
Operation Manual

Tegra® 4Bank

DMX



KINO FLO®
Lighting Systems

Tegra 4Bank DMX Assembly

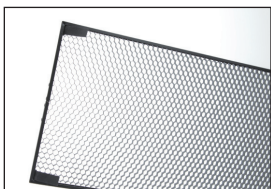


TEG-450-120U

Tegra 4Bank DMX, Univ 120U

TEG-450-230U

Tegra 4Bank DMX, Univ 230U



LVR-T490-P

Tegra 4Bank Louver/HP, 90°
(Included)



MTP-LB

Kino 41 Lollipop w/ Baby Receiver (16mm)
(Included)

True Match® Lamps



488-K32-S 4ft Kino KF32 Safety-Coated

488-K55-S 4ft Kino KF55 Safety-Coated

Tegra 4Bank DMX Kits



**Tegra 4Bank
DMX Kit**

KIT-T450-120U

Tegra 4Bank DMX Kit, Univ 120U

KIT-T450-230U

Tegra 4Bank DMX Kit, Univ 230U

Kit Contents:

1 Tegra 4Bank DMX
1 Flozier, Half
1 Lamp Case
1 Ship Case

Dimensions:

54.5 x 9 x 21"

(138.5 x 23 x 53.5cm)

Weight:

41 lb

(19kg)



**Tegra 4Bank DMX Kit
w/ Soft Case**

KIT-T450B-120U

Tegra 4Bank DMX Kit w/ Soft Case,
Univ 120U

KIT-T450B-230U

Tegra 4Bank DMX Kit w/ Soft Case,
Univ 230U

Kit Contents:

1 Tegra 4Bank DMX
1 Flozier, Half
1 Lamp Case
1 Soft Case

Dimensions:

55 x 8 x 19.5"

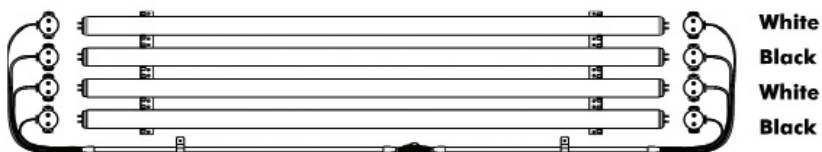
(140 x 20.5 x 49.5cm)

Weight:

23 lb

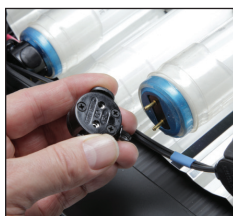
(10.5kg)

Lamp Harness Color Codes



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.

Applying Louver

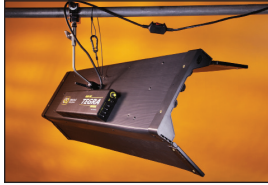


The Louver is fastened to the reflector with 4 Velcro straps.

Mounting Procedures



Mounted on a baby stand



Mounted to pipe grid



Note: When hanging in a studio, loop a safety cord through the strain-relief ring provided on the back of the fixture.



A 180 degree turn is all that is required to loosen the mount for orientation.



To adjust the tension on the lock lever, pull handle away from mount. This disengages the handle from the screw mechanism and allows the lever to be reoriented. You can also use a screwdriver to adjust the tension. Pull back on handle and adjust screw.



Lollipops are interchangeable.

MTP-L
MTP-LB
MTP-LBS

Kino 41 Lollipop w/ 3/8" Pin (10mm)
Kino 41 Lollipop w/ Baby Receiver (16mm)
Kino 41 Lollipop w/ Baby Receiver Short (16mm)

Baby Offset Arm



The Baby Offset Arm (**MTP-B41F**) allows fixtures to mount on the center of a stand or can also be under slung from a baby stand to use as an up light.

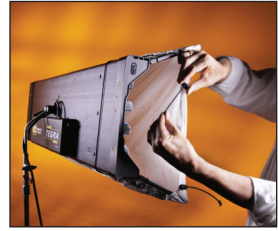
Mounting Flozier



Remove Louver.



