



## User Manual

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ColorPower™ User Manual  
P/N 60600229 Version 1.1, August 2003



# Contacting High End Systems®

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# Declaration of Conformity

## according to ISO/IEC Guide 22 and EN45104

Manufacturer's name: High End Systems, Inc.

Distributor's name: High End Systems, Inc.  
Distributor's address: 2217 West Braker Lane  
Austin, Texas 78758 USA

### Declares that the product

Product Name: ColorPower  
Product Number: All  
Product Options: All

### conforms to the following EEC directives:

73/23/EEC, as amended by 93/68/EEC  
89/336/EEC, as amended by 92/31/EEC and 93/68/EEC

Equipment referred to in this declaration of conformity was first manufactured in compliance with the following standards in 2003:

Safety: EN60950:2000

EMC: EN55022: 1998: Class A ITE  
EN61000-3-2  
EN61000-3-3  
EN55024:1998  
EN61000-4-2: Level 3, Class 2  
EN61000-4-3: 1995 Level 2 (3V/m)  
EN61000-4-4: 1995 Level 2 (1/.5kV)  
EN61000-4-5: 1995 Level 3 (2/1kV)  
EN61000-4-6: 1965 Level 2 (3Vrms)  
EN61000-4-11:1994



USA, Monday, August 04, 2003  
Kenneth Stuart Hansen, Compliance Engineer

# Product Modification Warning

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High End Systems products are designed and manufactured to meet the requirements of United States and International safety regulations. Modifications to the product could affect safety and render the product non-compliant to relevant safety standards.

## **Mise En Garde Contre La Modification Du Produit**

Les produits High End Systems sont conçus et fabriqués conformément aux exigences des règlements internationaux de sécurité. Toute modification du produit peut entraîner sa non conformité aux normes de sécurité en vigueur.

## **Produktmodifikationswarnung**

Design und Herstellung von High End Systems entsprechen den Anforderungen der U.S. Amerikanischen und internationalen Sicherheitsvorschriften. Abänderungen dieses Produktes können dessen Sicherheit beeinträchtigen und unter Umständen gegen die diesbezüglichen Sicherheitsnormen verstoßen.

## **Avvertenza Sulla Modifica Del Prodotto**

I prodotti di High End Systems sono stati progettati e fabbricati per soddisfare i requisiti delle normative di sicurezza statunitensi ed internazionali. Qualsiasi modifica al prodotto potrebbe pregiudicare la sicurezza e rendere il prodotto non conforme agli standard di sicurezza pertinenti.

## **Advertencia De Modificación Del Producto**

Los productos de High End Systems están diseñados y fabricados para cumplir los requisitos de las reglamentaciones de seguridad de los Estados Unidos e internacionales. Las modificaciones al producto podrían afectar la seguridad y dejar al producto fuera de conformidad con las normas de seguridad relevantes.

# FCC Information

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This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

# Important Safety Information

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Instructions pertaining to continued protection against fire, electric shock, exposure to excessive ultraviolet (UV) radiation, and injury to persons are found in Appendix A.

Please read all instructions prior to assembling, mounting, and operating this equipment.

## **Important: Informations De Sécurité**

Les instructions se rapportant à la protection permanente contre les incendies, l'électrocution, l'exposition à un rayonnement ultraviolet (UV) excessif et aux blessures corporelles se trouvent dans l'Annexe A.

Veuillez lire toutes les instructions avant d'assembler, de monter ou d'utiliser cet équipement.

## **Wichtige Sicherheitshinweise**

Sicherheitsanleitungen zum Schutz gegen Feuer, elektrischen Schlag, übermäßige UV-Strahlung und Verletzung von Personen finden Sie in Anhang A.

Vor der Montage, dem Zusammenbau und der Inbetriebnahme dieses Geräts alle Anleitungen sorgfältig durchlesen.

## **Informazioni Importanti Di Sicurezza**

Le istruzioni sulla protezione da incendi, folgorazione, esposizione eccessiva a raggi ultravioletti (UV) e infortuni sono contenute nell'appendice A.

Si prega di leggere tutte le istruzioni prima di assemblare, montare e azionare l'apparecchiatura.

## **Informacion Importante De Seguridad**

En el Apéndice A se encuentran instrucciones sobre protección continua contra incendios, descarga eléctrica, exposición excesiva a radiación ultravioleta (UV) y lesiones personales.

Lea, por favor, todas las instrucciones antes del ensamblaje, montaje y operación de este equipo.

# Symbols

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The following international caution and warning symbols appear in margins throughout this manual to highlight messages.



**Caution:** This symbol appears adjacent to Caution messages. Not heeding these messages could result in personal injury and/or damage to equipment.



**Warning:** This symbol appears adjacent to high voltage warning messages. Not heeding these messages could result in serious personal injury.



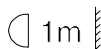
This symbol indicates that a fire hazard is present. Not heeding these messages could result in serious personal injury.



This symbol indicates that eye protection is required.



This symbol indicates an explosion hazard.



This symbol indicates the minimum distance to a lighted object, which in this case, is 1 meter.



This symbol indicates a hot surface.



This symbol indicates that an object not be mounted on a flammable surface

# Warranty Information

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## Limited Warranty

Unless otherwise stated, your Product unit is covered by a one year parts and labor limited warranty. Dichroic filters are not guaranteed against breakage or scratches to coating. It is the owner's responsibility to furnish receipts or invoices for verification of purchase, date, and dealer or distributor. If purchase date cannot be provided, date of manufacture will be used to determine warranty period.

## Returning an Item Under Warranty for Repair

It is necessary to obtain a Return Material Authorization (RMA) number from your dealer or point of purchase BEFORE any units are returned for repair. The manufacturer will make the final determination as to whether or not the unit is covered by warranty. Lamps are covered by the lamp manufacturer's warranty.

Any Product unit or parts returned to High End Systems must be packaged in a suitable manner to ensure the protection of such Product unit or parts, and such package shall be clearly and prominently marked to indicate that the package contains returned Product units or parts and with an RMA number. Accompany all returned Product units or parts with a written explanation of the alleged problem or malfunction. Ship returned Product units or parts to: 2209B Rutland, Suite 110, Austin, TX 78758 USA.

*Note: Freight Damage Claims are invalid for fixtures shipped in non-factory boxes and packing materials.*

## Freight

All shipping will be paid by the purchaser. Items under warranty shall have return shipping paid by the manufacturer only in the Continental United States. Under no circumstances will freight collect shipments be accepted. Prepaid shipping does not include rush expediting such as air freight. Air freight can be sent customer collect in the Continental United States.

REPAIR OR REPLACEMENT AS PROVIDED FOR UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER. HIGH END SYSTEMS, INC. MAKES NO WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO ANY PRODUCT, AND HIGH END SPECIFICALLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. HIGH END SHALL NOT BE LIABLE FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGE, INCLUDING LOST PROFITS, SUSTAINED OR INCURRED IN CONNECTION WITH ANY PRODUCT OR CAUSED BY PRODUCT DEFECTS OR THE PARTIAL OR TOTAL FAILURE OF ANY PRODUCT REGARDLESS OF THE FORM OF ACTION, WHETHER IN CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHERWISE, AND WHETHER OR NOT SUCH DAMAGE WAS FORESEEN OR UNFORESEEN.

Warranty is void if the Product is misused, damaged, modified in any way, or for unauthorized repairs or parts. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.





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# Chapter 1: Features and Specifications

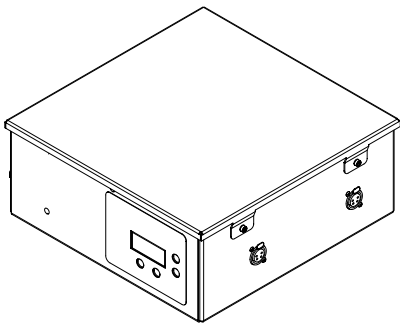
## Overview

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This manual includes information for the ColorPower™ power supply, and the ColorCommand™ fixture. These are the first of the new Dichroic Theatre series product family from High End Systems®. Features and specifications for each product in the series are listed below.

## ColorPower

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ColorPower is a power supply unit designed for the ColorCommand fixtures that can provide DMX data to 12 color mixing units. You can either manually assign a DMX start address for each unit linked to ColorPower or allow ColorPower to assign the DMX start addresses automatically. The front panel on ColorPower has a LED (Light Emitting Diode) display that enables you to access the menu system to configure linked Dichroic Theatre Series fixtures and assign DMX start channels.

