PFX
PERFORM FX

Vertical Fog 1600

PFX1600V Instruction Manual

CAUTION - ATTENTION - VORSICHT

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

RoHS

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User Manual
PFX1600V

Dear Customer,

Thank you for purchasing the Perform FX PFX1600V. With decades of experience in design and production, Perform FX are one of the leading manufacturers of professional effects and lighting equipment. This fog machine has been designed and manufactured to the highest of standards, so you can be assured you have made a good investment.

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

Important Safety Advice:
• You must read this manual in full before commencing operation.
• The machine should be operated by a responsible and competent adult only.
• 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.
• Impact to this machine or dropping may result in serious mechanical failure. The machine should not be used if it has been subjected to such incident.
• Turn off and unplug this machine from the mains supply when not in use.
• This machine is not water-proof and should not be used outside.
• In the event of any liquid entering the housing, unplug immediately & contact a qualified engineer.
• You must not attempt to modify this unit
• The manufacturer accepts no responsibility for injury or damage caused as a result of not following the manual provided.

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 submerge or expose this machine to any liquid.
• Do not operate near exposed water or in high humidity.
• 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 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.

Protecting Your Machine From Damage:
• Always install 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.
• Do not add liquids of any kind, especially flammable liquids to this machine or its intended fluid.   Use only water based fluid, specifically designed for effects machines.
• Use high quality water-based liquid, recommended by your dealer to reduce clogging.
• During operation ensure there is sufficient fluid in the tank. Operating without fluid will damage the pump.
• If your machine fails to work disconnect immediately, remove all liquid and return in original packing to your dealer.
• Always drain the fluid and water tanks before transporting.
• Follow the cleaning and maintenance advice in this manual.
• If your machine fails to work, disconnect immediately, remove all liquid and return in original packing to your dealer.

Danger of Injury or Burns:
• For operation by adults only, ensure installation is away from the reach of children.
• Never leave the machine running unattended.
• Avoid all contact with the heater.
• Never aim the nozzle directly at people.
• Use only in a well ventilated area & do not cover the machine vents. In order to guarantee adequate ventilation, allow a free air space of at least 20cm around all sides of the machine.
• Effects fluids can cause irratation and injury, handle with care and keep out of the reach of children. Avoid contact with the eyes and skin, if this occurs rinse with warm water. If ingested call a doctor immediately.

Before Use:
Before commencing setup check the machine has not been damaged in transit. In the event there is any damage to the housing, cable or internal components contact your dealer immediately.

Contents Includes:
PFX1600V
Power Cable
Wireless remote and receiver
Instructions

