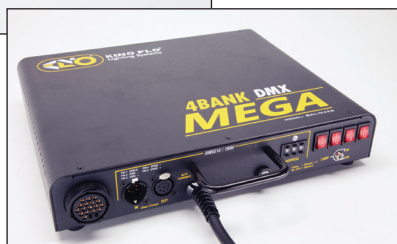
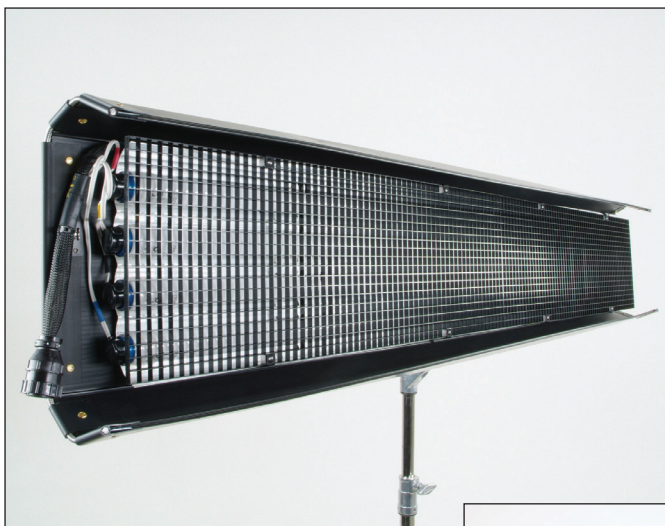


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# Operation Manual

## Mega 4Bank DMX



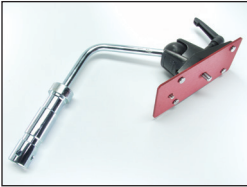
**KINO FLO®**  
Lighting Systems

# System



**CFX-9604** 8ft Mega 4Bank Fixture

**CFX-7204** 6ft Mega 4Bank Fixture



**MTP-K81** Kino 81 Mount w/ Junior Pin (28mm)



**X19-25M** Mega 4Bank Extension, 25ft



**BAL-455-M120** Mega 4Bank DMX Ballast, 120VAC

**BAL-455-M230** Mega 4Bank DMX Ballast, 230VAC

**Each Mega 4Bank DMX System consists of:**

- 1 Mega Fixture
- 1 Mounting Plate
- 1 Extension Cable
- 1 Mega 4Bank DMX Ballast

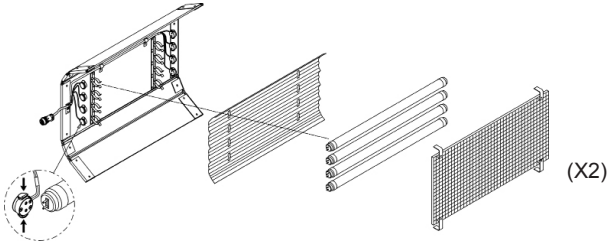
# True Match® Lamps



**722-K32-S** 6ft Kino KF32  
**722-K55-S** 6ft Kino KF55

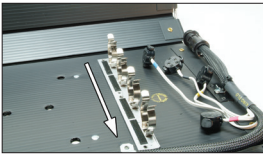
**962-K32-S** 8ft Kino KF32  
**962-K55-S** 8ft Kino KF55

# Fixture Assembly



The Mega 4Bank fixture is comprised of two removable Louvers, a Reflector and a Lamp Harness. The Louvers and Reflector are held in place with Velcro fasteners. The Lamp Harness is secured by means of a  $\frac{1}{4}$  turn fastener and two clips.

Note: The 8ft fixtures include two 4ft louvers; the 6ft fixtures include two 3ft louvers.



## To Release the Lamp Harness

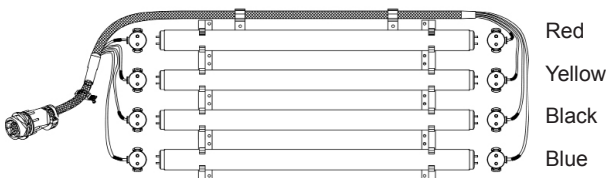
Remove the harness from clips located under the reflector. Rotate the  $\frac{1}{4}$  turn fastener clockwise to release harness.