## ColorPower Features

- Provides DMX data for 1-12 Color mixing fixtures
- Menu system for easy DMX addressing of ColorCommand fixtures
- Lightweight and easy to mount

# ColorPower Specifications

## Mechanical

Height: 137 mm (5.4 in)

Width: 311 mm (12.3 in)

Depth: 309 mm (12.2 in)

Weight: 5.9 kg (13 lb)

## Electrical

### Power Output Ratings:

40VDC / 750mA

### Power Input Ratings:

120V/230V, 50/60Hz @  
3A / 1.5A

## Environmental Specifications

Max. ambient temperature,  
 $T_a = 40^{\circ}\text{C}$  (104°F)

Max. exterior surface temperature:  $T_{\text{max}} = 100^{\circ}\text{C}$  (212°F)

Min. distance to flammable objects: .3 meter (12 in)

## Cabling and Terminator Specifications

ColorPower must be connected to a control desk using (DMX 512) 5-Pin XLR RS-485 data cable only. Fixtures must be linked to ColorPower using a 4-Pin XLR DATAPLEX Color Changer cable only. For more information, see “Optional Accessories” on page 1-6. Maximum total color changer cable length per ColorPower supply should not exceed 300 ft. (91 m).



**Warning:** ColorPower ships with two terminators. You must use these terminators to terminate both ends of ColorPower’s fixture link. Because you can connect two links (with six fixtures per link) on ColorPower, this means that if you use only one link, you must terminate the unused link on ColorPower as well as the last fixture in the used link. If you use both fixture links, you must terminate the last fixture on both links.

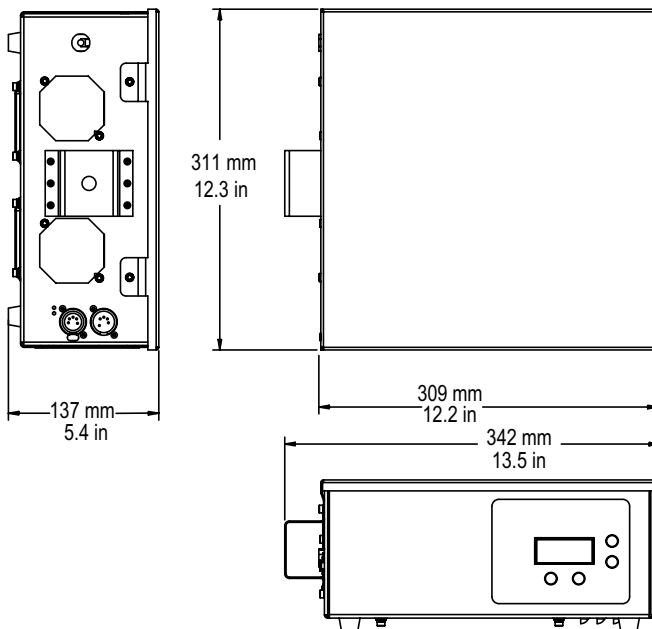
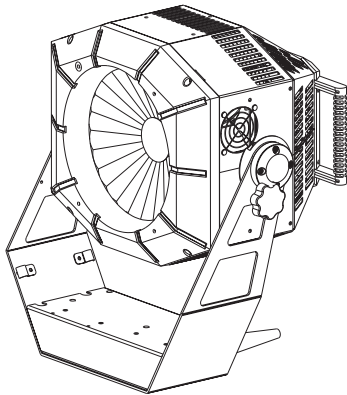


Figure 1-1 ColorPower Physical Dimensions

# ColorCommand

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1



ColorCommand is a highly-versatile color mixing PAR washlight that uses a simple, compact incandescent lamp and an innovative patented dichroic color mixing system. Because ColorCommand colors the whole beam simultaneously, it ensures a smooth, even field and allows you complete freedom when color mixing and adjusting beam size. ColorCommand produces a huge range of colors, from subtle pastels to deep saturates and everything in between.

ColorCommand can snap between one color and another in less than 1/3 second, or make slow, controlled fades. ColorCommand uses dichroic

borosilicate glass, which will not fade or change color, so the color you create during rehearsals is the same color you will see a week, month, or year later. There are no gel scrolls to burn out or replace, and ColorCommand can be used anywhere you would currently use a PAR can, Fresnel, or PC.

## ColorCommand Features

- Philips Halogen Biplanar 750W or 800W lamp
- 8° - 13° adjustable beam angle
- 18° - 32° field angle
- 270° tilt
- 1 meter minimum focus distance
- Lamp relay to automatically shut off the lamp if the power is disconnected or the cable is removed
- Compact and lightweight (similar in size to a PAR can)
- Efficient optics with high output
- Fat output beam (8 inches (200 mm) in diameter)
- Smooth color mixing (including pastel and saturated colors)
- Fully dichroic colors that never fade
- Full control over color mixing from smooth, stepless movement (allowing slow, imperceptible color fades) to rapid snap color changes
- Quiet performance even during snap color changes
- Even, soft-edged wash with good beam distribution for easy blending

- Live color fading from one color to another at any speed with no strange, intermediate colors
- Integral fully-variable beam angle
- Incandescent lamp allowing color temperature (3200K) matches with other incandescent fixtures
- Very little light spill
- Fits accessories such as barn doors, top hats, and snoots
- Operates on 4 DMX channels: Yellow, Magenta, Cyan, and Beam Angle Adjust

## ColorCommand Specifications

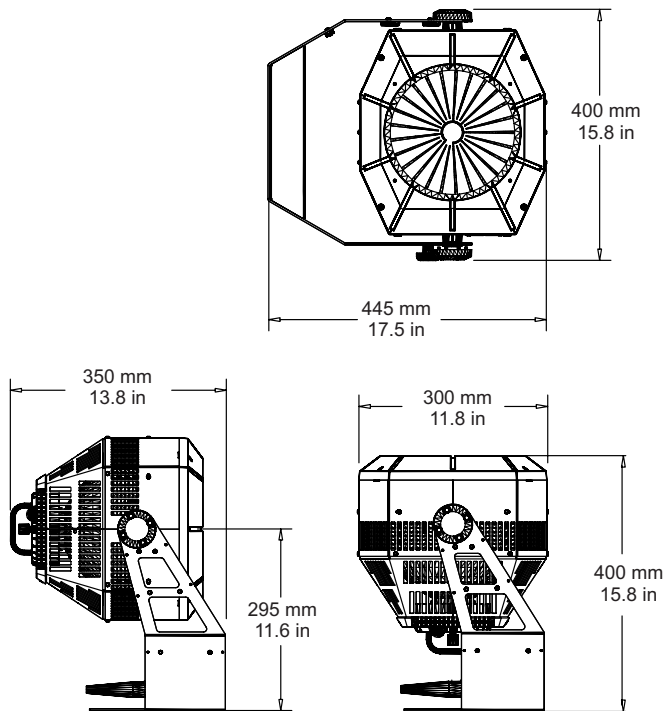
### Mechanical

Height (with yoke attached): 445 mm (17.5 in)

Width (with yoke attached): 400 mm (15.8 in)

Depth (with yoke attached): 350 mm (13.8 in)

Weight: 9.1 kg (20 lb)



*Figure 1-2 ColorCommand Physical Dimensions*

## Electrical

**Power Consumption:** 800 watts max

**Fuse:** 125V, 2.5A, Slow Blow SMF

**Power Input Ratings:** 115V, 50/60Hz @ 7A  
230V, 50/60Hz @ 3.5A

## Environmental Specifications

Max. ambient temperature , Ta =40°C (104°F)

Max. exterior surface temperature: T max=200°C (392°F)

Min. distance to flammable objects: 1 meter (3.28 ft)

Min. distance to lighted object: 1 meter (3.28 ft)

## Lamp Specifications

Lamp: Philips Halogen Biplanar

<u>Lamp Type</u>	<u>Lamp Life</u>	<u>Color Temperature</u>
750W / G9.5 / 115V	300 hours	3200K
800W / G9.5 / 230V	400 hours	3100K

Typical Field Lumens: 5000

## Cabling and Terminator Specifications

Fixtures must be linked using 4-Pin XLR DATAPLEX Color Changer Cable only. For more information, see “Optional Accessories” on page 1-6.

A terminating plug (provided with ColorPower) must be installed in the last fixture in a fixture link.

