

LRX™ FRESNEL

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WARNING

READ EQUIPMENT MANUFACTURES
MANUAL BEFORE USING THIS PRODUCT

SAFETY INSTRUCTIONS

- User must be authorized, qualified and certified in jurisdiction of use.
- It is the user's responsibility and obligation to determine and comply with all applicable laws and regulations.
- Do not operate if unit appears damaged.
- Always use approved safety cables secured to a point capable of supporting the total weight of the load.
- In case of malfunction disconnect all power supplies, discontinue use, notify supplier.
- Area under fixture must be cordoned off at all times and kept clear of all personnel.
- Prior to operation a daily inspection and log are required.
- For handling information see page thirteen.
- Do not operate without lens in place.
- If using a power trolley with this fixture please refer to "LRX Power Trolley" manual.
- THERE ARE NO USER SERVICEABLE PARTS.
- IF YOU ARE UNSURE ABOUT ANYTHING SUSPEND USE OF THE PRODUCT.
- Questions contact Cinelease LRX service representative at lrx-lighting.com and go to contact page.
- For the latest version of this manual please visit "lrx-lighting.com"



DANGER

- Dangerous voltages are present when power is supplied to the fixture.
- This fixture has more than one power supply. Disconnect all power supplies before installation or removal of the lamps.
- Ensure all power supplies are off when connecting or disconnecting any cabling.
- Ensure lamp power supply matches lamp manufactures specification.
- Always stand clear of fixture during ignition cycle.
- Power must be removed when not in use and when data signal is removed.
- Ensure fixture meets all local codes prior to operation.
- Safety power lockout procedures must be followed.
- Safe electrical and working practices must be observed.



WARNING

- This fixture has rotating parts with pinch points.
- Fixture may move without warning.
- No personal within range of motion
- Never operate with any covers missing.



WARNING

HEAT AND ULTRA VIOLET RADIATION!

- Arc lamps generate broad spectrum UV radiation.
- Do not operate without complete lamp enclosure in place or if UV lens is damaged.
- Limit exposure to high density light.
- UV blocking sun tan lotion should be used when working in high density light locations.



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- Excessive exposure to high intensity white light may cause fatigue and skin irritation.
- High energy light output will burn skin and ignite combustible materials. Do not operate in the proximity of materials that are adversely affected by heat or light.
- Failure to adhere to these warning may result in serious burns or irreversible skin/eye damage.
- Do not look directly into the light during operation.
- Personal or flammable objects may not be within 40m (131 feet) of the lens during operation.
- Lamp housing becomes extremely hot when in operation, avoid contact.
- When fixtures are mounted in close proximity to one another, care must be taken so that output energy from one fixture is not directed at another fixture or electrical cabling.
- IMPORTANT: Please follow the operating instructions of the ballast.

FIXTURE ADDRESSING

Fixture addressing is performed at the rear of the fixture hanger assembly. The fixture can be programmed to operate in DMX mode or FIXTURE mode (for use with the hand controller). Because each LRX fixture requires sixteen DMX channels for operation, FIXTURE mode is merely a convenient way of skipping DMX channels in 16 channel increments, beginning with DMX channel #001. Additionally, fixture mode provides power to a connected hand controller, which is also designed to work in 16 channel increments.

DMX Connector pin out: (also see important note below)

- Pin 1 = ground
- Pin 2 = Data negative
- Pin 3 = Data positive
- Pin 4 = 12VDC negative
- Pin 5 = 12 VDC positive



When the LRX fixture is in FIXTURE mode, pins 4 & 5 on the DMX IN connector become energized to 12VDC to supply power to the hand controller. No power is supplied to pins 4 & 5 when in DMX mode. Ensure that fixture is in the correct mode prior to connecting DMX lines. Always connect the hand

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controller to the fixture with the power off. Damage could result if attempting to connect the hand controller to the LRX fixture while the power is on.

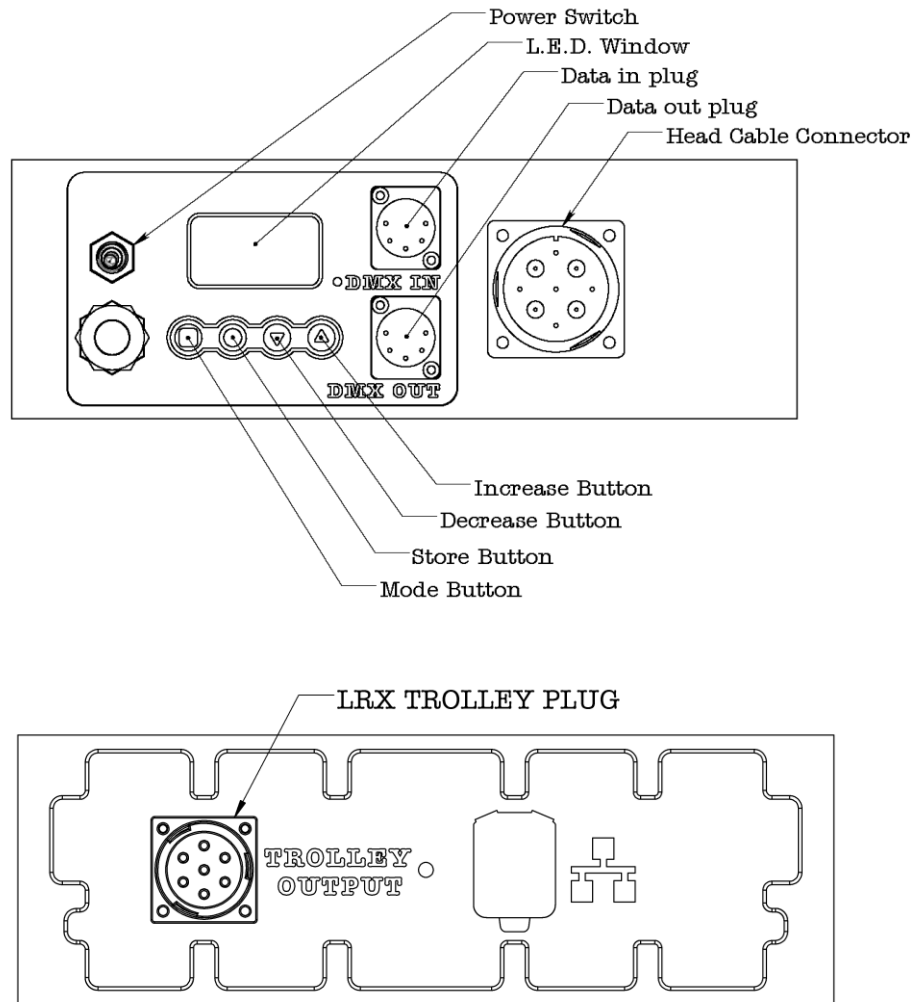
The mode (square icon) on the left is used to toggle between DMX mode and FIXTURE mode. FIXTURE mode is designated by a capital 'F' in the left-most digit, with the remaining two digits indicating the fixture number. E.g. F01=fixture#1, etc. DMX mode is shown as a three digit number from 001 to 512. Once the mode is selected the fixture number or DMX address can be increased or decreased using the up/down arrows on right side of the switch assembly. When the correct FIXTURE/address has been selected, the store (round icon) button second from the left is pressed and held (until the display stops flashing) to store that address. *It is important to note that the LRX fixture will not begin responding to a newly selected FIXTURE/DMX address until it has been stored by pressing and holding the store (round icon) button.* If the display is flashing, this is a warning that the displayed FIXTURE/DMX address does not match the address that fixture is currently responding to. Saving the displayed address tells the fixture to begin listening and responding to the new address. If the address is not stored within five seconds it will return to the previous set

The LRX fixture always writes the last saved address and mode to non-volatile memory, such that in the event of a power interruption, the fixture will power up with the mode and address it was using before the power interrupt.