Stretch two elastic cords around fixture.

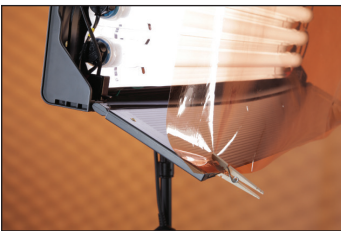


Take up slack on both elastic cords.



Expand the Barndoors to smooth out the face of the Flozier and eliminate wrinkles.

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.

Do Not clip gels to louver.

Do Not block the fixture ends in a manner that restricts airflow.

Ballast Power



Warning! To Ensure Proper Operation

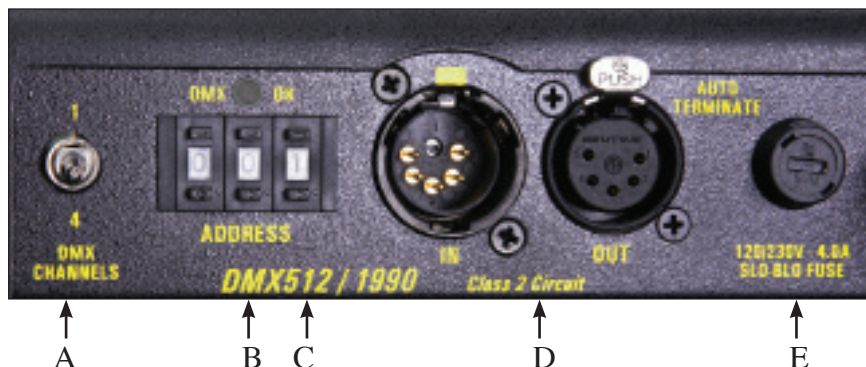
ALWAYS TURN OFF THE FIXTURE BEFORE connecting or disconnecting lamps. After the lamps are properly installed, the in-line switch can turn on the ballast.

The Tegra 4Bank DMX requires 100-240VAC 50/60 Hertz on an earth grounded circuit. The electronic Ballast operates at a high frequency of 40kHz. It is lightweight, flicker-free and dead quiet.

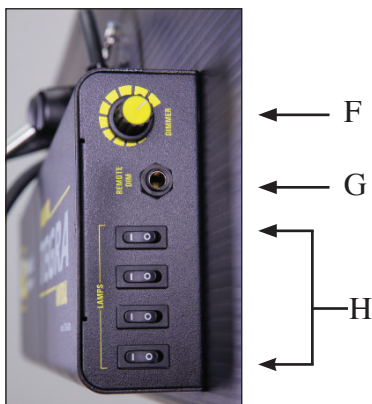
Cold Temperature Operation

The Tegra 4Bank DMX is designed to operate at temperatures from 14F to 122F (-10C to +50C). In cold temperatures, the ballast may not strike the lamp(s). Switch the ballast to OFF. Make sure onboard dimmer is full up and re-strike.

Tegra 4Bank DMX Control Panel



- A) DMX Channels:** Sets the fixture to use 1 DMX channel to dim all 4 lamps or 4 DMX channels to control lamps individually.
- B) DMX OK:** Lights if valid DMX signal is present.
- C) DMX Address:** Sets DMX address of fixture.
- D) DMX-In & DMX-Out:** DMX-In receives signals from Dimmer Board. DMX-Out relays DMX signals through other fixtures or instruments. (Note: Each Tegra 4Bank DMX fixture has an “**AUTO TERMINATE**” feature. The last fixture that does not have an XLR cable attached to the DMX “Out” port will automatically terminate.)
- E) Fuse:** Provides circuit protection. Note: If fuse is “blown” or “open”, replace with same type of fuse rating as marked.



- F) Dimmer Knob:** Manual dimming control
- G) Remote Dim:** Input jack for Remote Dimmer (**DIM-5**)
- H) Lamp Switches:** Turns individual lamps on manually.