# Optional Accessories

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The following accessories are available from High End Systems:

<b>Part Description</b>	<b>Part Number</b>
Philips Halogen Biplanar lamp 750W / G9.5 / 115V	55030064
Philips Halogen Biplanar lamp 800W / G9.5 / 230V	55030065
Additional Terminator plug	80470215
4-pin XLR DATAPLEX Color Changer cable (6')	65040001
4-pin XLR DATAPLEX Color Changer cable (10')	65040002
4-pin XLR DATAPLEX Color Changer cable (25')	65040003
4-pin XLR DATAPLEX Color Changer cable (50')	65040004
5-pin XLR DMX Data Cable Heavy Duty (10')	55050017
5-pin XLR DMX Data Cable Heavy Duty (25')	55050018
5-pin XLR DMX Data Cable Heavy Duty (50')	55050019
5-pin XLR DMX Data Cable Heavy Duty (100')	55050020
Whole Hog® III Lighting Console	61020001
DMX Upload dongle	26040002
Safety cable	90701349
Cheeseborough truss clamp	55040014

*Note: Call High End Systems for information on optical module replacement (see “Contacting High End Systems®” on page ii.)*



# Chapter 2:

# Setup and Configuration

# 2

ColorPower ships with the following items:

- ColorPower supply
- User manual
- Two (2) terminator plugs
- One power cord (plug molded for US)
- Safety cable

ColorCommand ships with the following items:

- ColorCommand fixture (with attached yoke)
- One power cord (without a cord cap)
- Declaration of Conformity
- Safety cable

## Unpacking the Products

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Unpack your products and verify that they are undamaged. If there is no damage, continue with the rest of the setup procedure described in this chapter. If there is damage, notify both the shipping agent and the sales agent immediately.

*Save the shipping carton and packing materials. The carton and packing materials are specifically designed to protect the product during transport. High End Systems® assumes no responsibility for products that are damaged during transport. Return a product for repair in its original shipping carton and packing materials.*

Before returning anything to the factory, call your High End Systems dealer/distributor for a Return Material Authorization (RMA) number. The factory cannot accept any goods shipped without an RMA number.

## Installing a Power Cord Cap

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ColorPower ships with a power cord with a Standard NEMA 5-15 cord cap. ColorCommand ships with a power cord *without* a cord cap. Different locations (even within the same country) may require a different power cord cap to connect the fixture to a power outlet.

Because of the variety of power cord caps used worldwide, High End Systems, Inc. cannot make specific recommendations for the power cord cap.

Contact a local authority for the type of power cord cap needed. When installing the power cord cap, note that the cores in the mains lead are colored in accordance with the following code:


- green and yellow = earth
- blue = neutral
- brown = live



**Warning:** Class 1 equipment - This equipment must be earthed.

## Installing a Line Cord Cap - U.K. Only

In the United Kingdom, the colours of the cores in the mains lead of this equipment may not correspond with the colored markings identifying the terminals in the fixture's plug. Therefore, install a line cord cap according to the following code:

- The core which is coloured green and yellow must be connected to the plug terminal which is marked with the letter “E,” or by the earth symbol , or coloured green, or green and yellow.
- The core which is coloured blue must be connected to the terminal which is marked with the letter “N” or coloured black.
- The core which is coloured brown must be connected to the terminal which is marked with the letter “L” or coloured red.



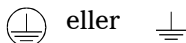
**Warning:** Class 1 equipment - This equipment must be earthed.

## Vatic Fitter Heads Information - Danmark

**Advarsel:** Beskyttelse mod elektrisk chock.

Vigtigt!

Lederne med gul/groen isolation maa kun tilsluttes en klemme maerket



eller



## Installing the Lamp in ColorCommand

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The ColorCommand fixture ships without a lamp. Use the following procedure to install a lamp in a new fixture or to replace a lamp.

**Warnings:** Disconnect power before lamping, relamping or servicing.  
Replace the lamp if it becomes damaged or thermally deformed.



An operating, unshielded lamp emits ultraviolet and visible (UV-vis) radiation which could damage eyes and skin. Whenever you are working on or near an exposed lamp, wear protective eye gear. Never look directly at the lamp while the lamp is on.

Hot lamp. Let the lamp cool before replacing.



**Caution:** This equipment is designed for use with a Philips® Halogen Biplanar lamp only. Using any other type lamp may be hazardous and will void the warranty.

To install a lamp in a new fixture, or replace a lamp in an existing fixture:

1. Perform this procedure *before* you connect the fixture to power.
2. Put on protective eye wear and gloves.
3. Access the lamp cap on the rear lamp socket housing and loosen the two thumbscrews.
4. Gently remove the socket housing from the reflector mount, exposing the lamp as shown in Figure 2-1.

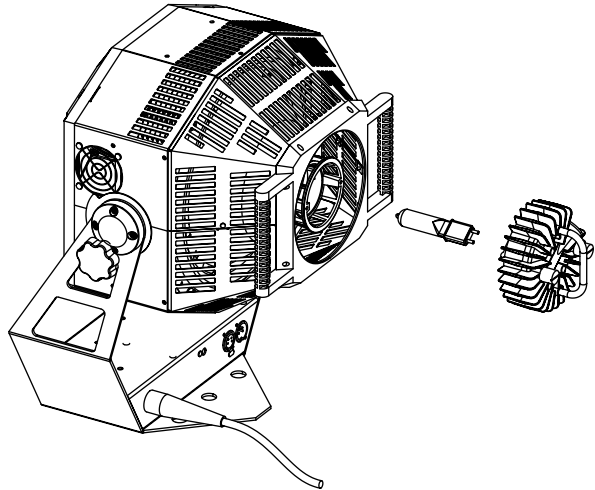


Figure 2-1 Removing the lamp

5. Remove the lamp from the socket housing.
6. The lamp assembly is connected to the fixture by lamp socket wires. Support the lamp assembly while inserting the lamp. Do not allow the lamp socket wires to support the weight of the lamp assembly.
7. Remove all packaging materials from the new Philips 800W max lamp.
8. Holding the new lamp by its base, gently press the two base pins straight into the lamp socket until the lamp is firmly seated as shown in Figure 2-2.

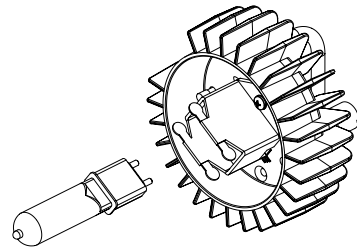


Figure 2-2 Installing the lamp

*Note:* To avoid premature lamp failure, do not touch the lamp glass. If you touch the glass, clean the lamp glass carefully with rubbing alcohol and a clean, lint-free cloth.

9. Gently replace the lamp socket housing on the reflector mount and tighten the thumbscrews.



**Caution:** Improperly-installed lamps cause premature lamp failure and socket problems.

**Make sure the lamp socket wires are not wrapped around the lamp or trapped while reinserting the lamp assembly.**

# Unit Addressing

A rotary switch is located on the back of each ColorCommand fixture (see Figure 2-3). You must select a rotary switch setting for each fixture in the link. The fixture's rotary switch setting determines the fixture's unit address, which identifies the fixture's unique position in the link.

The rotary switch allows up to 16 possible settings (0-9 and A-F).



Figure 2-3 Rotary switch



**Warning:** You must set the rotary switch to a unique number for each fixture on a fixture link.

For example, if you have 12 fixtures on a link, you might set the rotary switch on the first fixture to “0,” the second fixture to “1,” the tenth fixture to “9,” the eleventh fixture to “A,” and so on. You can choose any order for fixtures on a link and any rotary switch setting for a fixture, as long as each fixture in the link is assigned a unique number (see Figure 2-4).

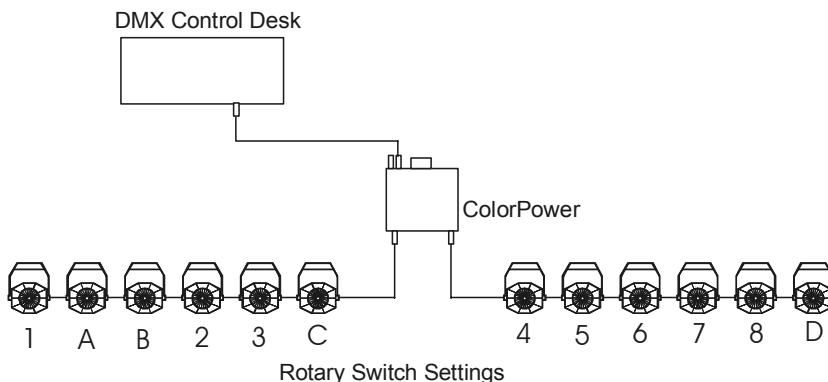


Figure 2-4 Sample Rotary switch settings

## Linking the Fixtures

A single ColorPower can control up to 12 ColorCommand fixtures (six fixtures per output).



