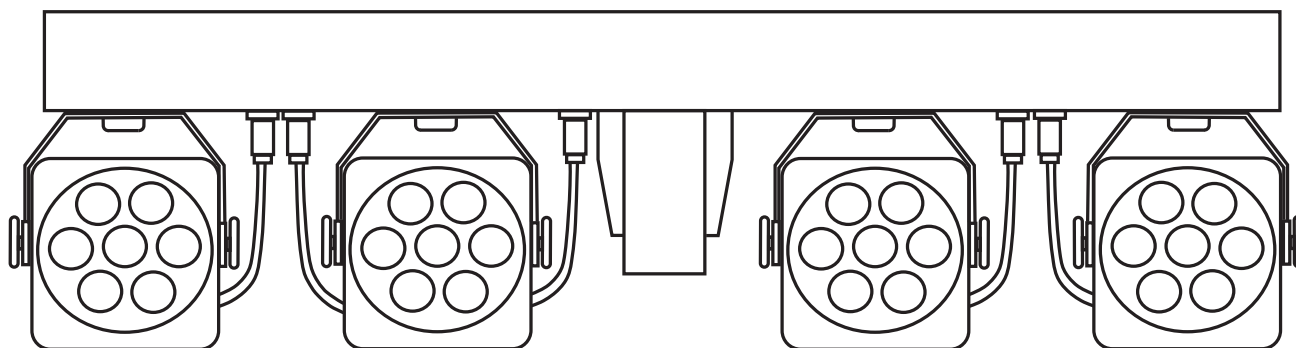# LUMI291 Instruction Manual

PERFORM FX

RGBW LED Stage Lighting Par Bar

CAUTION - ATTENTION - VORSICHT

RISK OF ELECTRIC SHOCK- DO NOT OPEN
RISQUE D'ELECTROCUTION- NE PAS OUVRIR
STROMSCHLAGGEFAHR- NICHT OFFNEN

In Compliance with the following directives: RoHS Directive (2002/95/EU) and WEEE Directive (2002/96/EU)
If this product is no longer functional or reaches the end of its usable life, please take it to an approved recycling plant.

RoHS

UKCA

Version 1.0

Dear Customer,

Thank you for purchasing the Perform FX LUMI291 LED Par Bar. With decades of experience in design and production, Perform FX is one of the leading manufacturers of Professional Lighting and Effects equipment. This unit has been designed and manufactured to the highest standards so you can be assured you have made a good investment.

For your safety and to ensure you make full use of the LUMI291 features, please make sure you read this manual in full.

Before Use
- Before you start using this unit, please check to ensure there's no transportation damage. Should there be any, do not use the device and consult with your dealer first.
- **Important: This device left our factory in perfect condition and well packaged. It is absolutely necessary for the user to strictly follow the safety instructions and warnings in this user manual. Any damage caused by mishandling is not subject to warranty. The dealer will not accept responsibility for any resulting defects or problems caused by disregarding this user manual.**
- Keep this booklet in a safe place for future consultation. If you sell the unit, be sure to add this user manual.
- To protect the environment, please try to recycle the packing material as much as possible.

Safety Instructions:
- Read this manual in full before operating this product.
- Keep this manual in a safe place for future reference.
- Heed all warnings and instructions, both in this manual and on the product.
- Carry and transport this product with care. Dropping this product may result in serious mechanical failure.
- The manufacturer accepts no responsibility for injury or damage caused as a result of not following the manual provided.
- Turn off and unplug this light from mains supply when not in use.
- This light is not waterproof and should not be used outside.
- Do **NOT** modify this product in any way.
- In the event of any liquid entering the housing, unplug immediately & contact a qualified engineer.

Protection from Fire:
- Do not place near sources of heat or ignition.
- Do not cover or block any ventilation holes.
- Check your AC wall socket will take the power you are applying to avoid overloading the mains supply.

