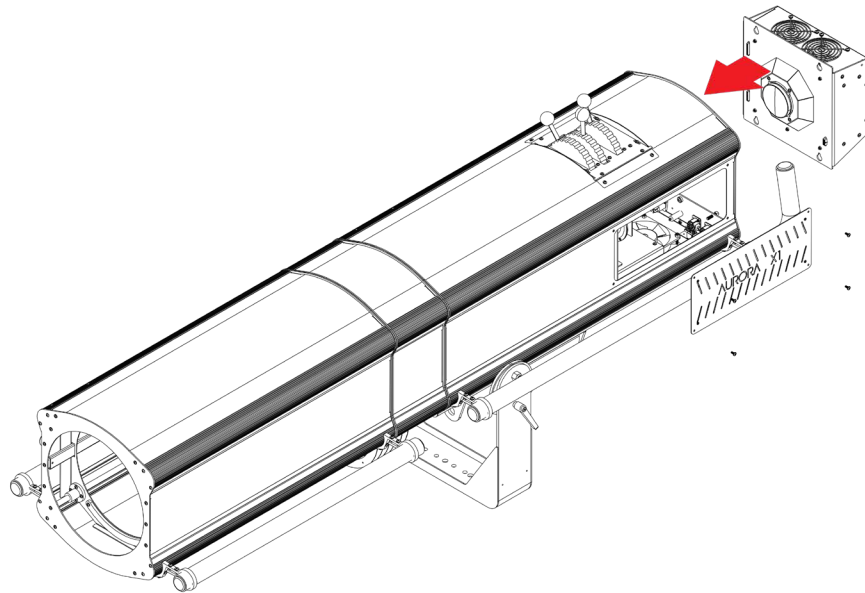
Step 6: Locate the plastic clear cap that came with the LED engine when it shipped. Replace the cover over the front lens of the optical engine to protect the front glass while shipping.

Step 7: Please coordinate with the factory the proper way to ship back the unit and arrange for a replacement engine.

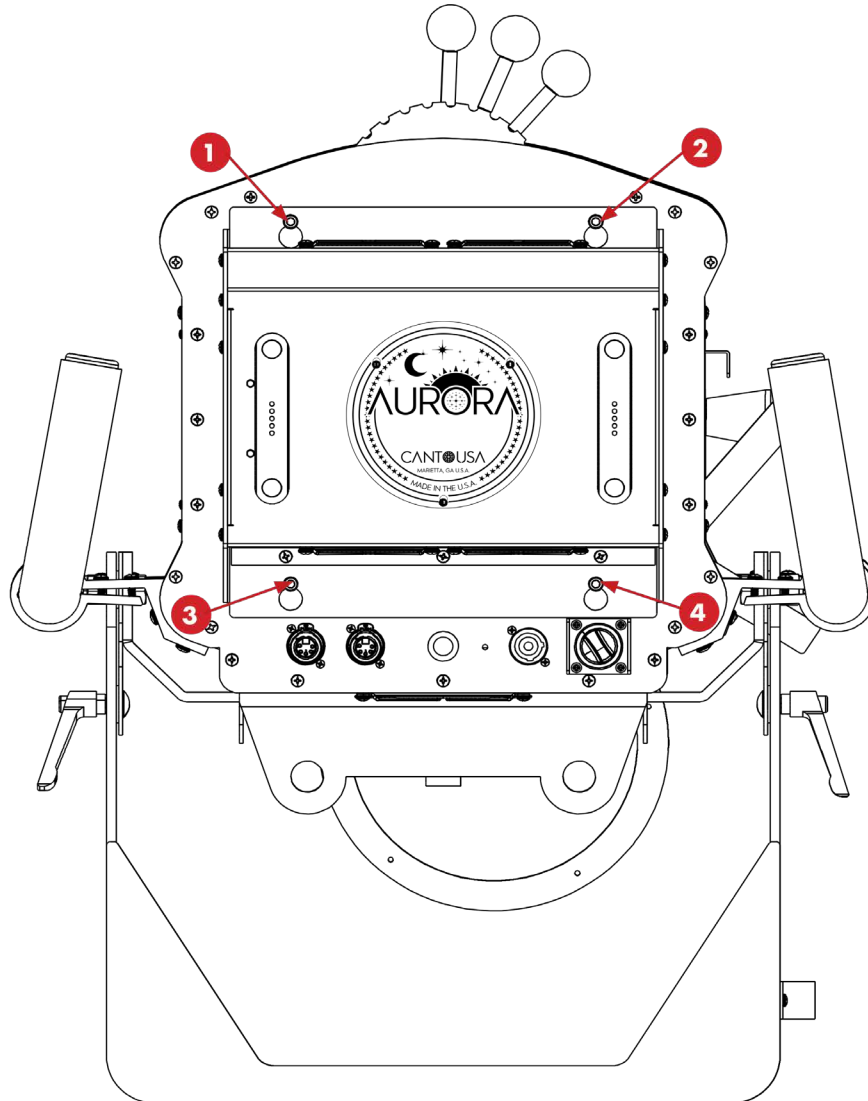
7: RE-INSTALLING THE LED ENGINE

Step 1: Remove the clear plastic cap that came with the LED engine when it first shipped (This is the piece over the front lens of the optical engine.)

Step 2: Place the LED Engine alignment holes onto the backed out mounting screws.

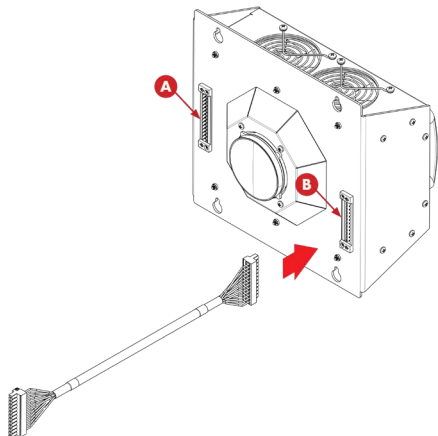


Step 3: Tighten the four security screws using the provided screwdriver with a #2 Phillips or TX27 bit, depending on which version you have.

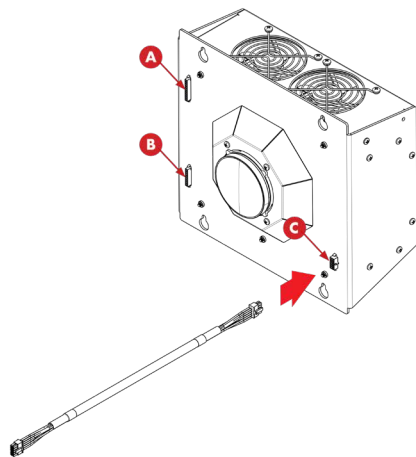


Step 4: Insert harnesses from the LED engine inside the base body.

X1: Manufactured before 6/1/23

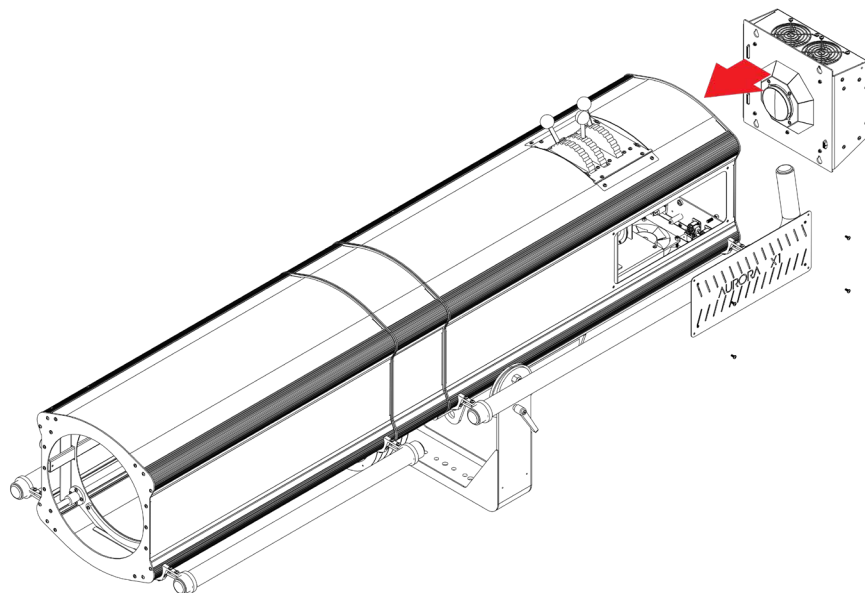


X1+DMX: Manufactured after 6/1/23



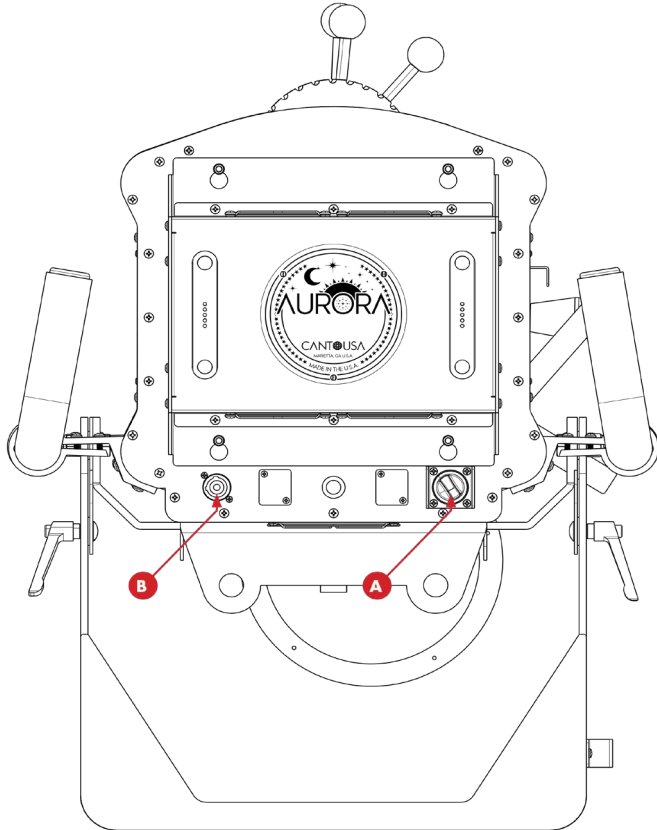
Step 5: Replace the left side panel on the base body using the thumbscrews or the provided screwdriver and security bit TX15, depending on which version you have.

NOTE: BEFORE CLOSING UP THE SIDE PANEL, PLEASE CHECK ALL ELECTRICAL CONNECTIONS INSIDE THE FIXTURE MADE DURING INSTALLATION. THIS IS TO ENSURE NOTHING LOOSENED DURING THE INSTALLATION PROCESS.

