PHILIPS

VARI*LITE

VLX3 Wash Luminaires

USER'S MANUAL

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VLX3 Wash Luminaire User's Manual

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Version as of: **17 December 2012**

Part number: **02.9703.0001 A**

VLX3 Wash Luminaire User's Manual

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How To Obtain Warranty Service

A copy of the Vari-Lite Limited Warranty was included in the shipping package for this VARI✻LITE product.

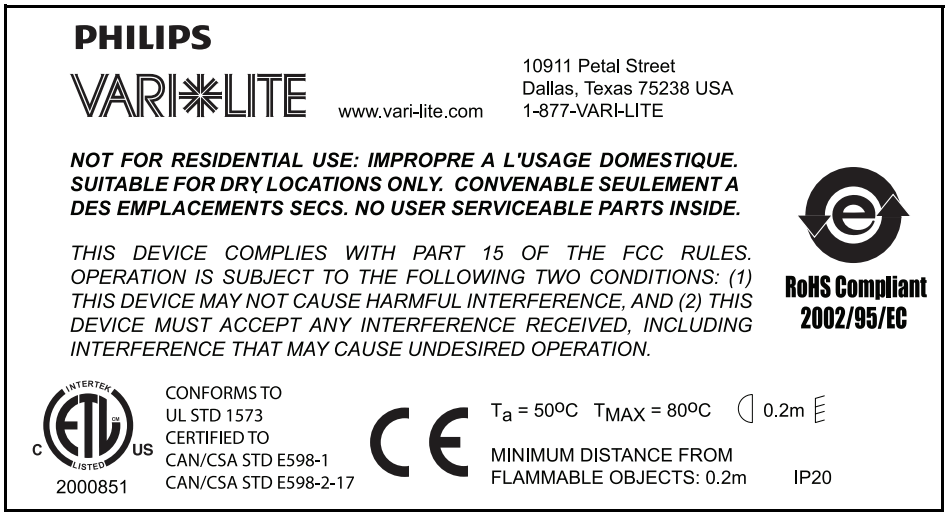
To obtain warranty service, please contact customer service at 1-877-VARI-LITE (1-877-827-4548), +1-214-647-7880, or entertainment.service@philips.com and request a Return Material Authorization (RMA) for warranty service. You will need to provide the model and serial number of the item being returned, a description of the problem or failure and the name of the registered user or organization. If available, you should have your sales invoice to establish the date of sale as the beginning of the warranty period.

Once you obtain the RMA, pack the unit in a secure shipping container or in its original packing box. Be sure to clearly indicate the RMA number on all packing lists, correspondence, and shipping labels. If available, please include a copy of your invoice (as proof of purchase) in the shipping container. With the RMA number written legibly on or near the shipping address label, return the unit, freight prepaid, to:

Vari-Lite
Attention: Warranty Service (RMA#_____)
10911 Petal Street
Dallas, Texas 75238 USA

As stated in the warranty, it is required that the shipment be insured and FOB our service center.

Compliance Notice



FCC This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when this 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 Vari-Lite system, service, and safety guidelines, 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/her own expense.

CE

Declaration of Conformity

We declare, under our sole responsibility, declare under our responsibility for the products named herein are in conformity with the essential requirement of the following European Directives and harmonized standards:

Low Voltage Directive (LVD), 2006/95/EC

EN 60598-2 17:1984+A1:1987+A2:1990 used in conjunction with 60598-1:2008/A11:2009

Electromagnetic Compatibility Directive (EMC), 2004/108/EC

EN 55022:2010

EN 55024:2010

Restriction of the use of certain Hazardous Substances in electrical and electronic equipment Directive (RoHS), 2011/65/EC

EN 50581:2012

Equipment referred to in this declaration of conformity was first manufactured in 2011 in compliance with these standards.

Safety Notice

It is extremely important to read ALL safety information and instructions provided in this manual and any accompanying documentation before installing and operating the products described herein. Heed all cautions and warnings during installation and use of this product.

Safety symbols used throughout this manual are as follows:

CAUTION advising of potential damage to product.

WARNING advising of potential injury or death to persons.

GENERAL INFORMATION PERTAINING TO PROTECTION AGAINST ELECTRICAL SHOCK, FIRE, EXPOSURE TO EXCESSIVE UV RADIATION, AND INJURY TO PERSONS CAN BE FOUND BELOW.

WARNING:
INSTRUCTIONS FOR CONTINUED PROTECTION AGAINST FIRE

1. VARI✳LITE luminaires have been designed for use with specific lamp types. The VLX3 Wash Luminaire uses special LED devices. Installing another type of light sources may be hazardous and will void your warranty.
2. Luminaires may be mounted on any type of surface as long as mounting instructions are followed. See instructions detailed in this manual.
3. Note distance requirement from combustible materials or illuminated objects for VARI✳LITE luminaires.

WARNING:
INSTRUCTIONS FOR CONTINUED PROTECTION AGAINST ELECTRICAL SHOCK

1. VARI✳LITE luminaires are designed for dry locations only. Exposure to rain or moisture may damage luminaire.
2. Disconnect power before servicing any VARI✳LITE equipment.
3. Servicing to be performed by qualified personnel only.

WARNING:
INSTRUCTIONS FOR CONTINUED PROTECTION AGAINST EXCESSIVE EXPOSURE TO UV RADIATION

1. Many VARI✳LITE luminaires use a lamp that produces UV radiation. DO NOT look directly at lamp.
2. It is hazardous to operate luminaires without lens or shield. Shields, lenses, or ultraviolet screens shall be changed if they have become visibly damaged to such an extent that their effectiveness is impaired. For example, by cracks or deep scratches.

WARNING:
RF INTERFERENCE

1. This is a Class A product. In a domestic environment this product may cause radio interference, in which case, the user may be required to take adequate measures.

Sicherheitshinweise

Es ist äußerst wichtig, ALLE Sicherheitsinformationen und -hinweise in diesem Handbuch und dem beiliegenden Informationsmaterial zu lesen, bevor Sie die hierin beschriebenen Produkte installieren bzw. bedienen. Halten Sie bei der Installation und dem Einsatz dieses Produkts alle Warnhinweise und Vorsichtsmaßnahmen ein.

Folgende Sicherheitssymbole werden in diesem Handbuch verwendet:

VORSICHT - weist auf möglichen Produktschaden hin.

WARNUNG - weist auf mögliche Körperverletzung und Lebensbedrohung hin.

NACHSTEHEND FINDEN SIE ALLGEMEINE HINWEISE ÜBER SICHERHEITSVORKEHRUNGEN GEGEN ELEKTROSCHOCK, FEUER, ÜBERHÖHTE UV-STRAHLUNG UND KÖRPERVERLETZUNGEN.

WARNUNG:
HINWEISE ZUM FEUERSCHUTZ

1. VARI✻LITE -Scheinwerfer sind ausschließlich für den Einsatz mit bestimmten Lampentyps. Achten Sie auf den Lampentyp (LED), bevor Sie die jeweiligen Lampen ersetzen. Die Installation eines anderen Lampentyps kann gefährlich sein.
2. Scheinwerfer können auf jeder beliebigen Oberfläche montiert werden, solange Sie die Montageanweisungen befolgen. Detaillierte Hinweise finden Sie in diesem Handbuch.
3. Beachten Sie die Einhaltung des erforderlichen Sicherheitsabstandes der VARI✻LITE -Scheinwerfer von brennbarem Material oder beleuchteten Objekten.

WARNUNG:
HINWEISE ZUM SCHUTZ GEGEN ELEKTROSCHOCK

1. VARI✻LITE -Scheinwerfer eignen sich ausschließlich für trockene Standorte. Regen oder Feuchtigkeit können die Scheinwerfer beschädigen.
2. Unterbrechen Sie die Stromzufuhr, bevor Sie mit der Arbeit an VARI✻LITE -Geräten beginnen.
3. Die Geräte sollten nur von qualifiziertem Personal gewartet werden.

WARNUNG:
HINWEISE ZUM SCHUTZ GEGEN ÜBERHÖHTE UV-STRAHLUNG

1. Viele VARI*LITE -Scheinwerfer verwenden die Lampentyp, der UV-Strahlen abgibt. SCHAUEN SIE NICHT direkt in die Lampe.
2. Es ist gefährlich, Leuchten ohne Linsen oder Blenden zu bedienen. Blenden, Linsen oder Ultraviolettschirme müssen ausgetauscht werden, sofern deren Schutzwirkung durch sichtbare Beschädigung (z. B. Sprünge oder Schrammen) eingeschränkt ist.

WARNUNG:
HF-INTERFERENZ

1. Es handelt sich um ein Produkt der Klasse A. In einer Wohnumgebung kann das Produkt Hochfrequenzstörungen verursachen. In diesem Fall müssen eventuell geeignete Maßnahmen getroffen werden.

Notes de sécurité

Avant de procéder à l'installation des produits décrits dans ce guide et de les mettre en marche, il est extrêmement important de lire TOUS les renseignements et TOUTES les directives de sécurité contenues dans ce guide ainsi que toute documentation jointe. Tenir compte de tous les avertissements et suivre toutes les précautions pendant l'installation et l'utilisation de cet appareil.

Les symboles de sécurité utilisés dans ce guide sont les suivants :

ATTENTION Ce symbole annonce que l'appareil risque d'être endommagé.

AVERTISSEMENT Ce symbole annonce qu'il y a risque d'accident grave ou même fatal.

CETTE SECTION CONTIENT DES INFORMATIONS GÉNÉRALES POUR SE PROTÉGER CONTRE LES DÉCHARGES ÉLECTRIQUES , LES INCENDIES, L'EXPOSITION EXCESSIVE AUX RAYONS UV ET TOUT AUTRE ACCIDENT POUVANT ENTRAÎNER DES BLESSURES.

AVERTISSEMENT:
DIRECTIVES POUR SE PROTÉGER CONTRE LES INCENDIES

1. Les luminaires VARI✳LITE ont été conçus pour être utilisés uniquement avec certaines type de lampes. Vérifier le type de lampe (LED) avant de remplacer les lampes. L'installation d'un autre type de lampe peut poser un danger.
2. Les luminaires peuvent être fixés sur tout type de surface tant que les directives de montage sont respectées. Voir les explications détaillées dans ce guide.
3. Vérifier la distance à respecter entre les matériaux combustibles ou les objets illuminés et les luminaires VARI✳LITE .

AVERTISSEMENT:
DIRECTIVES POUR SE PROTÉGER CONTRE LES DÉCHARGES ÉLECTRIQUES

1. Les luminaires VARI✳LITE sont conçus pour une utilisation au sec uniquement. Une exposition à la pluie et à l'humidité risque d'endommager le luminaire.
2. Débrancher l'appareil avant de procéder à la révision de tout matériel VARI✳LITE .
3. Les révisions doivent être effectuées uniquement par des personnes qualifiées.

AVERTISSEMENT:
DIRECTIVES POUR SE PROTÉGER CONTRE UNE EXPOSITION EXCESSIVE AUX RAYONS UV

1. Plusieurs luminaires VARI✳LITE utilisent une lampe qui produit des rayons UV. NE PAS fixer son regard sur la lampe.
2. L'utilisation des luminaires sans lentille ou blindage pose des risques. Tous blindages, lentilles ou écrans ultraviolet visiblement endommagés au point que leur efficacité en est affectée doivent être remplacés, par exemple s'il y a des fissures ou de profondes rayures.

AVERTISSEMENT:
INTERFÉRENCE RF

1. Cet appareil est de Classe A. Dans un environnement domestique, cet appareil peut causer des interférences radio, et si c'est le cas, l'utilisateur peut avoir à prendre des mesures adéquates.

Aviso sobre Seguridad

Es muy importante leer TODA la información e instrucciones sobre seguridad que se indica en este manual así como en los documentos adjuntos antes de instalar y operar los productos descritos. Se debe prestar atención a todos los avisos y advertencias durante la instalación y uso de este producto.

Los símbolos de seguridad usados en este manual son los siguientes:

CUIDADO, indica posibles daños al producto.

ADVERTENCIA, indica posibles lesiones o muerte a las personas.

LA INFORMACIÓN GENERAL RELACIONADA A LA PROTECCIÓN CONTRAGOLPES DE CORRIENTE ELÉCTRICA, INCENDIO, EXPOSICIÓN EXCESIVA A RADIACIÓN ULTRA VIOLETA Y LESIONES A LAS PERSONAS SE PUEDE ENCONTRAR SEGUIDAMENTE:

ADVERTENCIA:
INSTRUCCIONES PARA PROTECCIÓN CONTINUA CONTRA INCENDIO

1. Las luminarias VARI✻LITE han sido diseñadas para ser usadas solamente con algunas lámparas. Tome nota del tipo de lámpara (LED) antes de reemplazarla. Instalación de otro tipo de lámpara puede ser peligroso.
2. Las luminarias se pueden instalar en cualquier tipo de superficie siempre que se sigan las instrucciones de instalación. Vea las instrucciones detalladas en este manual.
3. Tome nota de los requerimientos de distancia de materiales combustibles u objetos iluminados para las luminarias VARI✻LITE .

ADVERTENCIA:
INSTRUCCIONES PARA PROTECCIÓN CONTINUA CONTRA CHOQUE ELÉCTRICO

1. Las luminarias VARI✻LITE están diseñadas solamente para lugares secos. La exposición a la lluvia o humedad pueden dañar la luminaria.
2. Desconecte la energía antes de dar servicio a cualquier equipo de VARI✻LITE .
3. El servicio debe ser realizado solamente por personal calificado.

ADVERTENCIA:
INSTRUCCIONES PARA PROTECCIÓN CONTINUA CONTRA LA EXPOSICIÓN EXCESIVA DE RADIACIÓN ULTRA VIOLETA

1. Muchas luminarias VARI✳LITE usan un tipo de lámpara que produce radiación UV. NO mire directamente a la lámpara.
2. Es peligroso operar luminarias sin lentes o protectores. Debe cambiar los protectores, lentes o pantallas ultravioletas si se aprecia que han sido dañadas, y que su efectividad pudiera estar deteriorada. Por ejemplo, si tuvieran rajaduras o raspaduras profundas.

ADVERTENCIA:
INTERFERENCIA RF

1. Este es un producto de Clase A. En el ambiente de la casa este producto puede ocasionar radiointerferencia, en cuyo caso, el usuario debe tomar las medidas adecuadas.

安全性に関する注意事項

ここに記載されている製品を取り扱う場合は、まず本マニュアルおよび付属のマニュアルの安全性に関する情報と説明をすべてお読みください。また、実際に本製品を取り付けたり使用する際には、すべての注意事項および警告に留意して作業してください。

本マニュアルでは、以下の安全マークを使用しています。

注意：製品に損傷を与える危険性があります。

警告：人身事故につながる危険性があります。

感電、火災、UV 放射に対する過度の露出、および人身事故を防ぐための一般的な情報については、以下の説明をお読みください。

警告：
火災の発生を防ぐためのヒント

1. VARI*LITE® 照明器具は、ランプを使用するように設計されています。ランプを交換する際は、ランプの種類（など）を確認するようにしてください。他の種類のランプを取り付けると危険です。
2. 照明器具は、本マニュアルの指示に従って操作するかぎり、どのようなタイプの表面にでも取り付けることができます。詳細については、本マニュアルを参照してください。
3. ヒューズを交換する場合は、同じヒューズ（同じ種類、同じクラス）を使用してください。
4. VARI*LITE® 照明器具は、可燃性物質または他の光源から必要な距離だけ離して配置してください。

警告：
感電を防ぐためのヒント

1. VARI*LITE® 照明器具は、乾燥した環境で使用するように設計されています。雨で濡れる場所や湿気の多い場所に取り付けると、照明器具が傷むことがあります。
2. VARI*LITE® 照明器具を修理点検する場合は、必ず先に電源を切ってください。
3. 照明器具の修理点検は、資格を持つ技師のみが行うようにしてください。

警告：
過度の UV 放射にさらされないためのヒント

1. VARI*LITE® 照明器具の多くは、UV 放射を生ずる HID タイプのランプを使用しています。ランプを直視することは避けてください。
2. レンズまたはシールドを使わずに照明器具を点灯すると危険です。レンズ、シールド、紫外線画面は、ひび割れや深い引っかき傷などにより、その効力が損なわれるようになったら取り替えるようにします。

警告：
人身事故を防ぐためのヒント

1. 照明器具が点灯しているときは、その外側が熱くなります。熱くなった器具やコンポーネントを取り扱う際には、適切な防具（手袋や保護用眼鏡）を使用してください。
2. 照明器具が点灯しているときは、そのランプが熱くなります。ランプを交換する場合は、照明器具の電源を切り、ランプの温度が下がるまで待ってください。ランプの裏ぶたをあけると、遮断スイッチが働いて、ランプの電源が切れる場合があります。
3. アーク灯は紫外線を放射します。この紫外線によって、ひどい火傷を負ったり、目の炎症を起こすことがあります。さらに、アーク灯は、高圧高温の状態で光を発します。そのため、万一アーク灯が破損すると、飛び散った破片で人身事故や火災が発生する危険性があります。
4. 再点灯するときには、保護用眼鏡を着用してください。
5. 損傷したランプを取り扱う場合は、適切な防具（手袋や保護用眼鏡）を着用してください。
6. 手袋を着用せずに直接手でランプを触った場合は、変性アルコールを使ってランプをきれいにし、糸くずの出ない布で拭いてから照明器具を取り付け、電源を入れるようにします。
7. 傷がついたランプや熱によって変形したランプは取り替えてください。

警告：
RF 干渉

1. 本製品は Class A に分類されます。本製品は、家庭環境において無線干渉を起こす可能性があります。その場合、使用者は適切な処置を取らなければならないことがあります。

アーク灯の特性

1. 停電後または大きな電圧ディップ後にアーク灯を再点灯する場合は、しばらく時間をおくようにしてください。Lamp Power-Up State）シ
   ステム設定によっては、温度が下がったときに自動的に再点灯される場合もあります。
2. アーク灯は点光源です。

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VLX3 Wash Luminaire 77

Introduction

About This Manual

This manual provides necessary information regarding safety, installation, operation and routine maintenance for the VARI*LITE VLX3 Wash Luminaire. Familiarizing yourself with this information will help you to get the most out of your luminaire.

WARNING: It is important to read ALL accompanying safety and installation instructions to avoid damage to the product and potential injury to yourself or others.

This manual covers the following models:

Model	Part Number	Source
VLX3 Wash Luminaire	20.9703.0001	3 x 120W RGBW LEDs
VLX3 Wash Luminaire, White	20.9703.0001.02	3 x 120W RGBW LEDs

Additional Documentation

A service manual, only for Authorized VARI*LITE Service Centers and technicians, of the VLX3 Wash Luminaire is available in electronic (PDF) format:

- VLX3 Wash Luminaire Service Manual (02.9690.0010)
  - Testing, Troubleshooting, Component Replacement and Illustrated Parts Breakdown.

Note: Performing maintenance procedures may void the product warranty. Refer to the Vari-Lite Limited Warranty card included in the product shipping package for more information.

Note: The VLX3 Wash Luminaire requires very little routine maintenance, but has special cleaning instructions unlike other fixtures. Please refer to "Special Cleaning and Care Instructions" on page 74 for complete cleaning and handling requirements.

For more information regarding DMX512 systems, refer to the following document available from United States Institute for Theatre Technology, Inc. (USITT):

- Digital Data Transmission Standard for Dimmers & Controllers plus AMX 192 Analog Multiplex Data Transmission Standard for Dimmers & Controllers. (A copy of Recommended Practice for DMX512 is included.)

  USITT Inc.
  6443 Ridings Road
  Syracuse, New York 13206-1111 USA
  Tel: (800) 938-7488 Fax: (866) 398-7488 / www.usitt.org

Text Conventions

The following styles and meanings are used throughout this manual:

Style	Meaning
[Button]	Front panel button. Example: Press [Enter] or [ESC] (Escape).
[Up] / [Down] / [Left] / [Right] Arrows	Press either [Up] or [Down] or [Left] or [Right] arrow button at Menu Display.
MENU	LCD Menu Display read-out. Example: Press [Up] / [Down] / [Left] / [Right] arrows until LAMP appears.

Customer Service

Our Goal

At Vari-Lite, we are committed to providing you the highest quality in customer service. Our comprehensive resources are available to help your business succeed and ensure you get the full benefit of being a Vari-Lite customer. Whether your needs are telephone troubleshooting assistance, product training or technical service, our full-time staff of experienced professionals are on-hand to provide support.

How to Reach Us

For assistance in your area, call the dealer from which your product was purchased. ***or*** Contact an Authorized VARI*LITE Service Center ***or*** Contact the Vari-Lite Customer Service Department, 9am - 6pm CST Monday through Friday, at the following:

phone: 1-877-VARI-LITE (1-877-827-4548) or +1-214-647-7880

email: entertainment.service@philips.com

Additional Resources

For additional resources and documentation, please visit our website at www.vari-lite.com and follow the Support link.

CHAPTER 1.

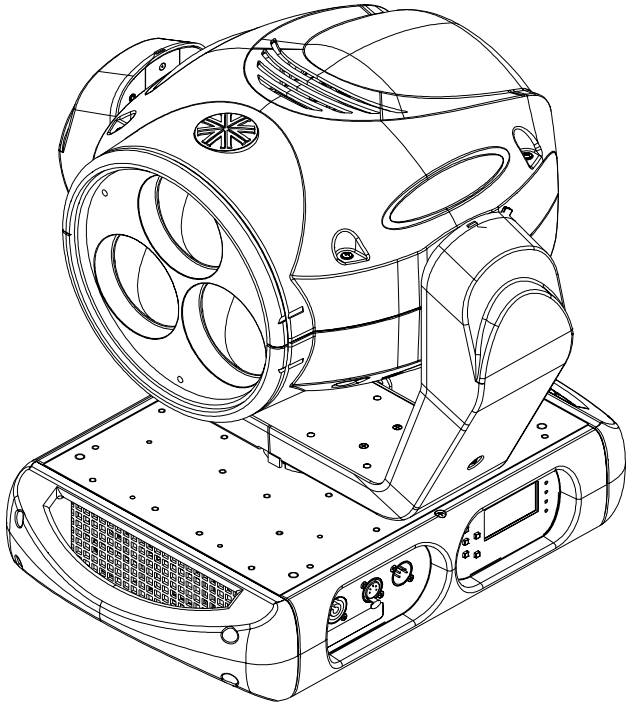
Description

This chapter contains descriptions of luminaire features and components, along with a list of accessories that are available.