Pressing and holding the mode button will provide access to the hour meter. Once in hour meter mode press the up icon to display bulb hours, indicated as a scrolling number. It will show as a blank digit followed by three digits then a decimal place and two more digits (i.e. _120.59). The bulb hours can be reset by pressing and holding the store button until the meter zeros, about five seconds.

To display fixture hours, press the down icon. Fixture hours will be displayed as a scrolling number with an "F" prefix. This can't be reset by the user.

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DMX CHANNEL ALLOCATION

When using the LRX with a lighting console or other device that offers discrete control over the DMX channels, they are used by the fixture as follows:

Where N= base channel of fixture. [LRX DMX address shown on display]:

N + (0-9) = motor control (depends on MODE)

N+10 = GEL fan ON/OFF (OFF<127<=ON)

N+11 = lamp control (unimplemented)

N+12 = motor control MODE: N+12<127 = BUMP MODE

N+12>=127 = FADER MODE

N+13 = reserved (future use)

N+14 = reserved (future use)

N+15 = reserved (future use)

If (MODE = BUMP): (n+12<128)

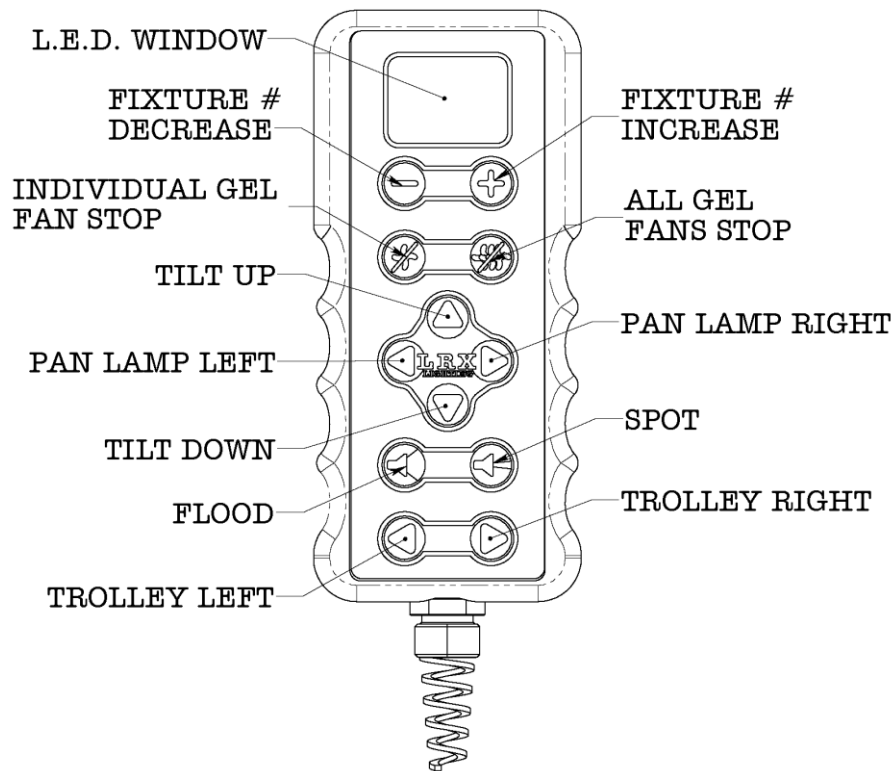
- (N+0 > 127) = pan left
- (N+1 > 127) = pan right
- (N+2 > 127) = tilt up
- (N+3 > 127) = tilt down
- (N+4 > 127) = spot
- (N+5 > 127) = flood
- (N+6 > 127) = trolley left
- (N+7 > 127) = trolley right
- (N + 8, 9) = reserved (future use)

If (MODE=FADER): (n+12>=128)


- (N+0 < 64) = pan left
- (N+0 > 127) = pan right
- (N+1 < 64) = tilt up
- (N+1 > 127) = tilt down
- (N+2 < 64) = spot
- (N+2 > 127) = flood
- (N+3 < 64) = trolley left
- (N+3 > 127) = trolley right
- (N+4 thru 9) = reserved (future use); each motor above is stopped when the fader is in the middle of its range (DMX value 64-127)

HAND CONTROLLER

The hand controller will allow fixture selection, (up to 32 fixtures), control of tilt - up/down, pan - left/right and flood/spot functions and will also shut off individual gel cooling fans or all gel cooling fans connected to that controller. All switches act as momentary type. When the “Individual Gel Fan Stop” switch is held the gel fan for the fixture indicated on the display stops. When the “All Gel Fans Stop” switch is held all gel fans connected to that hand controller will stop.

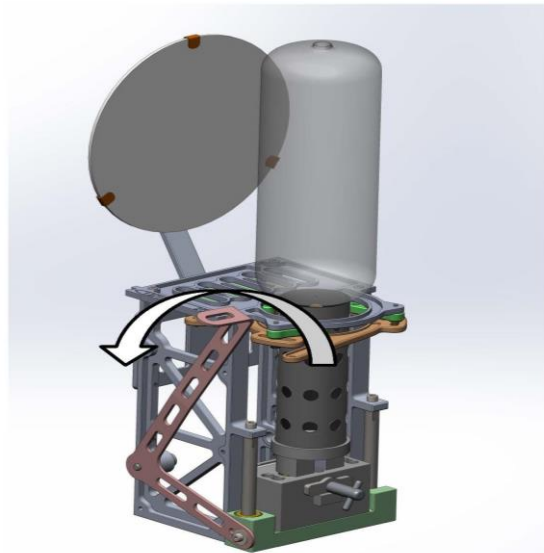


LAMP INSTALLATION

-  A number of hazards exist during lamp installation please refer to safety warnings on page two.
- This fixture has more than one power supply. Disconnect all power supplies before installation or removal of the lamps.
- Ensure socket is set to appropriate setting for lamp to be used. *See illustration below.*
- Prior to installing the lamp, check lamp contacts and wire ends for signs of arcing or over-heating. If lamp contacts or wiring appear damaged remove from service.
- Ensure power supply matches lamp type, voltage and wattage.
- Follow lamp manufactures instructions regarding use and handling of their product.
- Ensure the lamp clamp is tight.
- Always clean lamp with alcohol and clean paper towel after installing lamp.
- Allow lamps to cool before removing.

