

# KAM

INSTRUCTION MANUAL

## Kam CosmoSphere

Multicolour spinning colour light sphere

M A N U A L V E R S I O N 1 . 0  
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For the latest instruction manual updates and information on the entire Kam range visit:

[www.kam.co.uk](http://www.kam.co.uk)

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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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**Thank you for purchasing this Kam product, we are sure that it will serve you for many years to come.**

To optimise its 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 periodically, 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.**

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 (do not exceed 40°C).

**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).

The declarations are available on application from [certification@lambapl.com](mailto:certification@lambapl.com)

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. Inspection the unit regularly every year.

## Packing list

Lighting unit and bracket  
Power cable  
Instruction manual  
Warranty

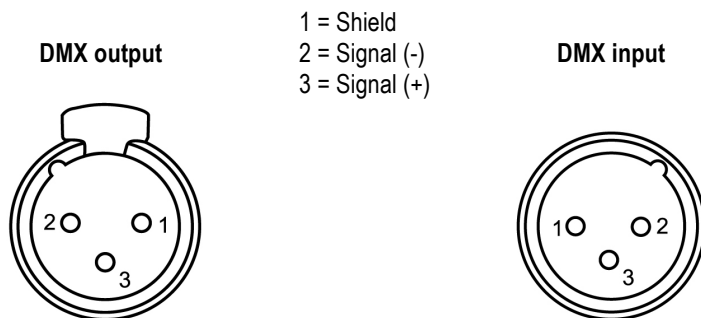
## AC power

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   |  |

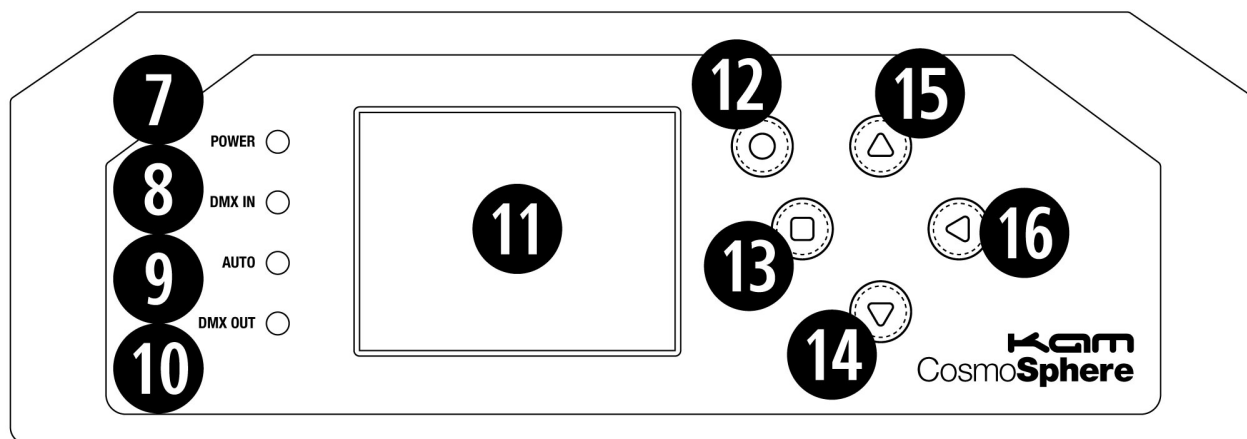
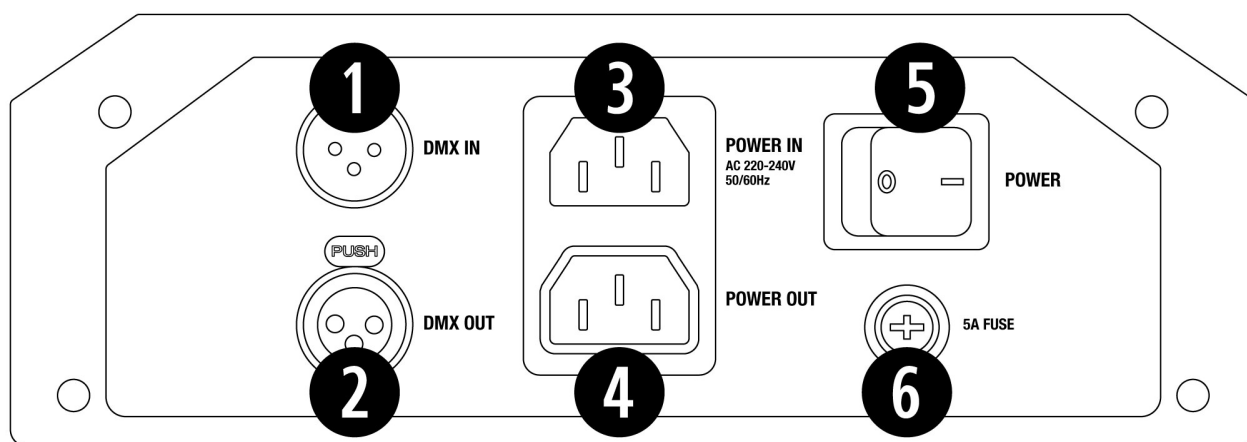
## DMX-512 connection

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.



