



SquareLED - KOBOLD 180W

# Manual | KOBOLD 180W

## BEFORE YOU BEGIN

### What is included

- 1 x Spot
- 1 x Mounting bracket and screws
- 1 x Power cable
- 1 x User Manual

### Unpacking Instructions

Immediately upon receiving a fixture, carefully unpack the carton, check the contents to ensure that all parts are present, and have been received in good condition. Notify the shipper immediately and retain packing material for inspection if any parts appear damaged from shipping or the carton itself shows signs of mishandling.

Save the carton and all packing materials. In the event that a fixture must be returned to the factory, it is important that the fixture be returned in the original factory box and packing.

### Manual Conventions




Manuals use the following conventions to differentiate certain types of information from the regular text.

CONVENTION	MEANING
[10]	A LCD display to be configured
<Menu>	A key to be pressed on the fixture's control panel
1~512	A range of values
50/60	A set of values of which only one can be chosen
Settings	A menu option not to be modified (for example, showing the operating mode/current status)
MENU > Settings	A sequence of menu options to be followed
ON	A value to be entered or selected

# Manual | KOBOLD 180W

## Icons

This manual uses the following icons to indicate information that requires special attention on the part of the user.

ICONS	MEANING
	This paragraph contains critical installation, configuration or operation information. Failure to comply with this information may render the fixture partially or completely inoperative, cause damage to the fixture or cause harm to the user.
	This paragraph contains important installation or configuration information. Failure to comply with this information may prevent the fixture from functioning correctly.
	This paragraph reminds you of useful, although not critical, information

## Safety Instructions



Please read these instructions carefully. It includes important information about the installation, usage and maintenance of this product.

- Please keep this User Manual for future consultation. If you sell the unit to another user, be sure that they also receive this instruction booklet.
- Always make sure that you are connecting to the proper voltage, and that the line voltage you are connecting to is not higher than that stated on the decal or rear panel of the fixture.
- This product is intended for indoor use only! To prevent risk of fire or shock, do not expose fixture to rain or moisture.
- Make sure there are no flammable materials close to the unit while operating.
- The unit must be installed in a location with adequate ventilation, at least 20 in (50 cm) from adjacent surfaces. Be sure that no ventilation slots are blocked.
- Always disconnect from power source before servicing or replacing fuse and be sure to replace with same fuse source.

# Manual | KOBOLD 180W

- Secure fixture to fastening device using a safety chain.
- Maximum ambient temperature (Ta) is 104° F (40° C). Do not operate fixture at temperatures higher than this.
- In the event of a serious operating problem, stop using the unit immediately. Never try to repair the unit by yourself.
- Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center.
- Never connect the device to a dimmer pack.
- Make sure the power cord is never crimped or damaged.
- Never disconnect the power cord by pulling or tugging on the cord.
- Never carry the fixture directly from the cord. Always use the hanging/mounting bracket.
- Avoid direct eye exposure to the light source while it is on.
- Never carry the fixture by holding the head. Always use the carrying handle.

## INTRODUCTION

### Source

- Light source: Advanced 180w white led
- Led life: 60.000 hours
- Luminous Flux: 10985lumen, 21385lux@2.5m
- Control: DMX
- Ballast: switching mode power supply

### Optical System

- Beam angle: 15°

### X/Y

- Pan: 540°(2.3sec), Tilt: 265° (1.8 sec)
- 16-bit resolution
- Auto repositioning

### Colors

- 7+open, indexable and bidirectional rainbow effect

# Manual | KOBOLD 180W

## Gobos

- Outside Ø25.5mm, inside Ø21.5mm
- 6+ open custom interchangeable position for rotating gobo wheel
- 8+ open fixed gobos
- Real indexable and gobo shaking
- Distinctive gobo animation effect

