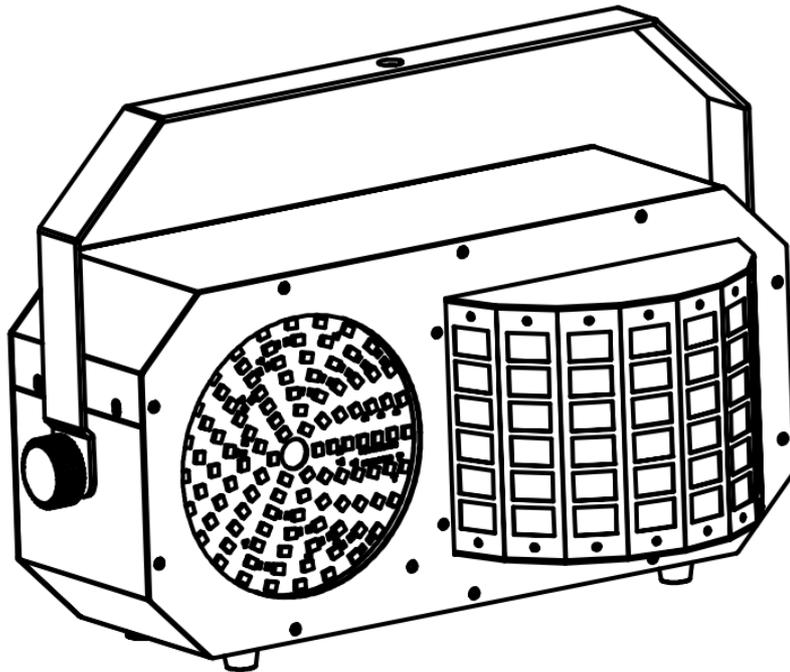




[www.lightemotion.com.au](http://www.lightemotion.com.au)

# DERBY3

3-in-1 Entertainment Lighting Effect.



## User's instruction manual

This manual contains important information about the safe installation and use of this product

Please read this instruction manual carefully before installing or operating

Please keep these instructions in a safe place for future reference

V1.01

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## **Introduction**

Thank you for the purchase of your DERBY3 3-in-1 Lighting Effect by Light Emotion. We are confident you will be satisfied with your purchase and enjoy many years of use from this Professional Light Emotion product. Please read these instructions carefully to ensure the product is well look after and used correctly to avoid any potential problems.

Please note that as part of our ongoing commitment to continuous improvement and product development, the specifications in this manual are subject to change without notice. Whilst every care has been taken in the preparation of this manual we reserve the right to change specifications in the course of product improvement.

### **What is in the box:**

- 1 x DERBY3 fixture
- Power cable
- Laser safety switch key
- IR remote control
- This user manual

### **1. 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 sticker 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 50cm from adjacent surface. Be sure that no ventilation slots are blocked.
- Always disconnect from power source before servicing.
- Secure fixture to stands, trussing and the like using a safety chain.
- Maximum ambient temperature is 40°C. Do not operate fixture at temperatures higher than this.
- In the event of 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 centre.
- Make sure power cord is never crimped or damaged.
- Never disconnect power cord by pulling or tugging on the cord.
- Never carry the fixture directly from the cord. Carry by holding the unit directly or via the hanging bracket.

- Avoid direct eye exposure to the light source while it is on.

## **2. Installation:**

Caution: For safe mounting of this product, please read the following carefully.

- Use a suitable clamp to attach to lighting stand, trussing or bar, together with safety chain.
- When mounting the product, do not stand directly underneath the product
- Always use a safety chain when mounting the product on stands, trussing or bars. Make sure the breaking strain rating of the chain is at least 10 times the weight of the product.
- Make sure there is adequate ventilation around the product.
- Never look directly into the LED light or laser sources of the product.
- For indoor use only – do not use outdoors.
- To avoid electrical shock, keep away from rain and moisture.

## **3. Features**

This product is designed as entertainment effect lighting fixture and is only intended to be used as an effect for entertainment and production applications. Due to our ongoing commitment to constantly reviewing and improving products, features and specifications are subject to change without prior notice.

