

Full color animation series laser performer

an instruction manual

Thank you very much for purchasing the full-color animation series laser performance device. For your personal safety and better use of the product, please read this manual carefully and operate according to the procedures, so as to avoid personal safety and lamp damage caused by misuse.

● **Packing list:**

Please check whether there are the following items when you open the packing box of the laser show:

- A set of full color animation laser performance machine
- A power line for full color animation laser performance
- A full color animation laser performance manual

● **Introduction of product and function effect:**

The light laser generator which meets the international standard for laser generator. source of full color animation series laser performance adopts semiconductor The laser source has long service life and high stability

Effect features: built in 500 latest laser performance effect patterns, with space effect, projection effect, laser dimming effect, laser stroboscopic effect, space-time shuttle effect, 3D laser effect and other latest laser performance effects.

Classic effects: three dimensional laser effects, such as beam optical network, vast sea of clouds, light, rotation, zooming in and out, time and space tunnel, etc.。

● **technical parameter:**

Rated voltage: AC110V / AC230V \pm 10%

Rated frequency: 50 Hz ~ 60 Hz

Rated power: 90W

Laser power: 3W

Laser source: semiconductor laser generator

Laser modulation signal: analog modulation signal

Laser color: full color

Laser pattern: 500 laser effect patterns

Scanning system: 15kpps galvanometer scanning system

Scanning angle of galvanometer: \pm 60 degrees

Control channel: 16 signal channels

Control signal: international standard signal of DMX-512, international standard signal of ILDA, voice control, self-propelled

Control mode: signal control, voice control, self-propelled and master-slave mode

Cooling system: fan forced cooling system

Working environment: Indoor

● **instructions:**

After opening the packing box, carefully check whether the laser performer is damaged due to transportation, such as whether the screw is loose, whether the reflector is broken, etc. After checking that everything is normal, select the right position, hang the lamp, adjust the angle, and connect the power supply and ground wire before power on.

This equipment belongs to class 1 protection equipment, so the yellow green conductor must be grounded

New functions: when the second channel is less than 128, the second channel is normal self-propelled and voice control; when the second channel is more than 128, the third channel selects the effect, the fourth channel controls the color, and the fifth channel controls the speed.

Debugging channel list

Channel		DMX-512 numerical value	Control content
CH1	Main switch	0~9	Laser closed light
		10~255	Laser switch (dimming)
CH2	colour	0~69	White red blue pink green yellow green (fixed color selection)
		70~79	Overall color change (flow rate controlled by CH3)
		80~89	Initial color of pattern (flow rate controlled by CH3)
		90~92	Rainbow Colors (Flow rate controlled by CH3)
		93~110	2 segmented color selection, 2 numerical steps (flow rate controlled by CH3)
		111~131	3 segmented color selection, 2 numerical steps (flow rate controlled by CH3)
		132~149	4 segmented color selection, 2 numerical steps (flow rate controlled by CH3)
		150~182	8 segmented color selection, 2 numerical steps (flow rate controlled by CH3)
		183~218	16 segmented color selection with 4 numerical steps (flow rate controlled by CH3)
		219~253	32 segmented color selection with 4 numerical steps (flow rate controlled by CH3)
CH3	Color flow rate	0~1	Color does not flow smoothly
		10~127	Color flowing forward, speed increasing from slow to fast
		128~255	Color reversed flowing water, speed from slow to fast
CH4	Graphic group selection	0~24	Built in static graphic group 1 (basic geometric patterns)
		25~49	Built in static graphic group 2 (basic geometric patterns)
		50~74	Built in static graphic group 3 (edge highlight pattern)
		75~99	Built in static graphic group 4 (dotted graphic)
		100~124	Built in static graphic group 5 (Christmas graphics)
		125~149	Built-in animation category 1
		150~174	Built-in animation category 2
		175~199	retain
		200~224	Iretain
225~255	retain		

