ALTMAN
LIGHTING

Quick Start Guide

PHX 1.5 LED Profile

ALTMAN
LIGHTING
1400 East 66th Avenue - Denver, CO 80229 USA
+1 303 500-7072 - www.Altmanlighting.com

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 1.5 LED Profile

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?

The material in this manual is for information purposes only and is subject to change without notice. Altman Lighting assumes no responsibility for any errors or omissions which may appear in this manual. For comments and suggestions regarding corrections and/or updates to this manual, please visit the Altman Lighting web site at www.altmanlighting.com or contact your nearest Altman Lighting Regional Manager.

El contenido de este manual es solamente para información y está sujeto a cambios sin previo aviso. Altman Lighting no asume responsabilidad por errores o omisiones que puedan aparecer. Cualquier comentario, sugerencia o corrección con respecto a este manual, favor de dirijirlo a la oficina de Altman Lighting más cercana.

Der Inhalt dieses Handbuches ist nur für Informationszwecke gedacht, Aenderungen sind vorbehalten. Altman Lighting uebernimmt keine Verantwortung für Fehler oder Irrtuemer, die in diesem Handbuch auftreten. FürBemerkungen und Verbesserungsvorschlaege oder Vorschlaege in Bezug auf Korrekturen und/oder Aktualisierungen in diesem Handbuch, moechten wir Sie bitten, Kontakt mit der naechsten Altman Lighting Niederlassung aufzunehmen.

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

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: **49-0458**
Version as of: **2024 April 1st**

PHX 1.5 LED Luminaire Quick Start Manual

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 TWO (2) years from date of shipment to correct by repair or replacement any part defect due to faulty material or workmanship. Under these same terms products with an LED light source shall be warranted for a period of FIVE (5) years and One (1) day.

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 (45) 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.

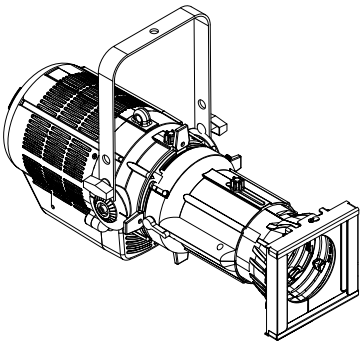
Table Of Contents

Installation & Set Up

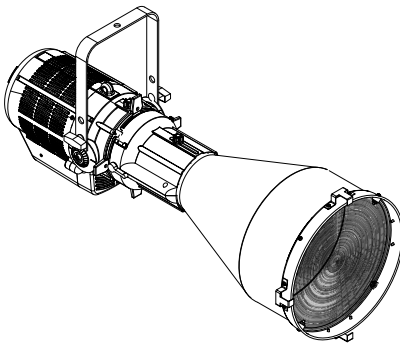
Overview

The PHX 1.5 LED is a 150 Watt Spot Profile luminaire utilizing high output LED emitters. Designed for theatrical and architectural applications.

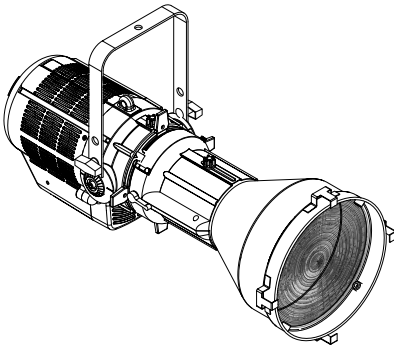
Components



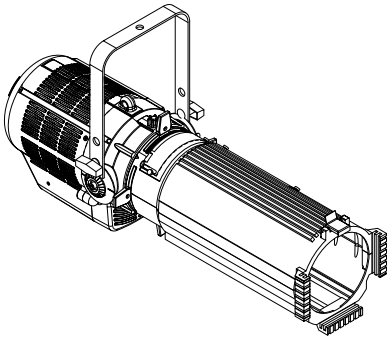
PHX LED Profile
(19°, 26°, 36°, 50°)



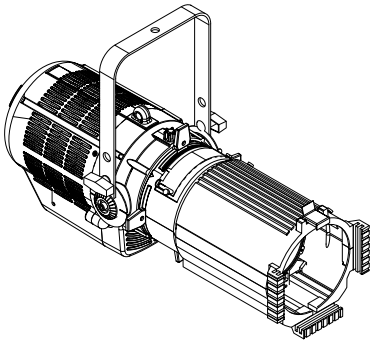
PHX LED Profile
(5° Degree Lens)



PHX LED Profile
(10° Degree Lens)



PHX LED Zoom Profile
(15° to 35° Zoom Lens)



PHX LED Zoom Profile
(30° to 55° Zoom Lens)

Models

Model: *	LED Array:	Lens: *	Body Color: ***
PHX1.5 - 150W	RGBL - Color Mixing	5 - 5° Lens 10 - 10° Lens 19 - 19° Lens 26 - 26° Lens 36 - 36° Lens 50 - 50° Lens 15Z - 15°-35° Lens 30Z - 30°-55° Lens	B - Black W - White C - Custom

Note: When ordering the fixture simply select an option from each column and that will produce your ordering part number.

