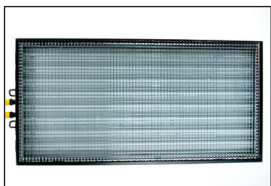# Operation Manual

Flathead 80 DMX

KINO FLO®
Lighting Systems

Flathead 80 System

CFX-4808
Flathead 80 Fixture

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

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

BAL-415-120
Select 4Bank Ballast, 120VAC (x2)

BAL-415-230
Select 4Bank Ballast, 230VAC (x2)

BAL-455-120
Select/DMX 4Bank Ballast, 120VAC (x2)

BAL-455-230
Select/DMX 4Bank Ballast, 230VAC (x2)

Each Flathead 80 System consists of:

1 Fixture
1 Mounting Plate
2 Extension Cable
2 Select or Select/DMX 4Bank 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-F80-1/120
Flathead 80 Kit, 120VAC

KIT-F80-1/230
Flathead 80 Kit, 230VAC

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

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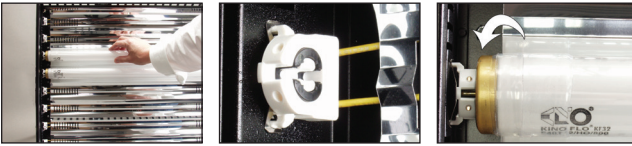(145 x 27 x 74cm)   (38kg)

Flathead 80 DMX Kit

KIT-F80-X1/120
Flathead 80 DMX Kit, 120VAC

KIT-F80-X1/230
Flathead 80 DMX Kit, 230VAC

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

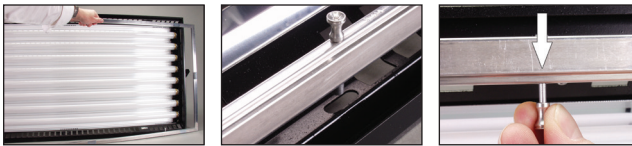**Dimensions:**   **Weight:**
57 x 10.5 x 29"   85 lb
(145 x 27 x 74cm)   (39kg)

Inserting Lamps

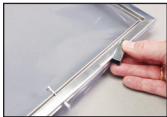Insert lamps into both lamp holders. Twist ¼ turn to make electrical contact.
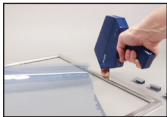
Inserting Gel Frame

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-I80-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.
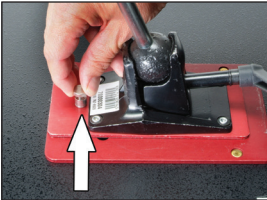
To remove the plate, pull up on the locking pin and reverse the mounting procedure.

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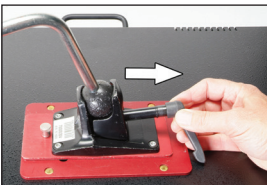
To reorient the lock lever, pull lever away from mount. This disengages the lever from the screw mechanism and allows it to be reoriented.

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.
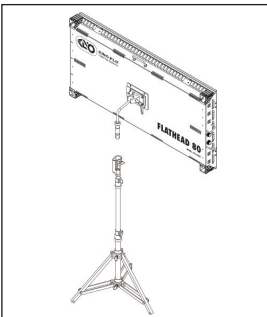
Mounted on a Junior Stand

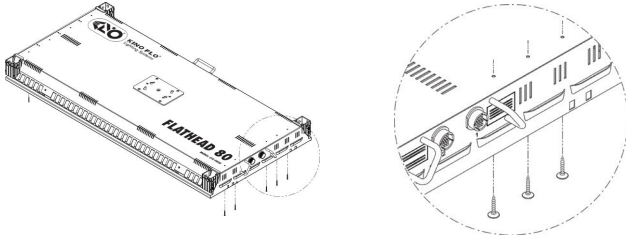## Mounting to a Set Wall

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.
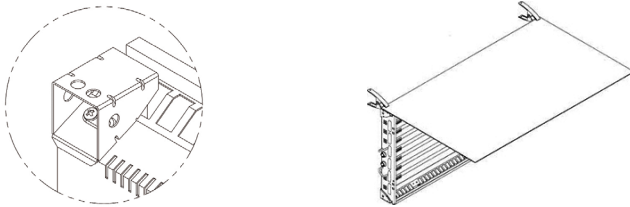
Extension Cable

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).

6

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 25kHz. It is dead-quiet, instant-on and lightweight.

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

Cold Temperature Operation
The Select Ballast series 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.
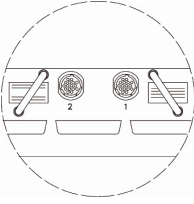
Select 4Bank Control Panel

Select/DMX 4Bank 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 4Bank DMX ballast (BAL-455 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 of Fixture. (Channels 1~4 = Lamps; Channel 5 = 4ft/2ft)
- **E) DMX Indicator:** Lights if valid DMX signal is present.
- **F) Manual Switches:** Turns lamps on and off manually.
- **G) Lamp Select Switch:** Set to **4ft** for 4ft lamps and **2ft** for 2ft lamps.

