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# Operation Manual

## KINO KOLORIS



**KINO FLO**

L I G H T I N G   S Y S T E M S

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# KOLORIS System

The Koloris Lighting System is designed to provide rich, saturated colors and color changing effects. The fixtures are made of rugged die-cast aluminum housings and can operate either in studio or in exterior applications. They display a beam angle of approximately 24 degrees.

The Koloris System is comprised of LED light fixtures and a 200 watt 24 Volt DC power supply. The power supply allows the lamps to be operated from a theatrical lighting board using DMX 512. Each power supply will operate 4 fixtures of either size, C6 or C12. By mixing the Red, Green and Blue LED's within each fixture, you can achieve 16 million additive RGB colors in variable intensity.

## KOLORIS Kit Assemblies



### KOLORIS C12 Kit

#### **KIT-K12 Contents:**

- 1 24 Volt Power Supply & IEC power cords..... **KOL-P200**
- 4 Koloris C12, 50 watt Heads, ..... **KOL-C12**
- 8 Koloris 4 pin XLR Extension Cables, 25ft..... **KOL-X25**
- 5 Twist-On Mounts w/Baby Receiver/Short..... **MTP-B41S**
- 1 Koloris C12 Kit Ship Case..... **KAS-K12**



## KOLORIS C6 Kit

### KIT-K6 Contents:

- 1 24 Volt Power Supply & IEC power cords..... **KOL-P200**
- 4 Koloris C6, 25 watt Heads,..... **KOL-C6**
- 8 Koloris 4 pin XLR Extension Cables, 25ft..... **KOL-X25**
- 5 Twist-On Mounts w/Baby Receiver/Short..... **MTP-B41S**
- 1 Koloris C6 Kit Ship Case..... **KAS-K6**

## Fixture Operation



Each KOLORIS Fixture is made up of Red, Green and Blue LEDs and requires 3 DMX addresses, one for each color.

The first address controls the Red, the second Green and the third Blue. After a DMX address is entered the KOLORIS power supply automatically assigns the next 2 addresses to the next set of lamps in the unit.

Set subsequent fixture addresses in groupings of 3. For example if the first fixture is address 001, the second fixture address should be 004, then 007, 010 and so on.

Adjust the dim level of each channel in a fixture to generate different colors.

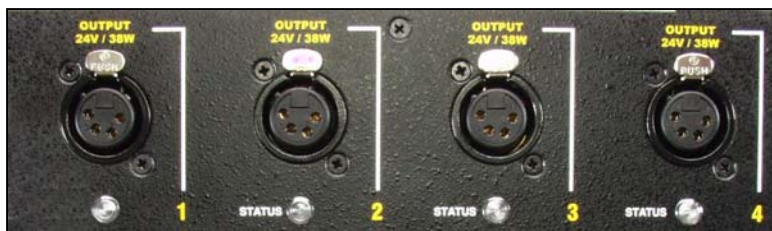


The Twist-On mount is used to mount the fixture to either a baby stand or a baby pipe hanger.

1. First align the center pin of the mount plate with the mating plate on the Fixture.
2. Rotate the plate clockwise until the four shoulder rivets drop into the receptacle. A locking pin will snap into place when the plate is properly seated.



To remove the plate, pull up on the locking pin and rotate the plate counter clockwise.



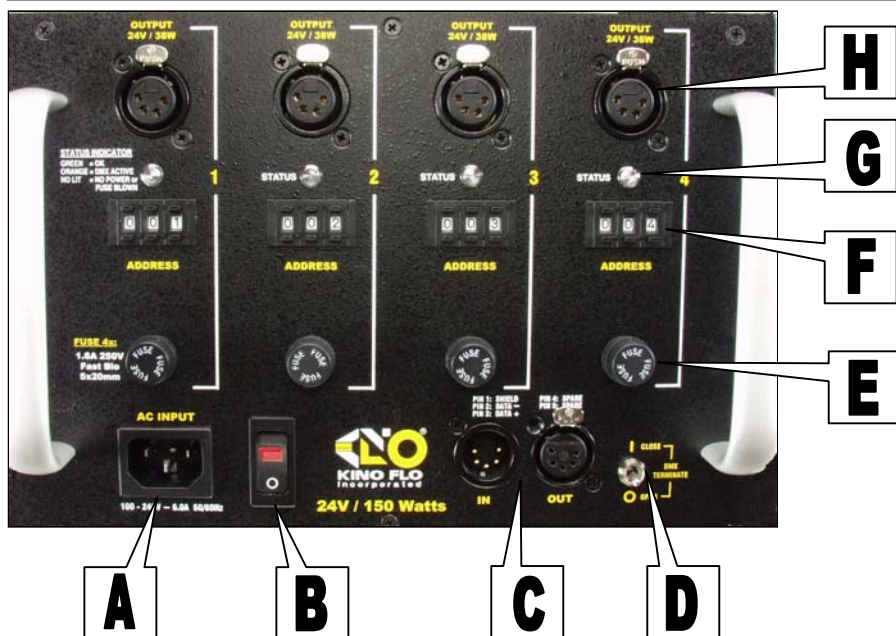
Plug the KOLORIS Fixture into one of the four Fixture OUTPUT ports. Each port can operate either a C6 or C12 Fixture.