CH5	Graphic selection	0~255	Pattern selection (pattern grouping controlled by CH4)
CH6	Built in dynamic effects	0~1	No functionality
		2~206	Built in dynamic effect single selection, one effect for every 2 values (color CH2 control, default color when CH2=0, speed CH7 control)
		207~216	Random playback of line effects (color CH2 control, default color when CH2=0, speed CH7 control)
		217~226	Random playback of animation effects (color CH2 control, default color when CH2=0, speed CH7 control)
		227~236	Christmas effect random playback (color CH2 control, default color CH2=0, speed CH7 control)
		237~246	Outdoor effect random playback (color CH2 control, default color when CH2=0, speed CH7 control)
		247~255	All effects are randomly played (controlled by color CH2, default color when CH2=0, speed controlled by CH7)
CH7	Built in dynamic effect speed	0~1	System default speed
		2~255	Manually adjust the built-in effect speed from slow to fast
CH8	Pattern size	0~255	Manual selection of pattern size
CH9	Automatic scaling of patterns	0~15	Pattern size selection
		16~55	Speed selection from small to large
		56~95	Speed selection from high to low
		96~135	Size scaling speed selection
		136~175	Two point irregular cyclic scaling
		176~215	Three point irregular cyclic scaling
		216~255	Four point irregular cyclic scaling
CH10	The pattern rotates around the center	0~127	Rotation angle selection
		128~191	Positive rotation speed selection
		192~255	Reverse rotation speed selection
CH11	The pattern rotates around the X-axis	0~127	Horizontal flip position selection
		128~255	Horizontal Flip Speed Selection
CH12	The pattern rotates around the Y-axis	0~127	Vertical Flip Position Selection
		128~255	Vertical flipping speed selection
CH13	Horizontal movement	0~127	Horizontal position selection
		128~255	Horizontal cyclic movement, with speed increasing from fast to slow
CH14	Vertical movement	0~127	Vertical position selection
		128~255	Vertical cyclic movement, with speed increasing from fast to slow
CH15	X-direction waves	0~1	No waves
		2~255	Wave amplitude and speed adjustment (amplitude from small to large, speed from slow to fast, every 32 values in one gear, a total of 8 gears)
CH16	Pattern gradual	0~1	No gradual drawing

	drawing	2~63	Manual Gradient Drawing 1
		64~127	Manual Gradient Drawing 2
		128~153	Automatic Gradient (Increase)
		154~179	Automatic Gradient (Subtraction)
		180~205	Automatic gradient drawing (increase first, then decrease - reverse)
		206~255	Automatic gradient drawing (increase first, then decrease - same direction)