- **Features**
- **Components**

Features

Standard Features



All VLX3 Wash Luminaires have the following standard features:

- Three, 120-watt replaceable custom RGBW chipsets. Each chip set contains high density red, green, blue, and white LED emitters.
- Manufacturer rated life (LED chip sets), in excess of 10,000 hours (at full RGBW).
- Light output of approximately 6,000 lumens (white light).
- Beam size control is achieved by the use of an optical zoom system that provides continuously variable field angle from approximately 15° to 55°.
- High-speed strobe with individual cell control and built-in effects.
- Smooth pan and tilt operation through time-controlled continuous motion by way of a pair of three-phase stepper motor systems.
- 540º Pan and 240º Tilt with 0.3º resolution.

Note: Detailed specification are available on the Vari-Lite web site at www.vari-lite.com and in "Technical Specifications" on page 77 in this manual.

Components

Included Items

The following illustration shows all items included with the luminaire:

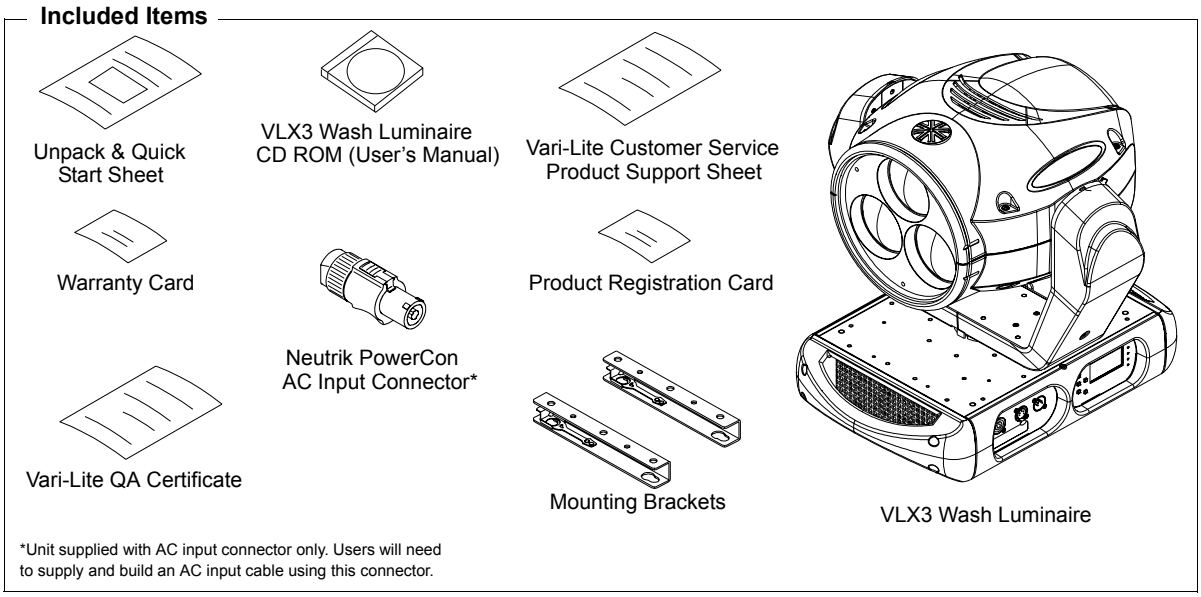


Figure 1-1: VLX3 Wash Luminaire Included Items

Replacement Items/Accessories

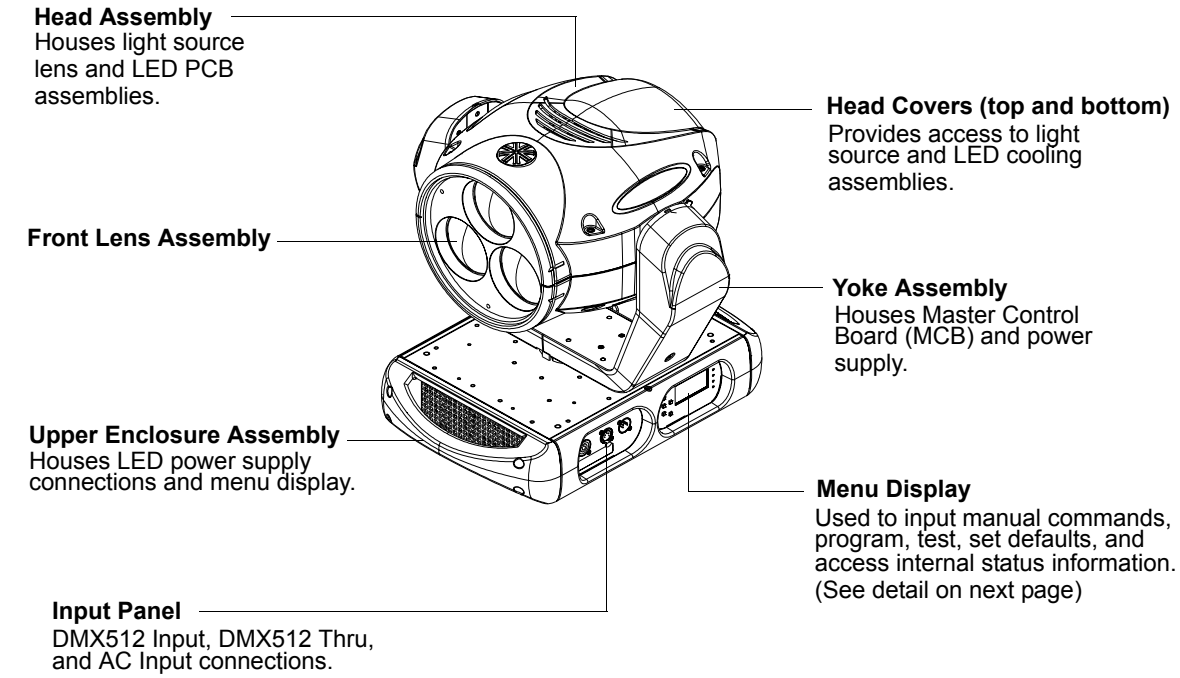
The following optional and/or replacement items can be ordered directly from your Authorized VARI*LITE Dealer. (Please order by Vari-Lite part number.)

Vari-Lite P/N	Accessory
22.9620.0194	Safety Cable Assembly
23.9623.0177	XLR DMX Terminator
28.8500.0054	USB Luminaire Programming Kit (Includes USB Upload Cable, Programming Kit CD ROM, Carry Bag, and Instructions)*
55.6840.0001	Truss Hook, Mega-Clamp, Round and Square
55.6841.0001	Truss Hook, Mega-Claw for 2" Round Tube
28.9687.0100	Wireless Solutions Wireless DMX Receiver
28.9687.0101	Lumen Radio Wireless DMX Receiver
28.9687.0102	City Theatrical Wireless DMX Receiver
PC1BE	AC Input Cable, PowerCon with Bare End (no connector), 1 Meter
PC1GP	AC Input Cable, PowerCon with Stage Pin (Male) Connector, 1 Meter
PC1GTL	AC Input Cable, PowerCon with Twist Lock (Male) Connector, 1 Meter
PC1GR	AC Input Cable, PowerCon with Edison (Male) Connector, 1 Meter

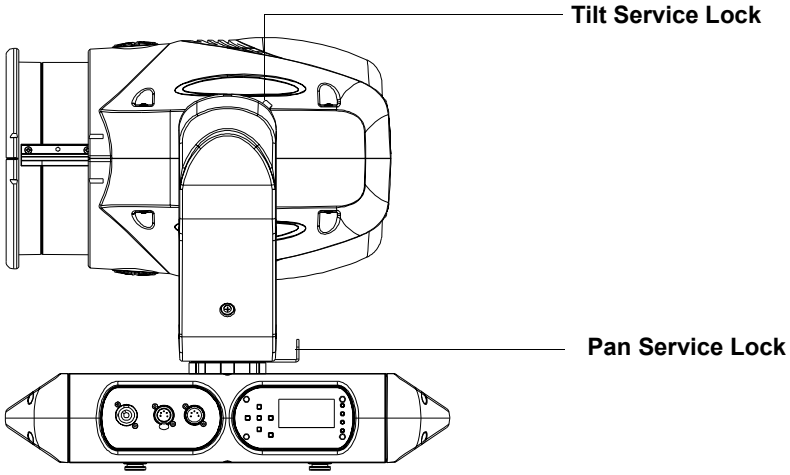
Note: * For more information on the USB Luminaire Programming Kit, please see "USB Download and Programming" on page 54.

Luminaire Overview

The following illustration shows the external luminaire components and controls.



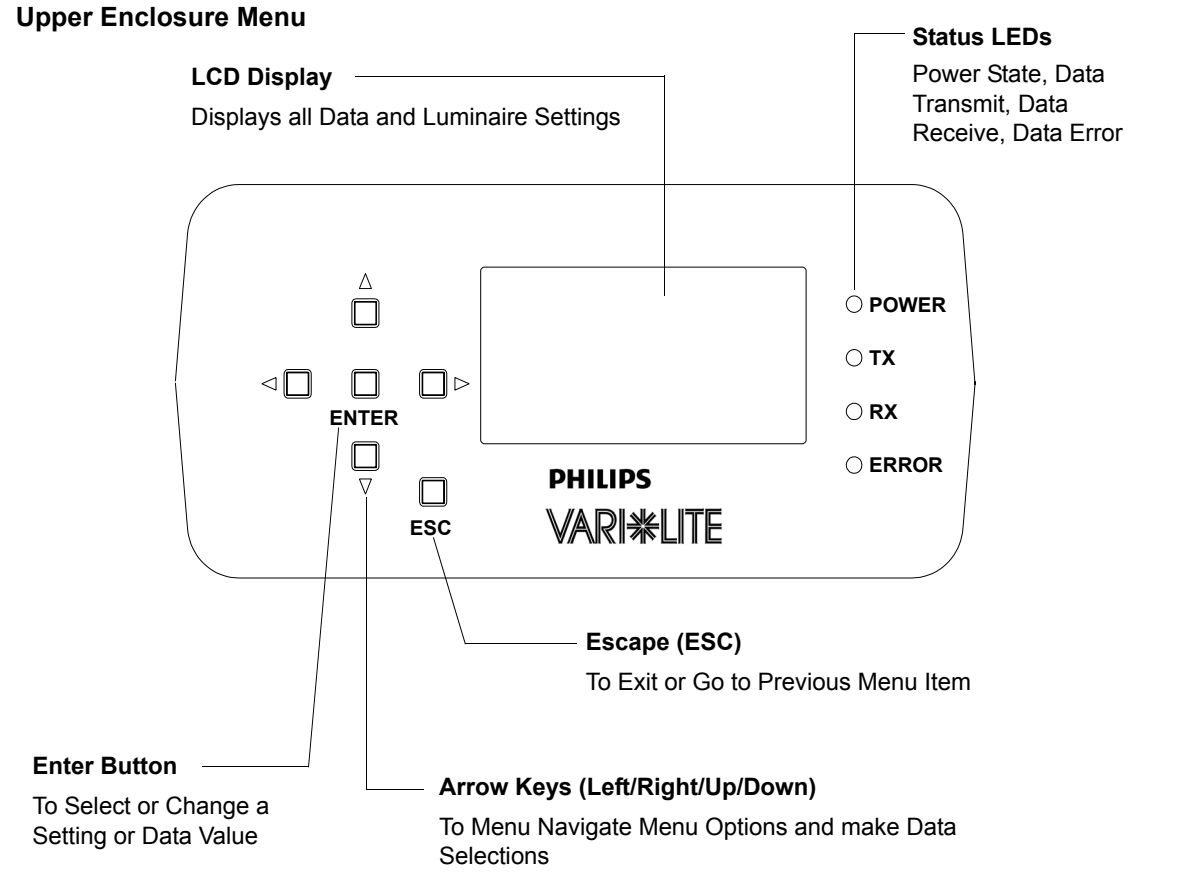
Pan & Tilt Service Locks



The VLX3 Wash Luminaire has separate Pan and Tilt service locks. When the luminaire is in use, both the Pan and Tilt service locks must be disengaged (unlocked) to allow free movement of the luminaire head and yoke assemblies.

Figure 1-2: VLX3 Wash Luminaire External Components and Controls

Luminaire Overview (continued)



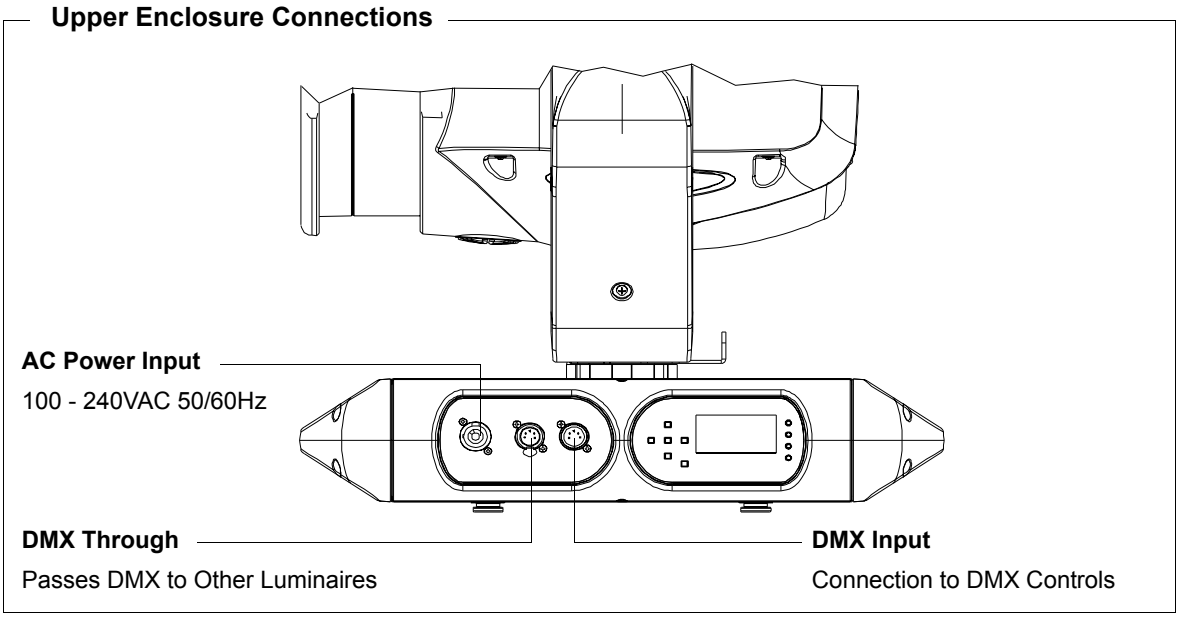


Figure 1-3: VLX3 Wash Luminaire External Components and Controls

CHAPTER 2.

Installation

This chapter contains instructions for installation of the luminaire. It includes connecting power and data, along with instructions for powering up the luminaire for the first time and addressing it within your system.

- **Power and Data Cabling Requirements**
- **Installation Procedures**
- **Powering Up**
- **Addressing**

WARNING: DO NOT connect or disconnect energized power cable at fixture (under load). Turn off circuit breaker (or completely de-energize circuit) before connecting or disconnecting power cable at fixture. Power is only removed from the fixture by disconnecting power cable from source or turning off source circuit breaker.

Note: ***Shipping / Transportation*** - The zoom assembly on the VLX3 Wash should be fully retracted (inside the head assembly) when the unit is not in use, being shipped, or is in storage. Vari-Lite recommends this be done with a suitable DMX control device. However, if the need arises to manually retract the lens, then it should be done by very carefully and slowly, with even pressure on each side of the barrel in line with the rails or with pressure right in the center between the three lenses. Care should be taken to not press quickly (taking less than 5 seconds) as this can possibly damage the unit. The unit should be adequately protected when shipped. See the latest version of Vari-Lite technical notice TN-235 on the Vari-Lite web site or contact Vari-Lite customer support for more information.

Power and Data Cabling Requirements

AC Power

WARNING: DO NOT connect to three-phase Delta service in countries with 240 volt power.

WARNING: DO NOT connect or disconnect energized power cable at fixture (under load). Turn off circuit breaker (or completely de-energize circuit) before connecting or disconnecting power cable at fixture. Power is only removed from the fixture by disconnecting power cable from source or turning off source circuit breaker.

WARNING: It is not recommended to power any VARI✳LITE luminaire from a dimmer - even in 'NONDIM' mode. Dimmer and non-dim modules are not suitable sources of power because their output modifies the AC wave form. This may work for a short time, but will eventually result in power problems, luminaire mis-operation and/or failure and may void the luminaire's warranty.

The luminaire requires standard AC power distribution from 100-240 VAC, 50/60 Hz in order to power all internal electronics and motors. It is equipped with a 3-pole Neutrik PowerCon locking connector (with contacts for line, neutral, and premating safety grounds) for the purpose of AC input.

Wire*	Connection
Green/Yellow	AC Ground
Blue	AC Neutral
Brown	AC Line

*International (Harmonized) Standard

Note: The mating Neutrik PowerCon connector is supplied, however, you will need to purchase or construct a cable appropriate for your application.

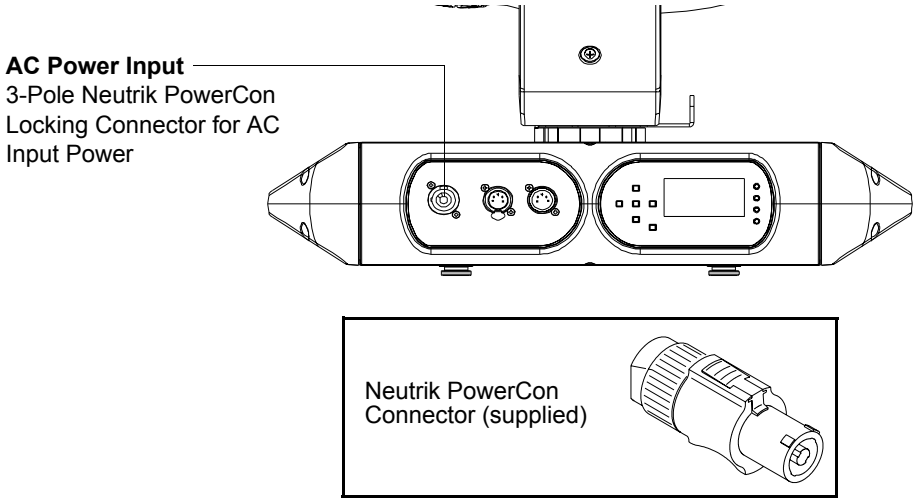


Figure 2-1: Power Connector

Current vs. Voltage

The following tables provide the luminaire's current draw at specific voltages.

Table 2-1: VLX3 Wash Luminaire - Current vs. Voltage*

Voltage (VAC) @ 60Hz	Current (Amps)
100	6.0
110	5.5
120	5.0
130	4.6
140	4.3
150	4.0
160	3.8
170	3.5
180	3.3
190	3.2
200	3.0
210	2.9
220	2.7
230	2.6
240	2.5

*Currents given are worst case with all motors sequencing.

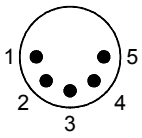
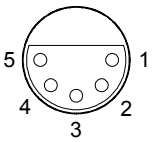
Data Cables

The VLX3 Wash Luminaire is equipped with two, 5-pin XLR connectors for DATA IN and DATA THRU (out) applications. DATA IN requires a 5-pin, female XLR connector and DATA THRU requires a 5-pin, male XLR connector. When purchasing or constructing data cables, it is important that not only the correct cable type be used, but also quality cable to ensure a reliable DMX512 system. Your cabling should meet the following USITT DMX specification requirements:

- Suitable for use with EIA485 (RS485) operation at 250k baud.
- Characteristic impedance 85-150 ohms, nominally 120 ohms.
- Low capacitance.
- Two twisted pairs.
- Foil and braid shielded.
- 24 AWG minimum gauge for runs up to 1000 feet (300m).
- 22 AWG minimum gauge for runs up to 1640 feet (500m).

Note: Microphone type cables and other general purpose, two-core audio or signal cables are not suitable for use with DMX512.

The XLR 5-pin connectors should be wired as follows:

Pin/Wire Code to XLR Connectors						
Data Thru Cable Pinout  Male Conn	**Pin 1** Foil & Braided Shield	**Pin 2** 1st conductor of 1st twisted pair Data (-)	**Pin 3** 2nd conductor of 1st twisted pair Data (+)	**Pin 4** 1st conductor of 2nd twisted pair Data (-)	**Pin 5** 2nd conductor of 2nd twisted pair Data (+)	Data In Cable Pinout  Female Conn

Note: Refer to the USITT Recommended Practice for DMX512 guide for additional information regarding DMX512 systems. How to obtain a copy is detailed in "Additional Documentation" on page 1.

Recommended Cable Types/Manufacturers

These are only a few of the suitable cable types. Any quality EIA485, twisted pair, 120 ohm, shielded cable will also work.

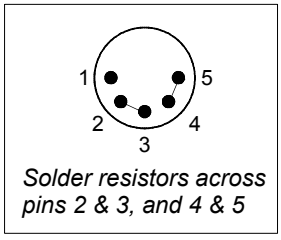
Table 2-2: Recommended Cable Types

Type	Pairs	ZΩ*	Jacket	AWG	Use	Temp (F)
Belden Cables						
1215A	2	150	PVC	26	IBM Type 6 Office cable	75
1269A	2	100	PTFE	22 (Solid)	High Temp, Plenum cable	200
8102	2	100	PVC	24	UL2919	80
8132	2	120	PVC	28	UL2919	80
8162	2	100	PVC	24	UL2493	60
82729	2	100	PTFE	24	High Temp, Plenum cable	200
88102	2	100	PTFE	24	High Temp, Plenum cable	200
89696	2	100	PTFE	22	High Temp, Plenum cable	200
89729	2	100	PTFE	24	High Temp, Plenum cable	200
89855	2	100	PTFE	22	High Temp, Plenum cable	200
9729	2	100	PVC	24	UL2493	60
9804	2	100	PVC	28	UL2960	60
9829	2	100	PVC	24	UL2919	80
9842	2	120	PVC	24	UL2919	80
Proplex Cables						
PC224P	2	110	Polyure-thane	22	Heavy Duty and Portable	105
PC224T	2	110	PVC	22	UL2464	105
PC226T	3	110	PVC	22	UL2464	

* Characteristic Impedance

Male Termination Connector

A male XLR termination connector is required at the last luminaire (or "far end of the line") to prevent signal reflections. Signal reflections may cancel out the signal at certain line lengths, resulting in errors. The terminator is also necessary for software downloads and running tests on multiple luminaires. To construct your own connector, you will need the following components:



Solder resistors across pins 2 & 3, and 4 & 5

- 5-pin, male XLR connector.
- Two 1/4W 5% 120 ohm resistors.