PRIOR TO INSTALLING LAMP

USE HANDLE TO RAISE SOCKET ASSEMBLY
FOR HMI LAMPS & LOWER SOCKET FOR
TUNGSTEN LAMPS



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FIXTURE SPECIFICATIONS

- This unit is designed to accept. 6KSE-X, 12KSE & 18KSE Metal halide lamps with a G38 base, as well as 10KSE & 12KSE tungsten lamps (120 – 240 VAC) with a G38 base and an arc center length of 255 & 260 mm. Place socket to high position, see illustration above
- This fixture will also accept industry standard 20KSE & 24KSE lamps (220-240 VAC) with a G38 base, set socket to low position, see illustration above.
- Note:
 - This fixture has an adjustable socket assembly, ensure setting is correct prior insertion of lamp; see illustration above.
 - 6KSE lamps with arc center length of 210mm will require a socket extender to compensate for the shorter A.C.L., part number G38-6X. Do not operate without socket extension in place.
- The use of dimmers for tungsten lamps is strongly recommended. Bringing tungsten lamps to full power without pre-warming the lamp and fixture may damage the lamp or break the Fresnel lens.
- Always start lamps in spot position.

Electrical:

Control power: Volts – 120 AC – non-dimmed feed line.
 Hertz – 50 - 60
 Amps – 2.0
 U- Ground plug

Metal Halide Lamps:

6KWSE: 125VAC / 48 amps approximate
 12KWSE: 160 VAC / 75 amps approximate
 18KWSE– 225 VAC / 85 amps approximate

Tungsten Lamps:

10KWSE Volts: 120/240 VAC - 83/41.5 amps approx.
 12KWSE Volts: 120/240 VAC - 100/50 amps approx.
 20KWSE Volts: 220/240 VAC - 83 amps approx.
 24KWSE Volts: 240 VAC - 100 amps approx.

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Head Input Connector:

- LRX fixture connector: Cannon part# CBO-28A16PS-A232
- Input is configured to accept Arri 12/18K connector.
- Tungsten mode requires an input connector with tails that mate to local distribution.
 - a. Pin "C" = Line
 - b. Pin "H" = Neutral
 - c. Pin "B" = Ground
- Or see wiring diagram for pin connections.

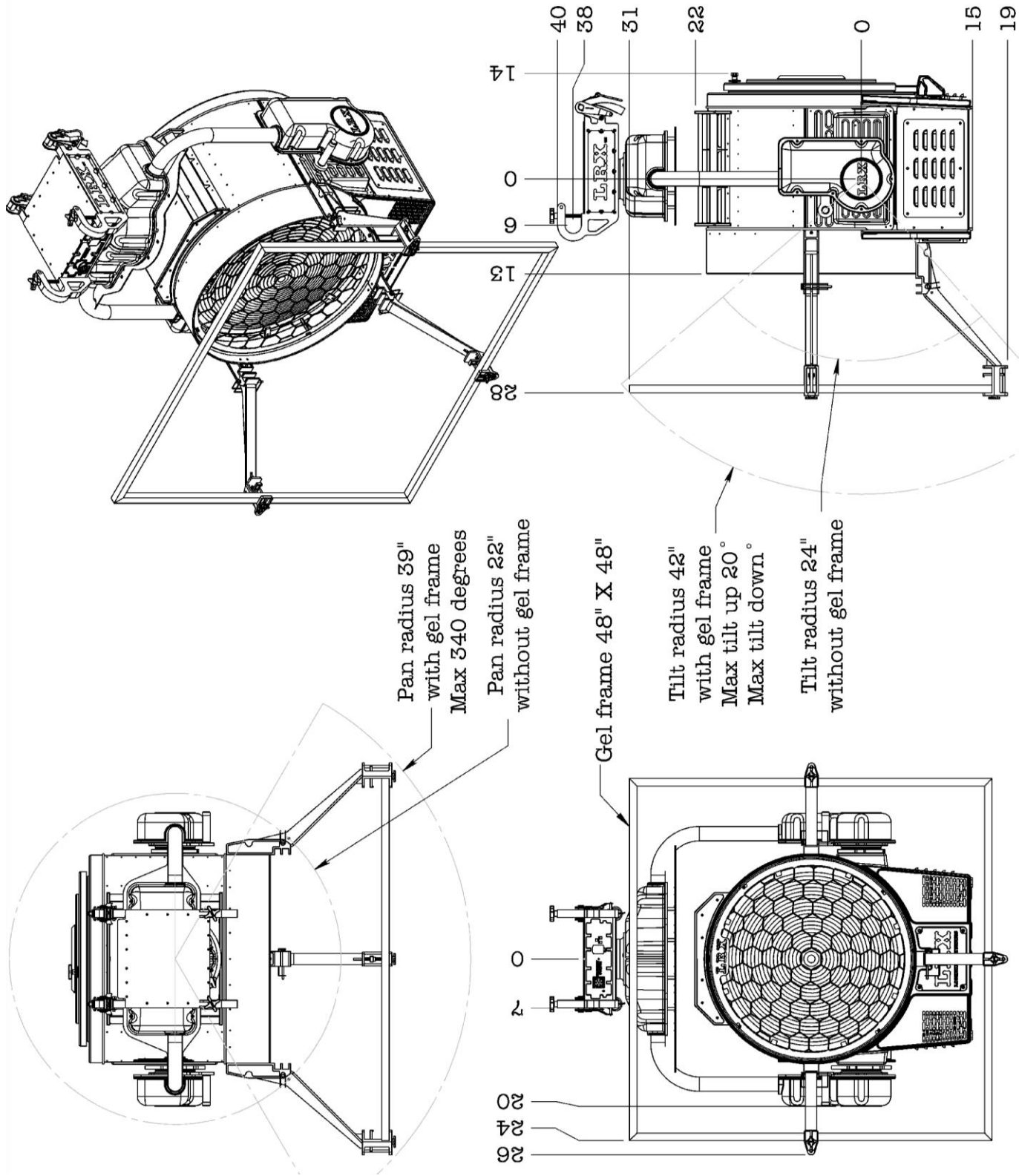
Physical

- Tilt from horizontal: +20 degrees to negative two hundred & twenty-five degrees
- Pan - 340 degrees
- Weight - 230 pounds
- Designed to accept gel frames: 48" X 48"
- Scrims: twenty nine inch diameter
- Fixture mounting hooks have been designed to mate with truss chords not greater than two inches (50.8mm) in diameter