**Caution:** ColorCommand must be operated with the High End Systems ColorPower. Connection to any other manufacturer's power supply could damage the ColorCommand fixture.

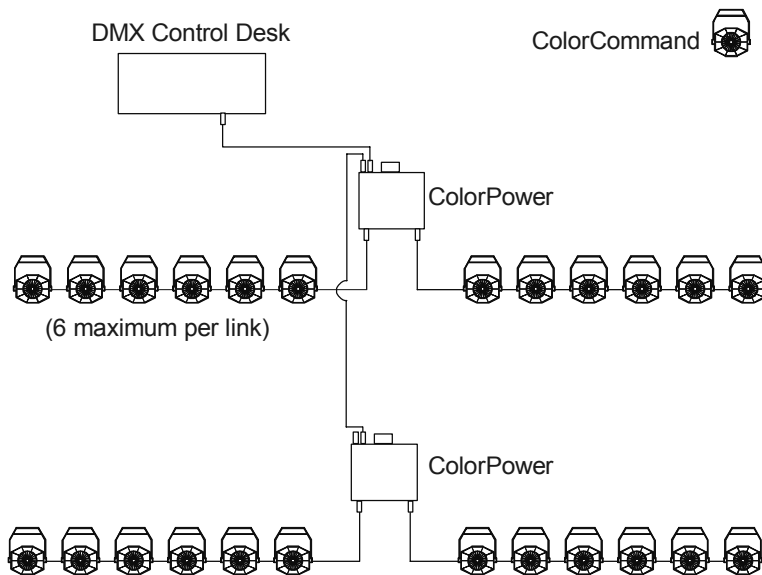
Disconnect mains power from ColorPower *before* linking color changer cables to fixtures.

ColorPower has two output links that can supply 40VDC and data to the Dichroic Theatre Series fixtures. The fixtures can be combined and linked in any configuration, as long as there are no more than six (6) fixtures per output link. Because ColorPower has two output links, you can connect a maximum of twelve (12) fixtures for each ColorPower (see Figure 2-5).

*Note: Maximum total color changer cable length per ColorPower supply should not exceed 300 ft. (91 m).*

You can link one or more ColorPower units to a DMX Control desk using 5-pin DMX data cables. Use Belden® 9842 or equivalent (meets specifications for EIA RS-485 applications) data cables with the following characteristics:

- Two twisted pairs (4-conductors) plus a shield
- Maximum capacitance between conductors: <15 pF/ft.
- Maximum capacitance between conductor and shield: 55 pF/ft.
- Maximum resistance: 20  $\Omega$ /1000 ft.
- Nominal impedance: 120  $\Omega$ .



*Figure 2-5 Dichroic Theatre Series linking diagram*

To connect ColorPower to ColorCommand fixtures, you must use 4-pin XLR DATAPLEX Color Changer cables. Although these cables do not ship with ColorPower, High End Systems offers them as optional accessories (see “Optional Accessories” on page 1-6).

The 4-pin XLR DATAPLEX Color Changer pin designation is as follows:

- Pin 1. Black #14 (40VDC +)
- Pin 2. Red #22 (Data +)
- Pin 3. Green #22 (Data -)
- Pin 4. White #14 (40 VDC -)

DMX protocol varies according to the number of fixtures in the link. ColorPower requires one DMX channel. ColorCommand fixtures require 4 DMX channels. For more information, see Chapter 3.

## Setting up the Link

Complete the following to link one or more fixtures as shown in Figure 2-5:

1. Connect the male XLR connector of a 5-pin DMX data cable to your DMX controller's DMX Data Out connector.
2. Connect the female XLR connector of the 5-pin DMX data cable to a ColorPower.
3. Connect the male XLR connector of a 4-pin XLR DATAPLEX Color Changer cable to ColorPower's Data Out connector.
4. Connect the female XLR connector of the 4-pin XLR DATAPLEX Color Changer cable to the first fixture on the fixture link.
5. Continue linking the remaining ColorCommand fixtures together by connecting a 4-pin XLR DATAPLEX Color Changer cable from the Data Out connector of each fixture to the Data In connector of the next fixture on the link.
6. Connect a male terminator to the Data Out connector of the last fixture in the link.



**Warning:** Unplug power from ColorPower before making any changes to fixture configuration on the fixture link.

**ColorPower ships with two terminators. You must use these terminators to terminate both ends of ColorPower's fixture link. Because you can connect two links (with six fixtures per link) on ColorPower, this means that if you use only one link, you must terminate the unused link on ColorPower as well as the last fixture in the used link. If you use both fixture links, you must terminate the last fixture on both links.**

## Mounting the Fixtures

---

You can mount ColorPower in any orientation suspended from a support system (such as a truss). Before mounting the fixture, heed the warnings below to guard against personal injury and damage to the fixture.



**Warning:** This equipment for connection to a branch circuit having a maximum overload protection of 20 A.

**Class I Equipment - This fixture must be earthed.**



**Mount the fixtures and controllers in a location that is away from direct heat and protected from moisture. Do not mount on a flammable surface.**

**For pluggable equipment, the socket outlet shall be installed near the equipment and shall be easily accessible.**

**Use a secondary safety cable when mounting this fixture.**



**Caution:** Do not remove top cover of ColorPower or attempt to service while ColorPower is attached to rigging or truss.

When mounting ColorPower on a truss or another type of support, do all of the following:

- Verify the truss or support will handle the combined weight of *all* the devices on the truss. Each ColorPower fixture weighs 5.9 kg (13 lb). Each ColorCommand fixture weighs 9.1 kg (20 lb).
- High End Systems strongly recommends using safety cables to attach any of its fixtures to a truss. Safety cables are provided with ColorPower and ColorCommand fixtures. If necessary, you can order additional safety cables from your High End Systems dealer/distributor (see “Optional Accessories” on page 1-6).
- You must supply your own clamps to attach the fixture to the support. Verify that the clamp(s) you use are capable of supporting the weight of the fixture. You can order cheeseboroughs for a two-inch truss from your High End Systems dealer/distributor (see “Optional Accessories” on page 1-6).
- Make sure the fixture cannot be rotated all the way around (360°). Allowing the fixture to rotate 360° could loosen the clamp mounting bolts.

*Note: Because of the variety of conceivable lighting designs, you should consider the procedure below as a suggested guideline only. High End Systems, Inc. cannot make specific recommendations for your particular lighting design or venue.*

To mount the fixture to a truss or another type of support:

- Attach a suitable clamp through one of the holes on top of the yoke. If you are attaching one clamp, use the middle hole on the yoke. If you are attaching 2 clamps per fixture, attach one clamp to each of the outer holes on the yoke. *Use two locking washers per clamp when attaching the clamp to the yoke.*
- Use two people to mount each fixture: one person to hold the fixture while it is being secured in place, and one person to secure the fixture to its support and to attach clamps and safety cables.

- Always stand on a firm, stable surface when mounting a fixture to its support. The fixture should be at a height where you can comfortably work on it, and should either be resting on a stable surface or held in a stable manner.
- Tighten the clamp(s) firmly to the yoke and to the support.
- Loop one or more suitable safety cables around the support and the yoke.



**Caution:** After mounting the fixtures, inspect all connected cables to ensure that the cables are properly routed away from any hot surface.

Do not mount ColorPower above or next to a hot fixture closer than 1 ft (.3 m).

## Powering On the Fixture

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**Caution:** Do not power on the fixture until verifying that the line cord cap is suitable for the power source in your location.



**Warning:** This equipment for connection to a branch circuit having a maximum overload protection of 20 A.

Before powering on ColorPower or ColorCommand fixtures connected to ColorPower, complete the following:

- Make sure the lamp is installed as described in “Installing the Lamp in ColorCommand” on page 2-2.
- Make sure the appropriate power cord cap is installed as described in “Installing a Power Cord Cap” on page 2-1.
- Make sure the rotary switch on all fixtures has been set as described in “Unit Addressing” on page 2-4.
- Make sure ColorPower is linked appropriately to all fixtures in the fixture link as described in “Installing the Lamp in ColorCommand” on page 2-2.

