

KAM

INSTRUCTION MANUAL

Mood Cluster

RGB LED wash effect with cluster & firework effects

9w RGB LED backwash effect with laser cluster and firework effects
Sound-to-Light, Auto, DMX and Master/Slave modes
8 channel DMX512 operation
XLR DMX in and out
Linkable Master/Slave in Sound-to-Light mode
40mW green laser / 100mW red laser
9w RGB LED wash effect
Numerous patterns available for selection
Fan cooled operation & tough metal chassis
Adjustable hanging bracket
Key operated power control

For the latest instruction manual updates and information on the entire Kam range visit:

www.kam.co.uk

Kam products are manufactured by: **Lamba plc**, Unit 1, Southfields Road, Dunstable, Bedfordshire, United Kingdom LU6 3EJ

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If this product is ever no longer functional please take it to a recycling plant for environmentally friendly disposal.

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

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INTRODUCTION

Thank you for purchasing the KAM LED Mood Cluster.

To optimise the performance of this product, please read these operating instructions carefully to familiarize yourself with the basic operations of this unit. The KAM LED Mood Cluster has been designed to create amazing laser effects. Please keep these user instructions in a safe place for future reference. This unit has been tested at the factory before being shipped to you. There is no assembly required.

WARNING

To prevent or reduce the risk of electrical shock or fire, do not expose this unit to high temperature, rain or moisture.

Unintended reflections of the laser beam from reflective or metallic surfaces can be dangerous. Do not touch the laser aperture. When cleaning the laser Aperture, please use a soft cloth.

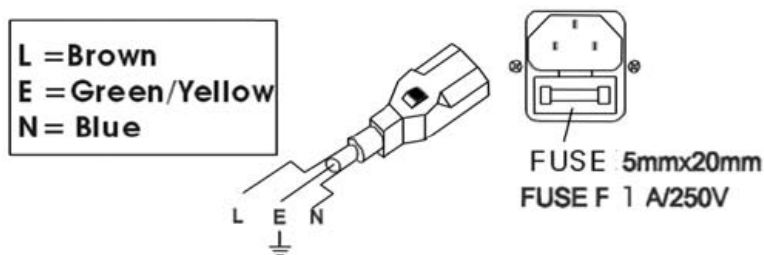
Laser Class 3B product. National regulations must be adhered to at all steps of installation. These can be downloaded from the website www.kam.co.uk (In Germany apply DIN 56912 and BGVR LASER note: additional regulations may apply).

Always replace the fuse with exact same type because anything other than the specified fuse can cause a fire, electric shock, damage your unit, and will void your manufactures warranty. This appliance must be earthed.

This appliance should be used by qualified personnel only.

UNPACKING YOUR NEW KAM PRODUCT

Carefully inspect your laser, as you unpack it. If any damage is evident, please notify the supplier you purchased the unit from immediately. For safety reasons do not use the unit if any damage has occurred during transportation.



CONTENTS: Laser, mains lead, user manual and safety keys.

DMX-512 CONNECTION BETWEEN FIXTURES

The fixture is equipped with 3-pin XLR sockets for DMX input and output. The sockets are wired in parallel. Only use a shielded twisted-pair cable designed for 3-pin XLR-plugs and connectors in order to connect the controller with the fixture or one fixture with another.

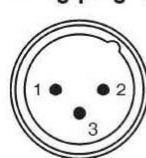
OCCUPATION OF THE XLR-CONNECTION

DMX - output
XLR mounting-sockets (rear view):

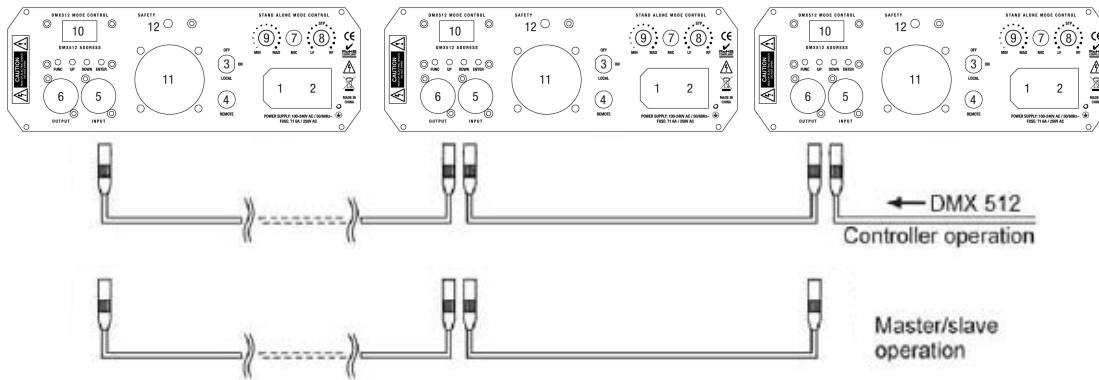


- 1 - Shield
- 2 - Signal (-)
- 3 - Signal (+)

DMX-input
XLR mounting-plugs (rear view):



BUILDING A SERIAL DMX-CHAIN



Master / slave no controller

Set the master unit to desired effect, use the menu button, followed by the up and down buttons to select desired master effect.

