



LEK-431/432 DMX

User manual

LEK-431 DMX



LEK-432 DMX



Model	LEK-431 DMX	LEK-432 DMX
Programs	Speed, brightness, 4 colour changing programs, custom colour mixing, twinkling wheel speed, on/off	
DMX modes	(1) DMX 512 Signal mode (2) Master and slave mode	
Remote controller	Yes, RF	
Light source type	LED CREE	
CRI (Ra>):	70	
IP rating	IP20	
Light colour mode	RGBW	
Working voltage	DC 12 V	
Power	12 W	24 W
Material of housing	Aluminium	
Light engine dimensions	126 mm (L) x 125 mm (W) x 88 mm (H)	
Net weight	0.85 kg	
Fibre optic port diameter	17.3 mm	2 x 17.3 mm
Maximum number of fibre optic bundles at 0.75 mm diameter	400	2 x 400
Lifetime	50,000 hours	
Warranty	2 years	
Package dimensions (excluding fibre optic bundle)	192 mm (L) x 160 mm (W) x 95 mm (H)	
Weight with packaging	1.1 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.*

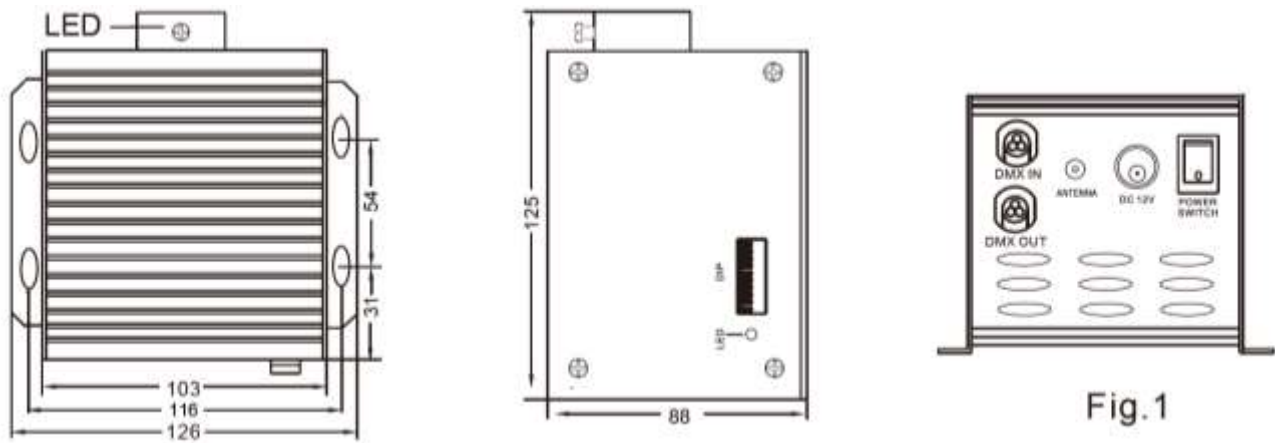
DIY tips and safety advice

- *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.*



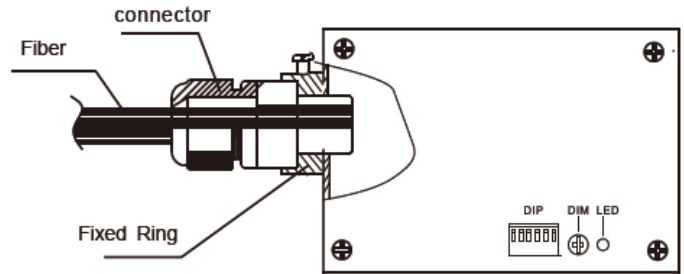
Installation

The installation dimension for the light engine (Fig. 1)



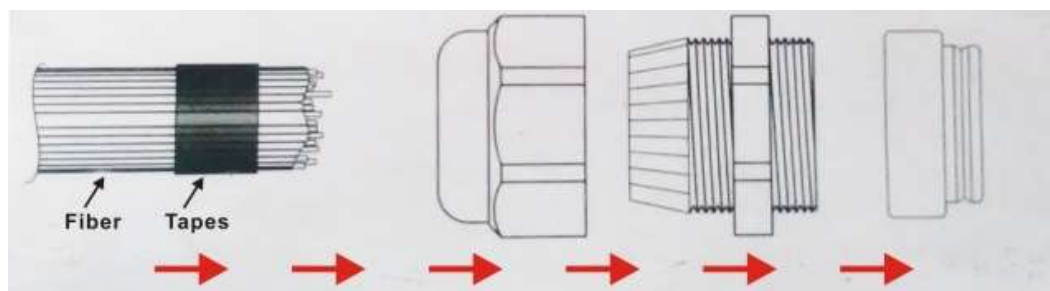
Connection method between optical fibres and the light engine

Your fibre optic bundle will come with the connector fittings ready to connect to the light engine.



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.

