MK-45 RGB fibre optic light engine
User manual

Features:

- 45W light engine with RGB LED light source
- 29 mm port diameter
- RF remote

Technical specification

Light engine model	MK-45-RGB
Programmes	Brightness, speed, 5 programs, custom programs, on/off
Remote controller	Yes, RF
Light source type	LED
CRI (Ra>):	80
IP rating	IP20
Light colour mode	RGB
Working voltage	DC12V
Rated power	45 W
Material of housing	Aluminium
Light engine dimensions	243 mm (L) x 150 mm (W) x 75 mm (H)
Light engine weight	1.9 kg
Remote control dimensions	85 mm x 52 mm x 7 mm
Fibre optic port diameter	30 mm
Fibre optic bundle compatibility:	B-29-XXX
Lifetime	50,000 hours
Warranty	2 years
Package dimensions (excluding fibre optic bundle)	290 mm (L) x 250 mm (W) x 130 mm (H)
Weight with packaging	2.5 kg

Safety notices

Electrical work safety advice and tips

- Make sure the input voltage is correct.

- Avoid placing the light engine in the rain or in moist areas. Please ensure that the light engine has sufficient ventilation and is not placed in a completely sealed area.

- Do not open the LED light engine for inspection or re-wire the electronic circuits if you are not a professional. Opening the light engine might void your warranty.

- Avoid any debris on top or around the light engine as it can cause poor heat dissipation.

- Avoid using the device above 40 C temperature.

DIY tips and safety advice

- This task will involve working at height. A safe system of work should be established and maintained, in order to prevent injury.

- Consider your safety! Think about the potential risks and dangers of the work and the steps you should take to avoid them.

- Personal protective equipment. Make sure that you are equipped with suitable and sufficient personal protective equipment. This could include eye protection, face mask, protective overalls, safety footwear and gloves.

- Ensure that the work area is sufficiently illuminated.

- Check that the tools you will be working with are in a good operating condition. For the installation, you will need a cordless drill, epoxy glue, side cutters or scissors and drill bits.
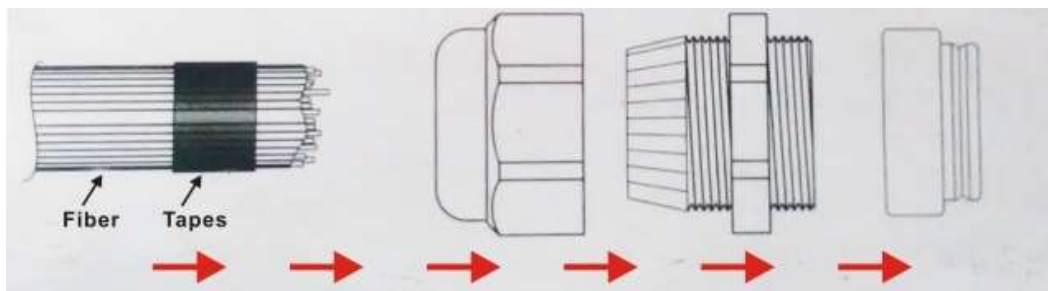
Connection method between optical fibres and the light engine

Your fibre optic bundle will come with the connector fittings ready to connect to the light engine. However, if you need to adjust your bundle or you're making your own, follow the steps below.

