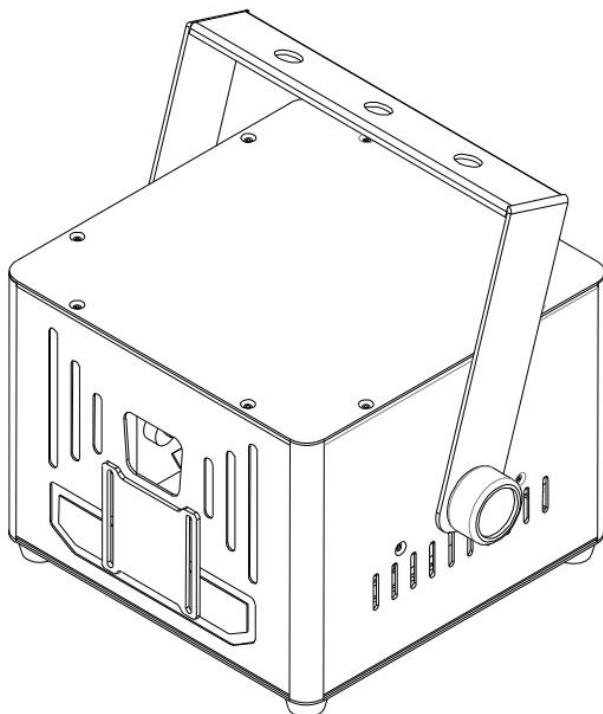


User manual

Please read the instructions carefully before use

Animated laser light

BLUETOOTH APP



As the products are constantly updated, the contents of this manual may be slightly different from the actual products. Please understand!

Note 1, when the 25-pin ILDA port access to the computer software signal, the lamps and lanterns automatically recognized and switched to the software control

Note 2, if the fixture is connected to the computer software through the network port, please manually set the mode setting in the menu to the network port mode (refer to the following table)

Technical Parameters

Laser: 1W--5W RGB

Galvanometer: 15kpps Scanning angle: +/- 30°

Power consumption: 20W

Power supply: 100-240VAC, 50/60Hz

Control mode: Voice control/automatic DMX512 control/master/slave synchronization, ILDA interface (ISHOW can be connected)

Software and imported pangolin, Fire Phoenix software)

Product size: 23*18*21.5cm Net weight: 3kg

1. Main menu list

| | | | |
|---|-------------|------------------|---|
| 1 | Dmx Address | 1-512 | Address Code Setting |
| 2 | Channel | 16CH/20CH | 16CH for simplify Channel Mode, 20CH for Pro Channel Mode |
| 3 | Mode | 0 DMX | --- DMX controller Mode |
| | | 1 Netmask | --- Switch to Netmask Puncture software control |
| | | 2 Random | --- All programs random |
| | | 3 Line | --- Line program |
| | | 4 Animation | --- Animation programs |
| | | 5 Text | --- Play text (text is entered by mobile app or applet) |
| | | 6 Programming | --- Play programming programs (programs are programmed by mobile apps or applets) |
| | | 7 Hand-drawn | --- Play a hand-drawn pattern (pattern drawn by mobile app or applet) |
| | | 8 Landmarks | --- Outdoor and Landmark Programs |
| | | 9 Break | --- Light OFF and Standby |
| 4 | Play Speed | 0 | Sound control |
| | | 1--99 | Self-propelled speed (slow to fast) |
| 5 | Size | 10-100 | Size of the pattern |
| 6 | Phase | X+/Y+ | Phase of the pattern |
| 7 | Language | Chinese /English | Language Settings |
| 8 | Software | VER2.5 | VER2.5 is the software version |

