# Instruction Manual

**(Professional full-color animation laser Instructions)**

**（RGB-15W）**

**This user manual contains important information about the safe installation and use of this product. Please read and follow the instruction carefully and keep this manual in a safe place for future reference.**

**Professional stage lighting**

## Getting Started：

Thanks for choosing our product, please read and follow the instruction carefully and keep this manual in a safe place for future reference.

This high power laser projector is made of Aluminum housing, with elegant appearance, energy-saving, long lifetime, suitable for indoor use.

The product is designed and produced strictly as per CE standard, in accord with international DMX512 protocol. One product can be controlled alone or many products can be controlled together for big shows, theaters, studios, KTV, walls of the hotel etc..

## 1. Security warning:

1、When unpacking and before disposing of the carton, check if there is any transportation damage before using the product. Should there be any damage caused by transportation, consult your dealer and do not use the apparatus.

2、Do not install the product or project the beam onto inflammable surfaces. Minimum distance is 5 M.

3、The product is only intended for installation, operation and maintenance by qualified personnel.

4、Product should install in a cool place. Keep away from the wall 50cm.

5、Avoid direct exposure to the light from the lamp. The light is harmful to eyes.

6、Keep the optical system clean. Do not touch the laser reflect lens with bare hands. Do not use any alcohol liquid or any other liquid to clean the optical system. Use medicinal absorbent cotton to clean it.

7、Please do not attempt to dismantle and/or modify the product inner structure. Otherwise 1 year of warranty will get invalid.

8、Before installation, ensure that the voltage and frequency of power supply match the power requirement of the product.

9、It is essential that each product is correctly earthed and that electrical installation conforms to all relevant standards.

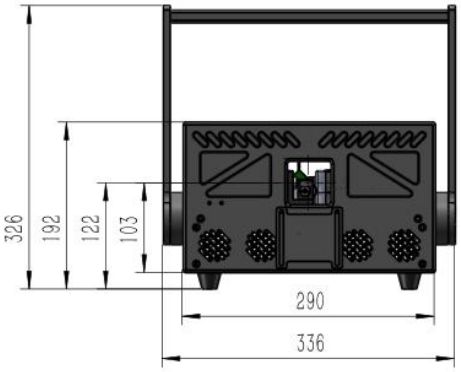
10、Make sure that the power-cord is never crimped or damaged by sharp edges. Never let the power-cord come into contact with other cables. Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord.

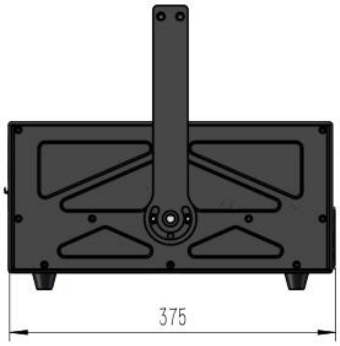
11、There is no user serviceable parts inside the product, do not open the housing and never operate the product with the cover removed.

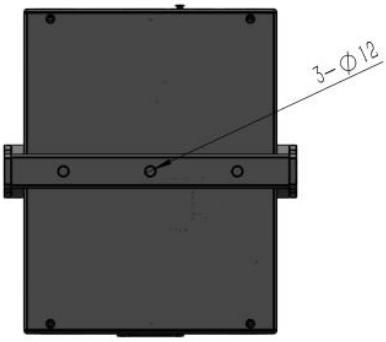
## 二、Technical parameters:

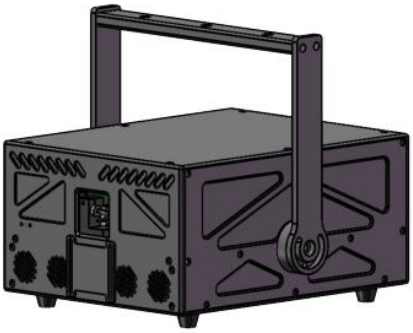
| Description | parameters |
|---|---|
| Laser power | 15W |
| Product name | RGB-15W animation laser lighting |
| Laser module red | 638nm 4W |
| Laser module green | 520nm 5W |
| Laser module blue | 445nm 6W |
| Special effect | Different patterns of colorful beam, wave and line |
| Beam size | 5*8mm |
| Connector In | ILDA、SD card、DMX、Mic |
| Connector Out | ILDA、DMX |
| Voltage & power | 220Vac,50/60Hz (±10%), 550W |
| Scanner | 40Kpps |
| Operation temperature | —20 to 40℃ |
| Net weight | 20kg |
| Product size | 375×336×192mm |
| Control mode | ILDA、SD card、Auto、DMX 512、Sound |
| Other features | Air cooling, RGB brightness adjustable individually, XY mirror image & pattern size adjustable, XY scanner system, optical components hermetically sealed, 10 Second warm-up time, low-power scanning electronic protection system, no special maintenance needed. |
| Laser Safety | keyed power switch, chain device, safety current protection for scanning failure. |