Specifications:
Code: PFX1600V
Mains Supply: 230Vac 50Hz
Power Consumption: 1600 Watts
Heat Up Time: 4 min
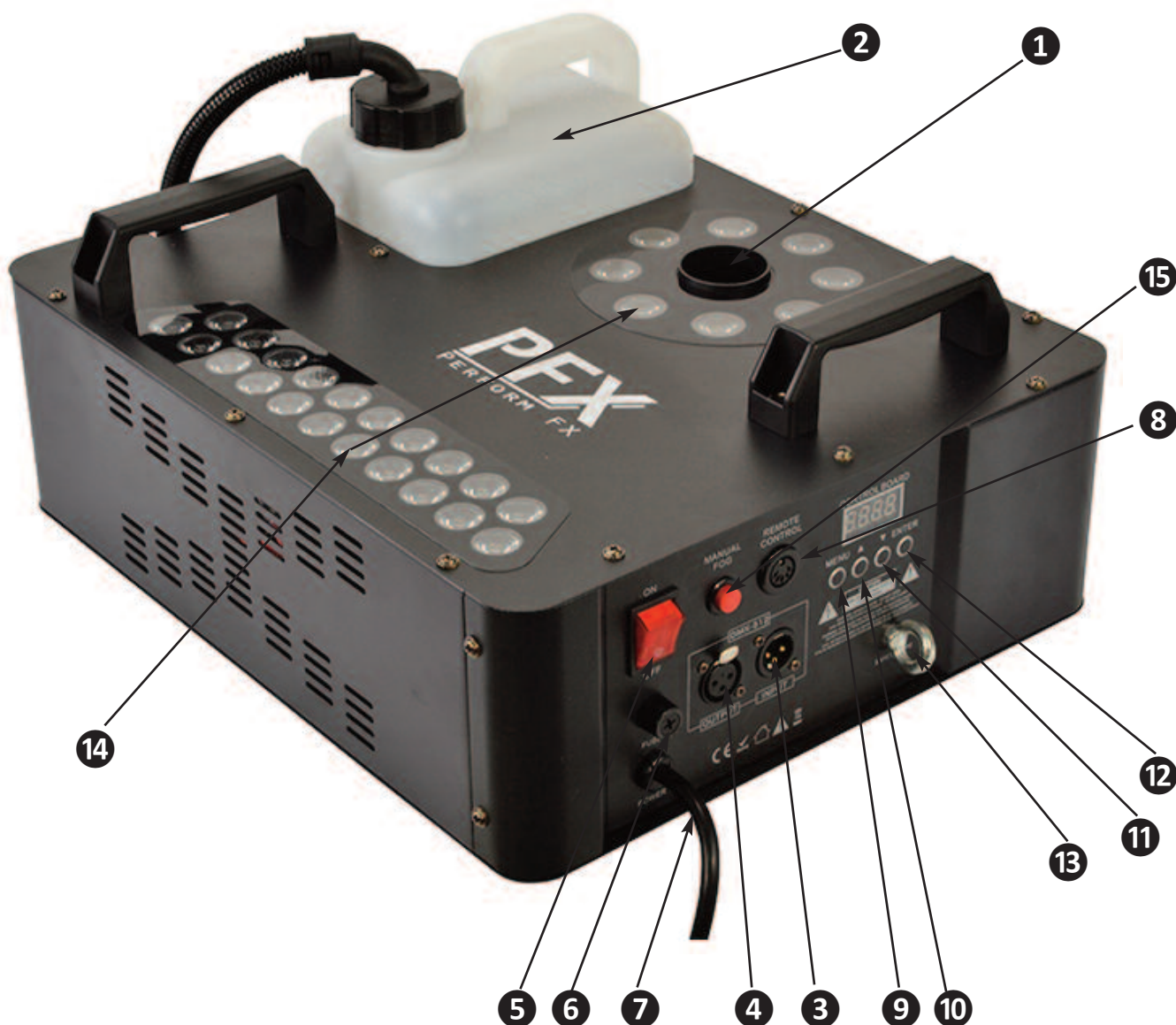Dimensions: 400 x 340 x 240mm
Weight: 8.5Kg

Features:
• Powerful vertical fog output.
• Vertical blast of around 8m.
• Red, Green and Blue LED colour mixing.
• Twenty Nine 9 watt tri LEDs.
• DMX controllable, 9 and 6 Control Channels.
• Wireless Remote control.
• Manual push button control.
• Pressure Booster

Description:

The PFX1600V is a powerful vertical smoke machine that can be used on the floor or hung upside down from trussing. Internal lights add to the effect and add to the dramatic effect of the machine. Manual, remote or DMX control will allow you to easily get the best from the machine.

1. **Heater Nozzle:** Smoke output, this will get very hot in operation - *do not touch.*
2. **Fluid Tank:** Fill the fluid tank with standard fog liquid, do not spill the liquid as this could damage the electronics.
3. **DMX Input:** Female 3 pin used to connect from a DMX controller or previous DMX fixture
4. **DMX Output:** Male 3 pin used to connect to next DMX fixture in the chain.
5. **Power Switch:** Used to turn the smoke machine on and off.
6. **Fuse Holder:** If this blows once, replace if the correct size fuse, if it blows again, there may be a problem with the machine, seek professional help from an engineer.
7. **Mains Lead:** Connect this to a suitable mains supply.
8. **Remote Control:** For connection of the wireless receiver.
9. **Menu Button:** used to browse the setup menu.
10. **Up Button:** Used to adjust setting in the menu.
11. **Down Button:** Used to adjust setting in the menu
12. **Enter Button:** Used enter sub menus in the menu.
13. **Eye Bolt:** For connecting a safety wire or chain.
14. **RGB LEDs:** Light up when fog is outputted.
15. **Manual control button.**

Set Up Menu:

The setup menu is used to adjust the different parameters of the smoke machine.

