Kam

INSTRUCTION MANUAL

Kam Derby FX-Bar
Portable performance lighting & derby FX rig

MANUAL VERSION 3.0
12-16

Thank you for purchasing this Kam product, we are sure that it will serve you for many years to come.
To optimise it's performance, please read these instructions carefully to familiarise yourself with the basic operations of the unit. Please retain them for future reference.This unit has been tested at the factory before being shipped to you. To prevent or reduce the risk of electrical shock or fire, do not expose the unit to rain or moisture. To prevent a fire hazard, do not expose the unit to any naked flame sources. Unplug this apparatus during lightning storms or if it is unlikely to be used for long periods of time.

When installing the unit, please ensure you leave enough space around the unit for ventilation. Slots and openings in the unit are provided for ventilation to ensure reliable operation of the product and to protect it from overheating. To prevent fire hazard, the openings should never be blocked or covered.

The unit is powered by the mains, always handle the power cable by the plug. Never pull out the plug by pulling on the cable. Never touch the power cable when your hands are wet as this could cause an electric shock. Do not tie a knot in the cable. The power cable should be placed such that it is not likely to be stepped on. A damaged power cable can cause a fire or give you an electrical shock. Check the power cord periodicaly, if you ever find that it is damaged, replace it before using the unit again. Contact your retailer for a replacement.

The voltage of the available power supply differs according to country or region. Be sure that the power supply voltage of the area where this unit is to be used meets the requirements of the unit.

The lightning flash symbol inside a triangle is to alert the user to the presence high voltage within the unit's enclosure that may be of sufficient power to constitute a risk of electrical shock to persons. Caution: to prevent the risk of electric shock, do not attempt to open the unit. No user-serviceable parts inside. Refer all servicing to qualified service personnel. The exclamation mark inside a triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the appliance. Please read and pay attention to all safety warnings on the unit.

Select the installation location of your unit carefully. Avoid placing it in direct sunlight or locations subject to vibration and excessive dust. Do not use the unit where there are extremes in temperature (below 41ºF / 5ºC or exceeding 95ºF / 35ºC).

Unpacking and safety Please unpack your new product carefully. Your new product should reach you in perfect condition. Please check that no damage has occurred during transit. If any damage is found, do not operate your unit. Please contact the retailer you purchased it from immediately. If there is any damage to the mains cable do not use the device. Always disconnect the unit from the mains supply when carrying out any cleaning of the unit.

Manufacturer declarations

In compliance with the following requirements: **RoHS Directive (2002/95/EU)** and **WEEE Directive (2002/96/EU).** If this product is ever no longer functional please take it to a recycling plant for environmentally friendly disposal.

CE declaration of conformity
R&TTE Directive (1999/5/EU), EMC Directive (2004/108/EU), Low Voltage Directive (2006/95/EU).

Before putting the devices into operation, please observe the respective country-specific regulations.

Overhead rigging

Important - the installation must be carried out by qualified service personal only. Improper installation can result in serious injuries and /or damage to property. Overhead rigging required extensive experience. Working load limits should be respected, certified installation materials should be used, the installed unit should be inspected regularly for safety.
- Make sure the area below the installation place is free from unwanted persons during rigging, de-rigging and servicing.
- Locate the unit in a well ventilated spot, far away from any flammable materials and/or liquids. The fixture must be fixed **at least 50cm** from surrounding walls
- The device should be installed out of reach of people and outside of areas where persons may walk by or be seated.
- Before rigging make sure that the installation area can hold minimum point load of 10 times the device`s weight.
- The device should be well fixed; a free swinging mounting is dangerous.
- Do not cover any ventilation opening as this may result in overheating

Before first time use, the unit should be inspected for safety. Inspect the unit regularly every year.

AC power
The unit is supplied with a power plug appropriate to its voltage. Should any other connections be required they must be carried out with the following configuration:

| Cable (EU)	Cable (US)	Pin	International
Brown	Black	Live	L
Light blue	White	Neutral	N
Yellow/green	Green	Earth	⏚

DMX-512 connection
If you are using a standard DMX controller, you can connect the DMX output of the controller directly to the DMX input of the first unit in a DMX chain. If you wish to connect a DMX controller with other XLR outputs you will need to use adapter cables.

1 = Shield
2 = Signal (-)
3 = Signal (+)

DMX output   **DMX input**
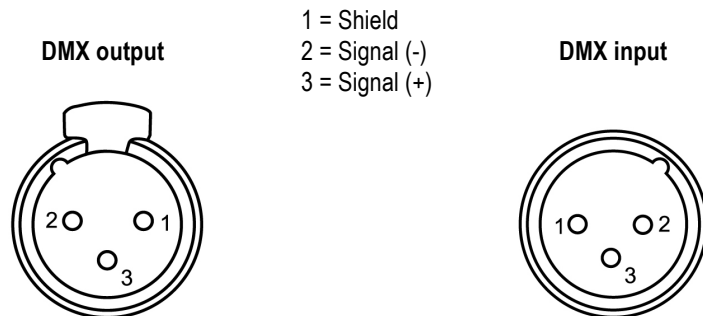
Connect the DMX output of the first unit in a DMX chain with the DMX input of the next unit in the chain. Always connect the the output of one unit with the input of the next unit until all units are connected.