For example:

| | |
|-----|---|
| ASr | Auto mixed Slow laser effect with random order with manual control of led wash effect |
|-----|---|

Then press the enter button to confirm selection

To set slave unit

Use the menu button and the up/down button to select "SLA"

Press the enter button to confirm selection.

Both units will now react the same (only one master unit should be set as master all other units to be set as slave)

Using DMX controller

Each fixture needs to have a DMX start address to receive the data from the controller. The DMX address number, which could be read from rear panel of each fixture and is between 000~511. Each unit uses 8 DMX channels.

If all units connected are to be controlled exactly the same, each unit must have the DMX start address set the same. For example, set all units to channel 001.

Use the menu button and then the up/down buttons to select the desired DMX start address, press enter to confirm your selection

Use a DMX cable to link the units together via the DMX in/out sockets on the rear panel. See above diagram.

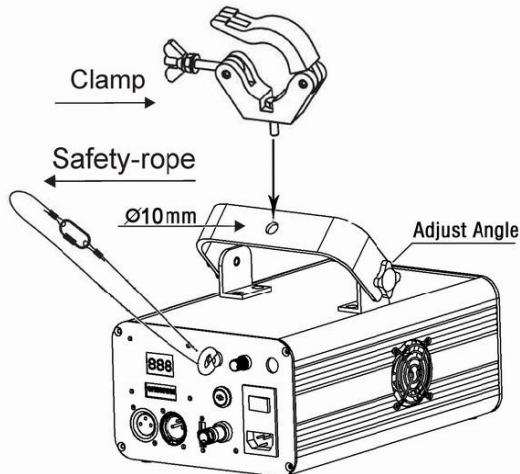
Individual Control

To have DMX control over individual units each unit will need an individual start address. Each unit uses 8 DMX channels.

As before using the menu button then up/down set the desired DMX address. For example, unit 1 set to 001 unit 2 set to 009 etc. Adding 8 channels each time. Make sure no channels overlap.

Use a DMX cable to link the units together via the DMX in/out sockets on the rear panel. See above diagram

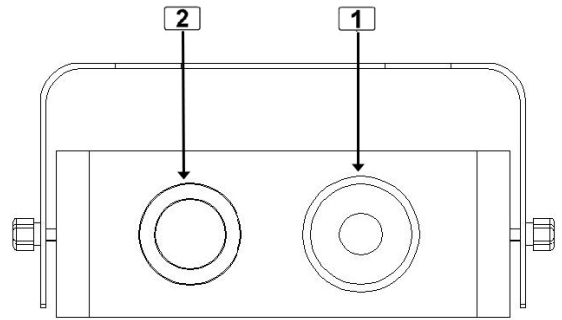
RIGGING THE FIXTURE



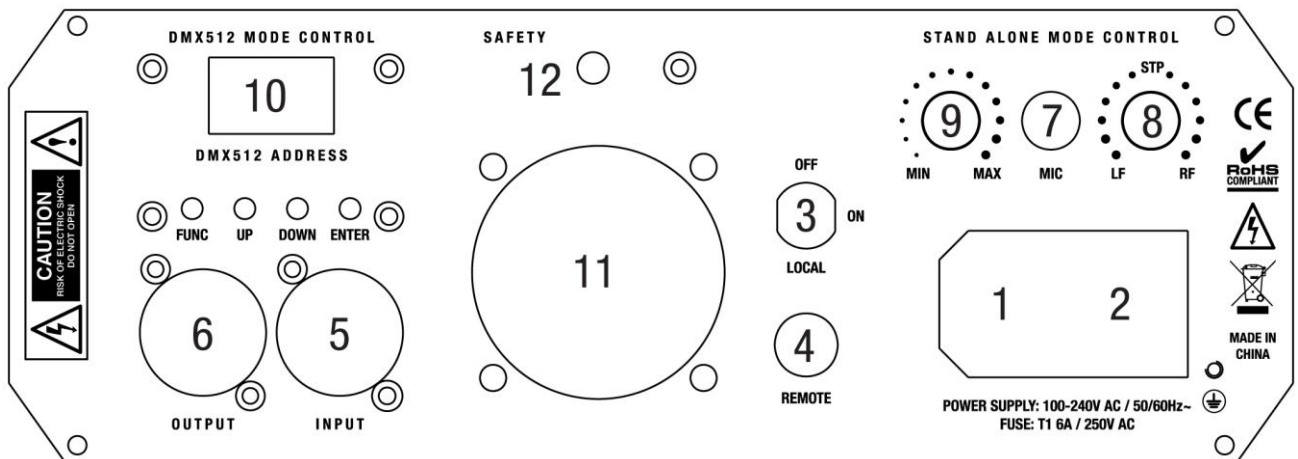
CAUTION: Please consider the respective national norms during the installation! The installation must only be carried out by an authorized employee or dealers! When installing the device, make sure there is no highly inflammable material (decoration articles, etc.) in between a distance of min 0.5m.