The lamps can operate independent of the fixture allowing them to be built into sets or custom soft boxes or hand-held as a single tube for an eye-light.

**WARNING:** Always use safety-coated lamps to avoid injury if lamp breaks.

## Lamp Harness Color Codes



## Mega 4Bank Harness

The Harness wiring is color-coded. The same color-code must match at each end of the lamp for proper operation.

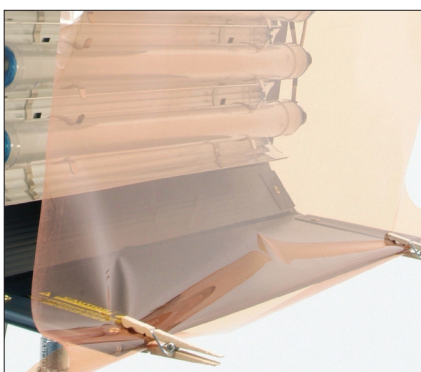
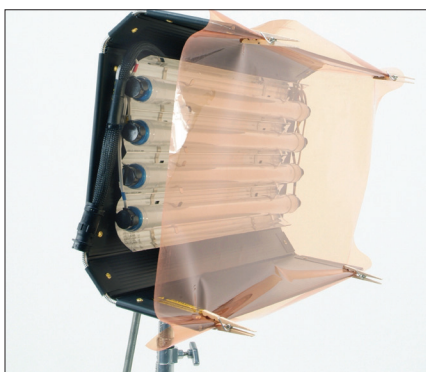
# Inserting Lamps



## Locking Lamp Connector:

Depress both tabs on lamp connector and apply to lamp pins.  
Match the Harness color-codes at each end of the lamp.  
Push lamps into the fixture's Lamp Holder Clips.

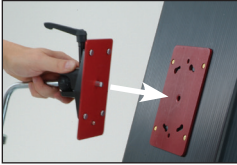
# Gelling the Fixture



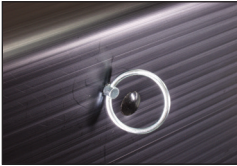
Restricting the airflow around the lamps can cause the lamps to operate hotter. This increased heat will raise the lamp's color temperature and green spike. Therefore, it is recommended to clip gels to the doors of the fixture.

**Remove louvers.** **Do Not** clip gels to louver. **Do Not** block the fixture ends in a manner that restricts airflow.

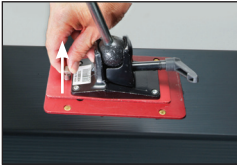
# Mounting the Fixture



Align the center pin of the mounting plate (**MTP-K81**) to the center hole on the mating plate. Rotate plate clockwise until the four shoulder rivets drop into the receptacle. A locking pin will snap into place when the plate is properly seated.



The **Silver Rings** provide attachment points for a safety chain.



**To remove the plate**, pull up on the locking pin and reverse the mounting procedure.



A 180° turn loosens the orientation of the mount. A right turn tightens the mount.



The tension on the lock lever may be adjusted by pulling the handle away from the mount.

This disengages the handle from the screw mechanism and allows it to be reoriented.

Note: You can also use a screwdriver to adjust the travel. Pull back on handle and adjust the screw in the center of the handle.

## Other Fixture Mounting Options



The grommet holes along the edge of the fixture are designed to allow the fixture to be screwed onto set walls.

## Extension Cable



To insert the cable, position the logo up to align the key ways on the extension cable with the circular receptacle on the ballast. Rotate the locking ring until it clicks into the lock position.

Lamps can operate as far as 75 feet from the ballast (3 x 25ft extensions).



A **Splitter** can be used at the Ballast or on the end of an Extension Cable to split a Mega 4Bank run into either four Mega Singles or two Mega Doubles. This allows for greater rigging flexibility.