Protection from Electric Shock:
- Only connect this unit to a mains socket with suitable trip and RCD protection.
- To disconnect from the mains socket, always remove by the mains plug. Do not attempt to remove by pulling the mains cable.
- Disconnect the unit from the mains supply before cleaning. Cleaning should be carried out with a soft, dry cloth.
- Do not expose this unit to any liquids.
- To prevent damage to the product or electric shock, do not expose or operate this device or its power supply to rain or moisture.
- Choose a suitable route for mains cables, ensuring trip hazards are avoided and the mains cable is not at risk of being crushed.
- Do not open this unit to service. There are no user serviceable parts inside. Any servicing or repairs should be carried out by a qualified engineer only. **Any attempt to service or adapt this unit will leave your warranty void** and could result in serious malfunction or injury.

Protection from Injury and Damage:
- Do not attempt to modify this unit.
- Always install the unit in a suitable location where vibrations to the unit are avoided.
- Check this unit matches the mains voltage and frequency before plugging it in to your mains socket.
- In the event that any object or liquid enters the machine, switch off immediately, remove from mains and consult a qualified engineer.
- Should you experience any malfunction or damage to the mains cable, disconnect from the mains supply immediately and consult a qualified engineer.
- All parts should be replaced with genuine spare parts and carried out by a qualified engineer.

Overhead Rigging:
- The installation must be carried out by a qualified engineer only. Improper installation can result in injuries or damage to property.
- Overhead rigging requires experience. Working loads should be adhered to, certified materials should be used.
- The installed device should be regularly inspected for safety.
- Make sure the working area is clear from people and obstructions during rigging, derigging and servicing.
- Locate the light in a well-ventilated area away from flammable materials and liquids.
- When mounting make sure the installation point can take the weight.
- Make sure a safety chain or wire is always used and can take the weight of the light.
- The light should be well fixed and free from swinging.
- Do not cover any ventilation holes.
- The light must not be powered when it is not to be used for an event.
- The operator must make sure the light fitting has been installed correctly to all the necessary guidelines before each use.
- **The installation should be inspected every 6 months.**

Product Information:

Contents and Unpacking:

Before beginning your initial setup, check the unit has not been damaged in transit. In the event there is damage to the housing, cable or internal components, contact your dealer immediately.

Contents:
- 1 x RGBW Par Bar
- 1x Mains Lead
- 1x User Manual
- 1x IR Remote
- 1x Foot Controller (some models only)

Product Description:

A LED par bar loaded with four LED cans each with seven 8w RGBW LEDs. Suitable for mobile performers, schools and DJs. This kit is exceptionally easy to transport with the supplied padded hard case. The par bar is fully DMX controllable for those who wish to customise their lighting show fully with 5, 8 or 20 channel modes. Included in this lighting kit is a simple foot controller (some models only) providing the user with instant scenes, chases and fades. An IR remote control and a lightweight stand (to elevate the bar in the air) is also supplied within this kit. With a beam angle of 25 degrees, this bar is more than capable of flooding large areas with colour in an instant.

Product Specification:

Power Supply: 100-240 Vac 50/60Hz
Power Consumption: 240 Watt
LED: 7x 8 watt per light
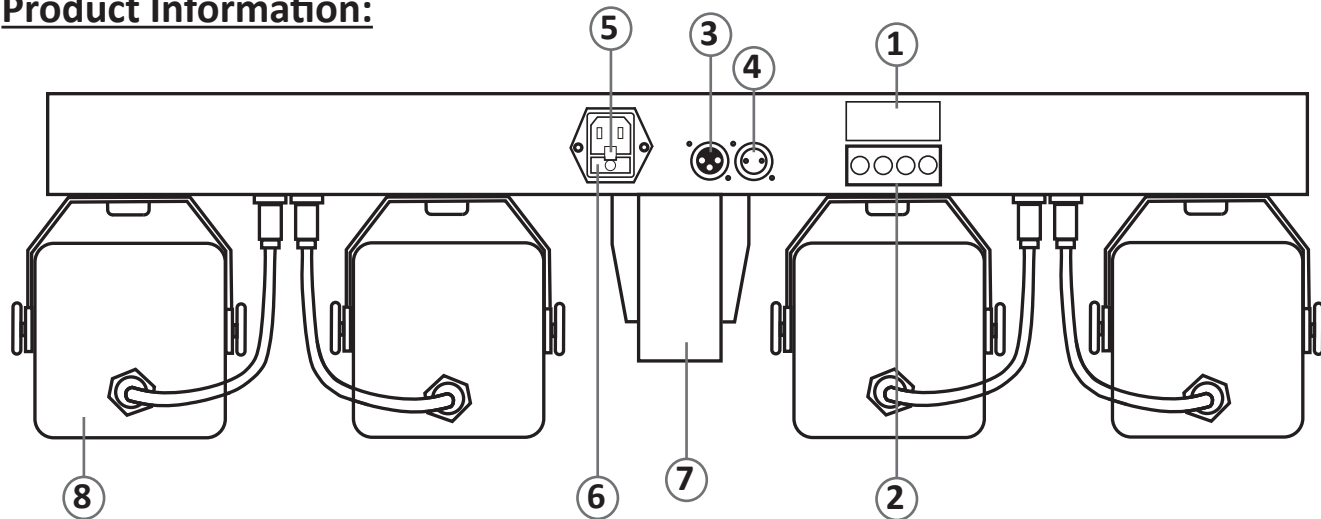**Beam Angle:** 35°
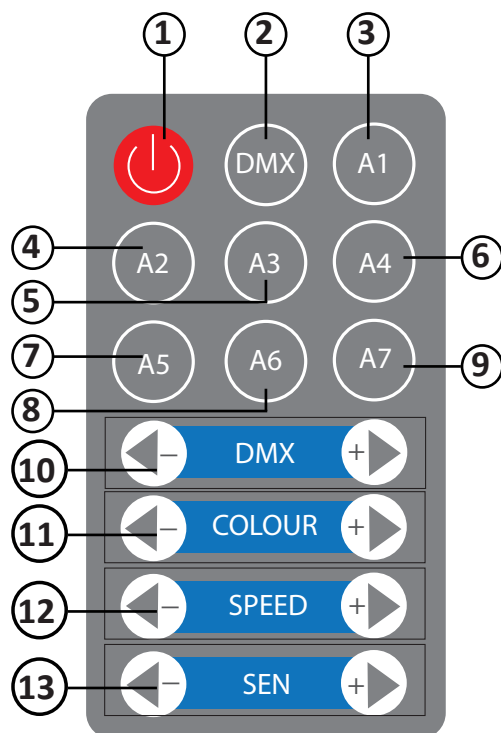**DMX Channels:** 5, 8, 20
Dimensions: 1050 x 340 x 165mm
Weight: 7.20kg
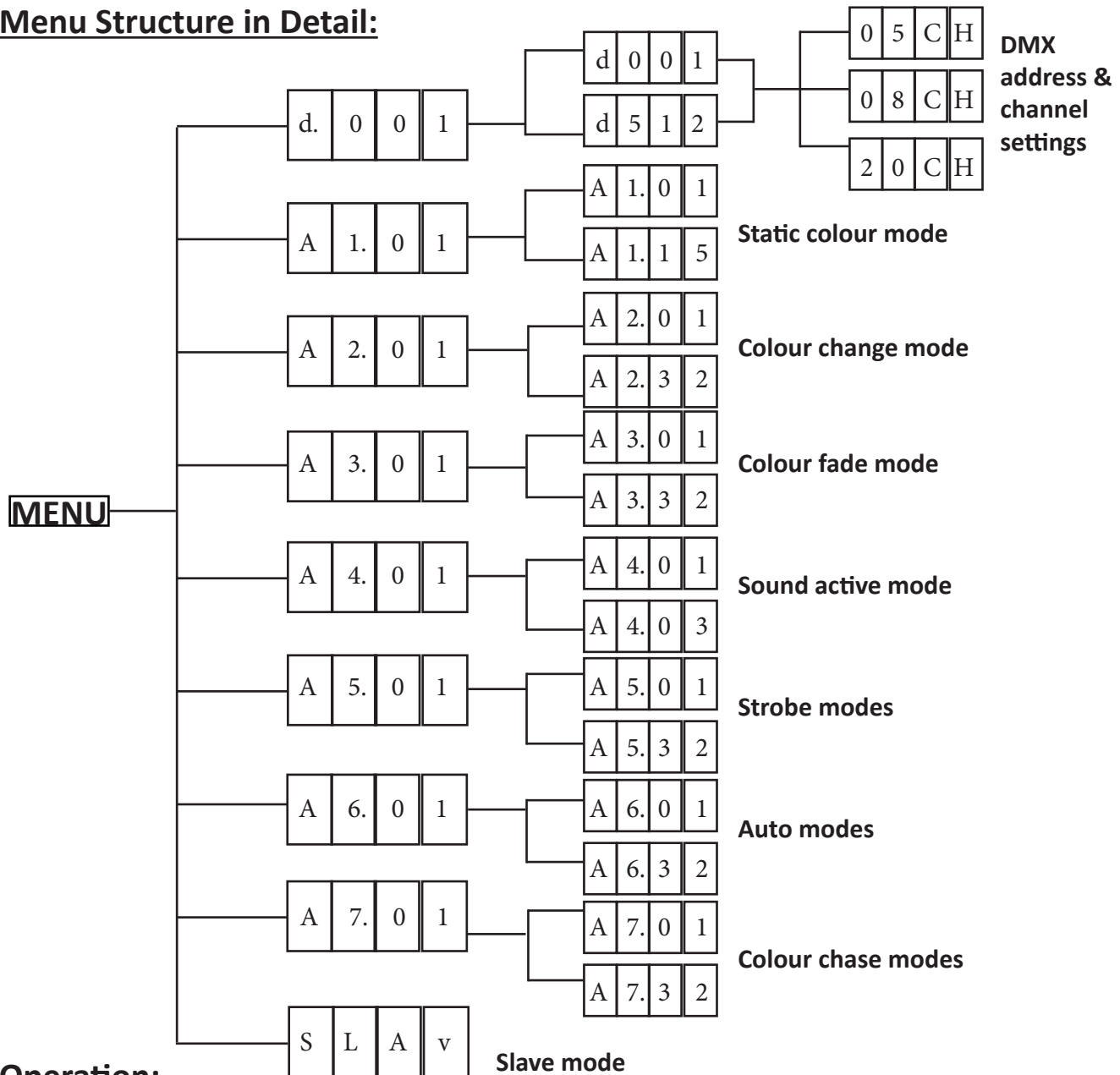
Product Information:

