

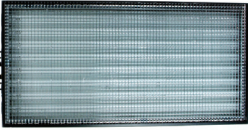
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# Operation Manual

## Flathead 80 Flathead 80 DMX



# Flathead 80 System



**CFX-4808**  
Flathead 80 Fixture



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



**X16-25**  
4Bank Extension, 25ft (x2)



**BAL-427-120U**  
4Bank Ballast, Univ 120U (x2)

**BAL-427-230U**  
4Bank Ballast, Univ 230U (x2)



**BAL-457-120U**  
4Bank DMX Ballast, Univ 120U (x2)

**BAL-457-230U**  
4Bank DMX Ballast, Univ 230U (x2)

## Each Flathead 80 System consists of:

- 1 Fixture
- 1 Mounting Plate
- 2 Extension Cable
- 2 4Bank or 4Bank DMX Ballast

# True Match® Lamps



- 488-K29-S** 4ft Kino KF29 Safety-Coated
- 488-K32-S** 4ft Kino KF32 Safety-Coated
- 488-K55-S** 4ft Kino KF55 Safety-Coated

# Flathead 80 Kits



**Flathead 80 Kit**

**KIT-F80-120U**  
Flathead 80 Kit, Univ 120U

**KIT-F80-230U**  
Flathead 80 Kit, Univ 230U

- Kit Contents:**
- 1 Flathead 80 Fixture
  - 1 Mount w/ Junior Pin (28mm)
  - 2 4Bank Ballast
  - 2 Extension, 25ft
  - 1 Ship Case

**Dimensions:**  
**Weight:**  
57 x 10.5 x 29"                      83 lb  
(145 x 27 x 74cm)                    (38kg)



**Flathead 80 DMX Kit**

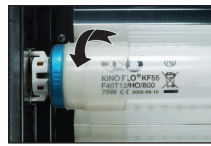
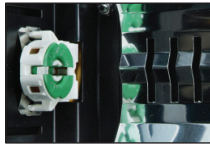
**KIT-F80-X120U**  
Flathead 80 DMX Kit, Univ 120U

**KIT-F80-X230U**  
Flathead 80 DMX Kit, Univ 230U

- Kit Contents:**
- 1 Flathead 80 Fixture
  - 1 Mount w/ Junior Pin (28mm)
  - 2 4Bank DMX Ballast
  - 2 Extension, 25ft
  - 1 Ship Case

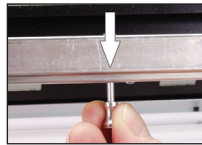
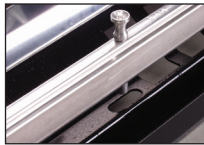
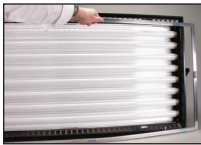
**Dimensions:**  
**Weight:**  
57 x 10.5 x 29"                      85 lb  
(145 x 27 x 74cm)                    (39kg)

## Inserting Lamps



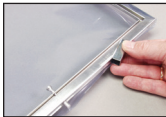
Insert lamps into both lamp holders. Twist  $\frac{1}{4}$  turn to make electrical contact.

## Inserting Gel Frame



The gel frame is secured to the fixture by 4 spring-loaded pins. Align the pins of the gel frame with the oval receptacle holes on the edge of the fixture. Pull back the pins and release into the receptacles to properly secure the gel frame.

## Applying Gel to Frame



Option 1 – The Gel Frame comes with gel clips. Cut the gel to size and use the clips to fasten the gel to the frame.

Note: It is recommended to attach one clip on each side and one clip near all four corners.

Option 2 – Another method is to apply transfer tape directly to the gel frame. The clips are not necessary when taping the gel.

## Inserting Louver



Place the long edge of the Louver (**LVR-180-S**) into the lower channel containing a set of leaf springs. Press down on the Louver and slip the upper edge of the louver into the upper channel of the fixture. To remove, reverse the procedure.

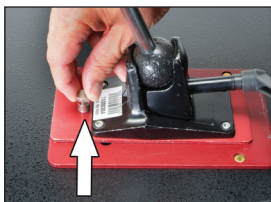
# Mounting the Fixture

The Flathead 80 is designed to operate on a Junior stand, hang from a Junior pipe hanger or mount directly to a set wall.

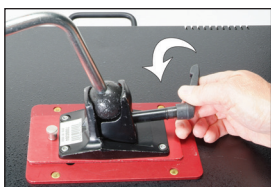
## Mount Plate Operation



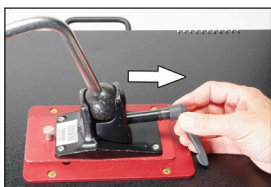
Align the center pin of the Mounting Plate (**MTP-K81**) to the center hole on the mating plate. Rotate plate clockwise until the four shoulder rivets drop into the receptacle. A locking pin will snap into place when the plate is properly seated.



