



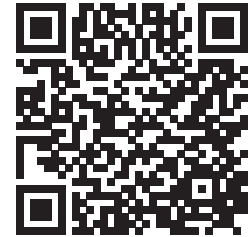
PHX LED SERIES LUMINAIRES INSTALLATION & USER'S MANUAL

Preface

The document provides basic information on installation and operational instructions for a qualified, trained installer. These instructions provide information for the following product:

PHX LED Series

Additional product information can be found on our web site at www.altmanlighting.com or by scanning the QR code to the right.



Have a question regarding this manual?

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Should you have a suggestion or question regarding your Altman Lighting product, we would love to hear from you.

You can reach us at:

Altman Lighting
1400 East 66th Ave.
Denver, CO. 80229
+1 (303) 500-7072
www.altmanlighting.com
customerservice@altmanlighting.com
support@altmanlighting.com
sales@altmanlighting.com

Note: Information contained in this document may not be duplicated in full or in part by any person without prior written approval of Altman Lighting. Its sole purpose is to provide the user with conceptual information on the equipment mentioned. The use of this document for all other purposes is specifically prohibited.

Our Commitment

Altman Lighting continually engages in research related to product improvement. New materials, production methods and design refinements are introduced into existing products without notice as a routine expression of the philosophy. For this reason any current Altman Lighting product may differ in some respect from its published description, but will always equal or exceed the original design specifications unless otherwise noted.

Document Number: **49-0221**
Version as of: **2022 June 13**

Product Luminaire Installation & User's Manual
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Important Information

Product Safety Notices



When using electrical equipment, basic safety precautions should always be followed including the following:

1. READ AND FOLLOW ALL SAFETY INSTRUCTIONS.
2. Do not mount near gas or electric heaters.
3. Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
4. Operate only in approved environments. Do not operate outside unless product is designed to do so.
5. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
6. Do not use this equipment for other than intended use.
7. Refer service to qualified personnel.

SAVE THESE INSTRUCTIONS.

Warnings



WARNING: You must have access to a main circuit breaker or other power disconnect device before installing any wiring. Be sure that power is disconnected by removing fuses or turning the main circuit breaker off before installation. Installing the device with power on may expose you to dangerous voltages and damage the device. A qualified electrician must perform this installation.

WARNING: Refer to National Electrical Code® and local codes for cable specifications. Failure to use proper cable can result in damage to equipment or danger to personnel.

WARNING: This equipment is intended for installation in accordance with the National Electric Code® and local regulations. Before any electrical work is performed, disconnect power at the circuit breaker or remove the fuse to avoid shock or damage to the control. It is recommended that a qualified electrician perform this installation.

WARNING: This Lighting Fixture IS NOT for residential installation or use.

WARNING: The structure where fixture(s) is to be mounted must be capable of supporting the weight of the fixture and its accessories. This fixture is for temporary, portable mounting only.

WARNING: The light source contained in this luminaire shall only be replaced by the manufacturer or his service agent or a similar qualified person.

THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED.

CE PRODUIT DOIT ÊTRE INSTALLÉ SELON LE CODE D'INSTALLATION PERTINENT, PAR UNE PERSONNE.

**CONSULT A QUALIFIED ELECTRICIAN TO ENSURE CORRECT BRANCH CIRCUIT CONDUCTOR.
CONSULTER UN ÉLECTRICIEN QUALIFIÉ POUR VOUS ASSURER QUE LES CONDUCTEURS DE LA
DÉRIVATION SONT ADÉQUATS.**

FCC Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Altman Lighting Product Warranty

Warranty Terms

Altman Lighting, Inc., a subsidiary of Altman Stage Lighting Company, Inc., herein referred to as Altman, warrants each new product (except for spare parts or products Altman does not manufacture) for a period of FIVE (5) years and ONE (1) day from date of shipment to correct by repair or replacement any part defect due to faulty material or workmanship.

Altman warrants for NINETY (90) days any spare part it manufactures. On spare parts or products Altman does not manufacture, including, but not limited to, lamps, sockets, lenses, roundels, electronics, ignitors, ballasts, etc.; Altman will grant the same warranty given Altman by its vendors. Altman assumes no responsibility for damage or faulty performance caused by misuse, improper installation, careless handling or where repairs have been attempted by others. This warranty is in lieu of all warranties or guarantees expressed or implied and no representative or person is authorized to assume Altman any other liability with the sale of Altman's products.

Altman assumes no responsibility for damage or faulty performance caused by misuse, improper installation, careless handling or where repairs have been attempted by others.

This warranty is in lieu of all warranties or guarantees expressed or implied and no representative or person is authorized to assume Altman any other liability with the sale of Altman's products.

Warranty Service

The customer must receive a Return Material Authorization (RMA) number prior to return, return shipment must be visibly marked with the RMA number and the product must be returned (shipping prepaid) to the factory at:

1400 East. 66th Avenue
Denver, CO 80229 USA
+1-303-500-7072
support@altmanlighting.com

The return must be within THIRTY (30) days of receiving the RMA from Altman. Altman warrants for NINETY (90) days any spare part it manufactures. On spare parts or products Altman does not manufacture, such as lamps, sockets, lenses, roundels, electronics, ignitors, ballasts, etc. Altman will grant the same warranty given Altman by its vendors.

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About this Manual

The document provides installation and operation instructions for the following products:

- **PHX LED Series Luminaires**

Please read all instructions before installing or using this product. Retain this manual for future reference.

Product Descriptions

This manual covers the all PHX LED LED Luminaires models. Because these fixtures are configured at the time of ordering, please refer to the current product specification sheet for the model numbers and descriptions.

Part Number	Description	LED Array(s)	Available Lenses	Body Color/Finish
PHX 1	150 Watts	RGBA	Fixed Lenses: 5°, 10°, 19°, 26°, 36°, 50° Zoom Lenses: 15° to 35° (15Z) and 30° to 55° (30Z)	Black (B) or White (W)
		RGBW		
		3K (White)		
		5K (White)		
		3K5K (Tunable White)		
PHX 1.5	150 Watts	RGBL		
PHX 2 (*Obsolete*)	250 Watts	RGBA		
		RGBW		
		3K (White)		
		5K (White)		
		3K5K (Tunable White)		
PHX 3	340 Watts	RGBL		
PHX 3.5	340 Watts	RGBL		

Note: Model numbers are as follows: PHX[Number]-[LED Array]-[Lens]-[Body Color]. Example: PHX2-RGBW-19-B, PHX ellipsoidal, 250W, RGBW LEDs, 19 degree lens, fixture/lens body color is black.



IMPORTANT! This manual covers the all PHX Series LED Luminaire models. Because these fixtures are configured at the time of ordering, please refer to the current product specification sheet for the model numbers and descriptions.

Please read all instructions before installing or using this product. Retain this manual for future reference.

Accessories

Contact your Authorized Altman Lighting Dealer for price and availability of all accessories for PHX LED LED Luminaires. Additional information can be found on the Altman Lighting web site at www.altmanlighting.com.

Included Accessories - Fixed Focus Models

Part Number	Description
4.5-CF*	Color frame, 6-1/4 inch x 6-1/4 inch (included with 19°, 26°, 36°, 50° models)
10-CFB	Black color frame, 12 inch x 12 inch (included with 10° models)
12-CFB	Color frame, 14 inch x 14 inch (included with 5° models)
510	Malleable iron pipe clamp
SC-36-BK	36-inch black safety cable with spring clamp
PHX-SFLGSA	PHX soft focus lens with A-size pattern holder
PCL-PBG-12-*	5-foot, 20A PowerCON connector with parallel blade U ground (Edison)

* Specify color at time of ordering by adding the following code for color: B = Black or W = White.

Included Accessories - Zoomable Focus Models

Part Number	Description
6-CF*	Color frame, 7-1/2 inch x 7-1/2 inch
510	Malleable iron pipe clamp
SC-36-BK	36-inch black safety cable with spring clamp
PHXZ-SFLGSB	PHX soft focus lens with B-size pattern holder
PCL-PBG-12-*	5-foot, 20A PowerCON connector with parallel blade U ground (Edison)

* Specify color at time of ordering by adding the following code for color: B = Black or W = White.

Available Accessories - Fixed Focus Pattern Holders

Part Number	Description
PHX-PHGSA	A Size Steel Pattern Holder (100mm OD/75mm IA)
PHX-PHGSB	B Size Steel Pattern Holder (86mm OD/64.5mm IA)
PHX-PHGSA-GLS	A Size Glass Pattern Holder (100mm OD/75mm IA)
PHX-PHG86-GLS	B Size Glass Pattern Holder (86mm OD/ 64.5mm IA)
PHX-PHISB	B Size Steel Pattern Holder (86mm OD/64.5mm IA)
PHX-PHISA-GLS	A Size Glass Pattern Holder (100mm OD/75mm IA) for Iris Slot
PHX-PHISB-GLS	B Size Glass Pattern Holder (82mm OD/ 64.5mm IA) for Iris Slot
PHX-PHIS86-GLS	B Size Glass Pattern Holder (86mm OD/ 64.5mm IA) for Iris Slot

Accessories

Available Accessories - Zoomable Focus Pattern Holders

Part Number	Description
PHXZ-PHGSB	B Size Steel Pattern Holder (86mm OD/ 64.5mm IA)
PHXZ-PHGSB-3T	B Size Steel Pattern Holder (86mm OD/ 64.5mm IA) 3 Tab Style
PHX-PHISB	B Size Steel Pattern Holder (86mm OD/ 64.5mm IA) for Iris Slot
PHX-PHISA-GLS	A Size Glass Pattern Holder (100mm OD/75mm IA) for Iris Slot
PHX-PHISB-GLS	B Size Glass Pattern Holder (82mm OD/ 64.5mm IA) for Iris Slot
PHX-PHIS86-GLS	B Size Glass Pattern Holder (86mm OD/ 64.5mm IA) for Iris Slot