The MENU button is used to navigate through the menu options.

Addr:

Press MENU until Addr is displayed, press ENTER use the up and down buttons to adjust selection of 6 or 9 channel mode, press ENTER, use the up and down buttons to set the DMX address required.

rENo:

Wireless control options for circle row of LEDs

Here you have you can select what colour or programme is activated by what button on the hand held remote control. These settings control what colour the LEDS are around the nozzle, when a particular button is pressed on the 8 button hand remote.

b-01 to b-08 represent a button on the remote control.

Co 0 to Co 7 represent a colour around the output nozzle.

Co 0=No LED Output

Co 1=Red

Co 2=Yellow

Co 3=Green

Co 4=Light Blue

Co 5=Blue

Co 6=Pink

Co 7=White

Pr 1 To Pr 4 Represents a programme around the output nozzle

• Press MENU button until rENo is displayed.

• Press the ENTER button to enter this sub menu.

• Choose what button on the remote you wish to set by using the up and down buttons. (B-01 to b-08)

• Press the ENTER button.

• Select one of the static colours Co 1 to Co 7 or a programme Pr 1 to Pr 4.

• Press ENTER.

• Repeat Steps 3 to 6 until you have set all 8 buttons.

CuSt:

Manual Setup Button

Set what colour you wish both groups of LEDS to be. When using the manual push button the back of the smoke machine.

• Press the MENU button until CuSt is displayed.

• Press ENTER button.

• Use the UP and DOWN buttons to move through this sub menu. Here there are 4 settings.

• R- This setting controls how much red is produced around the nozzle, this can be set from 0-255

• G- This setting controls how much green is produced around the nozzle, this can be set from 0-255

• B- This setting controls how much blue is produced around the nozzle, this can be set from 0-255

• A mixture of R,G,B can be used to create the desired colour.

• MACo:

This controls what colour is produced on the straight line group of LEDs this can be set from C 0-7. These are only preset macros, so you cannot colour mix the straight line LEDs.

C 0=No LED Output

C 1=Red

C 2=Yellow

C 3=Green

C 4=Light Blue

C 5=Blue

C 6=Pink

C 7=White

- Press ENTER on the desired setting either R,G,B or MACo
- Use the UP and DOWN buttons to set the desired setting
- Press ENTER

NoFU:

Turns the low fluid function on and off. When the machine is low on fluid the display will flash. It is a good ideal to leave this function ON(yes) as low fluid in the tank can damage the pump. Press ENTER and use the UP and DOWN to select yes or no, then press ENTER again.

AuHC:

Wireless control options for the straight row of LEDs. Here you have you can select what colour macro is activated by what button on the hand held remote control. These settings control what colour the LEDS are on the straight group of LEDs, when a particular button is pressed on the 8 button hand remote.

b-01 to b-08 represent a button on the remote control.

AC00 to AC07 represent a colour along the straight line group of LEDs.

AC00=No LED Output
AC01=Red
AC02=Yellow
AC03=Green
AC04=Light Blue
AC05=Blue
AC06=Pink
AC07=White

- Press MENU button until AuHC is displayed.
- Press the ENTER button to enter this sub menu.
- Choose what button on the remote you wish to set by using the up and down buttons. (B-01 to b-08)
- Pres the ENTER button.
- Select one of the static colours AC00 to AC07.
- Press ENTER.
- Repeat Steps 3 to 6 until you have set all 8 buttons.

First Time Operation with the Manual Red Push Button:

• Before you start using this unit, please check there is no transportation damage, should there be any, please do not use the device and contact your dealer immediately.

• The PFX1600V is designed to be used with water based smoke, fog or vapour liquid.

• Put the smoke machine on a flat stable surface or truss mount following the instructions in this manual carefully. Make sure no one can put any body part close to the heater output.

• Unscrew the Lid on the fluid bottle, fill up with a suitable fog liquid, do not to overfill. Screw the plastic cap back on and ensure the tank never runs dry during operation.

• Plug the mains plug into a suitable mains supply. Allow the unit to warm up for around 4 minutes.