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

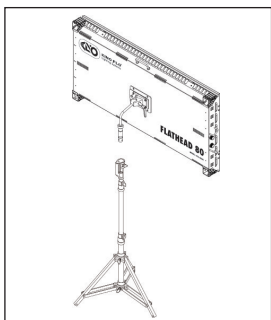


**To loosen or tighten the lollipop**, turn lock lever. With a 180 degree turn, the lever can be adjusted to provide the necessary clamping strength. Reorienting the lever allows for further tightening or loosening of the clamp.



**To reorient the lock lever**, pull lever away from mount. This disengages the lever from the screw mechanism and allows it to be reoriented.

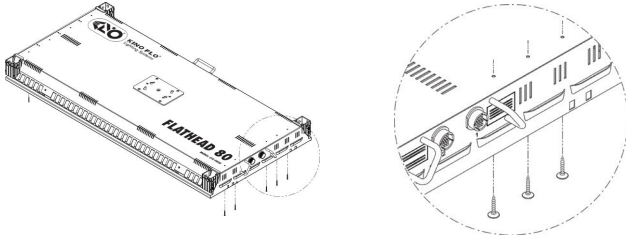
Note: You can also use a screwdriver to adjust the travel. Pull back on lever and adjust the screw in the center of the lever.



**Mounted on a Junior Stand**

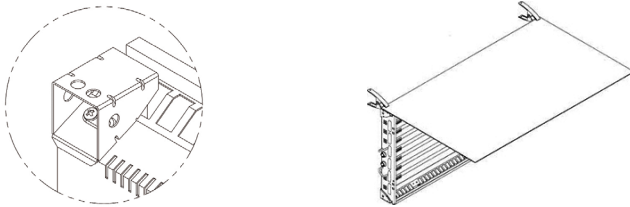
## Mounting to a Set Wall

The Flathead 80 has screw points within the fixture to allow it to be fastened flat against a surface.



## Cardholders (MTP-IB) (x4)

The Flathead 80 is equipped with unique cardholder corner brackets that allow foam core panels to be clipped in place.



## 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 ballasts. Rotate the locking ring until it clicks into the lock position.

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

# 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.

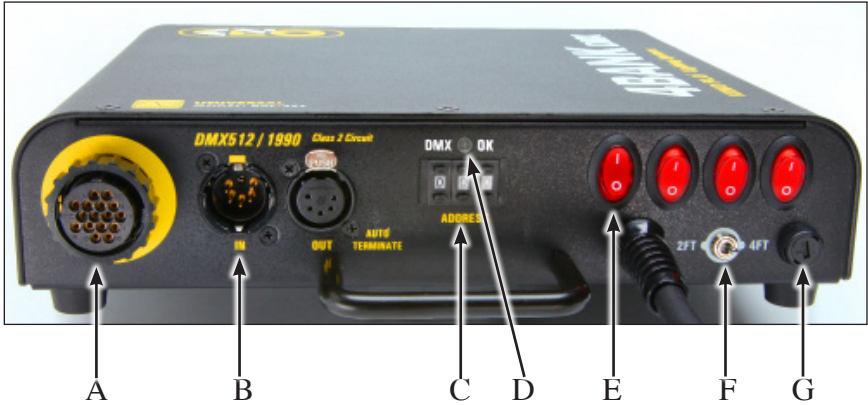
The Ballast requires 100-240VAC 50/60 Hertz on an earth grounded circuit; The electronic Ballast operates at a high frequency of 25kHz. It is dead-quiet, instant-on and lightweight.

The Ballasts operate remote from the fixture. Connect the extension cables to the ballasts and the Flathead 80 fixture. After the lamps are properly installed, the ballasts can be turned on.

## **Cold Temperature Operation**

The Ballast is designed to operate at temperatures from 14°F to 122°F (-10°C to +50°C). 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.

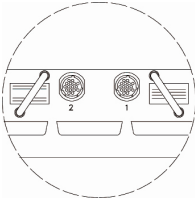
# 4Bank DMX Control Panel



- A) **Circular Output Connector:** Provides electrical power to the lamp head with the use of a 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 BAL-457 ballast has an “**AUTO TERMINATE**” feature. The last ballast that does not have an XLR cable attached to the DMX “Out” port will automatically terminate.
- C) **DMX Address:** Sets DMX Address of Fixture.  
(Channels 1~4 = Lamps; Channel 5 = 4ft/2ft)
- D) **DMX OK:** Lights if valid DMX signal is present and conforms to DMX512/1990 protocol.
- E) **Manual Switches:** Turns lamps on and off manually.
- F) **Lamp Select Switch:** Set to **4ft** for 4ft lamps and **2ft** for 2ft lamps.
- G) **Fuse:** Provides circuit protection. Note: If Fuse is “blown” or “open”, replace with same type of fuse rating as marked.