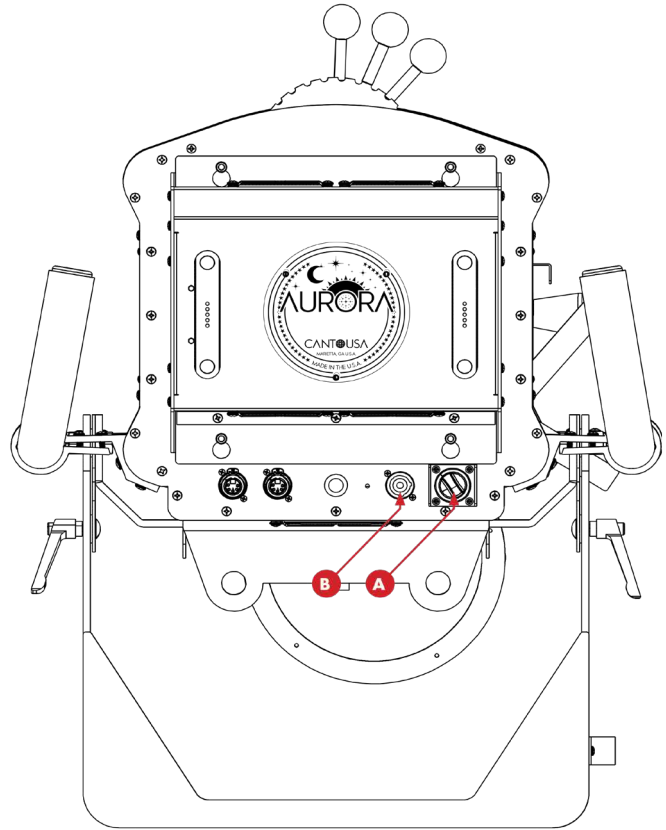


Step 6: Plug the power cable (B) into the back of the base body and turn power switch (A) on to power up the fixture.

X1: Manufactured before 6/1/23



X1+DMX: Manufactured after 6/1/23

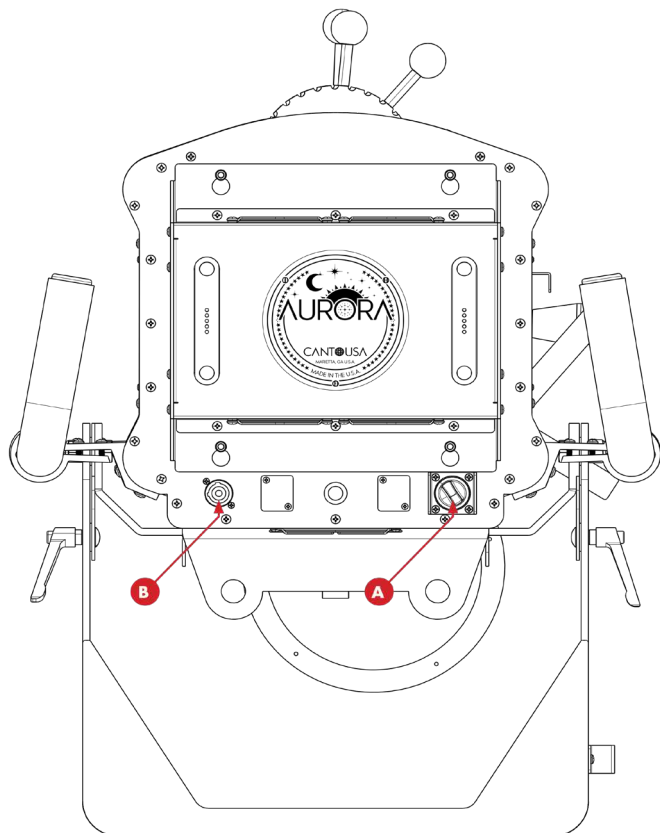


8: INSTALLING A GOBO! (AKA PROJECTION PATTERN)

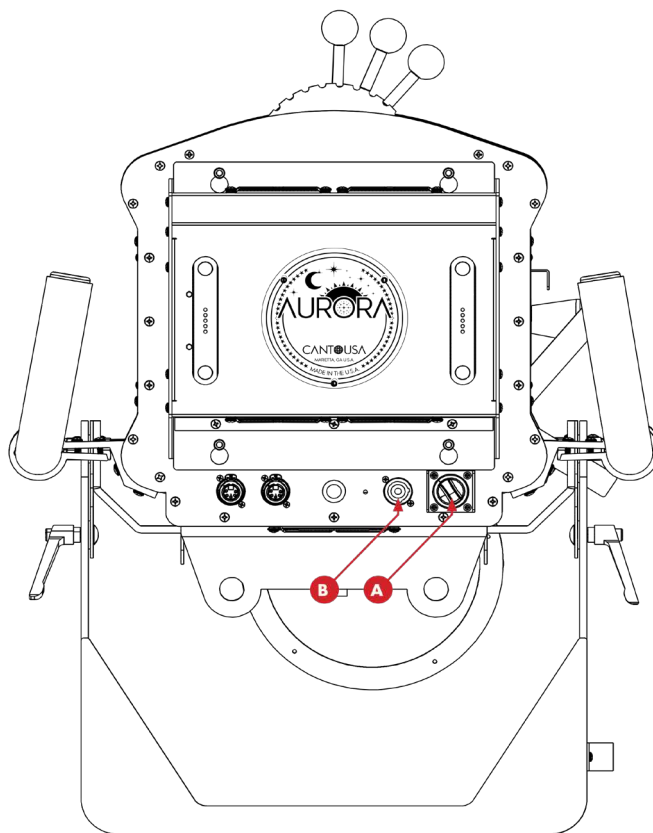
Step 1: Power off fixture (A) and remove power cable (B) from the back of the fixture before opening it up, for safety reasons.

*** NEVER WORK INSIDE AN OPERATING UNIT WITHOUT IT BEING COOLED AND UNPLUGGED FROM POWER SOURCE. NEVER EVER WORK INSIDE A UNIT THAT IS TURNED ON.**

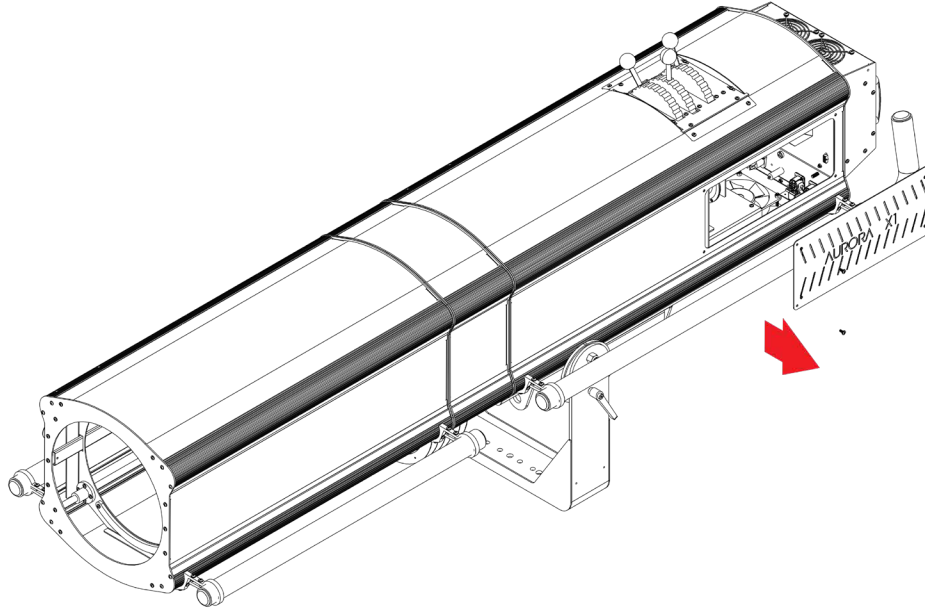
X1: Manufactured before 6/1/23



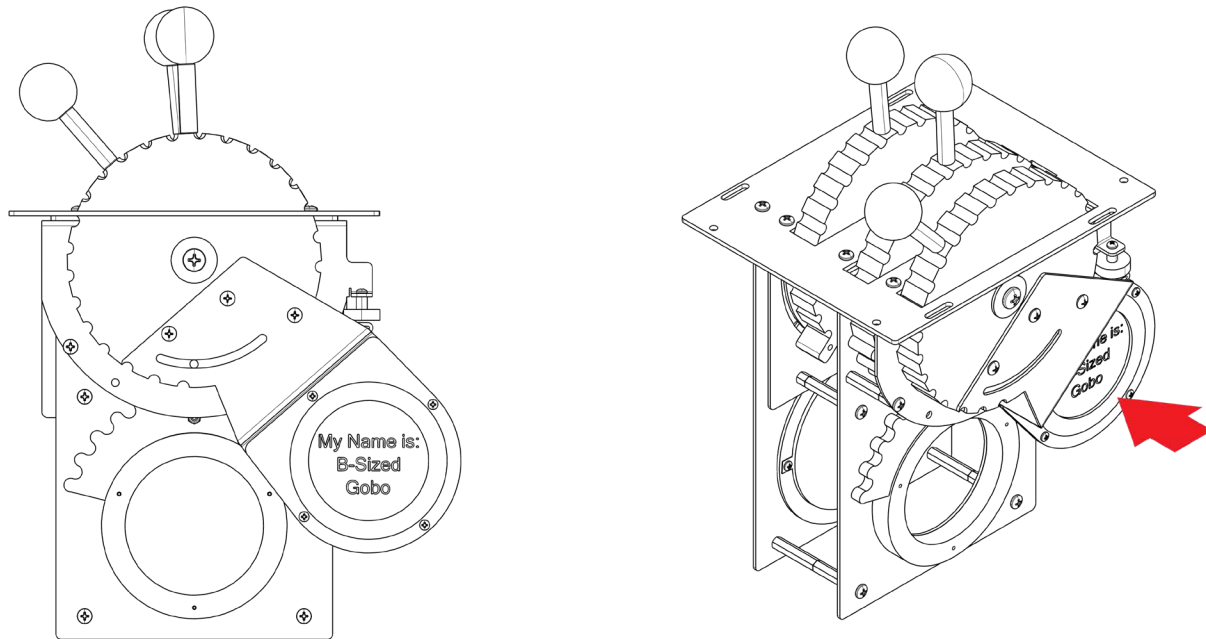
X1+DMX: Manufactured after 6/1/23



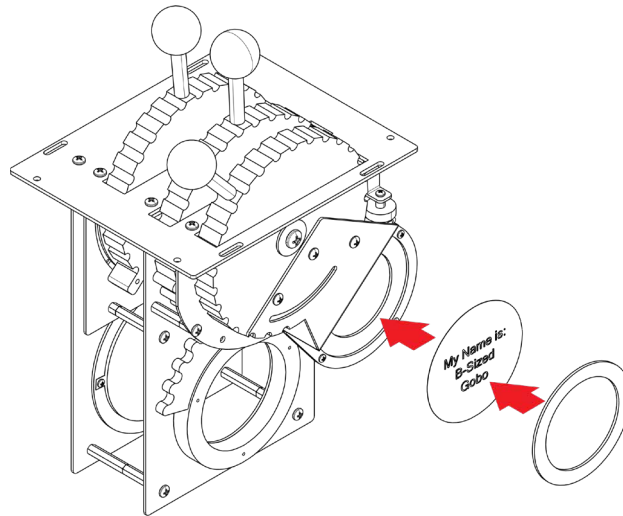
Step 2: Remove the left side panel to the base body enclosure. Use the thumbscrews or the provided screwdriver in combination of the TX15 security bit, depending on which version you have.