Note: A male termination connector is also available as an accessory from Vari-Lite. See "Replacement Items/Accessories" on page 6.

Installation Procedures

Hanging the Luminaire

The VLX3 Wash Luminaire can be hung horizontally or vertically from any structure designed to work with the type of load created by this moving luminaire. Two mounting bracket assemblies (provided) are used to attach truss hooks or other mounting hardware as required. Many compatible truss hooks are available from different manufacturers for your particular needs.

A minimum of one hook per truss hook bracket is required. If mounting method does not use truss hooks, two attachment points per truss hook bracket are required. When attaching more than one point on a single bracket, the attach points must be spaced as far apart as possible using the supplied mounting holes.

Install mounting hardware and brackets:

Step 1. Install truss hooks on two provided truss hook brackets as required.

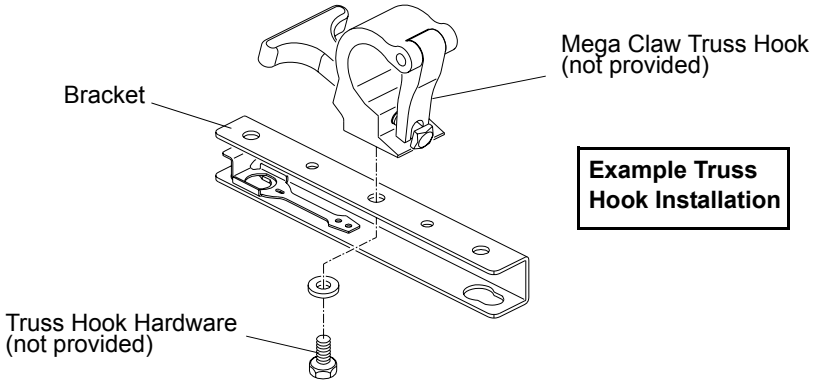


Figure 2-2: Installing Truss Hooks

Note: Various types of truss hooks can be used. The Mega Claw truss hook (as shown in the example above) as well as many other standard hooks, can be ordered separately. See "Replacement Items/ Accessories" on page 6.

Step 2. Determine required configuration of bracket installation. Brackets may be installed in either orientation as shown in Figure 2-3, but both must face the same direction. Figure 2-4 shows bracket installation details.

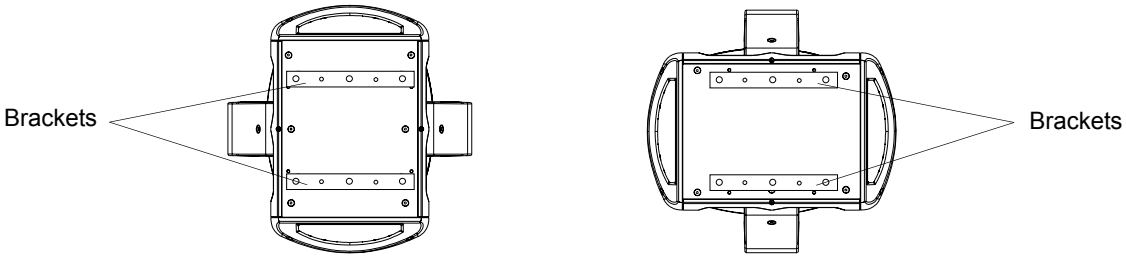


Figure 2-3: Bracket Orientation Options

Step 3. While pulling up on locking mechanism release, fit keyed holes onto raised mounting buttons at bottom of enclosure. Slide forward and release locking mechanism to lock in place. Ensure brackets are locked securely. (Always face brackets in same direction as shown.)

WARNING: Ensure that the bracket locking mechanism is fully seated after the bracket is installed on the luminaire.

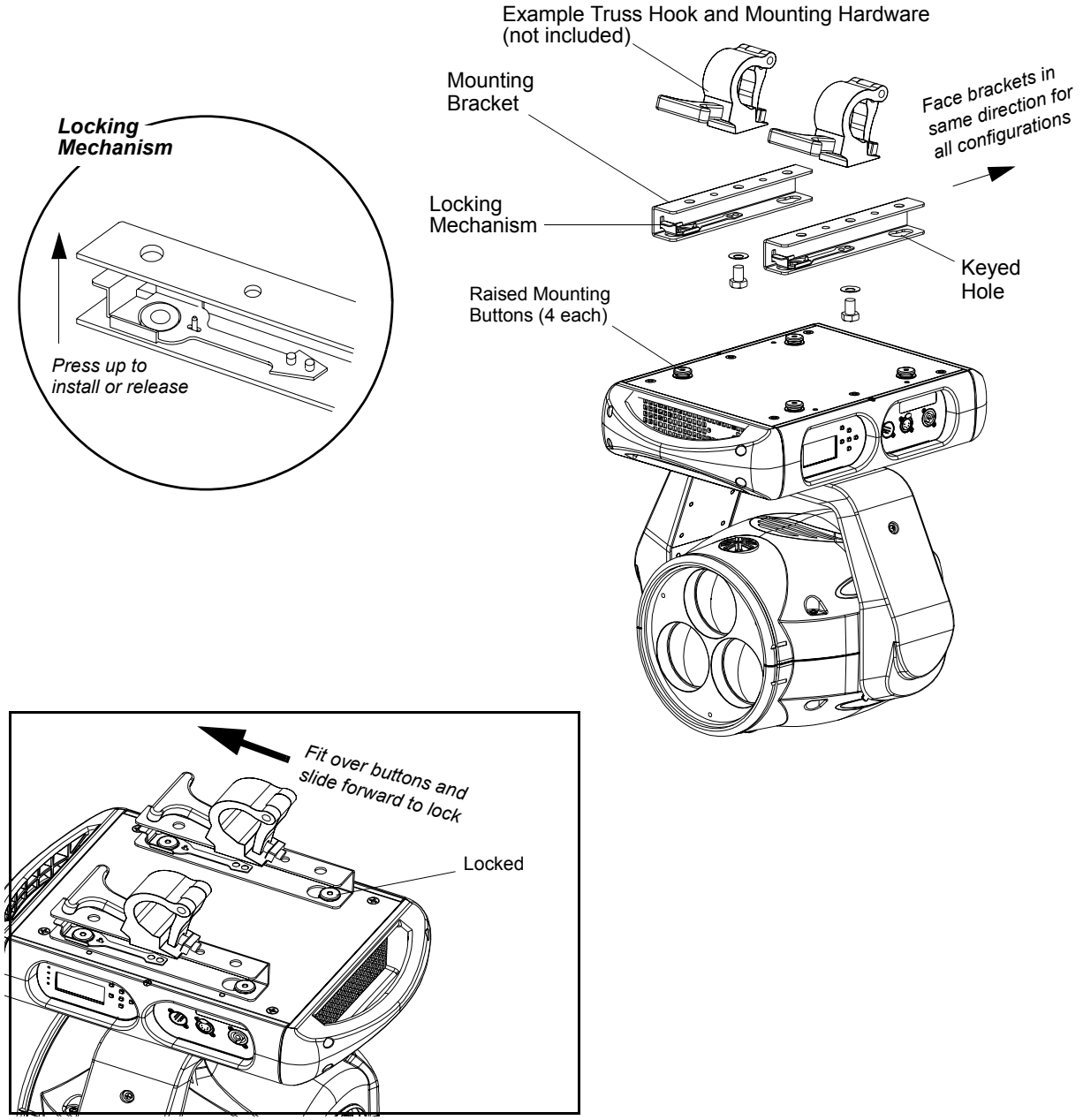


Figure 2-4: Installing Brackets on Luminaire Enclosure

Installing in Truss:

Step 1. Using two people, lift luminaire into mounting position.

Step 2. Secure in place with truss hook. Ensure truss hook hardware that locks hook in place (e.g. wing bolt) is properly tightened and that luminaire is fully supported.

Step 3. Attach safety cable (as required) as follows (refer to Figure 2-5):

a. Connect one end of cable to luminaire handle.

b. Loop at least once around truss/pipe and attach other end of cable to opposite handle.

Step 4. Connect power and data cables according to procedure given in "Connecting Data and Power" on page 17.

WARNING: DO NOT connect or disconnect energized power cable at fixture (under load). Turn off circuit breaker (or completely de-energize circuit) before connecting or disconnecting power cable at fixture. Power is only removed from the fixture by disconnecting power cable from source or turning off source circuit breaker.

Step 5. Be sure pan and tilt locks are disengaged (refer to "Luminaire Overview" on page 7 for details) to allow full head and yoke movement.

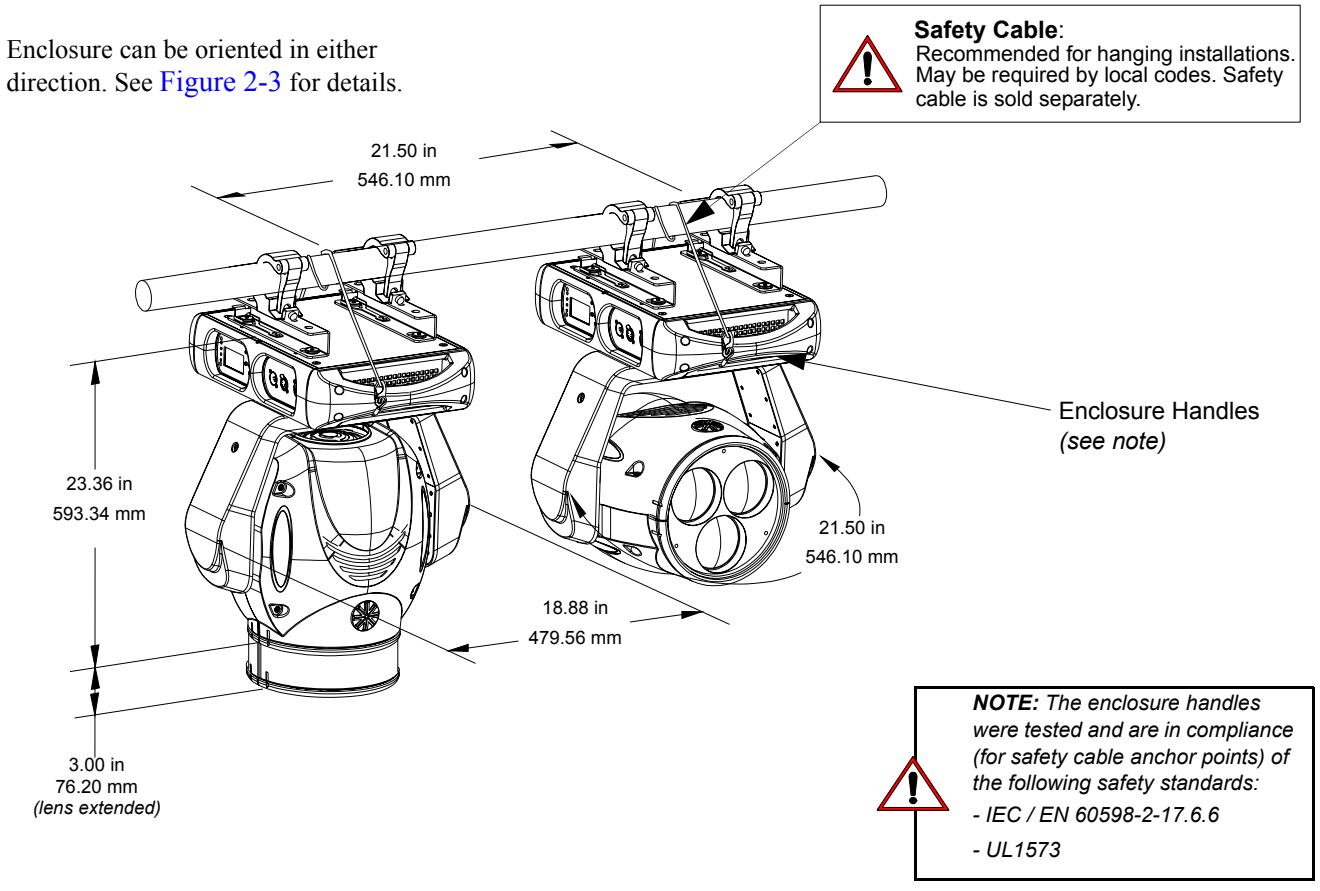
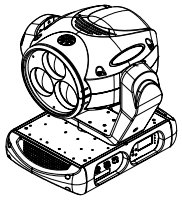


Figure 2-5: Hanging Configuration and Dimensions

Floor Mounting the Luminaire



The luminaire enclosure is sufficient to stabilize the luminaire in a floor installation, provided that the mounting surface is flat and sturdy. Also, the area around the luminaire must be free of debris and moisture.

Connecting Data and Power

A maximum of 32 luminaires may be connected in any one DMX data link.

Note: This maximum limit applies to the luminaire "daisy chain" only. Your system or console may require fewer luminaires on a single data link path. Consult your console documentation for more information.

To connect power and data:

Step 1. Connect data cable from console to first luminaire in chain at DATA IN connector.

Step 2. If required, connect additional data cables from DATA THRU connectors to DATA IN connectors of remaining luminaires in link.

Step 3. At last luminaire in link, install male termination connector at DATA THRU connector. (Luminaires and other devices on the same DMX chain may not function properly without termination.)

Step 4. Connect AC input cable connector to fixture before connecting to power input source or energizing power cable.

WARNING: DO NOT connect or disconnect energized power cable at fixture (under load). Turn off circuit breaker (or completely de-energize circuit) before connecting or disconnecting power cable at fixture. Power is only removed from the fixture by disconnecting power cable from source or turning off source circuit breaker.

Step 5. Dress AC input and data cables and secure them so they do not interfere with luminaire head and yoke movement.

Step 6. Be sure pan and tilt locks are disengaged (refer to "Luminaire Overview" on page 7 for details) to allow full head and yoke movement.

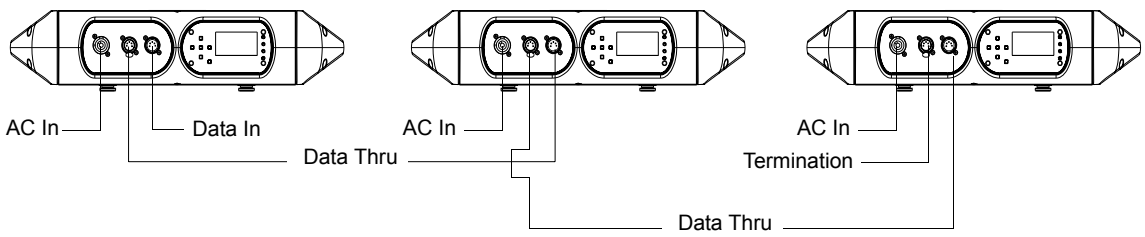


Figure 2-6: Connecting Power and Data

Powering Up

Power Up and Configuration Procedure

When AC power is initially applied, the luminaire immediately begins a calibration sequence that steps it through pan and tilt movements. The beam mechanism also moves through a full range of motion. After calibration, the luminaire head either stops at its "home" position (which positions the pan axis at mid-rotation and the head parallel to the yoke with the lens pointing away from the luminaire upper enclosure) or it moves to its current DMX-defined position when DMX data is present. All internal mechanisms also move to their "home" or DMX-defined positions.

CAUTION: Before applying power, be sure the luminaire is hung or positioned so that the head and yoke can move freely without restriction.

To power up:

WARNING: DO NOT connect or disconnect energized power cable at fixture (under load). Turn off circuit breaker (or completely de-energize circuit) before connecting or disconnecting power cable at fixture. Power is only removed from the fixture by disconnecting power cable from source or turning off source circuit breaker.

Step 1. At each luminaire, connect power cable to fixture.

Step 2. Be sure pan and tilt locks are disengaged (refer to "Luminaire Overview" on page 7 for details) to allow full head and yoke movement.

Step 3. Energize each connected circuit.

Step 4. Luminaire will automatically cycle through calibration and stop at "home" position.

LCD Display - Luminaire Calibration Status

During luminaire calibration or re-calibration, the progress of the operation is displayed on the luminaire's LCD Display. Information includes description of process and a progress bar.

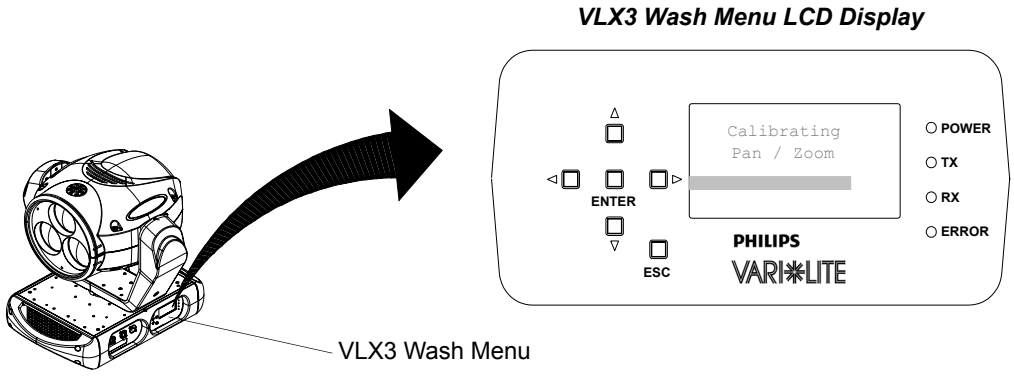


Figure 2-7: VLX3 Wash LCD Display - Luminaire Calibration Status

Addressing

Program Starting Address

The address setting for DMX console controlled systems is entered using the Menu Display (refer to "Menu Operation" on page 58). The luminaire retains the DMX address even when power is removed.

Note: Refer to your console operating instructions for specific information regarding its addressing requirements.

Program a DMX starting address:

Step 1. Press [ESC] to access the main menu of the luminaire.

Step 2. Press [Up] / [Down] arrows until Address appears. Press [Enter].

Step 3. Press [Up] / [Down] arrows to enter starting address.

Step 4. Press [Enter] to set.

Notes

CHAPTER 3.

Operation

This chapter contains instructions for operating the luminaire using DMX control and for updating the internal software. For Menu options and detailed information, see “Menu Operation” on page 58.

- **DMX Operation**
- **LED Field Adjustment**
- **Luminaire Timing**
- **Updating Software**

DMX Operation

Channel Mapping

The VLX3 Wash offers four modes:

Mode 1 - See "DMX Mode 1 Channel Mapping (Normal Operational Mode)" on page 22.

Mode 2 - See "DMX Mode 2 Channel Mapping (Enhanced Operational Mode)" on page 25.

Mode 3 - See "DMX Mode 3 Channel Mapping (Individual LED Engine Control)" on page 29.

Mode 4 - See "DMX Mode 4 Channel Mapping (Enhanced Individual LED Engine Control)" on page 33.

Refer to the appropriate DMX channel mapping chart for the mode you are using.

DMX Mode 1 Channel Mapping (Normal Operational Mode)

These tables assume a DMX start address of 1. When a different starting address is used, this address becomes channel 1 function and other functions follow in sequence.

Note: For Mode 2 Channel Mapping, refer to page 25. For Mode 3 Channel Mapping, refer to page 29. For Mode 4 Channel Mapping, refer to page 33

IMPORTANT! When changing the DMX Map (from one mode to another), the luminaire will auto re-calibrate.

Table 3-1: VLX3 Wash Luminaire Mapping Mode 1

DMX Channel	Parameter	Range DMX	Range%	**Default** - *These values are recommended console default values*	Description
1	Intensity - High	0 - 65535	0 - 100%	0	16-bit control for Intensity of LED settings.
2	Intensity - Low				
3	Pan - High Byte	0 - 65535	0 - 100%	32768	16-bit control of Pan - 540° of movement.
4	Pan - Low Byte				
5	Tilt - High Byte	0 - 65535	0 - 100%	32768	16-bit control of Tilt - 270° of movement.
6	Tilt - Low Byte				
7	Red - High Byte	0 - 65535	0 - 100%	0	16-bit control of Red LEDs from 0 to full.
8	Red - Low Byte				
9	Green - High Byte	0 - 65535	0 - 100%	0	16-bit control of Green LEDs from 0 to full.
10	Green - Low Byte				
11	Blue - High Byte	0 - 65535	0 - 100%	0	16-bit control of Blue LEDs from 0 to full.
12	Blue - Low Byte				
13	White - High Byte	0 - 65535	0 - 100%	0	16-bit control of White LEDs from 0 to full.
14	White - Low Byte				
15	*Unused*	*N/A*	*N/A*	*N/A*	*For Future Use*
16	*Unused*	*N/A*	*N/A*	*N/A*	*For Future Use*

Table 3-1: VLX3 Wash Luminaire Mapping Mode 1

17	Beam	0 - 255	0 - 100%	255	Controls beam angle from 15^{o} (DMX 0) to 55^{o} (DMX 255)
18	Strobe	0 - 255	0 - 100%	0	Controls strobe operations as follows: Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 (slowest) - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255
19	Intensity Time	0 - 255	0 - 100%	255	Allows for luminaire timing of intensity. Profile should default to DMX 255 for smoothest console fade times.
20	Focus Time	0 - 255	0 - 100%	255	Allows for luminaire timing of pan and tilt. Profile should default to DMX 255 for smoothest console fade times.
21	Color Time	0 - 255	0 - 100%	255	Allows for luminaire timing of color mixing. Profile should default to DMX 255 for smoothest console fade times.
22	Beam Time	0 - 255	0 - 100%	255	Allows for luminaire timing of zoom. Profile should default to DMX 255 for smoothest console fade times.