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.

## Rear panel features



## Key to rear panel features

| Number | Feature              | Function   |
|--------|----------------------|--|
| 1      | DMX input            | 3 pin XLR connector for DMX512 input communication.  |
| 2      | DMX output           | 3 pin XLR connector for DMX512 output communication. |
| 3      | Power input          | Mains power input IEC socket                         |
| 4      | Power output         | IEC connector socket for connecting multiple units   |
| 5      | Power switch         | Switches the unit on and off                         |
| 6      | Fuse holder          | For 5A fuse replacement as and when required         |
| 7      | Power ON LED         | Illumination shows unit is in operation              |
| 8      | DMX IN LED           | Illumination shows DMX input is connected            |
| 9      | Auto mode LED        | Illumination shows unit is in AUTO mode              |
| 10     | DMX OUT LED          | Illumination shows DMX output is connected           |
| 11     | LCD Touchscreen      | Touchscreen display panel                            |
| 12     | Display reset button | Rotates display 180° and changes language            |
| 13     | RETURN button        |  |
| 14     | Menu DOWN button     | Illumination confirms unit is in Master mode         |
| 15     | Menu UP button       | Illumination confirms unit is in sound to light mode |
| 16     | ENTER button         | Selects chosen function                              |

## Function setting

This unit uses a very unique LED Colour touchscreen display. Functions can either be selected by pressing gently on the touchscreen or by using the menu keys to the right hand side of the display

| SET UP menu            | Function  |  |
|------------------------|---|--|
| <b>DMX Address</b>     | DMX address setting. Can be changed using either the touch screen or buttons 14/15 above                  |  |
| <b>DMX Mode</b>        | Unit only operates in 21 Channel DMX Mode (see control table below)                                       |  |
| <b>Run Mode</b>        | <b>DMX512</b>   | Unit operates in DMX mode  |
|                        | <b>Auto Pr 1</b>  | Built in Show 1  |
|                        | <b>Auto Pr 2</b>  | Built in Show 2  |
|                        | <b>Auto Pr 3</b>  | Built in Show 3  |
|                        | <b>Edit Pr</b>  | User editable auto program. Scenes can be created in Edit mode.              |
|                        | <b>Sound Pr</b>   | Sound to light mode. Sound sensitivity can be adjusted in Advanced settings. |
| <b>Direction Rev</b>   | <b>X Reversion</b>  | Off / On - reverses rotational settings                                      |
|                        | <b>Y Reversion</b>  |  |
|                        | <b>XY Swap</b>  |  |
| <b>Master Slave</b>    | <b>Master</b>   | Unit operates in Master mode   |
|                        | <b>Slave</b>  | Unit operates in Slave mode  |
| <b>Screen Saver</b>    | Turns Screen saver on or off. When switched to off, display will turn black during periods of inactivity. |  |
| <b>Factory Setting</b> | Enters 'factory setting' mode (not required for normal usage)   |  |
| <b>Language</b>        | Changes language used on the display screen   |  |

## Edit menu

The Edit menu is for creating your own light shows from scratch and also control each Lamp individually.

| EDIT menu          | Function          |                  |            |   |
|--------------------|-------------------|------------------|------------|---|
| <b>Scenes Edit</b> | Edit programs 1-6 | Edit Scenes 1-12 | X Pos:     | 0-255                                     |
|                    |                   |                  | Y Pos:     | 0-255                                     |
|                    |                   |                  | XY Speed:  | 0-255                                     |
|                    |                   |                  | Open Run:  | 0-127 (Direction 1) 128-255 (Direction 2) |
|                    |                   |                  | LightAuto: | 0-255 (pattern selection)                 |
|                    |                   |                  | Lamp 1:    | 0-2 (off) 3-255 (pattern selection)       |
|                    |                   |                  | Lamp 2:    | 0-255 (pattern selection)                 |
|                    |                   |                  | Lamp 3:    | 0-255 (pattern selection)                 |
|                    |                   |                  | Lamp 4:    | 0-255 (pattern selection)                 |
|                    |                   |                  | Lamp 5:    | 0-255 (pattern selection)                 |
|                    |                   |                  | Lamp 6:    | 0-255 (pattern selection)                 |
|                    |                   |                  | Lamp 7:    | 0-255 (pattern selection)                 |
|                    |                   |                  | Lamp 8:    | 0-255 (pattern selection)                 |
|                    |                   |                  | Lamp 9:    | 0-255 (pattern selection)                 |
|                    |                   |                  | Lamp 10:   | 0-255 (pattern selection)                 |
|                    |                   |                  | Lamp 11:   | 0-255 (pattern selection)                 |
|                    |                   |                  | Lamp 12:   | 0-255 (pattern selection)                 |
| Delay Time:        | 0-255             |                  |            |   |