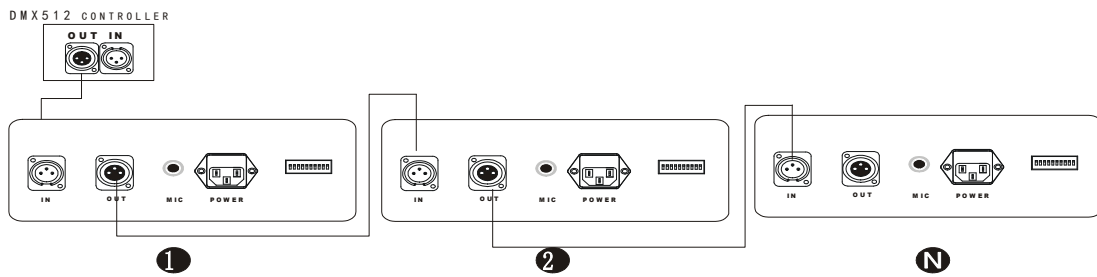
Menu Description

1	ADDR	1-512	Address code setting, DMX mode/slave mode
2	SHOW	SHOW 0	SHOW 0 All programs are shuffled
		SHOW 1	SHOW 1 Line Effect Program Playback
		SHOW 2	SHOW 2 Animation Effects Program Plays
		SHOW 3	SHOW 3 Built-in text program playback
		SHOW 4	SHOW 4 Christmas and New Year program is broadcast
		SHOW 5	SHOW 5 Outdoor Landmark Program Broadcast
		SHOW 6	SHOW 6 Personalized Programming Program Plays
		SHOW 7	AUTO 3--AUTO 9 Wedding Effect Single
3	SPEED	SP 0-SP 9	SHOW 7 Hand-painted graffiti program plays
4	SOUND	S_ON	ON : Voice control is turned on, and the program is played in voice mode (only SHOW 0, SHOW 1, SHOW 2, SHOW 4, and SHOW 5 support voice control)
		S_OFF	OFF: The voice is turned off, and when the voice is turned off, the program will be played in automatic mode
5	SENSE	SE 0-SE 9	SE 0-9 voice sensitivity from low to high
6	ILDA	ILDA	ILDA mode/network port mode

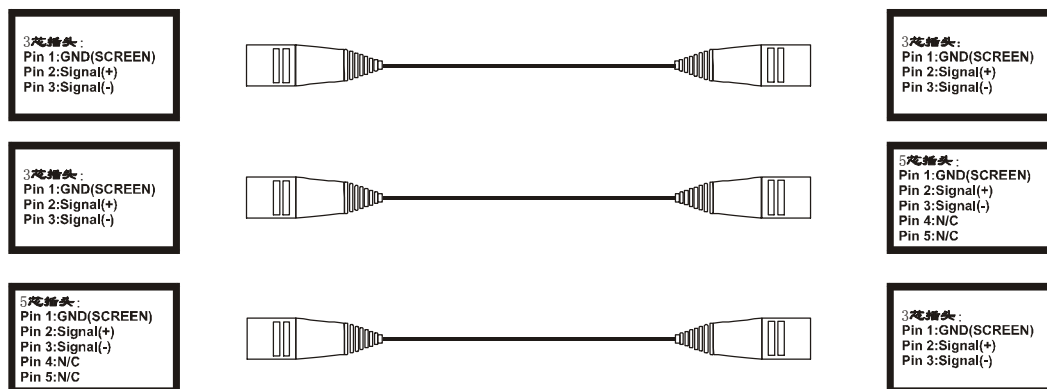
Hide menu description (press and hold the menu button for 3 seconds to enter, and press and hold the menu button for 3 seconds to exit)

1	PHASE	PH -XX	Phase and XY displacement settings
			n1:X+ Y+ (normal XY without substitution)
			n2:X+Y- (normal XY without substitution)
			n3:X-Y- (normal XY does not displace)
			n4: X-Y+ (normal XY non-displaced)
			C1: X+ Y+ (Change XY)
			C2:X+Y- (Change XY)
			c3:X- Y- (Change XY)
C4: X-Y+ (Change XY)			
2	SIZE-XY	S.10-S.100	Scan Range Adjustment (Pattern Size)
3	Protect	P. ON/P.OFF	ON: The galvanometer abnormal protection function is turned on, when the galvanometer XY does not move at the same time, the lamp is closed OFF: The protection function is turned off
4	LASER	LR 1 - LR3	LR 1: Monochromatic light source LR-3: Full-color light source

5	Default	DEFT	Factory reset (press and hold the Down button for more than 3 seconds to restore factory settings)
6	V.xxx	V001-V999	001-999 is the Bluetooth number of the lamp, which is used to distinguish different Bluetooth devices
7	VERSION	VA1.X	1.X is the version number of the lighting software



If 5-core XLR socket (head) is used in your signal console, you must use a conversion line from 5-core to 3-core. The specific conversion method is as follows:



When the control signal of the console is input to the seven color animated laser performers, all the seven color animated laser performers must first set the address code. So that the corresponding control signal works. In this way, when using any controller, each lamp must have its own address code. Therefore, when the address of the first lamp is set to 1, the address code of the second lamp is set to 23 (address code 1 of the first lamp plus 22 channels), and the third lamp is set to 55. And so on (this setting method also needs to be determined according to different console, now only according to the general rules).