Number	Description	Number	Description
1	LED Display	**5**	Power Connection (IEC In)
2	Menu Buttons	**6**	Fuse F3A 250V
3	DMX Input (3-pole)	**7**	35mm tripod adapter
4	DMX Output (3-pole)	**8**	LED Panels

Operating Remote Control:

1. Turns the device on and off.
2. Sets the device to DMX- use "+" and "-" buttons to change DMX Channels (001-512).
3. Sets the device to static colour mode- use "+" and "-"buttons to select desired colour.
4. Sets the device to colour selection mode- use "+" and "-" speed buttons to select desired speed.
5. Sets the device to gradient mode- use "+" and "-" colour buttons to select desired programme, and use "+" and "-" speed buttons to select programme speed.
6. Sets the device to active sound mode- use "+" and "-" colour buttons to select desired programme and use "-" and "+" sen buttons to select desired sensitivity level (1-4).
7. Sets the device to strobe mode- use "+" and "-" colour buttons to select desired programme and use "+" and "-" speed buttons to select desired flash speed.
8. Sets the device to Auto mode- use "+" and "-" speed buttons to select desired speed.
9. Sets the device in gradient mode- use "+" and "-" buttons to select desired speed.
10. Activates the DMX settings- use "+" and "-" DMX buttons to change the DMX channels (001-512).
11. Sets the static colours/ programmes- use "+" and "-" speed buttons to change desired colours/ programme. (Note: only available in static colours, gradient, tone active and Strobe-modes).
12. Sets the programme speed level- use "+" and "-" buttons to change the desired programme speed level. (Note: only in change colours, colours, fade-, strobe-, auto – and colour – chase – modes).
13. Sets the tone sensitivity level- use "+" and "-" buttons to change desired sound sensitivity level.
(Note: only in Tone available active mode).