Other Available Accessories

Part Number	Description
PCL-2P&G-12-5-*	5-foot, 20A PowerCON with 2P&G stage pin connector, male
PCL-TLG-12-5-*	5-foot, 20A PowerCON with L5-20P twist locking ground connector, male
PCL-BARE-12-5-*	5-foot, 20A PowerCON with bare end lead (no connector)
510-HD	Heavy Duty Malleable Iron Pipe Clamp
6-DN	"7-1/2 inch x 7-1/2 inch with 3 inch hole donut, black (For 19°, 26°, 36°, 50° and zoom models)"
PCTJ-12-5	5-Foot (1.5m), 20 Amp, PowerCON In to PowerCON Out feed-through jumper Cable
PCTJ-12-10	10-Foot (3.0m), 20 Amp, PowerCON In to PowerCON Out feed-through jumper Cable
PCTJ-12-15	15-Foot (4.5m), 20 Amp, PowerCON In to PowerCON Out feed-through jumper Cable
PCTJ-12-25	25-Foot (7.62m), 20 Amp, PowerCON In to PowerCON Out feed-through jumper Cable
PCTJ-COUPLER	PowerCON coupler (PowerCON In to PowerCON Out to link cables)

PHX LED Series LED Luminaires Overview

PHX LED Series Luminaires Components

Fixed Focus Models

Figure 1 shows the basic features of Fixed Models.

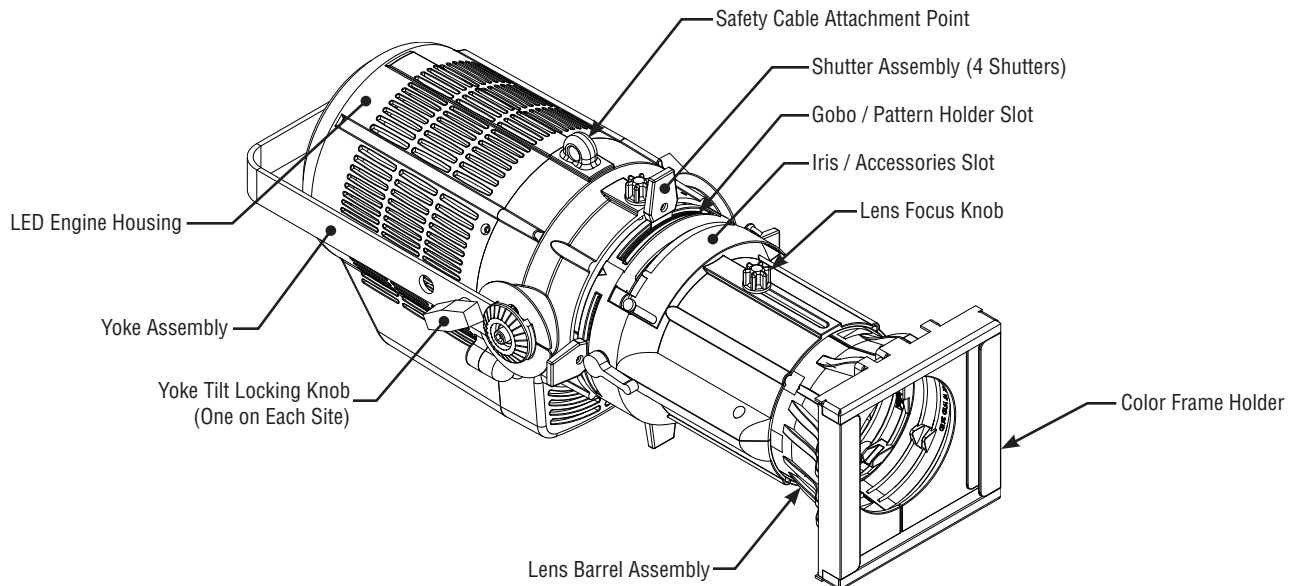


Figure 1: Fixed Focus Model Features

Zoomable Focus Model

Figure 2 shows the basic features of Zoomable Focus Models.

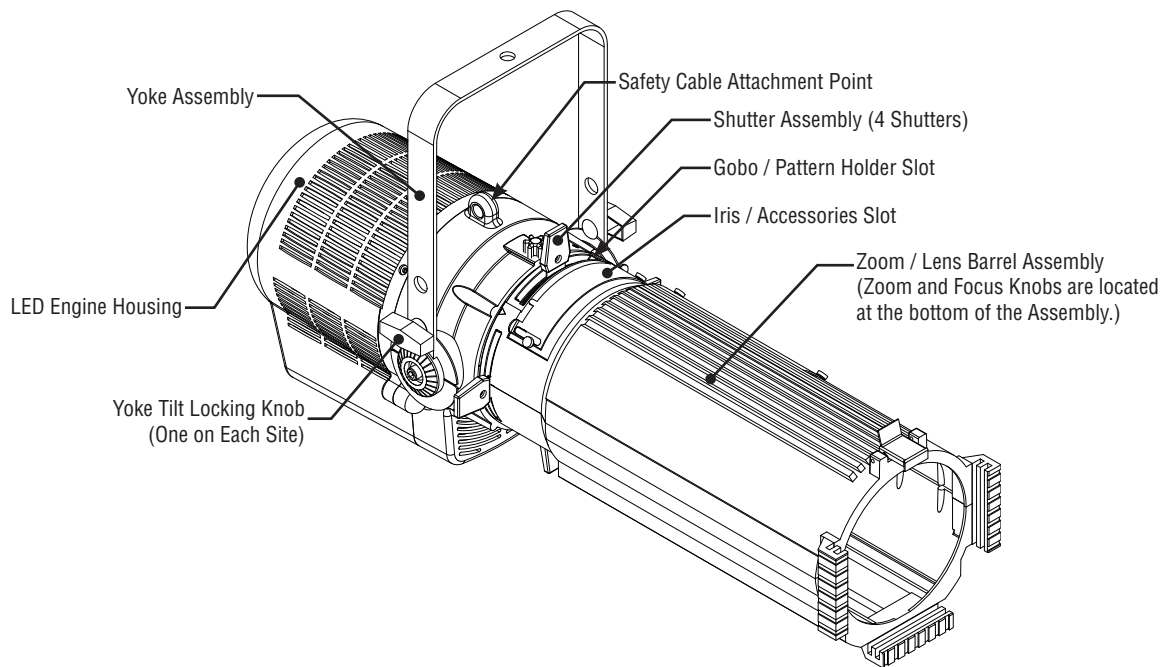


Figure 2: Zoomable Focus Model Features

Installation And Setup

Power Requirements



WARNING! PHX Series LED Luminaires should be connected to a constant circuit or a relay device. They should never be connected to a dimmer or circuit controlled by a dimmer. Read this section carefully on how to properly connect your fixture.



WARNING! When using the daisy-chain connection method, only connect your PHX LED Luminaire to AC output connection of other PHX LED Luminaires. DO NOT CONNECT OTHER TYPES OF LUMINAIRES OR DEVICES! The maximum allowable number of PHX LED Luminaires that can be daisy-chained on one power feed should not exceed the first fixture's 16 Amp output power rating. Refer to Table 1 for maximum number of PHX LED Luminaires on one daisy chain power feed.

Model	Voltage	Number of Units (maximum)	Total Amperage
PHX1 LED Luminaires	120VAC	10	12.5 Amps
	230VAC	20	13.0 Amps
PHX1.5 LED Luminaires	120VAC	10	12.5 Amps
	230VAC	20	13.0 Amps
PHX2 LED Luminaires	120VAC	6	14.0 Amps
	230VAC	12	13.0 Amps
PHX3 LED Luminaires	120VAC	5	14.6 Amps
	230VAC	10	14.7 Amps
PHX3.5 LED Luminaires	120VAC	5	14.6 Amps
	230VAC	10	14.7 Amps

Table 1: Daisy Chain Limits of PHX Series LED Luminaires



WARNING! The wiring information in Table Note: is shown for field wiring information and must be performed by a qualified and licensed electrician. Before performing any field wiring, refer to and read the warnings contained in "Important Information" on page 1.

Connecting Power

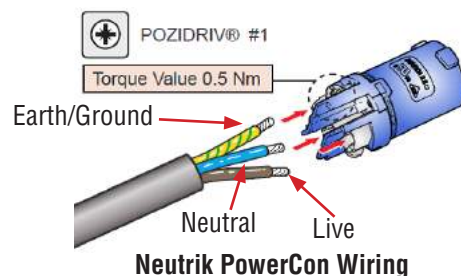
The PHX Series LED Luminaires are powered via an AC input cable from 100 to 240VAC, 50/60Hz and draw approximately:

- PHX1 / PHX 1.5 LED Luminaires: 150 Watts
- PHX2 LED Luminaires: 250 Watts
- PHX3 / PHX 3.5 LED Luminaires: 340 Watts

The table below outlines the wire colors and their purpose.

WIRE COLOR	PURPOSE
Brown or Black	Main / (L)ine
Blue or White	(N)eutral
Green/Yellow or Green	Ground / Earth

Table 2: AC Input Wiring



Connecting DMX

The PHX LED Series Luminaires offers two DMX512 connections. One for DMX Input (from a DMX source) and one DMX through-put (out). Basic DMX512 installation consists of connecting multiple DMX controlled PHX LED Series Luminaires together (up to 32 Total devices per DMX string) in “daisy-chain” fashion. A cable runs from the DMX512 control source to the DMX INPUT connection on the first luminaire. From the DMX OUTPUT of the luminaire another cable runs to the DMX IN connector on the next luminaire (or DMX512 device to be controlled).