### **Extreme Temperature Fault Mode**

If the Fixture is subjected to unsafe high temperatures a fault circuit will cause the lamps to operate in a dull red mode. Unplugging the fixture for a few minutes will reset the fault circuit.

# Koloris Control Panel



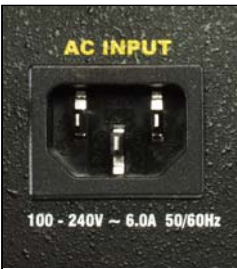
- A) AC INPUT:** 100-240VAC universal voltage input. 50/60 Hz ~ 6.0A
- B) Power Switch:** Has built-in indicator light, which can detect if AC power is present. "0" = OFF position.
- C) DMX-In & DMX-Out:** DMX-IN receives signals from Dimmer Board, DMX-OUT relays DMX signal through to other Fixtures or Instruments.
- D) DMX TERMINATE Switch:** Terminates DMX signal at the end of Fixture series.
- E) FUSE:** Provides circuit protection. *Note: If Fuse is "blown" or "open" replace with same type of fuse rating as marked.*
- F) DMX Address:** Sets DMX address of Fixture.
- G) STATUS Light:** Light is **ON** if the fixture is receiving a valid DMX signal. Light **BLINKS** on and off if DMX address is out of range or invalid. Light is **OFF** if no DMX signal is present or power is off.
- H) Fixture Output:** plug in either the Koloris C6 Fixture or the C12.

# Koloris Side Panel View



A Twist-On mount can be attached to the side of the power supply. This would enable the power supply to be clamped to a grid pipe using a Maffer clamp or Baby C-Clamp.

## Power Requirements



The Koloris Power supply requires 100-240 Volts AC, 50/60Hz and is rated for a maximum 8.0 amp draw. Use the appropriate IEC cable to connect to AC power.

Do Not operate the power supply through a dimmer rack.

**OVER TEMPERATURE FAULT:** In ambient temperatures above 122°F (50°C) the Koloris Power Supply may signal an Over Temperature Fault by flashing all fixtures on and off for about 15 seconds. Relocate the power supply to a cooler environment to correct the condition.

# KOLORIS DMX Operation



## DMX Addressing

Valid addresses range from 001 to 512. Push the tabs above or below the number window to set the address.

The **STATUS** light above the address block is used for troubleshooting:

Light is **ON** if the fixture is receiving a valid DMX signal.

Light **BLINKS** on and off if DMX address is out of range or invalid.

Light is **OFF** if no DMX signal is present or the unit has no power.

**NOTE: If a Fixture loses its DMX signal it will hold it's last DMX command.** For this reason it is important to turn a Fixture off using the DMX commands. For example if you try to turn off the lights by turning off the dimmer board the lights will remember their last DMX command and stay on. The Fixtures require a DMX "Off" or "Black-out" command in order to turn off.

# DMX Terminate Switch



The **DMX Terminate Switch** must be set to OPEN ( **O** ) on units within the DMX chain.

Set to CLOSE ( **I** ) when the unit is the last DMX control device in the chain.

# DMX512 Line Routing / Jumpering



Connect the DMX cable from the dimmer board to the DMX-IN port on the KOLORIS Power Supply.

Multiple KOLORIS Power Supplies can be jumpered together using the DMX IN and OUT ports. As many as 100 Kino Flo DMX units can be jumpered on one chain as long as the DMX cable run remains under 1000 feet or 40 x 25ft DMX cables.

**Note:** When operating DMX units at great distances from the dimmer board it is recommended to use Opto-Isolators to provide DMX signal amplification.

## DMX Cable



Kino Flo DMX products use five-pin XLR male and female connectors to receive DMX signals from the Dimmer Board and to jumper the units in a series.

DMX pin-out wiring follows the USITT DMX512 standard:

- Pin 1: Shield** Foil and braid shield.
- Pin 2: Data -** First conductor of the first twisted pair.
- Pin 3: Data +** Second conductor of the first twisted pair.
- Pin 4: Spare -** First conductor of the second twisted pair.
- Pin 5: Spare +** Second conductor of the second twisted pair.

