LIGHT ENGINE
USER MANUAL

MODEL: LEU-1012/ANI
LEU-1012DMX/ANI

Accessories:

Animation Light Engine	1pc
Power Adaptor.....	1pc
Fiber Connector.....	12pcs
RF Remote Control.....	1pc (Optional)
User Manual.....	1pc

DOWNLOAD ON THE App Store

GET IT ON Google Play

CE RoHS

LIGHT ENGINE
USER MANUAL

Please read the User Manual carefully before operation. Our company reserves the right to interpret the contents of the Manual. The appearance of light engines of different models may vary from the above pictures. Specifications, appearance, functionality, software, etc. are subject to change without prior notice.

Please read the User Manual carefully before use. If you have any questions about the safe operation and maintenance of light engines, please contact the dealer.

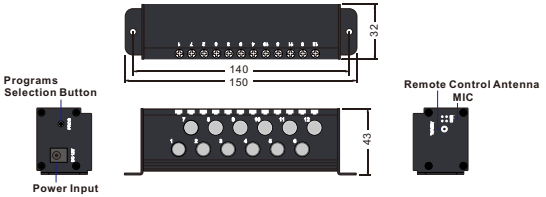
Usage Guidelines

Safety Notes:

1. Make sure that the power supply voltage is compatible with this light engine;
2. Prohibit use at high temperature (≤40℃);
3. Prohibit installation in a small enclosed space to avoid insufficient heat dissipation;
4. Prohibit placing in rain or humid places to prevent the risk of electric shock;
5. Prohibit looking directly at the LED module through the port of the light engine;

CHAPTER1 LEU-1012/ANI

I.Dimensions of the Light Engine



II. Technical parameters:

Item No.	LEU-1012/ANI
Input Voltage	12V DC
Power Consumption	12W MAX
Light Source	12-1W
Emitting Colors	White (6000K)
LED Lifespan	50000H
DMX 512	×

Sound Control	✓
Remote Control	Optional
BLE	Optional
Dimensions	L150XW32XH43 mm
Weight	0.20Kg
Fiber Connector Aperture	Φ3/Φ4/Φ5mm
Maximum Fiber Strands	12-Φ0.75X32PCS

III. Fiber optic light engine settings

This light engine is a regular model with the following control modes:

Working Status	Built-in Programs	Remote control	DMX controller	Sound	APP
Standalone	✓	✓	×	✓	✓

When the light engine is on, press the Program Selection button to select a program. Each time the button is pressed, one of the built-in programs will be selected in turn, as shown the following table.

Table of the built-in programs

PRG NO.	Description	PRG NO.	Description	PRG NO.	Description
01	Short Meteor-L to R	08	Comets-R to L	15	Starry Effect
02	Medium Meteor-L to R	09	Snow Effect -L to R	16	Flash
03	Long Meteor-L to R	10	Snow Effect -R to L	17	All Out
04	Short Meteor-R to L	11	Short Meteor-Center to Ends	18	Custom 1
05	Medium Meteor-R to L	12	Short Meteor-Ends to Center	19	Custom 2
06	Long Meteor-R to L	13	Moon	20	Custom 3
07	Comets-L to R	14	Firework		

IV. Remote control Instructions:

1.Before using the remote control:

(1) By default, the light engine and the remote control in the same box have been paired. The light engine can be controlled by the paired remote control only. Do not mix the light engine with other remote controls

(2) Before using the remote control, ensure that the remote control has a fresh button cell. **(The remote control does not come with batteries. You need to purchase CR2025/2032 on your own).**

(3) If necessary, you can pair the current light engine with more remotes. It is also possible to pair the current remote with more light engines.

2. How to pair the remote control and the machine:

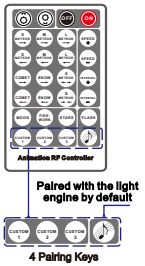
(1) Press and hold any one of the four pairing keys on the remote control.

(2) Turn on the light engine to activate pairing.

(3) The light engine will flash 2 times slowly and 3 times quickly.

(4) The remote control and the machine are successfully paired.

(5) Release the pairing key.



3. The pairing rule of the remote control and the light engine:

(1) The four keys in the last row of the remote control, are the four pairing keys.

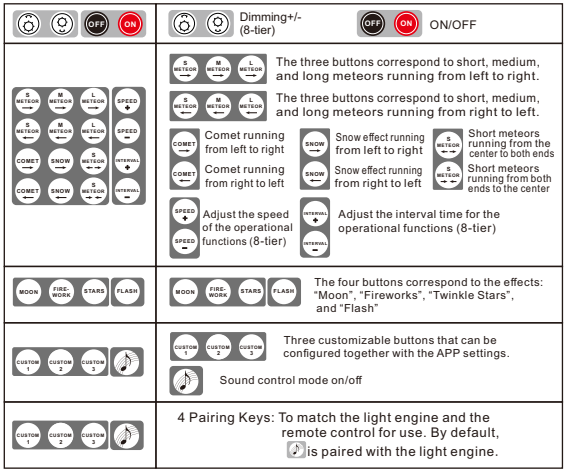
(2) Each Pairing Key can be paired with multiple light engines and will have the same effect.