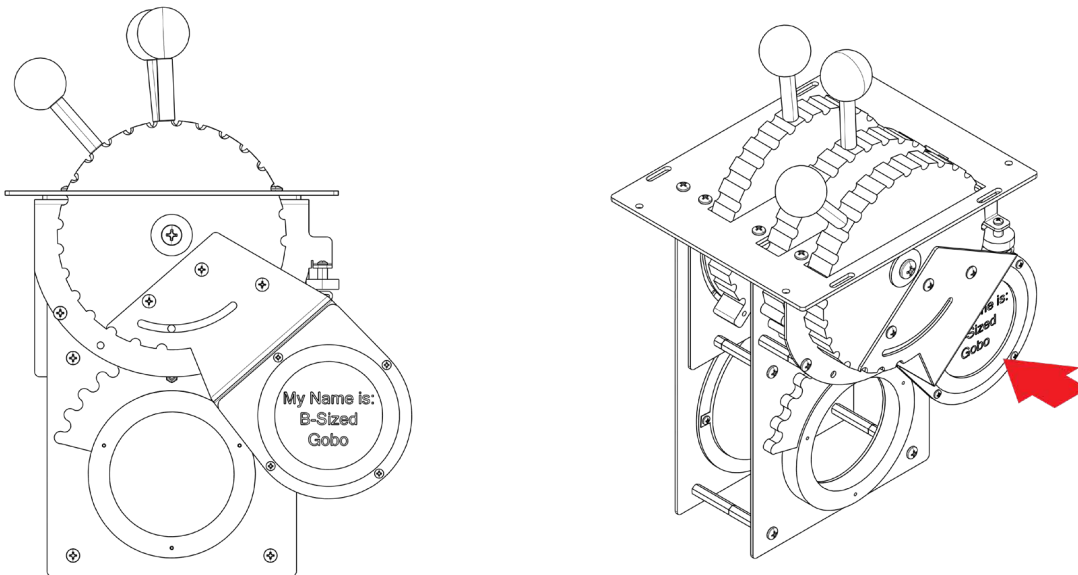
Step 3: Reach a hand inside and remove the magnetic retaining ring on the front of the gobo holder below:



Step 4: Take a steel gobo and place it in the gobo holder. Only steel gobos can be used at this time. For glass gobos, please contact Canto USA.



Step 5: Place the magnetic retaining ring over the gobo, allowing the magnet to hold the gobo in place. While the gobo is in the “engaged” position, this would be the time to make sure orientation and placement is correct for the desired effect.



Step 6: Re-install the left side panel with the thumbscrews or the TX15 screwdriver bit and screws, depending on which version you have.

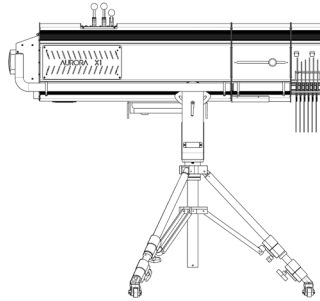
NOTE: BEFORE CLOSING UP THE SIDE PANEL, PLEASE CHECK ALL ELECTRICAL CONNECTIONS INSIDE THE FIXTURE MADE DURING INSTALLATION. THIS IS TO ENSURE NOTHING LOOSEENED DURING THE INSTALLATION PROCESS.

9: RESTORING BALANCE: WITHOUT MUCH FORCE.

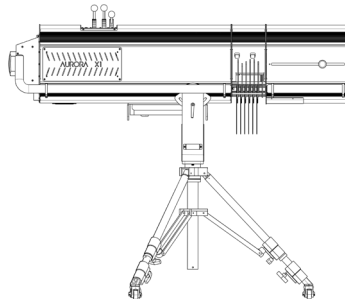
NOTE: THE IDEAL ADJUSTMENTS AND SETTINGS FOR YOUR APPLICATIONS ARE DETERMINED BY A NUMBER OF FACTORS. WHAT IS STATED BELOW MAY BE RIGHT FOR SOME, BUT WRONG FOR OTHERS. YOU WILL NEED TO EXPERIMENT TO FIND THE BEST WAY TO USE A FOLLOWSPOT. PLEASE TAKE THIS SECTION AS SET UP "GUIDELINES" RATHER THAN RULES.

There are 3 different configurations of the Aurora™ X1 LED followspot system:

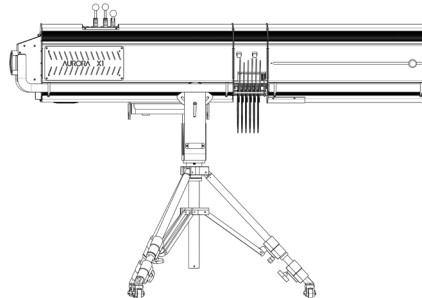
Short Throw:



Medium Throw:



Long Throw:



Each of these fixtures are going to have its own unique positioning in terms of where the fixture is going to sit in the "yoke saddle". The general rule of thumb is to always make sure the T-handles are tight.

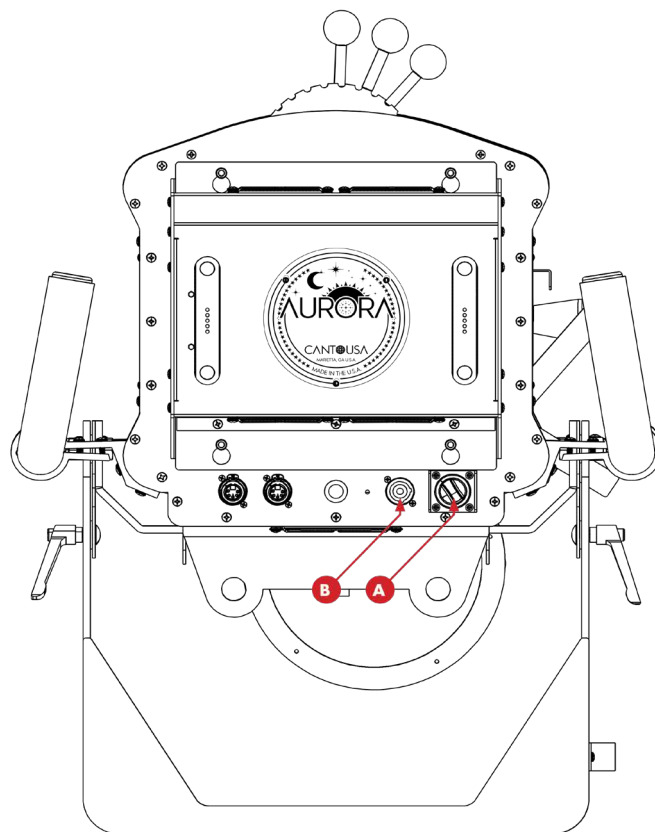
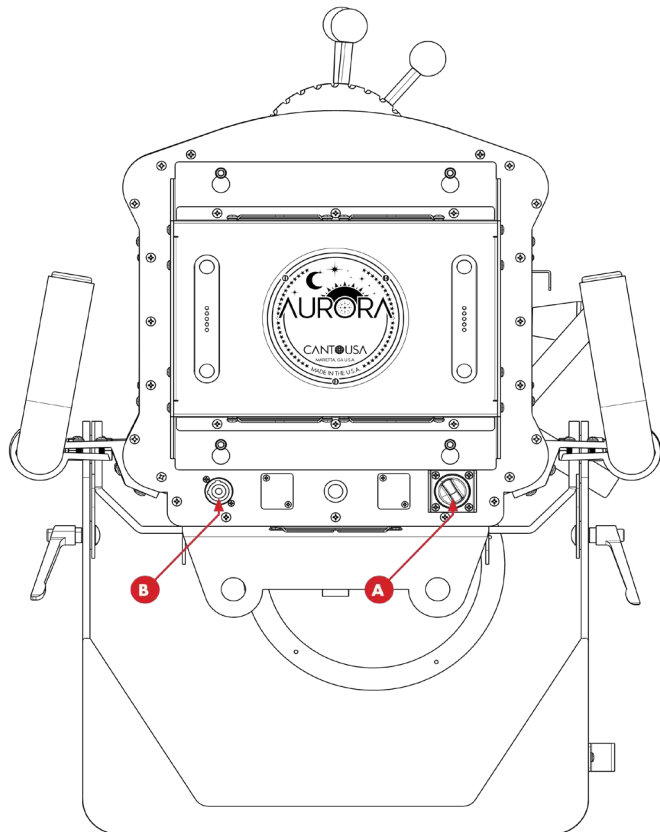
Mechanics to Adjust Balance:

Step 1: Power off (A) fixture and unplug power cable (B) before working on or adjusting anything other than operating the fixture.

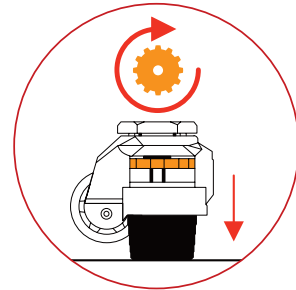
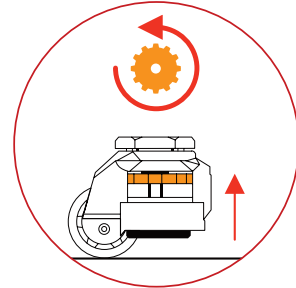
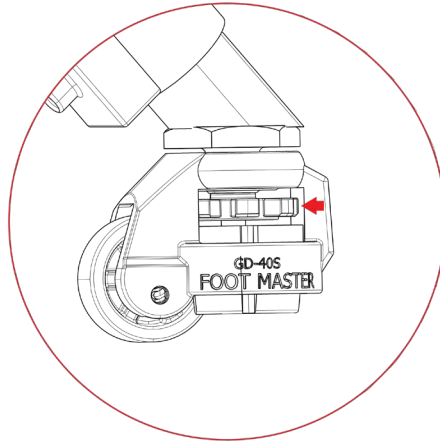
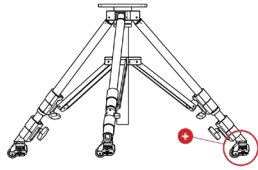
*** NEVER WORK INSIDE AN OPERATING UNIT WITHOUT IT BEING COOLED AND UNPLUGGED FROM POWER SOURCE. NEVER EVER WORK INSIDE A UNIT THAT IS TURNED ON.**

X1: Manufactured before 6/1/23

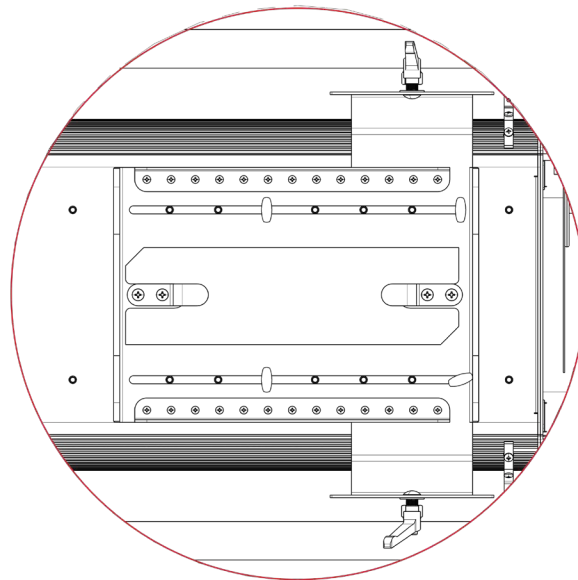
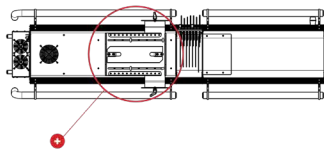
X1+DMX: Manufactured after 6/1/23