The specific setting of the address code switch of the signal control mode of the DMX-512 is shown in the figure below:

Light signal	Starting address	Binary dialing (ON)
1	1	1
2	23	1、2、3、5
3	55	1、2、3、5、6



How to use ILDA interface control function mode:

When the standard ILDA interface signal line is connected, it will automatically switch to ILDA interface control mode.

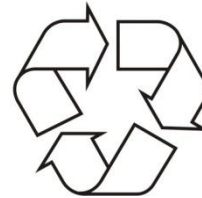
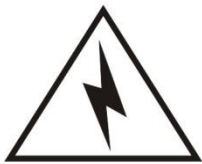
Note: first disconnect the power supply, and then plug in the signal line of ILDA interface to avoid damaging the lamp.

Notes on master slave synchronization function:

1. When the lamp is the host, the lamp will send DMX-512 signal, and cannot be connected to the DMX-512 console at this time, otherwise it will interfere with each other and cannot run synchronously.
2. Multiple lamps are operated simultaneously, only one is the main unit and the other is slave. Otherwise, it cannot be run synchronously.

The master-slave synchronous connection diagram is as follows:

● Safety instructions:



! Before the installation and maintenance of the lamp, please make sure that the power supply of the lamp body is disconnected.

! Please make sure that the fan mouth of the lamp is unblocked and the surrounding environment is well ventilated. Do not use this product in humid environment for a long time.

! When the lamp is used indoors or maintained, please prevent the lamp from contacting with water drops. If it is used outdoors, please take sufficient waterproof measures.

! Installation, operation and maintenance personnel must be familiar with the performance of the lamp before they start to operate, otherwise the lamp will be damaged.

! Please do not use other different specifications of power supply voltage and laser generator.

! Do not look directly at the laser source to avoid eye injury.

! Do not use this product with shaking.

● maintain:

1. Try to prevent dust, dirt and smoke oil from artificially laying or even flowing into the lamp body, and try to keep the grating effect series of laser performers clean;

2. Please use professional glass cleaning agent regularly every month and clean the reflector with flannelette, so as to ensure the maximum brightness output of the laser and prolong the service life of the light source

LightElf (WeChat Mini Program & App) User Manual

一、 Software installation (WeChat mini program /Android APP)

(** You need to grant the software permission to access Bluetooth and positioning, otherwise it cannot be used normally. **)

1. WeChat mini program:

Open WeChat,

in the mini program scan the QR code below to use it



2. Android App

APP

Download

address

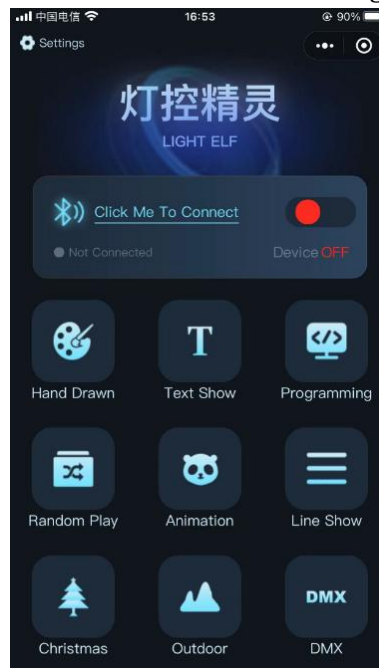
:

<https://pan.baidu.com/s/1b1u-g0RXZcgcRLBKteJozA?pwd=nhrd> Or log in to the Google Play Store and search for "LightElf" to install it