2. Channel List

| 16-Channel | | | |
|------------|--------------------------|-------------------|---|
| | | DMX-51 2 value | Control content |
| CH1 | Main switch | 0-255 | ON/OFF |
| CH2 | Strobe | 0-9 | No function |
| | | 10-255 | Strobe speed from slow to fast |
| CH3 | Color | 0-34 | White-Red-Blue-Purple-Cyan-Yellow-Green (fixed color selection) |
| | | 35-39 | Overall color change (flow rate controlled by CH4) |
| | | 40-44 | Pattern initial color (flow rate controlled by CH4) |
| | | 45-46 | Seven rainbow colors (flow rate controlled by CH4) |
| | | 47-66 | 2 Segment color selection 4 Numerical stepping (flow rate controlled by CH4) |
| | | 67-96 | 3 Segment color selection 4 Numerical stepping (flow rate controlled by CH4) |
| | | 97-126 | 4-segment color selection 4 numerical steps (flow rate controlled by CH4) |
| | | 127-150 | 8-segment color selection 4 numerical steps (flow rate controlled by CH4) |
| | | 151-174 | 16-segment color selection with 4 numerical steps (flow rate controlled by CH4) |
| | | 175-214 | 32 segment color selection 4 numerical steps (flow rate controlled by CH4) |
| | | 215-247 | Color Segmentation |
| | | 248-255 | Color gradient (flow rate controlled by CH4) |
| CH4 | Color flow rate | 0-9 | No function |
| | | 10-127 | Color positive running water, slow to fast speeds |
| | | 128-255 | Colors flow in reverse, speed from slow to fast |
| CH5 | Graphics Selection | 0-255 | Pattern Selection (Pattern grouping is controlled by CH6) |
| CH6 | Graphics Group Selection | 0-24 | Built-in static graphics group 1 (basic geometric patterns) |
| | | 25-49 | Built-in static graphics group 2 (basic geometric patterns) |
| | | 50-74 | Built-in static graphics group 3 (edge highlight pattern) |
| | | 75-99 | Built-in static graphics group 4 (punched graphics) |
| | | 100-124 | reservations |
| | | 125-149 | Animation Category 1 |
| | | 150-174 | Animation Category 2 |
| | | 175-199 | Animation Category 3 (Reserved for now) |
| | | 200-224 | Animation Category 4 (Reserved for now) |
| | | 225-255 | Hand-drawn pattern (pattern drawn by mobile app or applet) |
| CH7 | Pattern size | 0-255 | Manual selection of pattern size |
| CH8 | Automatic scaling of | 0-15 | Pattern size selection |
| | | 16-55 | Choose from small to large speeds |

| | | | |
|------|---------------------------------------|---------|--|
| | patterns | 56-95 | Selection of speed from large to small |
| | | 96-135 | Size Zoom Speed Selection |
| | | 136-175 | two-point irregular loop scaling |
| | | 176-215 | Three-quarter irregular loop scaling |
| | | 216-255 | quadratic irregular loop scaling |
| CH9 | Pattern rotates around the center | 0-127 | Rotation angle selection |
| | | 128-191 | Positive rotation speed selection |
| | | 192-255 | Counter-rotation speed selection |
| CH10 | The pattern rotates around the X-axis | 0-127 | Horizontal flip position selection |
| | | 128-255 | Horizontal flip speed selection |
| CH11 | The pattern rotates around the Y-axis | 0-127 | Vertical flip position selection |
| | | 128-255 | Vertical flip speed selection |
| CH12 | Pan | 0-255 | Horizontal position selection |
| CH13 | Vertical | 0-255 | Vertical position selection |
| CH14 | X-direction wave | 0-1 | wave-free |
| | | 2-255 | Wave amplitude and speed adjustment (amplitude from small to large, speed from slow to fast, one step for every 32 values, 8 steps in total) |
| CH15 | Built-in dynamic effects | 0-1 | No function |
| | | 2-202 | Built-in effects radio selection (Color CH3 control, CH3=0 default color, Speed CH16 control) |
| | | 203-214 | Line effect (color CH3 control, CH3=0 default color, speed CH16 control) |
| | | 215-224 | Animation effects (color CH3 control, CH3=0 default color, speed CH16 control) |
| | | 225-234 | Outdoor landmark effect (color CH3 control, CH3=0 default color, speed CH16 control) |
| | | 235-255 | Random playback of all effects (color CH3 control, CH3=0 default color, speed CH16 control) |
| CH16 | Built-in dynamic effect speed | 0-1 | System default speed |
| | | 2-255 | Manual Adjustment Built-in effect speed from slow to fast |

| 20-Channel | | | |
|------------|-------------|----------------|-----------------|
| | | DMX-51 2 value | Control content |
| CH1 | Main switch | 0-255 | ON/OFF |
| CH2 | Red | 0-255 | ON/OFF |
| CH3 | Green | 0-255 | ON/OFF |
| CH4 | Blue | 0-255 | ON/OFF |
| CH5 | Strobe | 0-9 | No function |