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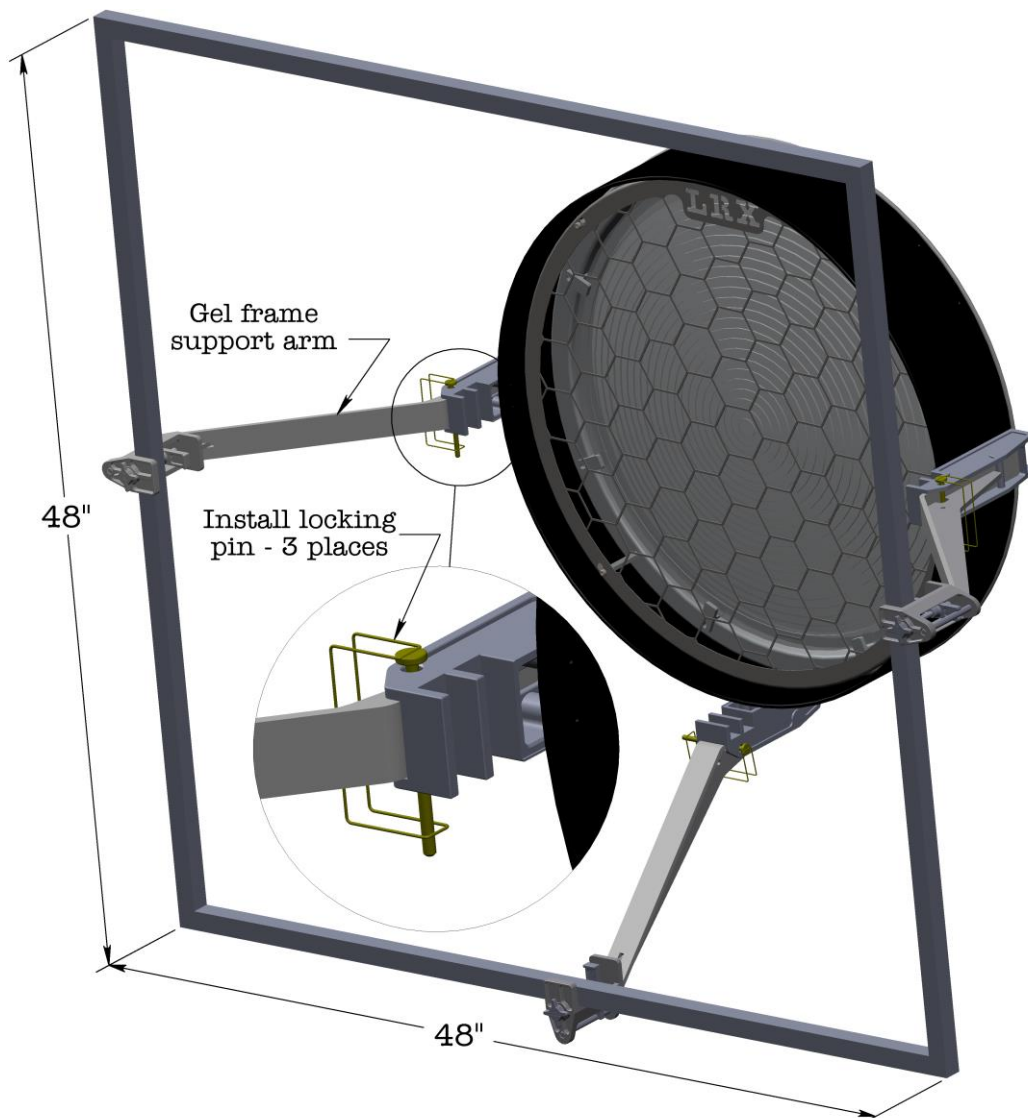
GEL FRAMES

-  SAFETY CABLES REQUIRED

To install gel frame holders, insert gel frame arms into receivers and install locking pin.

Gel frame holders will accept forty-eight inch square frames.

Tighten gel clamps against gel frames and install safety wires as required.

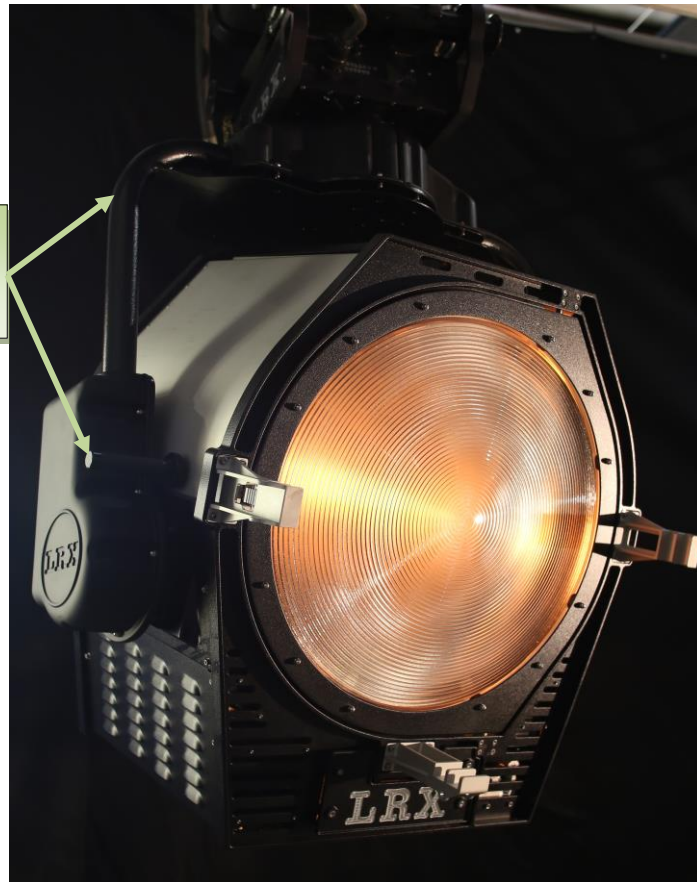


HANDLING OF FIXTURE



- Heavy lift, minimum two persons, the weight is approximately 230 pounds.
- Hanging of the fixture creates a number of potential pinch points.
- Use fixture lifting handles provided as well as the yoke tubes.
- If there are any concerns regarding handling please contact your supervisor.
- Ensure hanger bolts are installed immediately after hanging, before the ratchet straps are tensioned.
- Ratchet straps must have a minimum of one and a half wraps around the ratchet drum at all times.
- Removal of shipping case covers require two persons to lift. Always use lifting handles provided to avoid potential pinch points.