Table 3-1: VLX3 Wash Luminaire Mapping Mode 1

23	Control	0 - 255	0 - 100%	0	Used to set different modes, parameters, and functions of the VLX Wash. Set control channel value for desired action. Hold value for at least 3 seconds. Set control channel value to 0 without any scaling. Default Setting on Console = DMX 0 Display On / Off = DMX 3 - 4 Reset All to Defaults** = DMX 5 - 7 Quiet Mode† = DMX 11 - 13 Level Light Mode† = DMX 14 - 16 Constant Fans Mode† = DMX 17 - 19 Normal Mode† = DMX 20 - 22 Dimmer Curve LINEAR† = DMX 31 - 32 Dimmer Curve SQUARE LAW† = DMX 34 - 35 Full Luminaire Reset = DMX 81 - 87 Color Calibration OFF† = DMX 116 - 117 Color Calibration ON† = DMX 118 - 120 Manual Color Adjust ENABLE† = DMX 121 - 122 Manual Color Adjust STORE† = DMX 124 - 125 Notes: ** When resetting to defaults, the following will be enabled on the luminaire: - Normal Mode - Dimmer Curve SQUARE LAW - Color Calibration ON † These settings require the Command Lock in Menu to be set to OFF in order to change on Control Channel. Resetting to defaults will turn Command Lock OFF.

DMX Mode 2 Channel Mapping (Enhanced Operational Mode)

These tables assume a DMX start address of 1. When a different starting address is used, this address becomes channel 1 function and other functions follow in sequence.

Note: For Mode 1 Channel Mapping, refer to page 22. For Mode 3 Channel Mapping, refer to page 29. For Mode 4 Channel Mapping, refer to page 33.

DMX Map Mode 2 allows for independent control of each of the three individual LED segments in terms of Red, Green, Blue, White and Strobe. There is also a way to combine all three segments so you can control the unit as you would in Mode 1.

To select DMX Mode 2, access the Menu System as follows:

DMX -> DMX Map -> Mode 2

IMPORTANT! When changing the DMX Map (from one mode to another), the luminaire will auto re-calibrate.

Once Mode 2 has been selected, there are two additional settings of the control channel, Engines Combined and Engines Independent. When you first select Mode 2, the unit will default to Combined Control.

Combined Control

Combined Control allows luminaire's set to Mode 2 to behave as if set to Mode 1. Meaning that you have one set of console controls for all three of the individual segments.

Combined Control**:**

- Channels 7 & 8 controls all three Red
- Channels 9 & 10 controls all three Green
- Channels 11 & 12 controls all three Blue
- Channels 13 & 14 controls all three White
- Channel 15 controls all three Strobe
- Channels 16 through 33 have no affect on the luminaire

Independent Control

Independent control allows each of the 3 segments R, G, B, W and Intensity to be set to individual parameters.

To operate in Independent Mode, you have to send a value on the control channel (41) of 153-155. Please note there is **NO** 3-second rule. You should always **HOLD** the control channel at that DMX value while operating in Independent Mode. You can then set levels for each individual segment by adjusting the corresponding DMX channel.

To return to Combined Control, send a value on the control channel of 150-152. Again, the 3-second rule is not needed.

Table 3-2: VLX3 Wash Luminaire Mapping Mode 2

DMX Channel	Parameter	Range DMX	Range%	**Default** - *These values are recommended console default values*	Description
1	Intensity - High	0 - 65535	0 - 100%	0	16-bit control for Intensity of LED settings.
2	Intensity - Low				
3	Pan - High Byte	0 - 65535	0 - 100%	32768	16-bit control of Pan - 540° of movement.
4	Pan - Low Byte				
5	Tilt - High Byte	0 - 65535	0 - 100%	32768	16-bit control of Tilt - 270° of movement.
6	Tilt - Low Byte				
7	Red 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Red LED (Engine 1) from 0 to full.
8	Red 1 - Low Byte				
9	Green 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Green LED (Engine 1) from 0 to full.
10	Green 1 - Low Byte				
11	Blue 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Blue LED (Engine 1) from 0 to full.
12	Blue 1 - Low Byte				
13	White 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of White LED (Engine 1) from 0 to full.
14	White 1 - Low Byte				
15	Strobe Engine 1	0 - 255	0 - 100%	0	Controls strobe operations as follows: Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 (slowest) - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255
16	Red 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Red LED (Engine 2) from 0 to full.
17	Red 2 - Low Byte				
18	Green 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Green LED (Engine 2) from 0 to full.
19	Green 2 - Low Byte				
20	Blue 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Blue LED (Engine 2) from 0 to full.
21	Blue 2 - Low Byte				
22	White 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of White LED (Engine 2) from 0 to full.
23	White 2 - Low Byte				
24	Strobe Engine 2	0 - 255	0 - 100%	0	Controls strobe operations as follows: Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 (slowest) - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255
25	Red 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Red LED (Engine 3) from 0 to full.
26	Red 3 - Low Byte				
27	Green 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Green LED (Engine 3) from 0 to full.
28	Green 3 - Low Byte				

Table 3-2: VLX3 Wash Luminaire Mapping Mode 2

29	Blue 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Blue LED (Engine 3) from 0 to full.
30	Blue 3 - Low Byte				
31	White 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of White LED (Engine 3) from 0 to full.
32	White 3 - Low Byte				
33	Strobe Engine 3	0 - 255	0 - 100%	0	Controls strobe operations as follows: Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 (slowest) - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255
34	*Unused*	*N/A*	*N/A*	*N/A*	For Future Use
35	*Unused*	*N/A*	*N/A*	*N/A*	For Future Use
36	Beam	0 - 255	0 - 100%	255	Controls beam angle from 15^{o} (DMX 0) to 55^{o} (DMX 255)
37	Intensity Time	0 - 255	0 - 100%	255	Allows for luminaire timing of intensity. Profile should default to DMX 255 for smoothest console fade times.
38	Focus Time	0 - 255	0 - 100%	255	Allows for luminaire timing of pan and tilt. Profile should default to DMX 255 for smoothest console fade times.
39	Color Time	0 - 255	0 - 100%	255	Allows for luminaire timing of color mixing. Profile should default to DMX 255 for smoothest console fade times.
40	Beam Time	0 - 255	0 - 100%	255	Allows for luminaire timing of zoom. Profile should default to DMX 255 for smoothest console fade times.

Table 3-2: VLX3 Wash Luminaire Mapping Mode 2

41	Control	0 - 255	0 - 100%	0	Used to set different modes, parameters, and functions of the VLX Wash. Set control channel value for desired action. Hold value for at least 3 seconds (unless noted by #). Set control channel value to 0 without any scaling. Default Setting on Console = DMX 0 Display On/Off = DMX 3-4 Reset All to Defaults** = DMX 5 - 7 Quiet Mode† = DMX 11 - 13 Level Light Mode† = DMX 14 -16 Constant Fans Mode† = DMX 17 - 19 Normal Mode† = DMX 20 - 22 Dimmer Curve LINEAR† = DMX 31 - 32 Dimmer Curve SQUARE LAW† = DMX 34 - 35 Full Luminaire Reset = DMX 81 - 87 Color Calibration OFF† = DMX 116 - 117 Color Calibration ON† = DMX 118 - 120 Manual Color Adjust ENABLE† = DMX 121 - 122 Manual Color Adjust STORE† = DMX 124 - 125 Engines Combined# = DMX 150 -152 Engines Independent# = DMX 153 - 155 Notes: ** When resetting to defaults, the following will be enabled on the luminaire: - Normal Mode - Dimmer Curve SQUARE LAW - Color Calibration ON † These settings require the Command Lock in Menu to be set to OFF in order to change on Control Channel. Resetting to defaults will turn Command Lock OFF. # This parameter does not require that the value be held for 3-seconds to set. NOTE: In Combined Mode, all fixtures must be patched as Mode 2 units (41 channel) for proper operation.

DMX Mode 3 Channel Mapping (Individual LED Engine Control)

Vari-Lite has added a new control mode in VLX3 wash luminaires called Mode 3. Mode 3 allows users to program and control each LED engine individually but with significant differences from Mode 2.

To select DMX Mode 3, access the Menu System as follows:

DMX -> DMX Map -> Mode 3

- Mode 3 provides programmers access to individual control or combined control of the LEDs and allows control of easily built effects.
- VLX3 Wash Mode 3 adds an 8-bit channel called the **Engine Modifier** channel. This is channel **36** in the DMX map. This channel designates the way the programmer accesses the LED engines.
    a. To operate the fixture as a conventional moving wash fixture, set the **Engine Modifier** channel (channel 15) to a DMX value of **0** (default). This means that the RGBW and Strobe control of engine #1 (DMX Channels 7-15) will control all the LED engines as one.
    b. To control the engines separately, users can set the fixture to **Engine Modifier** channel to a DMX value of **15** (11-20 range). Enabling **Engine Modifier** separates the LED engines for individual control using their own individual control channels.
- Mode 3 extends the DMX channel count to 42 DMX channels. See Table 3-3, “VLX3 Wash Luminaire Mapping Mode 3,” on page 30 for more information.
- Now that you have each engine set to different colors, you may want to do some effects with them. If you move the **Engine Modifier** channel up in the range of **21** through **83**, you will notice that the colors you have selected are now rotating around each of the three engines. By adjusting within this range you are able to change speed and direction of the rotation.
- If the **Engine Modifier** channel is set in the range of **87** through **149**, the color selected for engine 1 will be applied to engine 2 and then engine 3 sequentially. It will then apply the selected color on engine 2 to engine 3 and then engine 1 sequentially. It will then apply the color selected for engine 3 to engine 1 and then to engine 2 sequentially. This is called **LED Pile-On**. By changing the values within this range you can manipulate the speed and direction the **LED Pile-On** takes.
- It is important to note that the individual colors can be altered while this channel is activated. Simply go back to any of the engines and change their values. The **Engine Modifier** channel will recognize the changes in real time. It is also important to note that the Color Timing Channel (DMX Channel 40 in Mode 3) is still recognized with the **Engine Modifier** channel. For example, if you set a slow rotation of the LED engines and then give it a 1 or 2 second color timing value, you will notice the rotation of the LED engines are now fading to each color rather than snapping to each color.
- Refer to Table 3-3, “VLX3 Wash Luminaire Mapping Mode 3,” on page 30 for all the values needed to write a console profile.

These tables assume a DMX start address of 1. When a different starting address is used, this address becomes channel 1 function and other functions follow in sequence.

Note: For Mode 1 Channel Mapping, refer to page 22. For Mode 2 Channel Mapping, refer to page 25. For Mode 4 Channel Mapping, refer to page 33.

IMPORTANT! When changing the DMX Map (from one mode to another), the luminaire will auto re-calibrate.

Table 3-3: VLX3 Wash Luminaire Mapping Mode 3

DMX Channel	Parameter	Range DMX	Range%	**Default** - *These values are recommended console default values*	Description
1	Intensity - High	0 - 65535	0 - 100%	0	16-bit control for Intensity of LED settings.
2	Intensity - Low				
3	Pan - High Byte	0 - 65535	0 - 100%	32768	16-bit control of Pan - 540° of movement.
4	Pan - Low Byte				
5	Tilt - High Byte	0 - 65535	0 - 100%	32768	16-bit control of Tilt - 270° of movement.
6	Tilt - Low Byte				
7	Red 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Red LED (Engine 1) from 0 to full.
8	Red 1 - Low Byte				
9	Green 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Green LED (Engine 1) from 0 to full.
10	Green 1 - Low Byte				
11	Blue 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Blue LED (Engine 1) from 0 to full.
12	Blue 1 - Low Byte				
13	White 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of White LED (Engine 1) from 0 to full.
14	White 1 - Low Byte				
15	Strobe - LED Engine 1	0 - 255	0 - 100%	0	Controls strobe operations as follows: Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 (slowest) - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255
16	Red 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Red LED (Engine 2) from 0 to full.
17	Red 2 - Low Byte				
18	Green 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Green LED (Engine 2) from 0 to full.
19	Green 2 - Low Byte				
20	Blue 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Blue LED (Engine 2) from 0 to full.
21	Blue 2 - Low Byte				
22	White 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of White LED (Engine 2) from 0 to full.
23	White 2 - Low Byte				

Table 3-3: VLX3 Wash Luminaire Mapping Mode 3

24	Strobe - LED Engine 2	0 - 255	0 - 100%	0	Controls strobe operations as follows: Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 (slowest) - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255
25	Red 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Red LED (Engine 3) from 0 to full.
26	Red 3 - Low Byte				
27	Green 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Green LED (Engine 3) from 0 to full.
28	Green 3 - Low Byte				
29	Blue 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Blue LED (Engine 3) from 0 to full.
30	Blue 3 - Low Byte				
31	White 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of White LED (Engine 3) from 0 to full.
32	White 3 - Low Byte				
33	Strobe - LED Engine 3	0 - 255	0 - 100%	0	Controls strobe operations as follows: Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 (slowest) - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255
34	*Unused*	*N/A*	*N/A*	*N/A*	*For Future Use*
35	*Unused*	*N/A*	*N/A*	*N/A*	*For Future Use*
36	Engine Modifier	0 - 255	0 - 100%	0	Used for setting fixture into expanded mode for control of individual LED engines. This channel also contains individual spin speeds and various other effects. DMX values as follows: Combined Engine Control = DMX 0 - 10 Independent LED Control = DMX 11 - 20 LED Virtual Spin CW = DMX 21 - 50 (Fast to Slow) LED Virtual Spin STOP = DMX 51 - 53 LED Virtual Spin Counter CW = DMX 54 - 83 (Slow to Fast) Stop - Independent Engine Data = DMX 84 - 86 LED Pile-On Spin CW = DMX 87 - 116 (Fast to Slow) LED Pile-On STOP = DMX 117 - 119 LED Pile-On Spin Counter CW = DMX 120 - 149 Stop - Independent Engine Data = DMX 150 - 152

Table 3-3: VLX3 Wash Luminaire Mapping Mode 3

37	Beam	0 - 255	0 - 100%	255	Controls beam angle from 15° (DMX 0) to 55° (DMX 255)
38	Intensity Time	0 - 255	0 - 100%	255	Allows for luminaire timing of intensity. Profile should default to DMX 255 for smoothest console fade times.
39	Focus Time	0 - 255	0 - 100%	255	Allows for luminaire timing of pan and tilt. Profile should default to DMX 255 for smoothest console fade times.
40	Color Time	0 - 255	0 - 100%	255	Allows for luminaire timing of color mixing. Profile should default to DMX 255 for smoothest console fade times.
41	Beam Time	0 - 255	0 - 100%	255	Allows for luminaire timing of zoom. Profile should default to DMX 255 for smoothest console fade times.
42	Control	0 - 255	0 - 100%	0	Used to set different modes, parameters, and functions of the VLX Wash. Set control channel value for desired action. Hold value for at least 3 seconds. Set control channel value to 0 without any scaling. Default Setting on Console = DMX 0 Display On / Off = DMX 3 - 4 Reset All to Defaults** = DMX 5 - 7 Quiet Mode† = DMX 11 - 13 Level Light Mode† = DMX 14 - 16 Constant Fans Mode† = DMX 17 - 19 Normal Mode† = DMX 20 - 22 Dimmer Curve LINEAR† = DMX 31 - 32 Dimmer Curve SQUARE LAW† = DMX 34 - 35 Full Luminaire Reset = DMX 81 - 87 Color Calibration OFF† = DMX 116 - 117 Color Calibration ON† = DMX 118 - 120 Manual Color Adjust ENABLE† = DMX 121 - 122 Manual Color Adjust STORE† = DMX 124 - 125 <u>Notes</u>: ** When resetting to defaults, the following will be enabled on the luminaire: - Normal Mode - Dimmer Curve SQUARE LAW - Color Calibration ON † These settings require the Command Lock in Menu to be set to OFF in order to change on Control Channel. Resetting to defaults will turn Command Lock OFF.

DMX Mode 4 Channel Mapping (Enhanced Individual LED Engine Control)

Vari-Lite has added a new control mode in VLX3 wash luminaires called Mode 4. Mode 4 allows users to program and control each LED engine individually but with significant differences from Mode 2 and Mode 3 (as described in Vari-Lite Technical Bulletin LSW-064).

To select DMX Mode 4, access the Menu System as follows:

DMX -> DMX Map -> Mode 4

IMPORTANT! Mode 4 utilizes the same control functionality as Mode 3, but with a different channel map. This channel map is useful when patching the fixture as 4 independent fixtures (one for intensity, pan, tilt, zoom and control) while the other 3 control the individual LED cells. Certain console profiles will prefer to use this mode. Please check with your console manufacturer for which mode their console profile supports.

Like Mode 3, Mode 4 provides:

- Programmers access to individual control or combined control of the LEDs and allows control of easily built effects.
- An 8-bit channel called the **Engine Modifier** channel. This is channel **15** in the DMX map in Mode 4. This channel designates the way the programmer accesses the LED engines.
    a. To operate the fixture as a conventional moving wash fixture, set the **Engine Modifier** channel to a DMX value of **0** (default). This means that the RGBW and Strobe control of engine #1 (DMX Channels 16 - 24) will control all the LED engines as one.
    b. To control the engines separately, users can set the fixture to **Engine Modifier** channel to a DMX value of **15** (11-20 range). Enabling **Engine Modifier** separates the LED engines for individual control using their own individual control channels.
- An extended DMX channel count - 42 DMX channels. See Table 3-4, “VLX3 Wash Luminaire Mapping Mode 4,” on page 34 for more information.
- The ability to set each engine to a different color and create effects with them. If you move the **Engine Modifier** channel up in the range of **21** through **83**, you will notice that the colors you have selected are now rotating around each of the three engines. By adjusting within this range you are able to change speed and direction of the rotation.
- If the **Engine Modifier** channel is set in the range of **87** through **149**, the color selected for engine 1 will be applied to engine 2 and then engine 3 sequentially. It will then apply the selected color on engine 2 to engine 3 and then engine 1 sequentially. It will then apply the color selected for engine 3 to engine 1 and then to engine 2 sequentially. This is called **LED Pile-On**. By changing the values within this range you can manipulate the speed and direction the **LED Pile-On** takes.
- It is important to note that the individual colors can be altered while this channel is activated. Simply go back to any of the engines and change their values. The **Engine Modifier** channel will recognize the changes in real time. It is also important to note that the Color Timing Channel (DMX Channel 10 in Mode 4) is still recognized with the **Engine Modifier** channel. For example, if you set a slow rotation of the LED engines and then give it a 1 or 2 second color timing

value, you will notice the rotation of the LED engines are now fading to each color rather than snapping to each color.

These tables assume a DMX start address of 1. When a different starting address is used, this address becomes channel 1 function and other functions follow in sequence.

Note: For Mode 1 Channel Mapping, refer to page 22. For Mode 2 Channel Mapping, refer to page 25. For Mode 3 Channel Mapping, refer to page 29.

IMPORTANT! When changing the DMX Map (from one mode to another), the luminaire will auto re-calibrate.

Table 3-4: VLX3 Wash Luminaire Mapping Mode 4

DMX Channel	Parameter	Range DMX	Range%	**Default** - *These values are recommended console default values*	Description
1	Intensity - High	0 - 65535	0 - 100%	0	16-bit control for Intensity of LED settings.
2	Intensity - Low				
3	Pan - High Byte	0 - 65535	0 - 100%	32768	16-bit control of Pan - 540° of movement.
4	Pan - Low Byte				
5	Tilt - High Byte	0 - 65535	0 - 100%	32768	16-bit control of Tilt - 270° of movement.
6	Tilt - Low Byte				
7	Beam	0 - 255	0 - 100%	255	Controls beam angle from 15° (DMX 0) to 55° (DMX 255)
8	Intensity Time	0 - 255	0 - 100%	255	Allows for luminaire timing of intensity. Profile should default to DMX 255 for smoothest console fade times.
9	Focus Time	0 - 255	0 - 100%	255	Allows for luminaire timing of pan and tilt. Profile should default to DMX 255 for smoothest console fade times.
10	Color Time	0 - 255	0 - 100%	255	Allows for luminaire timing of color mixing. Profile should default to DMX 255 for smoothest console fade times.
11	Beam Time	0 - 255	0 - 100%	255	Allows for luminaire timing of zoom. Profile should default to DMX 255 for smoothest console fade times.