| | | | |
|------|-------------------------------|---------|---|
| | | 10-255 | Strobe speed from slow to fast |
| CH6 | Color | 0-34 | White-Red-Blue-Purple-Cyan-Yellow-Green (fixed color selection) |
| | | 35-39 | Overall color change (flow rate controlled by CH7) |
| | | 40-44 | Pattern initial color (flow rate controlled by CH7) |
| | | 45-46 | Seven rainbow colors (flow rate controlled by CH7) |
| | | 47-66 | 2 Segmented color selection 4 Numerical stepping (flow rate controlled by CH7) |
| | | 67-96 | 3 Segment color selection 4 Numerical stepping (flow rate controlled by CH7) |
| | | 97-126 | 4-segment color selection 4 numerical steps (flow rate controlled by CH7) |
| | | 127-150 | 8-segment color selection 4 numerical steps (flow rate controlled by CH7) |
| | | 151-174 | 16-segment color selection with 4 numerical steps (flow rate controlled by CH7) |
| | | 175-214 | 32 segment color selection 4 numerical steps (flow rate controlled by CH7) |
| | | 215-247 | Color Segmentation |
| | | 248-255 | Color gradient (flow rate controlled by CH7) |
| CH7 | Color flow rate | 0-9 | Color does not run |
| | | 10-127 | Color positive running water, slow to fast speeds |
| | | 128-255 | Colors flow in reverse, speed from slow to fast |
| CH8 | Graphics Selection | 0-255 | Pattern Selection (Pattern grouping is controlled by CH9) |
| CH9 | Graphics Group Selection | 0-24 | Built-in static graphics group 1 (basic geometric patterns) |
| | | 25-49 | Built-in static graphics group 2 (basic geometric patterns) |
| | | 50-74 | Built-in static graphics group 3 (edge highlight pattern) |
| | | 75-99 | Built-in static graphics group 4 (punched graphics) |
| | | 100-124 | reservations |
| | | 125-149 | Animation Category 1 |
| | | 150-174 | Animation Category 2 |
| | | 175-199 | Animation Category 3 (Reserved for now) |
| | | 200-224 | Animation Category 4 (Reserved for now) |
| | | 225-255 | Hand-drawn pattern (pattern drawn by mobile app or applet) |
| CH10 | Pattern size | 0-255 | Manual selection of pattern size |
| CH11 | Automatic scaling of patterns | 0-15 | Pattern size selection |
| | | 16-55 | Choose from small to large speeds |
| | | 56-95 | Selection of speed from large to small |
| | | 96-135 | Size Zoom Speed Selection |
| | | 136-175 | two-point irregular loop scaling |
| | | 176-215 | Three-quarter irregular loop scaling |
| | | 216-255 | quadratic irregular loop scaling |
| CH12 | Pattern rotates around the | 0-127 | Rotation angle selection |
| | | 128-191 | Positive rotation speed selection |

| | | | |
|------|---------------------------------------|---------|--|
| | center | 192-255 | Counter-rotation speed selection |
| CH13 | The pattern rotates around the X-axis | 0-127 | Horizontal flip position selection |
| | | 128-255 | Horizontal flip speed selection |
| CH14 | The pattern rotates around the Y-axis | 0-127 | Vertical flip position selection |
| | | 128-255 | Vertical flip speed selection |
| CH15 | Pan | 0-255 | Horizontal position selection |
| CH16 | Vertical | 0-255 | Vertical position selection |
| CH17 | X-direction wave | 0-1 | wave-free |
| | | 2-255 | Wave amplitude and speed adjustment (amplitude from small to large, speed from slow to fast, one step for every 32 values, 8 steps in total) |
| CH18 | Gradual drawing of patterns | 0-1 | No Graduated Drawing |
| | | 2-63 | Manual Graduated Drawing 1 |
| | | 64-127 | Manual Graduated Drawing 2 |
| | | 128-153 | Auto Gradient (Increase) |
| | | 154-179 | Automatic gradient drawing (minus) |
| | | 180-205 | Automatic gradation (incremental and decremental - reverse) |
| | | 206-255 | Automatic gradation (incremental and decremental - isotropic) |
| CH19 | Built-in dynamic effects | 0-1 | No function |
| | | 2-202 | Built-in effects radio selection (Color CH3 control, CH3=0 default color, Speed CH20 control) |
| | | 203-214 | Line effect (color CH3 control, CH3=0 default color, speed CH20 control) |
| | | 215-224 | Animation effects (color CH3 control, CH3=0 default color, speed CH20 control) |
| | | 225-234 | Outdoor landmark effect (color CH3 control, CH3=0 default color, speed CH20 control) |
| | | 235-255 | Random playback of all effects (color CH3 control, CH3=0 default color, speed CH20 control) |
| CH20 | Built-in dynamic effect speed | 0-1 | System default speed |
| | | 2-255 | Manual Adjustment Built-in effect speed from slow to fast |