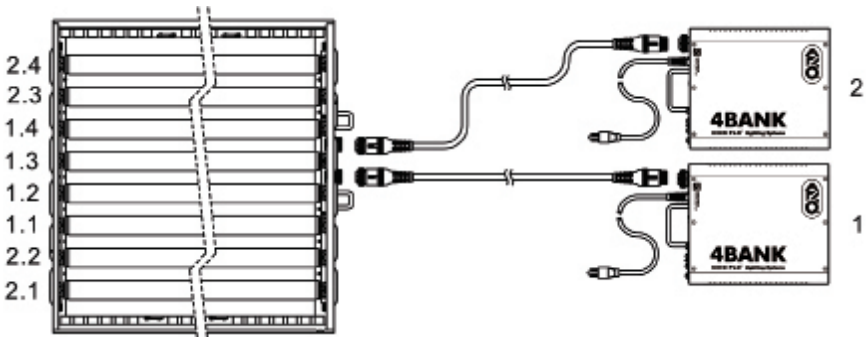
# Manual Operation



## Lamp Switching

The Flathead 80 operates remotely on two 4Bank or 4Bank DMX Ballasts. Each ballast includes four lamp switches for individual lamp control. The multi-pin connectors on the side of the Flathead 80 fixture are numbered 1 and 2.

Ballast 1 operates the four inner lamps; Ballast 2 operates the four outside lamps as illustrated below.



## Lamp Select Feature

The **4Bank** and **4Bank DMX Ballasts** have a **4ft/2ft** switch. Set the selector switch to **4ft** for 4ft lamps.

When operating 4ft lamps in high ambient temperature or where the units are rigged into place with restricted airflow, the **2ft** setting can be used to lower the color temperature and remove any green spike. The light drops about a  $\frac{1}{2}$  f-stop in exposure when dropping from **4ft** to **2ft** setting.

**Note:** The manual **2ft/4ft** switch is disabled as soon as the DMX cable is applied.

To manually control the **2ft/4ft** 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 Operation



## 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 4Bank DMX ballast operates on 5 addresses.** This is useful in achieving light effects like flickering, chasing or creating light patterns.

**BAL-457** operates on 5 addresses:

**Lamps = 1-4**

**4ft/2ft = 5**

The 5th address controls the **4ft/2ft** setting. Dimmer level from 0%~50% operates all the lamps at the 4ft setting. Dimmer level from 50%~100% operates the lamps in the 2ft setting and the overall light output drops by  $\frac{1}{2}$  f-stop.

**Note:** If the 5th address is not addressed, the ballast will default in the 4ft setting. The **4ft/2ft** select setting controls all 4 lamps equally. Individual settings per lamp are not possible.

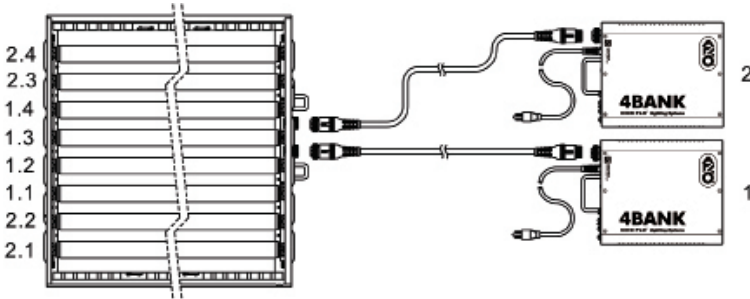
## IMPORTANT!

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.)

Note: **If a Fixture or Ballast loses its DMX signal, it will hold its last DMX command.** For this reason, it is important to turn a Fixture or 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 Fixtures or Ballasts require a DMX "Off" or "Black-out" command in order to turn off.

For example: If the 4Bank DMX base address is set at 001 for Ballast 1, and Ballast 2 is set at 006, the configuration below will provide 8 lamps individually addressable through DMX 512.

## DMX Lamp Sequence



DMX Lamp Sequence	
DMX Address = 001, 006	
Lamp #	DMX Address
Lamp 1.1	1
Lamp 1.2	2
Lamp 1.3	3
Lamp 1.4	4
4ft/2ft	5
Lamp 2.1	6
Lamp 2.2	7
Lamp 2.3	8
Lamp 2.4	9
4ft/2ft	10

### To chase one lamp through multiple fixtures:

- 1) Set each ballast with its own address: 001, 006, 011, 016 and so on.
- 2) Program address 005, 010, 015, etc. for 2ft operation.
- 3) Program lamp sequence to chase from 001 through 004, 006-009, 011-014 and so on.

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

- 1) For each Flathead 80 fixture, set Ballast 1 address to 001 (or a common address) and set Ballast 2 address to 006 (or a common address).
- 2) Program address 005, 010, 015, etc. for 2ft operation.
- 3) Program lamps to chase from address 001-004 and 006-009.