## 三、Product size display:



## Main function:

**Auto-propelled mode: Through the ILDA Lock option on the LCD display panel, click ON/OFF to start the self-propelled program.**

ILDA mode: When you use software to control the laser, connect the ILDA cable to the computer.

ILDA to RJ45: from the “ILDA Lock” option, select “on” mode, connect the signal cable.

DMX mode: connect the DMX cable to the lighting console, then ready to operate.

## 五、GS-PLAYER Instructions:


With the touch button knob and LCD menu display function, the menu operation is simple and easy to use.

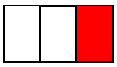
Select the desired function by pressing a button knob.

Confirm the selected function by pressing a key-click, and double-click to return to the main menu.

Link indication:

In DMX playback mode

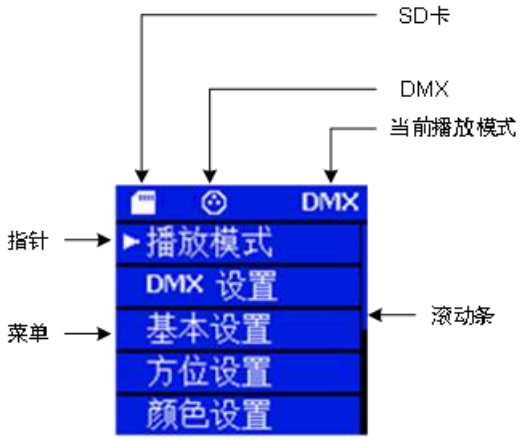
| | |
|---|---|
| Out | The DMX daughter board is not connected |
| Slow flashing | There is a daughter board, but there is no DMX signal |
| Solid on | Normal DMX communication |



Laser projector signal output

| | |
|---|---|
| Out | no output |
| Solid on | Normal output |

## 1.1 Interface Description:




## 1.2 Main Directory


ZLDA
Playback mode
ZLDA setting
Basic setting
Orientation setting
Color setting


ZLDA
Language:English
Device information
Exit the menu

| Menu items | illustrate | Default value |
|---|---|---|
| 【Playback mode】 | Select the playback mode, there are [DMX512], [ILDA], [ZLDA], [TEST] and other playback methods | |
| 【XXX Set up】 | This is the setting for the selected playback mode | |

| | | |
|---|---|---|
| 【basic setting】 | Basic settings of the system | |
| 【Orientation setting】 | Orientation parameter setting | |
| 【Color settings】 | The setting of the color parameters | |
| 【language】 | 【Chinese】Chinese Simplified Chinese<br>English | 【Chinese】 |
| 【Device information】 | Information such as the version of the device | |
| 【Exit the menu】 | Save the settings and turn off the backlight | |

## 1.3 Playback mode selection


Playback mode
DMX512√
ILDA PLAY ×
ZLDA PLAY ×
TEST PLAY ×
exit

| Menu items | illustrate | Default value |
|---|---|---|
| 【DMX512】 | In DMX512 control mode, the program data comes from the TF card, corresponding to the ZLDA format file in the dmx directory. | × |
| 【ILDA play】 | ILDA playback, the program data comes from the ILDA format file in the ilda directory in the TF card. | × |
| 【ZLDA play】 | ZLDA playback, the program data comes from the ZLDA format file in the zlda directory in the TF card. | × |
| 【TEST play】 | TEST, the program data comes from the ZLDA format file in the test directory in the TF card. | × |
| 【exit】 | Exit the current menu and return to the previous menu. | |