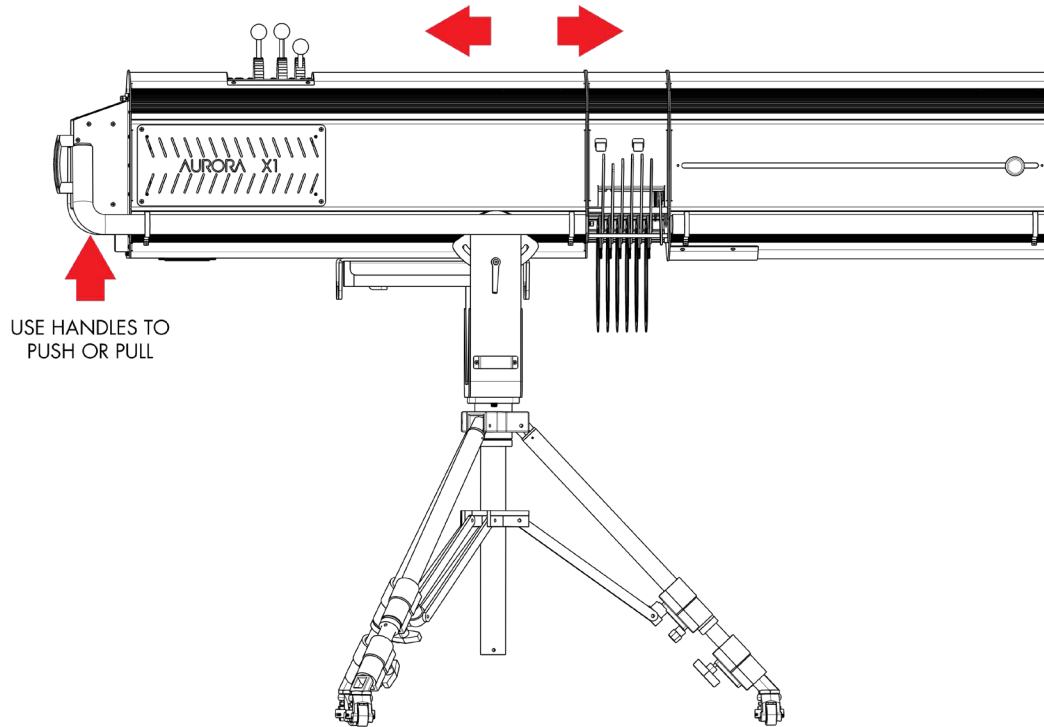
Step 2: If the tripod has caster wheels installed, confirm the fixture's entire weight is on those three feet. To insure the pads are engaged, use the orange thumb wheel to adjust the feet so the wheels are suspended off the ground for this procedure.



Step 3: Loosen the silver T handle screws (4) underneath the yoke saddle.



Step 4: With the assistance of another person, using the curved rubber handles at the back of the fixture and either push or pull till the balance desired is achieved.



NOTE: DEPENDING ON THE CONFIGURATION, THE T HANDLE SCREWS MAY NEED TO BE REPOSITIONED BY REMOVING THEM AND INSTALLING THEM IN DIFFERENT HOLES.

REMEMBER: BEFORE CHECKING THE BALANCE OF THE UNIT, BE SURE TO TIGHTEN DOWN THE T- HANDLES SCREWS FIRST TO AVOID THE FIXTURES WOBBLING OR FALLING OVER.

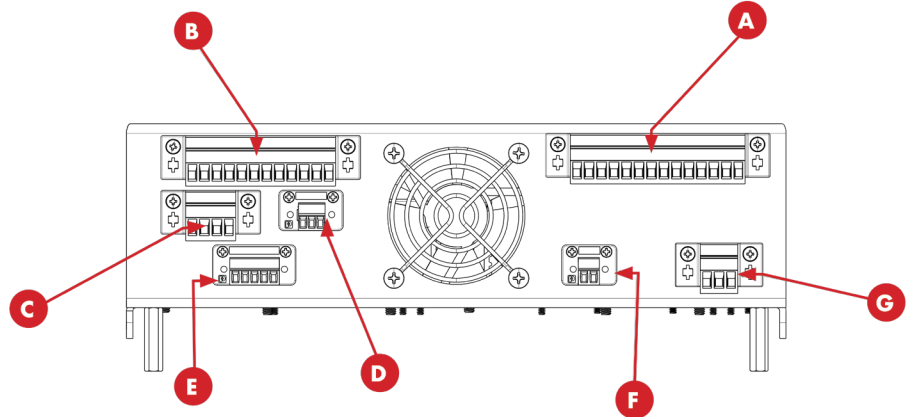
10: ELECTRICAL CONNECTIONS MATRIX:

*** NEVER WORK INSIDE AN OPERATING UNIT WITHOUT IT BEING COOLED AND UNPLUGGED FROM POWER SOURCE. NEVER EVER WORK INSIDE A UNIT THAT IS TURNED ON.**

LED DRIVER ENCLOSURE:

X1: Manufactured before 6/1/23

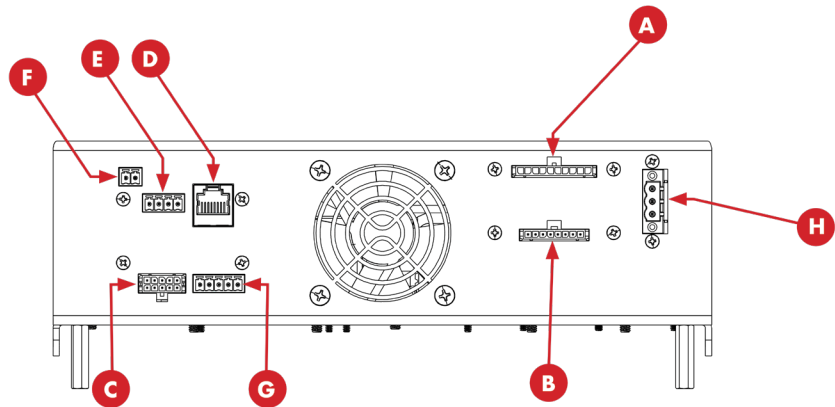
- A: Wire Harness A - to LED Engine
- B: Wire Harness B - to LED Engine
- C: Wire Harness C - LCD- Future Upgrade
- D: DMX In/Out - Future Upgrade
- E: Control Panel Plug In
- F: 120mm 12vdc Fan in Base Body
- G: 100-240VAC Power Input



LED DRIVER ENCLOSURE:

X1+DMX: Manufactured after 6/1/23

- A: Wire Harness A - to LED Engine
- B: Wire Harness B - to LED Engine
- C: Wire Harness C - to LED Engine
- D: DMX
- E: Factory Port
- F: Base Body Fan
- G: Control Panel Plug In
- H: LCD Module Fan Control Wire Harness

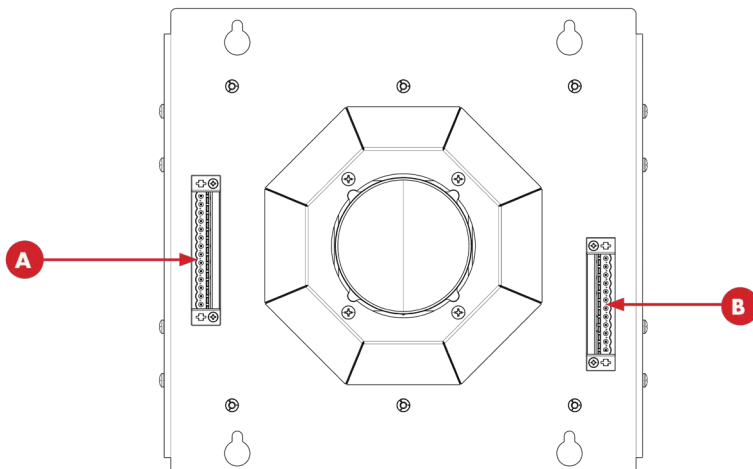


LED ENGINE MODULE:

X1: Manufactured before 6/1/23

A: Wire Harness A to LED Driver

B: Wire Harness B to LED Driver



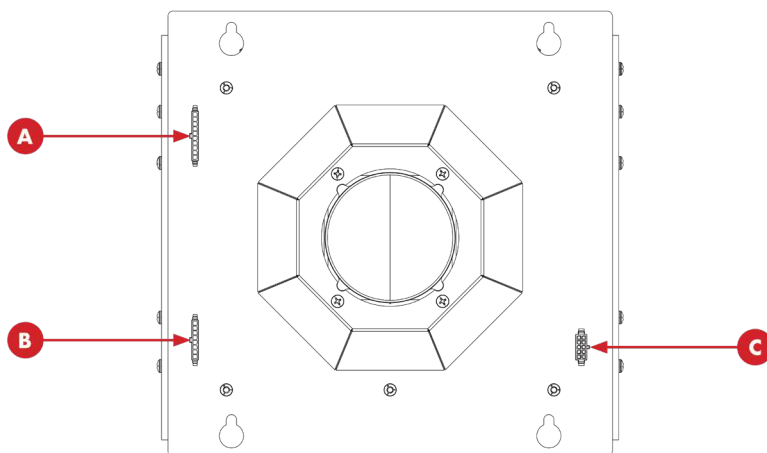
LED ENGINE MODULE:

X1+DMX: Manufactured after 6/1/23

A: Wire Harness A to LED Driver

B: Wire Harness B to LED Driver

C: Wire Harness C to LED Driver

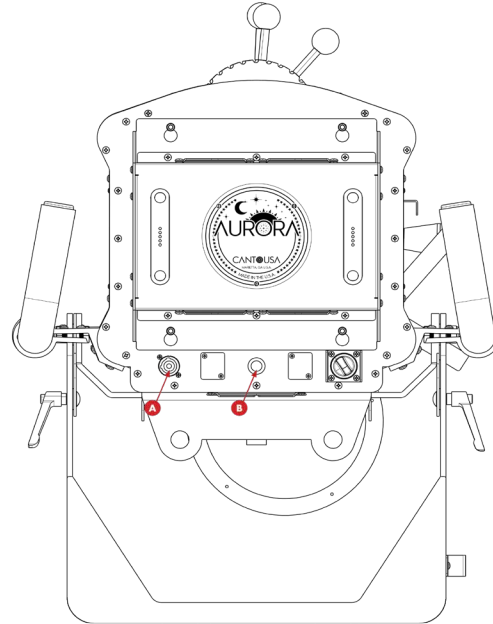


BASE BODY BACK PANEL:

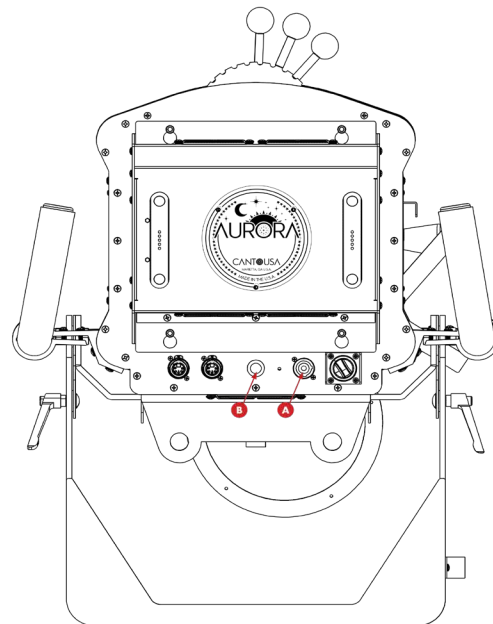
A: Power Input Connector
(100-240VAC 50/60hz)

B: Fuse

X1: Manufactured before 6/1/23



X1+DMX: Manufactured after 6/1/23



11: GEL CHANGER OVERVIEW AND OPERATION

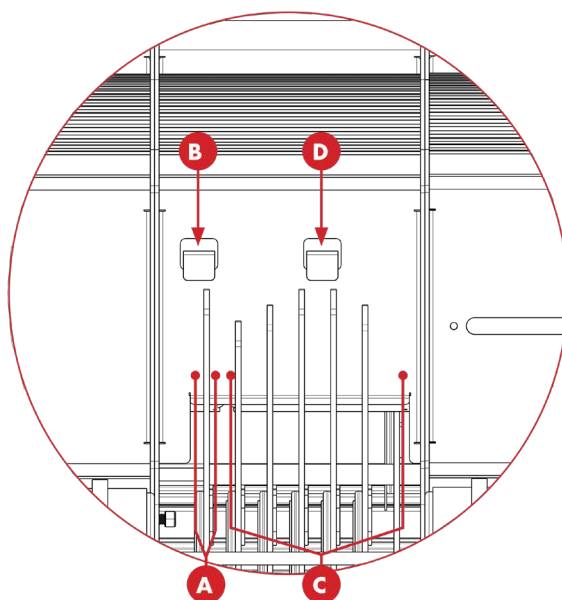
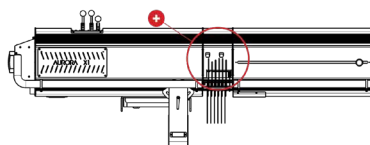
The Aurora™ X1 LED followspot gel changer has a total of 7 frames (6+1) with 6 frames being independent from the singular frame. The gel changer is self-canceling. This allows for rolling color changes unless a second or third frame is held during the roll. Here is a quick overview of the controls and what lever does what. Please note that the releases are a **push** action **not** a lift or pull.

A: Single Frame Lever Control
(Frame 1)

B: Single Frame Push Release Button

C: Frames 2-7 in varying heights for
ease to operate in the dark

D: 6 Frame Push Release Button



Using Gels and Sizing

When using gels they should be cut in circles to a minimum of 9" (23 cm) in diameter as referenced in **Diagram 1**.

Place gel between the retaining rings and match the retaining holes for the brass clips as referenced in **Diagram 2**.

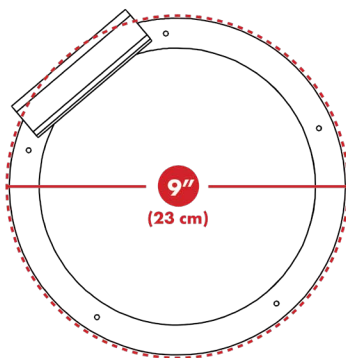


Diagram 1

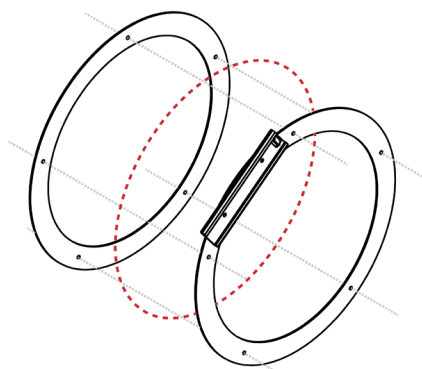


Diagram 2

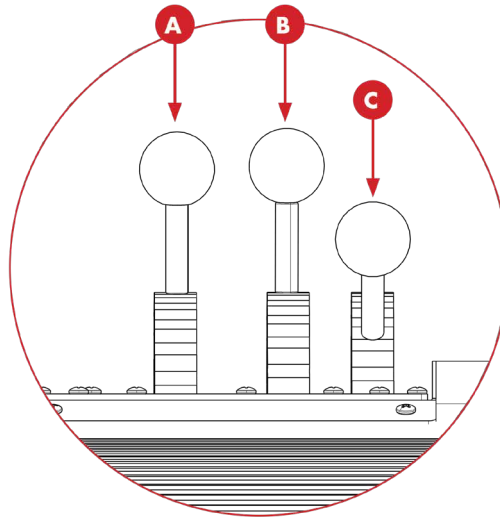
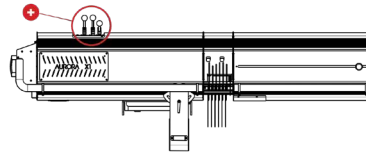
12: CONTROL PANEL OVERVIEW AND OPERATION

The control panel is where the fixture beam controls are located. These include douser (intensity), iris (size) and drop in a gobo. Please see below the overview of the control panel.

A: Electronic Dimmer (Far Left)

B: Iris
(24 Leaf, 25:1 Aperture Control)

C: Gobo Lever: "B" Size
(Outer Diameter 86mm)



13: REPLACING THE FUSE

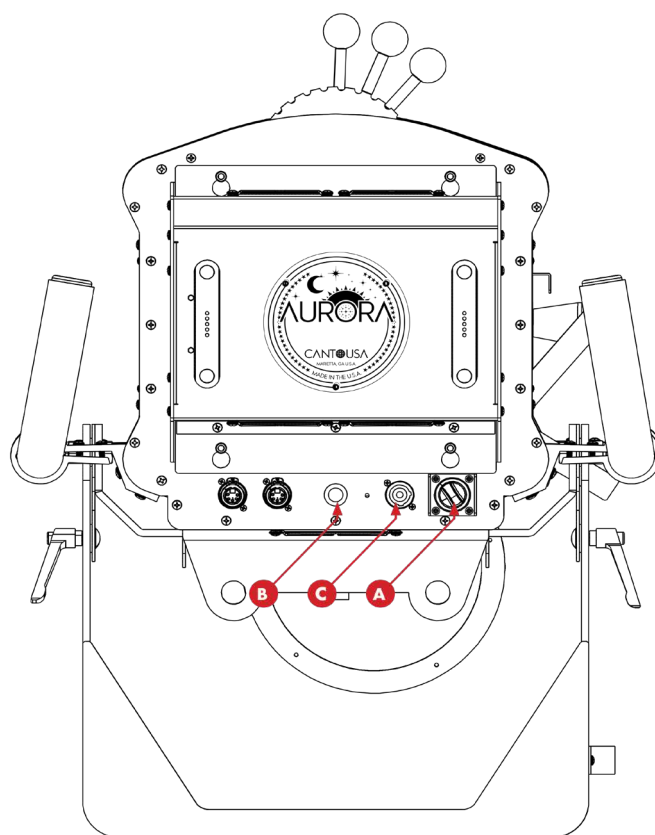
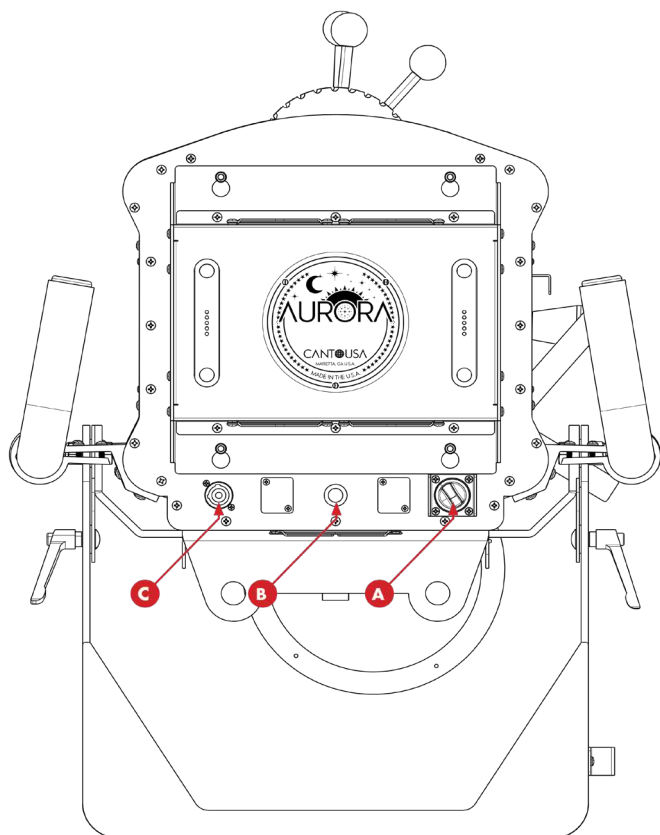
Step 1: Turn off power (A) to the LED followspot and unplug the power cable (C) from the back panel of the base body.

*** NEVER WORK INSIDE AN OPERATING UNIT WITHOUT IT BEING COOLED AND UNPLUGGED FROM POWER SOURCE. NEVER EVER WORK INSIDE A UNIT THAT IS TURNED ON.**

Step 2: Locate the fuse holder (B) on the back panel, to the right of the power input connector and to the left of the power switch.

X1: Manufactured before 6/1/23

X1+DMX: Manufactured after 6/1/23



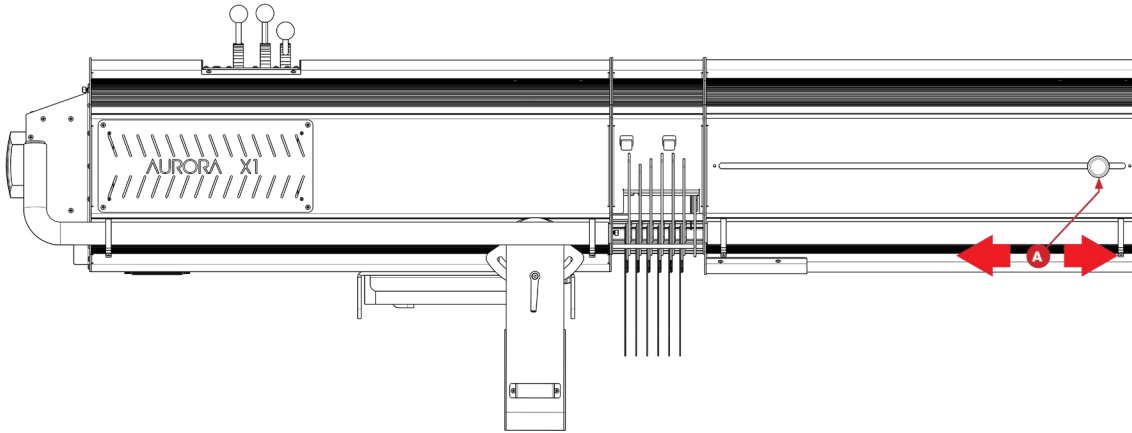
Step 3: Rotate the back end of the fuse holder until the back cap comes off completely and the fuse is removable.