### Auto Terminate Feature

4Bank DMX ballasts (457 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.

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.

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



### DMX Cables

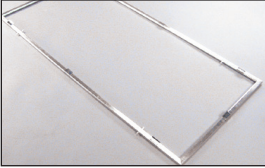
The ballast uses 5-pin XLR male and female connectors to receive DMX signals from the Dimmer Board and jumper the Ballasts in a series. DMX pin-out wiring follows the USITT DMX 512 standard:

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

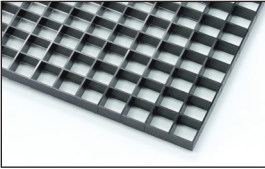
Note: Pin four and five in the ballast are connected internally as Pin four to four and Pin five to five. Connecting Pin four and five as the pass-through allows secondary data to be passed through for other equipment.

**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).

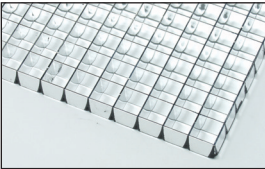
# Accessories and Parts



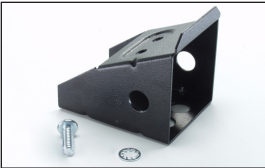
**GFR-180** Image 87/Flathead 80 Gel Frame



**LVR-180-B** Image 87/Flathead 80 Louver (Black)



**LVR-180-S** Image 87/Flathead 80 Louver (Silver)



**MTP-1B** Image/Flathead 80 Cardholder



**REF-180** Image 87/Flathead 80 Reflector



**X16-25** 4Bank Extension Cable, 25ft

**X16-12** 4Bank Extension Cable, 12ft



**XLR-525** DMX Cable 5-Pin XLR, 25ft

**XLR-515** DMX Cable 5-Pin XLR, 15ft

# True Match® Lamps

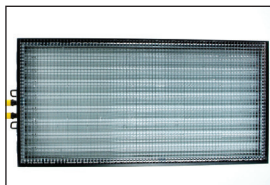


**488-K29-S** 4ft Kino KF29 Safety-Coated  
**488-K32-S** 4ft Kino KF32 Safety-Coated  
**488-K55-S** 4ft Kino KF55 Safety-Coated



**488-K10-S** 4ft Kino 420 Blue Safety-Coated  
**488-K5-S** 4ft Kino 525 Green Safety-Coated

# Fixture Specifications



**CFX-4808** Flathead 80 Fixture

**Lamps:** 8

**Weight w/ Lamps:** 27lbs / 12kg

**Dimensions:** 51 x 24 x 4"  
(129 x 61 x 10cm)

**Lamp Type:** F75/T12

# Ballast Specifications



**4Bank**

## **BAL-427-120U** 4Bank Ballast, Univ 120U

**Input Voltage:** 100~240VAC 50/60Hz  
**Output Frequency:** 25kHz  
**Amperage:**  $2 \times 2.6A = 5.2A$   
**Lamp Switching:** 1~4  
**Output Switching:** 4ft / 2ft  
**Ballast Size:** 13 x 9.5 x 3"  
(33 x 24 x 7.6cm)  
**Weight:** 4.9lb (2.2kg)

## **BAL-427-230U** 4Bank Ballast, Univ 230U

**Input Voltage:** 240~100VAC 50/60Hz  
**Output Frequency:** 25kHz  
**Amperage:**  $2 \times 1.4A = 2.8A$   
**Lamp Switching:** 1~4  
**Output Switching:** 4ft / 2ft  
**Ballast Size:** 13 x 9.5 x 3"  
(33 x 24 x 7.6cm)  
**Weight:** 4.9lb (2.2kg)



**4Bank DMX**

## **BAL-457-120U** 4Bank DMX Ballast, Univ 120U

**Input Voltage:** 100~240VAC 50/60Hz  
**Output Frequency:** 25kHz  
**Amperage:**  $2 \times 2.6A = 5.2A$   
**Lamp Switching:** 1~4  
**Output Switching:** 4ft / 2ft  
**Ballast Size:** 12 x 11 x 3"  
(30.5 x 28 x 7.6cm)  
**Weight:** 5.3 lb (2.4kg)

## **BAL-457-230U** 4Bank DMX Ballast, Univ 230U

**Input Voltage:** 240~100VAC 50/60Hz  
**Output Frequency:** 25kHz  
**Amperage:**  $2 \times 1.4A = 2.8A$   
**Lamp Switching:** 1~4  
**Output Switching:** 4ft / 2ft  
**Ballast Size:** 12 x 11 x 3"  
(30.5 x 28 x 7.6cm)  
**Weight:** 5.3 lb (2.4kg)

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 local and state regulations.

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