A **Combiner** can connect a number of smaller ballasts to a larger fixture. For example, 4 Mega Single Ballasts or two Mega Double Ballasts can be combined to a Mega 4Bank Extension or Fixture.

# Ballast Operation

## **WARNING!**

- 1) ALWAYS TURN OFF THE BALLAST BEFORE connecting or disconnecting Lamps, Harnesses or Extension Cables.
- 2) Use only with Sine wave inverters. Do not operate on SCR dimmers.
- 3) If powering the ballasts through a Dimmer Pack, set the Dimmer to Non-Dim mode.

The 120VAC Ballast requires 110 to 130 Volts AC 50/60 Hertz on an earth grounded circuit; the 230VAC Ballast requires 220 to 240 Volts AC on an earth grounded circuit. The electronic Ballast operates at a high frequency of 25 kHz. It is dead-quiet, instant-on and lightweight.

The Ballast operates remote from the fixture. Connect the Extension cable to the Ballast and the Lamp Harness. After the lamps are properly installed, the Ballast can be turned on.

## **Load Considerations**

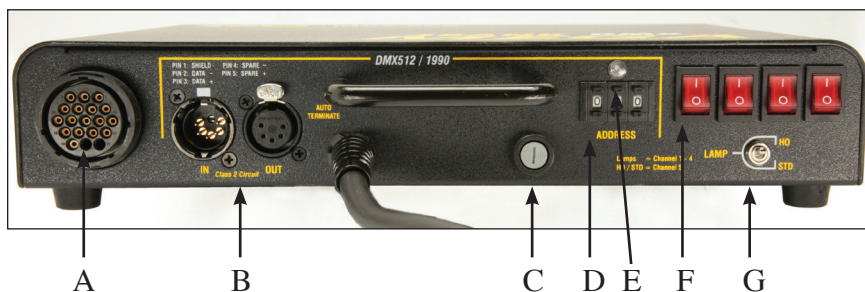
Kino Flo Mega ballasts are not power factor corrected. They will draw double the current on the neutral from what is being drawn on the two hot legs. On large installations it may be necessary to double your neutral run so as not to exceed your cable capacity.

## **Cold Temperature Operation**

The Mega Ballast series is designed to operate at temperatures from 14F to 122F (-10C to +50C). In cold temperatures, the Ballast may not strike the lamp(s) instantly. Switch the Ballast to OFF, wait seven seconds and try again. If the Ballast does not strike after two or three attempts, turn off the Ballast, check that the Extension and Harness connections are secure and re-strike. Once operating for a few minutes, the lamps should re-strike instantly.