Step 4: Install replacement fuse in place of the old fuse.

Step 5: Re-install the fuse back into the fuse holder and rotate the back cap until secure.

Step 6: Plug in the LED fixture power connector, turn on the power switch and ensure the replacement was successful.

14: FOCUSING THE LIGHT



Step 1: Loosen the black handle by rotating counterclockwise on the selected lens tube installed on the Aurora™ X1 LED followspot.

Step 2: Using the handle, move the lens assembly in the desired direction to get the proper focus on the beam.

Step 3: Tighten the black handle by rotating clockwise on the selected lens tube that is installed on the Aurora™ X1 LED followspot.

15: CLEANING AND MAINTENANCE

Cleaning the Lens Tube

The Aurora™ X1 LED followspot system has very little need for regular maintenance or cleaning. However, some venues that use considerable amounts of HAZE/FOG can heavily coat the optics and or the lens assembly bushings. Below are some recommended practices for cleaning the fixture.

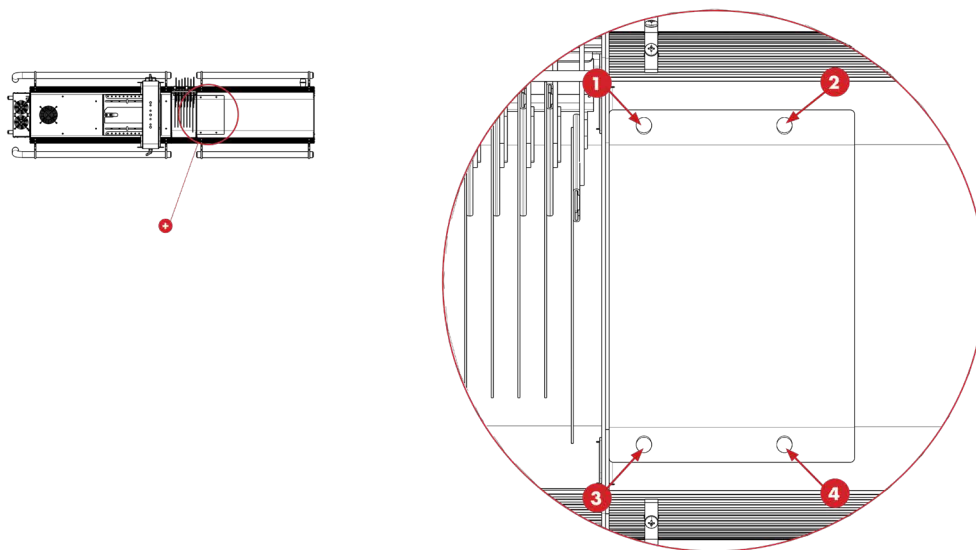
CAUTION: ONLY PERFORM SERVICING AFTER THE UNIT HAS BEEN COOLED DOWN, UNPLUGGED FROM POWER SOURCE, AND OFF FOR 5 MINUTES.

*** NEVER WORK INSIDE AN OPERATING UNIT WITHOUT IT BEING COOLED AND UNPLUGGED FROM POWER SOURCE. NEVER EVER WORK INSIDE A UNIT THAT IS TURNED ON.**

WARNING: NEVER USE AMMONIA, BLEACH, VINEGAR, OR WINDOW CLEANER, WHICH CAN HARM COATED LENSES.

Step 1: To clean the front of the lens, using the recommended (and provided) optics wipes, loosen the black handle on the lens tube and slide it all the way forward to the front of the light. The stage side of the lens should be available to cleaning.

Step 2: To wipe down the back of the glass, move the lens all the way to the back of the unit (closest to the access door under the lens tube.) Remove the access hatch to gain access to clean the lens.



Step 3: When cleaning is complete, reinstall the access hatch with the four thumbscrews.

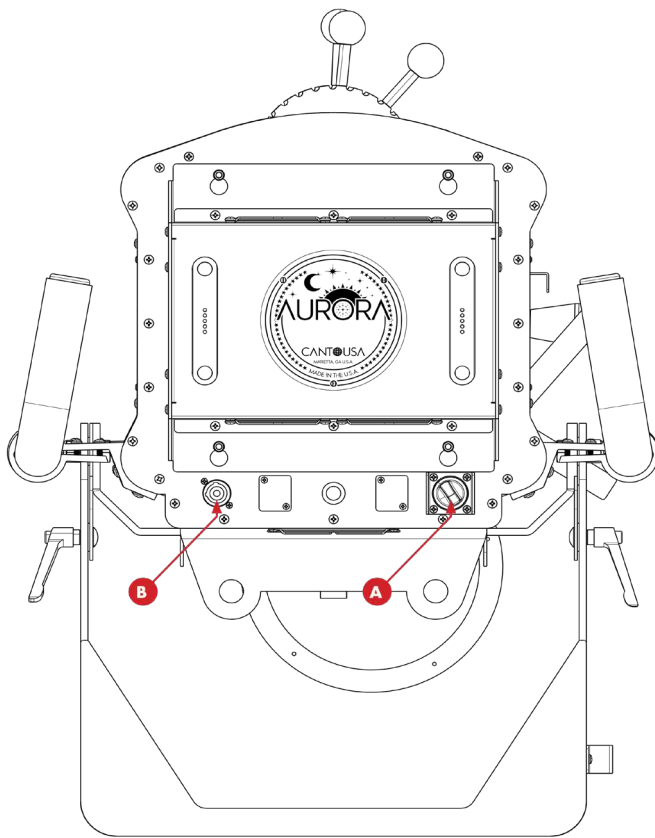
Cleaning the LED Source Optics

The Aurora™ X1 LED Followspot system does not require regular maintenance or cleaning. However, venues that use a considerable amount of HAZE/FOG can have residue accumulate on the optics as well as the lens assembly bushings. Here are some recommended practices for cleaning your fixture.

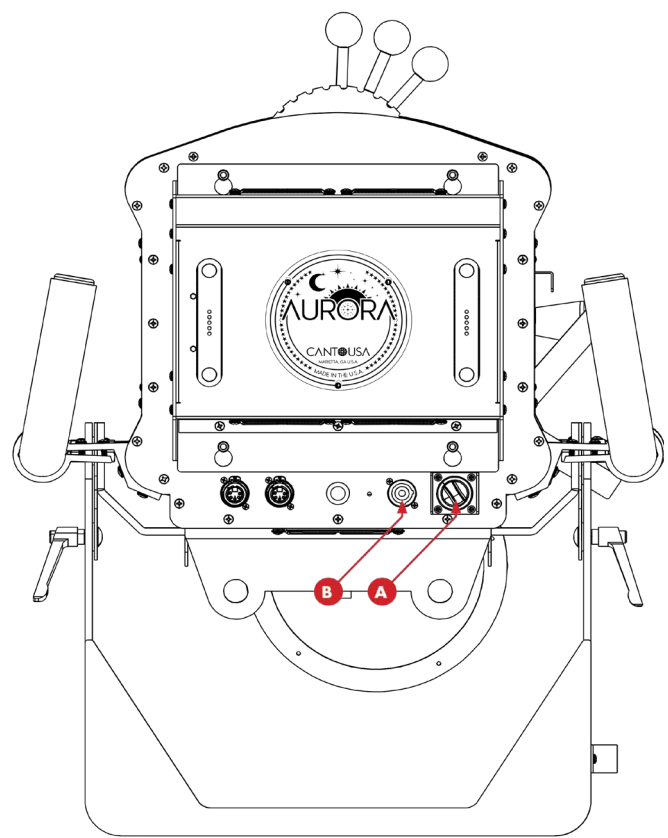
Step 1: Power down (A) the Aurora™ X1 and remove the power cable (B) from the back plate of the base body.

*** NEVER WORK INSIDE AN OPERATING UNIT WITHOUT IT BEING COOLED AND UNPLUGGED FROM POWER SOURCE. NEVER EVER WORK INSIDE A UNIT THAT IS TURNED ON.**

X1: Manufactured before 6/1/23

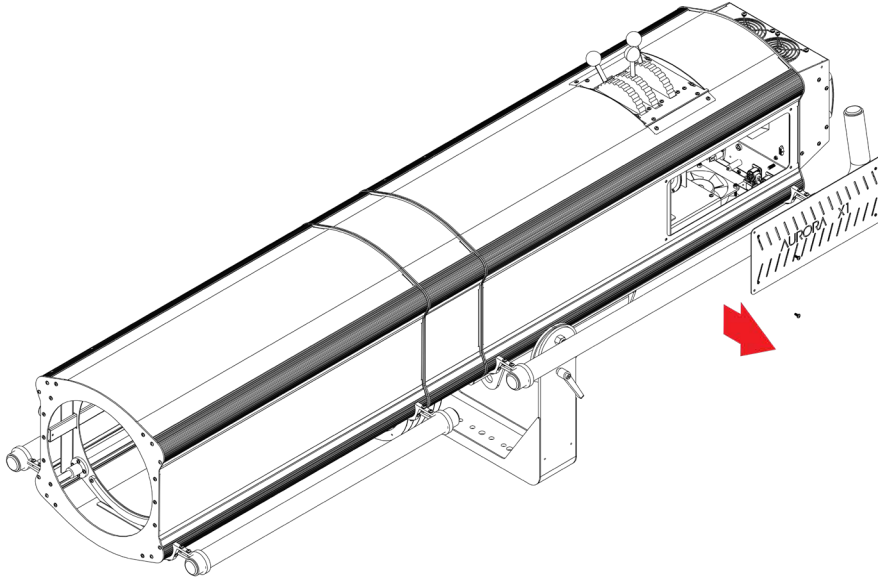


X1+DMX: Manufactured after 6/1/23



*** NEVER APPLY LUBRICATION/GREASE TO THE LENS RODS. BUSHINGS ARE PLASTIC AND DO NOT REQUIRE LUBRICATION FOR OPERATION. USING LUBRICATION/GREASE CAN AFFECT MECHANICAL PERFORMANCE IN A NEGATIVE WAY.**

Step 2: Remove the left side panel of the base body fixture.



Step 3: Using the provided optical wipes, wipe down the lens system in the control panel as well as the front optic of the LED engine.

Step 4: Once completed, re-install the side panel.

NOTE: BEFORE CLOSING UP THE SIDE PANEL, PLEASE CHECK ALL ELECTRICAL CONNECTIONS INSIDE THE FIXTURE MADE DURING CLEANING. THIS IS TO ENSURE NOTHING LOOSEENED DURING THE CLEANING PROCESS.

16: DMX/RDM

DMX control of the X1 dimming is an available option.

Connection is via a standard 5 pin XLR

If you have this option an active DMX signal will disable the manual dimmer.