Table 3-4: VLX3 Wash Luminaire Mapping Mode 4

12	Control	0 - 255	0 - 100%	0	Used to set different modes, parameters, and functions of the VLX Wash. Set control channel value for desired action. Hold value for at least 3 seconds. Set control channel value to 0 without any scaling. Default Setting on Console = DMX 0 Display On / Off = DMX 3 - 4 Reset All to Defaults** = DMX 5 - 7 Quiet Mode† = DMX 11 - 13 Level Light Mode† = DMX 14 - 16 Constant Fans Mode† = DMX 17 - 19 Normal Mode† = DMX 20 - 22 Dimmer Curve LINEAR† = DMX 31 - 32 Dimmer Curve SQUARE LAW† = DMX 34 - 35 Full Luminaire Reset = DMX 81 - 87 Color Calibration OFF† = DMX 116 - 117 Color Calibration ON† = DMX 118 - 120 Manual Color Adjust ENABLE† = DMX 121 - 122 Manual Color Adjust STORE† = DMX 124 - 125 <u>Notes</u>: ** When resetting to defaults, the following will be enabled on the luminaire: - Normal Mode - Dimmer Curve SQUARE LAW - Color Calibration ON † These settings require the Command Lock in Menu to be set to OFF in order to change on Control Channel. Resetting to defaults will turn Command Lock OFF.
13	*Unused*	*N/A*	*N/A*	*N/A*	*For Future Use*
14	*Unused*	*N/A*	*N/A*	*N/A*	*For Future Use*

Table 3-4: VLX3 Wash Luminaire Mapping Mode 4

15	Engine Modifier	0 - 255	0 - 100%	0	Used for setting fixture into expanded mode for control of individual LED engines. This channel also contains individual spin speeds and various other effects. DMX values as follows: Combined Engine Control = DMX 0 - 10 Independent LED Control = DMX 11 - 20 LED Virtual Spin CW = DMX 21 - 50 (Fast to Slow) LED Virtual Spin STOP = DMX 51 - 53 LED Virtual Spin Counter CW = DMX 54 - 83 (Slow to Fast) Stop - Independent Engine Data = DMX 84 - 86 LED Pile-On Spin CW = DMX 87 - 116 (Fast to Slow) LED Pile-On STOP = DMX 117 - 119 LED Pile-On Spin Counter CW = DMX 120 - 149 Stop - Independent Engine Data = DMX 150 - 152
16	Red 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Red LED (Engine 1) from 0 to full.
17	Red 1 - Low Byte				
18	Green 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Green LED (Engine 1) from 0 to full.
19	Green 1 - Low Byte				
20	Blue 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Blue LED (Engine 1) from 0 to full.
21	Blue 1 - Low Byte				
22	White 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of White LED (Engine 1) from 0 to full.
23	White 1 - Low Byte				
24	Strobe - LED Engine 1	0 - 255	0 - 100%	0	Controls strobe operations as follows: Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 (slowest) - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255
25	Red 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Red LED (Engine 2) from 0 to full.
26	Red 2 - Low Byte				
27	Green 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Green LED (Engine 2) from 0 to full.
28	Green 2 - Low Byte				
29	Blue 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Blue LED (Engine 2) from 0 to full.
30	Blue 2 - Low Byte				
31	White 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of White LED (Engine 2) from 0 to full.
32	White 2 - Low Byte				

Table 3-4: VLX3 Wash Luminaire Mapping Mode 4

33	Strobe - LED Engine 2	0 - 255	0 - 100%	0	Controls strobe operations as follows: Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 (slowest) - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255
34	Red 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Red LED (Engine 3) from 0 to full.
35	Red 3 - Low Byte				
36	Green 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Green LED (Engine 3) from 0 to full.
37	Green 3 - Low Byte				
38	Blue 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Blue LED (Engine 3) from 0 to full.
39	Blue 3 - Low Byte				
40	White 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of White LED (Engine 3) from 0 to full.
41	White 3 - Low Byte				
42	Strobe - LED Engine 3	0 - 255	0 - 100%	0	Controls strobe operations as follows: Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 (slowest) - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255

Control Channel Functions

Used to set different modes, parameters, and functions of the VLX3 Wash Luminaire via the control console. Set control channel value for desired action. Hold value for at least 3 seconds.

Set control channel value to 0 without any scaling. Discrete values must be used; not manual controls such as faders or encoders (see chart below for values).

To use control channel functions:

Step 1. Select an action to be sent.

Step 2. Set control channel value for desired action (for example, 84 for reset). Hold value for at least 3 seconds (unless noted with a "#" in Mode 2).

Step 3. Set control channel value to zero. (This must occur without any scaling values. Action will be voided if other values are detected between action value and zero.)

Note: A numerical keypad is required for sending values. An encoder or fader does not allow for a quick value change, which is required to effect the control functions. However, the encoders on some consoles include discreet value capability.

Control Channel Functions - Mode 1

Table 3-5: Control Channel Functions - Mode 1

DMX Channel	Control Channel Function	Control Channel DMX Value
23	Default Setting on Console	0
	Display On / Off	3 - 4
	Reset All to Defaults**	5 - 7
	Quiet Mode†	11 - 13
	Level Light Mode†	14 - 16
	Constant Fans Mode†	17 - 19
	Normal Mode†	20 - 22
	Dimmer Curve LINEAR†	31 - 32
	Dimmer Curve SQUARE LAW†	34 - 35
	Full Luminaire Reset	81 - 87
	Color Calibration OFF†	116 - 117
	Color Calibration ON†	118 - 120
	Manual Color Adjust ENABLE†	121 - 122
	Manual Color Adjust STORE†	124 - 125
	Notes: ** When resetting to defaults, the following will be enabled on the luminaire: • Normal Mode • Dimmer Curve SQUARE LAW • Color Calibration ON † These settings require the Command Lock in Menu to be set to OFF in order to change on Control Channel. Resetting to defaults will turn Command Lock OFF.	

Control Channel Functions - Mode 2

Table 3-6: Control Channel Functions - Mode 2

DMX Channel	Control Channel Function	Control Channel DMX Value
41	Default Setting on Console	0
	Display On / Off	3 - 4
	Reset All to Defaults**	5 - 7
	Quiet Mode†	11 - 13
	Level Light Mode†	14 - 16
	Constant Fans Mode†	17 - 19
	Normal Mode†	20 - 22
	Dimmer Curve LINEAR†	31 - 32
	Dimmer Curve SQUARE LAW†	34 - 35
	Full Luminaire Reset	81 - 87
	Color Calibration OFF†	116 - 117
	Color Calibration ON†	118 - 120
	Manual Color Adjust ENABLE†	121 - 122
	Manual Color Adjust STORE†	124 - 125
	Engines Combined#	150 - 152
	Engines Independent#	153 - 155
	Notes: ** When resetting to defaults, the following will be enabled on the luminaire: • Normal Mode • Dimmer Curve SQUARE LAW • Color Calibration ON † These settings require the Command Lock in Menu to be set to OFF in order to change on Control Channel. Resetting to defaults will turn Command Lock OFF. # This parameter does not require that the value be held for 3-seconds to set. NOTE: In Combined Mode, all fixtures must be patched as Mode 2 units (41 channel) for proper operation.	

Control Channel Functions - Mode 3

Table 3-7: Control Channel Functions - Mode 3

DMX Channel	Control Channel Function	Control Channel DMX Value
42	Default Setting on Console	0
	Display On / Off	3 - 4
	Reset All to Defaults**	5 - 7
	Quiet Mode†	11 - 13
	Level Light Mode†	14 - 16
	Constant Fans Mode†	17 - 19
	Normal Mode†	20 - 22
	Dimmer Curve LINEAR†	31 - 32
	Dimmer Curve SQUARE LAW†	34 - 35
	Full Luminaire Reset	81 - 87
	Color Calibration OFF†	116 - 117
	Color Calibration ON†	118 - 120
	Manual Color Adjust ENABLE†	121 - 122
	Manual Color Adjust STORE†	124 - 125
	Notes: ** When resetting to defaults, the following will be enabled on the luminaire: • Normal Mode • Dimmer Curve SQUARE LAW • Color Calibration ON † These settings require the Command Lock in Menu to be set to OFF in order to change on Control Channel. Resetting to defaults will turn Command Lock OFF.	

Control Channel Functions - Mode 4

Table 3-8: Control Channel Functions - Mode 4

DMX Channel	Control Channel Function	Control Channel DMX Value
12	Default Setting on Console	0
	Display On / Off	3 - 4
	Reset All to Defaults**	5 - 7
	Quiet Mode†	11 - 13
	Level Light Mode†	14 - 16
	Constant Fans Mode†	17 - 19
	Normal Mode†	20 - 22
	Dimmer Curve LINEAR†	31 - 32
	Dimmer Curve SQUARE LAW†	34 - 35
	Full Luminaire Reset	81 - 87
	Color Calibration OFF†	116 - 117
	Color Calibration ON†	118 - 120
	Manual Color Adjust ENABLE†	121 - 122
	Manual Color Adjust STORE†	124 - 125
	Notes: ** When resetting to defaults, the following will be enabled on the luminaire: • Normal Mode • Dimmer Curve SQUARE LAW • Color Calibration ON † These settings require the Command Lock in Menu to be set to OFF in order to change on Control Channel. Resetting to defaults will turn Command Lock OFF.	

VLX3 Wash Luminaire Operational Modes (from Control Channel Settings)

Display On / Off (All Modes)

With the display on, the backlight timer will control how long the luminaire's display backlight will stay on. Also, the display LED indicators (Power, Tx, Rx and Error) will illuminate normally. With display off, the backlight will stay off as will the LED indicators.

Reset All to Defaults (All Modes)

Reset to defaults, when selected via control console and channel, will restore all factory default settings but will not affect the starting DMX address.

Quiet Mode (All Modes)

Quite Mode lowers LED output levels for low noise operation. In Quiet Mode, LED junction temperatures are lowered and fan noise set to minimum. Fans will still vary in speed, but will not exceed the set (lower noise) limit.

Level Light Mode (All Modes)

Level Light Mode maintains a reduced LED output to keep various fixtures from operating at different levels depending upon thermal situations. The fans will run full speed, regardless of junction temperatures.

Constant Fan Mode (All Modes)

Constant Fan Mode sets fans to maximum speed and will keep them operating at full, regardless of LED junction temperatures.

Normal Mode (default setting) (All Modes)

Normal Mode operates the luminaire's fans according to the LED's junction temperature. Fans will vary in speed according to thermal readings by LED Driver Board.

Dimmer Curve LINEAR (All Modes)

Linear Dimmer Curve applies a linear control of the output of the fixture based on the DMX values on the Intensity Control Channels (1 and 2) from 0 to 65535.

Dimmer Curve SQUARE LAW (default setting) (All Modes)

Square Law Dimmer Curve applies a square law control of the output of the fixture based on the DMX values on the Intensity Control Channels (1 and 2) from 0 to 65535. Provides the smoothest operation of luminaire's dimming.

Full Luminaire Reset (All Modes)

Luminaire Reset causes the luminaire to run its entire calibration routine (Tilt/Pan/Zoom).

Color Calibration OFF (All Modes)

Turns off the internal color calibration of the luminaire's LEDs.

Color Calibration ON (default setting) (All Modes)

Turns on the internal color calibration of the luminaire's LEDs.

Manual Color Adjust ENABLE (All Modes)

Selecting Manual Color Adjust Enable sets the luminaire into Field Adjust Mode. See "Manual Color Adjustment" on page 43.

Manual Color Adjust STORE (All Modes)

Selecting Manual Color Adjust Store saves the adjustments made to the color calibration file during a Field Adjust. See "Manual Color Adjustment" on page 43.

Engines Combined (DMX Modes 2, 3, and 4)

Selecting Engines Combined allows all segments of Red, Green, Blue and White to be controlled as one unit.

Engines Independent (DMX Modes 2, 3, and 4)

Selecting Engines Independent allows each individual segment of Red, Green, Blue and White to have separate values of level. Also allows individual strobe control of each segment.

LED Field Adjustment

VLX3 wash software allows for a manual adjustment of the color calibration that is stored within the fixture's Main Control Board (MCB). Manual color adjustments will provide the user the ability to "visually match" the color and intensity between multiple fixtures should they desire to. LED Correction must be turned ON for the manual color adjustment to be applied. There are two ways to access the manual color and intensity adjustment as described herein.

Manual Color Adjustment

Manual Color Adjustment Through the Luminaire Menu System

The first way to adjust colors is manually through the menu system. The manual color adjustment is located in the menu path:

Configure -> LED Modes -> LED Correction (Must be turned ON) -> Field Adj

As shown in Figure 3-1, a window will appear in the LCD Display that will allow access to Red (R), Green (G), Blue (B), and Dimmer (D) parameters that can be adjusted as desired.

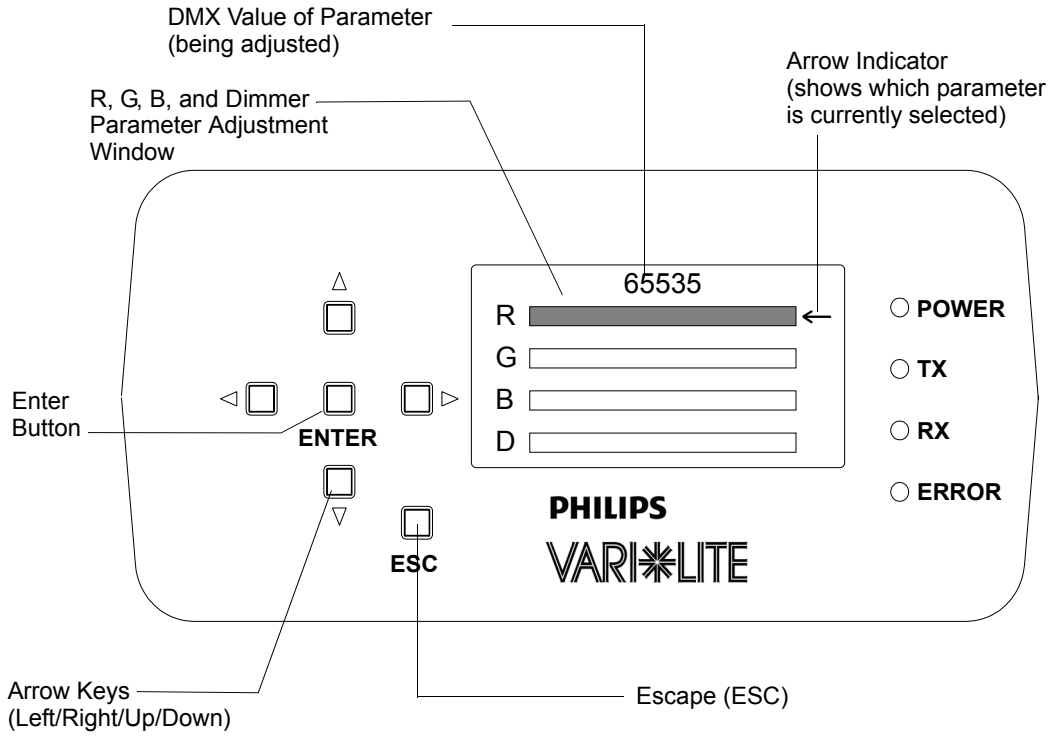


Figure 3-1: Manual Color Adjustment through Luminaire Menu System

To adjust Red, Green, Blue, and Dimmer (Intensity) values in through the menu system:

Step 1. Luminaire must be powered and all values (R, G, B, and D) should be set manually to 100%

Step 2. Access Field Adj section of menu system as follows:

Configure -> LED Modes -> LED Correction (Must be turned ON) -> Field Adj

Step 3. Using UP and DOWN arrow keys, select parameter to adjust.

Step 4. Using LEFT and RIGHT arrow keys, adjust parameter.

Step 5. Repeats Steps 3 and 4 as desired for each parameter until preferred color is achieved.

IMPORTANT! Pressing ESC (escape) while in this menu will automatically store the adjusted values with the LED correction. When LED Correction is turned ON, any adjustments you've made will be reflected. To return back to the factory calibration, simply adjust the R, G, B, and D back to the values of 65535.

Manual Color Adjustment Through a Control Console

The other way to manipulate the color adjustment is via the control console. After making sure color calibration is ON and all RED, Green, Blue and Intensity channels are set to 100%, set control channel (23 in Mode 1, 41 in Mode 2) to a DMX value of 121-122, hold value for at least 3 seconds, then give a DMX value of 0. This will set the fixture into a color calibration "adjustment mode".

While in Adjustment Mode, modify Red, Green, Blue and/or Dimmer channels to desired color/ intensity. Once color is determined, set control channel to a DMX value of 124-125, hold for at least 3 seconds, then give a DMX value of 0. This will store the values into the color calibration.

IMPORTANT NOTES:

- After the value of "0" is given during control console adjustment, the color or output of the fixture - as the user has adjusted it - will suddenly change. If the user returns Red, Green, Blue, and/or Dimmer values for the luminaire back to full from the desk, the fixture will then match the color (s) and/or intensity values that they have adjusted.
- Any adjustments to the calibration that have been made through the menu system or via the control channel may be viewed via the adjustment window on the luminaire itself as values of less than 65535 on the display bars for each of the four parameters. Values of less than 100% on any of these parameters indicate that a manual adjustment has been performed on the fixture and stored.
- To return back to the factory calibration, simply adjust the R, G, B, and D back to the values of 65535.

Luminaire Timing

Timing Channel Information

Timing channel control improves the timed moves of certain groups of parameters. We provide up to four timing channels, one for focus (Pan and Tilt), one for color parameters, one for beam parameters, and one for luminaire intensity.

Types of timing control:

- Timing Control Channel: the luminaire uses its timing channel value to calculate a smooth continuous movement for a given time and transition.
- Console Timing: the console calculates the time duration between the DMX increments to be sent for a given time and transition.

Guidelines:

- Timing channels support time values of up to six minutes.
- To use a timing channel instead of console timing, it is necessary to set the timing channel to the desired value and set cue and/or parameter time to zero. A combination of time controls can produce unexpected results.
- The default value setting in the profile should be 255 (proportional control) to allow smooth movement when using console timing.
- The timing channel data should change as a snap. A zero value will give the fastest move, however, without any smoothing this can appear "steppy" in console timed moves.

Table 3-9: VLX3 Channel Function / Timing Channel Relationship

Channel Function	Timing Channel			
	Focus Time	Color Time	Beam Time	Intensity Time
Pan (Hi Byte/Lo Byte)	♦			
Tilt (Hi Byte/Lo Byte)	♦			
Red (Hi Byte/Lo Byte)		♦		
Green (Hi Byte/Lo Byte)		♦		
Blue (Hi Byte/Lo Byte)		♦		
White (Hi Byte/Lo Byte)		♦		
Beam Spreader			♦	
*Intensity				♦
**If Intensity has a timing channel value, manual faders will respond at given time value.This may deliver unexpected results.*				

A timing value of zero is full speed. A time value of 100% (or 255 in DMX) enables the associated parameter(s) to follow cue fade time (console time) rather than the timing channel.

Note: The particular storing syntax for your console, as well as instructions on how to write part cues, can be found in the operation manual for that console.

To use these channels, you must:

Step 1. Create the cue, including color, focus, intensity, etc. as required.

Step 2. Decide which fixtures and which parameter groups will use timing channels.

Step 3. Assign a value to the particular timing channel(s) you wish to use (for timing information, see chart on next page).

Step 4. Set console timing (or cue fade time) for parameters and timing channels to zero seconds.

Step 5. Store cue.

Note: Avoid changing timing channel values in a fading cue. This can cause unexpected behavior in the luminaire as the timing channel value is updated over time. Timing channel values and the final destination of the parameters affected by the timing channel should always be sent in a zero count.

Timing channels can be set in either % or 0-255 (DMX) modes, with the following values assigned:

Table 3-10: Timing Channels Map

% Value	DMX	= Seconds
	0	Full Speed
	1	0.2
	2	0.4
1	3	0.6
	4	0.8
2	5	1
	6	1.2
	7	1.4
3	8	1.6
	9	1.8
4	10	2
	11	2.2
	12	2.4
5	13	2.6
	14	2.8
6	15	3
	16	3.2
	17	3.4
7	18	3.6
	19	3.8
8	20	4
	21	4.2
	22	4.4
9	23	4.6
	24	4.8
10	25	5
	26	5.2
	27	5.4
11	28	5.6
	29	5.8
	30	6
12	31	6.2
	32	6.4
13	33	6.6
	34	6.8
	35	7.0
14	36	7.2
	37	7.4
15	38	7.6

Table 3-10: Timing Channels Map (Continued)

% Value	DMX	= Seconds
	39	7.8
	40	8
16	41	8.2
	42	8.4
17	43	8.6
	44	8.8
	45	9
18	46	9.2
	47	9.4
19	48	9.6
	49	9.8
	50	10
20	51	10.2
	52	10.4
	53	10.6
21	54	11
	55	11
22	56	12
	57	12
	58	13
23	59	13
	60	14
24	61	14
	62	14
	63	15
25	64	15
	65	16
26	66	16
	67	16
	68	17
27	69	17
	70	18
28	71	18
	72	18
	73	19
29	74	19
	75	20
30	76	20
	77	20
	78	21
31	79	21
	80	21

Table 3-10: Timing Channels Map (Continued)

% Value	DMX	= Seconds
	81	22
32	82	22
	83	23
33	84	23
	85	23
	86	24
34	87	24
	88	25
35	89	25
	90	25
	91	26
36	92	26
	93	27
37	94	27
	95	27
	96	28
38	97	28
	98	29
39	99	29
	100	29
	101	30
40	102	30
	103	30
	104	31
41	105	31
	106	32
42	107	32
	108	32
	109	33
43	110	33
	111	34
44	112	34
	113	34
	114	35
45	115	35
	116	36
46	117	36
	118	36
	119	37
47	120	37
	121	38
48	122	38

Table 3-10: Timing Channels Map (Continued)

% Value	DMX	= Seconds
	123	38
	124	39
49	125	39
	126	39
	127	40
50	128	40
	129	41
51	130	41
	131	41
	132	42
52	133	42
	134	43
53	135	43
	136	43
	137	44
54	138	44
	139	45
55	140	45
	141	45
	142	46
56	143	46
	144	47
57	145	47
	146	47
	147	48
58	148	48
	149	49
59	150	49
	151	49
	152	50
60	153	50
	154	50
	155	51
61	156	51
	157	52
62	158	52
	159	52
	160	53
63	161	53
	162	54
64	163	54
	164	54

Table 3-10: Timing Channels Map (Continued)

% Value	DMX	= Seconds
	165	55
65	166	55
	167	56
66	168	56
	169	56
	170	57
67	171	57
	172	58
68	173	58
	174	58
	175	59
69	176	59
	177	59
	178	60
70	179	60
	180	65
71	181	65
	182	65
	183	70
72	184	70
	185	75
73	186	75
	187	75
	188	80
74	189	80
	190	85
75	191	85
	192	85
	193	90
76	194	90
	195	95
77	196	95
	197	95
	198	100
78	199	100
	200	110
79	201	110
	202	110
	203	120
80	204	120
	205	120
81	206	130

Table 3-10: Timing Channels Map (Continued)

% Value	DMX	= Seconds
	207	130
	208	140
82	209	140
	210	140
	211	150
83	212	150
	213	160
84	214	160
	215	160
	216	170
85	217	170
	218	180
86	219	180
	220	180
	221	190
87	222	190
	223	200
88	224	200
	225	200
	226	210
89	227	210
	228	210
	229	220
90	230	220
	231	230
91	232	230
	233	230
	234	240
92	235	240
	236	250
93	237	250
	238	250
	239	260
94	240	260
	241	270
95	242	270
	243	270
	244	280
96	245	280
	246	290
97	247	290
	248	290

Table 3-10: Timing Channels Map (Continued)

% Value	DMX	= Seconds
	249	300
98	250	300
	251	310
99	252	310
	253	310
	254	310
100	255	Follows Cue Data

Updating Software

Important Information on VLX3 Wash Luminaire Software (05/30/12 and later):

- Software version **05/30/12** and is completely compatible with all VLX3 Wash Luminaire Main Control Boards (MCBs) - both old-style and new-style.
- Users with VLX3 Wash Luminaires are encouraged to make sure their VLX3 Wash Luminaires have this new version of software (or later) loaded into their fixtures.
- New-style MCBs (on luminaires built after **05/18/12**) ***must have this software version*** (or later) installed or zoom mechanism will not function. A matching zoom feature* is added for new-style MCBs to match the speed and performance of old-style MCBs.
- Refer to "Menu System Overview" on page 61 menu structure.