At this point it is safe to connect ColorPower to an appropriately-rated power source (which turns ColorPower on).

*Note: ColorCommand fixtures use a thermal protection relay. A ColorCommand fixture must have a 4-pin XLR Color Changer cable connected or the lamp will not turn on.*

## Connecting ColorCommand to Power

Connect the ColorCommand lamp cable to mains power or a suitable dimmer.



## Homing ColorCommand

When ColorCommand fixtures are connected to ColorPower, they automatically begin a homing procedure to verify that the major functions of the fixture are oriented properly.

ColorPower's menu system provides an option for re-homing the fixtures. See Chapter 3 for instructions on using the Menu system and locating the Home function.

## Assigning a DMX Start Channel

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The DMX start channel identifies each fixture on a link for the DMX controller. There are 512 available channels on each DMX link. These 512 channels are divided among *all* the devices on a particular link. The number of channels a fixture requires is called the fixture's channel range. ColorPower requires one channel. ColorCommand fixtures require 4 consecutive channels on the link. The DMX start channel assigned to a particular fixture is the first channel available to a fixture in its channel range.

The fixture's channel range must not overlap any other device's channel range on the link. When two devices on the same DMX link have overlapping channel ranges, one or both devices will be disabled or behave erratically.

Remember the following criteria when determining a valid start channel:

- The Start channel is the number of the first channel in a consecutive block of channels assigned to an individual fixture.
- A fixture can be assigned the second block of DMX channels on a link without physically being the second fixture on the link.
- To avoid overlapping channels, place the start channel at the beginning of a range of available channels large enough to accommodate that fixture type.
- Every channel in the link does not need to be assigned.
- The channel range required for a fixture differs depending on the fixture type.

You can assign a DMX start channel to a fixture either manually or automatically (using ColorPower).

## Assigning a DMX Start Channel to ColorPower

To set the ColorPower Address (for the single DMX channel it uses):

1. Access ColorPower's menu system via the LED display and four menu navigation buttons to assign a Start channel to ColorPower.

Note: For more information regarding the display and using the menu system, see Chapter 3.

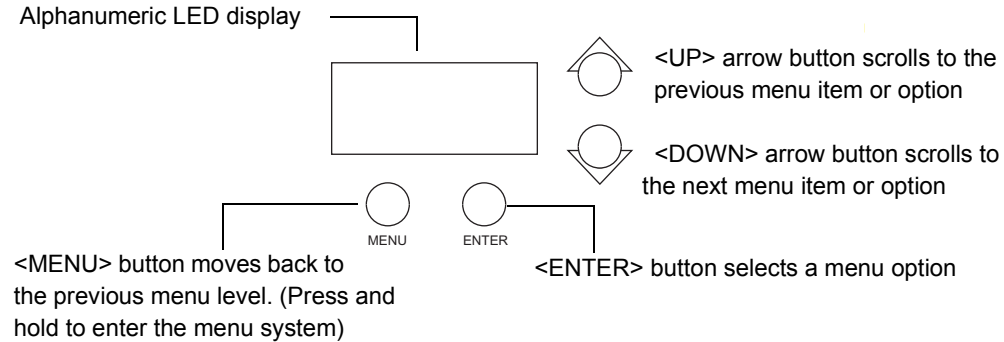


Figure 2-6 ColorPower menu navigation buttons

2. Press and hold **<Menu>** until *dMX* appears on the LED display.
3. Press **<Enter>**.
4. Use the arrow buttons to scroll to *AddR*.
5. Press and hold **<Enter>** until the display begins flashing.
6. Use the arrow buttons to scroll to the desired DMX start channel (*C001 - C509*)
7. Press and hold **<Enter>** until the display stops flashing.

## Manually Assigning a DMX Start Channel

Manually assigning a DMX start channel to a fixture enables you to control which consecutive block of DMX channels are assigned to each fixture in a link. For example, you might choose to assign channels 150-153 to a ColorCommand that is identified as the first fixture in the link, (see Figure 2-7).

Note: A fixture is identified by its rotary switch setting, which specifies its unit number.

To Address a fixture by manually assigning the start channel:

1. Using ColorPower's menu system (see Figure 2-6 on page 2-10), press and hold the **<Menu>** button until *dMX* appears on the LED display.
2. Press **<Enter>**.
3. Using the **<Up>** and **<Down>** arrow buttons, scroll to the *MOdE* menu and press the **<Enter>** button to select.
4. Using the **<Up>** and **<Down>** arrow buttons, scroll to the *MANU* menu and press the **<Enter>** button to select.

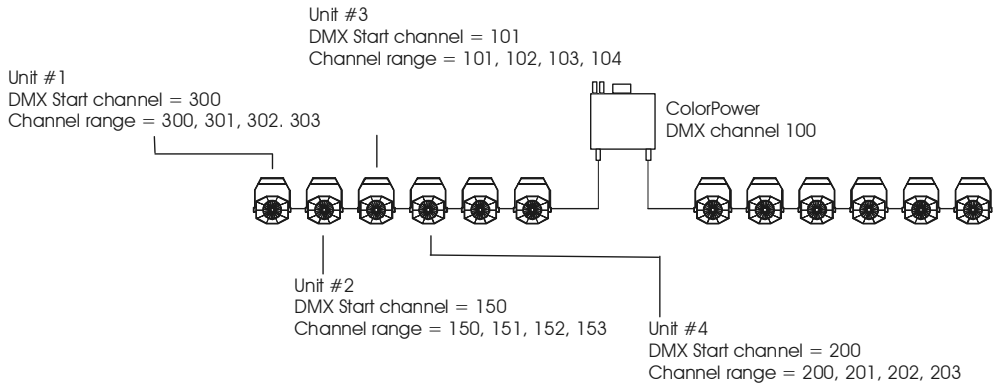


Figure 2-7 Sample manual assignment of DMX start channels

5. Using the <Up> and <Down> arrow buttons, scroll to the *UNIT* menu and press the <Enter> button to select.
6. Using the <Up> and <Down> arrow buttons, scroll to the desired fixture unit number and press the <Enter> button to select the desired unit. For example, “1 CC” means a ColorCommand unit with a rotary switch setting of 1.
7. Using the <Up> and <Down> arrow buttons, scroll to the desired DMX start channel (*C001 – C510*) and press the <Enter> button to select.

*Note: The last valid Start channel for a ColorCommand (4-channel protocol) fixture on a 512-channel DMX link is Channel 509.*

## Automatically Assigning a DMX Start Channel

When automatically assigning DMX start channels to fixtures on a link, ColorPower allocates the DMX addresses in the order of each fixture’s unit number (specified by the rotary switch setting on each fixture) (see Figure 2-8).

To Address a fixture by automatically assigning the start channel:

1. Using ColorPower’s menu system (see Figure 2-6 on page 2-10), press and hold the <Menu> button until *dMX* appears on the LED display.
2. Press <Enter>.
3. Using the <Up> and <Down> arrow buttons, scroll to the *MOdE* menu and press the <Enter> button to select.
4. Using the <Up> and <Down> arrow buttons, scroll to the *AUtO* menu and press the <Enter> button to select.
5. Press the <Enter> button until *DOnE* displays.