LightElf (WeChat Mini Program & App) User Manual

i. Software installation (WeChat mini program /Android / IOS 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 (Choose one of the following two installation methods)

1) APP Download address: <https://www.lanzouh.com/s/lightelf>

Or use WeChat to scan the QR code and choose to open the download in the default browser. There is no need to register a network disk account during the download process.



2) Log in to the Google Play Store and search for "LightElf" to install it

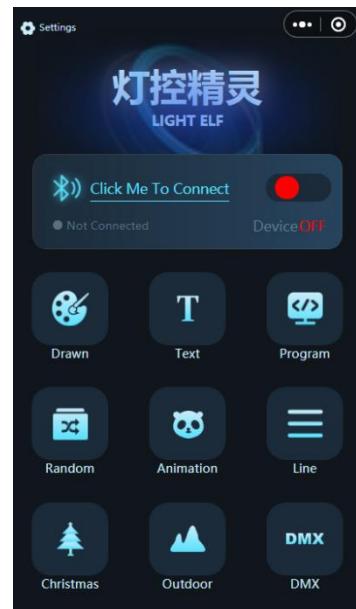


1. IOS APP

Search for LightElf in Apple's official App Store and install it.

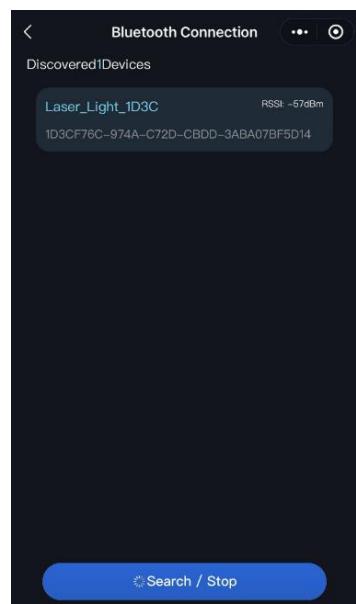


- After the software starts successfully, the main interface is as shown on the right.



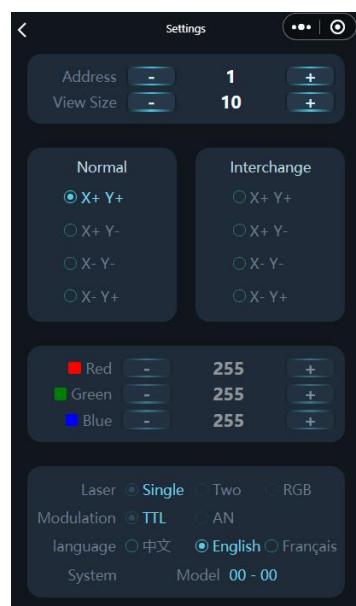
ii. Connect laser light equipment

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



iii. Software settings

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



iv.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.