Fixture lifting points
Fixture approximately
230 pounds

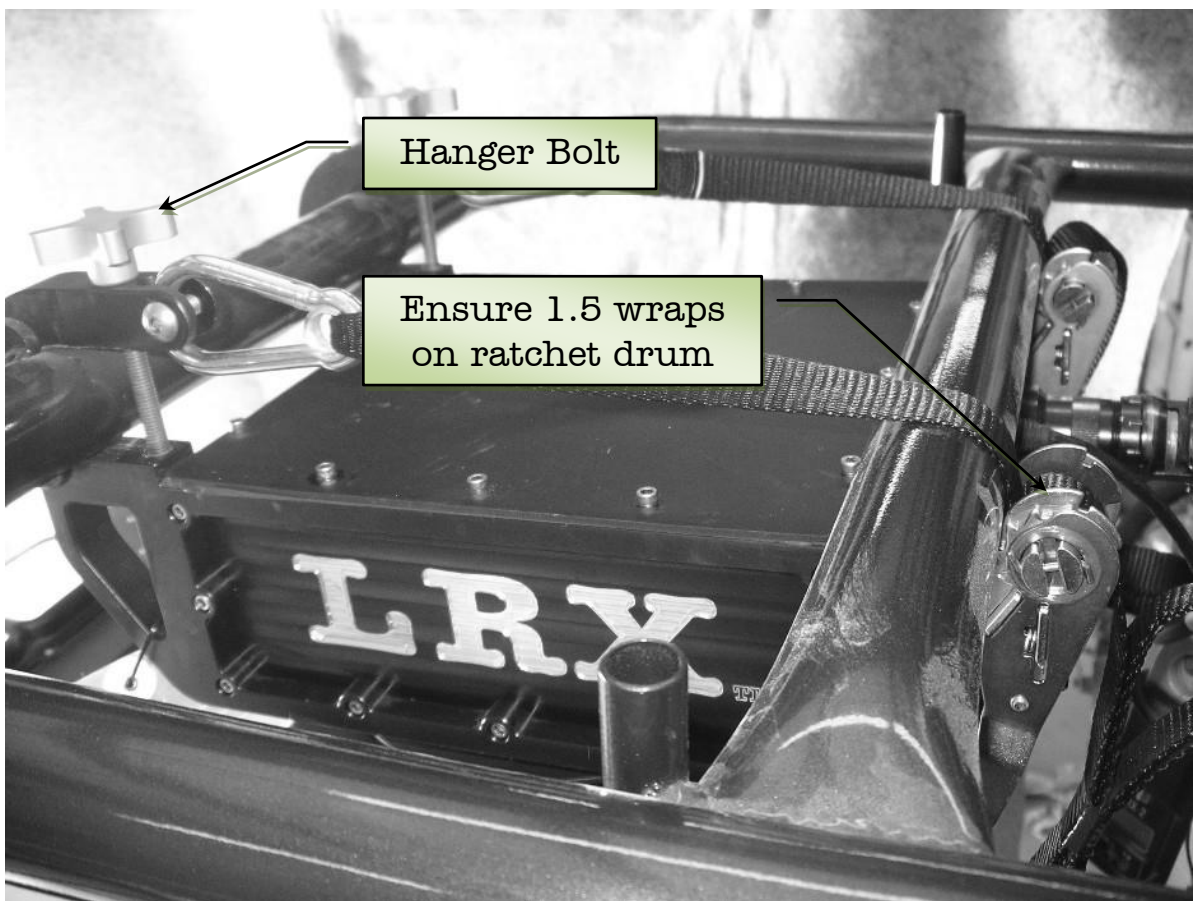


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Notice; to enable the fixture to fit into the shipping case:

- Tilt fixture so that lens surface is vertical.
- Pan fixture so that it is pointed straight ahead.
- Install onto shipping frame, tighten hanger bolts and ratchet straps; ensure there is a minimum of 1.5 wraps on the ratchet drum.
- Secure gel frame holders using the Velcro straps provided in the shipping trays.
- Place hand controller into Pelican case and place in tray.
- Hang DMX cables on shipping stand.
- Always store equipment in a dry location.



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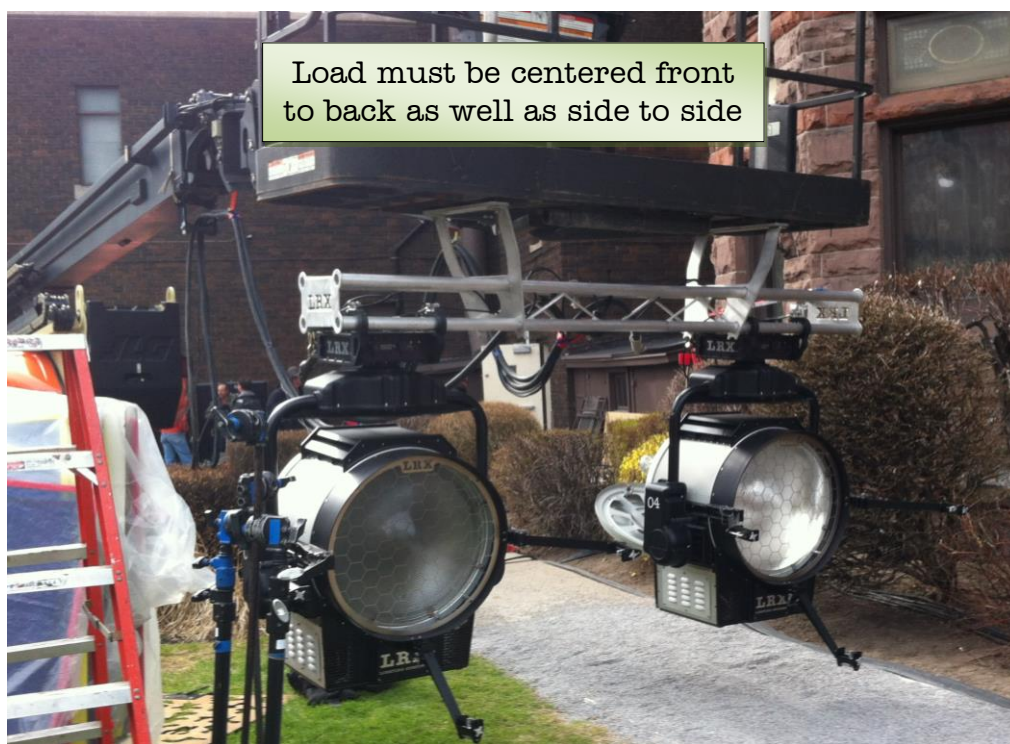
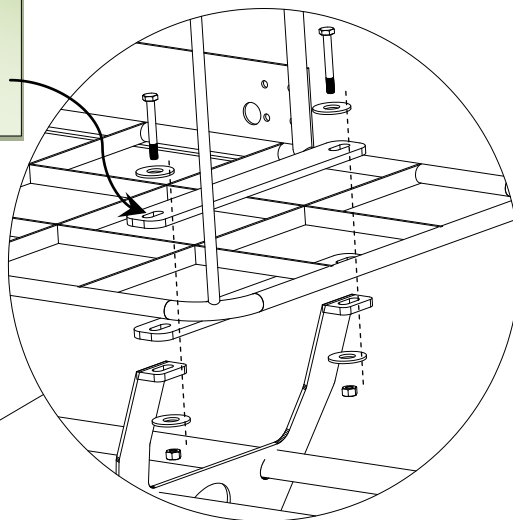
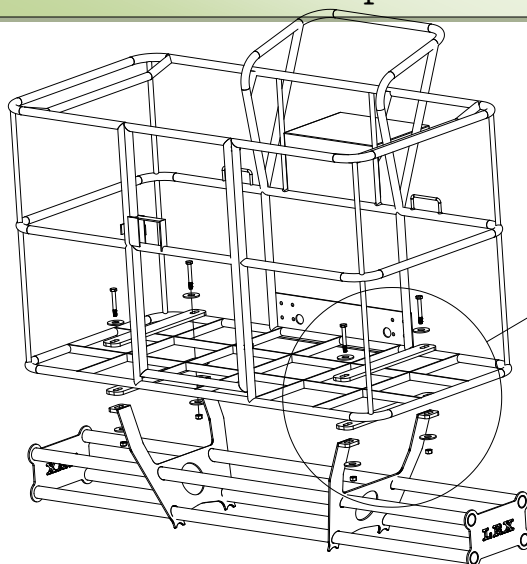
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INSTALLATION OF FIXTURES ON TRUSS, I-BEAM OR TELESCOPIC TYPE MAN LIFTS