It features a Derby effect, RGB mini laser which produces patterns and a unique 105 SMD LED panel round flood area that can be used for patterns, strobing and flood light applications. All three built-in effects can be controlled independently or used together to create interesting lighting effect shows. Like most lighting effects, the beams of the Derby in particular are enhanced in an environment where a smoke / fog or haze machine is used, but the use of an effects machine is not necessary for this light to provide a great and effective light show.

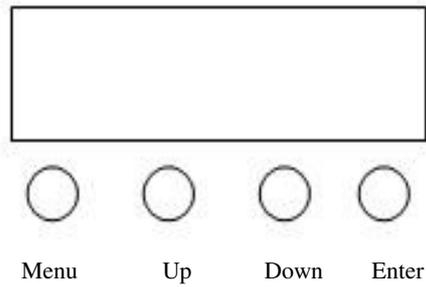
- Derby LED: 2 x 10w RGBW 4-in-1 10W LED
- SMD LED Panel: 105 x 0.2W RGB 30-in-1 SMD LED
- Laser: Red 100mW/650nm + Green 30mW/532nm + Blue 80mW 450nm
- Control: Sound activated, auto, DMX, master/slave, IR remote control
- DMX channels: 2 / 14 ch selectable profile
- Power input: 100-240VAC, 50/60Hz.
- Power consumption: 50W
- DMX connections: 3 pin male and female XLR
- Dimensions: 510 x 290 x 295mm
- Weight: 6.5kg

## 4. Operation

Because this light features a laser, there is the mandatory key operated laser safety switch on the rear of the unit. This is independent of the power on/off switch. The laser will not operate until the safety switch is placed into the on position using the included key. All other functions of the product will work regardless, when the power switch is on.

The four button LED menu control on the rear of the product allows you to access all features of the product including how it is to be controlled.

LED Four Digit Display:



Using the four button LED menu control, press the menu button repeatedly until you reach your desired mode. You can also scroll through the modes using the up and down buttons. Press enter to access being able to vary the settings for that mode or feature. Using the up and down buttons, adjust to the desired setting, then press enter again to save your setting.

The following table shows each of the modes and the settings able to be varied in each mode:

	MENU	UP/DOWN	Default Value	Function
1	Addr	1-512	1	DMX Address setting
2	ChMd	14Ch	14Ch	14 channel setting
		2Ch		2 channel setting
3	ShNd	Sh 1	Sh 7	Show 1 Derby Only
		Sh 2		Show 2 SMD LED Panel Only
		Sh 3		Show 3 Laser Only
		Sh 4		Show 4 Derby and Laser
		Sh 5		Show 5 Derby and SMD LED Panel
		Sh 6		Show 6 Laser and SMD LED Panel
		Sh 7		Show 7 Combined 3 effects
4	SPEE	0-100	90	Sh 1-Sh 7 speed setting
5	SLMD	MASt	MASt	Master mode
		SLAV		Slave mode
6	SoUn	ON/OFF	ON	Sound activation on or off
7	SoSE	0-100	90	Sound sensitivity setting
8	NodM	Prom	Prom	If no DMX, use master mode
		BLAC		If no DMX, enter standby mode
		HoLd		If no DMX, use last show
9	LED	ON/OFF	ON	LED Display on/off
10	Ver	V10		Version
11	Test			Test mode

**Explanation of Menu items.**

Addr – DMX address

ChMd – DMX profile 2 or 14 channel mode

ShNd – Built in show selection

SPEE – Speed setting for shows 1-7 if not sound activated

SLMD – Chose between master or slave mode

SoUn – Sound activation on or off

SoSe – Sets sound sensitivity

NodM – Sets what the light does if there is loss of DMX signal

LED – LED display on or off – When you chose off, the LED display will turn itself off after 10 seconds of not being used. Pressing mode turns on the LED display.