## 1.4 DMX setting


DMX setting
Start address 1
Timeout period 3
Manner V3
exit

| Menu items | illustrate | Default value |
|---|---|---|
| 【Start address】 | The address from which the DMX data starts is 1~500. | 1 |

| | | |
|---|---|---|
| 【Timeout period】 | Unit: seconds, if no DMX message is received within this time, the DMX connection is considered disconnected, and the output is turned off. | 3 |
| 【manner】 | [V3] Compatible with FB3 format control commands.<br>【CH26】26-channel format control command.<br>[V4] Compatible with FB4 format control commands. | V3 |
| 【exit】 | Exit the current menu and return to the previous menu. | |

## 1.5 ILDA setting


ILDA setting

Playback Mode Single

The current file 001

End Method Loop

exit

| Menu items | illustrate | Default value |
|---|---|---|
| 【Playback mode】 | Single indicates that only a single file is played, corresponding to the ILDA format file in the ildacue directory.<br>[List] indicates a playlist file, corresponding to an ILDA format file in the ildalist001~999 directory. | Single |
| 【The current file】 | The first few files currently played, from 001~999.<br>If you select [Single] for playback mode, it means 001.ild~999.ild in the ildacue directory<br>If you select [List] for playback mode, it indicates the files in the 001~999 directory in the ildalist directory | 001 |
| 【How to end】 | 【Loop】After the program is played to the end, it starts from the beginning.<br>[Off] After the program is played to the end, turn off the laser output. | loop |
| 【exit】 | Exit the current menu and return to the previous menu | |

## 1.6 ZLDA Set up


ZLDA setting

Playback Mode Single

The current file 001

End Method Loop

exit

| Menu items | illustrate | Default |
|---|---|---|

| | | value |
|---|---|---|
| 【Playback mode】 | [Single] indicates that only a single file is played, corresponding to the ZLDA format file in the ildacue directory.<br>[List] indicates a playlist file, which corresponds to a ZLDA file in the ildalist001~999 directory. | Single |
| 【The current file】 | The first few files currently played, from 001~999.<br>If the playback mode is selected as Single, it means 001.zld~999.zld in the zldacue directory<br>If you select [List] for playback mode, it indicates the files in the 001~999 directory in the zldalist directory | 001 |
| 【How to end】 | 【Loop】After the program is played to the end, it starts from the beginning.<br>[Off] After the program is played to the end, turn off the laser output. | loop |
| 【exit】 | Exit the current menu and return to the previous menu | |

## 1.7 TEST set up


TEST Set up
→output ×
The current file 001
Brightness 100
Overall dimensions 50
exit

| Menu items | illustrate | Default value |
|---|---|---|
| 【output】 | Turn the laser's output on and off | × |
| 【The current file】 | The first few files currently played, from 001~999. Corresponding to 001.zld~999.zld in the test directory | 001 |
| 【Overall dimensions】 | 0~100% | 50 |
| 【brightness】 | 0~100% | 100 |
| 【exit】 | Exit the current menu and return to the previous menu | |

## 1.8 Basic Settings

Basic setting
→Sending second rate 20
Color shift 3
Replay time 999
Frames per second 10
Playtime 2



Basic setting
→Language Chinese
Screen-off time 60
exit

| Menu items | illustrate | Default value |
|---|---|---|
| 【Scan rate】 | The number of points per second output of the laser, in K, the range is 5~40K | 20 |
| 【Color displacement】 | The number of points of the color lag coordinates, unit points, range 0~15 | 0 |
| 【Replay time】 | After the playback source is disconnected, the maintenance time before the program is closed, in milliseconds, in the range of 100~999ms | 999 |
| 【Playtime】 | The minimum playing time of each program, in seconds, is 1~20s | 2 |
| 【Screen-off time】 | After the interface is not operated, the screen off time, unit second, range 5~60s, 60s means that the screen is always on | 30 |
| 【Animation mode】 | 1 - Play by Click, 2 - Play by Frame | 1 |
| 【Animation speed】 | Select Play by Dot, the parameter is valid. 1 is full speed, 2 is 1/2 speed, and 3 is 1/3 speed | 1 |
| 【Frames per second】 | Select Playback by Frame, this parameter is valid. The number of frames of the program played per second, the unit frame, the range is 1~40 | 10 |
| 【exit】 | Exit the current menu and return to the previous menu | |