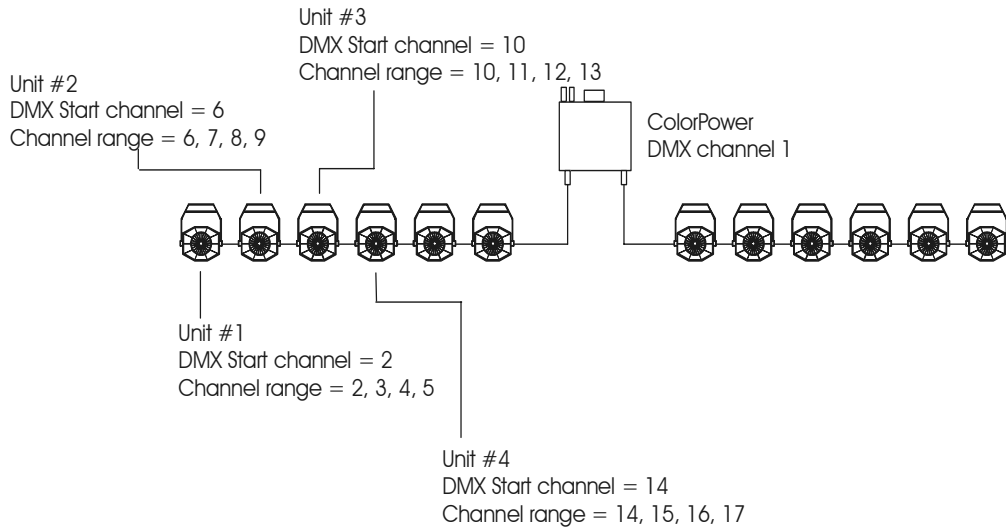


Figure 2-8 Sample automatic assignment of DMX start channels

**IMPORTANT:** You must complete this procedure after all fixtures have been added to the fixture link. ColorPower only assigns start channels automatically after all steps in this procedure are completed. In other words, the start channels assigned using this procedure do not automatically change if a unit fails or is disconnected.

## Verifying and Uploading ColorPower Software

1. Use the menu system to identify the current version of software running on ColorPower. See Chapter 3.
2. Verify that the version displayed by ColorPower is the latest available. The latest software is available in the support section of the High End Systems® website ([www.highend.com](http://www.highend.com)).
3. If a software upgrade is required, attach a High End Systems Upload Dongle to the computer and upload the software to ColorPower.

A High End Systems Upload Dongle requires a 386-based (or faster) computer, MS DOS® version 3.3 (or later) or Windows 95/98/ME, and one MB of free disk space. To obtain an Upload Dongle (with installation and operation instructions), contact your High End Systems dealer/distributor (see “Contacting High End Systems®” on page -ii).

*Note: ColorCommand is controlled using the software stored in ColorPower. Therefore, you only need to upload ColorPower software (when applicable).*

# Fixture Maintenance

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ColorPower and ColorCommand have no user-serviceable parts inside. If your fixture requires maintenance, contact customer support (see “Contacting High End Systems®” on page -ii).

2

## Cleaning the ColorCommand Lens



**Warnings:** Disconnect power and turn power switch off before servicing.



Equipment surfaces may reach temperatures up to 67° C (153° F).  
Allow the fixture to cool before handling.

Clean the front ColorCommand lens using a mild glass cleaner (containing no ammonia) and a soft, lint-free cotton cloth.

## Replacing the ColorCommand Lamp

For information on replacing the lamp in a ColorCommand fixture, see “Installing the Lamp in ColorCommand” on page 2-2.

## Maintenance Mode

When performing maintenance, you can set all fixtures in a link to maintenance mode. This enables ColorPower to automatically locate (or, discover) each fixture on the link and assign it a DMX start channel.

To place all fixtures in a link in maintenance mode:

1. Using ColorPower’s menu system (see Figure 2-6 on page 2-10), press and hold the <Menu> button until *dMX* appears on the LED display.
2. Press <Enter>.
3. Using the <Up> and <Down> arrow buttons, scroll to the *MOdE* menu and press the <Enter> button to select.
4. Using the <Up> and <Down> arrow buttons, scroll to the *DISC* menu and press the <Enter> button to select.
5. Press the <Enter> button until *DONE* displays.

**IMPORTANT:** After performing any maintenance, you must return all fixtures to either Manual (MANU) mode or Automatic (AUTO) mode for operation. For more information, see “Manually Assigning a DMX Start Channel” on page 1-10 or “Automatically Assigning a DMX Start Channel” on page 1-11.



# Chapter 3:

# Fixture Operation

This chapter contains information on using the ColorPower menu system and DMX programming to operate and control the fixture. Use the Menu Map on page 3-3 for a quick reference on menu options.

## Accessing the Menu System

To access the menu system, press and hold the <Menu> key until *DMX* appears on the LED display. The menu system is protected against inadvertent menu changes by requiring the <Menu> button to be held for a few seconds before allowing entry to the menus.

To exit the menu system, you must keep pressing the <Menu> button to back out of each menu level until you reach the top menu level. After approximately 2 minutes, the display will revert to the fixture's currently assigned DMX start channel.

## Basic Navigation

The navigation buttons on the fixture's display panel allow you to navigate through the onboard menu system. As you navigate the menu system, the alphanumeric display will show the menu items you select from the menu map.

- Press the <Up> and <Down> arrow buttons to move to the Menus and options. The alphanumeric display will flash when a new option is selected and will stop flashing when a new option is stored by pressing the <Enter> button.

*Note: If you do not press the <Enter> button, the new option you selected will not be stored.*

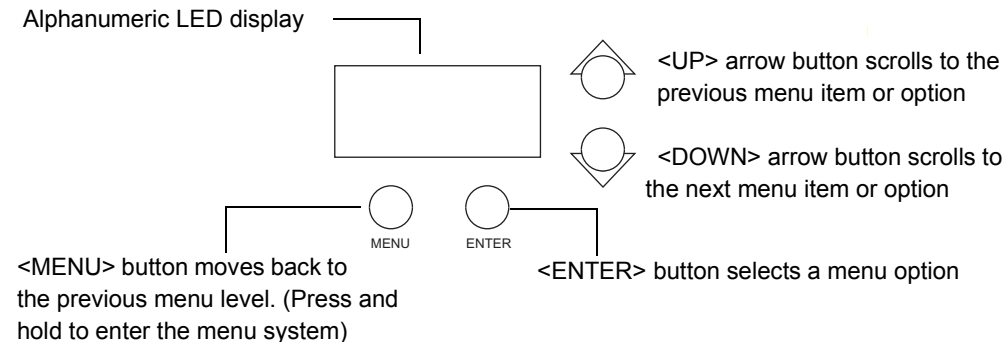


Figure 3-1 ColorPower Menu display panel

- If you have not pressed <Enter>, pressing the <Menu> button returns you to the previous menu without changing the value of an option.

## Menu Options

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The following sections describe the information and operations available under each of the Level 1 Menus and include option selection examples.

### DMX Menu

Use this Menu option to set the Start channel for ColorPower supply and ColorCommand fixtures. For more information on setting a DMX start channel, see “Assigning a DMX Start Channel to ColorPower” on page 2-9. For information on the maintenance mode, see “Maintenance Mode” on page 2-13.

### Information (INFO) Menu

Use this Menu option to display information on software versions and connected units.

#### Display the Software Version (VERS)

To view the Software version currently running on the fixture:

1. If you are not already in the Menu system, press and hold the <Menu> button until *DMX* appears on the LED display.
2. Using the <Up> and <Down> arrow buttons, scroll to the *INFO* menu and press the <Enter> button to select.
3. Using the <Up> and <Down> arrow buttons, scroll to the *VERS* option and press the <Enter> button to select. The current ColorPower software version number will be displayed. Check with the High End Systems website ([www.highend.com](http://www.highend.com)) to verify that this is the latest version. If you need to install new software, see “Verifying and Uploading ColorPower Software” on page 2-12.

#### Display the Unit Information (UNIT)

To view unit information for each fixture on the link:

1. If you are not already in the Menu system, press and hold the <Menu> button until *DMX* appears on the LED display.
2. Using the <Up> and <Down> arrow buttons, scroll to the *INFO* menu and press the <Enter> button to select.
3. Using the <Up> and <Down> arrow buttons, scroll to the *UNIT* option and press the <Enter> button to select. The available data for the fixtures connected to the fixture link displays. For example, “1 CC” means that a ColorCommand fixture is connected to the link and its rotary switch is set to 1.



# Control (CTRL) Menu

Use this Menu option to reset ColorPower and home all ColorCommand fixtures connected to the fixture link.

## Reset and Home (RST)

To view the Software version currently running on the fixture:

1. If you are not already in the Menu system, press and hold the <Menu> button until *DMX* appears on the LED display.
2. Using the <Up> and <Down> arrow buttons, scroll to the *CTRL* menu and press the <Enter> button to select.
3. Using the <Up> and <Down> arrow buttons, scroll to the *RST* option and press the <Enter> button to select. ColorPower will reset and home all connected units.