Menu Structure in Detail:

Menu tree (MENU):

- **d. 0 0 1** → **d 0 0 1** / **d 5 1 2** → **0 5 C H** / **0 8 C H** / **2 0 C H** — DMX address & channel settings
- **A 1. 0 1** → **A 1.0 1** / **A 1.1 5** — Static colour mode
- **A 2. 0 1** → **A 2.0 1** / **A 2.3 2** — Colour change mode
- **A 3. 0 1** → **A 3.0 1** / **A 3.3 2** — Colour fade mode
- **A 4. 0 1** → **A 4.0 1** / **A 4.0 3** — Sound active mode
- **A 5. 0 1** → **A 5.0 1** / **A 5.3 2** — Strobe modes
- **A 6. 0 1** → **A 6.0 1** / **A 6.3 2** — Auto modes
- **A 7. 0 1** → **A 7.0 1** / **A 7.3 2** — Colour chase modes
- **S L A v** — Slave mode

Operation:

Start:

Connect the device to the power supply and wait a few seconds until it is ready for operation.

Menu:

Navigation of the menu is performed using the four menu buttons below the display. Use the "Menu" key to activate the menu, navigation is via the "Up" and "Down" buttons. Activate selection by using the "Enter" key.

Static, Auto or Sound Mode:

The device contains automatic programs that run according to fixed patterns. In addition, effect sequences matching the music can be called up via the built-in microphone. The selection of the respective mode is made via the menu directly on the device.

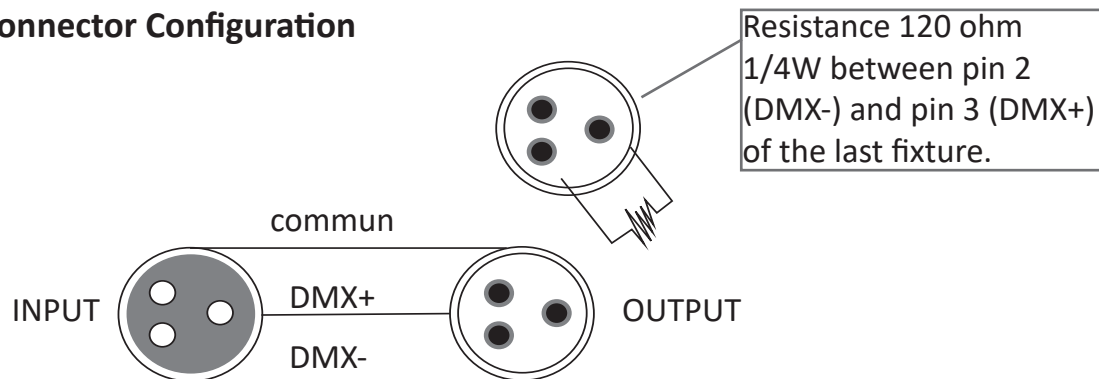**Operating mode master/ slave:**

If you connect several devices of the same type via DMX, they can be controlled simultaneously via the master device. To do this, set the desired function on the first device in the chain; the other devices in the series must now be set as "slaves". Now the first device in the chain controls all the other devices, so they run simultaneously.

Operation:

All connections of the device should be made before switching on. Use only high-quality cables that are as short as possible for the connections.

DMX Connector Configuration

Resistance 120 ohm 1/4W between pin 2 (DMX-) and pin 3 (DMX+) of the last fixture.