Ver – shows the software version of the light

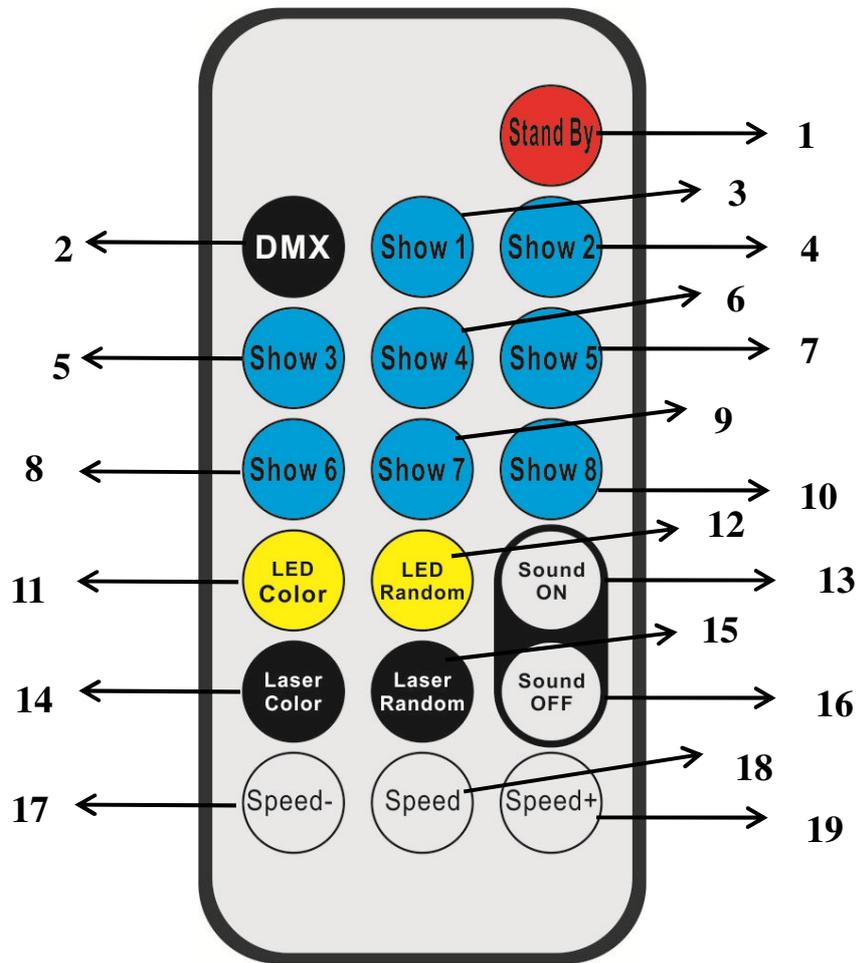
TEST – Test mode.

**Notes:**

- DMX takes priority over all other mode settings. If there is a DMX lead connected and a DMX signal received, the light will immediately be controlled by DMX.

- After using the LED menu, hold down the menu button for 2 seconds for the light to resume normal operation. Otherwise normal operation will resume after 10 seconds (as in light effects output).

## 5. Infra Red remote control.



Number	Button	Function
1	Stand By	Stand by
2	DMX	Hold on
3-10	Show 1-Show 8	Show1-Show7 (Show 8 hold on)
11	LED Colour	LED colour select
12	LED Random	LED colour randomly
13	Sound ON	Sound on
14	Laser Colour	Laser colour select
15	Laser Random	Laser colour randomly
16	Sound OFF	Sound off
17	Speed -	Show 1 - Show 7 speed down
18	Speed	Show 1 - Show 7 speed default
19	Speed+	Show 1 - Show 7 speed up

## 6. DMX Control

Using DMX you can control each of the three effects built into this light individually. You can also use DMX to call upon built in programs and shows. This fixture has 2 DMX profiles – 2 and 14 channels modes. The 14 channel mode allows individual control of all the effects while the 2 channel mode is a simpler way to control the light by DMX simply calling upon built in programs and features.