3

## ColorPower Menu Map

Level 1	Level 2	Level 3	Level 4	Level 5	Options	Description
DMX	ADDR				1 – 512	Set DMX Start channel number for Color Power hub 001– 512
	MODE	AUTO			DONE	Sets automatic start channel selection for attached modules
		MANU	UNIT	1 XX – 12XX	1 – 512	Sets manual start channel selection for attached modules
		DISC			DONE	Maintenance mode
INFO	VERS				V.##.#	Displays version Major.Minor.Build
	UNIT				1 XX – 12XX	Displays rotary switch setting and type of unit connected to the fixture link
CTRL	RST					Resets ColorPower and homes all connected units

# DMX Programming

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## Basics of DMX Control

A Parameter is a fixture attribute that can be controlled to modify the light beam in terms of color, beam quality and pattern, intensity, or focus (position). DMX programming assigns a DMX value to each of the fixture's parameters. A Cue (sometimes referred to as a *look* or a *scene*) is one combination of parameter settings. Cues are combined and timing is added to create shows.

## DMX Protocol

Programming a fixture for a DMX link requires each parameter be assigned to a specific DMX channel in the fixture's channel range. Channel assignments are based on the DMX protocol used. ColorCommand uses a 4-channel protocol.

Parameters for each channel are described in the ColorPower Protocol Table on the following pages. DMX values are given in decimal, percentage and hexadecimal units.

## Homing the Fixture Using a DMX Controller

ColorPower and all connected units automatically home when power is initially applied. You can rehome a fixture at anytime from the menu system, see "Reset and Home (RST)" on page 3-3. You can also home the units using a DMX controller with the following procedure:

1. Set the ColorPower DMX channel to the appropriate value for the desired unit(s) (see "ColorPower DMX Protocol Table" on page 3-5) and hold the value static for at least one second.
2. Return the ColorPower DMX channel to 0 (Safe). The specified unit(s) will home.

## ColorPower DMX Protocol Table

Chan	Parameter	Description	Value (dec.)	Value (%)	Value (hex)
1	CONTROL	Safe	0-15	0-6	00h-0Fh
		Display OFF	16-23	6-9	10h-17h
		Display DIM	24-31	9-12	18h-1Fh
		Display BRIGHT	32-39	13-15	20h-27h
		<i>Reserved</i>	40-47	16-18	28h-2Fh
		<i>Reserved</i>	48-63	19-25	30h-3Fh
		Home All	64-71	25-28	40h-47h
		Home Unit 0	72-79	28-31	48h-4Fh
		Home Unit 1	80-87	31-34	50h-57h
		Home Unit 2	88-95	35-37	58h-5Fh
		Home Unit 3	96-103	38-40	60h-67h
		Home Unit 4	104-111	41-44	68h-6Fh
		Home Unit 5	112-119	44-47	70h-77h
		Home Unit 6	120-127	47-50	78h-7Fh
		Home Unit 7	128-135	50-53	80h-87h
		Home Unit 8	136-143	53-56	88h-8Fh
		Home Unit 9	144-151	57-60	90h-97h
		Home Unit A	152-159	60-62	98h-9Fh
		Home Unit B	160-167	63-66	A0h-A7h
		Home Unit C	168-175	66-69	A8h-AFh
		Home Unit D	176-183	69-72	B0h-B7h
Home Unit E	184-191	72-75	B8h-BFh		
Home Unit F	192-199	75-78	C0h-C7h		
<i>Reserved</i>	200-255	78-100	C8h-FFh		

3

## ColorCommand DMX Protocol Table

Chan	Parameter	Description	Value (dec.)	Value (%)	Value (hex)
1	Cyan	Cyan (0 = open, 255 = fully saturated)	0-255	0-100	00-FF
2	Magenta	Magenta (0 = open, 255 = fully saturated)	0-255	0-100	00-FF
3	Yellow	Yellow (0 = open, 255 = fully saturated)	0-255	0-100	00-FF
4	Beam Angle	Beam Angle (0 = narrow, 255 = wide)	0-255	0-100	00-FF




# Appendix A:

# Important Safety Information

## Warning: For Continued Protection Against Fire

1. This equipment (ColorCommand™) is designed for use with a Philips #134205 (750W) / #134213 (800W) lamp only. Use of any other type lamp may be hazardous and may void the warranty.
2. Do not mount on a flammable surface.
3. Maintain minimum distance of .3 meter (0.98 foot) from combustible materials.
4. Replace fuses only with the specified type and rating.
5. This equipment for connection to branch circuit having a maximum overload protection of 20 A.

## Warning: For Continued Protection Against Electric Shock

1. If this equipment was received without a line cord plug, attach the appropriate line cord plug according to the following code:
  - brown–live
  - blue–neutral
  - green/yellow–earth
2. As the colours of the cores in the mains lead of this equipment may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
  - the core which is coloured green and yellow must be connected to the terminal in the plug which is marked with the letter E or by the earth symbol , or coloured green or green and yellow.
  - the core which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
  - The core which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.
3. Class I equipment. This equipment must be earthed.
4. Equipment suitable for dry locations only. Do not expose this equipment to rain or moisture.
5. Disconnect power before re-lamping or servicing.
6. Refer servicing to qualified personnel; no user serviceable parts inside.

## Warning: For Continued Protection Against Exposure To Excessive Ultraviolet (UV) Radiation

1. Do not operate this equipment without complete lamp enclosure in place or if shields, lenses, or ultraviolet screens are damaged.
2. Change shields, lenses, or ultraviolet screens if they have become visibly damaged to such an extent that their effectiveness is impaired, for example by cracks or deep scratches.
3. Never look directly at the lamp while lamp is on.

## Warning: For Continued Protection Against Injury To Persons

1. Use secondary safety cable when mounting this fixture.
2. Caution: hot lamp may be an explosion hazard. Do not open for 5 minutes after switching off. Wear eye and hand protection when re-lamping.
3. Equipment surfaces may reach temperatures up to 100° C (212° F). Allow 5 minutes for cooling before handling.
4. Change the lamp if it becomes damaged or thermally deformed.



# Appendice A

## Importantes Informations Sur La Sécurité

### Mise En Garde: Pour Une Protection Permanente Contre Les Incendies

1. Cet appareil (ColorCommand™) est conçu uniquement pour une lampe Philips #134205 (750W) / #134213 (800W). Son utilisation avec tout autre type de lampe peut être dangereuse et annuler la garantie.
2. Ne pas monter les lampes sur une surface inflammable.
3. Maintenir à une distance minimum de 0.3 mètre de matières inflammables.
4. Ne remplacer les fusibles qu'avec des modèles et valeurs assignées recommandés.
5. Cet appareil de connection au circuit comporte une protection contre les surcharges de 20 A.

### Mise En Garde: Pour Une Protection Permanente Contre Les Chocs Électriques

1. Si cet équipement est livré sans prise de cable, veuillez connecter la prise de cable correcte selon le code suivant:
  - marron - phase
  - bleu - neutre
  - vert/jaune - terre
2. Débrancher le courant avant de changer les lampes ou d'effectuer des réparations.
3. Cet équipement doit être uniquement utilisé dans des endroits secs. Ne pas l'exposer à la pluie ou l'humidité.
4. À l'intérieur de l'équipement il n'y a pas de pièces remplaçables par l'utilisateur. Confiez l'entretien à un personnel qualifié.
5. Equipement de Classe I. Cet équipement doit être mis à la terre.

### Mise En Garde: Pour Une Protection Permanente Contre Des Expositions Excessives Aux Rayons Ultra Violets (UV)

1. Ne pas utiliser cet appareil si le boîtier de la lampe n'est pas complètement fixé ou si les blindages, lentilles, ou écrans ultraviolets sont endommagés.
2. Changer les blindages ou les écrans ultraviolets s'ils sont visiblement endommagés au point que leur efficacité aient été altérée, par exemple par des fissures ou de profondes égratignures.
3. Ne jamais regarder directement la lampe quand celle ci est allumée.

### Mise En Garde: Pour Une Protection Permanente Contre Les Blessures Corporelles

1. Lors de l'assemblage, utiliser un câble de sécurité secondaire.
2. AVERTISSEMENT: les lampes chaudes comportent un risque d'explosion. Après l'avoir éteinte, attendre 5 minutes avant de la dégager. Lors du remplacement de la lampe, une protection des yeux et des mains est requise.
3. Les surfaces de l'appareil peuvent atteindre des températures de 100 C. Laisser refroidir pendant 5 minutes avant la manipulation.
4. Changer la lampe si elle est endommagée ou thermiquement déformée.