At the end of each DMX Daisy chain, it is highly recommended that a DMX TERMINATOR (Altman Lighting part number DMX-5-TERM) is installed on the last luminaire (or device) in the chain.

For more information on installing DMX512 control systems, the following publication is available for purchase from the United States Institute for Theatre Technology (USITT), “Recommended Practice for DMX512: A Guide for Users and Installers, 2nd edition” (ISBN: 9780955703522).

USITT Contact Information: www.usitt.org

DMX - XLR Connectors

The table to the right shows the pin-out and corresponding DMX signals for a 5-pin XLR connector.

DMX Signal	XLR Connector*
Common (Drain)	Pin 1
DMX -	Pin 2
DMX +	Pin 3
Not Used	Pin 4
Not Used	Pin 5

Table 3: DMX 5-PIN XLR Connector Wiring

Note: * Only those pins shown are used. Remaining pins on connectors are not used.

C-Clamp Installation

The provided c-clamp should be installed as shown in **Figure 3**. Only use the hardware supplied with the c-clamp.

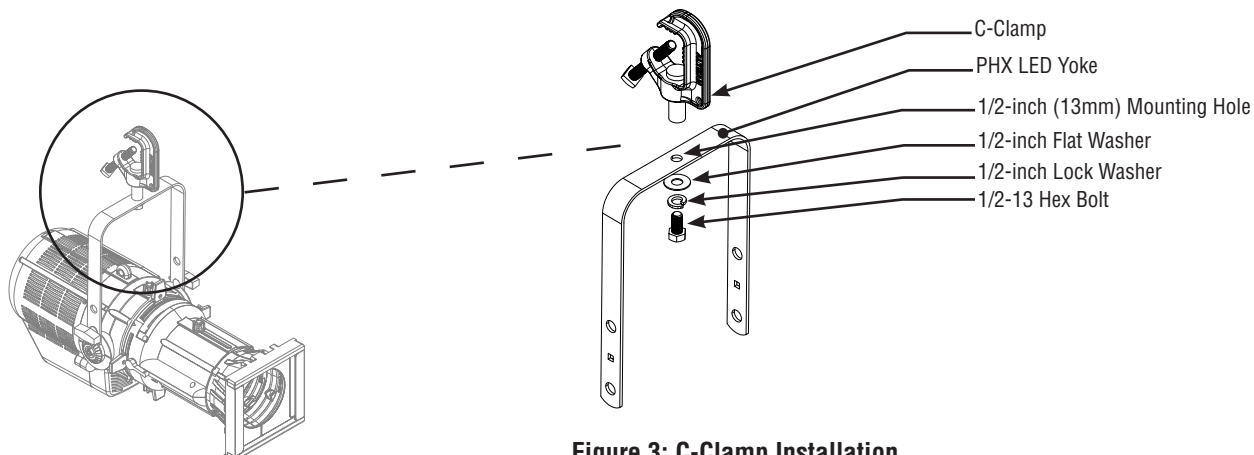


Figure 3: C-Clamp Installation

To Install the C-clamp:

1. With luminaire on a flat, sturdy surface, position yoke assembly for easy access as illustrated in **Figure 2**.
2. Place on 1/2-13 hex bolt, in this order, the 1/2-inch lock washer and then the 1/2-inch flat washer.
3. Insert bolt into hole on yoke assembly.
4. Position c-clamp over bolt and thread bolt into c-clamp.
5. Tighten bolt.

Safety Cable Installation

The provided safety cable should be installed in accordance to local and national codes.



NOTE: The safety cable (supplied with unit) should be used and may be required by local and/or national codes when hanging this luminaire. The mounting structure must be capable of supporting the weight of the fixture, lens, cabling, any accessories, etc.

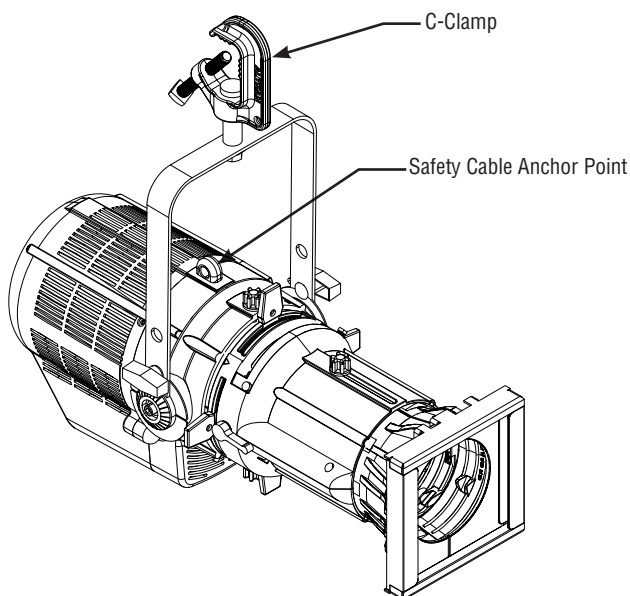


Figure 4: Safety Cable Installation

Installing Fixture Features and Accessories

PHX Series LED Luminaires accept a variety of accessories and has several on-board features. This section will describes what accessories can be used, how to install them and how to use the various features of the fixture.



CAUTION: When installing accessories, it is best practice to do so with the fixture on a flat and stable work surface. If this is not possible, when installing accessories when the fixture is mounted above, be sure to install the accessory with no one below the fixture in the event the accessory is dropped.



NOTE: There are many aftermarket accessories for Altman Lighting products available through third-party suppliers. When considering these aftermarket accessories, we suggest that you consult with your Altman Regional Sales Manager beforehand regarding capability and effects on product performance.

Focus Adjustment (Fixed Focus Models)

Focusing PHX Series LED Luminaires is straight forward. Position the fixture as needed, loosen, but do not remove, the lens focus knob (refer to [Figure 1 on page 7](#)) and slide lens forwards or backwards until desired focus is achieved. Once focus is set, hand-tighten lens focus knob.

Focus and Zoom Adjustment (Zoomable Focus Models)

Zoomable models offer users the ability to zoom the lens to various beam angles (refer to the model purchased for available beam angles).

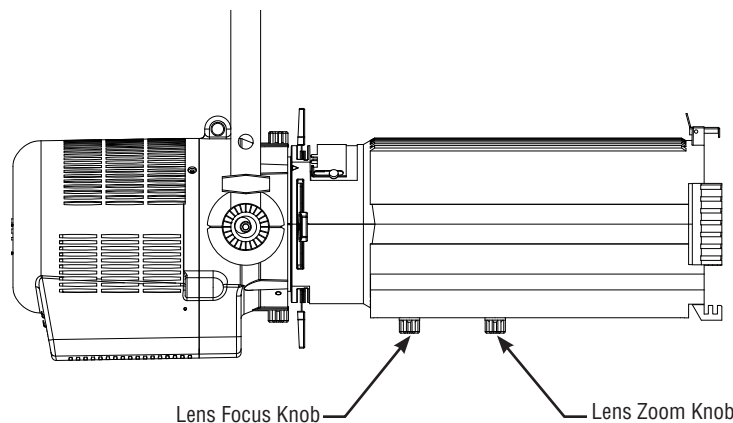


Figure 5: Safety Cable Installation

Setting Zoom (Beam Angle)

Position the fixture as needed, loosen, but do not remove, the lens zoom knob (refer to [Figure 6](#)). Slide lens forwards or backwards until desired zoom is achieved. After zoom is set as desired, hand-tighten the zoom knob. Once beam angle is set, hand-tighten lens zoom knob. Proceed to adjust focus (if required).

Setting Focus

To set the beam focus on zoomable models, loosen, but do not remove, the lens focus knob (refer to [Figure 6](#)) and slide lens forwards or backwards until desired focus is achieved. Once focus is set, hand-tighten lens focus knob.

Rotating Shutter Assembly (All Models)

If rotating the shutter assembly is required, loosen, but do not remove, shutter rotation lock knob (see Figure 6) on fixture. Using both hands, rotate the shutter assembly (in either direction) until in the desired position. Hand-tighten shutter rotation lock knob.

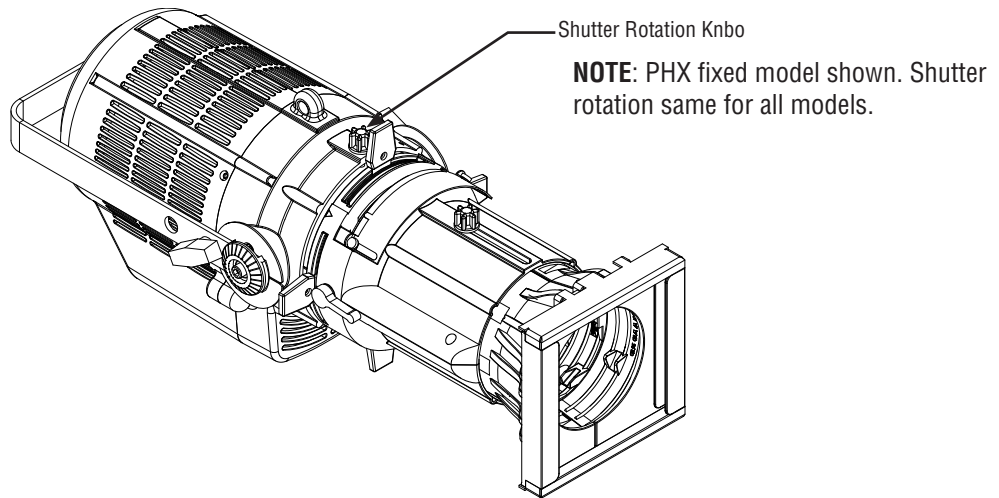


Figure 6: Shutter Rotation Knob

Shutter Movement

Each PHX LED Luminaire offers four (4) shutter blades that can be moved in or out of the fixture's light beam. To set the shutters, first set the beam as needed (refer to "Focus Adjustment (Fixed Focus Models)" on page 13 or "Focus and Zoom Adjustment (Zoomable Focus Models)" on page 13 as applicable), disengage the shutter lock, move shutters as desired.