### 14 Channel DMX chart:

		DMX Value Range	Function
CH1	Access to built-in shows via DMX	0-9	No function
		10-44	Show 1 Derby only
		45-79	Show 2 SMD LED panel only
		80-114	Show 3 Laser only
		115-149	Show 4 Derby and Laser only
		150-184	Show 5 SMD LED panel and Derby only
		185-219	Show 6 Laser and SMD LED panel only
		220-255	Show 7 All three effects together
CH2	RGBW Derby colour select (CH1 set 0-9)	0-9	black-out
		10-198	Choose colours (15 groups), 13 DMX values for each colour.
		199-225	Colour chase1 (single colour) from slow to fast
		226-255	Colour chase2 (multiple colour) from slow to fast
	Sound active on/off (CH1 set 0-9)	0-247	Sound control off for Show 1 - Show 7 from slow to fast
		248-255	Sound control on for Show 1 - Show 7
CH3	Derby LED Strobing	0-9	No strobing
		10-244	Derby LED strobe speed from slow to fast
		245-255	Derby LED strobe by sound
CH4	LED Motor setting	0-127	Derby LED motor position select
		128-255	Derby LED motor scan speed from slow to fast
CH5	SMD LED Setting	0-9	SMD LED off
		10-255	Strobe, LED chase effect select
CH6	Strobe chase speed	0-127	No strobe, LED chase speed from slow to fast
		127-255	With strobe, LED chase speed from slow to fast
CH7	Laser colour select	0-9	Laser off
		10-127	Laser colour fixed
		128-255	Colour chase speed from slow to fast
CH8	Laser pattern select	0-255	Laser pattern select
CH9	Laser pattern size	0-63	Choose patterns size
		64-127	From small to large, speed up rate
		128-191	From large to small, speed up rate

		192-255	Large – small – large, speed up rate
CH10	Laser pattern rotation	0-127	Rotation angle select
		128-191	positive rotation speed
		192-255	Inverted rotation speed
CH11	Laser pattern pan position	0-127	Horizontal position
		128-255	Horizontal move, speed up rate
CH12	Laser pattern tilt position	0-127	Choose vertical position
		128-255	Vertical move, speed up rate
CH13	Laser scan track choose	0-255	Track choose
CH14	Laser track scan speed choose	0-255	Laser track scan speed from slow to fast

Note: In 14 channel mode, channel 1 needs to be set between 0 and 9 to be able to control the feature of the light individually. When channel 1 is set between 10 and 255, the light will perform one of the 7 inbuilt shows in accordance to what the DMX setting is on channel 1. Also note that channel 2, when channel 1 is set between 10 and 255 playing shows, controls sound activation and the speed of the shows

**2 channel DMX Chart:**

		DMX Value Range	Function
CH1	Show mode	0-9	No function
		10-44	Show 1 Derby LED only
		45-79	Show 2 SMD LED Panel only
		80-114	Show 3 Laser only
		115-149	Show 4 Derby and Laser only
		150-184	Show 5 Derby and SMD LED panel
		185-219	Show 6 Laser and SMD LED panel
		220-255	Show 7 Three effect combined
CH2	Show speed/Sound active	0-247	Show 1-Show 7 speed from slow to fast
		248-255	Show 1-Show 7 Sound active

## 7. DMX-512 Control Connection

Using a 3 pin XLR cable, you can connect the product to a DMX controller and then to other fixtures with 3 pin XLR inputs and outputs. When not using DMX, multiple fixtures can be connected together and operate under master/slave control. The signal cable should have two core with shielded cable, the signal connectors are XLR input and output connectors. Please refer to the below diagram:



## 8. DMX Address Setting

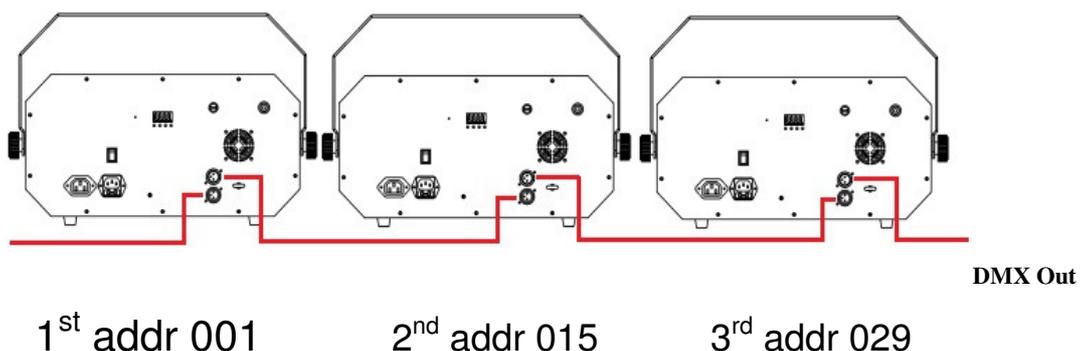
When being used in conjunction with a DMX controller, each fixture must be set a specific starting address. When receiving signal, fixture will receive channel control signals of this address from the DMX controller.