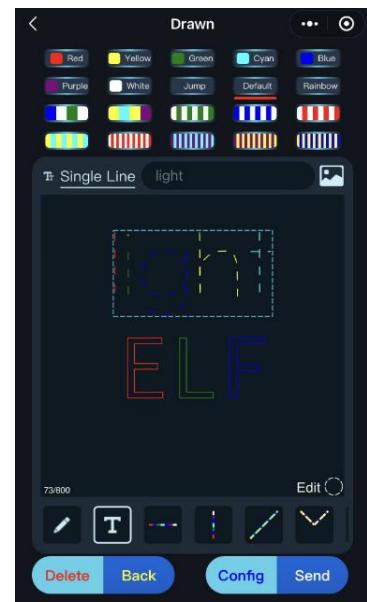
v. Introduction to hand-drawn graffiti function

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 drawing pattern function
- 2) Draw the pattern you want in the middle large screen area with your fingers
- 3) You can also click the icon to add the picture background to make the drawing easier



2. Text input

- 1) Click the icon to switch to the text input function
- 2) Enter text in the input box
- 3) Use your fingers to drag and drop in the middle of the screen
- 4) You can also select different fonts on the left side of the input box (Note: Mini Program Version
the font library is limited, some text or symbols may not be included,
if you need a more complete font library, it is recommended to select the APP version)

3. Select the built-in pattern

Sliding pattern list View all built -in patterns

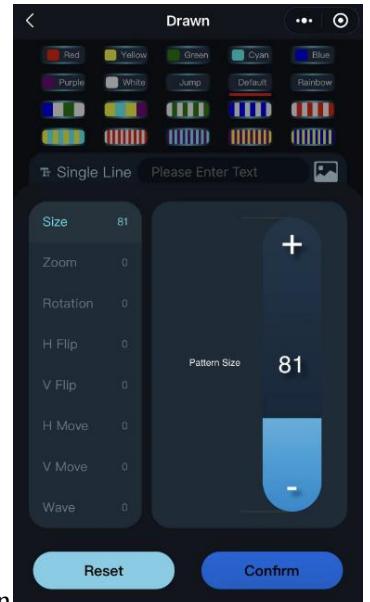
After clicking the pattern, you can drag and drop with your fingers in the middle of the screen



C. Use logo images to generate patterns



1. Click the icon , select a logo picture
2. Actable and moved pictures make the logo area display complete
3. Click the "Identification Patterns" button
4. After the picture recognition is successful, click the OK button
5. Note: The default edge mode, the edge line of the pattern of this mode;
6. In addition, the pattern skeleton extract mode; the user can switch mode by itself to achieve the best effect



D. Pattern editing



1. Select the pattern: click the editor's small circle at the bottom right of the middle area, then slide your fingers on the pattern drawn and you can choose
2. Mobile pattern: The finger moves in the middle area, and the selected pattern moves with it
3. Scaling pattern: Use two fingers to slide in the middle area, and the selected pattern will be zoomed in
4. Modify the color: click the button in the color of the above color to select the button in the area, and the selected pattern will change the color
5. Delete the pattern: When the pattern is selected, the delete button will appear at the bottom left , click to delete the pattern

bottom left , click to delete the pattern

E. Graphic operation and parameter configuration

1. Clear and retreat buttons can be cleared on the drawn patterns. After clearing, you can re-draw the pattern
2. Click the configuration button to perform the parameter configuration. The size, rotation angle, flipping, horizontal vertical motion of the graphic, the parameter of the configuration on the left side, the up and down on the right side to change the parameter value, click the OK button to save the parameters for saving the parameters to save
3. After the pattern is drawn, click the sending button to display the pattern effect on the device

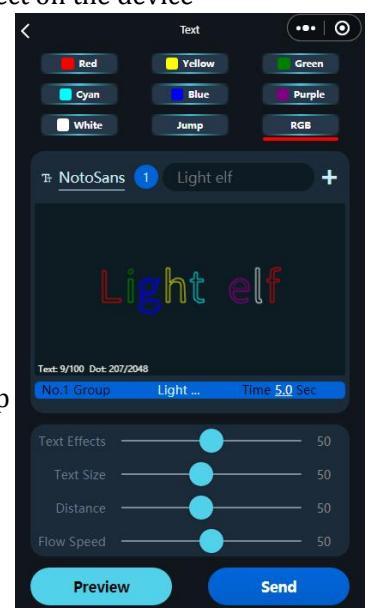
vi. Text playback function introduction

Click the text playback menu to enter in the main interface. Here you can set the text display effect. You can support up to 100 characters