*Note: Pin four and five in the DMX unit are connected internally as Pin four to four and Pin five to five. Connecting Pin four and five as the pass-thru allows secondary data to be passed through for other equipment.*

**No connection should be made on the shell of either end of the XLR connectors.**

## Cable Type

The type of cable used is critical for reliable operation. It should conform to the following requirements for EIA485 (RS485) operation at 250k baud:

- Characteristic impedance 85-150 ohms, nominally 120 ohms
- Low capacitance
- One or more twisted pairs
- Foil and braid shielded
- 24 AWG min. gauge for runs up to 300m (1000')
- 22 AWG min. gauge for runs up to 500m (1640')

**Do Not use Microphone Cables** and other, general purpose, two-core Cables designed for audio or signaling use. They are not suitable for DMX512. Problems due to incorrect cabling may not be immediately apparent. Microphone Cables may appear to work fine, but systems built with such Cables may fail or be prone to random errors. Cable must comply with EIA-485 (RS485).

# DMX Troubleshooting Guide

Following is a checklist of solutions to common problems with DMX technology:

**Symptom:** DMX unit not receiving signal

- DMX unit not set to valid address "001" to "512."
- Dmx cable not connected to unit, dimmer board, not jumpered properly or faulty cable.
- DMX unit not plugged into A/C.
- Too many devices on the line. This could happen if you have DOL isolating receivers. Otherwise, up to 32 standard EIA485 receivers are allowed. Kino Flo DMX units equal 1/8 of a standard device. If all units are Kino Flos, potential units equal 256.

**Symptom:** DMX unit intermittent or flashing

- End of line not terminated.
- Faulty Cable.
- Faulty channel on dimmer board or the dimmer board itself.
- The conductors are connected at both ends of the cable. DMX512 has a tendency to work intermittently even if the inverted data wire is cut (Pin two).
- One of the data signals is missing. This may cause random flickering during an apparently normal operation.
- The introduction of an opto-isolator in the network clears up or reduces the problem. If so, there is probably a ground-loop effect taking place. You may be able to reroute the power cabling to minimize this. Otherwise, you may have to introduce opto-isolator to some branches of — or the whole of — the DMX network.

**Symptom:** Don't have individual Fixture control

- Make sure each Fixture has a unique address

**Symptom:** Don't have individual lamp control:

- Fixture must be set to Individual Lamp option.
- Must "reserve" addresses from one unit to the next ( see Operation Manual for particular model or Product)

**Symptom:** Random flashing of fixtures and lamps when powering up from a dimmer board:

- Circuits must be set to **non-dim**. Turning on fixtures by dimming on power, causes DMX receiver to malfunction resulting in erratic behavior of fixtures.

## Accessories and Parts



**MTP-L** Lollipop  
w/ 3/8" pin



**MTP-LB** Lollipop  
w/Baby  
Receiver



**XLR-15** DMX  
extension  
cable, 15ft.  
**XLR-25** DMX  
extension  
cable, 25ft.



**KOLX/PWS** 24 Volt  
Pigtail

**KOL/CTRL** DMX  
Color  
Controller

# Cases

**KAS-K12**



**KAS-K6**



Part Number	Description	Dimensions	Weight ( Empty)
<b>KAS-K12</b>	Koloris C12 Kit Ship Case w/ retractable handle	24.5" x 16" x 17" 62cm x 40.5cm x 43cm	33 lbs / 14.9 Kg
<b>KAS-K6</b>	Koloris C6 Kit Ship Case w/ retractable handle	26.5" x 17" x 13" 67.5cm x 43cm x 33cm	33 lbs / 14.9 Kg

# Fixture Specs



**Model: KOL-C12**

**Input Voltage:** 24VDC

**Power:** 50 watt / 2 amps

**Beam angle:** 24°

**Temperature range:** -4°F to 122°F (-20°C to 50°C)

**Color range:** 16.7 million additive RGB colors

**Weight:** 3.9 lbs / 1.8 Kg

**Dimensions:** 12.5" x 5.5" x 2"

32cm x 14cm x 5cm



**Model: KOL-C6**

**Input Voltage:** 24VDC

**Power:** 25 watt / 1 amp

**Beam angle:** 24°

**Temperature range:** -4°F to 122°F (-20°C to 50°C)

**Color range:** 16.7 million additive RGB colors

**Weight:** 3.5 lbs / 1.6 Kg

**Dimensions:** 6.5" x 5.5" x 2"

16.5cm x 14cm x 5cm

## Power Supply Specs



**Model: KOL-P200**

**Input voltage:** 100-230 VAC, 50/60 Hz

**Power:** 200 watts / 8.0 amps

**Weight:** 5.7 lbs / 2.6 Kg

**Dimensions:** 10 " x 7" x 6"

25.5cm x 18cm x 15cm

**Temperature range:** -4°F to 122°F (-20°C to 50°C)

### Environmental: Disposal of Old Electrical & Electronic Equipment.



This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. This product is made of recyclable materials and should be disposed of in accordance with local and state regulations.

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