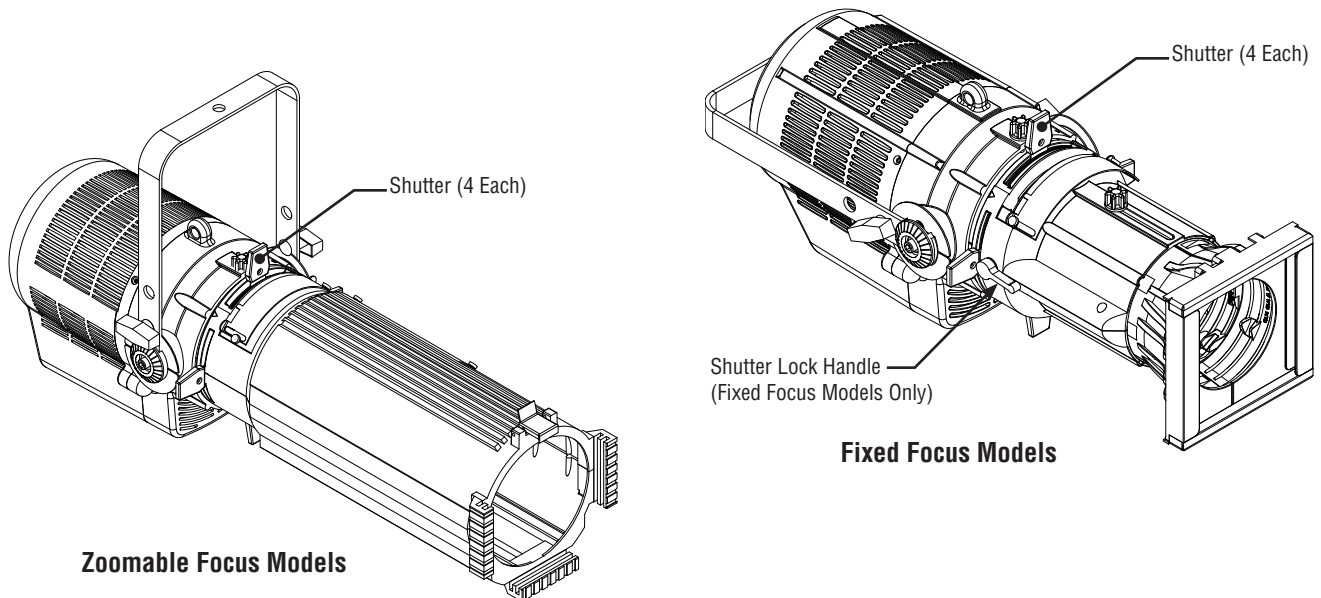


Figure 7: Shutter Rotation Knob



NOTE: On fixed focus units, the shutters can be locked into position by engaging the shutter lock (see Figure 7) on side of the luminaire. Users will know when the shutter lock is engaged when the shutter, when grabbed by the hand, does not easily move.

Accessory Holder

Each PHX Series LED Luminaire is equipped with an end of lens accessory holder to hold the supplied color frame. Please note which model you have. The accessory holder for fixed focus and zoomable models are different and are operated differently

Accessory Holder (Fixed Focus Models)

On fixed focus models, the accessory holder latch is opened by sliding the cover to the side, lift up on the cover, insert accessory, and close the cover. Make sure the retaining cover locks back in place

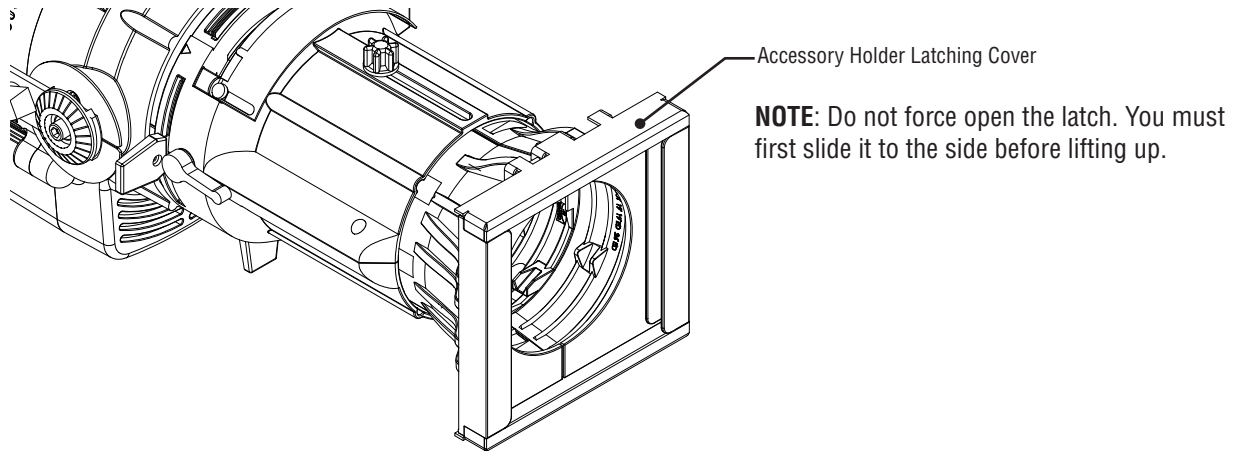


Figure 8: Accessory Holder Latching Cover (Fixed Focus Models)

Accessory Holder (Zoomable Focus Models)

On zoomable focus models, the accessory holder has a small latch that is released by sliding it to the side, lift up on the latch, insert accessory, and close the latch make sure the retaining latch locks back in place.

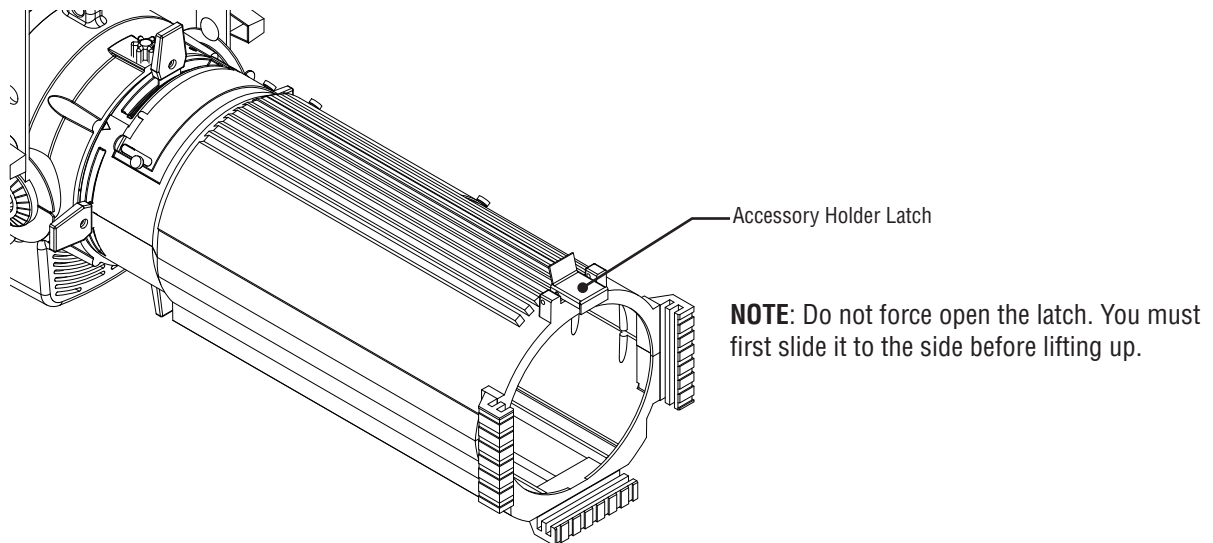
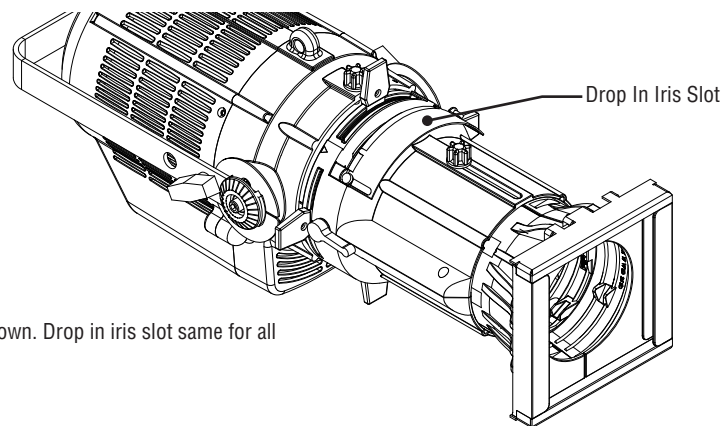


Figure 9: Accessory Holder Latch (Zoomable Models)

Drop In Iris Slot (All Models)

Each PHX LED Luminaire's lens has a large opening for a drop in iris or motorized pattern device / gobo rotator (by others). This slot has a retractable cover in order to prevent light leak when not in use and should be closed as far as possible when in use.



NOTE: PHX fixed model shown. Drop in iris slot same for all models.

Figure 10: Drop In Iris Slot

NOTE: To avoid damage to the fixture, insert the flat side of the accessory towards the shutters

Gobo / Soft Focus Lens Adapter Slot (All Models)

Each PHX LED Luminaire's lens has an opening for a gobo holder (templates and gobos by others or for the soft focus lens adapter (supplied with unit).