INPUT
commun
DMX+
DMX-
OUTPUT

DMX Mode:
Connect the DMX input of your device to the DMX output of your DMX controller, your DMX software or the DMX output of a device already in your DMX chain. Always use DMX cable with a 110 Ohm resistance. Address the device according to your DMX configuration. The following tables show the respective DMX modes of the individual devices with the corresponding values and functions:

5-Channel DMX Mode:

Channel	Value	Function
1	000-255	Master Dimmer
2	000-255	Red Dimmer
3	000-255	Green Dimmer
4	000-255	Blue Dimmer
5	000-255	White Dimmer

8-Channel DMX Mode:

Channel	Value	Function	Note
1	000-255	Dimmer	
2	000-255	Strobe	Slow to fast
3	000-255	Red Dimmer	
4	000-255	Green Dimmer	
5	000-255	Blue Dimmer	
6	000-255	White Dimmer	
7	000-009	No Function	
	010-099	Full on	
	100-129	Colour change	erratic
	130-159	Colour change	fade
	160-189	Colour change	
	190-219	Music Control Program I	
	220-249	Music Control Program II	
	250-255	Music Control Program III	
8	000-255	Speed	

20-Channel DMX Mode:

Channel	Value	Function	Note
1	000-255	Dimmer	
2	000-255	Strobe	Slow to fast
3	000-255	Red Dimmer	**PAR 1**
4	000-255	Green Dimmer	
5	000-255	Blue Dimmer	
6	000-255	White Dimmer	
7	000-255	Red Dimmer	**PAR 2**
8	000-255	Green Dimmer	
9	000-255	Blue Dimmer	
10	000-255	White Dimmer	
11	000-255	Red Dimmer	**PAR 3**
12	000-255	Green Dimmer	
13	000-255	Blue Dimmer	
14	000-255	White Dimmer	
15	000-255	Red Dimmer	**PAR 4**
16	000-255	Green Dimmer	
17	000-255	Blue Dimmer	
18	000-255	White Dimmer	
19	000-009	No Function	
	010-099	Full on	
	100-129	Colour change	
	130-159	Colour change	
	160-189	Colour change	
	190-219	Music Control Program I	
	220-249	Music Control Program II	
	250-255	Music Control Program III	
20	000-255	Speed	

DMX Basics:

DMX is short for "digital multiplexer", which is a universal protocol designed for the entertainment industry. It allows control of intelligent fixtures like scanners, moving heads, LED par cans, dimmer packs and effects machines etc. DMX allows you to control many fixture channels, normally up to 512, with varying channels from 0-255 (0-100%). This will give control of channels such as gobo selection, movement, colours, dimming and timing to name just a few.

DMX is a very good system, as all this information can be sent down one cable. Used in conjunction with a DMX controller with memory, all your channel settings can be saved and recalled easily.

DMX was designed so that all manufacturers can use the same protocol/ language to control their fixtures, allowing the end user to use any make fixture from their DMX controller, as long as both are DMX compatible, and the controller has enough channels to control the fixture that is attached.
Fixtures have an input and output DMX socket, allowing you to connect from the controller to the first fixture then from that fixture to the next (this is often referred to as 'daisy chaining').
Sockets are normally 3 pin XLR but can be 5 pin XLR.

DMX fixtures need to have a DMX address set, this is so they can then decode the correct information from the controller. This is normally done by a digital display panel, where the address can be changed by simple up and down buttons; the system address ranges from 1-512. Alternatively, it may be controlled by a row of small switches, called dip switches; on this type of system, the required address is then converted to a binary number.
To work out your dip switch settings you can simply download a DMX calculator from the internet.
The order in which fixtures are connected in a DMX line does not influence the DMX address, a fixture set to DMX address 1 can be put in a DMX line anywhere from beginning, middle to end. As long as it has its address set to 1, it knows to take information from that point onward.

3 Pin	5 Pin
Pin 1 GND	Pin 1 GND
Pin 2 -	Pin 2 -
Pin 3 +	Pin 3 +
	Not Used
	Not Used

DMX Wiring and Connections:

3 pin DMX wiring is more common, although using a 5 pin connector is better to stop confusion with audio leads. With 5 pin connections, not all pins are used, though it is worth checking your manual for your fixture, as some lights use the unused pins for low voltage control.
To avoid erratic behaviour from your fixture, ensure when making cables, you always use suitable DMX cables and do not connect pin 1 GND to the outer casing of the connector (as you may do with your audio cables). Do not make "Y" leads to split cable fixtures; always use the in and out sockets or a DMX splitter.
We also recommend you put a DMX terminator in any fixture which does not have a DMX lead connected from the output socket to another fixture; to reduce unexpected behaviour. A DMX terminator is simply a male XLR plug with 120 Ohms, ¼ watt resistor, soldered across pins 2 and 3.
You can also buy these pre-made.