# Anhang A

## Wichtige Hinweise Für Ihre Sicherheit

### Warnung: Zum Schutz Vor Brandgefahr

1. Dieses Gerät (ColorCommand™) ist nur für den Gebrauch mit einer Philips #134205 (750W) / #134213 (800W) Lampe . Der Gebrauch irgend eines anderen Lampentyps könnte Sie gefährden und Ihre Garantie außer Kraft setzen.
2. Das Gerät nie auf einer feuergefährlichen Fläche montieren.
3. Stets einen Mindestabstand von 0.3 Meter zu brennbaren Materialien einhalten.
4. Zum Ersatz nur Sicherungen verwenden, die dem vorgeschriebenen Typ und Nennwert entsprechen.
5. Dieses Gerät darf nur an eine Zweigleitung mit einem Überlastungsschutz von höchstens 20 A angeschlossen werden.

### Warnung: Zum Schutz Gegen Gefährliche Körperströme

1. Wenn dieses Gerät ohne einen Netzkabelstecker erhalten wurde, ist der entsprechende Netzkabelstecker entsprechend dem folgenden Code anzubringen:
  - Braun - Unter Spannung stehend
  - Blau - Neutral
  - Grün/Gelb - Erde
2. Vor dem Austauschen von Lampen oder vor Wartungsarbeiten stets den Netzstecker ziehen.
3. Diese Geräte sind nur zum Einbau in trockenen Lagen bestimmt und müssen vor Regen und Feuchtigkeit geschützt werden.
4. Servicearbeiten sollten nur von Fachpersonal ausgeführt werden. Das Gerät enthält keine wartungsbedürftigen Teile.
5. Dieses Gerät gehört zur Klasse I. Dieses Gerät muß geerdet werden.

### Warnung: Zum Schutz Gegen Übermäßige Ultraviolett (UV)-Bestrahlung

1. Benutzen Sie dieses Gerät nur, wenn das komplette Lampengehäuse fest eingebaut ist; ebenfalls dürfen keine der Schutzabdeckungen, Linsen oder der UV-Schutz Beschädigungen aufweisen.
2. Die Schutzabdeckungen, Linsen und der UV-Schutz müssen ausgewechselt werden, wenn sie sichtlich dermaßen beschädigt sind, daß sie ihre Wirksamkeit einbüßen, z.B. infolge von Rissen oder tiefen Kratzern.
3. Nie direkt in die eingeschaltete Lampe schauen.

### Warnung: Zum Schutz Vor Verletzungen

1. Verwenden Sie bei der Installation des Beleuchtungskörpers ein zusätzliches Sicherheitskabel.
2. VORSICHT: Bei einer heißen Lampe besteht Explosionsgefahr. Nach dem Abschalten der Netzspannung sollten Sie etwa 5 Minuten warten, bevor Sie das Lampengehäuse öffnen. Schützen Sie beim Auswechseln der Lampen Ihre Hände und tragen Sie eine Schutzbrille.
3. Die Oberflächen des Gerätes können Temperaturen bis zu 100 C erreichen. Vor dem Anfassen stets 5 Minuten lang abkühlen lassen.
4. Falls die Lampe beschädigt oder durch Wärmeeinwirkung verformt ist, muß sie ausgewechselt werden.



# Apéndice A

## Información Importante De Seguridad

### Advertencia: Para Protección Continua Contra Incendios

1. Este equipo (ColorCommand™) está diseñado para utilizarse únicamente con la lámpara Philips #134205 (750W) / #134213 (800W). El uso de cualquier otro tipo de lámpara podrá resultar peligroso, y podrá anular la garantía.
2. No monte el equipo sobre una superficie inflamable.
3. Mantenga una distancia mínima de materiales combustibles de 0.3 metro.
4. Cambie los fusibles únicamente por otros que sean del tipo y la clasificación especificadas.
5. Este equipo debe conectarse a un circuito que tenga una protección máxima contra una sobrecargas de 20 A.

### Advertencia: Para La Protección Continua Contra Electrocuiones

1. Si se recibió este equipo sin el conector de alimentación, monte usted el conector correcto según la clave siguiente:
  - moreno - vivo
  - azul - neutral
  - verde/amarillo - tierra
2. Desconecte el suministro de energía antes de cambiar lámparas o prestar servicio de reparación.
3. Este equipo está diseñado para usarse en lugares secos no lo exponga a la lluvia o humedad.
4. Derive el servicio de reparación de este equipo al personal calificado. El interior no contiene repuestos que puedan ser reparados por el usuario.
5. Equipo de Clase I. Este equipo debe conectarse a tierra.

### Advertencia: Para Protección Continua Contra La Exposición A Radiación Ultravioleta (UV) Excesiva

1. No opere este equipo sin tener colocada en su lugar la caja protectora completa de la lámpara o bien, si el blindaje, los lentes o las pantallas ultravioletas están dañadas.
2. Cambie el blindaje, los lentes o las pantallas ultravioleta si nota una avería visible, a tal grado que su eficacia se vea comprometida. Por ejemplo, en el caso de grietas o rayaduras profundas.
3. Jamás mire directamente a la lámpara mientras ésta esté encendida.

### Advertencia: Para Protección Continua Contra Lesiones Corporales

1. Almontar este aparato utilice un cable de seguridad secundario.
2. Precaución: una lámpara caliente puede constituir un peligro de explosión. No la abra por 5 minutos luego de haberla apagado. Lleve puestos, un protector ocular, y guantes al cambiar las lámparas.
3. Las superficies del equipo pueden alcanzar temperaturas máximas de 100° grados centígrados. Deje que se enfríen por 5 minutos antes de tocarlas.
4. Cambie la lámpara si ésta se avería o deformada por acción térmica.



# Appendice A

## Importanti Informazioni Di Sicurezza

### Avvertenza: Per Prevenire Incendi

1. Questa apparecchiatura (ColorCommand™) è stata progettata per l'uso esclusivo con lampada Philips #134205 (750W) / #134213 (800W). L'uso di qualsiasi altro tipo di lampada può essere pericoloso e può annullare la garanzia.
2. Da non montare sopra una superficie infiammabile.
3. Mantenere l'apparecchio a un minimo di 0.3 metri (0.98 piedi) di distanza dai materiali combustibili.
4. Sostituire i fusibili usando soltanto quelli del tipo e della taratura adatta.
5. Questa apparecchiatura e' da collegarsi ad un circuito con una protezione da sovraccarico massima di 20 ampere.

### Avvertenza: Per Prevenire Le Scosse Elettriche

1. Se questa apparecchiatura è stata consegnata senza una spina del cavo di alimentazione, collegare la spina appropriata del cavo di alimentazione in base ai seguenti codici:
  - marrone - fase
  - blu - neutro
  - verde/giallo - terra
2. Disconnettere la corrente prima di cambiare la lampada o prima di eseguire qualsiasi riparazione.
3. Questo apparecchio deve essere utilizzato in ambienti secchi. Non deve essere esposto a pioggia o montato in luoghi umidi.
4. Per qualsiasi riparazione rivolgersi al personale specializzato. L'utente non deve riparare nessuna parte dentro l'unità.
5. Apparecchio di Classe I. Questa apparecchiatura deve essere messa a terra.

### Avvertenza: Protezione Contro Le Radiazioni Dei Raggi Ultravioletti

Non usare questa apparecchiatura se il sistema di chiusura della lampada non e' completo o se gli schermi, le lenti, o gli schermi ultravioletti si sono visibilmente danneggiati di maniera tale che la loro efficacia sia stata ridotta --- ad esempio, se vi sono visibili spaccature o graffi profondi. Mai guardare direttamente verso la lampada quando sia accesa.

### Avvertenza: Per Non Ferire Ad Altre Persone

1. Montare questo apparecchio utilizzando il cavo secondario di sicurezza.
2. Avvertenza: la lampada calda potrebbe esplodere. Spegnerla per 5 minuti prima di aprirla. Usare protezioni per le mani e per gli occhi prima di cambiare la lampada.
3. Le superfici della apparecchiatura possono arrivare a temperature di 100 gradi centigradi (212 gradi f). Aspettare 5 minuti prima di maneggiare.
4. Cambiare la lampada se si e' danneggiata o se si e' deformata dal calore.



# Vigtig Sikkerhedsinformation

Advarsel: Beskyttelse mod elektrisk chock.

VIGTIGT!

LEDEREN MED GUL/GROEN ISOLATION MAA KUN TILSLUTTES KLEMME MAERKET

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