3. Apple App: Search for LightElf on the official App Store and download to use.

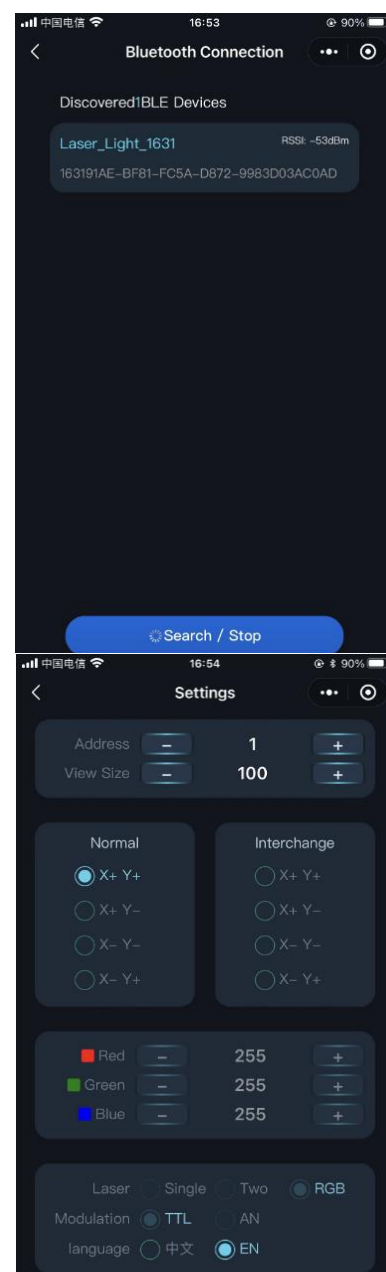


4. The main interface after the software is started is as shown in the figure



二、 Connect laser light equipment

1. Please turn on the laser light equipment before use
2. Open the software and click "Click Me To Connect" on the main interface.
3. Select Laser_Light_xxxx in the Bluetooth list
4. Successfully connected to device

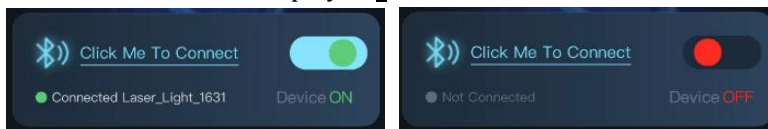


三、 Software settings

1. The address code, display range and XY related parameters of the laser light device can be set
2. The menu language of the software can be changed at the bottom

四、 Turn the laser on and off

1. Click the switch button on the right side of the main interface. After turning it on, the words "Device ON" will be displayed.
2. Click the switch button on the right side of the main interface. After closing, the words "Device OFF" will be displayed.





五、 Introduction to hand-drawn graffiti function

Click the hand-drawn graffiti menu in the main interface to enter. Here you can control the display effect of the device by manually drawing patterns, entering text, or selecting built-in patterns.


- A. **Selection of color:** The upper part of the interface is the color selection area. Click the different color buttons to select the color of the laser drawing.

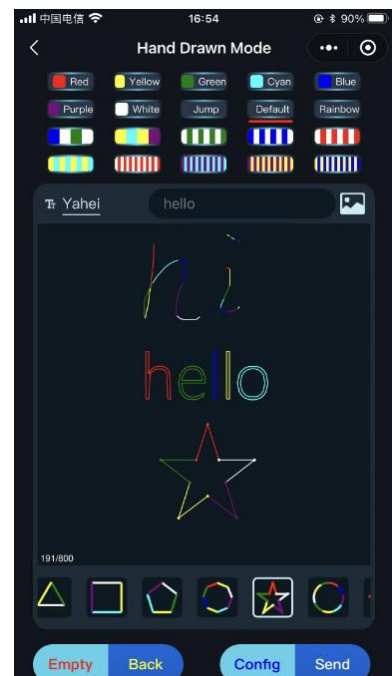
- B. **Draw patterns:** The middle part of the interface is the pattern control area. In this area you can do the following operations

1. Manually draw patterns

- 1) Click the icon  to switch to the manual pattern drawing function
- 2) Use your finger to draw the pattern you want on the middle large screen area
- 3) You can also click the icon  to add a picture background to make drawing easier

2. Text input

- 1) Click the icon  to switch to text input function
- 2) Enter text in the input box
- 3) Use your finger to drag and drop in the middle of the screen
- 4) You can also choose different fonts on the left side of the input box (Note: The font library of the mini program version is limited, and some texts or symbols may not



be included. If you need a more complete font library, it is recommended to choose the app version)