A. The above part is the color selection area, click the corresponding button to select the color of the Chinese text

B. The middle part is the text setting area (as shown in the figure)

1. Click to select fonts on the left
2. In the middle of the text input box
3. The number on the left side of the text input box represents the current text group
4. Click "+" on the right side of the input box to add text grouping, support up to 4 groups
5. Click the time of the group playback time to modify the time
6. After the text input is completed, click the preview button in the



lower left corner to generate a preview in the middle of the screen Effect

7. Click the sending button to display the text effect on the device

C. There are four configuration parameters below

1. Text accuracy: regulate text display accuracy to achieve the best effect,
Some models do not support this function
2. Text size: adjustment text size can change the size of the text on the device
3. Display vision: adjust the display area size (the projection distance is long and near adjustment and use)
4. Flowing speed: The speed of adjusting the flowing speed can change the speed of the text from left to right.

vii. Personality programming

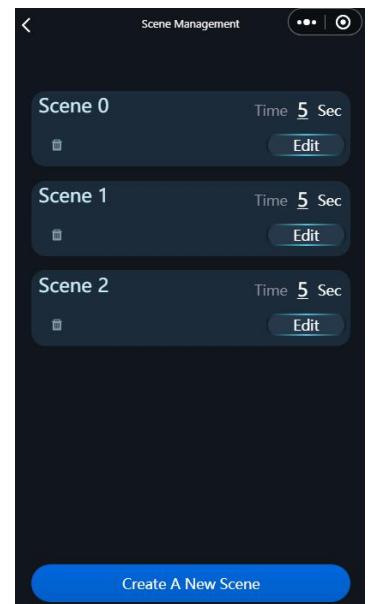
Click the personalized programming menu to enter in the main interface.

By editing the pattern of each scene, Let the laser equipment be played in order to meet your personalized needs in order to meet your personalized needs.

A maximum of 20 scene editors can be supported.

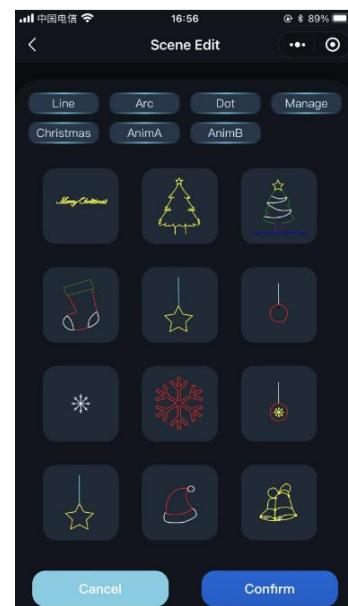
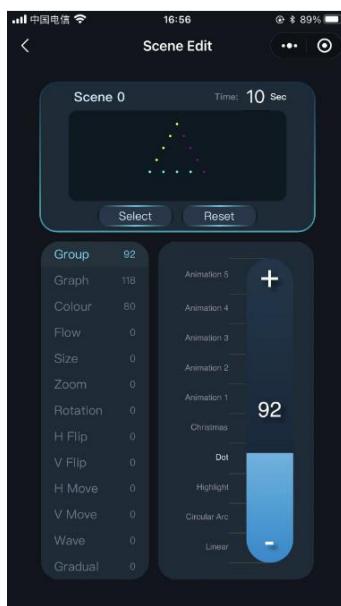
A. Scene management

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



B. Scene editing

1. Click on the top of the page to select the graphical button to pop up the selection interface of various graphics, a total of 7 groups, this includes dynamic graphics. Click a certain picture the shape can be seen in real time on the device effect. Select to complete the click OK button to save.
2. You can also select the channel parameters below to select graphic, select the picture in the channel menu on the left form group or graphic, and on the right skateboard swipe to select
3. In addition to the graphic selection, you can also set it the same display effect, just select the parameters on the left and then slide on the right skateboard.



viii. Built -in program playback

The system has built -in hundreds of light programs for you to choose from, you can play without any editors. You can play all the built -in programs or specify the program playback.

A. Random playback: All programs are randomly played

1. Click the random playback menu in the main interface to enter
2. Click the color button above to select the color of the laser
3. Play mode supports the sliding rods below the two modes of self -walking and voice control can adjust the speed and the sensitivity of the voice control

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

1. Click the corresponding program menu in the main interface to enter
2. The color and playback mode settings in the show refer to the random play page
3. Select the cycle to indicate that the 50 programs under this classification will be played in order
4. You can also check and play some of the programs, just click to play the show