• Adjust the settings in the menu display to produce the colours required. The circle row of LEDs can be colour mixed to make what colour you want. Preset colours can only be selected for the straight line group of LEDs. See SET UP MENU section above for how to change the colour settings.

• Once the smoke machine is heated, push the red push button on the back of the smoke machine to output smoke and the LED colours.

First Time Operation with Wireless Remote:

• Before you start using this unit, please check there is no transportation damage, should there be any, please do not use the device and contact your dealer immediately.

• The PFX1600V is designed to be used with water based smoke, fog or vapour liquid.

• Put the smoke machine on a flat stable surface or truss mount following the instructions in this manual carefully. Make sure no one can put any body part close to the heater output.

• Unscrew the Lid on the fluid bottle, fill up with a suitable fog liquid, do not to overfill. Screw the plastic cap back on and ensure the tank never runs dry during operation.

• The wireless remote can be used up to 25 metres. Plug the receiver into the back of the smoke machine labelled remote control.

• Plug the mains plug into a suitable mains supply. Allow the unit to warm up for around 4 minutes.
• You can programme the 8 remote control buttons to produce the colours you require. This can be done in the menu on the back of the smoke machine. (see SET UP MENU section above)

First Time Operation With DMX:

• Before you start using this unit, please check there is no transportation damage, should there be any, please do not use the device and contact your dealer immediately.
• The PFX1600V is designed to be used with water based smoke, fog or vapour liquid.
Put the smoke machine on a flat stable surface or truss mount following the instructions in this manual carefully. Make sure no one can put any body part close to the heater output.
• Unscrew the Lid on the fluid bottle, fill up with a suitable fog liquid, do not to overfill. Screw the plastic cap back on and ensure the tank never runs dry during operation.
• Connect a DMX controller to the DMX input socket. Terminate the output socket or connect to other DMX fixtures.
• Plug the mains plug into a suitable mains supply. Allow the unit to warm up for around 4 minutes

This unit uses 6 or 9 DMX channels. Set a suitable DMX address via the digital display. (see SET UP MENU section above) There is some useful DMX info at the end of this manual.

DMX Channel Layout:

9 Channel mode:

CH	Value	Function	LED type
CH 1	016-255	Fog output	
CH 2	001-255	White color (with dimmer function)	LED around Nozzle
CH 3	001-255	Red color (with dimmer function)	
CH 4	001-255	Green color (with dimmer function)	
CH 5	001-255	Blue color	
CH 6	016-255	Strobe effect from slow to fast.	
CH 7	016-036	Red color	
	037-056	Red green color	
	057-076	Green color	
	077-096	Blue color	
	097-116	Red blue color	
	117-136	Green blue color	
	137-156	White color	
	157-176	R/G/B colors change (slow smooth change)	
	177-196	7 colors change (slow smooth change)	
	197-216	R/G/B color change (fast change)	
	217-255	7 colors change (fast change)	
CH 8	016-050	Red color	Second group LED
	051-085	Red green color	
	086-120	Green color	
	121-155	Green blue color	
	156-190	Blue color	
	191-225	Red blue color	
	226-255	White color	
CH9	016-255	Colors change	

6 Channel mode:

CH	Value	Function	LED type
CH 1	016-255	Fog output	
CH 2	001-255	Red color	LED around Nozzle
CH 3	001-255	Green color	
CH 4	001-255	Blue color	
CH 5	016-050	Red color	Second group LED
	051-085	Red + Green color	
	086-120	Green color	
	121-155	Green + Blue color	
	156-190	Blue color	
	191-225	Blue + Green color	
	226-255	White color	
CH 6	016-255	Colors change	

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 a heard 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, de rigging and servicing.
• Locate the smoke machine in a well ventilated area away from flammable materials and liquids. The smoke machine needs to be 50cm away from surrounding walls and fixtures.
• The smoke machine should be installed out of reach of people and not where people are seated, walking or standing.
• 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 smoke machine.
• The smoke machine should be well fixed and free from swinging.
• Do not cover any ventilation holes.
• The smoke machine must not be powered when it is not to be use for an event.
• The operator must make sure the smoke machine has been installed correctly to all the necessary guidelines before each use. The installation should be inspected every 6 months.