## Features

- DMX channels: 17
- Color wheel: 7+1 colors
- Fixed gobo wheel: 8+1 gobos
- Rotating gobo wheel: 6+1 gobos
- Motorized auto focus
- Full range 0-100% dimmer
- Various strobe
- bilateral rotation 3
- Indicate temperature info of lamp
- Fan speed auto change according to temperature

## Power

- Max power consumption: 250W
- Powercon in and out
- Power supply: Electronic auto-ranging
- Input voltage range: 100–240V, 50-60Hz

## Dimension and Weight

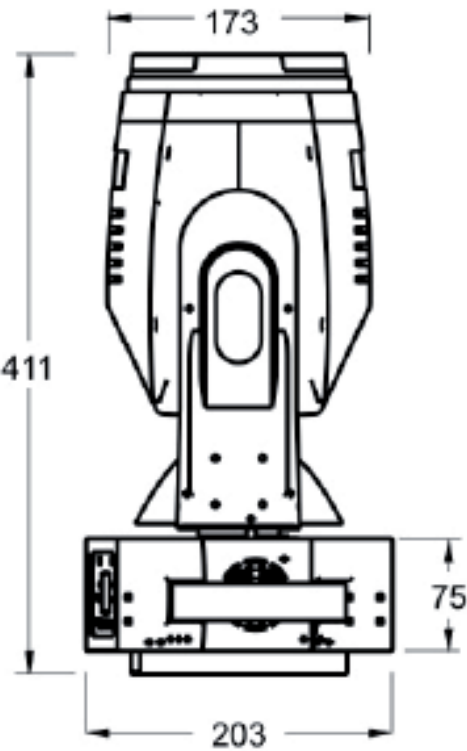
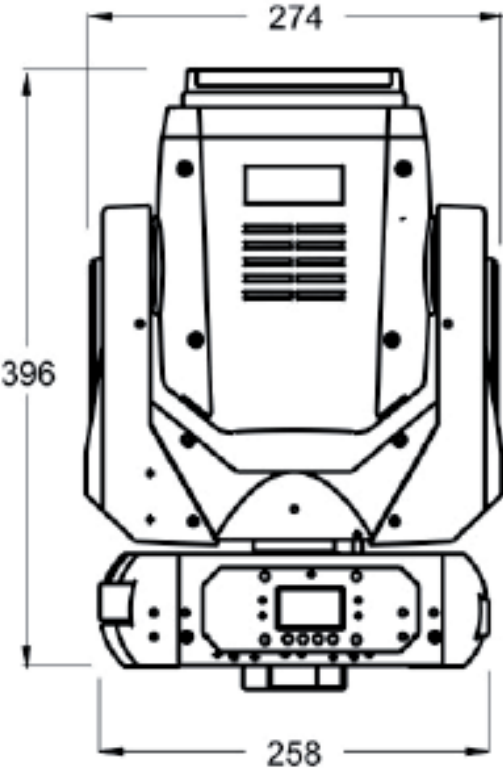
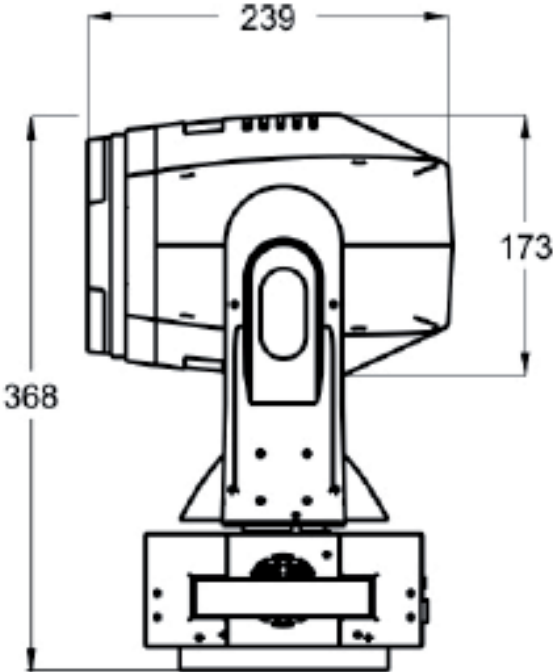
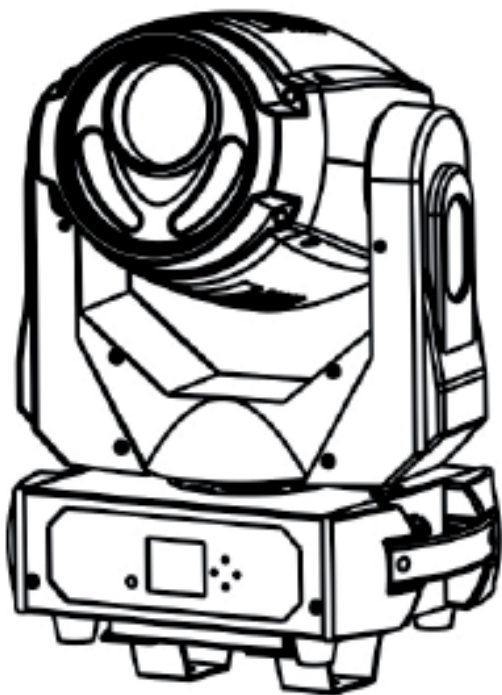
- Fixture: 275X245X353MM
- Net Weight: 8.3KG
- Gross Weight: 9.7KG