DMX start address and dimming profile can be set via RDM (by others).

Please follow all standard DMX rules. If this is the last device on the DMX line, please terminate the DMX THRU connector using a terminating connector (by others).

17: CHANGING A GEL FRAME

Take a few moments to review the process listed below on how to remove the gel frame from the operator's arms as well as the best procedure for installing new gel or diffusion into the provided gel frames with fixture.

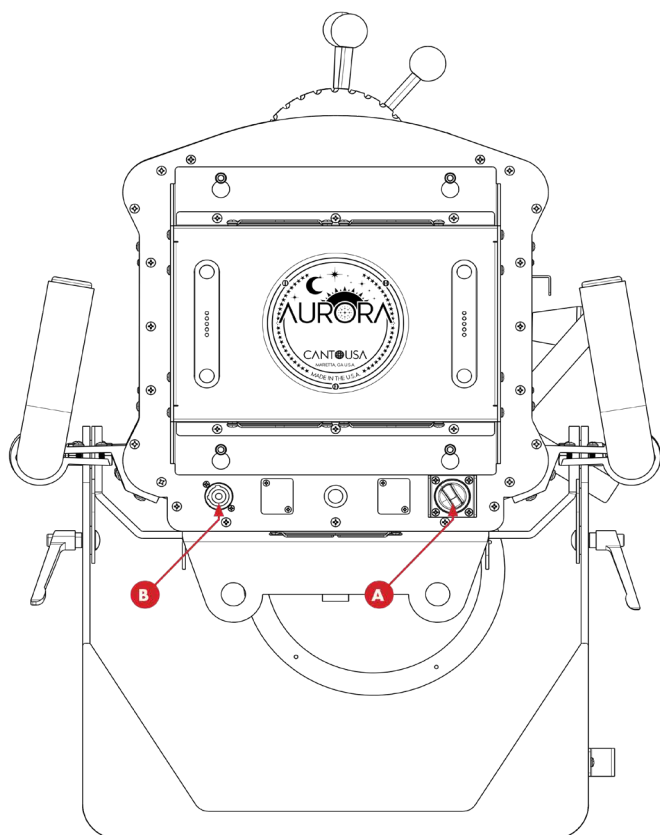
The gel frame operator arms (7) are designed to accept the provided gel frames that ship with the unit. The X1 also accepts most gel frames from other fixture manufacturers.

Removing the Gel Frame:

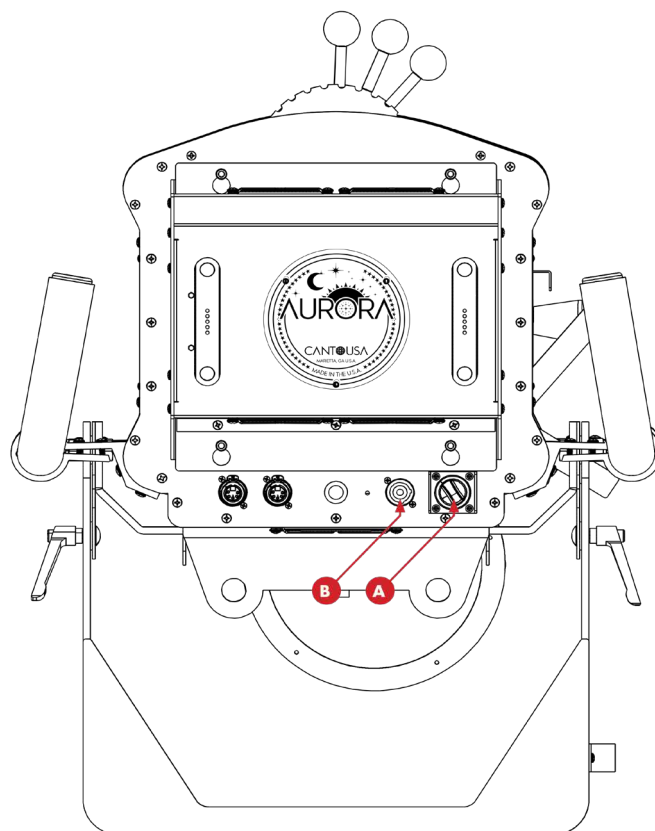
Step 1: Turn off the power to the fixture by use of the toggle switch (A) on the operator's side of the fixture. Remove the power cord (B) from the back of the unit to ensure no accidental power startups occur while working in the direct path of the beam.

*** NEVER WORK INSIDE AN OPERATING UNIT WITHOUT IT BEING COOLED AND UNPLUGGED FROM POWER SOURCE. NEVER EVER WORK INSIDE A UNIT THAT IS TURNED ON.**

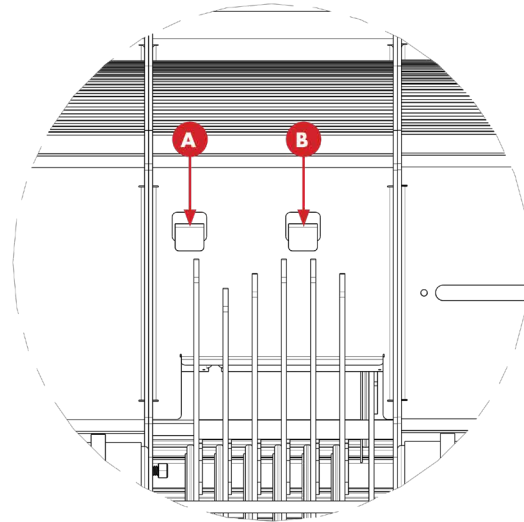
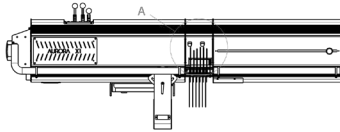
X1: Manufactured before 6/1/23



X1+DMX: Manufactured after 6/1/23

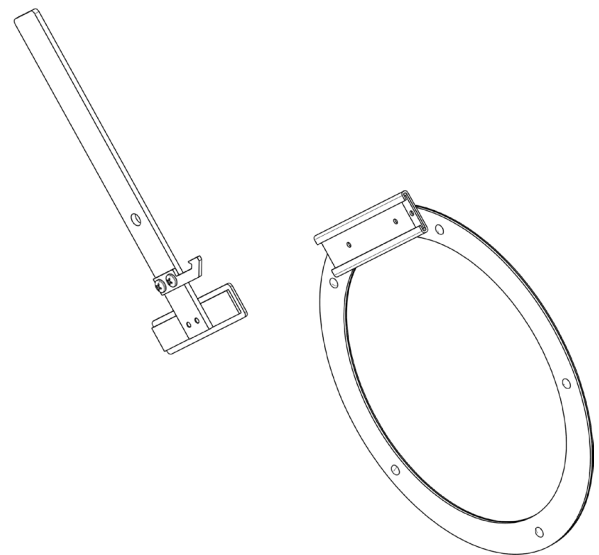
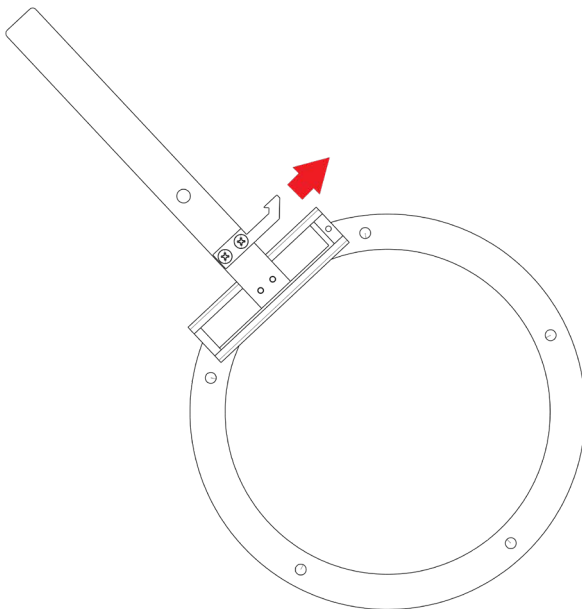


Step 2: Make sure the gel frames are all released and are low in the fixture. To insure this is the case, press in the release buttons on both the single (A) and 6 frame (B) release buttons.



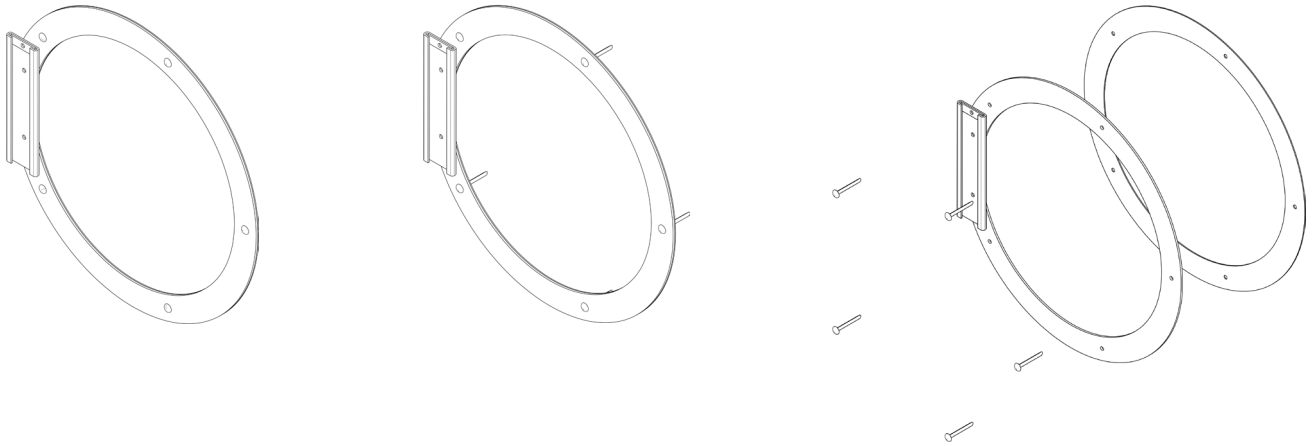
Detail A

Step 3: Remove the singular gel frame by sliding it out of its mechanical slot. (Make sure gel levers are in down position.)

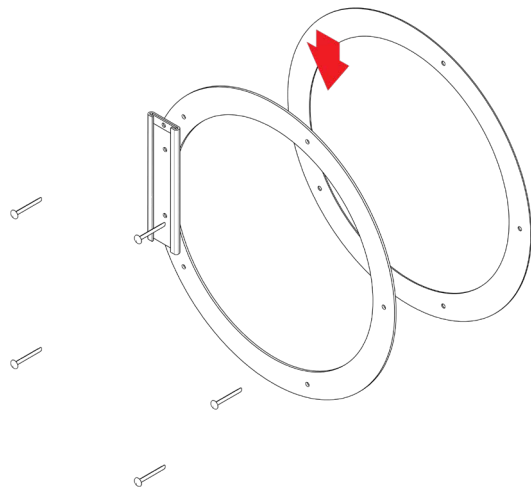


Installing the Gel into a new Color Frame:

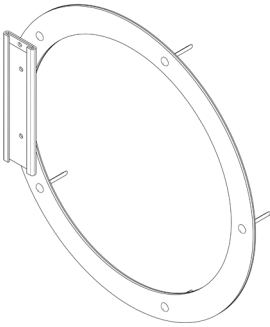
Step 4: Remove the brass brads (1 inch long) from the gel frame and separate the two pieces.