Note: * This feature should be used when using a mixture of luminaires with old-style and new-style MCBs.

USB Download and Programming

To download files with a PC equipped with a Universal Serial Bus (USB) port, you need the VARI*LITE USB Luminaire Programming Kit (28.8500.0054). The USB Luminaire Programming Kit can be ordered directly from your Authorized VARI*LITE Dealer.

The VARI*LITE USB Luminaire Programming Kit (28.8500.0054) includes:

- VARI*LITE USB Upload Cable (25.9600.0001)
- USB Luminaire Programming Kit CD (87.8500.0002)
- Instruction Sheet (02.8500.0100)
- VARI*LITE carry bag (07.5044.0005)

Computer Requirements for the USB Luminaire Programming Kit

- PC running Windows 98, 2000, XP, or Vista. Although the USB Luminaire Programming kit software is not directly compatible with Macintosh computers, it does run with some Windows emulators.
- In addition to Windows, your computer must be running IE 5.01 or later, and Microsoft.NET Framework Version 3.5 (or later), which you can download from http://www.microsoft.com and search for .NET Framework downloads.
- An available USB 2.0 port on the PC.

USB VLDownloader PC Program and .bin Luminaire Files

The USB VLDownloader program and current .bin files are available from the Product Downloads page at www.vari-lite.com. Instructions for installing the USB VLDownloader program on your PC are also available on the Product Downloads page. Use the USB VLDownloader program to transfer updated versions of the luminaire operating software (.bin files) from your PC to the luminaires.

Note: Refer to instruction sheet 02.8500.0100 for detailed programming instructions for VARI*LITE luminaires.

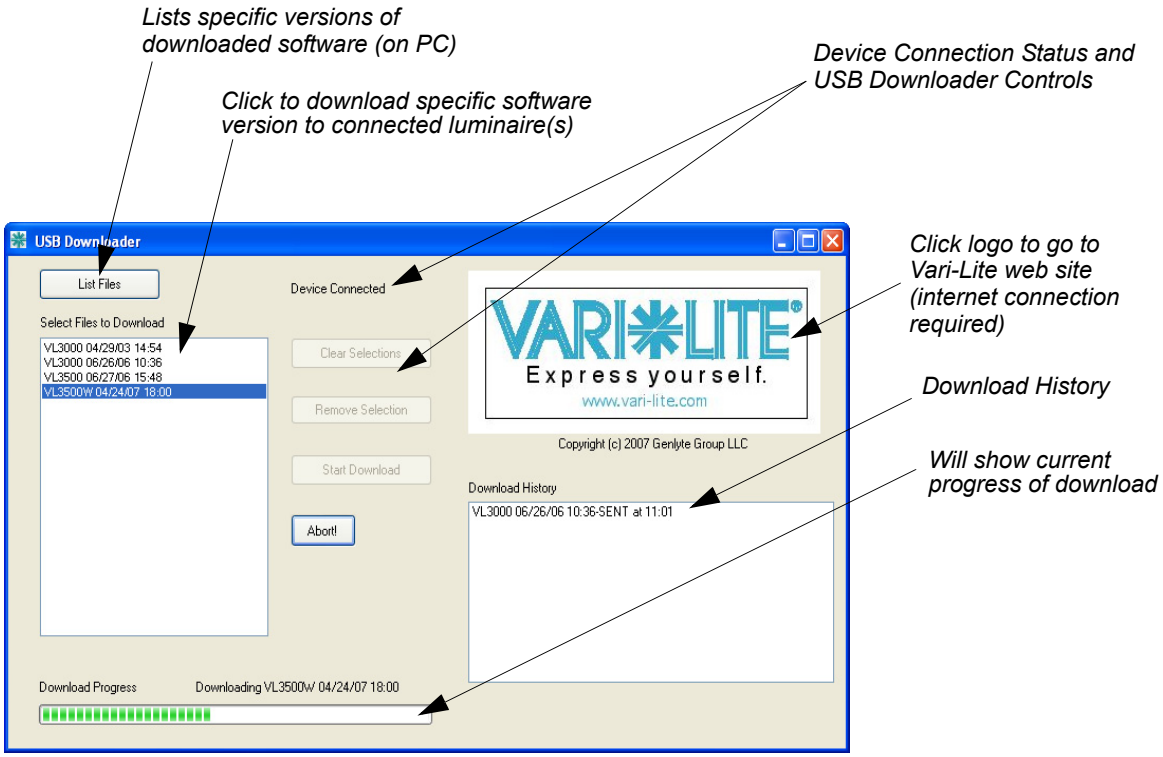


Figure 3-2: VL Download Program Window

Transferring Software From Luminaire to Luminaire

It is possible to transfer specific software versions between luminaires. As in the case of installing new software versions, multiple luminaires can be programmed at the same time when they are data linked together (refer to "Connecting Data and Power" on page 17), however, only a maximum of 32 luminaires can be updated at once.

Hardware Requirements

Data cables used in this process must have two twisted pairs and a shield. It is also recommended that cables meet all other USITT DMX specification requirements. Refer to "Data Cables" on page 12.

A termination connector is used in this process. Refer to page 13 for more information regarding the construction of this connector.

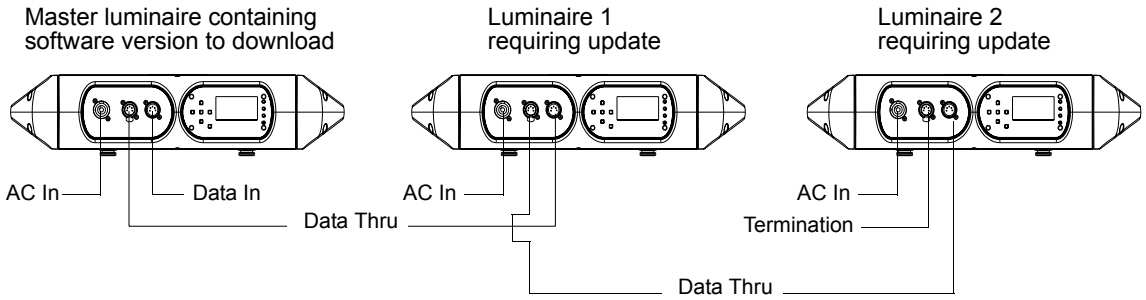


Figure 3-3: Software Transfer Setup

Transfer Procedure

This procedure is used to transfer software versions between luminaires.

Step 1. At last luminaire, install male termination connector into DATA THRU XLR connector.

Step 2. At master luminaire (first in chain) Menu Display, press [ESC].

Step 3. Press [Up] / [Down] arrows until Fixture appears.

Step 4. Press [Up] / [Down] arrows until Download appears. Press [Enter].

Step 5. OK? will be displayed. Press [Enter] to accept.

Step 6. Download proceeds. (Download takes 4-5 seconds.) The number of blocks displayed is less in a luminaire-to-luminaire download than in a PC-to-luminaire download for the same software version.

Step 7. When download is complete, luminaire automatically recalibrates. When recalibration is complete, luminaire is ready for operation with its new software version.

Verify software version at luminaire:

Step 1. At Menu Display, press [ESC].

Step 2. Press [Up] / [Down] arrows until Fixture appears. Press [Enter].

Step 3. Press [Up] / [Down] arrows until Version appears. Press [Enter].

The first half of the version will be displayed as a date (MM.DD.YY). For example, 03.18.03 (March 18, 2003).

Press [Up] / [Down] arrows to display second half of version. This will be displayed as a time (HH:MM). For example, 16:00

CHAPTER 4.

Menu System

This chapter contains instructions for operating the luminaire using the Menu Display feature. For DMX operation and detailed information, see "DMX Operation" on page 22.

- **Menu Operation**
- **Menu Functions**

Important Information on VLX3 Wash Luminaire Software (05/30/12 and later):

- Software version **05/30/12** and is completely compatible with all VLX3 Wash Luminaire Main Control Boards (MCBs) - both old-style and new-style.
- Users with VLX3 Wash Luminaires are encouraged to make sure their VLX3 Wash Luminaires have this new version of software (or later) loaded into their fixtures.
- New-style MCBs (on luminaires built after **05/18/12**) ***must have this software version*** (or later) installed or zoom mechanism will not function. A matching zoom feature* is added for new-style MCBs to match the speed and performance of old-style MCBs.
- Refer to "Menu System Overview" on page 61 menu structure.

Note: * This feature should be used when using a mixture of luminaires with old-style and new-style MCBs.

Menu Operation

What is the Menu System?

The menu system is a programmable set of commands used to configure, address, operate, and test the luminaire. The menu system is controlled at the Menu Display available at the enclosure input panel.

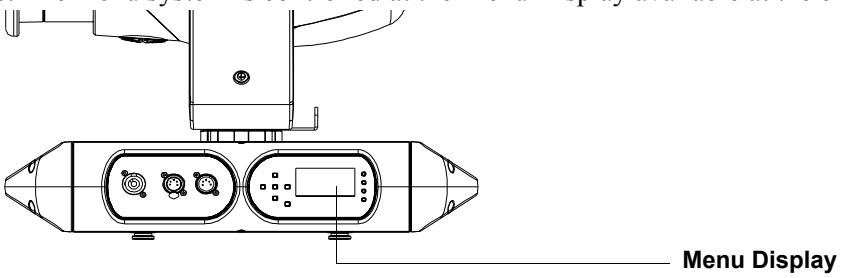


Figure 4-1: Menu Display Location

Controls Operation

The menu system is controlled by an ENTER, ESC (Escape), and four Arrow (◁△▽▷) buttons. These buttons function as follows:

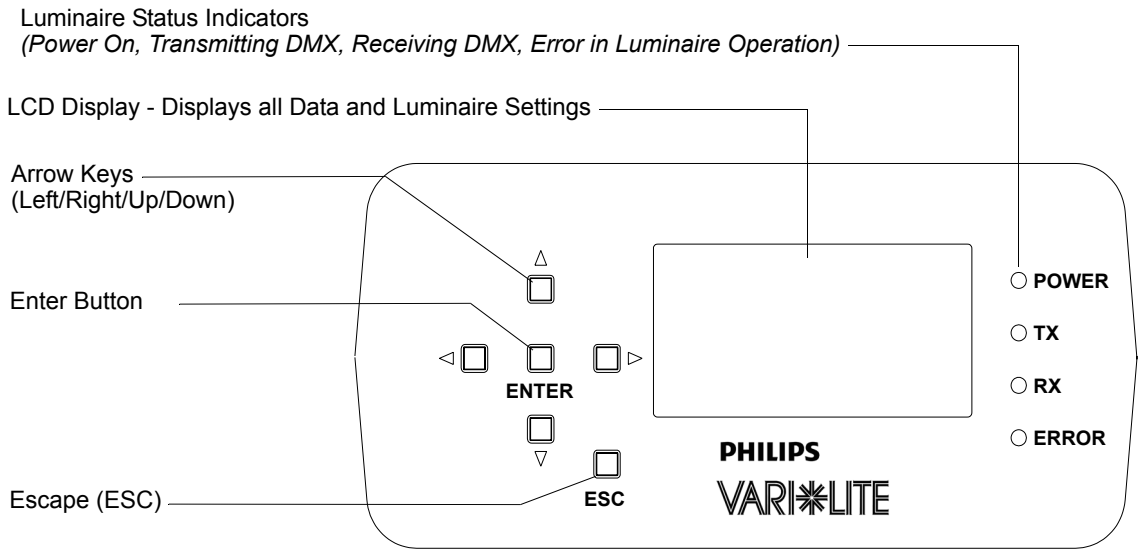


Figure 4-2: VLX3 Wash Menu Control

Table 1-1: Menu Control Buttons

Button	Description	Action
	Up Arrow	Menu Navigation / Data Selection
	Down Arrow	Menu Navigation / Data Selection
	Right Arrow	Menu Navigation / Data Selection
	Left Arrow	Menu Navigation / Data Selection
ENTER	Enter Button	To Select or Change a Setting or Data Value
ESC	Escape Button	Used to Access Main Menu Parameters, Exit, or Return to Previous Menu Item

[ESC] button. Displays the menu, or if at first level, the current address. Also used to return to previous menu item or to exit.

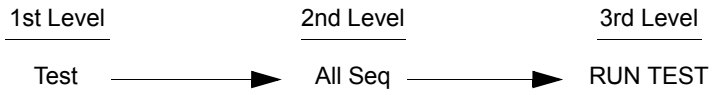
[ENTER] button. Selects the current menu option or stores current data value.

[Up] / [Down] / [Left] / [Right] arrows. Scrolls menu options upward or increases current data value.*

* LCD Display automatically sets to hanging orientation. See **Disp Tilt** in the "Menu System Function Chart" on page 62.

To enter the menu system, first press [ESC]. The functions displayed will be 1st level functions. Scroll through the 1st level functions by pressing [Up] / [Down] arrows. Once the desired function appears in the display, press [Enter]. You are now at the 2nd level. Once again, press the [Up] / [Down] arrows to scroll through 2nd level functions. Press [Enter] to access 3rd level functions and so forth. When the highest level for the function is reached, [Up] / [Down] arrows can be pressed to enter a value or select a toggle activation such as On/Off. Press [Enter] to store the value or select an action.

For example:



Default State

The menu display's default state during normal operation is to display the DMX address. After 10 seconds of inactivity at the display, it will change to the default state.

After longer periods of inactivity, the menu display will switch to its off state. The default state for this feature is 5 minutes, however, different time lengths can also be programmed.

To program a different time length for menu off feature:

Step 1. Press [ESC].

Step 2. Press [Up] / [Down] arrows until Config (Configuration) appears. Press [Enter].

Step 3. Press [Up] / [Down] arrows to access Display. Press [Enter].

Step 4. Press [Up] / [Down] arrows to select either 30 Sec (30 seconds), 5 Min (5 minutes), 10 Min (10 minutes), or ON (on indefinitely). Press [Enter] to set.

Menu Button Shortcuts

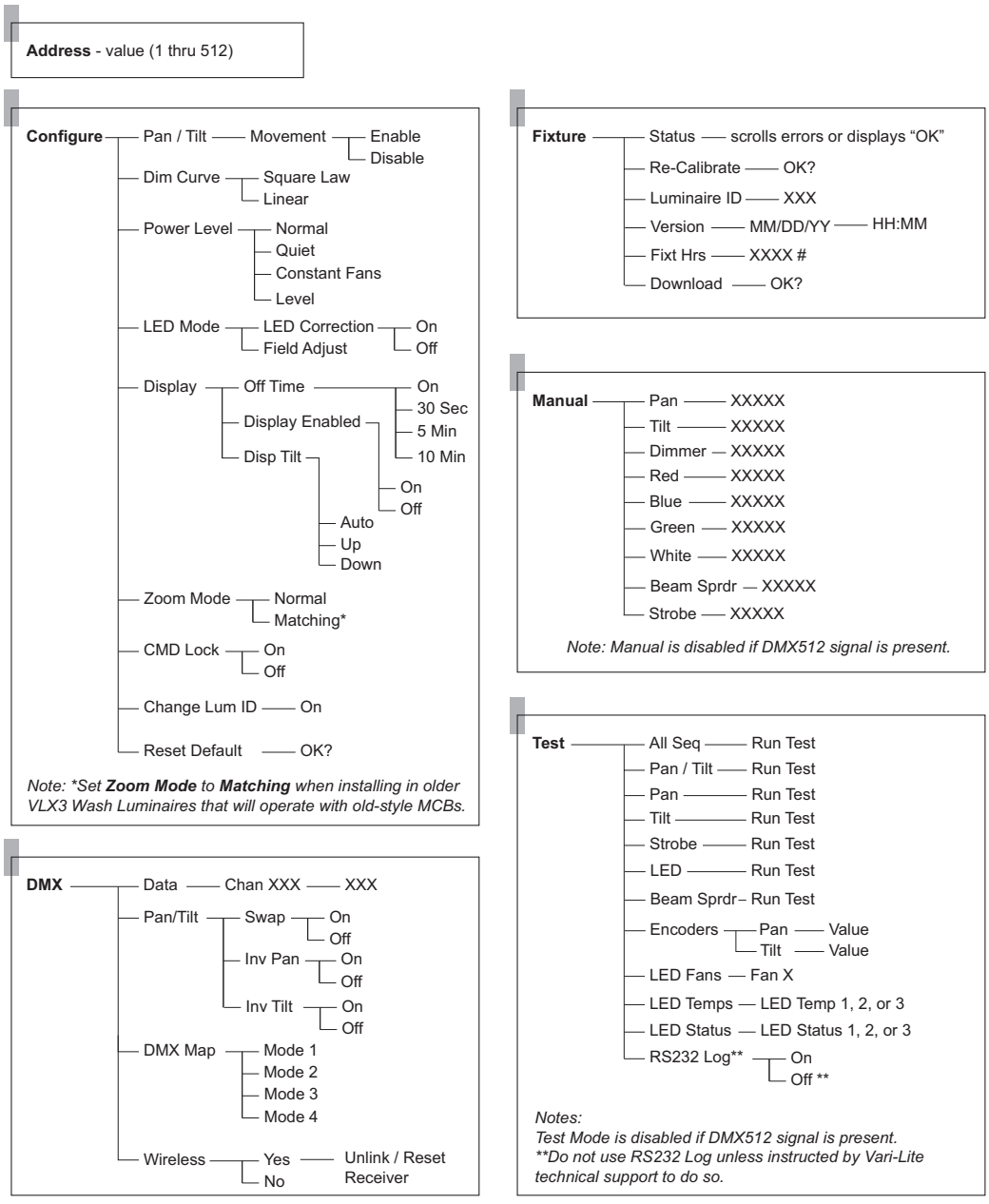
The VLX3 Wash has some useful menu button short-cuts. These shortcuts are:

Action	Buttons	Comments
LUMINAIRE RESET	[ESC] and [UP ARROW] (simultaneously)	Resets luminaire.
DISABLE PAN/ TILT	[UP ARROW] and [DOWN ARROW] (simultaneously)	Disables pan and tilt operation. Luminaire will not respond to any DMX pan or tilt commands until pan and tilt is enabled by user.
LED QUICK TEST*	[ENTER] and [UP ARROW] (simultaneously)	LED Quick Test is a useful tool to check the operation of all LEDs. The fixture will check operation of all the individual LEDs, one color at a time, in the order of each driver board. For example, the test will scroll Red LED 1, Red LED 2, Red LED 3, Pause, Green LED 1, Green LED 2, Green LED 3, and so on through all LEDs.
DISABLE MOTORS ON POWER UP	Power up fixture and press/hold [ESC] until DMX address appears in LCD display.	Temporarily disables all motors in Luminaire (during power up routine only). Useful for addressing fixtures in their cases.

Menu Functions

Menu System Overview

The following is a graphic representation of the entire VLX3 Wash Luminaire menu system.



Note: For the latest version of this manual and luminaire software, please visit the Vari-Lite web site at www.vari-lite.com and click on the "Product Downloads" link on the VLX3 Wash Luminaire Products information page.

Menu System Function Chart

Table 4-1: VLX3 Wash Menu System Chart

1st Level	2nd Level	3rd Level	4th Level	5th Level
Address	**XXX** *value 1 thru 512*			
Configure *Fixture configuration settings*	**Pan/Tilt** *Pan and Tilt movement*	**Movement** *Position recovery*	**Enable**	
			Disable	
	Dim Curve *Fixture dimming operation*	**Square Law** *Dimming curve (Default)*		
		Linear *Standard linear dimming curve*		
	Power Level *Settings for LED operation or calibration*	**Normal** *Default*		
		Quiet *For reduced noise*		
		Constant Fans *Sets fans to a set speed level*		
		Level *Sets to a set level*		
	LED Mode *Selects whether to use factory calibration or not*	**LED Correction** *Sets LEDs to factory calibration level*	**ON**	
			OFF	
		Field Adjust *When CAL is ON, field adjust will allow for manual adjustment of LEDs*		
	Display *Display Illumination*	**Off Time** *Selects display off time*	**ON** *On indefinitely*	
			30 Sec *Off in 30 seconds*	
			5 Min *Off in 5 minutes*	
			10 Min *Off in 10 minutes*	
		Display Enable *Turns On or Off the LCD menu backlight and status LEDs.*	**On** *Backlight and status LEDs On (normal operation)*	
			Off *Backlight and status LEDs Off*	
		Disp Tilt *Display orientation - Factory default is Auto and other functions are currently disabled from selection.*	**Auto** *(Default)*	
			Up - *Currently Disabled*	
			Down - *Currently Disabled*	
	Zoom Mode	**Normal**		
(continued on next page)		**Matching*** *Note: *Set Zoom Mode to **Matching** when installing in older VLX3 Wash Luminaires that will operate with old-style MCBs.*		

Menu system description continued on next page.