## Rigging

- Mounting points: 4 ¼-turn locks
- 2 x Omega brackets with ¼-turn quick locks

# Manual | KOBOLD 180W

## Product Dimensions



# Manual | KOBOLD 180W

## Mounting

### Orientation

The Spot may be mounted in any safe position provided there is adequate room for ventilation.

### Rigging

Be sure that the structure can support 10 times the weight of the fixture. Please see the “Technical Specifications” section of this manual for a detailed weight listing. Mount the fixture securely. Two hanging clamps for truss mounting may be used, or nuts and bolts for permanent installation may be used.

The holes in each bracket are 13 mm in size. When rigging, consider routine maintenance and control panel access. Please see the following steps for installation.

- If the power link out is intended to be used with multiple fixture, take into account the length of each power cable, and mount the fixtures close enough to one another to accommodate for this.
- Attach both included bolts in the locations indicated below, using a metric 8 mm Allen wrench.
- Attached 2 hanging clamps to the bracket in each of the two locations indicated below
- Safety cables must always be used.

## OPERATING INSTRUCTIONS

### Configuring the Starting Address

Each fixture requires a starting address from 1~512. A fixture requiring one or more channels for control begins to read the data on the channel indicated by the starting address.

For example, a fixture that uses seven DMX channels and is addressed to start on DMX channel 100, will read data from channels: 100, 101, 102, 103, 104, 105 and 106.

Choose the starting addresses for each fixture so that the channels used do not overlap. In addition, you should note the starting address selected for future reference.

# Manual | KOBOLD 180W

## Control Panel Functions

The Control Panel shows the current state of the unit. It is used to select the operating mode, as well as the sub-features. For a detailed layout of the control panel functions, please see the “menu map” section on the following page.



**[MODE]** menu selection or return to previous menu.

**[UP]** press **[UP]** through the menu list to increase/change the value of the current function.

**[DOWN]** press **[DOWN]** through the menu list to decrease/change the value of the current function.

**[ENTER]** confirm & quit out current function setting.

## DMX CHANNEL VALUES

### Basic Mode(16-channel)

Channel	Function	Value	Description
1	Pan	0-255	
2	Pan Fine	0-255	
3	Tilt	0-255	
4	Tilt Fine	0-255	
5	Pan/Tilt speed	0-255	Decreasing speed
6	Dimmer	0-255	Dimmer 0-100%
7	Strobe	0-19	No function
		20-199	Strobe effect slow to fast
		250-255	No function
8	Colour	0-9	Open/White
		10-19	Half color