FRONT PANEL

| NO. | NAME | DESCRIPTION |
|-----|----------------|---|
| 1 | Laser Aperture | The laser effect output aperture. NEVER LOOK INSIDE THE FIXTURE THROUGH THIS APERTURE WHILE FIXTURE IS OPERATING. |
| 2 | LED Aperture | The LED effect output aperture. |



REAR PANEL



| NO. | NAME | DESCRIPTION |
|-----|----------------------|---|
| 1 | Main Power Input | IEC socket and integrated fuse holder. |
| 2 | Power Switch | ON and OFF switch |
| 3 | Key Switch | Safety key switch unit will not operate with this turned off |
| 4 | Interlock | Used to connect an optional emergency stop button. When the contact is closed the laser will Black-out immediately. This must be wired by a qualified engineer |
| 5 | DMX input | 3 pins male XLR connector |
| 6 | DMX output | 3 pins female XLR connector |
| 7 | Microphone | To detect the music/sound signal |
| 8 | LED Speed | LED effect rotating speed |
| 9 | Mic Sensitivity Knob | Turning this knob clockwise increases the sound sensitivity |
| 9 | Mic Sensitivity Knob | Turn the knob (potentiometer) until the laser works in sync with the music. |
| 10 | Control Panel | To control the fixture with digital LED display, check more information on CONTROL & FUNCTION |
| 11 | Cooling | Forced air fan cooling |
| 12 | Safety eyelet | Attach safety chain or rope to this point |

OPERATING MODE

When laser is powered on, LED monitor on rear panel shows the current operating standalone mode or DMX address of DMX mode. With help of LED control panel, it is very easy to set and change the operating mode of laser. After every resetting and saved, the new mode information will be shown on LED monitor at next power on.



Mode/Function Option, to choose the operating mode of laser.



Confirmation - to confirm all settings or change of LED control panel.



UP/DOWN, to change operating mode, parameter or DMX address.



Standalone pre-programmed laser show

Press FUNC to enter the mode option. Keep pressing until the LED panel shows one of the following: ArA, ASr, AFd, ASd, SrA, SSr, SFd, SSd.

Press UP or DOWN to select your favourite Standalone mode as above. Press ENTER to confirm the setting. The laser is working in stand alone. Each time when you turn on your laser, it will default to this setting.

In standalone mode, press the function button to choose a different program and the display will flash. Use the up and down buttons to select the desired mode then press enter to confirm.

| DISPLAY | STAND ALONE MODE LASER EFFECT |
|---------|--|
| ArA | Mixed laser effect show automatic mode with manual control of led wash effect |
| | Use led colour choice section to change led colour |
| ASr | Auto mixed S low laser effect with random order with manual control of led wash effect |
| | Use led colour choice section to change led colour |
| AFd | Auto F ast d ot laser effect with manual control of led wash effect |
| | Use led colour choice section to change led colour |
| ASd | Auto S low d ots laser effect with manual control of led wash effect |
| | Use led colour choice section to change led colour |
| SrA | Sound activated r Andom mixed laser effect with manual control of led wash effect |
| | Use led colour choice section to change led colour |
| SSr | Sound activated S low random mixed laser effect with manual control of led wash effect |
| | Use led colour choice section to change led colour |
| SFd | Sound activated F ast moving d ots laser effect with manual control of led wash effect |
| | Use led colour choice section to change led colour |
| SSd | Sound active S low moving d ots laser effect with manual control of led wash effect |
| | Use led colour choice section to change led colour |

LED colour choice

Press FUNC to enter mode option.

Keep pressing until the LED panel shows either one of LEd, Loo, rAn, -r-, -Y-, -G-, -C-, -b-, -P- & -W-. colours explained in grid below.