Example - For the PHX1.5 Unit with an RGBL LED Array with a 15°-35° Zoom Lens in Black, the part number would be PHX1.5-RGBL-15Z-B

Color: Fixture ship standard as Black. If White or Custom are required that could result in a longer lead time.

Custom Color: Consult factory for custom colors

Included Items

PHX1.5-RGBL-5-***	Color Frame 14" X 14" (**12-CFB**), 36" Safety Chain (**SC-36-BK**),5' 20A PowerCON to Edision (**PCL-PBG-12-5**), PHX Soft Focus Lens (**PHX-SFLGSA**)
PHX1.5-RGBL-10-***	Color Frame 12" X 12" (**10-CFB**), 36" Safety Chain (**SC-36-BK**), 5' 20A PowerCON to Edision (**PCL-PBG-12-5**), PHX Soft Focus Lens (**PHX-SFLGSA**)
PHX1.5-RGBL-**-***	Color Frame 6-1/4"x6-1/4" (**4.5-CFB**), 36" Safety Chain (**SC-36-BK**), 5' 20A PowerCON to Edision (**PCL-PBG-12-5**), PHX Soft Focus Lens (**PHX-SFLGSA**)
PHX1.5-RGBL-15Z-***	Color Frame 7-1/2"x7-1/2" (**6-CFB**), 36" Safety Chain (**SC-36-BK**), 5' 20A PowerCON to Edision (**PCL-PBG-12-5**), PHX Zoom Soft Focus Lens (**PHXZ-SFLGSB**)
PHX1.5-RGBL-30Z-***	Color Frame 7-1/2"x7-1/2" (**6-CFB**), 36" Safety Chain (**SC-36-BK**), 5' 20A PowerCON to Edision (**PCL-PBG-12-5**), PHX Zoom Soft Focus Lens (**PHXZ-SFLGSB**)

Power Requirements

Before performing any field wiring, refer to and read the warnings contained in “Important Information” on page 3.

WARNING! The PHX LED Profile LED Luminaire should be connected to a constant circuit or a relay device. It should never be connected to a dimmer or circuit controlled by a dimmer. Read “Connecting Power” on page 7 carefully on how to properly connect your fixture.

WARNING! When using the daisy-chain connection method, only connect your PHX LED Profile LED Luminaire to AC Output Connection of other PHX LED Profile Luminaires. DO NOT CONNECT OTHER TYPES OF LUMINAIRES OR DEVICES! The maximum allowable of number of PHX LED Profile LED Luminaires that can be daisy-chained on one power feed should not exceed the first fixture’s 20 Amp power rating.

Connecting Power

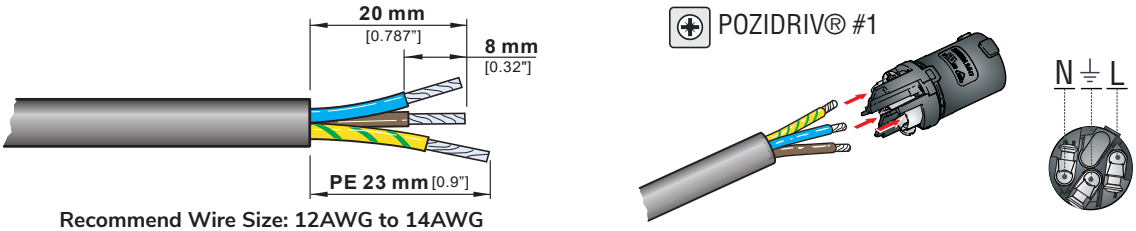
Units are powered via an AC input cable (unit ships with a 5ft PowerCon to Edison Cable) from 120 to 240VAC, 50/60Hz and draw approximately 100 Watts of power. Table 1, outlines the wire colors and their purpose.