Manual Operation



Manual Dimming Control

The onboard dimmer dial can manually dim lamps.

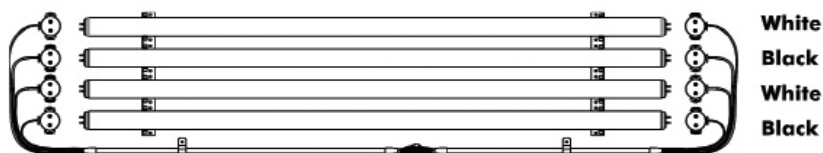


Lamp Switching

The Tegra 4Bank DMX fixture has four lamp switches which allow for individual lamp operation. See diagram below.

Turning off 2 lamps equals a one f-stop reduction in light output without color shift.

Tegra 4Bank Lamp Switching



Note: All manual controls are disabled as soon as the DMX cable is applied. For Manual control with DMX cables plugged in, set address to “000”. There is a 5 second delay when switching between DMX and Manual control.

Dimming and Color Temperature Shift

Dimming can be used to adjust the light output of the fixture. The color temperature will shift marginally if kept to within one f-stop. Dimming beyond one f-stop may result in a reduction of color temperature as well as a noticeable shift to magenta.

Remote Dimmer Operation

The Remote Dimmer (**DIM-5**), sold separately, is designed to remotely dim the Tegra 4Bank.



Insert the dimmer cable into the receptacle marked: **REMOTE DIM**.

Inserting the dimmer cable will automatically disable the onboard dimmer.



Insert the other end of the dimmer cable into the Remote Dimmer (**DIM-5**).

DMX Operation



DMX Addressing

Prior to hanging any instruments, set the DMX address of each fixture.

Push the tabs above or below the number window to set the address. (Valid addresses range from 001 to 512.) The light above the address block will illuminate if a DMX signal is present.

Tip: Power is not required to set DMX addresses. Therefore, DMX addresses can be set for each fixture prior to hanging.

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.)

If a fixture loses its DMX signal, it will hold its 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.

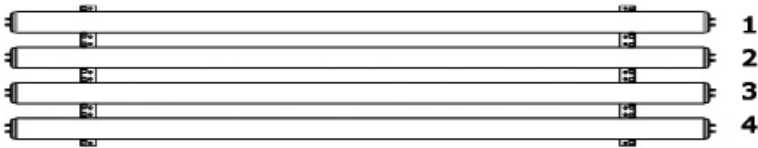
Note: The Tegra ballast board incorporates a preheat circuit when striking the lamps. Therefore, when fading up from black, there will be a 2-3 second response delay. One way to avoid this issue is to lower the light level to approximately 7-10% on the DMX console, then fade up from that point.

DMX Channels



The **Tegra 4Bank DMX** operates on 1 or 4 DMX addresses. On **DMX Channel 1**, one DMX address controls/dims all 4 lamps on one dimmer channel. On **DMX Channel 4**, four DMX addresses control/dim 4 lamps individually.

Tegra 4Bank DMX Lamp Sequence



Tegra 4Bank DMX Address Sequence (DMX Channel 4)	
Lamp #	DMX Address
Lamp 1	1
Lamp 2	2
Lamp 3	3
Lamp 4	4

Auto Terminate



Auto Terminate Feature

The Tegra 4Bank DMX series have an “**AUTO TERMINATE**” feature. The last fixture that does not have an XLR cable attached to the DMX “Out” port will automatically terminate.

Any theatrical lighting board with DMX512 protocol can be used to individually turn on/off lamps in a fixture. Tegra 4Bank DMX fixtures can be jumpered using the IN and OUT ports. As many as 100 fixtures 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 fixtures at great distances from the dimmer board, it is recommended to use Opto-Isolators to provide DMX signal amplification.

DMX Cables



DMX Cables

Cable must comply with EIA-485 (RS485).

