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
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 ¼ 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 ¼ 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**

- Red
- Yellow
- Black
- Blue

**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.
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

<table>
<thead>
<tr>
<th>Lamp #</th>
<th>DMX Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lamp 1</td>
<td>1</td>
</tr>
<tr>
<td>Lamp 2</td>
<td>2</td>
</tr>
<tr>
<td>Lamp 3</td>
<td>3</td>
</tr>
<tr>
<td>Lamp 4</td>
<td>4</td>
</tr>
<tr>
<td>Std Setting</td>
<td>5</td>
</tr>
</tbody>
</table>

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.

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.

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).
## Accessories and Parts

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIX-9604</td>
<td>8ft Mega 4Bank Fixture Shell</td>
</tr>
<tr>
<td>FIX-7204</td>
<td>6ft Mega 4Bank Fixture Shell</td>
</tr>
<tr>
<td>HAR-9604</td>
<td>8ft Mega 4Bank Harness</td>
</tr>
<tr>
<td>HAR-7204</td>
<td>6ft Mega 4Bank Harness</td>
</tr>
<tr>
<td>LVR-4804-B</td>
<td>4ft 4Bank Louver, Black</td>
</tr>
<tr>
<td>LVR-3604-B</td>
<td>3ft 4Bank Louver, Black</td>
</tr>
<tr>
<td>MTP-BAL</td>
<td>Kino Ballast Baby Mount (16mm)</td>
</tr>
<tr>
<td>MTP-LM</td>
<td>Kino 81 Lollipop w/ Junior Pin (28mm)</td>
</tr>
</tbody>
</table>

* 8ft Fixtures require two 4ft Louvers
* 6ft Fixtures require two 3ft Louvers
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 for more repair parts.
## Cases

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

Kino Flo Mega 4Bank Fixture Dimensions

<table>
<thead>
<tr>
<th>Fixture Style</th>
<th>Length</th>
<th>Width</th>
<th>Depth</th>
<th>Barndoor Width</th>
<th>Weight w/ Lamps</th>
</tr>
</thead>
<tbody>
<tr>
<td>8ft Mega 4Bank</td>
<td>97&quot;</td>
<td>13&quot;</td>
<td>3.5&quot;</td>
<td>3.5&quot;</td>
<td>21.8 lbs</td>
</tr>
<tr>
<td>6ft Mega 4Bank</td>
<td>73.5&quot;</td>
<td>13&quot;</td>
<td>3.5&quot;</td>
<td>3.5&quot;</td>
<td>18.5 lbs</td>
</tr>
</tbody>
</table>

Lamp w/ Harness Specifications

Kino Flo Lamp w/ Harness Dimensions

<table>
<thead>
<tr>
<th>Lamp Type</th>
<th>Length</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>8ft Med. Bi-Pin</td>
<td>94.5&quot;</td>
<td>1.5&quot;</td>
</tr>
<tr>
<td>6ft Med. Bi-Pin</td>
<td>70.5&quot;</td>
<td>1.5&quot;</td>
</tr>
</tbody>
</table>
# Ballast Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Input Voltage</th>
<th>Output Frequency</th>
<th>Amperage</th>
<th>Lamp Switching</th>
<th>Output Switching</th>
<th>Ballast Size</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAL-455-M120</td>
<td>Mega 4Bank DMX Ballast, 120VAC</td>
<td>120VAC 50/60Hz</td>
<td>25kHz</td>
<td>F120/7.0A, F100/6.4A</td>
<td>1~4</td>
<td>HO/Std</td>
<td>13 x 12.5 x 2.5&quot;</td>
<td>6.5 lb (2.9kg)</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>(33 x 32 x 6.5cm)</td>
<td></td>
</tr>
<tr>
<td>BAL-455-M230</td>
<td>Mega 4Bank DMX Ballast, 230VAC</td>
<td>230VAC 50/60Hz</td>
<td>25kHz</td>
<td>F120/3.5A, F100/3.2A</td>
<td>1~4</td>
<td>HO/Std</td>
<td>13 x 12.5 x 2.5</td>
<td>6.8 lb (3.1kg)</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>(33 x 32 x 6.5cm)</td>
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</tr>
</tbody>
</table>

For latest Warranty information and Certifications, see Kino Flo website at 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.