Unit features & functions
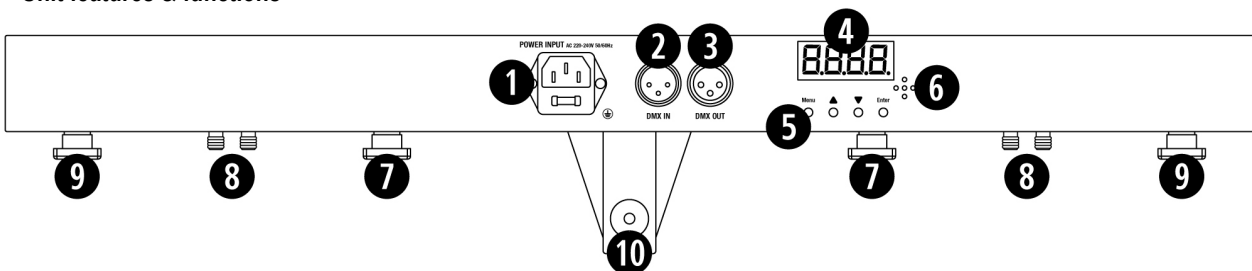
Number	Feature	Function
1	Power supply input	Attach the IEC mains cable here. Built-in fuse.
2	DMX input	3 pin XLR connector for DMX512 input communication.
3	DMX output	3 pin XLR connector for DMX512 output communication.
4	LED display	LED function display and menu buttons to control the operating mode of the unit.
5	MENU buttons	MENU function buttons x 4 (see below for operation).
6	Mic	Built-in microphone for Sound-to-Light operation.
7	Par can mounts	Attach the par can lights to the controller bar at the 2 points shown.
8	Lighting unit connections	Attach all 4 lighting cables to the controller bar at the points shown.
9	Derby FX mounts	Attach the derby FX to the controller bar at the 2 points shown.
10	Light stand socket	Tighten screw to secure the controller bar to the light stand.

Function setting
Using the four function buttons on the controller bar you can set the operating mode of the unit. Press the **Menu** button to display the different functions (see table below for a description of the functions). Use the **Up** or **Down** arrow buttons to make your selection. When you have chosen your desired function, press the **Enter** button to confirm the change.

Auto modes: AP (parcan effects) / **AF** (derby effects) / **AN** (parcan and derby effects)
Sound to Light modes: SP (parcan effects) / **SF** (derby effects) / **SN** (parcan and derby effects)

Display	Mode	Function		
AUT	**AUTP** par can auto mode	**AP01-AP13** auto shows	**S01-S32** par can speed	
	AUTF derby auto mode	**AF01-AF07** auto shows	**S01-S32** derby speed	**N00-N09** motor speed setting
	AUTN unit auto mode	**AN01-AN10** auto shows	**S01-S32** lighting speed	**N00-N09** motor speed setting
SOU	**SOUP** par can sound mode	**SP01-SP13** sound shows		
	SOUF derby sound mode	**SF01-SN10** sound shows		
	SOUN unit sound mode	**SN01-SN10** sound shows		
COL	**COLO**	**R 0-255** red adjust		
		G 0-255 green adjust		
		B 0-255 blue adjust		
		U 0-255 white adjust		
		S00-32 strobe adjust		
		N01-09 motor speed adjust		
dNH (DMX)	**D001-D510**	**3CH** 3 channel DMX mode		
		6CH 7 channel DMX mode		
		15CH 11 channel DMX mode		
SLA	**SLAU**	Master/Slave mode		
SYS	**ASEN**	**SN01-SN04** mic sensitivity		

DMX address setting

When controlling the unit (or units) with a DMX controller, each one must be set with a specific DMX address. You can choose to set all units with the same DMX address or you can set every unit with its own DMX address. If all units are set with the same DMX address all units will be synchronised and operate in the same way. If you set each unit with a different DMX address, they will receive the DMX signal from their own DMX address. You will now be able to control each unit individually. The DMX address that you set for each unit must be determined by the number of channels. This unit has different options of DMX channel modes (3, 6 or 15). When working in 3 DMX channel mode, you should set the starting address of the first unit to 1, the second unit must be set to 4 (1+3), the third to 7 (4+3), the fourth to 10 (7+3) and so on. When working in 6 channel mode, you should set the starting address of the first unit to 1, the second unit must be set to 7 (1+6), the third to 13 (7+6), the fourth to 19 (13+6) and so on. When working in 15 channel mode, you should set the starting address of the first unit to 1, the second unit must be set to 16 (1+15), the third to 31 (16+15), the fourth to 46 (31+15) and so on.