You must follow the gobo manufacturer's instructions on how to handle and use a gobo in your fixture. Always place the most reflective side towards the light source.

The unit is also supplied with a soft focus lens. The soft focus lens is a pattern holder with a special lens material that allows the LED fixture to appear like a conventional ellipsoidal. The matte side of the material should face the LED light source - shiny side towards the front of the lens.

Note: PHX fixed focus model shown. Gobo/soft focus lens adapter slot same for all models.

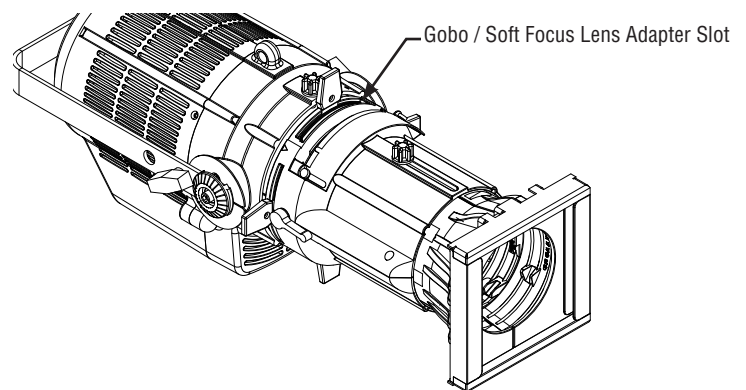


Figure 11: Gobo / Soft Focus Lens Adapter Slot

Notes:

- Recommended practice when using metal gobos - depending upon the complexity of the pattern - it may be possible to view an afterimage of the gobo if shutters are used in conjunction with the gobo. If an after image is seen, it is recommended to black out the steel pattern using high temperature black spray paint or request this process from the gobo manufacturer.
- If the image requires extremely sharp-focused edges it is always recommended that a Donut is installed to help with image quality.
 - For fixed focus units 19, 26, 36, and 50 degree models, use part number 4.5-DN
 - For zoomable focus models, use part number 6-DN
 - For 10 degree models, use part number 10-DN
 - For 5 degree models, use part number 12-DN

Yoke Assembly

The PHX LED Luminaire can have its tilt adjusted via the two lock off handles on each side of the luminaire. Simply loosen (but DO NOT REMOVE) each handle so the unit is able to swing up and down. Set tilt as desired and re-tighten the two lock off handles so the unit does not move from the set position.

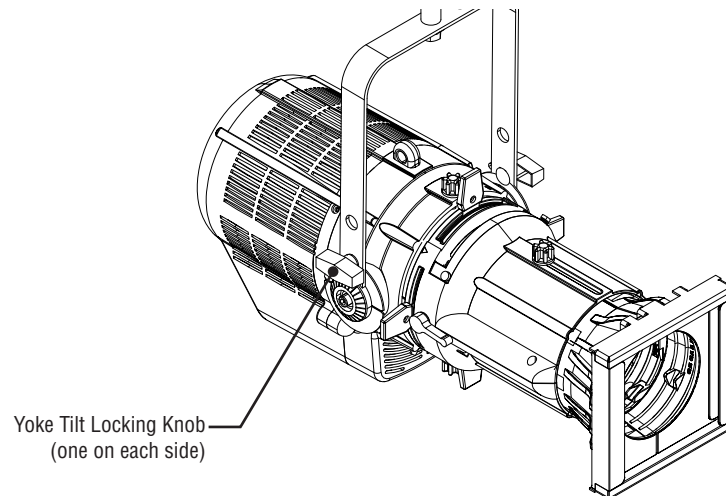


Figure 12: Yoke Assembly

Short Yoke Position

The yoke assembly has two sets of mounting holes to decrease the distance of the hanging position. To set the unit to a short yoke position, you will need a 1/4-inch hex head (Allen) wrench (by others).

To reposition the yoke assembly to short yoke position:

- Step 1. Place fixture on a flat, sturdy work surface. Remove power from fixture
- Step 2. At yoke tilt lock knobs, remove both tilt lock knobs and associated hardware. Set aside for reinstallation.
- Step 3. As shown in **Figure 13**, using a 1/4-inch hex head wrench (by others), remove yoke bolts, cup washers, and pivot covers. Please note order of hardware for reinstallation. Set hardware aside.
- Step 4. Position yoke assembly so secondary mounting holes are aligned with fixture yoke mounting position.
- Step 5. Reinstall yoke bolts, cup washers, and pivot covers in order removed in Step 3.
- Step 6. Reinstall tilt lock knobs and associated hardware in order removed in Step 2. Washer is positioned between handle and yoke assembly.

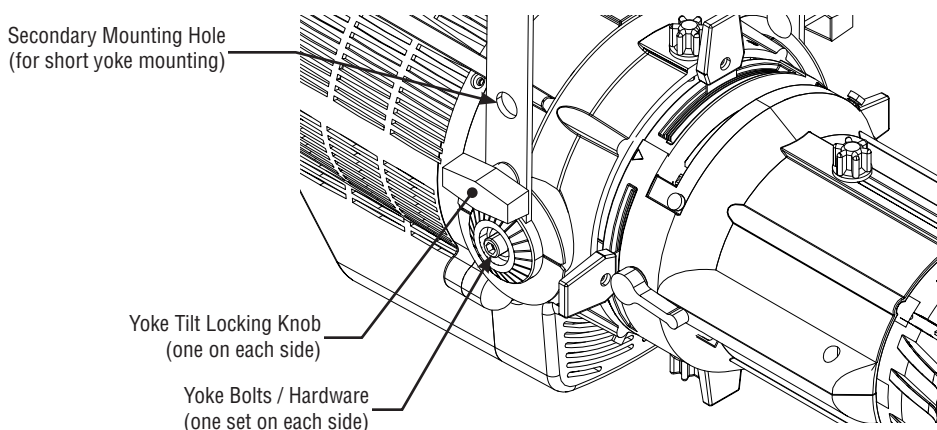


Figure 13: Yoke Hardware

Menu System

All PHX Series LED Luminaires have an onboard menu system that allow users to control a variety of luminaire features or setup the luminaire for standalone operation or control via DMX. This section covers the onboard menu system and DMX mapping for all models.

The unit has a LCD display that users can use to see and set various parameters for luminaire operation. This section will review how to access these settings.

Button Label	Control / Function
Menu	Move to previous menu and cancel current action
Enter	Select / enter into an option, accept a current action
Up	Scroll up through options and selections
Down	Scroll down through options and selections

Table 4: PHX Series LED Luminaire Menu Buttons



Figure 14: PHX LED LCD Screen

Setting DMX Address

To set the fixture’s DMX address: (Note: Default is 001)

- Step 1. Power fixture on and wait until the fixture booting is completed. When complete, LCD display will go blank.
- Step 2. Press ENTER button. When “DMX Control” appears, press ENTER button.
- Step 3. As illustrated in **Figure 15**, LCD display will show “DMXAdr” (with a number underneath), press ENTER button.
- Note:** An up/down arrow will appear next to the number letting you know the unit is in DMX address setting mode.
- Step 4. Using UP and DOWN buttons, scroll and select desired DMX address.
- Step 5. Once desired DMX address appears, either:
 - a. Press ENTER to confirm DMX address. OR,
 - b. Press MENU to back out of DMX address setting.



Figure 15: DMX Mode

Once DMX address is set, the unit is ready to connect to DMX network for control. For DMX connections and connecting to a DMX network, refer to [“Connecting to the DMX512 Network” on page 11](#).

Setting DMX Mode

To set the fixture's DMX Mode: (Note: Default is 8bit)

- Step 1. Power fixture on and wait until the fixture booting is completed. When complete, LCD display will go blank.
- Step 2. Press ENTER button. When "DMX Control" appears, press ENTER button.
- Step 3. Press Down Button. When "DMX Res" appears, press ENTER button
- Step 4. Using UP and DOWN buttons, scroll and select desired DMX Mode.
- Step 5. Once desired DMX Mode appears, either:
 - a. Press ENTER to confirm DMX Mode. OR,
 - b. Press MENU to back out of DMX Mode setting.



Figure 16: DMX Mode

Note: The PHX LED Series is capable of operating in 4 DMX modes or personalities. The Modes menu allows users to select which DMX map the luminaire will operate. For further information on modes of operation and mapping, refer to "DMX Mapping and Control" on page 24.

Setting Master Channel

To set the fixture's DMX Master Channel: (Note: Default is Off)

- Step 1. Power fixture on and wait until the fixture booting is completed. When complete, LCD display will go blank.
- Step 2. Press ENTER button. When "DMX Control" appears, press ENTER button.
- Step 3. Press Down Button twice. When "Master" appears, press ENTER button
- Step 4. Using UP and DOWN buttons, scroll and select to turn off or on the Master Channel



Figure 17: Master

Note: Master Channel is selectable as ON or OFF and provides a Master Fade channel that dims all four (4) colors proportionally at the same time in order to maintain the color. This adds an intensity channel at the end of the DMX string, refer to "DMX Mapping and Control" on page 24.

Setting Smoothing

To set the fixture's Smoothing: (Note: Default is Off)

- Step 1. Power fixture and wait until fixture booting is completed. When complete, LCD display will go blank.
- Step 2. Press ENTER button. When "DMX Control" appears, press ENTER button.
- Step 3. Press Down Button Three times. When "Smoothing" appears, press ENTER button
- Step 4. Using UP and DOWN buttons, scroll and select to turn off or on Smoothing



Figure 18: Smoothing

Note: Smoothing is selectable as ON or OFF and provides a smooth transition ramp from one level to another, this is similar to how an incandescent lamp behaves. This helps to eliminate the "Digital Linear Dimming" at the bottom end of the dimming curve.