Programming the light engine

The LEK-431 DMX light engine has two modes:

1. DMX 512 Signal mode: the operation of the light engine is controlled by a DMX 512 controller
2. Master / Slave mode: one light engine (master) controls the other light engines' (slave) light programs

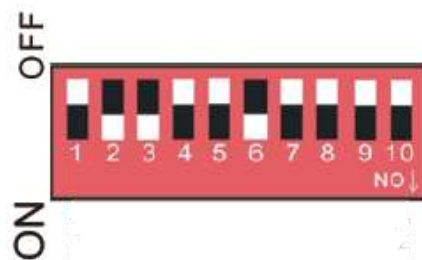
Light engine connector cable:

- 2 x 0.5 mm² audio wire



PIN1: GND
PIN2: SIGNAL-
PIN3: SIGNAL+

The programs and functions are set on the controller with DIP switches.

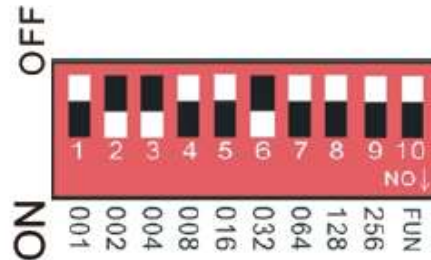




DMX 512 Signal mode

DIP switch settings:

- DIP switch 1-7: DMX address
- DIP switch 8-9: motor speed setting
- DIP switch 10: remote controller on/off



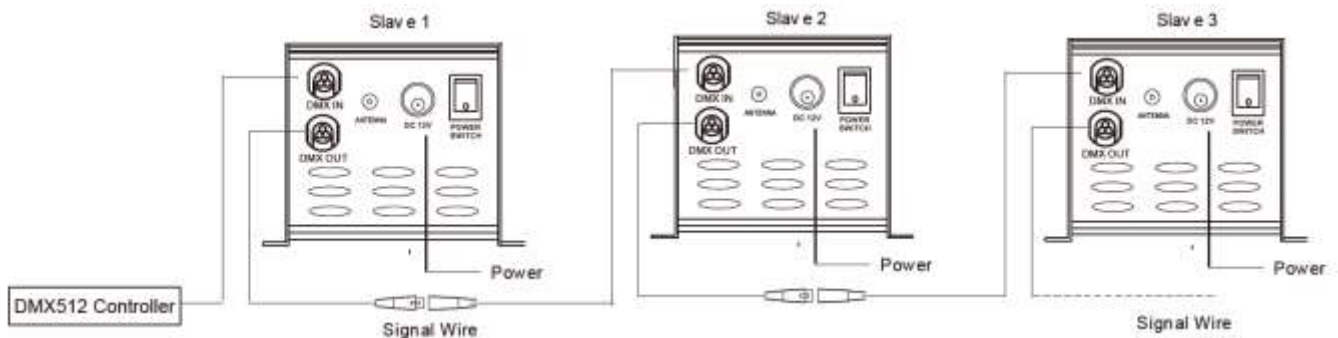
Calculating the DMX address:

- for example, to set DMX address 38: 2nd switch ON (2) + 3rd switch ON (4) + 6th switch ON (32) = 38

DMX channels:

- Channel 1: red
- Channel 2: green
- Channel 3: blue
- Channel 4: white

Connection diagram for DMX 512 Signal mode:



DIP switch settings:

- DIP switch 1-7: DMX address
- DIP switch 8-9: motor speed setting:
 - DIP switch 8-9 OFF: motor off
 - DIP switch 8 ON: motor speed 0.5 RPM
 - DIP switch 9 ON: motor speed 1 RPM
 - DIP switch 8-9 ON: motor speed 2 RPM



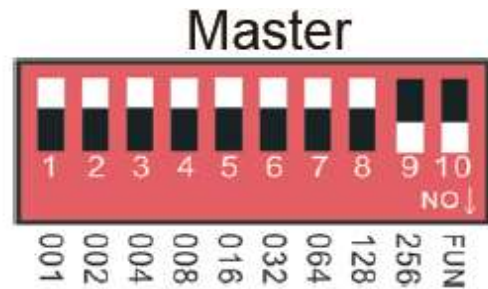
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Master / Slave control mode

DIP switch settings:

- DIP switch 1-4: light colour programme
- Master DIP switch 5-6: speed of colour change
- Master DIP switch 7-8: motor speed
- Master DIP switch 10: wireless remote ON/OFF
- Dip switch 9-10: ON



Colour change programmes: DIP switch 1-4 (Master light engine):

- DIP switch 1 ON: 7 colour fade: white, blue, purple, red, yellow, green, turquoise
- DIP switch 2 ON: 7 colour jump: white, blue, purple, red, yellow, green, turquoise
- DIP switch 1 & 2 ON: 3 colour jump: red, green blue
- DIP switch 3 ON: 7 colour fade in and out: white, blue, purple, red, yellow, green, turquoise
- DIP switch 1 & 3 ON: Red
- DIP switch 2 & 3 ON: Green
- DIP switch 1 & 2 & 3 ON: Blue
- DIP switch 4 ON: Yellow
- DIP switch 1 & 4 ON: Purple
- DIP switch 2 & 4 ON: Turquoise
- DIP switch 1 & 2 & 4 ON: White