The fixture uses five-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 DMX512 standard:

Pin 1: Shield

Pin 2: Data –

Pin 3: Data +

Pin 4: Spare –

Pin 5: Spare +

Note: Pin four and five in the Fixture 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 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 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).

Troubleshooting

If the Fixture does not strike after two or three attempts, turn off the Fixture.

- With the power switch in the ON position, the red light should be on. If it is not, Voltage is not present. Check your power feed.
- The onboard dimmer should be full up, turned completely clockwise.
- All four lamp switches should be in the ON position.
- Check lamp contact. Harness color-codes must match at each end of the lamp. Once everything has been checked, re-strike.

With DMX cable connected, if yellow light is off, there is no DMX signal.

- Establish a valid DMX signal. Address must be between 001 and 512. (Note: 0 or 513 and higher are invalid addresses.)
- The dimmer setting on the lighting board must be up in the full mode.

There is a 2-3 second response delay when fading up from black.

- Lower the light level to approximately 7-10% on the DMX console, then fade up from that point.

Accessories and Parts

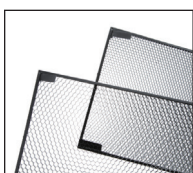


DIM-5 Remote Dimmer w/ 15ft Cable



DFS-4804 Tegra 4Bank Flozier, Full

DFS-4804-H Tegra 4Bank Flozier, Half



LVR-T490-P Tegra 4Bank Louver/HP, 90°

LVR-T460-P Tegra 4Bank Louver/HP, 60°



MTP-B41F Kino Offset w/ Baby Receiver (16mm)



MTP-L Kino 41 Lollipop w/ 3/8" Pin (10mm)

MTP-LB Kino 41 Lollipop w/ Baby Receiver (16mm)

MTP-LBS Kino 41 Lollipop w/ Baby Receiver Short (16mm)



STD-M36 Medium Duty Stand/Black, 36"



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

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

True Match® Lamps



488-K32-S 4ft Kino KF32 Safety-Coated

488-K55-S 4ft Kino KF55 Safety-Coated

Cases



KAS-T4-C



BAG-401



KAS-C46

Part No.	Description	Dimensions	Weight (Empty)	Holds
BAG-401	Tegra 4Bank Soft Case	55 x 8 x 19.5" (140 x 20.5 x 49.5cm)	6 lb (3kg)	Tegra 4Bank System, Lamp Case
KAS-C46	6-Lamp Carry Case,	50.5 x 6 x 4" (128.5 x 15 x 10cm)	1.5 lb (0.7kg)	4ft Lamps (6)
KAS-T4-C	Tegra 4Bank Travel Case	54.5 x 9 x 21" (138.5 x 23 x 53.5cm)	24 lb (11kg)	Tegra 4Bank Kit Items

Fixture Specifications



**Tegra 4Bank
DMX**

TEG-450-120U Tegra 4Bank DMX, Univ 120U

Input Voltage: 100~240VAC 50/60Hz

Output Frequency: 40kHz

Amperage: 2.8 amps at 120VAC

Lamp Switching: 1~4

Dimming Range: 100% - 5%

Weight w/ lamps: 19 lb (8.6kg)

Dimensions: 52 x 13.5 x 6"

(w/ 6.5" barndoors)

(132 x 34 x 15cm)

(w/ 16.5cm barndoors)

Lamp Type: F75/T12

TEG-450-230U Tegra 4Bank DMX, Univ 230U

Input Voltage: 240~100VAC 50/60Hz

Output Frequency: 40kHz

Amperage: 1.4 amps at 230VAC

Lamp Switching: 1~4

Dimming Range: 100% - 5%

Weight w/ lamps: 19 lb (8.6kg)

Dimensions: 52 x 13.5 x 6"

(w/ 6.5" barndoors)

(132 x 34 x 15cm)

(w/ 16.5cm barndoors)

Lamp Type: F75/T12

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.

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