DMX Loss

To set the fixture's DMX Loss: (Note: Default is LED Off)

- Step 1. Power fixture on and wait until the fixture booting is completed. When complete, LCD display will go blank.
- Step 2. Press ENTER button. When "DMX Control" appears, press ENTER button.
- Step 3. Press Down Button four times. When "DMXLoss" appears, press ENTER button
- Step 4. Using UP and DOWN buttons, scroll and select one of three options for DMX Loss
 - LED Off - Fixture will go off when the fixture sees no DMX
 - Hold - Fixture will hold its last DMX setting
 - Scene-1 - Fixture will output the setting of the Player Mode Cue 1 setting

Note: See Player / Programming Cues on page 21 to set the Cue 1 setting

- Step 5. Once desired DMX Loss Setting appears, either:
 - a. Press ENTER to confirm DMX Loss setting. OR,
 - b. Press MENU to back out of DMX Loss setting.



Figure 19: DMX Loss

Dimming Curve

To set the fixture's Dimming Curve: (Note: Default is Square)

- Step 1. Power fixture on and wait until the fixture booting is completed. When complete, LCD display will go blank.
- Step 2. Press UP or DOWN buttons until "Set" appears, press ENTER button.
- Step 3. Press Down Button twice. When "DIM Curve" appears, press ENTER button
- Step 4. Using UP and DOWN buttons, scroll and select desired Dimming Curve.
- Step 5. Once desired DMX Curve Setting appears, either:
 - a. Press ENTER to confirm DMX Curve setting. OR,
 - b. Press MENU to back out of DMX Curve setting.

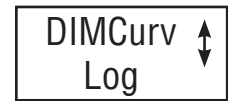


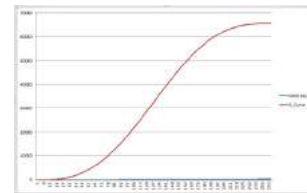
Figure 19: DMX Loss

Linear - When set to Linear, the dimming curve is in direct relationship to the DMX value. For example, if the DMX value of the DMX slider is at 25% of its range, then the signal to the luminaire (and its output) will also be at 25%.



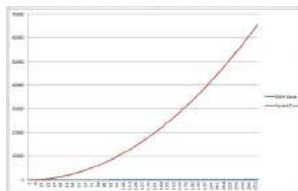
Linear

Log: When set to Log, the dimming curve, (also called a logarithmic curve by some manufacturers), sets the luminaire to mimic a dimming effect that is perceived as linear (naturally following an incandescent lamp fade).



Incandescent

Square: When set to Square, the dimming curve (also called Standard by some manufacturers) results in a dimming effect that follows a slow or soft bottom-end response and follows a linear line at the top end. (Default)



Square

Player / Programming Cues

The Player allows users to pre-program and the playback cues (up to five) on the fixture automatically. The cues can run as short as one (1) second or as long as 99 minutes. You can choose any of the colors available on your fixture as desired within the cues to create any look. There is also an option of putting a delay in between your cues.

To program cues for the Player:

- Step 1. Power fixture and wait until fixture booting is completed. When complete, LCD display will go blank.
- Step 2. Press ENTER button to turn on LCD display.
- Step 3. Press DOWN button to scroll to Player option.
- Step 4. Press ENTER button to enter Player Settings.
- Step 5. Press ENTER button to enter Player On /Off Settings
- Step 6. Press MENU button once to enter Player Settings. Press UP or DOWN buttons to scroll to “Edit Presets”.
- Step 7. Press ENTER button to go to “Edit Cue”.
- Step 8. Press UP or DOWN buttons to scroll to cue to be edited.
- Step 9. Press ENTER button to select “Cue 1”.
- Step 10. Press ENTER button to enable (option on) Cue 1.
- Step 11. Press MENU button to back out of selection.
- Step 12. Select and edit color intensity for Cue 1.
 - a. Scroll to Red and press ENTER button. Red color is ready to be edited.
 - b. Press UP button to desired intensity (0-255).
 - c. Once intensity is set, press ENTER button to confirm (save color intensity setting).
 - d. Press MENU button to return to color selection.
 - e. Repeat these steps for all colors as desired.

Note: Once Cue 1 is programmed, repeat steps above for any additional cues you wish to edit.

Menu Options and Settings

Table 5, “Menu Options and Settings,” on page 20 and 21 describes the available menu options and settings. Not all options and settings are available for all models in the PHX series and are noted.

Table 5: Menu Options and Settings

Main Menu	Sub Menu	Options	Description / Notes
DMX Control	DMXAdr (Default is 001)	001-512	Sets DMX address for the fixture.
	DMXRes (Default is 8 bit)"	8 Bit	Uses one (1) DMX channel per color.
		8 Bit + M	Uses one (1) DMX channel per color plus intensity (master channel).
		16 Bit	Uses two (2) DMX channels per color (high and low bytes).
		16 Bit + M	Uses two (2) DMX channels per color (high and low bytes) plus intensity (master channel).
	Master (Default is OFF)	ON	Master Channel is selectable as ON or OFF and provides an intensity channel to the DMX Mode that you have selected.
		OFF	
	Smoothing (Default is OFF)	ON	Smoothing is selectable as ON or OFF and provides a smooth transition ramp from one level to another, this is similar to how an incandescent lamp behaves. This helps to eliminate the “Digital Linear Dimming” at the bottom end of the dimming curve.
		OFF	
	DMXLoss (Default is OFF)	LED OFF	When DMX signal is lost, unit turns off.*
Scene-1 (cue)		When DMX signal is lost, unit will goto cue 1.*	
Hold		When DMX signal is lost, unit will hold its last setting (look).*	
"Player (Default is OFF)"	"Player (Default is OFF)"	OFF	Turns off player.
		ON	Turns on player.
	Edit Presets	"Edit Cue 1 - Enable ON/OFF - Set color(s) level"	"Enables or disable cue(s). Provides user-selectable settings for each cue: • Settings for Color(s) levels of Red, Green, Blue, White or Amber or Lime, (DMX value of 000 to 255) and, • Delay of cue (1 second to 99 min- utes). Default delay is 2 seconds."
		"Edit Cue 2 - Enable ON/OFF - Set color(s) level"	
		"Edit Cue 3 - Enable ON/OFF - Set color(s) level"	
		"Edit Cue 4 - Enable ON/OFF - Set color(s) level"	
		"Edit Cue 5 - Enable ON/OFF - Set color(s) level"	
"Fact. (Factory) Presets"	Set?	Resets player settings to factory defaults.	

Table 5: Menu Options and Settings

Main Menu	Sub Menu	Options	Description / Notes	
Set	Facts (Factory Defaults)	Set?	Resets fixture settings to factory defaults.	
	"Fan (Default is Auto) Note: this menu item is not present in PHX1 fixtures."	Low	Low	Sets fan on low speed
		ON	ON	Turns fan on.
		Auto	Auto	Fan operates according to the fixture's current operating temperature.
	"Dim Mode (Default is Normal)" Note: This Menu is only present in PHX2 Fixtures	Normal	Normal	Fixture dimming will be normal, optimized for live performance
		Fast	Fast	Fixture dimming is be faster than normal. PWM is increased from Normal for optimized dimming with higher PWM for combination of live and video productions
		Video	Video	Fixture dimming will be optimized for video camera applications.
	"Display (Defaults are Back Light: ON and Flipped: Auto)"	"Back Light / Timeout - ON (always on) - Auto-60 (60 sec.) - Auto-30 (30 sec.) - Auto-10 (10 sec.) - Auto-5 (5 sec.) - Off"		Sets the LCD display backlight to either always on or off or to a set number of seconds after the last button press.
		"Flipped - Auto - Flipped - Normal"		Sets the LCD display orientation to auto rotate (when the fixture is inverted), set to flipped (180 degrees from normal) or set to normal.
	"Dim Curve (Default is Square)"	Log	Log	When set to Log, the dimming curve, (also called a Incandescent curve by some manufacturers), sets the luminaire to mimic a dimming effect that is perceived as naturally following an incandescent lamp fade.
		Square	Square	When set to Square, the dimming curve (also called standard by some manufacturers) results in a dimming effect that follows a slow or soft bottom-end response and follows a linear line at the top end.
		Linear	Linear	When set to Linear, the dimming curve is in direct relationship to the DMX value. For example, if the DMX value of the DMX slider is at 25% of its range, then the signal to the luminaire (and its output) will also be at 25%.
	X-Load Software Note: This Menu is only present in PHX1 and PHX2 Fixtures	Confirm	Confirm	Used for loading software from one PHX to the next using the DMX daisy chain. Note, this is for software update only and will not transfer fixture settings from one luminaire to another.
Info	LED Temp	--	Displays the current operating temperature of the LED in °C	
	Hours	--	Displays the number of hours the luminaire has been powered. This does not reflect the number of hours the LEDs have been on.	
	Serial Number	--	Displays the luminaire's serial number.	
	LED SN	--	Displays the LED engine serial number.	
	SFT Ver (software version)	--	Displays the software version loaded in the luminaire.	

DMX Maps

This section provides DMX maps for all versions of PHX LED Luminaires. Please refer to the map specific to the fixture you have.

Master Channel is selectable as ON or OFF and provides a Master Fade channel that dims all four (4) colors proportionally at the same time in order to maintain the color. This adds an intensity channel at the end of the DMX string.