- THIS FIXTURE MUST BE MOUNTED ON A LEVEL TRUSS.
- Installation structure must be designed and approved to safely carry all anticipated loads.
- It is the user's responsibility and obligation to determine and comply with all applicable laws and regulations.
- The installation and operation of this unit must be carried out by authorized and qualified personnel.
- Hanger bolts in hanger assembly must be installed. Both ratchet straps must be clipped onto their respective anchor point.
- Ratchet straps require minimum of 1.5 wraps on the ratchet to ensure they remain tight.
- Always use approved safety cables secured to a point capable of supporting the total weight of the load.
- All power and data cables must have a strain relief attached.
- Power trolleys must have positive mechanical stops on beams.
- When fixtures are mounted in close proximity to each other, care must be taken so that output energy from one fixture is not directed at another fixture or electrical cabling.
- If cable rollers are required refer to "LRX Cable Roller" manual.
- If LRX truss is to be installed, ensure that load is centered and evenly applied to basket. Maximum capacity for LRX truss is 500 pounds evenly distributed.
- Never use damaged or compromised trusses or equipment.
- Follow all lift manufactures guide-lines for load/wind capacities and de-rating as required. Refer to the aerial equipment operator manuals & special supplement for "Authorized and Trained Set Lighting Technicians and Studio Grips".

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Using two truss plates (1/2" X 3") per side, a minimum of two structural members must be captured. Fasten using 1/2" X 4" bolts with washers, lock washers and nuts – four places



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TROUBLE SHOOTING GUIDE

NO DISPLAY AT REAR OF HANGER ASSEMBLY

- Ensure 120vac power to fixture is live and on a non-dimmed line.
- Remove DMX connectors and inspect contact pins for damage and signs of corrosion
- Inspect 120 volt U ground supply wire for cuts or mechanical damage
- Inspect U ground plug contacts.
- Power switch is on (up position)

FIXTURE DOESN'T RESPOND TO ANY FUNCTIONS REQUESTED FROM HAND CONTROLLER

- Establish power is correct and display is functioning properly, see above.
- Test with another hand controller if available. If still unresponsive proceed to next step.
- Remove DMX connectors and inspect contact pins for damage and no signs of corrosion. Note all five wires and pins are required to operate hand controller.
- Check hanger display for proper addressing and mode. For use with hand controller the fixture display must show the "F" prefix; not the three digit DMX channel and the display must not be flashing.
- It is important to note that the LRX fixture will not begin responding to a newly selected FIXTURE/DMX address until it has been stored by pressing and holding the store (round icon) button. If the display is flashing, this is a warning that the displayed FIXTURE/DMX address does not match the address that the fixture is currently responding to.
- Plug hand controller directly into fixture, at this point the hand controller should light up and DMX light on the fixture should also light up. At this point if the unit is not operational test with another hand controller.
- Ensure the address at the fixture matches the address on the hand controller.
- If still not operational, place fixture into DMX mode and test with an alternative DMX source.
- Call for service

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TILT, PAN OR FOCUS MOTOR NOT OPERATING CORRECTLY.


Head moves freely without control:

- This may indicate the fixture has received impact and the drive gear has been damaged or drive may have become disengaged.

Head not moving on one axis but other axis is fine

- Test with another hand controller if available. If still unresponsive proceed to next step.
- This may indicate the fixture has received impact and the drive gear has been damaged or drive may have become disengaged.
- Actuate drive function and listen for motor operation. The tilt and pan drive assemblies use a slip clutch inline between the motor and drive gear as a protective measure, this clutch will slip and make a clicking sound once each revolution when driven by the motor, if the clutch has exceeded its preset limits.
- If any of these conditions exist, suspend use of the product and call for service.
- There are no user serviceable parts.

TROLLEY DOESN'T RESPOND

-  Dangerous voltage present at socket.
- Test with LRX hardwired trolley hand controller. If it now works problem with fixture, hand controller, lighting console.

LAMPS NOT WORKING

TUNGSTEN MODE LAMP NOT WORKING

- Check head extension cables and fixture panel mount connector pins
- Ensure correct lamp input power is available at head cable.
- Check that the lamp lock door is closed and door interlock switch is operating.
- Ensure lamp is OK, disconnect power supplies, remove lamp from

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fixture and perform a visual inspection and check continuity. We have seen lamps that look OK, but the feed wire is broken inside near the base.

- Check socket contacts and wiring.

METAL HALIDE MODE LAMP NOT IGNITING

Please store ballast in warm dry location when not in use.

- Damp ballasts are the number one cause of lamps not operating, damp ballast will need to be placed in a warm dry location and allowed to dry before attempting to use.
- Also check for signs of water in head cable connectors, dry as required.
- Check that the lamp access door is closed and door interlock switch is operating.
- Check head extension cables and panel mount connector pins (paying particular attention to the small pins are not dislodged or damaged which would cause improper contact.
- Install lamp ensure is properly seated (ceramic against ceramic and the contact tee bolt clamp is tight).
- Test with a ballast (ensure output matches lamp wattage) and a head extension cable that are known to be good.
- Ensure line voltage to ballast input is above 205 VAC when under load.
- Check socket contacts and wiring to socket. Check for signs of overheating contacts or arcing.