# Mega 4Bank DMX Control Panel

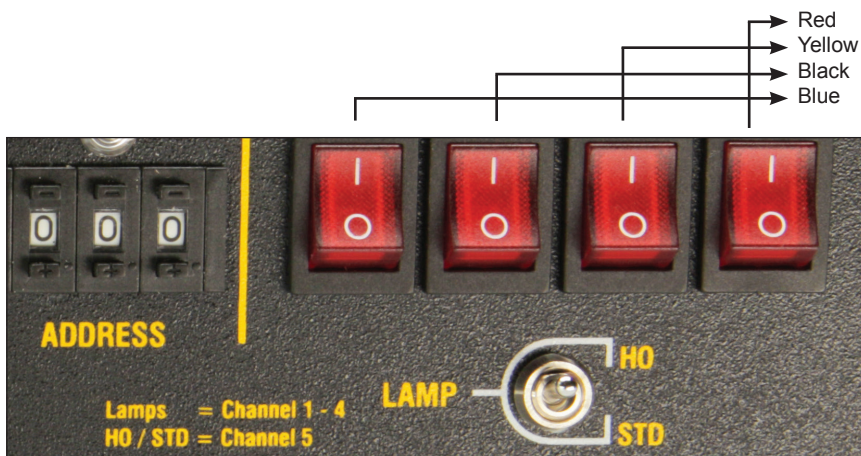


- A) **Circular Output Connector:** Provides electrical power to the lamp head with the use of a Mega 4Bank extension cable.
- B) **DMX-In & DMX-Out:** DMX-In receives DMX signals from Dimmer Board. DMX-Out relays DMX signals through other Fixtures or Instruments. (**Note:** Each Mega 4Bank DMX ballast (BAL-455M Series) has an “**Auto Terminate**” feature. The last ballast that does not have an XLR cable attached to the “Out” port will automatically terminate.)
- C) **Fuse:** Provides circuit protection. Note: If Fuse is “blown” or “open”, replace with same type of fuse rating as marked.
- D) **DMX Address:** Sets DMX Address.  
(Channels 1~4 = Lamps; Channel 5 = HO/Std)
- E) **DMX Indicator:** Lights if valid DMX signal is present.
- F) **Manual Switches:** Turns lamps on and off manually.
- G) **HO/STD:** Set to HO for High Output and Std for Standard light output.



# Manual Operation

The Ballast operates remote from the fixture. Connect the Extension cable to the Ballast and the Lamp Harness. After the lamps are properly installed, the Ballast can be turned on. Each switch controls one lamp. The color bands on the lamp harness correspond to the switches as illustrated.



## Lamp Select Feature

The Mega Ballasts have an **HO/Std** switch. Set the selector switch to **HO** for High Output and **Std** for Standard light output.

When operating 8ft or 6ft lamps in high ambient temperature or where the units are rigged into place with restricted airflow, the Std setting can be used to lower the color temperature and remove any green spike. The light drops about a half f-stop in exposure when dropping from **HO** to **Std**.

Note: The **HO/Std** switch is disabled as soon as the DMX cable is applied.

To control the **HO/Std** switch with DMX cables plugged in:

- 1) Unplug the DMX cable or
- 2) Leave cables plugged in and set DMX address to "000". There is a 5 second delay when switching between DMX and Manual control.

# Mega 4Bank DMX Operation



## IMPORTANT!

The dimmer board/light console should have its channel set to LINEAR light output response. (LINEAR response is the default setting on most dimmer boards.)

## DMX Addressing

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

The yellow light above the address block will illuminate if a DMX signal is present.

## Each Mega 4Bank DMX ballast operates on

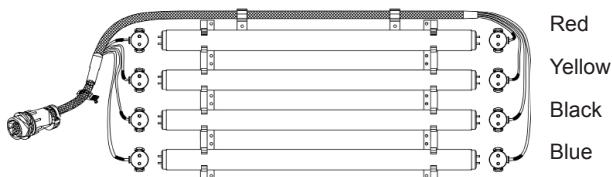
**5 addresses.** This is useful in achieving light effects like flickering, chasing or creating light patterns. Individual lamps or fixtures can be rigged into a set by using a Mega Single or Mega Double splitter. A Mega Single splitter can provide 4 individual cable feeds to lamps or fixtures in a set. (See page 14 for parts.)

After the DMX address is entered, the Mega 4Bank DMX ballast automatically assigns the first 4 addresses to lamps 1-4 and the 5th address controls the **HO/Std** setting. The **HO/Std** setting is defaulted to **HO**.

To activate the **Std** lamp setting on address 5, set the dimmer slider to full. Setting the dimmer value under 49% or not programming address 5 will restore the **HO** setting.

**Note:** The **HO/Std** select setting controls all 4 lamps equally. Individual settings per lamp are not possible.

## Mega 4Bank DMX Lamp Sequence



## DMX Address Sequence

Lamp #	DMX Address
Lamp 1	1
Lamp 2	2
Lamp 3	3
Lamp 4	4
Std Setting	5

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

## Note: If a Ballast loses its DMX signal, it will hold its last

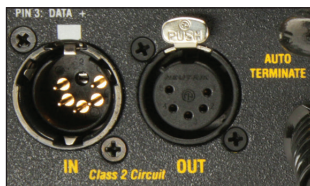
**DMX command.** For this reason, it is important to turn a Ballast off using the DMX commands. For example, if you try to turn off the lights by turning off the dimmer board, the lights will remember their last DMX command and stay on. The Ballasts require a DMX "Off" or "Black-out" command in order to turn off.