Speed for colour change programmes: DIP switch 5-6 (Master light engine):

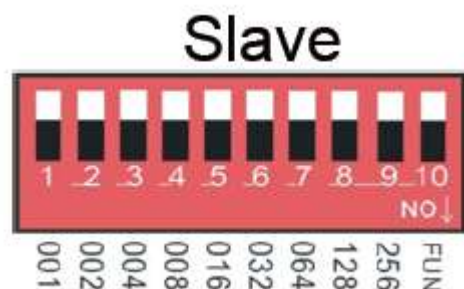
- DIP switch 5 & 6 OFF: 0.5 second
- DIP switch 5 ON: 1 second
- DIP switch 6 ON: 1.5 second
- DIP switch 5 & 6 ON: 2 second

Motor speed: DIP switch 7-8 (Master light engine):

- DIP switch 7 & 8 OFF: motor off
- DIP switch 7 ON: 0.5 RPM
- DIP switch 8 ON: 1 RPM
- DIP switch 7 & 8 ON: 2 RPM

Motor speed: DIP switch 8-9 (Slave light engine(s)):

- DIP switch 8 & 9 OFF: motor off
- DIP switch 8 ON: 0.5 RPM
- DIP switch 9 ON: 1 RPM
- DIP switch 8 & 9 ON: 2 RPM





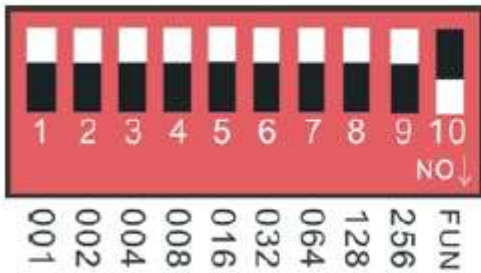
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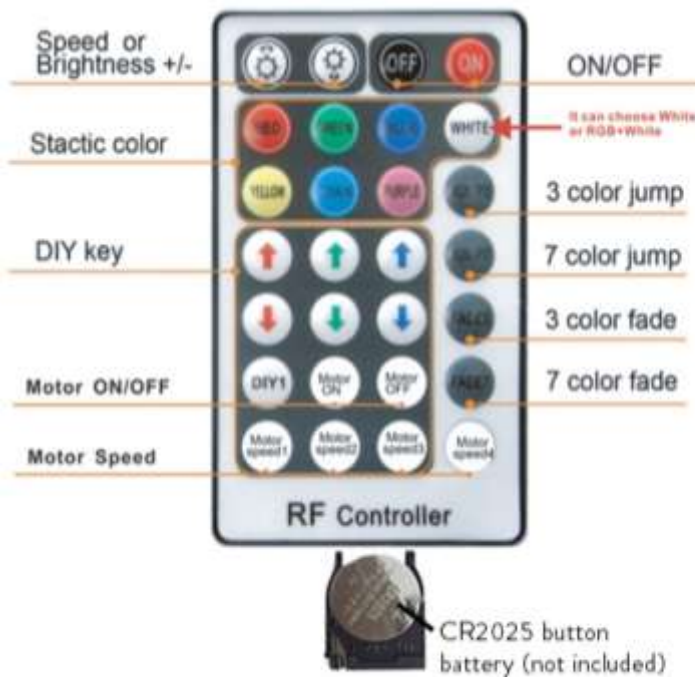
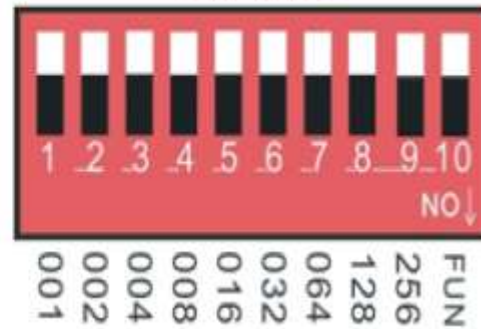
Wireless remote controller mode:

- Set DIP switch 10 ON and all other DIP switches OFF

Master



Slave



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
	white mode white,rgb+white change
	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
	Motor ON/OFF Turn ON/OFF the motor
	Motor speed Four kinds of the speed about the motor

- Motor speed:
 - In Master/Slave mode the Master light engine's speed can be controlled with remote controller
 - The Slave light engine's speed can be controlled with DIP switches 8-9



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, restart the device and test again. If the indicator light still doesn't flash up, try re-pairing the remote controller with the light engine. If the pairing didn't work, please contact your supplier.*
- *Pairing your remote controller with the light engine:*
 1. *Make sure the light engine is powered off completely*
 2. *Press the "FADE 3" and FADE 7" buttons at the same time within the remote control's range*
 3. *Power on the light engine*
 4. *The light engine will flash in white if the pairing was successful.*