3. Select the built-in pattern

- 1)Swipe the pattern list to view all built-in patterns
- 2)Click on the pattern and drag it with your finger in the middle of the



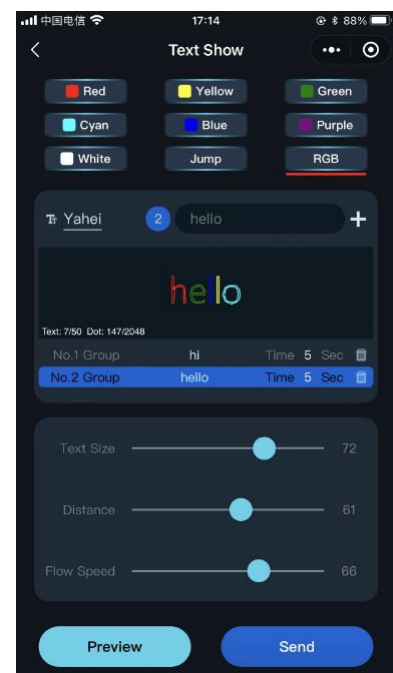
C. Graphic operation and parameter configuration

- 1)The clear and back buttons can be used to delete the drawn pattern. After deletion, the pattern can be redrawn.
- 2)Click the configuration button to configure parameters, configure the size, rotation angle, flip, and horizontal and vertical movement of the graphics. Click on the left side to select the parameters to be configured, slide up and down on the right side to change the parameter value, and click the OK button to save the parameters.
- 3)After the pattern is drawn, click the send button to display the pattern effect on the device.█

六、 Introduction to text playback function

Click the text playback menu in the main interface to enter. Here you can set the text display effect, which can support up to 50 characters.

1. The upper part is the color selection area. Click the corresponding button to select the color of the text.
2. The middle part sets the area for text
 - 1)Click on the left to select a font
 - 2)In the middle is the text input box
 - 3)The number on the left side of the text input box indicates the current text group
 - 4)Click the "+" on the right side of the input box to add a new text group. Up to 4 groups are supported.
 - 5)Click the playback duration of the group to modify the time
 - 6)After completing the text input, click the preview button in the lower left corner to generate a preview effect in the middle of the screen.
 - 7)Click the send button to display text effects on your device█



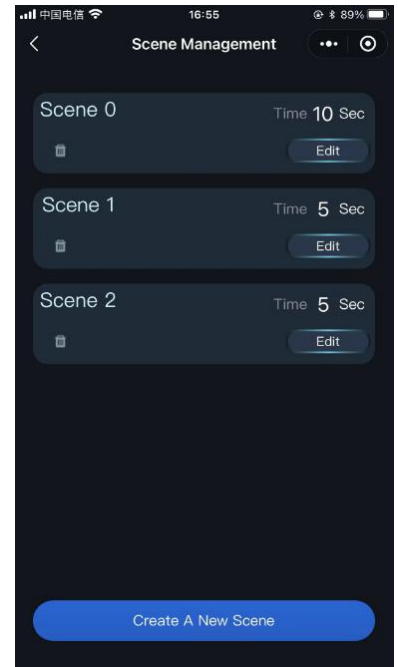
3. There are three configuration parameters in the following section
 - 1) Text size: Adjust text size to change the size of text displayed on your device
 - 2) Display viewing distance: adjust the size of the display area (use to adjust the projection distance)
 - 3) Water flow speed: Adjust the water flow speed to change the speed at which text moves from left to right. When set to 0, the text remains stationary and does not move.

七、 Personalized programming

Click the personalized programming menu in the main interface to enter. By editing the pattern of each scene, the laser light device can play in sequence according to the programmed scenes to meet your personalized needs. It can support up to 20 scene editing.