Wire Color	Purpose
Brown or Black	Main / (L)ine
Blue or White	(N)eutral
Green/Yellow or Green	Ground / Earth

Table 1: AC Input Wiring

Note: The PHX LED Profile **MUST NOT BE CONNECTED OR POWER OFF A DIMMER. IT IS ONLY RECOMMEND TO HAVE IT POWER OFF A CONSTANT CIRCUIT OR RELAY.**

Note: It is recommend that when the PHX LED Profile is not being used for a long period of time to have it power off. This will help with extending the life of the fixture



Recommend Wire Size: 12AWG to 14AWG

Figure 1: PowerCon Wiring Diagram

Daisy Chain Power and Data

When daisy-chaining units, do not exceed the number of units as shown in the table below. Also, please make sure to read and understood the warnings contained in this section of the manual (“Power Requirements” on page 7.)

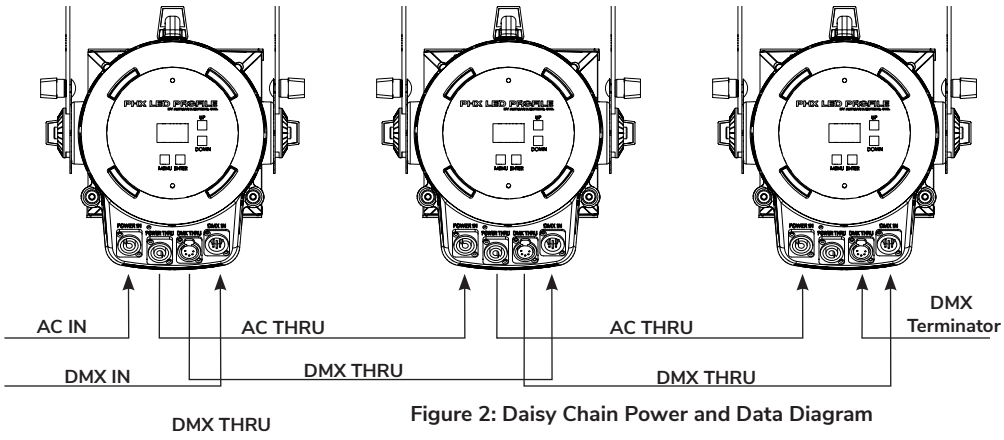


Figure 2: Daisy Chain Power and Data Diagram

Fixtures Per Circuit
10 (20A Power Thru Connector) Portable Units

DMX Data String
Max of 32 Total DMX devices per DMX string

Table 2: Daisy Chain Power and Data

Connecting DMX

The PHX LED Profile LED offers two DMX512 connections. One for DMX Input (from a DMX source) and one DMX throughput (out). Basic DMX512 installation consists of connecting multiple DMX controlled PHX LED Profile LED 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 C-Clamp should be installed as shown in **Figure 3**. Only use the hardware supplied with the C-clamp.

NOTE: A 515 / 510 C-Clamp are sold separately .

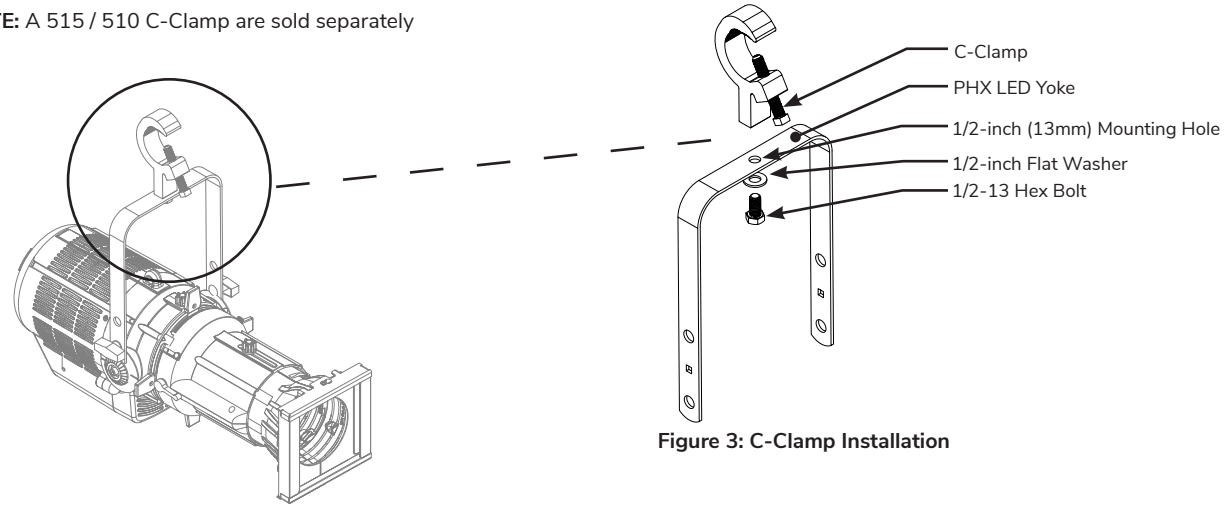


Figure 3: C-Clamp Installation

Installing the 515 C-clamp:

1. With luminaire on a flat, sturdy surface, position yoke assembly for easy access as illustrated in Figure 4.
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.