Table 4-1: VLX3 Wash Menu System Chart

1st Level	2nd Level	3rd Level	4th Level	5th Level
Configure *Fixture configuration settings* *(continued from previous page)*	**CMD Lock** *Selects whether to set Command Lock - to lock-out access to various settings from the console using the Control Channel Note: Resetting to Defaults (DMX 5 - 7 on Control Channel) will turn Command Lock OFF.*	**On** *Control Channels - Mode, Dimmer Curve, Color Calibration (On/Off) - control, via the console, is disabled.*		
		Off *(Default) Control Channels - Mode, Dimmer Curve, Color Calibration (On/Off) - control, via the console, is enabled.*		
	Change Lum ID *User can change or select luminaire ID as desired*	**###** *Luminaire ID*	**OK?** *Asks (confirms) to change luminaire ID*	
	Reset Default *Restores fixture to factory default*	**OK?** *Asks (confirms) to execute restoration of factory defaults of fixture*		
DMX	**DATA**	**Chan XXX** *DMX Channel*	**XXXX** *Value 0 - 255*	
	Pan/Tilt *Pan and Tilt Options*	**Swap** *Swap Pan & Tilt*	**ON**	
			OFF	
		Inv Pan *Invert Pan*	**ON**	
			OFF	
		Inv Tilt *Invert Tilt*	**ON**	
			OFF	
	DMX Map *Selects DMX Map Mode*	**Mode 1** *Selects Mode 1 DMX map operation* See “DMX Mode 1 Channel Mapping (Normal Operational Mode)” on page 22.		
		Mode 2 *Selects Mode 2 DMX map operation* See “DMX Mode 2 Channel Mapping (Enhanced Operational Mode)” on page 25.		
		Mode 3 *Selects Mode 3 DMX map operation* See “DMX Mode 3 Channel Mapping (Individual LED Engine Control)” on page 29.		
		Mode 4 *Selects Mode 4 DMX map operation* See “DMX Mode 4 Channel Mapping (Enhanced Individual LED Engine Control)” on page 33.		
	Wireless *(note, wireless receivers are sold separately)*	**Yes**	**Unlink / Reset Receiver**	
		No		
Fixture	**Status** *Status/Error Display*	*Scrolls error messages or displays* **OK**		
	Re-Calibrate *Recalibrate fixture*	**OK?** *Asks (confirms) to execute recalibration of fixture*		
	Luminaire ID	**XXX** *Displays current Luminaire ID setting*		
	Version	**MM/DD/YY** *(Page 1)*	**HH:MM** *(Page 2)*	
	Fixt Hrs *Fixture Hours*	**XXXX #** *Number of Fixture Hours*		
	Download *Download Software*	**OK?** *Asks (confirms) to download software in fixture*		

Menu system description continued on next page.

Table 4-1: VLX3 Wash Menu System Chart

1st Level	2nd Level	3rd Level	4th Level	5th Level
Manual *Manual Commands (Disabled when DMX Present.)*	**Pan***	**XXXXX** *DMX Value*		
	Tilt *	**XXXXX** *DMX Value*		
	Dimmer*	**XXXXX** *DMX Value*		
	Red*	**XXXXX** *DMX Value*		
	Blue*	**XXXXX** *DMX Value*		
	Green*	**XXXXX** *DMX Value*		
	White*	**XXXXX** *DMX Value*		
	Beam Sprdr	**XXX** *DMX Value*		
	Strobe	**XXX** *DMX Value*		
Test *Fixture operational tests - Press [ESC] to stop tests*	**All Seq** *Selects fixture to run and sequence through all available tests*	**RUN TEST**		
	Pan/Tilt *Selects fixture to run Pan/Tilt operational test*	**RUN TEST**		
	Pan *Selects fixture to run Pan operational test*	**RUN TEST**		
	Tilt *Selects fixture to run Tilt operational test*	**RUN TEST**		
	Strobe *Selects fixture to run Strobe operational test*	**RUN TEST**		
	LED *Operational test of each LED operation*	**RUN TEST**		
	Beam Sprdr *Selects fixture to run beam spreader mechanism operational test*	**RUN TEST**		
	Encoders *Allows manual (hand movement) testing of the luminaire's encoders.*	**Pan**	**Value** *Displays encoder value*	
		Tilt	**Value** *Displays encoder value*	
	LED Fans *Selects and displays fan speed for 1,2,3*	**Fan X** *(select fan)*		
	LED Temps *Selects and displays LED junction temperature*	**LED Temp 1** thru **LED Temp 3**		
	LED Status *Selects and displays LED status*	**LED Status 1** thru **LED Status 3**		
	RS232 Log** *Selects RS232 logging operation*	**On** or **Off**** ***(See Table , "Table 4-1, "VLX3 Wash Menu System Chart" Notes")***		

Table 4-1, "VLX3 Wash Menu System Chart" Notes

* For 16-bit parameters, the data displayed will be scaled to a range of 0-65535.

** Do NOT use or select RS232 unless instructed by Vari-Lite technical support to do so.

Menu Function Definitions

For easy reference, each possible menu item is listed alphabetically in the first column by its display abbreviation. The second column follows with a definition of the abbreviation and then a third column provides an explanation of its purpose and function.

Table 4-2: Menu Function Definitions

Display	Definition	Purpose
10 Min	10 Minutes	Sets Menu Display to automatically shut off after 10 minutes of non-use.
30 Sec	30 Seconds	Sets Menu Display to automatically shut off after 30 seconds of non-use.
5 Min	5 Minutes	Sets Menu Display to automatically shut off after 5 minutes of non-use.
Address	Address	Accesses option for setting luminaire DMX starting address.
All Seq	All Test Sequences	Tests all internal mechanisms in sequence for X steps.
Auto	Automatic Operation	When set to "Auto", menu display will automatically orient itself is relation to fixture's hanging or sitting position (up or down).
Beam Sprdr	Beam Spreader Mechanism	Specifies beam spread function for manual control (**Manual** or **Test**).
Blue	Blue LED	Specifies Blue color (intensity) for manual control (**Manual**).
CAL LEDs	Calibrates LEDs	To start LED calibration or to set LEDs to specific factory calibration level
Channel XXX	DMX Channel	Specifies DMX channel for display of current data value.
CMD Lock	Command Lock	Selects whether to set Command Lock - to lock-out access to various settings from the console using the Control Channel.
Configure	System Configuration	Accesses options for pan/tilt operation, LED Setup, dimmer operational settings, and Menu Display defaults.
Constant Fans	Fixture Mode	Luminaire setup is in Constant Fans mode. This setting sets fans to maximum speed and will keep them operating at full, regardless of LED junction temperatures.
Data	DMX Data	Accesses option for setting DMX address channel.
Dim Curve	Dimmer Operation	Specifies dimmer to operate in Curve or Linear Mode
Dimmer	Dimmer	Specifies dimmer mechanism for manual control (**Manual**).
Disable	Disable	Disables a function.
Display	Display	Accesses options for Menu Display illumination time and orientation.
Display ⇓	Display	Selects and sets menu display orientation of arrow direction. *(Currently Disabled)*
Display ⇑	Display	Selects and sets menu display orientation of arrow direction. *(Currently Disabled)*
Disp Tilt	Menu orientation control	Sets the orientation of the menu display to match the luminaire orientation, (**Auto**) automatic display orientation, standing (**Up**) or hanging (**Down**).
DMX	DMX	Accesses options for DMX system settings.
DMX Map	Selects DMX Mode Operation	Allows users to select between four different DMX mapping operational modes - Mode 1, Mode 2, Mode 3, or Mode 4. See "DMX Operation" on page 22.
Download	Download	Initiates download of luminaire software.
Enable	Enable	Enables a function.
Encoder	Encoder	Accesses pan/tilt encoders for diagnostic testing.

Table 4-2: Menu Function Definitions (Continued)

Display	Definition	Purpose
FAIL	Test Fail	Indicates that a test has failed.
Fixt Hrs	Fixture Hours	Displays total number of hours luminaire has been powered on.
Fixture	Fixture	Accesses luminaire information such as serial number, software version, and total operation hours. Also accesses recalibration and download options.
Green	Green LED	Specifies Green (intensity) parameter for manual control (**Manual**).
Int Level	Intensity Level	The Intensity Limiter is used to match overall output level of multiple VLX wash luminaires if desired. The Intensity Limiter default is 100% and is adjustable by the user. For example, if a fixture's Intensity Limiter is set to'80', a value of 100% from a desk will only output 80% of the fixture power (as determined by the VLX Operation Mode - Normal, Quiet, Constant Fans or Level Light)
Inv Pan	Invert Pan	Reverses pan action for special focus requirements.
Inv Tilt	Invert Tilt	Reverses tilt action for special focus requirements.
LED Correction	LED Calibration Level	Sets LEDs to factory calibration level.
LED Fans	LED Fan Test	Specifies one of luminaire's six fans for status (or current state) information.
LED Setup	LED Operational Settings	LED settings/operation of power level or calibration.
LED Status	Current Status of LED	Specifies one of luminaire's seven LEDs for status (or current state) information.
LED Temps	LED Operational Temperature	Measures temperature associated with LED operation - displays in degrees Celsius
Level Light	Fixture Mode	Luminaire setup is in set to Level Light mode by user. This mode maintains a reduced LED output to keep various fixtures from operating at different levels depending upon thermal situations. The fans will run full speed, regardless of junction temperatures.
Linear	Dimming Curve - Linear	Sets dimmer operation to standard linear dimming curve. *See also, "Square Law"*
Manual	Manual	Accesses options for luminaire mechanism control by entry of data values.
Mode 1	Mode 1 DMX Operation	See "DMX Mode 1 Channel Mapping (Normal Operational Mode)" on page 22.
Mode 2	Mode 2 DMX Operation	See "DMX Mode 2 Channel Mapping (Enhanced Operational Mode)" on page 25.
Mode 3	Mode 3 DMX Operation	See "DMX Mode 3 Channel Mapping (Individual LED Engine Control)" on page 29.
Mode 4	Mode 4 DMX Operation	See "DMX Mode 4 Channel Mapping (Enhanced Individual LED Engine Control)" on page 33.
Movement	Movement	Enables or disables pan and tilt movement.
Normal	Fixture Mode	(Default) Luminaire setup is in normal fan and LED operational mode. This mode operates the luminaire's fans according to the LED's junction temperature. Fans will vary in speed according to thermal readings by MCB.
OFF	Off	Turns off a function.
Off Time	Display off time	Shows the automatic shut-off time for the menu display.
OK	Okay	Indicates calibration has completed and no errors have occurred.
OK?	Okay?	Prompt for pressing [Enter] before an action is executed.

Table 4-2: Menu Function Definitions (Continued)

Display	Definition	Purpose
ON	On Indefinitely	Sets Menu Display to stay on until programmed otherwise (**Display**) or turns on a function.
Pan	Pan	Specifies pan function for manual control (**Manual**) or testing (**Test**).
Pan/Tilt	Pan/Tilt	Accesses pan and tilt options for focus swap function, movement enable/disable, manual control and testing.
PASS	Test Pass	Indicates that a test has passed.
Programming	Luminaire software programming	The luminaire is in the process of being reprogrammed with a new version of software.
Power Level	Fixture operational power level	Sets the output of the luminaire to **Normal**, **Quiet** (reduced fan operation and light output), **Constant Fans** (fans stay at a constant speed, cooling capacity), or **Level** (set operational level as desired by user)
Quiet	Fixture Mode	Luminaire setup is in Quiet mode. LED output levels are decreased to keep LED junction temperatures lower and fan noise to a minimum. Fans will still vary in speed, but will not exceed the set (lower noise) limit.
Re-Calibrate	Recalibrate	Recalibrates luminaire.
Red	Red LED	Specifies Red (intensity) for manual control (**Manual**).
Reset Def	Reset Defaults	Resets default system configuration values.
RS232 Log	RS232 Logging	**WARNING:** For factory use only - DO NOT use OR select, "RS232 Log - > On" unless instructed by Vari-Lite technical support to do so.
RUN TEST	Run Test	Indicates that a mechanism test is in progress.
SENS TST	Sensor Test	Indicates that a system sensor test is in progress.
Square Law	Dimming Curve - Square Law	Sets dimmer operation to Square Law dimming curve. *See also, "Linear"*
Start LED CAL	Factory Use Only	**WARNING:** For factory use only - DO NOT use OR select, "Start LED Cal".
Status	Status/Error	Allows scrolling through error list or displays **OK** if no errors.
Strobe	Manual strobe operation	Allows (**Manual**) operation of luminaire strobe.
Swap	Swap	Swaps pan/tilt action for special focus requirements.
Test	Test	Accesses diagnostic tests for internal mechanisms or assemblies.
Tilt	Tilt	Specifies tilt function for manual control (**Manual**) or testing (**Test**).
Version	Version	Displays current software version date and time (in two pages).
Wireless	Wireless DMX Receiver Attached	Allows use of optional wireless DMX receivers. Note, wireless DMX receivers sold separately.
White	White LED	Specifies White (intensity) parameter for manual control (**Manual**) or testing (**Test**).
Zoom Mode	Zoom Operational Modes	Sets Zoom Mode to **Matching** when installing in older VLX3 Wash Luminaires that will operate with old-style MCBs.

Notes

APPENDIX A.

Troubleshooting and Maintenance

This appendix provides instructions for troubleshooting and routine maintenance which may be necessary during the life of the luminaire.

- **Troubleshooting**
- **Routine Maintenance**

WARNING: All routine maintenance procedures are to 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 servicing the fixture. All service and maintenance, other than described herein should be performed by an Authorized VARI*LITE Dealer or Service Center.

WARNING: DO NOT connect or disconnect energized power cable at fixture (under load). Turn off circuit breaker (or completely de-energize circuit) before connecting or disconnecting power cable at fixture. Power is only removed from the fixture by disconnecting power cable from source or turning off source circuit breaker.

Troubleshooting

Error Messages

If a problem occurs during luminaire calibration, at the end of the calibration sequence the Menu Display cycles through any applicable error message(s) until the end of the list is reached. To review the error messages again, re-access them using the Status function.

To access error messages:

Step 1. As indicated in Figure A-1, press [ESC] to access the main menu screen.

Step 2. Press [Up] / [Down] arrows until Fixture appears. Press [Enter].

Step 3. Press [Up] / [Down] arrows to access Status. Press [Enter]. (Display will now scroll through any error messages or display OK if no errors.)

Step 4. If an error occurs, recalibrate fixture. If error message persists, then contact an Authorized VARI*LITE Dealer or Service Center for support.

Note: Refer to "Error Message Reference Chart" on page 71 for Errors Message and possible causes.

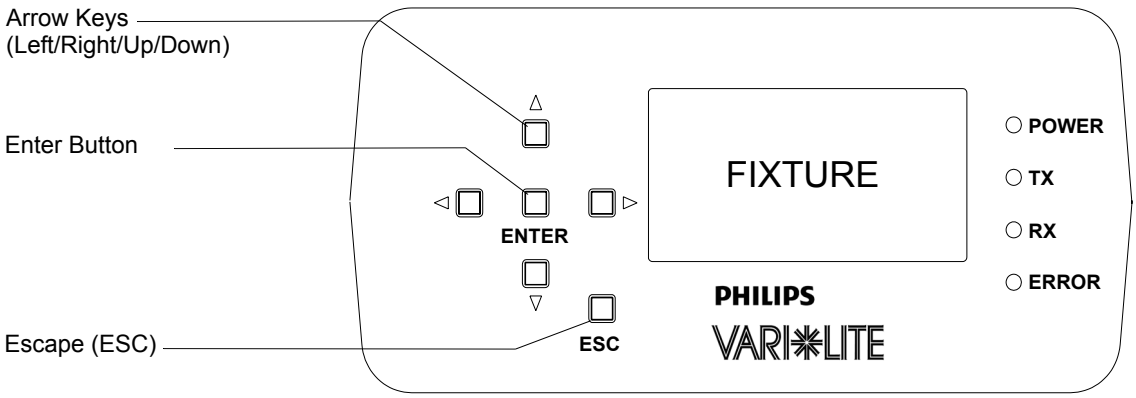


Figure A-1: VLX Wash LCD Display (Menu)

Table A-1: Error Message Reference Chart

Error Message	Definition	Possible Causes
Error X of X **No LED Upload** Board Number X	Firmware version in LED Driver Board did not match firmware version in MCB. MCB will try to upload correct version of firmware three times. If, after the third try the versions do not match, the error will be displayed.	• Faulty LED Driver Board • Faulty connection between LED Driver Board and Motherboard • Faulty Motherboard • Faulty comm between MCB and Motherboard (Multiple Errors) • Faulty MCB (Multiple Errors)
Error X of X **No LED Comm** Board Number X	No response to the MCB from the LED Driver Board.	• Faulty LED Driver Board. • Faulty connection between LED Driver Board and Motherboard. • Faulty Motherboard. • Faulty comm between MCB and Motherboard (Multiple Errors). • Faulty MCB (Multiple Errors)
Error x of x **LED Overtemp** Board Number x	LED thermistor is measuring a temperature over 120° C at LED x.	• Faulty Fan • Faulty LED Driver Board (fan driver) • High ambient operating temperature
Error x of x **No LED Config** Board Number x	LED Driver Board X has lost its configuration. Configuration is needed to load currents, limits, logic, etc. LED module will not turn on without being configured.	• Faulty LED Driver Board
Error x of x **LED Comm Error** Board Number x	LED Driver Board X detected a communication error with MCB.	• Faulty LED Driver Board. • Faulty connection between LED Driver Board and Motherboard. • Faulty Motherboard. • Faulty comm between MCB and Motherboard (Multiple Errors). • Faulty MCB (Multiple Errors)
Error x of x **Thermal Fault** Board Number x	Open or shorted LED Thermistor.	• Faulty LED • Conductive debris (i.e., graph foil) shorting across LED Thermistor • Solder bridge at Thermistor leads on Driver board
Error x of x **No Sensor on Tilt**	Tilt sensor flag fails to see optical sensor.	• Faulty Tilt Driver (No Movement) • Faulty Tilt Belt (No Movement) • Faulty Tilt Motor (No Movement) • Faulty Tilt Sensor (Movement of tilt to stop) • Faulty Tilt Sensor wiring (Movement of tilt to stop) • Faulty Tilt Encoder PCB (Movement of tilt to stop) • Tilt sensor tab not passing through sensor (yoke damage)
Error x of x **Encoder Error on Pan**	Pan encoder value fails to change during calibration.	• Faulty Pan Driver (No Movement) • Faulty Pan Belt (No Movement) • Faulty Pan Motor (No Movement) • Faulty Pan Encoder (Movement of pan to stop) • Faulty Pan Encoder wiring (Movement of pan to stop) • Pan encoder wheel not passing through encoder (pan motor assembly)
Error x of x **Encoder Error on Tilt**	Tilt encoder value fails to change during calibration.	• Faulty Tilt Driver (No Movement) • Faulty Tilt Belt (No Movement) • Faulty Tilt Motor (No Movement) • Faulty Tilt Encoder (Movement of tilt to stop) • Faulty Tilt Encoder wiring (Movement of tilt to stop) • Tilt encoder wheel not passing through encoder (tilt motor assembly)

Troubleshooting Guide

If a problem is suspected, first try recalibrating the luminaire to prompt an error message. The chart below provides possible causes and remedies for various error messages and/or symptoms.

WARNING: All service and maintenance (including troubleshooting), other than described herein should be performed by an Authorized VARI*LITE Dealer or Service Center.

Table A-2: Troubleshooting Chart

Message	Description	Symptom	Possible Cause/Remedy
n/a	No light output	Fixture will not produce or output light	Component Failure... - check fans for proper connection and operation.
n/a	No power	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 "Power and Data Cabling Requirements" on page 10.).
n/a	DMX Data Input	Self tests will not run or software download does not work.	Detecting DMX data... - disconnect DMX input cable.
n/a	DMX Failure	No response to DMX data	MCB connector disconnected... - check MCB DATA IN connection. DMX data cable not wired correctly or has a broken conductor... - check DMX data cable for proper wiring. (See "Power and Data Cabling Requirements" on page 10.)
n/a	DMX Termination	Erratic control of luminaire	No DMX termination or termination not correct... - check for DMX terminator. (See "Male Termination Connector" on page 13.)
n/a	LED (light) is getting dimmer.	Fixture appears not to be operating at full brightness.	Luminaire has detected an over temperature condition... - The luminaire will reduce power to all 7 LEDs if it senses that one LED is operating over the specified temperature. LED temperature is read and recorded through a thermistor imbedded in each LED chip. The two yellow wires carry the information (on temperature) to the LED's respective driver PCB. - Check the thermistor temperatures of each LED through the fixture's LCD display. If one LED is much hotter than the others... - Check to see that the LED's fan is running / connected to the Driver PCB.

Table A-2: Troubleshooting Chart (Continued)

Message	Description	Symptom	Possible Cause/Remedy
n/a	Colors (light output) not matching from luminaire to luminaire	Color output not matching other VLX3 Wash fixtures operating at same control settings.	Calibration turned On or Off... - Check fixture calibration setting. Make sure calibration is set to same setting (On or Off) as other fixtures. - Check dimming curve setting. Make sure dimming curve selection (Linear or Curve) is same for all fixtures.

Routine Maintenance

Introduction

Being a solid-state fixture, and unlike most automated arc or tungsten fixtures, the VLX3 Wash Luminaire requires very little routine maintenance by the user. This section covers all the parts or assemblies that can be removed, cleaned, and checked by the user. Any additional maintenance or service should only be completed by an Authorized VARI*LITE Service Center.

Special Cleaning and Care Instructions

The VLX3 Wash Luminaire requires special care when it comes to cleaning front lens assembly.

Note: 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 VLX3 Wash Luminaire:

- Lint free lens tissue
- Lint free cotton swabs (for hard-to-reach spot cleaning)
- Lint or powder free gloves
- Reagent grade isopropyl alcohol
- A mild soap solution.

Reagent grade isopropyl alcohol is good to use on the VLX3 Wash 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.

WARNING: Under no circumstances should ammonia-based cleaners, acetone, or other harsh solvents be used on or near the VLX3 Wash 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 VLX3 Wash Luminaire, please contact Vari-Lite technical support at 1.877-VARI-LITE or +1.214.647.7880.

Shipping / Transportation

The zoom assembly on the VLX3 Wash should be fully retracted (inside the head assembly) when the unit is not in use, being shipped, or is in storage. Vari-Lite recommends this be done with a suitable DMX control device. However, if the need arises to manually retract the lens, then it should be done by very carefully and slowly, with even pressure on each side of the barrel in line with the rails or with pressure right in the center between the three lenses. Care should be taken to not press quickly (taking less than 5 seconds) as this can possibly damage the unit. The unit should be adequately protected when shipped. See the latest version of Vari-Lite technical notice TN-235 on the Vari-Lite web site or contact Vari-Lite customer support for more information.

Cooling System Heatsink Cleaning Procedure

Tools:

- #2 Phillips Screwdriver
- Moisture and oil-free, compressed air duster
- Soft bristle, 1" Mottler brush

WARNING: Ensure that power is completely removed from luminaire before attempting any work. Always wear eye protection and proper gloves when performing this procedure.