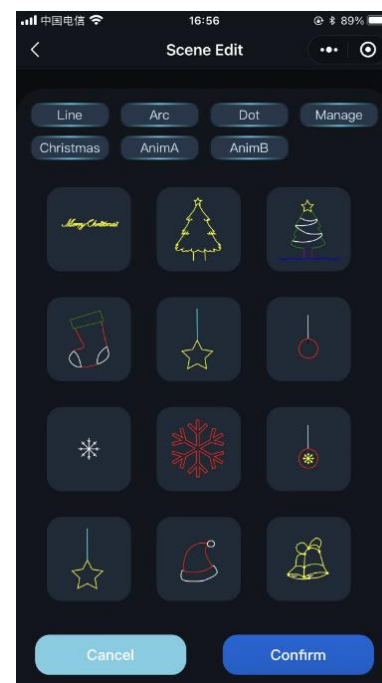
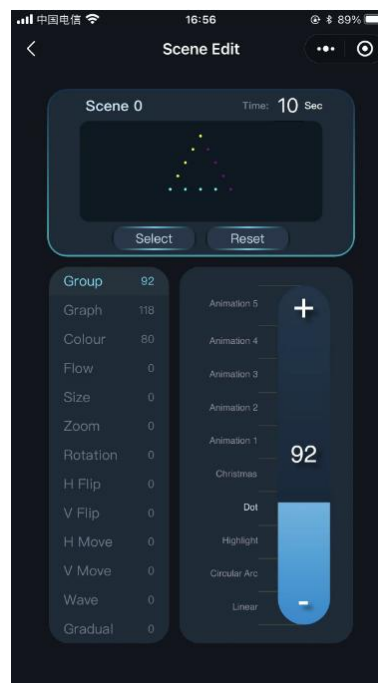
A. Scene management

1. Click the New Scene button at the bottom of the page to add a new scene
2. Click the delete icon on the left in the scene list to delete the scene
3. Click the number on the right in the scene list to modify the playback duration of the scene.
4. Click the corresponding edit button in the scene list to enter the scene editing page



B. Scene editing

1. Click the Select Graphics button at the top of the page to pop up a selection interface for various graphics, with a total of 7 groups including dynamic graphics. Click on a graphic to see the effect of the graphic in real time on the device. After selecting, click the OK button to save.
2. You can also select graphics by modifying



the channel parameters below, select graphics groups or graphics in the channel menu on the left, and slide up and down on the right skateboard to select

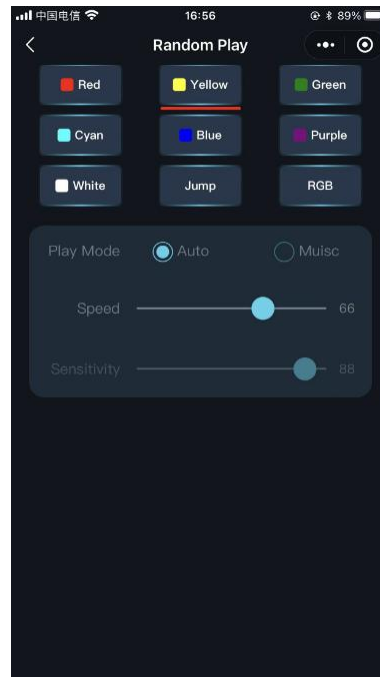
3. In addition to graphic selection, you can also set different display effects. Just select the parameters on the left and slide up and down the skateboard on the right.

八、 Built-in program playback

The system has built-in hundreds of lighting programs for you to choose from, and they can be played without any editing clicks. All built-in programs can be played randomly or specified programs can be played.

A. Random play: all programs are played randomly

1. Click on the random play menu in the main interface to enter
2. Click the color button above to select the color of the laser
3. The playback mode supports two modes: self-propelled and voice-controlled. The slider below can adjust the self-propelled speed and voice-controlled sensitivity.



B. Line playback, animation playback, Christmas playback, outdoor program playback

1. Click the corresponding program menu in the main interface to enter
2. For the color and play mode settings in the program, please refer to the random play page
3. Selecting loop means that the 50 programs under this category will be played in order.
4. You can also check the box to play some of the programs and just click to play the program