| System menu  |  |
|--------------|--|
| Version Info | Shows unit version number                                |
| DMX Values   | DMX Signal values that the unit is receiving             |
| System Error | Shows a list if any errors the unit may have encountered |
| Total Time   | Shows the total operating time of the unit               |
| The Use Time | Shows the current operating time of the unit             |
| Lamp Reset   | Resets the unit  |

| Advanced Menu |  |                |
|---------------|--|----------------|
| Sensors Inf   | If unit is poperating correct, should read     | X Hall state H |
|               |  | Y Hall state H |
|               |  | X encoder L    |
|               |  | Y encoder L    |
| Reset adjust  | No function                                    |                |
| Touch Set     | Calibrates the Touch screen                    |                |
| White Adjust  | Adjusts the brightness of the RGBY lamps       |                |
| Sound adjust  | Adjusts the units sound sensitivity from 0-255 |                |

**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 operates in 21 Channel mode, so you should set the starting address of the first unit to A001, the second unit must then be set to A022 (1+21), the third to A043 (22+21) e.t.c.

#### 21 Channel DMX control table

| DMX channel |                           | Value   | Function   |
|-------------|---------------------------|---------|--|
| CH1         |                           | 0-255   | X Axis position (Rotating Arm)                     |
| CH2         |                           | 0-255   | Y Axis position (Rotating Sphere)                  |
| CH3         |                           | 0-255   | X Axis position (Rotating Arm) <b>FINE TUNE</b>    |
| CH4         |                           | 0-255   | Y Axis position (Rotating Sphere) <b>FINE TUNE</b> |
| CH5         |                           | 0-255   | XY Speed   |
| CH6         | Y Axis Limitless Rotation | 0-9     | Off  |
|             |                           | 10-127  | Direction A (Slow/Fast/Slow)                       |
|             |                           | 128-255 | Direction B (Slow/Fast/Slow)                       |

|          |                     |         |                                 |
|----------|---------------------|---------|---------------------------------|
| CH7      |                     | 0-255   | Master dimmer                   |
| CH8-CH19 | 12 Individual LED's | 0-2     | Off                             |
|          |                     | 3-119   | Colour Macro                    |
|          |                     | 120-169 | 4 Colour change                 |
|          |                     | 170-219 | 4 Colour (water running effect) |
|          |                     | 220-255 | Strobe & colour change          |
| CH20     | Light effect        | 0-4     | Off                             |
|          |                     | 5-255   | 36 Group light effects          |
| CH21     | Auto mode           | 0-2     | Off                             |
|          |                     | 3-255   | Auto mode                       |

### Master/Slave operation

Connect the units in a Master/Slave chain via 3 pin DMX cables:

1. Connect the DMX output of the Master unit to the DMX input of the first Slave unit.
2. Next connect another DMX cable from the first Slave unit DMX output to the second Slave unit DMX input.
3. Continue in this fashion until all units are connected.
4. Set the Master Slave option to **Master** on the first unit, and **Slave** on the second unit
5. Slave unit will now follow the operation of the Master unit.

### Product specification

|                                  |  |
|----------------------------------|--|
| <b>Mains power / rated power</b> | AC100~240V, 50/60Hz / 300W                               |
| <b>Control modes</b>             | 21 Channel DMX512 / Auto / Sound-to-Light / Master/Slave |
| <b>Display</b>                   | Colour touch screen LCD control panel                    |
| <b>Light source</b>              | 12 x 20W high power 4 in 1 LED's                         |
| <b>Beam angle</b>                | 12°  |
| <b>Operating temperature</b>     | 0°C to 40°C  |
| <b>DMX512 connections</b>        | 3 pins XLR male/female                                   |
| <b>Dimensions (WxDxH)</b>        | 320x230x400mm  |
| <b>Nett weight</b>               | 7.0kg  |

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