DMX Channel Map Overview

Fixtures	LED Array	DMX Modes	DMX Channel Count
PHX 1 - 150W PHX 1.5 - 150W PHX 2 - 250W PHX 3 - 340W PHX3.5 - 340W	RGBW / RGBA / RGBL	8 Bit	4
		8 Bit + Master On	5
		16 Bit	8
		16 Bit + Master On	10
PHX 1 - 150W PHX 2 - 250W	3000K	8 Bit	1
		8 Bit + Master On	2
		16 Bit	2
		16 Bit + Master On	4
PHX 1 - 150W PHX 2 - 250W	5600K	8 Bit	1
		8 Bit + Master On	2
		16 Bit	2
		16 Bit + Master On	4
PHX 1 - 150W PHX 2 - 250W	3K5K (3000K/5600K Tunable White)	8 Bit	2
		8 Bit + Master On	3
		16 Bit	4
		16 Bit + Master On	6

Table 6: PHX LED DMX Channel Map Overview

Fixed White DMX Maps (3000K and 5600K)

Table 7, Table 8 on page 24 and Table 9, Table 10 on page 25 show the DMX map options for fixed white LED fixtures in 8-bit and 16-bit modes with master channel off and on.

DMX Channel	Channel Description	DMX Range	Description
1	White	0 - 255	8-bit control of intensity

Table 7: Fixed White, 8-Bit Mode, Master Channel OFF

DMX Channel	Channel Description	DMX Range	Description
1	White	0 - 255	8-bit control of intensity
2	Master Channel	0 - 255	8-bit control of master channel

Table 8: Fixed White, 8-Bit Mode, Master Channel On

Fixed White DMX Maps (3000K and 5600K)

DMX Channel	Channel Description	DMX Range	Description
1	White (High Byte)	0 - 65535	16-bit control of intensity
2	White (Low Byte)		

Table 9: Fixed White, 16-Bit Mode, Master Channel OFF

DMX Channel	Channel Description	DMX Range	Description
1	White (High Byte)	0 - 65535	16-bit control of intensity
2	White (Low Byte)		
3	Master (High Byte)	0 - 65535	16-bit control of master channel
4	Master (Low Byte)		

Table 10: Fixed White, 16-Bit Mode, Master Channel ON

Tunable White DMX Maps (3000K to 5600K)

Table 11, through Table 14 on page 25 show the DMX map options for tunable white LED fixtures in 8-bit and 16-bit modes with master channel off and on.

DMX Channel	Channel Description	DMX Range	Description
1	3000K White	0 - 255	8-bit control of 3000K LEDs
2	5600K White	0 - 255	8-bit control of 5600K LEDs

Table 11: Tunable White, 8-Bit Mode, Master Channel OFF

DMX Channel	Channel Description	DMX Range	Description
1	3000K White	0 - 255	8-bit control of 3000K LEDs
2	5600K White	0 - 255	8-bit control of 5600K LEDs
3	Master Channel	0 - 255	8-bit control of master channel

Table 12: Tunable White, 8-Bit Mode, Master Channel On

DMX Channel	Channel Description	DMX Range	Description
1	3000K White (High Byte)	0 - 65535	16-bit control of 3000K white LEDs
2	3000K White (Low Byte)		
3	5600K White (High Byte)	0 - 65535	16-bit control of 5600K white LEDs
4	5600K White (Low Byte)		

Table 13: Tunable White, 16-Bit Mode, Master Channel OFF

DMX Channel	Channel Description	DMX Range	Description
1	3000K White (High Byte)	0 - 65535	16-bit control of 3000K white LEDs
2	3000K White (Low Byte)		
3	5600K White (High Byte)	0 - 65535	16-bit control of 5600K white LEDs
4	5600K White (Low Byte)		
5	Master Channel (High Byte)	0-65535	16-bit control of master channel
6	Master Channel (Low Byte)		

Table 14: Tunable White, 16-Bit Mode, Master Channel ON

Color DMX Maps (RGBW, RGBA, and RGLB LEDs)

Table 15 through Table 18 on page 26 show the DMX map options for color LED fixtures in 8-bit and 16-bit modes with master channel off and on.

DMX Channel	Channel Description	DMX Range	Description
1	Red	0 - 255	8-bit control of Red LEDs
2	Green	0 - 255	8-bit control of Green LEDs
3	Blue	0 - 255	8-bit control of Blue LEDs
4 (Depends on Fixture)	White	0 - 255	8-bit control of White LEDs
	Amber	0 - 255	8-bit control of Amber LEDs
	Lime	0 - 255	8-bit control of Lime LEDs

Table 15: Color LEDs, 8-Bit Mode, Master Channel OFF

DMX Channel	Channel Description	DMX Range	Description
1	Red	0 - 255	8-bit control of Red LEDs
2	Green	0 - 255	8-bit control of Green LEDs
3	Blue	0 - 255	8-bit control of Blue LEDs
4 (Depends on Fixture)	White	0 - 255	8-bit control of White LEDs
	Amber	0 - 255	8-bit control of Amber LEDs
	Lime	0 - 255	8-bit control of Lime LEDs
5	Master Channel	0 - 255	8-bit control of Master channel

Table 16: Color LEDs, 8-Bit Mode, Master Channel On

DMX Channel	Channel Description	DMX Range	Description
1	Red (High Byte)	0 - 65535	16-bit control of Red LEDs
2	Red (Low byte)		
3	Green (High Byte)	0 - 65535	16-bit control of Green LEDs
4	Green (Low Byte)		
5	Blue (High Byte)	0 - 65535	16-bit control of Blue LEDs
6	Blue (Low Byte)		
For RGBW Fixtures			
7	White (High Byte)	0 - 65535	16-bit control of White LEDs
8	White (Low Byte)		
For RGBA Fixtures			
7	Amber (High Byte)	0 - 65535	16-bit control of Amber LEDs
8	Amber (Low Byte)		
For RGLB Fixtures			
7	Lime (High Byte)	0 - 65535	16-bit control of Lime LEDs
8	Lime (Low Byte)		

Table 17: Color LEDs, 16-Bit Mode, Master Channel OFF

Color DMX Maps (RGBW, RGBA, and RGLB LEDs)

DMX Channel	Channel Description	DMX Range	Description
1	Red (High Byte)	0 - 65535	16-bit control of Red LEDs
2	Red (Low byte)		
3	Green (High Byte)	0 - 65535	16-bit control of Green LEDs
4	Green (Low Byte)		
5	Blue (High Byte)	0 - 65535	16-bit control of Blue LEDs
6	Blue (Low Byte)		
For RGBW Fixtures			
7	White (High Byte)	0 - 65535	16-bit control of White LEDs
8	White (Low Byte)		
For RGBA Fixtures			
7	Amber (High Byte)	0 - 65535	16-bit control of Amber LEDs
8	Amber (Low Byte)		
For RGLB Fixtures			
7	Lime (High Byte)	0 - 65535	16-bit control of Lime LEDs
8	Lime (Low Byte)		
9	Master (High Byte)	0 - 65535	16-bit control of Master Channel
10	Master (Low Byte)		

Table 18: Color LEDs, 16-Bit Mode, Master Channel On

RDM Control and Tables

PHX Series LED Luminaires are fully RDM compliant. This section outline the RDM features available for all models. Please refer to the table specific for the model you have.

- For PHX1 / PHX1.5 (150W) LED Luminaires, refer to Table 19, “Supported RDM Parameter IDs (PID) for PHX1 LED Fixtures,” on page 28.
- For PHX2 (250W) and PHX3 / PHX3.5 (350W) LED Luminaires, refer to Table 20, “Supported RDM Parameter IDs (PID) for PHX2, PHX3 and PHX3.5 LED Fixtures,” on page 29.

PHX1 / PHX 1.5 150W Fixtures

Category	Support Parameters	PID	Get	Hex	Set
Manufacturer Specific PIDs	Smoothing	0xA104	ON...01	4F 6E 20 20 20 20 20 20	1
			OFF...00	4F 66 66 20 20 20 20 20	0
	DMX Loss	0x9023	OFF...00	4F 66 66 20 20 20 20 20	0
			HOLD...01	4F 6F 6C 64 20 20 20 20	1
			PRESET...02	50 72 65 73 65 74 20 20	2
	DMX Resolution	0xA100	8-Bit...00	38 2D 62 69 74 20 20 20	0
			16-Bit...01	31 36 2D 62 69 74 20 20	1
	Dimming Curve	0xA450	LINEAR...00	4C 69 6E 65 61 72 20 20	0
			SQUARE...01	53 71 75 61 72 65 20 20	1
			LOG...02	4C 6F 67 20 20 20 20 20	2
	Fixture Serial Number	0XA501	Example: 78426155	37 38 34 32 36 31 35 38	XXXX
	LED Serial Number	0XA502	Example: w ww	57 20 20 57 57 00 00 96	XXXX
	LCD Display Backlight	0xA430	ON...01	4F 6E 20 20 20 20 20 20	0
			AUTO-5s...01	41 75 74 6F 2D 35 73 20	1
			AUTO-10s...02	41 75 74 6F 2D 31 30 73	2
AUTO-30s...03			41 75 74 6F 2D 33 30 73	3	
AUTO-60s...04			41 75 74 6F 2D 36 30 73	4	
ESTA Defined PIDs	Device Model Description	0x0080	Phoenix 150W		XXXX
	Manufacturer Label	0x0081	Altman Lighting		XXXX
	Software Version-Label	0x00C0	VX.X		XXXX
	DMX Personality	0x00E1	See DMX Resolution Above		
	DMX_START_ADDRESS	0x00F0	0-512	0000-0200	"0000-0512"
	Sensor Definition	0x0200		"00 00 01 00 00 00 00 64 00 0A 00 64 00 4C 45 44 20 20 20"	XXXX
	Sensor Value	0x0201		00 00 18 00 00 00 00 00 00	XXXX
	IDENTIFY_DEVICE	0x1000	0-512		0-512
	Reset Device	0x1001	xxxx		XXXX
	Device Hours	0x0400	xxxx		XXXX