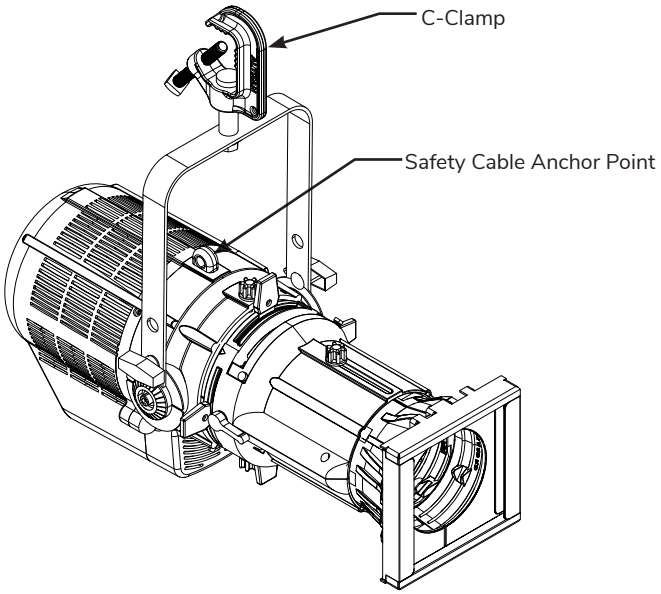


Figure 4: Safety Cable Installation

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. It is recommend that one side of the Gobo be black out, so the light source doesn't reflect back on the LED Source.

The unit is also supplied with a soft focus lens. The soft focus lens is a pattern holder with s 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.

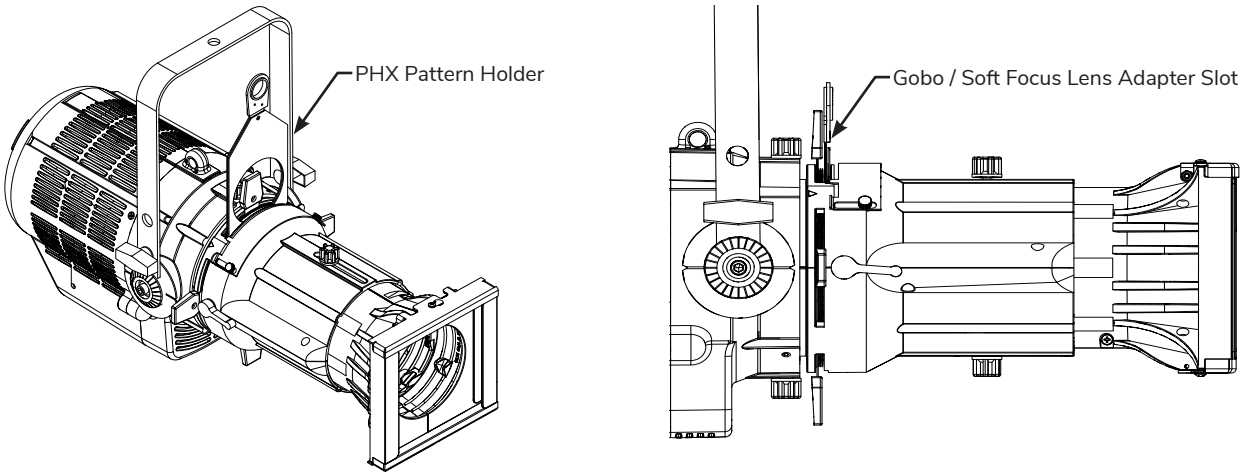


Figure 5: Gobo / Soft Focus Lens Adapter Slot

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 Zoom 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

PHX Fixed Lens Accessory Holder

Each PHX Series LED Luminaire is equipped with an end of lens accessory holder to hold the supplied color frame.
Note: The accessory holder for fixed focus and zoom 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