Press UP or DOWN to select your favourite LED colour as above. Press ENTER to confirm the setting. The LED will be in the colour which you selected. Each time you turn on your laser, it will default to this colour option.

In the COLOUR CHOICE setting, the LED COLOUR that you are going to choose will flash. Press UP or DOWN to change the LED colour, you will have 10 different LED colour modes. Their display and effects are listed below:

| DISPLAY | LED COLOUR | DISPLAY | LED COLOUR |
|---------|----------------|---------|------------|
| LEd | LED Colour | -G- | Green |
| Loo | Colour Looping | -C- | Cyan |
| rAn | Colour Random | -b- | Blue |
| -r- | Red | -P- | Purple |
| -Y- | Yellow | ☐ | White |

Master/slave mode

Press FUNC to enter mode option. Keep pressing until the LED panel shows SLA. Press ENTER to confirm the setting.

The laser is working in slave mode. Connect master laser and slave lasers with DMX cable, the SLAVE lasers will do exactly what the master laser does.

DMX mode

Press FUNC to enter MODE OPTION

Until the LED panel shows 001.

Press ENTER to confirm the setting.

The laser is working in "DMX MODE". With help of UP/DOWN button, change the number to the desired DMX start address.

DMX protocol

| CHANNEL | DMX VALUE | DESCRIPTION |
|---|-----------|---|
| 1 - MODE | 000-025 | Laser Black Out |
| | 026-050 | Mixed laser effect Auto show with rAndom led |
| | 051-075 | Auto mixed Slow laser effect with random led |
| | 076-100 | Auto Fast dots laser effect |
| | 101-125 | Auto Slow dots laser effect |
| | 126-150 | Sound activated rAndom mixed laser effect |
| | 151-175 | Sound activated Slow random laser effect |
| | 176-200 | Sound activated Fast moving dots laser effect |
| | 201-225 | Sound active Slow moving dots laser effect |
| | 225-255 | DMX MODE |
| 2 – ROTATION SPEED AND DIRECTION | 000-128 | Anti-clockwise Rotation |
| | 129-138 | Stop |
| | 139-255 | Clockwise Rotation |
| 3 - VIBRATE | 000-255 | vibrating Range |
| 4 - FLASH | 000-005 | Stop |
| | 006-255 | Flash |
| 5 – COLOUR MODE | 000-036 | Black Out |
| | 037-072 | Red |
| | 073-108 | Green |
| | 109-144 | Red & Green (To alternate colour use ch6) |
| | 145-180 | Red and green, to strobe Green use ch6 also |
| | 181-216 | Green and red to strobe red use ch6 |
| | 217-255 | Both Red and Green to strobe use ch6 |
| 6 - STROBE | 000-127 | NO Strobe |
| | 128-255 | Speed of strobe |
| 7 - LED COLOUR MODE To activate CH 7 – CH8 value must be set to 4 | 000-025 | No Strobe |
| | 026-050 | White |
| | 051-075 | Purple |
| | 076-100 | Blue |
| | 101-125 | Cyan |
| | 126-150 | Green |
| | 151-175 | Yellow |
| | 176-200 | Red |
| To adjust speed use CH8 | 201-225 | Looping Colour Strobing |
| | 226-255 | Random Colour Strobing |
| 8 - LED STROBE | 000-003 | NO Strobe |
| | 000-255 | Fast to Slow |

LASER EMISSION DATA

| | |
|--------------------------|-----------------------------|
| Laser Classification | Class 3B |
| Green Laser medium | DPSS Nd:YVO4, 532nm |
| Red laser medium | LD GaAlAs 650nm, typical |
| Beam diameter | <5mm at aperture |
| Pulse data | All pulses < 4Hz (>0.25sec) |
| Divergence (each beam) | <2 mrad |
| Divergence (total light) | <160 degrees |
| Laser Power | Red>100mW, Green>40mW |

* As measured under IEC measurement conditions for classification.

LASER COMPLIANCE STATEMENT

This laser product complies with EN/IEC 60825-1 Ed 2, 2007-03, and US FDA/CDRH FLPPS via the terms of Laser Notice No. 50 dated June 24, 2007.

SPECIFICATIONS

Mains Input: AC100-240V, 50/60Hz

Fuse: 250V 1.6A Slow Blow (20mm Glass)

Total Power: 25W

Music Control: Internal microphone

Laser Power: 40mW 532nm Green CW

100mW 650nm Red CW

Laser Classification: Class 3B

Laser Safety Standard: EN60825-1 2007

Condition Temperature: 10~40°C

DMX Connections: 3 pins XLR Male/Female

DMX Channels: 8 channels

Measurement: See diagram below

N Weight: 2.8 Kg