For simplicity, the user can use the same address for multiple fixtures but this will result in each fixture providing exactly the same output and fixtures with the same DMX address cannot be individually controlled.

To control each fixture individually via DMX, each fixture must have its own unique DMX address. If this fixture is in 14 channel DMX mode then each address must be 14 channels apart. For example, if the first unit is on DMX channel 1, the 2<sup>nd</sup> must be on DMX channel 15, the 3<sup>rd</sup> on channel 29 and so on.

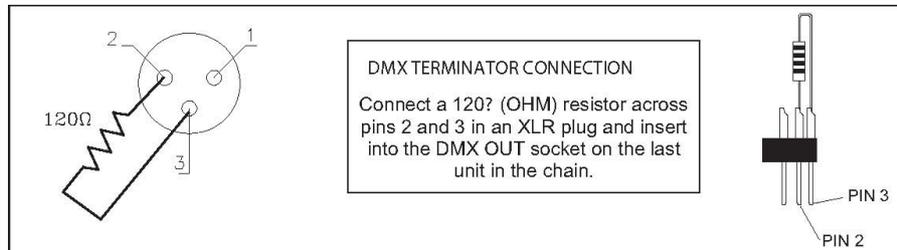
Similarly, for 2 channel DMX mode, the DMX channels would be 1,3,5,7 and so on.

Some DMX controllers may group fixtures in lots of 16 channels – so in that case, fixture 1 on channel 1, fixture 2 on channel 17, 3 on 33, and so on. Refer to your DMX controllers' instruction manual on how best to manage your DMX channel allocation.



## 9. DMX-512 connection with DMX terminator

A DMX terminator helps to reduce 'noise' on the DMX chain, and makes the light respond to control more accurately. It should be plugged in to the last fixture in any chain. For Terminator connections please see below:



## 10. Cleaning and Maintenance

From time to time it is recommended the product is cleaned to ensure maximum light output and performance. Use a wet cloth to clean the housing as well as the lenses. Please note that alcohol based cleaners and solvents cannot be used as they will cause damage to the product.

When used in a fixed long term installation such as a venue or club, the unit should be periodically taken down from the installation and professionally cleaned. Dust build-up within the unit can cause damage and ultimately failure of components.

## 11. Technical Data

- Derby LED: 2 x 10w RGBW 4-in-1 10W LED
- SMD LED Panel: 105 x 0.2W RGB 30-in-1 SMD LED
- Laser: Red 100mW/650nm + Green 30mW/532nm + Blue 80mW 450nm
- Control: Sound activated, auto, DMX, master/slave, IR remote control
- DMX channels: 2 / 14 ch selectable profile
- Power input: 100-240VAC, 50/60Hz.
- Power consumption: 50W
- DMX connections: 3 pin male and female XLR
- Working temperature 10-40 degrees C
- Fuse 5x20mm 250VAC T2A
- Dimensions: 510 x 290 x 295mm
- Weight: 6.5kg

## 12. Warranty

This product is warranted for 2 years from your purchase date. We are confident that this product will give many years of trouble-free operation but should an unlikely problem arise, warranty claims must be via the original place of purchase, together with the original purchase receipt. Please keep both your original purchase receipt and this instruction manual together and in a safe place for future reference. Should the product be sold within the warranty period, be sure to pass on both to the new purchaser so they are able to claim warranty should they need to. We recommend you register your warranty online at [www.industrygear.com.au](http://www.industrygear.com.au).

Purchased from: \_\_\_\_\_

Contact Details: \_\_\_\_\_

Date Purchased: \_\_\_\_\_

Invoice/Receipt Number: \_\_\_\_\_

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