1. Align all the optical fibre ends and fasten with tapes which can resist temperature over 130°C

2. Pass the fibres through the connector and fasten the rotary tensioner until the fibres are tightened.

3. Cut the fibre bundle to a flat surface with a heat-knife or blade.
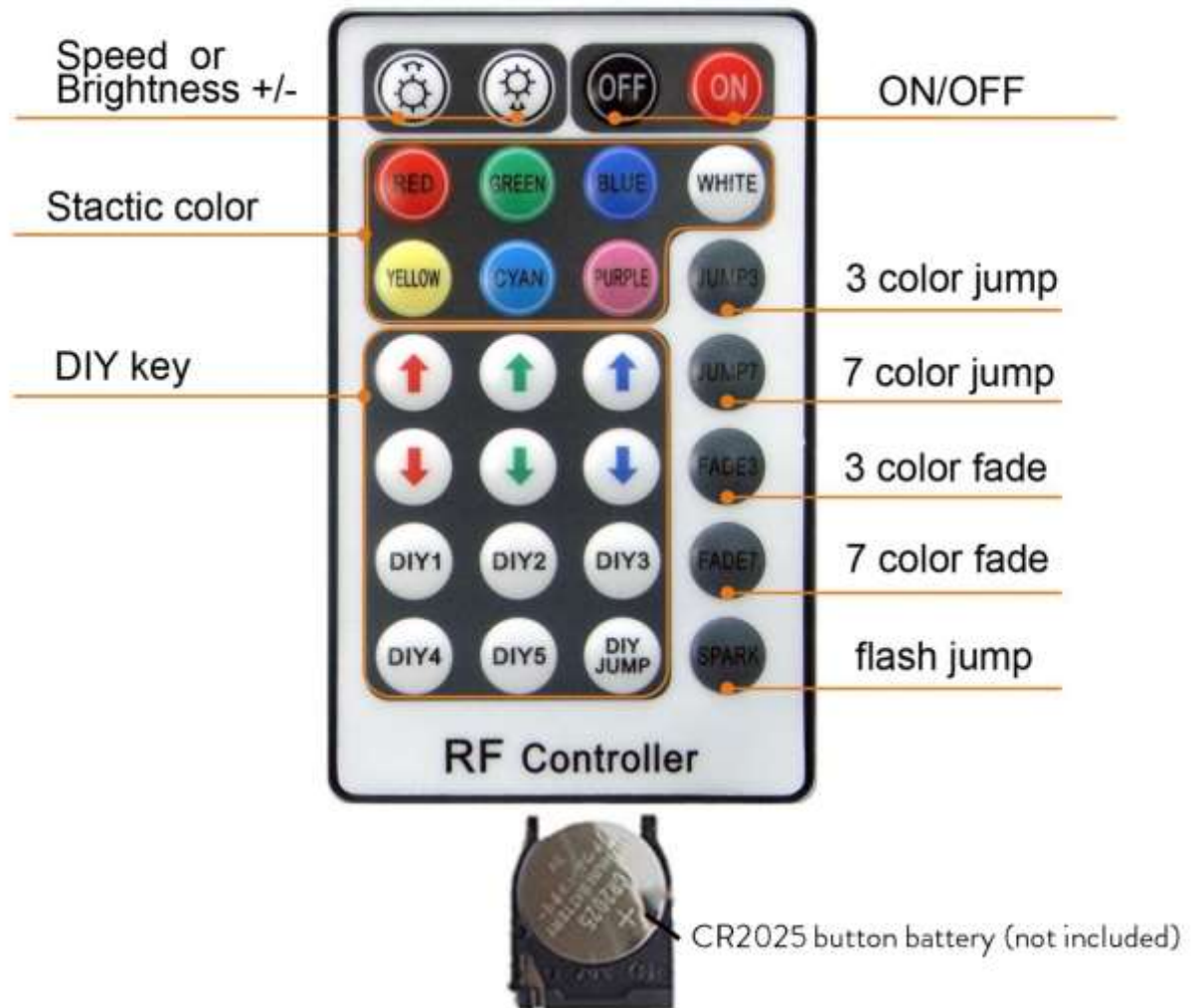
4. Make sure that the optical fibre bundle head is smooth and clean to ensure even light distribution.

5. Place the fibre optic bundle's connector into the light engine's port connector. Fasten the bundle with the screw on the top of the light engine's port connector.

Remote controller operation

Speed or Brightness +/-

Stactic color

DIY key

ON/OFF

RED GREEN BLUE WHITE

YELLOW CYAN PURPLE JUMP3 — 3 color jump

DIY key ↑ ↑ ↑ JUMP7 — 7 color jump

↓ ↓ ↓ FADE3 — 3 color fade

DIY1 DIY2 DIY3 FADE7 — 7 color fade

DIY4 DIY5 DIY JUMP SPARK — flash jump

RF Controller

CR2025 button battery (not included)

RF28 key remote control function		Key function details specification
	ON/OFF	Turn ON/OFF the controller
	Speed/brightness adjust key	Press this two keys to increase/decrease the brightness when in static mode, Press these two keys to increase/decrease the changing speed when in dynamic mode
	static color mode	brightness is adjustable
	DIY brightness adjust key	Press the DIY key to address the Green,Red, Blue color brightness to choose the specific color
	DIY mode key	Press the key to save the DIY color you adjust be the DIY brightness adjust key
	DIY JUMP	Press the key to realize all the color setting by DIY to JUMP
	3 color JUMP	Red,Green,Blue color jump
	7 color JUMP	Red,Green,Blue,Yellow,cyan,purple white color jump
	3 color fade	Red,Green,Blue color fade
	7 color fade	Red,Green,Blue,Yellow,purple,cyan, white color fade
	SPARK Dynamic mode	7 color flash Jump

Pairing the remote controller

The remote controller is normally paired with the light engine, so you don't have to do this when you receive the light engine. However, in some cases the remote controller can unpair from the light engine. In these scenarios, follow these steps:

Press the "FADE3" and "FADE7" buttons at the same time within the remote controller's range. The light engine will flash in white to indicate that the remote control is paired.

Troubleshooting for remote controller connection issues:

- Make sure that the remote controller is switched on by pressing the "On" button

- Check if the battery is operational in the remote controller: Press a button on the remote and the indicator light should flash up. If the light doesn't flash up, it means that there is either no battery in the remote or the battery needs replacing.

- If the remote's control light flashes up, check whether the green indicator light on the back of the light engine flashes up, when a button is pressed on the remote. If the indicator light is not flashing up, the remote controller might be unpaired from the light engine. To pair the devices, press the "FADE3" and "FADE7" buttons at the same time within the remote controller's range. The light engine will flash in white to indicate that the remote control is paired.

- If the indicator light on the light engine still doesn't flash up when pressing a button on the remote controller, restart the device and test again.

- If you're still experiencing issues, contact your supplier.