(3) Each light engine can be paired with at most four different Pairing Keys, namely respectively. These four Pairing Keys with different icons can come from different remote controls.

(4) Once the device is successfully paired with the remote control, the pairing function cannot be canceled, but can be overwritten.

(5) For the same light engine, a new pairing key will overwrite the previous pairing key with the same icon.

4.The buttons of the remote control

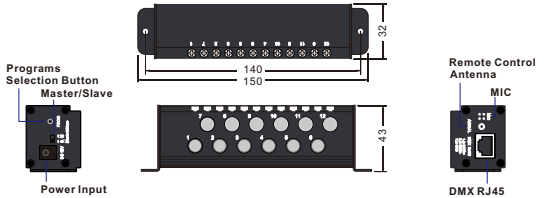


(1) The light engine has a memory function. When turned on, the light engine runs the last program before it is turned off.

(2) To disconnect the Bluetooth connection: press and hold the remote control button " " when the paired light engine is powered on.

CHAPTER2 LEU-1012DMX/ANI

I.Dimensions of the Light Engine



II. Technical parameters:

Item No.	LEU-1012DMX/ANI	Sound Control	✓
Input Voltage	12V DC	Remote Control	Optional
Power Consumption	12W MAX	BLE	Optional
Light Source	12-1W	Dimensions	L150XW32XH43 mm
Emitting Colors	White (6000K)	Weight	0.20Kg
LED Lifespan	50000H	Fiber Connector Aperture	Φ3/Φ4/Φ5mm
DMX 512	✓	Maximum Fiber Strands	12-Φ0.75X32PCS

III. Light Engine Settings

1.This light engines is a DMX512 model, and can be used in two ways: either as a single independent light engine or in a Master/Slave configuration with 2 light engines connected together using DMX cables. The control methods under different working conditions are as follows:

Working Status	Master/ Slave	Built-in Programs	Remote Control	DMX Controller	Sound	APP
Standalone	Master	✓	✓	×	✓	✓
	Slave	×	×	✓	×	×
Multiple Units in Series	Master	✓	✓	×	✓	✓
	Slave	×	×	✓	×	×

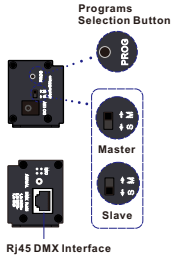
When the light engine is on, press the Program Selection button to select a program. Each time the button is pressed, one of the built-in programs will be selected in turn, as shown the following table.

2.The settings of a single independent light engine (12 ports)

Set the master/slave DIP switch to the "M" position. Turn on the light engine and select an program via the remote control and/or the mobile APP.

3. The settings of Master-slave operation (24 ports)

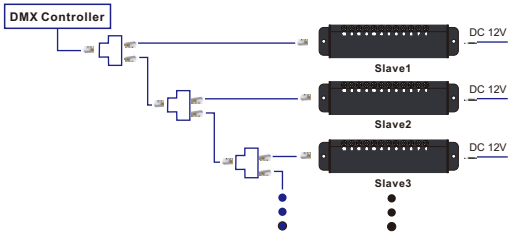
Set the master/slave DIP switches to the "M" position on one light engine as a Master, and to "S" position on the other as a Slave. Connect both light engines with a DMX signal cable to run master-slave mode. Turn on both light engines and select an program via the remote control and/or the mobile APP.



* The slave light engine is powered via the DMX signal cable and does not require a separate power adapter.

The connection diagram for the master-slave mode is as follows:

4. The connection diagram when there is a DMX controller/console:



* Number of DMX Channels: 12 (Each port corresponds to one channel)
* The DMX address can be set via a RDMX console

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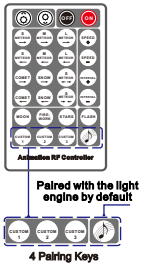
(2) Before using the remote control, ensure that the remote control has a fresh button cell. **(The remote control does not come with batteries. You need to purchase CR2025/2032 on your own).**

(3) If necessary, you can pair the current light engine with more remotes. It is also possible to pair the current remote with more light engines.