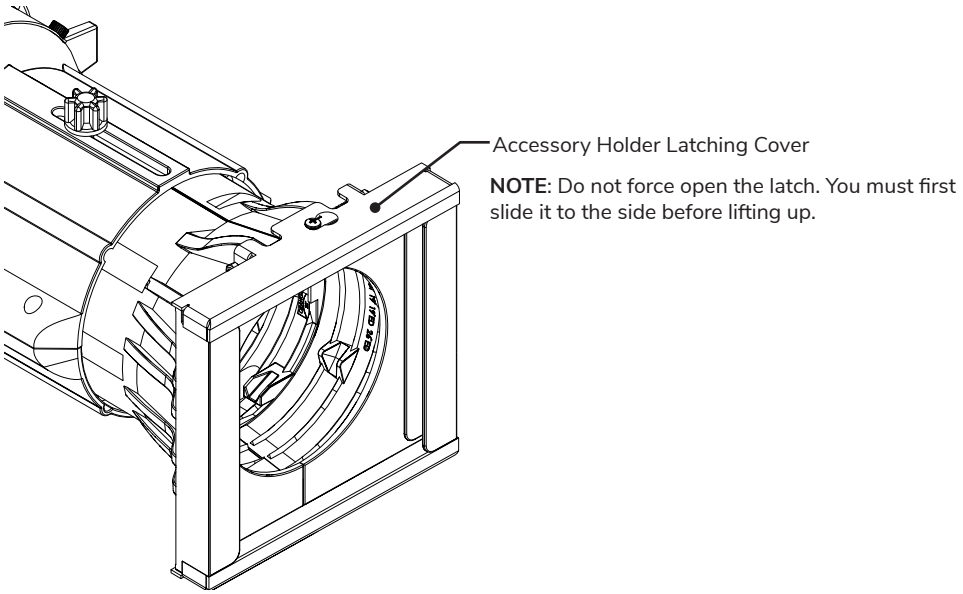


Figure 6: Accessory Holder Latching Cover (Fixed Focus Models)

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.

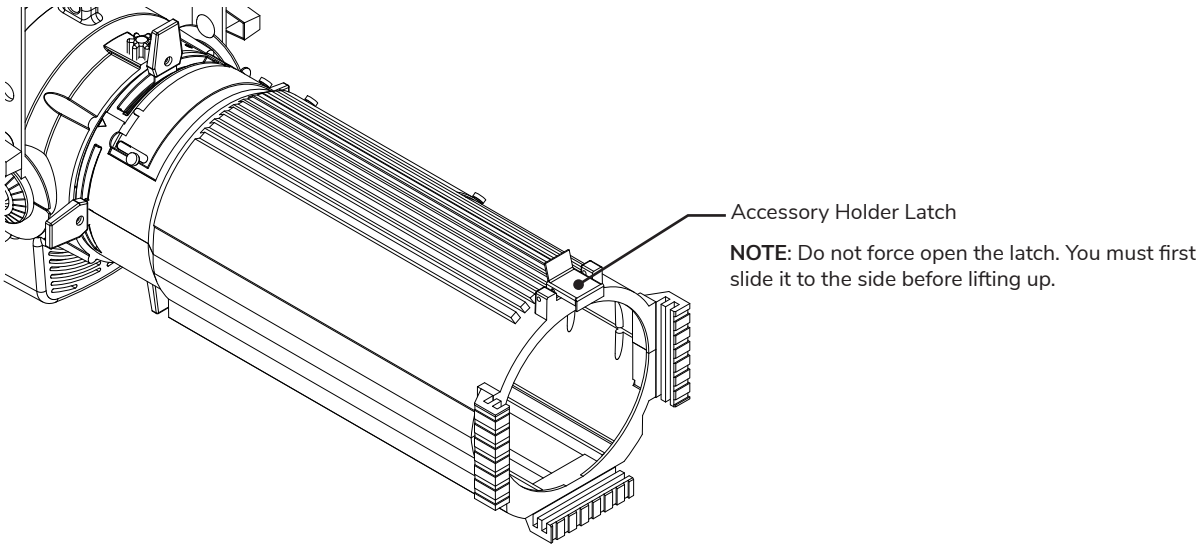


Figure 7: Accessory Holder Latch (Zoomable Models)

Operation and Programming

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 LuminaireMenu Buttons

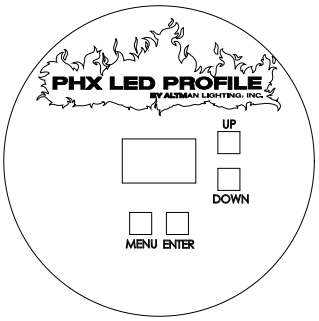


Figure 8: PHX LED LCD Screen

Setting DMX Address

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

1. Power fixture on and wait until the fixture booting is completed. When complete, LCD display will go blank.
2. Press **ENTER** button. When "DMX Control" appears, press **ENTER** button.
3. As illustrated in Figure 9, 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.
4. Using **UP** and **DOWN** buttons, scroll and select desired DMX address.
5. Once desired DMX address appears, either:
   - Press **ENTER** to confirm DMX address. OR,
   - Press **MENU** to back out of DMX address setting.