Manual Operation

Lamp Switching
The Flathead 80 operates remotely on two Select 4Bank or Select/DMX 4Bank 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.
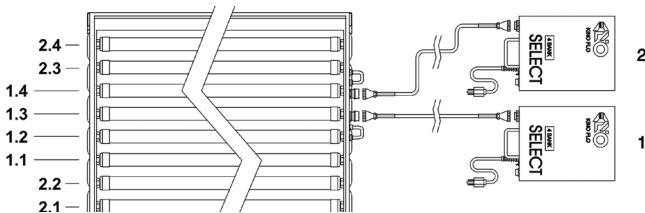
Lamp Select Feature

The **Select 4Bank** and **Select/DMX 4Bank 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 ½ f-stop in exposure when dropping from **4ft** to **2ft** setting.

Note: When using the DMX ballast, all manual controls are disabled as soon as the DMX cable is applied.

For manual control 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.

9

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.

After the DMX address is entered, the ballast automatically assigns the first 4 addresses to control lamps 1-4 and the 5th address controls the **4ft/2ft** setting. The **4ft/2ft** setting is defaulted to **4ft**.

To activate the **2ft** lamp setting on address 5, set dimmer slider to full. Setting the dimmer value under 49% or not programming address 5 will restore the **4ft** setting.

Note: 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.)

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.

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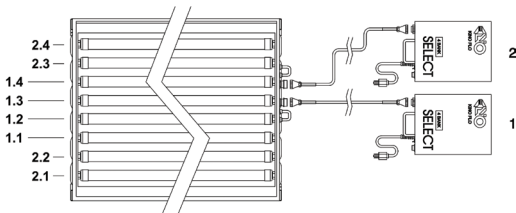
| DMX Address Sequence	
DMX Address = 001, 006	
Lamp #	DMX Address
Lamp 1.1	1
Lamp 1.2	2
Lamp 1.3	3
Lamp 1.4	4
4ft/2ft	5
Lamp 2.1	6
Lamp 2.2	7
Lamp 2.3	8
Lamp 2.4	9
4ft/2ft	10

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.

Note: Each ballast (455 Series) is automatically "terminated" for proper DMX signals.
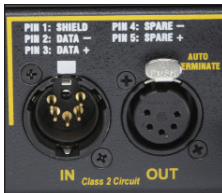
Auto Terminate Feature

Select/DMX 4Bank 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.

Select/DMX 4Bank 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).

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.
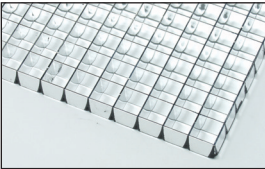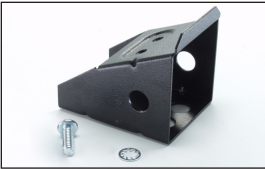
Accessories and Parts
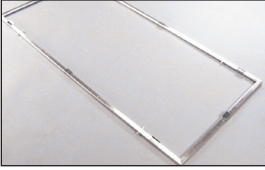
GFR-I80   Image 87/Flathead 80 Gel Frame
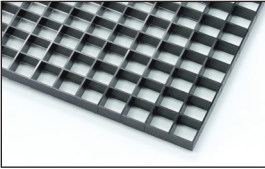
LVR-I80-B   Image 87/Flathead 80 Louver (Black)

LVR-I80-S   Image 87/Flathead 80 Louver (Silver)

MTP-IB   Image/Flathead 80 Cardholder

REF-I80   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
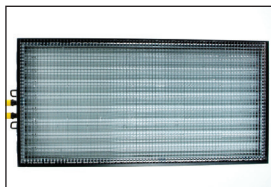**XLR-515**   DMX Cable 5-Pin XLR, 15ft

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

Select 4Bank

BAL-415-120 Select 4Bank Ballast, 120VAC (x2)

Input Voltage:	120VAC 50/60Hz
Output Frequency:	25kHz
Amperage:	2 x 5.0A = 10A
Lamp Switching:	1~4
Output Switching:	4ft / 2ft
Ballast Size:	13" x 9.5 x 3"
	(33 x 24 x 7.6cm)
Weight:	5.5 lb (2.5kg)

BAL-415-230 Select 4Bank Ballast, 230VAC (x2)

Input Voltage:	230VAC 50/60Hz
Output Frequency:	25kHz
Amperage:	2 x 2.5A = 5.0A
Lamp Switching:	1~4
Output Switching:	4ft / 2ft
Ballast Size:	13" x 9.5 x 3"
	(33 x 24 x 7.6cm)
Weight:	5.9 lb (2.7kg)

Select/DMX 4Bank

BAL-455-120   Select/DMX 4Bank Ballast, 120VAC (x2)

Input Voltage:	120VAC 50/60Hz
Output Frequency:	25kHz
Amperage:	2 x 5.0A = 10A
Lamp Switching:	1~4
Output Switching:	4ft / 2ft
Ballast Size:	12.5 x 12.5 x 2.5"
	(32 x 32 x 6.5cm)
Weight:	6.3 lb (2.9kg)

BAL-455-230   Select/DMX 4Bank Ballast, 230VAC (x2)

Input Voltage:	230VAC 50/60Hz
Output Frequency:	25kHz
Amperage:	2 x 2.5A = 5.0A
Lamp Switching:	1~4
Output Switching:	4ft / 2ft
Ballast Size:	12.5 x 12.5 x 2.5"
	(32 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.

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.

Kino Flo, Inc. 2840 N. Hollywood Way, Burbank, CA 91505, USA
Tel: 818 767-6528 website: www.kinoflo.com