3 channel DMX mode - NB The DMX settings in Channel 2, relate to the 6 settings in Channel 1 (AP, AF, AN, SP, SF, SN)

Channel	Value		Function
1	0-9	Black out	
	10-49	APxx	Auto par can
	50-89	AFxx	Auto derby FX
	90-129	ANxx	Auto par can & derby FX
	130-169	SPxx	Sound activated par can
	170-209	SFxx	Sound activated derby FX
	210-255	SNxx	Sound activated par can & derby FX
2	0-19	AP01/SP01	When Channel 1 is set to 010-049 or 130-169
	20-39	AP02/SP02	
	40-59	AP03/SP03	
	60-79	AP04/SP04	
	80-99	AP05/SP05	
	100-119	AP06/SP06	
	120-139	AP07/SP07	
	140-159	AP08/SP08	
	160-179	AP09/SP09	
	180-199	AP10/SP10	
	200-219	AP11/SP11	
	220-239	AP12/SP12	
	240-255	AP13/SP13	
	20-39	AF02/SF02	When Channel 1 is set to 050-089 or 170-209
	40-59	AF03/SF03	
	60-79	AF04/SF04	
	80-99	AF05/SF05	
	100-119	AF06/SF06	
	120-255	AF07/SF07	
	0-19	AN01/SN01	When Channel 1 is set to 090-129 or 219-255
	20-39	AN02/SN02	
	40-59	AN03/SN03	
	60-79	AN04/SN04	
	80-99	AN05/SN05	
	100-119	AN06/SN06	
	120-139	AN07/SN07	
	140-159	AN08/SN08	
	160-179	AN09/SN09	
	180-255	AN10/SN10	
3	0-255		Speed adjust

6 channel DMX mode

Channel	Value	Function
1	0-255	Red
2	0-255	Green
3	0-255	Blue
4	0-255	White
5	0-255	Strobe
6	0-255	Motor

15 channel DMX mode

Channel	Value		
1	0-255	Red	
2	0-255	Green	
3	0-255	Blue	Effect 1
4	0-255	White	
5	0-255	Motor	
6	0-255	Red	
7	0-255	Green	
8	0-255	Blue	Par cans
9	0-255	White	
10	0-255	Red	
11	0-255	Green	
12	0-255	Blue	Effect 2
13	0-255	White	
14	0-255	Motor	
15	0-255	Strobe	

Remote control operation
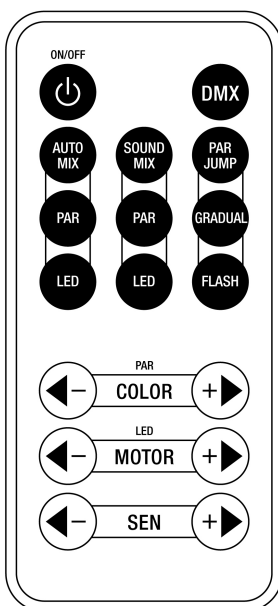
ON/OFF button – turn the unit on or off (blackout)
DMX button – set the unit to DMX mode (press once for 3 channel mode, twice for 6 channel)

AUTO MIX button – set the unit to Auto mode with par cans and derby FX
PAR button – set the unit to Auto mode with par cans
LED button – set the unit to Auto mode with derby FX

SOUND MIX button – set the unit to Sound mode with par cans and derby FX
LED button – set the unit to Sound mode with par cans
LED button – set the unit to Sound mode with derby FX

PAR JUMP button – par can jump colour change (use the PAR COLOR buttons to adjust speed)
GRADUAL button – par can gradual colour change (use the PAR COLOR buttons to adjust speed)
FLASH button – par can strobe (use the PAR COLOR buttons to adjust speed)

- COLOR + buttons > – adjust the par can colour/speed (- slower / + faster)
- MOTOR + buttons + – adjust the derby motor speed (- slower / + faster)
- SEN + buttons – adjust the sensitivity of the Sound mode (- less senstive / + more sensitive)

Product specification

Mains power / rated power	AC 220~240V, 50/60Hz / 60w
Control modes	3/6/15 channel DMX512 / Auto / Sound-to-Light / Master/Slave / Remote control
Light source	2 x par cans with 12 x 1w RGBW LEDs plus 2 x derby FX with 4 x 3w RGBW LEDs
Operating temperature	-20°C to 40°C
DMX512 connections	3 pins XLR male/female
Dimensions (WxDxH)	725 x 200 x 150mm (not including stand)
Weight	5.5Kg

Due to continuous product development, specifications and appearance are subject to change.