### To chase one lamp through multiple fixtures:

- 1) Set each ballast with its own address: 001, 006, 011, 016 and so on.
- 2) Program lamp sequence to chase from 001 through 004, 006-009, 011-014 and so on (note: skipping the HO/Std function).

### To chase same lamp position simultaneously through multiple fixtures:

- 1) Set each ballast address to 001 (or a common address).
- 2) Program address 005, 010, 015, etc. for Std operation.
- 3) Program lamps to chase from address 001-004.



### Auto Terminate Feature

The Mega 4Bank DMX ballasts (455 Series) have an “**AUTO TERMINATE**” feature. The last ballast that does not have an XLR cable attached to the DMX “Out” port will automatically terminate.

Any theatrical lighting board with DMX 512 protocol can be used to individually turn on/off lamps in a fixture. Mega 4Bank DMX ballasts can be jumpered using the IN and OUT ports. As many as 100 ballasts can be jumpered on one chain as long as the DMX cable run remains under 1000 feet or 40 x 25ft DMX cables.



**Do Not use Microphone Cables** and other general purpose, two-core cables designed for audio or signaling use. They are not suitable for DMX 512. 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).

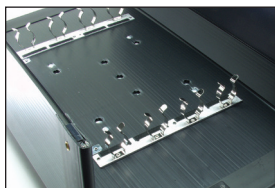
### DMX Cables

The ballast uses 5-pin XLR male and female connectors to receive DMX signals from the Dimmer Board and jumper the Fixtures in a series. DMX pin-out wiring follows the USITT DMX 512 standard:

- Pin 1: Shield**
- Pin 2: Data –**
- Pin 3: Data +**
- Pin 4: Spare –**
- Pin 5: Spare +**

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

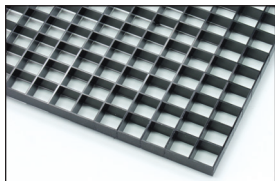
# Accessories and Parts



**FIX-9604** 8ft Mega 4Bank Fixture Shell  
**FIX-7204** 6ft Mega 4Bank Fixture Shell



**HAR-9604** 8ft Mega 4Bank Harness  
**HAR-7204** 6ft Mega 4Bank Harness



**LVR-4804-B** 4ft 4Bank Louver, Black  
**LVR-3604-B** 3ft 4Bank Louver, Black

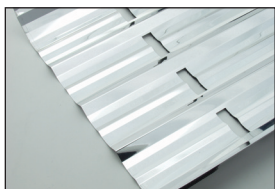
\* 8ft Fixtures require two 4ft Louvers  
\* 6ft Fixtures require two 3ft Louvers



**MTP-BAL** Kino Ballast Baby Mount (16mm)



**MTP-LM** Kino 81 Lollipop w/ Junior Pin (28mm)



**REF-9604** 8ft Mega 4Bank Reflector  
**REF-9604** 6ft Mega 4Bank Reflector



**X19-A7M** Mega 4Bank to Mega Single Splitter  
**X19-A9M** Mega 4Bank to Mega Double Splitter

## Expendables



**EXP-LHC-T12** Lamp Holder Clips, T12 (24pk)



**EXP-M&T** Adhesive Mounts & Releasable Ties (25pk)



**PRT-HLC** Kino Locking Lamp Connector (1pk)

See our website at [www.kinoflo.com](http://www.kinoflo.com) for more repair parts.