If you want to hang the PFX1600V upside down the fog liquid container needs to be moved.
• Remove the 2 screws holder the top plate of the fluid container.
• Remove the cap and tube for the liquid container.
• Remove the liquid container.
• Turn the machine upside down.
• Remove the base plate. (A)
• Turn the machine again to its normal position. Put the base plate this side.
• Turn the machine upside down again.
• Install the liquid container back inside.
• Install the top plate back on.
• Hang the smoke machine via the 3 M10 fixing points, either with clamps, eye bolts or stud. (B)
• Make sure you use a safety chain or wire.

Maintenance:

Do not allow liquid to become contaminated. Always replace the cap on the liquid container immediately after filling.

After every 40 hours of operation, or if the unit is not to be used for one month, It is recommended to run a cleaning solution of 20% clear vinegar and 80% distilled water through the system to prevent clogging in the heater. This should be carried out in a well-ventilated room.

Always empty the fluid and water tanks after every use. Use a dry cloth to wipe down the outside of the fog machine. Make sure the power cable is disconnected from the mains supply.

Make sure the mains cable is in impeccable condition and should be replaced when a small defect is detected.

All other maintenance should be carried out by a qualified engineer

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 & 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 of 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 of 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 address ranges from 1-512. Alternatively it may be controlled by a row of small switches, called dip switches; on this type system, the required address is then converted to a binary number.
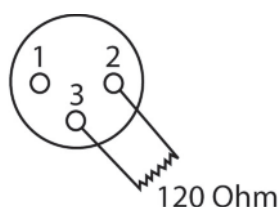
DMX Connector Wiring

3 PIN	5 PIN
PIN 1 GND	PIN 1 GND
PIN 2 -	PIN 2 -
PIN 3 +	PIN 3 +
	PIN 4 NOT USED
	PIN 5 NOT USED

3 Pin wiring is more common, but the 5 pin configuration is often used on larger equipment. With the 5 pin configuration, not all pins are used, though it is worth checking the fixture manual, as some equipment use the extra pins for low voltage control. 5 Pin connectors are ideal so there is no confusion over mixer leads and DMX leads in larger rigs. Sending a mixers 48v phantom power down a DMX cable could damage the DMX light or fixture.
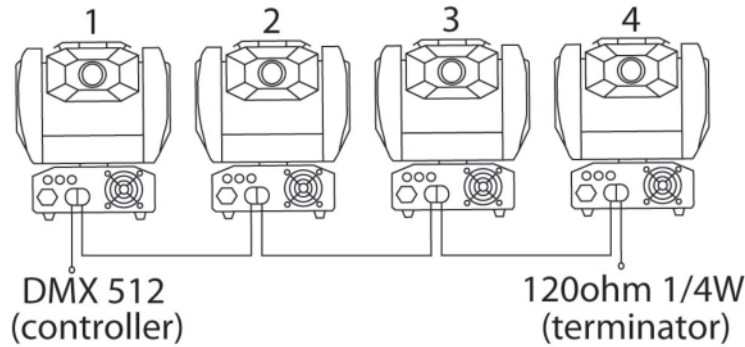
If making cables, always use suitable DMX cable and do not connect pin 1 GND to the outer casing of the connector as you might do with audio cables, as this may cause erratic behaviour from your fixture.

Do not make "Y" leads to split cables to fixtures; always use the in and out sockets or a DMX splitter, as again this may cause erratic behaviour from your fixture.

We recommend you to plug a DMX terminator into any fixture that hasn't got a DMX lead connected from the output socket to another fixture; This again is to reduce unexpected behaviour. A DMX terminator is simply a male XLR plug with 120 ohm, ¼ watt resistor soldered across pin 2 & 3.

120 Ohm

Example of a DMX line

1   2   3   4

DMX 512
(controller)

120ohm 1/4W
(terminator)

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

Each fixture takes up 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.

Fixture 1 would be set to DMX address 1

Fixture 2 would be set to DMX address 6

Fixture 3 would be set to DMX address 11

Fixture 4 would be set to DMX address 16

When setting these addresses, ensure that the fixture addresses dont overlap. You can set two fixtures to the same address as long as they have the same channel layout, they will then perform in the same way.

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 equipment will need other settings changed before they will work.