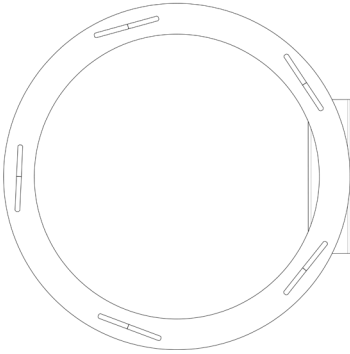
Step 5: Place gel between the two pieces of sheet metal frames.



Step 6: Using brass fasteners, put the two halves of the gel frame together using the brass fasteners to join them.



Step 7: Spread the brass fasteners apart so that they all look like the below image on the back of the gel frame.



NOTE: SOME OPERATORS PREFER TO ADD EITHER A PIECE OF BLACK GAFF TAPE OR BLACK TACK OVER TOP OF THE BRASS FASTENERS AS SHOWN IN THE IMAGE ABOVE. THIS CAN HELP KEEP THE BRASS FASTENERS IN PLACE, ESPECIALLY IF THE GEL IS GOING TO BE IN THE FRAMES FOR A LONG SHOW RUN.

Step 5: Re-install the gel frame in the desired slot of the gel changer.

18: TROUBLESHOOTING/OPERATION GUIDE

Symptom: The followspot is not turning on (no light and no fans) when the power switch is on.

Step 1: Check the power connection at the back of the fixture. Ensure that the power cable is twisted properly and locked into place. Also ensure the plug is in the outlet properly.

Step 2: Using a power meter, remove the fuse and check for continuity.

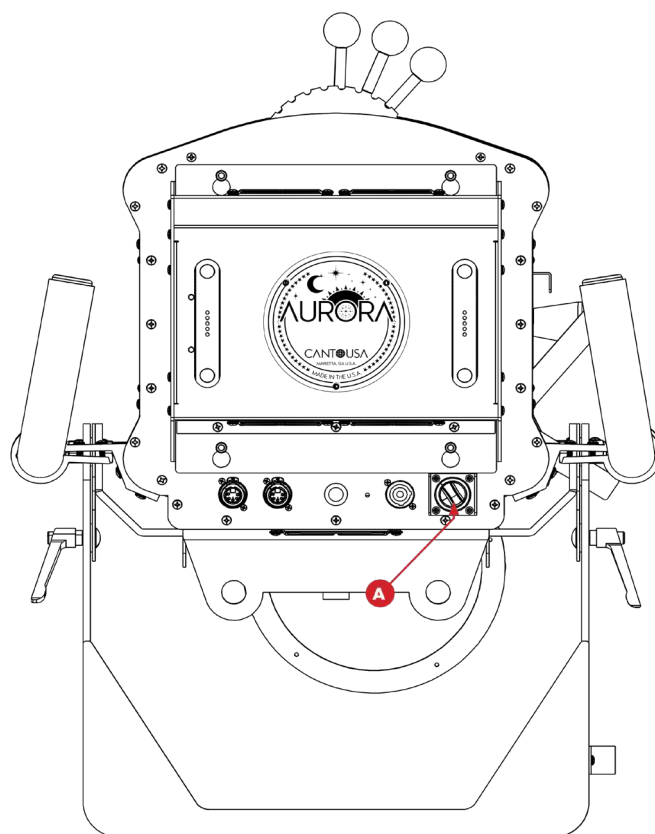
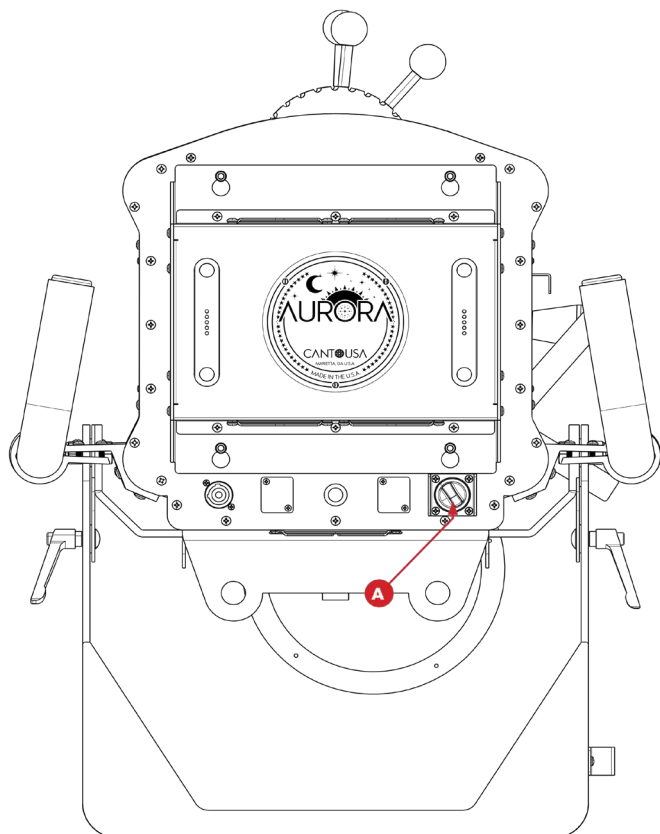
Step 3: Meter the power coming into the fixture. Operational voltage needed for the fixture is 90-240VAC 50/60Hz.

Operation: Powering On/Dimming Control

Step 1: Assuming that all trouble shooting steps have been taken to ensure that proper power has been applied to the fixture. Turn on the power switch (A) on the back panel of the base body.

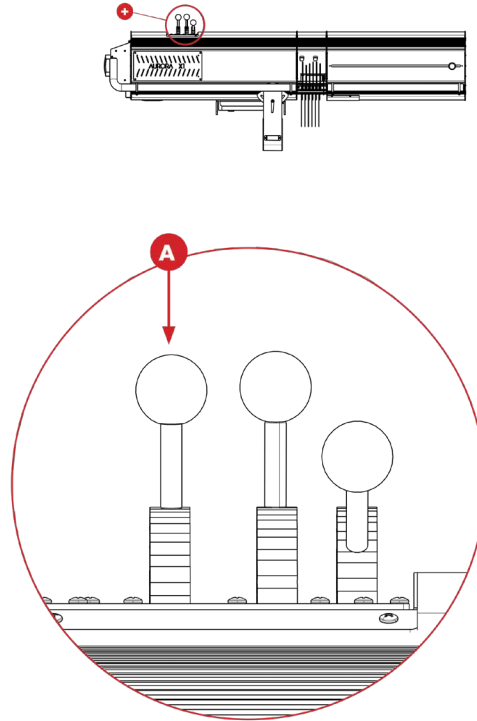
X1: Manufactured before 6/1/23

X1+DMX: Manufactured after 6/1/23



NOTE: WHEN THE POWER SWITCH IS ACTIVATED A FEW THINGS WILL HAPPEN. 1: THE FANS ON THE UNIT WILL BEGIN TO POWER UP. 2: DEPENDING ON THE POSITION OF THE DIMMER HANDLE, LIGHT WILL PROCEED TO COME OUT OF THE FRONT OF THE FIXTURE.

Step 2: Move the dimmer handle (A) to the desired intensity. The LED driver is being electronically controlled through the dimmer handle, when the handle is at 0%, the LED is no longer powered on.



Symptom: Why are the fans increasing in noise the longer the LED is turned on.

Reason: The fans on the unit are designed to keep the unit as cool as possible given the ambient temperature in which the fixture is being operated. The fans are variable speed controlled and will fluctuate based upon how hot the LED is in its current ambient temperature. For optimal performance, ensure the fixture is being operated in a 70F-75F ambient controlled environment. The hotter the room gets, the faster the fans will rotate to maintain a constant light output.

When the dimmer level is reduced to 0% the fans will restore back to their pre-programmed speed after a 5-minute period. This is to reduce white noise fluctuations in the background.

NOTE: THE FANS WILL ONLY SPEED UP IF THE HEAT SENSORS IN THE FIXTURE DETECT A UNDESIRABLE TEMPERATURE.

Symptom: The light output has just reduced to 20% output in the middle of my show. Why did this happen?

Reasons: The LED control system built into the Aurora™ X1 has safety protocols to protect the LED or LED driver. If the ambient temperature is above 104F ambient, and the LED has been at 100% for too long, the current to the LED will automatically reduce to a pre-determined level where the heatsink would be sufficient to operate the LED without the assistance of fans.

Symptom: The Aurora™ X1 just shut off the LED, but the fans are still rotating at what seems to be 100% control.

Reason: The LED engine also has a mechanical thermal switch installed to protect the LED from failing in the event the driver controlling the LED fails.

Fix: Leave the fans rotating till the temperature of the LED falls back to safe operational temperature, the fixture will power back on the PSU and the LED driver and the light will come back on.

If this becomes repeating problem, contact the factory to resolve the issue.

NOTE: FOR ALL OTHER ISSUES, PLEASE CONTACT TECHNICAL SERVICES (TECHSUPPORT@CANTOUSA.COM) AT CANTO USA FACTORY.

19: SPARE PARTS

All fixture components are available as spare parts. Customers should always use Canto USA X1 original components as spare parts. Failure to use Canto USA X1 parts will void warranty.

For questions or to order replacement parts, please call Canto USA technical team at **888-252-5912**.

Aurora™ X1 Parts List

CAST00006	Caster Kit for Low Profile HD Tripod (X1)
TRIP00256	Followspot Stand, Low Profile, HD (X1)
XLED00004	Aurora™ X1 Short Throw Lens Tube Module
XLED00005	Aurora™ X1 Medium Throw Lens Tube Module
XLED00006	Aurora™ X1 Long Throw Lens Tube Module
XLED00008	Aurora™ X1 LED Engine Module, 90CRI 6000K
XLED00009	Aurora™ X1 Yoke Module
XLED00010	Aurora™ X1 Control Panel Module
XLED00011	Aurora™ X1 Base Body Assembly (Does not include LED Engine or Power Supply)
XLED00012	Aurora™ X1 LED Driver Module
XLED00013	Aurora™ X1 Gel Changer Module, Bottom Load
XLED00014	Aurora™ X1 Power Cord, 20', 15A Edison Plug
XLED00015	Aurora™ X1 Power Cord, 20', Bare End (North America)
XLED00017	Aurora™ X1 Installation/Tool Kit
XLED00020	Aurora™ X1 Followspot Base Body, 90 CRI, 6000K (c/w LED Engine, Gel Changer, Tripod and NEMA5-15 Power Cable)
XLED 19600	Aurora™ X1 Base Body, 90CRI, 6000K Module

20: WARRANTY

The warranty covers all structural and manufacturer defects for three years from the date you purchased this product and 2 years or 20,000 hours on any LED array. In case of any issues, we strongly recommend you call us at **888-252-5912** or contact the local dealer who supplied the purchased product. In any case, please report the serial number of the product when making a warranty claim.

Canto USA reserves the right to modify this document without prior notice.