# Cases



**KAS-96**



**KAS-96L**

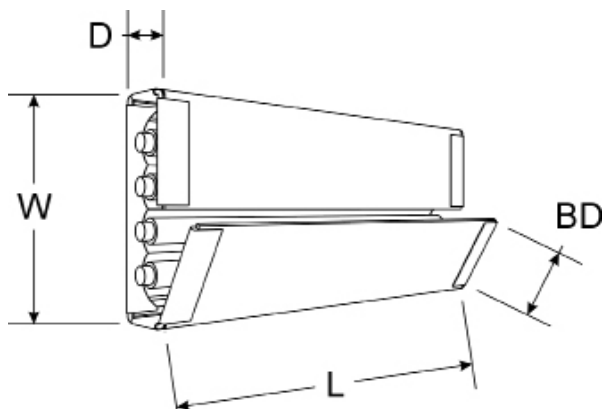


**KAS-KFC**

Part Number	Description	Dimensions	Weight (Empty)	Holds
<b>INS-L4</b>	4-Lamp Foam Pad	24 x 9 x 1" (61 x 23 x 2.5cm)	N/A	Fits KAS-48, 72, 96
<b>INS-L6</b>	6-Lamp Foam Pad	24 x 13 x 1" (61 x 33 x 2.5cm)	N/A	Fits KAS-54S, 54L, 96L
<b>KAS-72</b>	6ft Lamp Ship Case	72.5 x 11 x 12" (184 x 28 x 30.5cm)	20 lb (9kg)	6ft Lamps (20)
<b>KAS-96</b>	8ft Lamp Ship Case	97.5 x 11 x 14" (248 x 28 x 36cm)	29 lb (13kg)	8ft Lamps (24)
<b>KAS-96L</b>	8ft Fixture Ship Case	101.5 x 14.5 x 16.5" (258 x 37 x 42cm)	38.5 lb (17.5kg)	8ft Mega Double Fixtures (9)
<b>KAS-KFC</b>	Ballast & Cable Crate w/ Lid	21.5 x 15 x 12" (54.5 x 38 x 30.5cm)	6 lb (3kg)	Ballasts, Cables, Mounting Plates

# Fixture Specifications

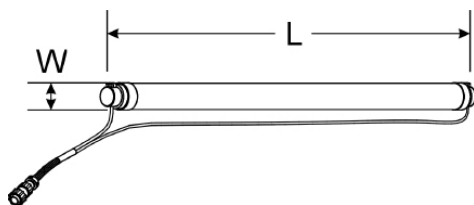
## Kino Flo Mega 4Bank Fixture Dimensions



Fixture Style	Length	Width	Depth	Barndoor Width	Weight w/ Lamps
8ft Mega 4Bank	97"	13"	3.5"	3.5"	21.8 lbs
6ft Mega 4Bank	73.5"	13"	3.5"	3.5"	18.5 lbs

# Lamp w/ Harness Specifications

## Kino Flo Lamp w/ Harness Dimensions



Lamp Type	Length	Width
8ft Med. Bi-Pin	94.5"	1.5"
6ft Med. Bi-Pin	70.5"	1.5"



# Ballast Specifications



**Mega 4Bank DMX**

**BAL-455-M120** Mega 4Bank DMX Ballast, 120VAC

**Input Voltage:** 120VAC 50/60Hz  
**Output Frequency:** 25kHz  
**Amperage:** F120/7.0A, F100/6.4A  
**Lamp Switching:** 1~4  
**Output Switching:** HO/Std  
**Ballast Size:** 13 x 12.5 x 2.5"  
(33 x 32 x 6.5cm)  
**Weight:** 6.5 lb (2.9kg)

**BAL-455-M230** Mega 4Bank DMX Ballast, 230VAC

**Input Voltage:** 230VAC 50/60Hz  
**Output Frequency:** 25kHz  
**Amperage:** F120/3.5A, F100/3.2A  
**Lamp Switching:** 1~4  
**Output Switching:** HO/Std  
**Ballast Size:** 13 x 12.5 x 2.5"  
(33 x 32 x 6.5cm)  
**Weight:** 6.8 lb (3.1kg)

For latest Warranty information and Certifications,  
see Kino Flo website at [www.kinoflo.com](http://www.kinoflo.com).

## 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 governmental regulations.

Kino Flo, Inc. 2840 N. Hollywood Way, Burbank, CA 91505, USA  
Tel: 818 767-6528 website: [www.kinoflo.com](http://www.kinoflo.com)