# Manual | KOBOLD 180W

8	Colour	20-29	Color1
		30-39	Half color
		40-49	Color2
		50-59	Half color
		60-69	Color3
		70-79	Half color
		80-89	Color4
		90-99	Half color
		100-109	Color5
		110-119	Half color
		120-129	Color6
		130-139	Half color
		140-149	Color7
		150-159	Half color
		160-199	Color auto changing from slow to fast
		200-227	Forwards rainbow effect from fast to slow
		228-255	Backwards rainbow effect from slow to fast
9	Focus	0-255	
10	Gobo 1	0-19	Open
		20-39	Gobo1
		40-59	Gobo2
		60-79	Gobo3
		80-99	Gobo4
		100-119	Gobo5
		120-159	Gobo6
		160-179	Forwards step
		180-199	Backwards step
		200-226	Forwards gobo rotation from fast to slow
		227-255	Backwards gobo rotation from slow to fast

# Manual | KOBOLD 180W

11	Gobo 1 Rot.	0-19	Stop
		20-99	Forwards gobo rotation from fast to slow
12	Gobo1 shake	0-9	No function
		10-255	Shake slow to fast
13	Gobo2	0-19	Open
		20-31	Gobo1
		32-47	Gobo2
		48-63	Gobo3
		64-79	Gobo4
		80-95	Gobo5
		96-111	Gobo6
		112-127	Gobo7
		128-159	Gobo8
		160-179	Forwards step
		180-199	Backwards step
		200-226	Forwards gobo rotation from fast to slow
		227-255	Backwards gobo rotation from slow to fast
14	Gobo1 Shake	0-9	No function
		10-255	Slow to Fast
15	Prism	0-9	Off
		10-39	Open
		40-99	Forwards rotation from fast to slow
		100-159	Backwards rotation from slow to fast
		160-255	Forwards Backwards rotation from slow to fast
16	Control	20-39	Auto1
		40-59	Auto2
		200-219	Reset

# Manual | KOBOLD 180W

## APPENDIX

### DMX Primer

There are 512 channels in a DMX connection. Channels may be assigned in any manner. A fixture capable of receiving DMX will require one or a number of sequential channels. The user must assign a starting address on the fixture that indicates the first channel reserved in the controller. There are many different types of DMX controllable fixtures and they all may vary in the total number of channels required.

Choosing a start address should be planned in advance. Channels should never overlap. If they do, this will result in erratic operation of the fixtures whose starting address is set incorrectly. You can however, control multiple fixtures of the same type using the same starting address as long as the intended result is that of unison movement or operation. In other words, the fixtures will be slaved together and all respond exactly the same.

DMX fixtures are designed to receive data through a serial Daisy Chain. A Daisy Chain connection is where the DATA OUT of one fixture connects to the DATA IN of the next fixture. The order in which the fixtures are connected is not important and has no effect on how a controller communicates to each fixture.

Use an order that provides for the easiest and most direct cabling. Connect fixtures using shielded two conductor twisted pair cable with three pin XLR male to female connectors. The shield connection is pin 1, while pin 2 is Data Negative (S-) and pin 3 is Data positive (S+).

### General Maintenance

To maintain optimum performance and minimize wear, fixtures should be cleaned frequently. Usage and environment are contributing factors in determining frequency. As a general rule, fixtures should be cleaned at least twice a month. Dust build up reduces light output performance and can cause overheating. This can lead to reduced lamp life and increased mechanical wear. Be sure to power off fixture before conducting maintenance.

- Unplug fixture from power.
- Use a vacuum or air compressor and a soft brush to remove dust collected on external vents.
- Clean all glass when the fixture is cold with a mild solution of glass cleaner or Isopropyl Alcohol and a soft lint free cotton cloth or lens tissue.
- Apply solution to the cloth or tissue and drag dirt and grime to the outside of the lens.
- Gently polish optical surfaces until they are free of haze and lint.