2. How to pair the remote control and the machine:

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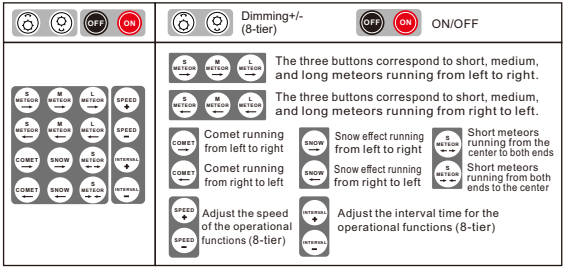
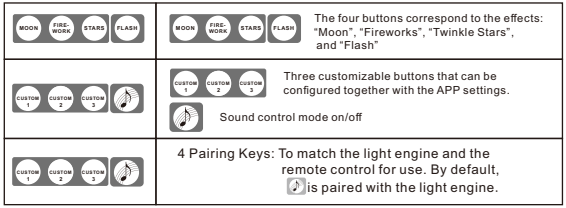
4.The buttons of the remote control





(1) The light engine has a memory function. When turned on, the light engine runs the last program before it is turned off.

(2) To disconnect the Bluetooth connection: press and hold the remote control button " " when the paired light engine is powered on.

V . Mobile APP Control

On the first page of the User Manual, there are QR codes for downloading the corresponding mobile APP. After downloading the APP, turn on the light engine, and you can connect to and operate the light engine on the APP. If a new mobile phone fails to connect because the light engine has already been connected to other mobile phones, press and hold either the Program Button on the light engine or the remote control button" " over 3 seconds while turning on the light engine to disconnect its Bluetooth connection (the light engine will flash 3 times). Then search again and pair the light engine with the new mobile phone. For specific connection steps and operation control methods, please refer to the APP User Manual (available from the sales).

Table of the built-in programs

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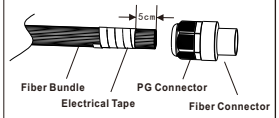
04	Short Meteor-R to L	11	Short Meteor-Center to Ends	18	Custom 1
05	Medium Meteor-R to L	12	Short Meteor-Ends to Center	19	Custom 2
06	Long Meteor-R to L	13	Moon	20	Custom 3
07	Comets-L to R	14	Firework		

Remarks:

1. Custom programs can be set up and saved through the mobile APP according to personal preferences.
2. The default factory settings for the built-in custom effects in the program appendix are as follows:
   Custom 1: Short meteor from left right left (loop)
   Custom 2: Medium meteor from left right left (loop)
   Custom 3: Full on

CHAPTER3 Fiber Bundle Assembly and Installation

1.Fiber connectors/couplings assembly

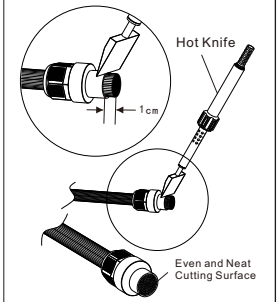


Step A:

Cut the fiber strands to the desired length. Bundle one end together and make the surface flush. Tighten the bundle with an electrical tape at 5cm away from the end. Loosen the nut on the PG connector, insert the harness end into it. For the sheathed fiber cables, peel off the sheath 10cm before the assembly.

Remarks:

The fiber bundle needs to match the fiber connector in size. If the port aperture is bigger than the bundle, insert dead fiber strands into the fiber connector to make it full. Ensure that the fiber strands are straight in the fiber connector, which is better for light output.



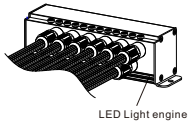
Step B:

1.Push the fiber bundle 1cm out of the fiber connector, and fasten the nut of the PG connector.

2.Heat the hot knife to about 250 degree Celsius. Hold the hot knife firmly and cut the fiber bundle flush with the fiber connector. The angle between the hot knife and the fiber port is suggested to be 25-30 degrees as shown in the left pictures

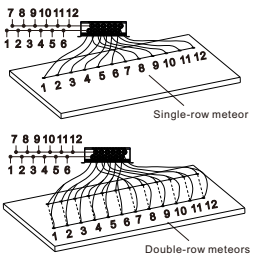
Remarks:

If the fiber bundle is not cut well, for example, the surface is not even, not neat, or in other bad conditions, loosen the nut and push the fiber bundle 1cm out of the connector again, and repeat the cutting procedure.

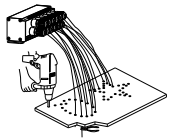


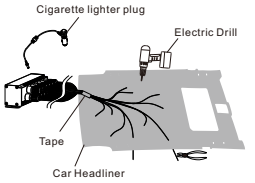
Loosen the set screw on the light engine, insert the processed fiber connectors into the ports, and then tighten the screw.

2. Fiber strands installation on ceilings



Drill holes on the ceiling as required by the pattern. When creating a meteor effect, the fiber strands of ports 1 - 12 on the light engine need to be installed at the corresponding positions numbered 1 - 12 on the meteor, following the port sequence. For a double-meteor effect, evenly distribute the fiber strands from each port to the corresponding numbered position on each meteor.



1. Drill holes on the ceiling as required by the pattern. Insert the fiber strands into the holes and glue them with the resin adhesive. Cut the fiber ends flush with the ceiling or leave 2-3mm protrusion

2. The fiber strands cannot be folded in half, and the bending radius should not be less than 10mm.