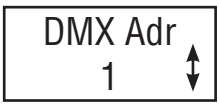


Figure 9: DMX Mode

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)

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

Figure 10: 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)

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

Figure 11: 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.

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.

DMX Channel Map Overview

Fixtures	LED Array	DMX Modes	DMX Channel Count
PHX1.5 - 340W	RGBL	8 Bit	4
		8 Bit + Master On	5
		16 Bit	8
		16 Bit + Master On	10

Table 5: PHX LED DMX Channel Map Overview

Color Changing DMX Maps (RGBW, RGBA, and RGBL LEDs)

Table 6 and Table 7 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	Lime	0 - 255	8-bit control of Lime LEDs
5 *	Master Channel	0 - 255	8-bit control of Master channel

Table 6: 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)		
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 7: Color LEDs, 16-Bit Mode, Master Channel On

* 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.

Menu Options and Settings

Table 8, Menu Options and Settings, describes the available menu options and settings.

Table 8: 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 (For more information on Player, see ""Player / Programming Cues"" on page 19)"	"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 8: Menu Options and Settings

Main Menu	Sub Menu	Options	Description / Notes
Set	Facts (Factory) Defaults	Set?	Resets fixture settings to factory defaults.
	"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	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	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	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%.
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.

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 preformed at least twice a year. Additional inspections and cleaning may be necessary and more often depending upon 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:

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

Front Lens (Interior)

To clean the interior of front lens:

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

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%.
Fixture will not power on	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 7 for more information." • Unit could have a bad Power Supply. Contact Altman Tech Support or a local Altman Dealer
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 DMX" on page 8 for more information." • Does the fixture say DMX ON or DMX OFF. If it says DMX ON it sees DMX coming from a DMX controller.
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 (Local Control) / Programming Cues" on page 17 in the PHX LED User Manual. • 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 DMX" on page 8 for more information."

Specifications

Specifications

LED Source

LED Engine	RGBL Engine (PHX1.5)
Max Power Consumption	150 Watts
Rated LED Life:	Arrays are rated for >50,000 to L70

Optical

Lens Options	5°, 10°, 19°, 26°, 36°, 50°
Aperture Size	5° - 13 1/4” 10° - 11” 19°, 26°, 36°, 50° - 4.73” 15-35 - 15°-35° 30-55 - 30°-55°

Control and Programming

Input Connections	DMX512 via 5-pin XLR connector
Protocols	DMX512 / RDM
Modes	8bit (4 DMX Channels) 8bit + Master Channel (5 DMX) 16bit (8 DMX Channels) 16bit + Master Channel (10 DMX)
RDM Configuration	Yes
User Interface	On Board LCD for User Interface with options to change settings

Electrical

Voltage Range:	100-240 VAC, 50/60 Hz
Input Connection:	Neutrik PowerCon Input and Through Connector
Quiescent Load:	0.087 AMP (10.54 W) @ 120 VAC* 0.045 AMP (10.54 W) @ 240 VAC*
Current Draw:	1.25A at 120VAC / 0.65A at 230VAC
Power Factor:	≥ 0.95
Max Daisy Chain:	Up to 10 Units at 120VAC* Up to 12 units at 230 VAC* * Recommended Power linking of units via Powercon connection.

Thermal

Ambient Operating Temp	0 - 50°C (32 - 122°F) with humidity of 5-95% non-condensing)
Fan	Control Fan: Low, On, Auto
BTUs/Hour	511.8 BTU per hour(*At Full Intensity) - 150W Unit

Construction

Materials	Corrosion-resistant materials and hardware
Color Options	Black, White or Custom
Mounting	Yoke
IP Rating	IP20

Warranty

Fixture	5 Years and 1 Day.
Support	Forever the life of the Product

Compliance

Compliance Marks	cETLus listed CE marked
Country of Origin	Assembled in the USA