The cleaning of external optical lenses and/or mirrors must be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates. Damp, smoky or particularly dirty surroundings can cause greater accumulation of dirt on the unit's optics. Clean with soft cloth using normal glass cleaning fluid. Clean the external optics at least every 20 days. Clean the fixture at least every 30/60 days.



**Always dry the parts carefully after cleaning them.**



**Never spin a fan using compressed air.**

# Manual | KOBOLD 180W

## Fixture Linking

You will need a serial data link to run light shows of one or more fixtures using a DMX controller or to run synchronized shows on two or more fixtures set to a master/slave operating mode. The combined number of channels required by all the fixtures on a serial data link determines the number of fixtures the data link can support.



**Fixtures on a serial data link must be daisy chained in one single line. To comply with the EIA485 standard, no more than 32 fixtures should be connected on one data link. Connecting more than 32 fixtures on one serial data link without the use of a DMX optically-isolated splitter may result in deterioration of the digital DMX signal.**

Maximum recommended serial data link distance: 500 m (1640 ft)

Maximum recommended number of fixtures on a serial data link: 32

## Data Cabling

To link fixtures together you must obtain data cables. You can purchase certified DMX cables directly from a dealer/distributor or construct your own cable. If you choose to create your own cable please use data-grade cables that can carry a high quality signal and are less prone to electromagnetic interference.

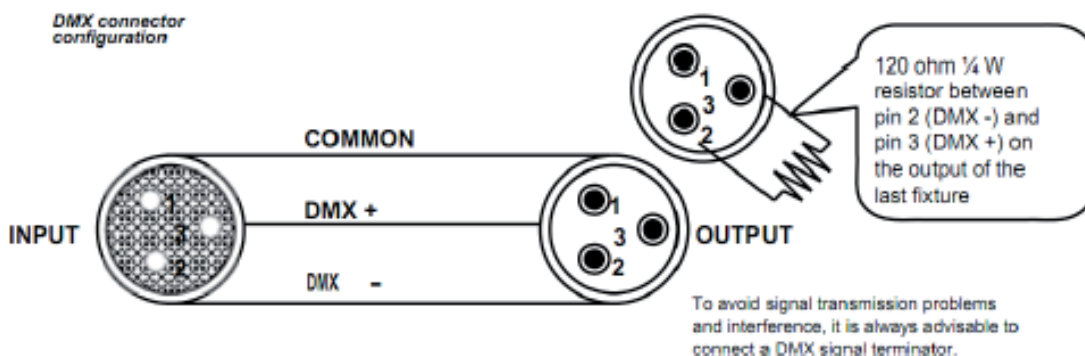
## DMX Data Cable

Use a Belden© 9841 or equivalent cable which meets the specifications for EIA RS-485 applications. Standard microphone cables cannot transmit DMX data reliably over long distances. The cable must have the following characteristics:

Type:	shielded, 2-conductor twisted pair
Maximum capacitance between conductors:	30 pF/ft
Maximum capacitance between conductor and shield:	55 pF/ft
Maximum resistance:	20 ohms/1000 ft
Nominal impedance:	100 ~ 140 ohms

## Cable Connectors

Cabling must have a male XLR connector on one end and a female XLR connector on the other end.



# Manual | KOBOLD 180W



Do not allow contact between the common and the fixture's chassis ground. Grounding the common can cause a ground loop, and your fixture may perform erratically. Test cables with an ohm meter to verify correct polarity and to make sure the pins are not grounded or shorted to the shield or each other.