Example of a DMX Fixture with 5 Channels:

Ch1	Ch2	Ch3	Ch4	Colour	
Pan	**Tilt**	**Shutter/Shaking**	**Gobo**	**Normal**	**Split**
540°	270°	246-255 Open	255 Fastest speed Gobo change	255 Fastest speed Rainbow Effect	255 Fastest speed Rainbow Effect
		247 Fastest speed shaking	128 Slowest speed Gobo change	128 Slowest speed Rainbow effect	128 Slowest speed Rainbow effect
			120-127	118-127 Pink	121-127 Pink
			111-119	107-117 Yellow	113-120 Yellow+Pink
			103-110	096-106 Orange	106-112 Yellow
			094-102	086-095 Light Green	098-105 Orange+Yellow
			086-083	075-085 UV Purple	091-097 Orange
		132 Slowest speed shaking	077-085	064-074 Blue	083-090 Light Green+Orange
		131 Fastest speed shutter	069-076	054-063 Red	076-082 Light Green
			060-068	043-053 Amber	068-075 UV Purple
			052-059	032-042 Light Blue	061-067 Blue
			044-051	022-031 Magenta	053-060 Red+Blue
			035-043	011-021 Green	046-052 Red
		16 Slowest speed shutter	0-26-034	000-010 White	038-045 Amber
			018-025		031-037 Light Blue
		008-015 Open	009-017		023-030 Magenta
			000-008		016-022 Green+Magenta
		000-007 Blackout			008-016 Green
0°	0°				000-007 White

Each fixture takes up to 5 DMX Channels (see above):

You have a cable from the controller to the first fixture cable, then from first to second and so on. The last light then has a DMX terminator plugged in.

Example of a DMX Line
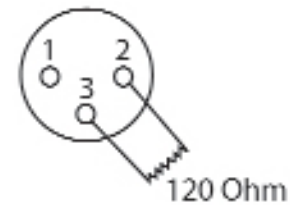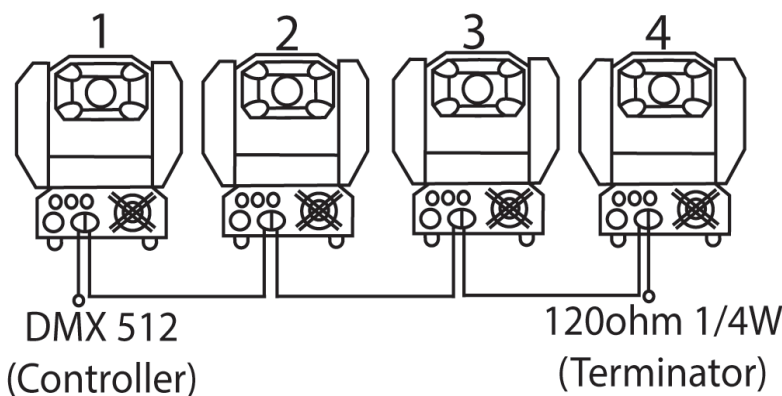
Fixture 1 would be set to DMX address: **DMX Address 1**

Fixture 2 would be set to DMX address: **DMX Address 6**

Fixture 3 would be set to DMX address: **DMX Address 11**

Fixture 4 would be set to DMX address: **DMX Address 16**

DMX 512 (Controller)

120ohm 1/4W (Terminator)

120 Ohm

We recommend you to read manuals for your DMX fixture and controller in full. Some controllers tell you what each fixture address needs to be, and some lights need other settings changed before they will work.

When setting your DMX address, you must ensure fixtures don't overlap from one to the next. You can set two fixtures to the same address, and as long as they are the same fixture (i.e. same channel layout) then they will do the same as each other.

Thank you for taking the time to read this information.
For further information, please contact sales@terralec.com or visit
www.terralec.co.uk