METAL HALIDE LAMP RUNS AND SHUTS OFF AFTER TEN OF MORE MINUTES

- The lamp could be near the end of its life
- Check that the lamp access door is properly closed and that interlock switch is positively engaged.
- Check that voltage at the fixture or ballast, long cable runs can significantly reduce voltage, thus decreasing performance.
- Check lamps, socket contacts and wiring.
- Unsure about anything or questions? Contact representative before use.
- For the latest version of this manual please visit “lrx-lighting.com”

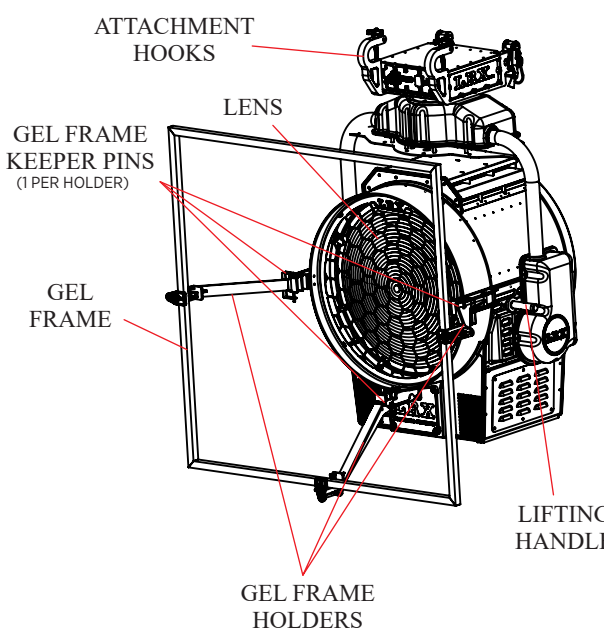
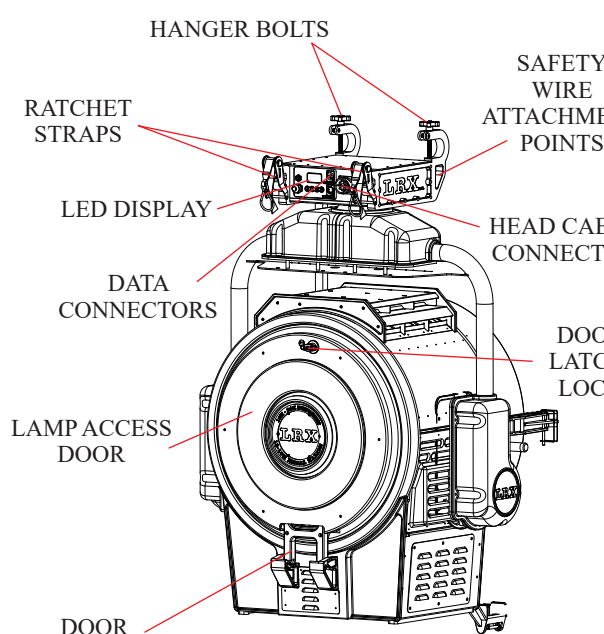
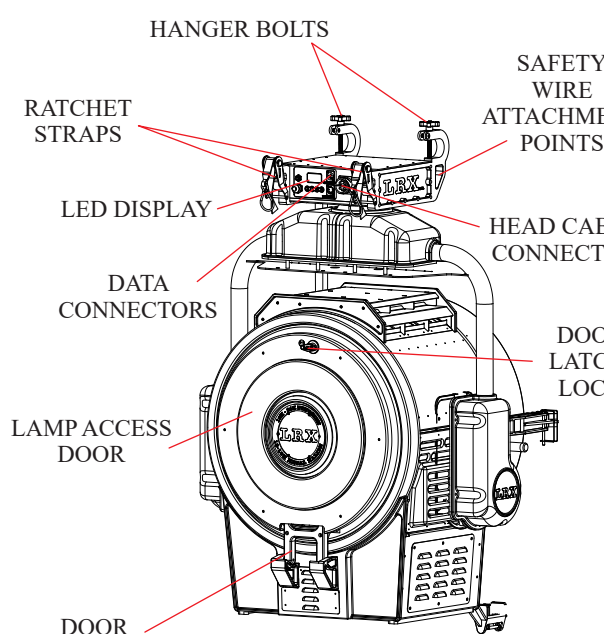
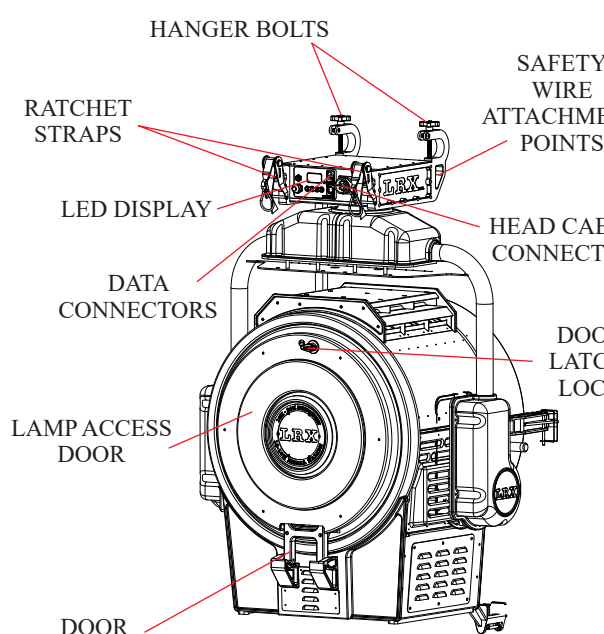
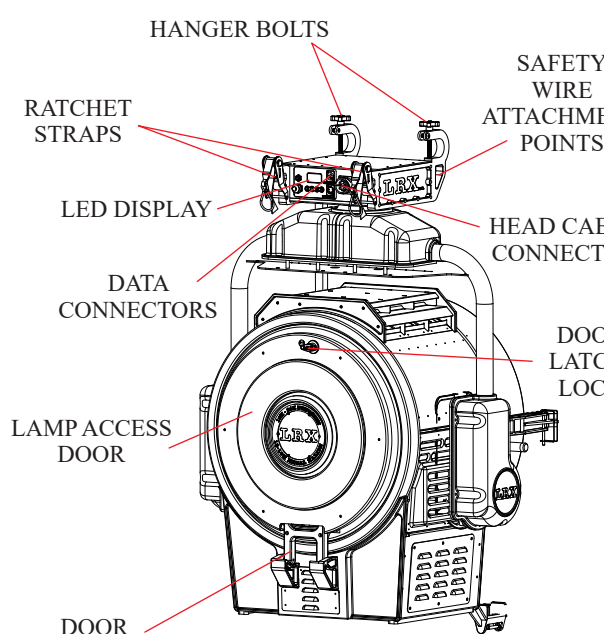
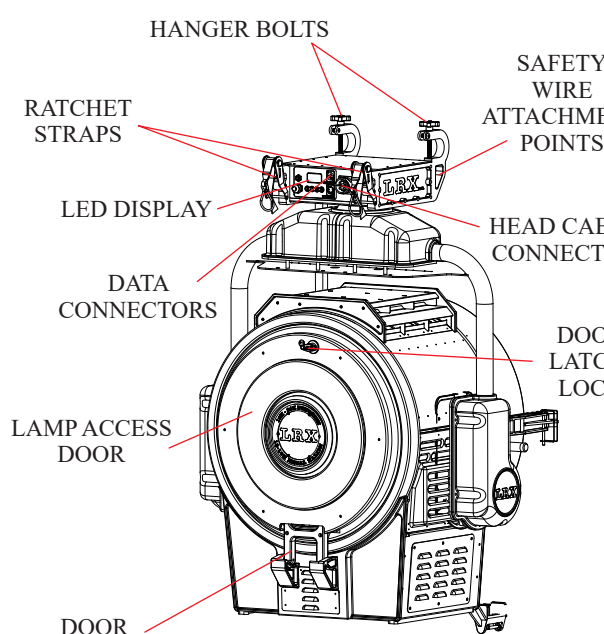
CUSTOMER: _____