## 3-Pin to 5-Pin Conversion Chart



If you use a controller with a 5-pin DMX output connector, you will need to use a 5pin to 3-pin adapter. The chart below details a proper cable conversion:

3-PIN TO 5-PIN CONVERSION CHART

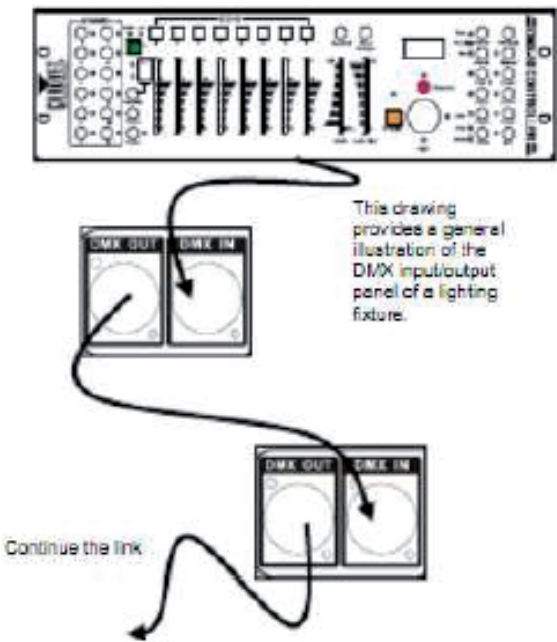
Conductor	3-Pin Female (Output)	5-Pin Male (Input)
Ground/Shield	Pin 1	Pin 1
Data ( - ) signal	Pin 2	Pin 2
Data ( + ) signal	Pin 3	Pin 3
Not used		Pin 4
Not used		Pin 5

## Setting up a DMX Serial Data Link

### Controller

1. Connect the (male) 3-pin connector side of the DMX cable to the output (female) 3-pin connector of the controller.
2. Connect the end of the cable coming from the controller which will have a (female) 3-pin connector to the input connector of the next fixture consisting of a (male) 3-pin connector.
3. Then, proceed to connect from the output as stated above to the input of the following fixture and so on.

### Universal DMX



# Manual | KOBOLD 180W

## General Troubleshooting

SYMPTOM	POSSIBLE CAUSE(S)	POSSIBLE ACTION(S)
Breaker/Fuse keeps blowing	<ul style="list-style-type: none"><li>• Excessive circuit load</li><li>• Short circuit along the power wires</li></ul>	<ul style="list-style-type: none"><li>• Check total load placed on the electrical circuit.</li><li>• Check for a short in the electrical wiring (internal and/or external)</li></ul>
Device does not power up	<ul style="list-style-type: none"><li>• No power</li><li>• Loose power cord</li></ul>	<ul style="list-style-type: none"><li>• Check for power on power outlet</li><li>• Check power cord</li></ul>
Fixture is not responding to DMX	<ul style="list-style-type: none"><li>• Wrong DMX addressing</li><li>• Damaged DMX cables</li><li>• Wrong polarity settings on the controller</li><li>• Loose DMX cables</li><li>• Faulty DMX interface</li><li>• Faulty Main PCB</li></ul>	<ul style="list-style-type: none"><li>• Check Control Panel and unit addressing</li><li>• Check DMX cables</li><li>• Check polarity switch settings on the controller</li><li>• Check cable connections</li><li>• Replace DMX input</li><li>• Replace Main PCB</li></ul>
Loss of signal	<ul style="list-style-type: none"><li>• Non DMX cables</li><li>• Bouncing signals</li><li>• Long cable / Low level signal</li><li>• Too many fixtures</li><li>• Interference from AC wires</li></ul>	<ul style="list-style-type: none"><li>• Use only DMX compatible cables</li><li>• Install terminator as suggested</li><li>• Install amplifier right after fixture with strong signal</li><li>• Install an optically coupled DMX splitter after unit #32</li><li>• Keep DMX cables separated from power cables or black lights</li></ul>



## **Das Lichttechnikhaus Vertriebs GmbH**

Rudolf-Diesel-Str. 3, D-89312 Günzburg

Telefon +49 (0) 82 21 207 98-0

Fax +49 (0) 82 21 207 98-69

E-Mail [info@lth-gmbh.de](mailto:info@lth-gmbh.de)

Web [www.lth-gmbh.de](http://www.lth-gmbh.de)