Table 19: Supported RDM Parameter IDs (PID) for PHX1 LED Fixtures

PHX2 250W and PHX3 / PHX3.5 340W Fixtures

Category	Support Parameters	PID	Get	Hex	Set
Manufacturer Specific PIDs	Smoothing	0xA104	ON...01	4F 6E 20 20 20 20 20 20	1
			OFF...00	4F 66 66 20 20 20 20 20	0
	DMX Loss	0x9023	OFF...00	4F 66 66 20 20 20 20 20	0
			HOLD...01	4F 6F 6C 64 20 20 20 20	1
			PRESET...02	50 72 65 73 65 74 20 20	2
	DMX Resolution	0xA100	8-Bit...00	38 2D 62 69 74 20 20 20	0
			16-Bit...01	31 36 2D 62 69 74 20 20	1
	Dimming Curve	0xA450	LINEAR...00	4C 69 6E 65 61 72 20 20	0
			SQUARE...01	53 71 75 61 72 65 20 20	1
			LOG...02	4C 6F 67 20 20 20 20 20	2
	Fixture Serial Number	0XA501	Example: 78426155	37 38 34 32 36 31 35 38	XXXX
	LED Serial Number	0XA502	Example: w ww	57 20 20 57 57 00 00 96	XXXX
	LCD Display Backlight	0xA430	ON...01	4F 6E 20 20 20 20 20 20	0
			AUTO-5s...01	41 75 74 6F 2D 35 73 20	1
			AUTO-10s...02	41 75 74 6F 2D 31 30 73	2
			AUTO-30s...03	41 75 74 6F 2D 33 30 73	3
			AUTO-60s...04	41 75 74 6F 2D 36 30 73	4
	Dimming Mode	0x9021	NORMAL...00	4E 6F 72 6D 61 6C 20 20	0
			FAST...01	46 61 73 74 20 20 20 20	1
			VIDEO...02	56 69 64 65 6F 20 20 20	2
Fan Speed Mode	0xA420	AUTO...00	41 75 74 6F 20 20 20 20	0	
		ON...01	4F 6E 20 20 20 20 20 20	1	
ESTA Defined PIDs	Device Model Description	0x0080	"Phoenix 250W or Phoenix 350W"		XXXX
	Manufacturer Label	0x0081	Altman Lighting		XXXX
	Software Version-Label	0x00C0	VX.X		XXXX
	DMX Personality	0x00E1	See DMX Resolution Above		
	DMX_START_ADDRESS	0x00F0	0-512	0000-0200	"0000-0512"
	Sensor Definition	0x0200		"00 00 01 00 00 00 00 00 64 00 0A 00 64 00 4C 45 44 20 20 20"	XXXX
	Sensor Value	0x0201		00 00 18 00 00 00 00 00 00 00	XXXX
	IDENTIFY_DEVICE	0x1000	0-512		0-512
	Reset Device	0x1001	xxxx		XXXX
	Device Hours	0x0400	xxxx		XXXX

Table 20: Supported RDM Parameter IDs (PID) for PHX2 and PHX3 / PHX3.5 LED Fixtures

Cleaning And Care



WARNING! All cleaning should be performed with power completely removed from the luminaire. Never remove protective covers when luminaire is powered. Wear appropriate protective eye wear and gloves when cleaning the fixture. All service and maintenance, other than described herein, should be performed by a qualified technician or Authorized Service Center. AT NO TIME SHOULD THE LED BE TOUCHED.

Being a solid-state fixture, and unlike most fixtures, the PHX LED Series Luminaires requires very little routine maintenance by the user. This section covers portions of the luminaire that can be removed for cleaning.

The PHX LED Series Luminaire LED requires special care when it comes to cleaning the front reflector assembly. Additional care needs to be taken with the plastic components because they are much easier to scratch or damage than glass.

The following is a list of cleaning materials required to care for your PHX LED Series Luminaire:

- Lint free lens tissue
- Lint or powder free gloves
- Reagent grade isopropyl alcohol*
- A mild soap solution.



Reagent grade isopropyl alcohol is good to use on the PHX LED Series Luminaire plastic optics with anti-reflection coatings.

If the lens is still dirty after using isopropyl alcohol, for instance if fingerprints or oil is just redistributed and not cleaned off the optic, then a mild soap and water solution can be used to gently wash the lens. Repeat the cleaning with isopropyl alcohol to eliminate streaks and soap residue.



Under no circumstances should ammonia-based cleaners, acetone, or other harsh solvents be used on or near the PHX LED Series Luminaire. These types of cleaners or solvents can permanently damage the optics or housings of the fixture. If you have any questions regarding the use or care of your PHX LED Series Luminaire, please contact Altman Lighting technical support or your local Authorized Dealer.

If you have any questions regarding the use or care of your PHX LED Series LED Luminaires, please contact Altman Lighting technical support at support@altmanlighting.com or your local Authorized Dealer.

Routine Preventative Maintenance: Regular routine maintenance should be performed at least twice a year. Additional inspections and cleaning may be necessary and more often depending upon the the environment and hours of use of each luminaire. (see previous page for cooling fin location (Heat Sink Location))

1. Turn off luminaire and allow to cool completely.
2. Check for excessive dust or debris in the heat sink area of the luminaire
3. Wipe and remove all debris, dirt, dust from the cooling fins (a can of clean compressed air can be used to blow out from one side of the luminaire to the other.



Do not blow dust into the open cavity of the PHX Luminaire.

NOTE: keeping these components clean will facilitate efficient cooling and extend LED life.

Using a second lint-free lens tissue, wipe off any alcohol residue.

Lens Cleaning

Front Lens (Exterior)

To clean the exterior front lens:

- Step 1. Turn off luminaire and allow to cool completely.
- Step 2. Apply a small amount of reagent grade isopropyl alcohol to lint-free lens tissue.
- Step 3. Wipe all debris, dirt, fingerprints, etc. from lens.
- Step 4. Using a second lint-free lens tissue, wipe off any alcohol residue.

Front Lens (Interior)

To clean the interior of front lens:

- Step 1. Turn off luminaire and allow to cool completely.
- Step 2. Remove lens assembly.
- Step 3. Apply a small amount of reagent grade isopropyl alcohol to lint-free lens tissue.
- Step 4. Wipe all debris, dirt, fingerprints, etc. from lens.
- Step 5. Using a second lint-free lens tissue, wipe off any alcohol residue.
- Step 6. Once lens is completely dry, reinstall lens assembly.

Service and Maintenance

If you have any questions regarding the use or care of your PHX LED Series LED Luminaires, please contact Altman Lighting technical support at support@altmanlighting.com or your local Authorized Dealer.



WARNING! Disassembly (other than as described herein), alterations, unauthorized service, etc. will void the product warranty. Contact your local Altman Lighting office or an Authorized Service Center for technical support and service.

Troubleshooting

Troubleshooting Guide

The chart below provides possible causes and remedies for various error messages and/or symptoms. If this chart is unable to address your issue, please contact your authorized dealer or Altman customer service at 1.303.500.7072 or support@altmanlighting.com for assistance.



WARNING! Any service and maintenance (including troubleshooting), other than described herein should be performed by an Authorized Altman Lighting Dealer or Service Center.

Description	Issue	Possible Cause/ Remedy
No light output.	"Fixture will not produce or output light and connected to power. Internal LED is illuminated."	- "Unit Setting is at 0% local control... Unit Setting is at 0% DMX control... - Set intensity level above 0% or adjust to a higher intensity."
LOW light output.	Fixture produces low light output and connected to power.	Controller fade pot set to 0, turn local control to 100%.
No power at luminaire.	Luminaire does not power up	- Circuit not energized...verify circuit breaker is turned on. - Not plugged in...ensure A/C cable is connected to power source. - Power cable wired incorrectly...verify power cable and connector are wired correctly. See " Connecting Power " on page 10 for more information."
DMX data control issues.	Fixture will not respond to DMX commands.	- "Not detecting DMX data... Disconnect and reconnect DMX input cable. Unit is not set to proper DMX address - check settings. - Check all DMX connections (at control source and luminaire). DMX data cable not wired correctly or - Has a broken conductor... check DMX data cable for proper wiring. See " Connecting to the DMX512 Network " on page 11 for more information."
Imperfections in light beam.	Beam appears fuzzy, distorted, low intensity, etc.	Check lens for dirt, obstructions, cracks or chips, shutter positions, etc.
No RDM control.	Luminaire does not respond to RDM commands.	- "Luminaire is in Player mode - turn Player mode off...see " Player / Programming Cues " on page 21. - Turn off or disable control network's auto discovery. Check all DMX connections (at control source and luminaire). - DMX data cable not wired correctly or has a broken conductor... check DMX data cable for proper wiring. See " Connecting to the DMX512 Network " on page 11 for more information."

Technical Specifications

PHX LED Series Luminaires Common Specifications

Input Voltage:	120-240VAC 50/60Hz
Light Engine:	PHX1 (150W): 3000K (White), 5600K (White), 3000K to 5600K (Tunable White), RGBA, and RGBW. PHX1.5 (150W): RGBL PHX2 (250W): 3000K (White), 5600K (White), 3000K to 5600K (Tunable White), RGBA and RGBW. PHX3 (340W): RGBL PHX3.5 (340W): RGBL
Control:	DMX512A, RDM, and Onboard Menu (Local)
Cooling:	PHX1(150W) and PHX1.5 (150W) Convection Cooled (no fan) PHX2 (250W), PHX3 (340W) and PHX3.5 (340W) Active Cooling
Ambient Temperature:	0 to 40 degrees C (32 to 104 degrees F) PHX1 & 2 0 to 50 degrees C (32 to 122 degrees F) PHX3
Compliance:	cETLus, CE and PSE (IP20 Rated for indoor use)

Note: Basic model specifications shown. For specific model specifications, features, sizes/weights, and accessories, refer to the product specification sheet or visit the Altman Lighting web site at www.altmanlighting.com.