DATE: _____

LOCATION: _____

FIXTURE SERIAL #: _____

Read and understand LRX Fresnel Manual before proceeding with daily checklist and/or operation of any LRX fixture. Manual available in fixture transport case or online at www.lrx-lighting.com.

#	HEAD STRUCTURAL INSPECTION	GOOD / FAIL	REFERENCE IMAGES
1.	Inspect fixture attachment hooks & head structure for damage, cracks or loose bolts.		 <p>FIG. 1</p> <p>ATTACHMENT HOOKS</p> <p>LENS</p> <p>GEL FRAME KEEPER PINS (1 PER HOLDER)</p> <p>GEL FRAME</p> <p>LIFTING HANDLE</p> <p>GEL FRAME HOLDERS</p>
2.	Inspect ratchet straps. There must be a minimum of two wraps around each ratchet drum. Ensure the straps capture truss & strap clips are correctly placed and latched.		
3.	Ensure hanger keeper bolts are installed completely.		
4.	Inspect overall condition of fixture / structure.		
5.	All covers are installed & in good condition.		
6.	Inspect lamp access door and door lock for proper operation.		
7.	Inspect gel frame receivers for damage, cracks or loose bolts.		
8.	Inspect gel frame holders and mounting hardware.		
9.	Inspect reflector.		
10.	Inspect lamp socket & contacts.		
11.	Inspect lens, lens grill & mounting hardware.		
12.	Inspect head cable input connector & contacts.		
13.	Inspect data connectors condition and pins & housing.		
14.	Inspect condition of U ground plug, wire & strain relief.		
15.	Provide safety cables as required.		
16.	No components have been modified outside of manufactures specifications.		
#	TRUSS CONNECTION POINT	GOOD / FAIL	 <p>FIG. 2</p> <p>HANGER BOLTS</p> <p>RATCHET STRAPS</p> <p>LED DISPLAY</p> <p>DATA CONNECTORS</p> <p>SAFETY WIRE ATTACHMENT POINTS</p> <p>HEAD CABLE CONNECTOR</p> <p>DOOR LATCH/ LOCK</p> <p>LAMP ACCESS DOOR</p> <p>DOOR HINGE</p>
17.	Inspect truss for damage, cracks, dents, distortion.		
18.	Inspect truss mounting plates for damage, cracks, distortion.		
19.	Inspect all fasteners & hardware for damage and ensure all fasteners are secure.		
#	BALLAST	GOOD / FAIL	 <p>FIG. 2</p> <p>HANGER BOLTS</p> <p>RATCHET STRAPS</p> <p>LED DISPLAY</p> <p>DATA CONNECTORS</p> <p>SAFETY WIRE ATTACHMENT POINTS</p> <p>HEAD CABLE CONNECTOR</p> <p>DOOR LATCH/ LOCK</p> <p>LAMP ACCESS DOOR</p> <p>DOOR HINGE</p>
21.	Inspect case for damage.		
22.	Inspect input power cables, connectors & contacts.		
23.	Inspect head cable output connector & contacts.		
#	CABLES	GOOD / FAIL	 <p>FIG. 2</p> <p>HANGER BOLTS</p> <p>RATCHET STRAPS</p> <p>LED DISPLAY</p> <p>DATA CONNECTORS</p> <p>SAFETY WIRE ATTACHMENT POINTS</p> <p>HEAD CABLE CONNECTOR</p> <p>DOOR LATCH/ LOCK</p> <p>LAMP ACCESS DOOR</p> <p>DOOR HINGE</p>
25.	Inspect head cable, connectors & contacts for damage.		
26.	Inspect data cable, connectors & contacts for damage.		
#	LAMP	GOOD / FAIL	
27.	Inspect lamp for damage.		
28.	Inspect lamp arc envelop for irregularities or deformities.		
29.	Inspect lamp contact pins for signs of overheating or arcing.		
#	HARD FILTERS	GOOD / FAIL	 <p>FIG. 2</p> <p>HANGER BOLTS</p> <p>RATCHET STRAPS</p> <p>LED DISPLAY</p> <p>DATA CONNECTORS</p> <p>SAFETY WIRE ATTACHMENT POINTS</p> <p>HEAD CABLE CONNECTOR</p> <p>DOOR LATCH/ LOCK</p> <p>LAMP ACCESS DOOR</p> <p>DOOR HINGE</p>
30.	Inspect glass for cracks or chips.		
31.	Check wire mesh on both sides of filter and confirm they are in good condition.		
32.	Ensure safety wires are used to secure all filters.		
#	POWER UP CHECKS	GOOD / FAIL	 <p>FIG. 2</p> <p>HANGER BOLTS</p> <p>RATCHET STRAPS</p> <p>LED DISPLAY</p> <p>DATA CONNECTORS</p> <p>SAFETY WIRE ATTACHMENT POINTS</p> <p>HEAD CABLE CONNECTOR</p> <p>DOOR LATCH/ LOCK</p> <p>LAMP ACCESS DOOR</p> <p>DOOR HINGE</p>
33.	Ensure all power & data cables are correctly connected to fixture.		
34.	Ensure proper electrical power is supplied.		
35.	Ensure all power & data cables have a secure strain relief.		
36.	Ensure Hanger LED display & keypad operating properly.		
37.	Inspect hand controller for damage & proper function.		
38.	Test tilt, pan & flood / spot functions.		
Notes:			

Confirm the combined weight of all accessories are within the allowable weight restrictions of the aerial lifting device or supporting structure.

INSPECTED BY: _____ SIGNATURE: _____

IF THE FIXTURE FAILS ANY PART OF THIS INSPECTION, REMOVE POWER, LOCK OUT AND REPORT TO YOUR SUPERVISOR IMMEDIATELY. DO NOT ATTEMPT TO MAKE REPAIRS. ALL REPAIRS TO LRX LIGHTING FIXTURES ARE TO BE PERFORMED BY AN LRX AUTHORIZED DEALER ONLY.