To clean the cooling system heatsinks:

Step 1. Remove power from luminaire and allow unit to completely cool.

Step 2. Carefully set luminaire on upper enclosure, rotate head as shown in Figure A-2, and engage tilt lock.

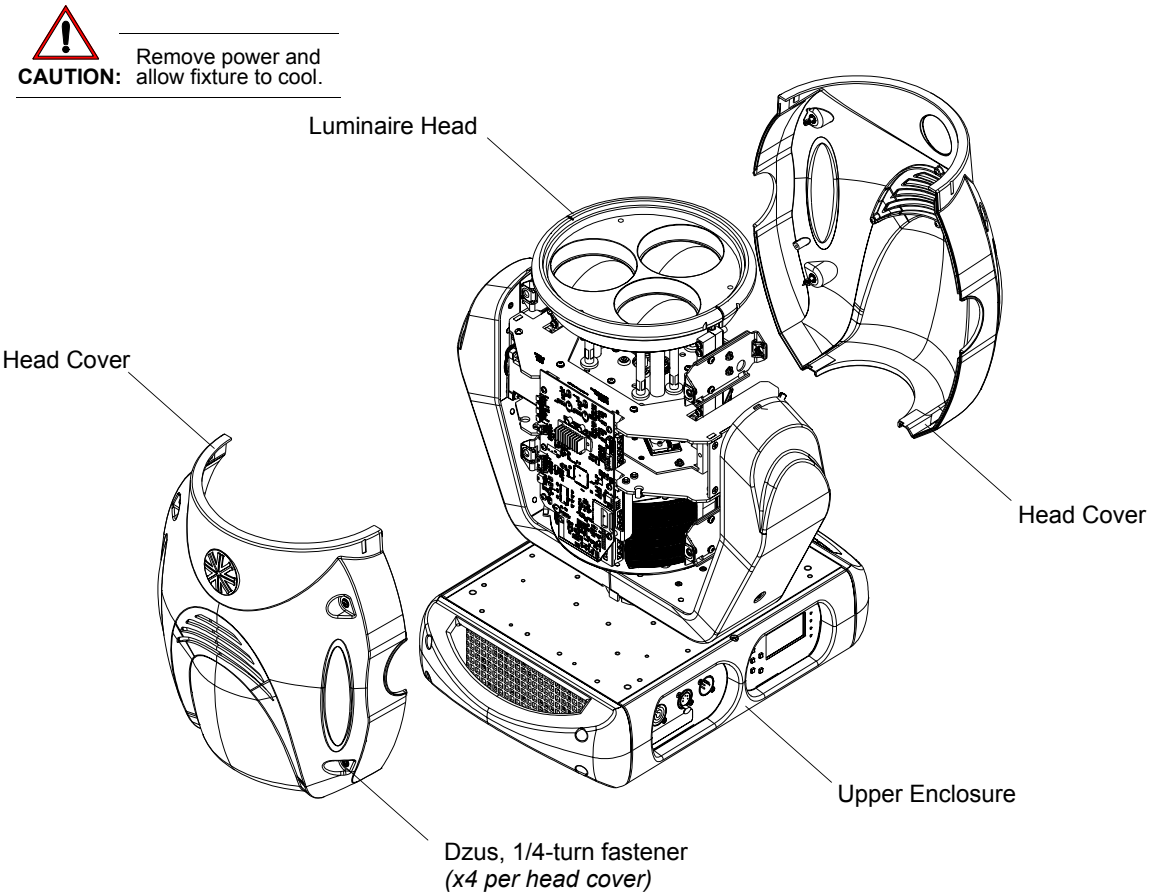


Figure A-2: VLX3 Wash Luminaire

Step 3. Remove head covers by loosing the four 1/4-turn Dzus fasteners on each cover. Set covers aside.

Step 4. Disengage tilt lock and rotate luminaire head 90-degrees and re-engage tilt lock (optional).

Step 5. As indicated in Figure A-3, at LED cooling assembly heatsinks, run Mottler brush gently through and in the direction of the heatsink fins from top to bottom so debris will fall down and away from assembly. Care should be taken as not to damage heatsinks.

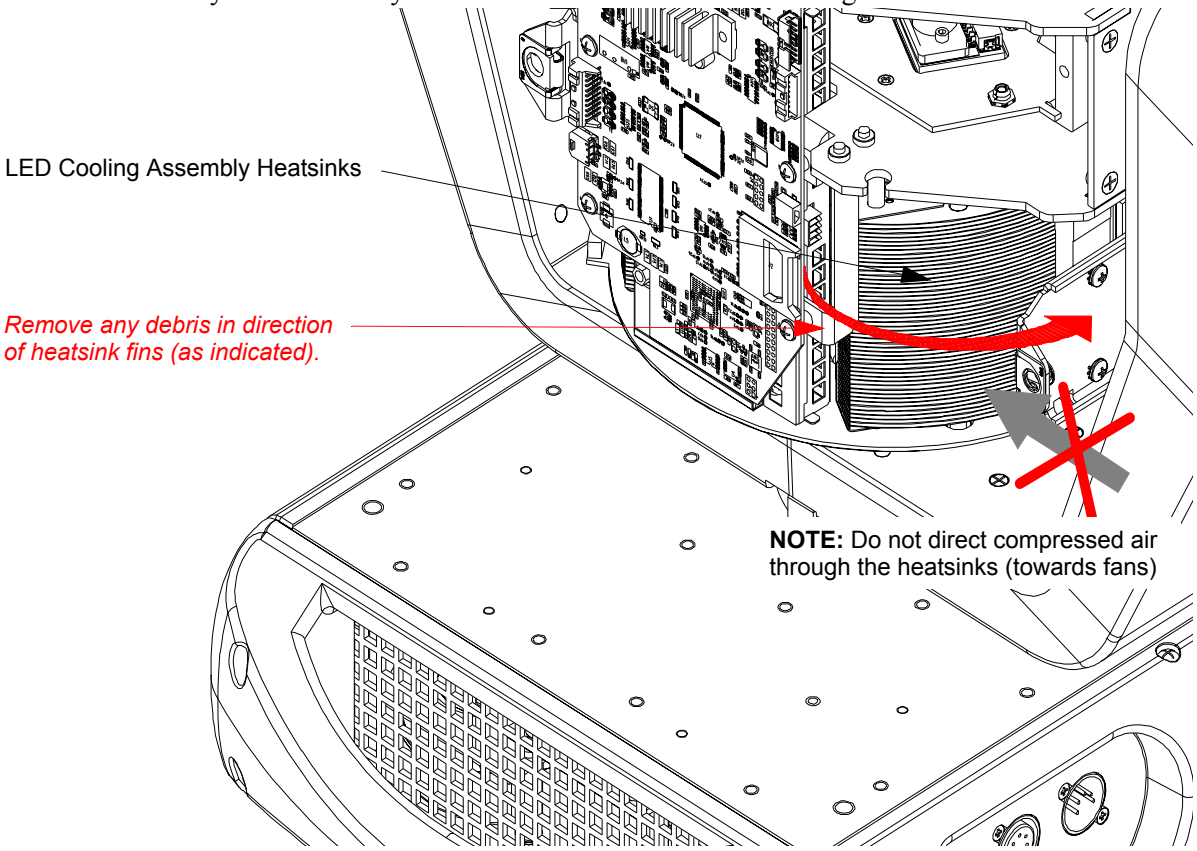


Figure A-3: VLX3 Wash Cooling System Heatsink Cleaning

Step 6. Using compressed air duster, blow any remaining debris from heatsink fins in the same direction as indicated in previous step.

WARNING: DO NOT direct compressed air through heatsinks towards fans or vice-versa. Doing so will cause the fans to spin at a high rate and could damage them. Also, never use any type of cleaning solution on heatsinks.

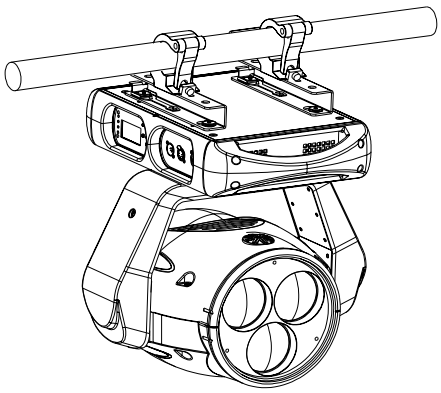
Step 7. After cleaning is complete, reinstall luminaire head covers.

Step 8. Power luminaire and test.

APPENDIX B.

Technical Specifications

VLX3 Wash Luminaire



PROGRAMMABLE FUNCTIONS

Color Mixing System

Three, custom replaceable 120 watt RGBW LED chipsets. Each chipset contains high density red, green, blue, and white LED emitters.

Optics

Beam size control is achieved by the use of an optical zoom system that provides continuously variable field angle from approximately 15° to 55°.

Intensity Control

Smooth, high resolution dimming control of Red (R), Green (G), Blue (B), and White (W) LED's.

Strobe

High speed with multiple strobe effects.

Pan and Tilt

Smooth, time-controlled continuous motion by way of a pair of three-phase stepper motor systems. Pan range is 540°/ Tilt range is 240° both with a 0.3° resolution.

OPTICAL

Source

Three x 120 watt RGBW LED chipsets.

Color Temp. White: Variable between approximately 3000 and 9000 Kelvin.

CRI: Dynamically Adjustable.

Manufacturer Rated Life: In excess of 10,000 hours (at full RGBW).

Output

6,000 lumens (white light, RGBW at Full).

NOTE: Vari-Lite reserves the right to change details of design, materials and finishes. Specifications are subject to change without notice. VARI✳LITE automated lighting equipment is made in the U.S.A.

PHOTOMETRIC

3 x 120W RGBW LEDs				
LED Mode	**Zoom Setting**	**Distance (ft)**	**Field Diameter (ft)**	**Center Beam Illuminance (fc)**
RGBW at Full	Narrow 15° (4400 Lumens)	16	4.3	670
		32	8.5	167
		48	12.8	74
		64	17.1	42
		80	21.4	27
	Wide 55° (6000 Lumens)	16	22.8	49
		32	45.7	12
		48	68.5	5
		64	91.4	3
		80	114.2	2

3 x 120W RGBW LEDs				
LED Mode	**Zoom Setting**	**Distance (m)**	**Field Diameter (m)**	**Center Beam Illuminance (lux)**
RGBW at Full	Narrow 15° (4400 Lumens)	5	1.3	6859
		10	2.7	1715
		15	4.0	762
		20	5.3	429
		25	6.7	274
	Wide 55° (6000 Lumens)	5	7.1	500
		10	14.3	125
		15	21.4	56
		20	28.6	31
		25	35.7	20

OPERATIONAL

Power Requirements

Standard AC power distribution from 100-240 VAC, 50/60 Hz. The fixture requires up to 7A depending on the AC supply voltage.

Operational Temperature

-20° to 122°F (-29° to 50°C)

Cooling

Variable forced air cooling.

Control

Completely compatible with a wide variety of DMX512 lighting control consoles. Channel Count depends on mode selected by user. 5-pin in and thru DMX.

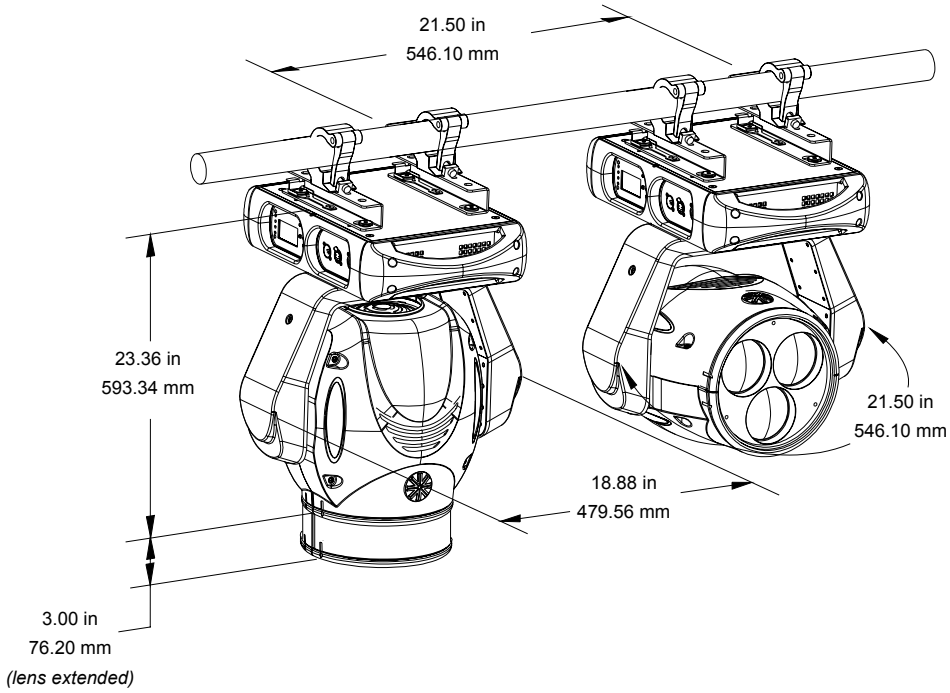
Weight

44 lbs. (20.0 kg)

NOTE: Vari-Lite reserves the right to change details of design, materials and finishes. Specifications are subject to change without notice. VARI✳LITE automated lighting equipment is made in the U.S.A.

Spacing

Hangs on 21.50 inch (54.6 cm) centers. All models can be mounted and operated in any orientation.



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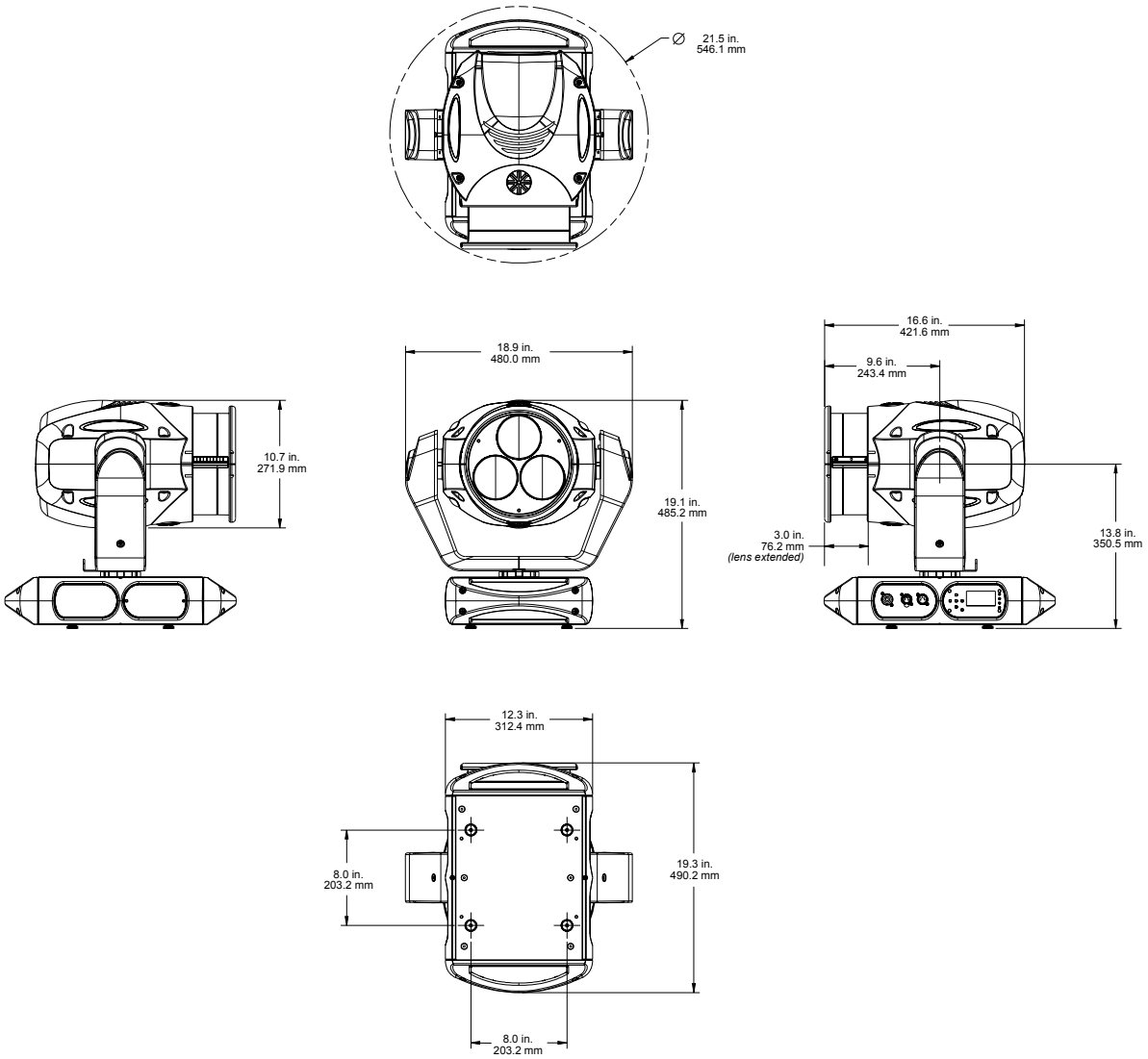
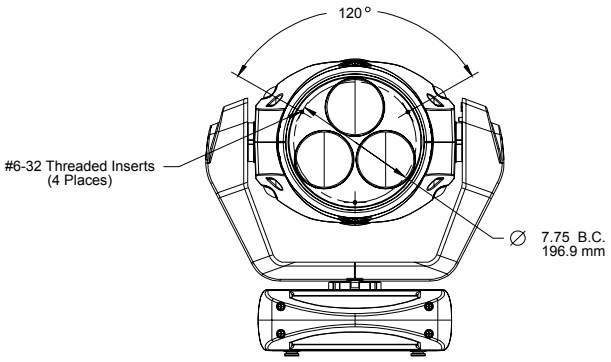
Dimensions



Accessory Holder Mounting Points



Information contained herein is for reference only. Vari-Lite cannot be responsible for issues arising from non-approved parts and accessories installed on any VARI✳LITE product. Customers of such products should contact the manufacturer directly for assistance and support.
Introducing non-Vari-Lite approved third-party parts or accessories to your VARI✳LITE product may damage the luminaire and could

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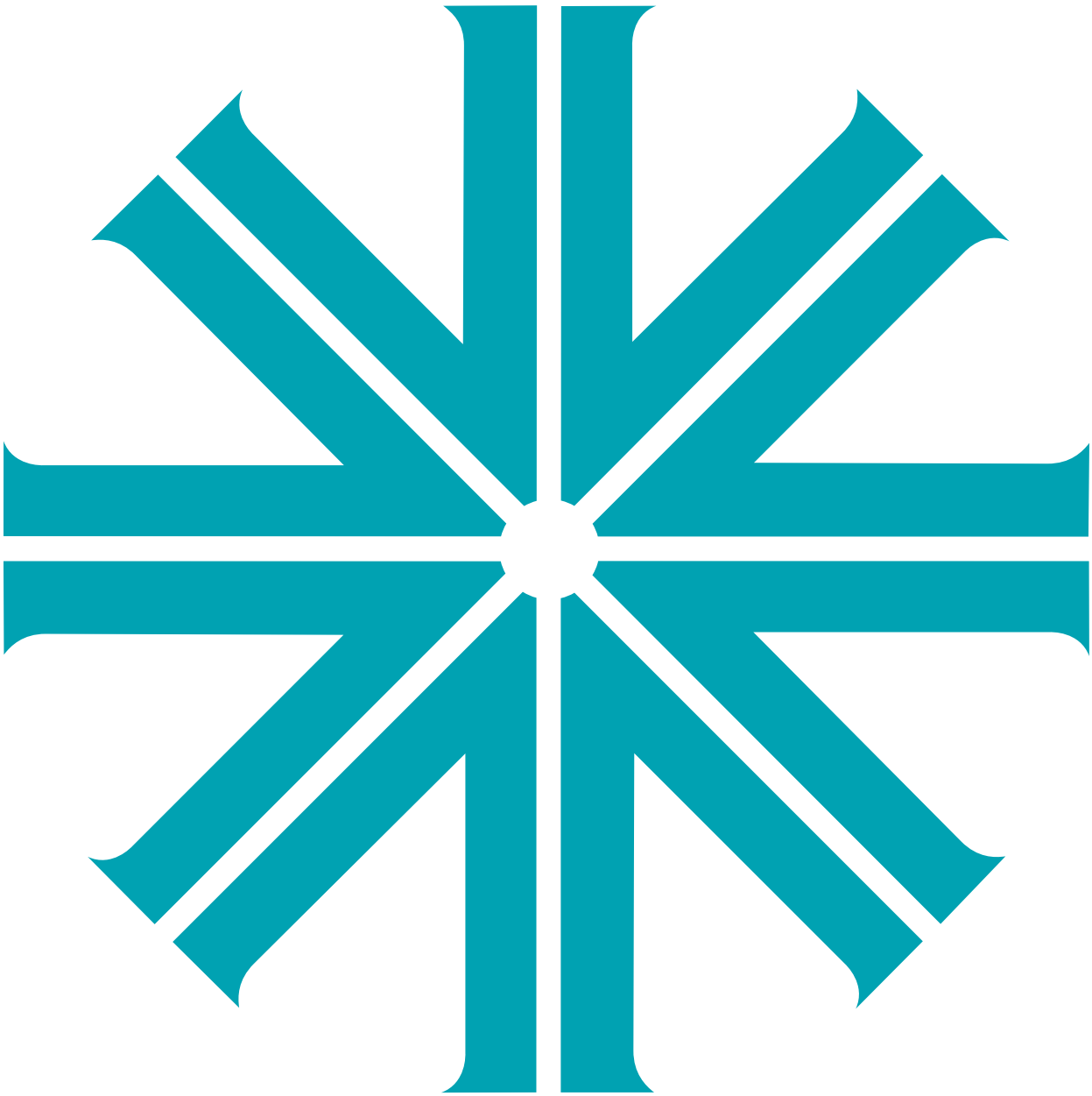

VARI*LITE

Express yourself.

Vari-Lite
10911 Petal Street
Dallas, Texas 75238 USA
1-877-VARI-LITE ✻ 1-214-647-7880
www.vari-lite.com.

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