## 1.9 Orientation settings


Orientation settings
→Overall dimensions 50
X size 100
Y size 100
X shear 0
Y shear 0


Orientation settings
→Z angle 0
X position 0
Y position 0
X reversed ×
Y reversed ×

Orientation settings
→X Y exchange ×
exit


| Menu items | illustrate | Default value |
|---|---|---|
| 【Overall dimensions】 | 0~100% | 50 |
| 【X size】 | 0~100% | 100 |
| 【Y size】 | 0~100% | 100 |
| 【X shear 】 | -100~100% | 0 |
| 【Y shear】 | -100~100% | 0 |
| 【Z angle】 | 0~359 | 0 |
| 【X position】 | -100~100% | 0 |
| 【Y position】 | -100~100% | 0 |
| 【X reversed】 | 0\|1 | × |
| 【Y reverses】 | 0\|1 | × |
| 【Swap XY】 | 0\|1 | × |
| 【exit】 | Exit the current menu and return to the previous menu | |

## 1.10 颜色设置

Color setting
→brightness 100
Red 100
Green 100
Blue 100
starting point 0

Color setting
→End point 100
exit



| Menu items | illustrate | Default value |
|---|---|---|
| 【brightness】 | 0~100% | 100 |

| | | |
|---|---|---|
| 【red】 | 0~100% | 100 |
| 【green】 | 0~100% | 100 |
| 【blue】 | 0~100% | 100 |
| 【starting point】 | 0~100% | 0 |
| 【End point】 | 0~100% | 100 |
| 【exit】 | Exit the current menu and return to the previous menu | |

## 1.11 Device Information


Exit the menu

→Serial number 10000

Firmware version 2.09

Date(YM) 22.05

upgrade

Exit

| Menu items | illustrate | Default value |
|---|---|---|
| 【Firmware version】 | X.XX indicates the major version number. The subversion number | —— |
| 【Date(YM)】 | XX.XX indicates the month and year of the firmware | —— |
| 【Reset the parameters】 | Parameters are factory reset | |
| 【upgrade】 | button and click Upgrade Firmware | |
| 【exit】 | Exit the current menu and return to the previous menu | |

## 2.1 V3 version

The layout in the 16 channels is as follows (base 255):

| passage | value | | description | | width |
|---|---|---|---|---|---|
| 1 | 0-255 | DMX mode | 0-31 | Turn off the light | 8 Bit |
| | | | 33-95 | The first 4 channels | |
| | | | 97-159 | The first 8 channels | |
| | | | 161-232 | The first 12 channels | |
| | | | 225-255 | The first 16 channels | |

| | | | | | |
|---|---|---|---|---|---|
| 2 | 0-255 | Page index<br>(9 pages in total) | 0-15<br>17-31<br>33-47<br>49-63<br>65-79<br>81-95<br>97-111<br>113-127<br>129-255 | page 1<br>page 2<br>page 3<br>page 4<br>page 5<br>page 6<br>page 7<br>page 8<br>page 9 | 8 Bit |
| 3 | 0-255 | Program Index<br>(48 shows in total) | 0-32<br>33-35<br>37-39<br>.. - ..<br>221-223<br>225-255 | Turn off the light<br>program 1<br>program 2<br>..<br>program 48<br>—— | 8 Bit |
| 4 | 0-255 | velocity | 0-15<br>17-31<br>33-255 | Default speed<br>Time out<br>25% ~ 200% | 8 Bit |
| 5 | 0-255 | brightness | 0% ~ 100% | | 8 Bit |
| 6 | 0-255 | size | 0% ~ 100% | | 8 Bit |
| 7 | 0-255 | X size | -100% ~ 100% | | 8 Bit |
| 8 | 0-255 | Y size | -100% ~ 100% | | 8 Bit |
| | | | | | |
| 9 | 0-255 | Z angle | 0~360 degrees | | 8 Bit |
| 10 | 0-255 | X location | 0 = left, 128 = middle, 255 = right | | 8 Bit |
| 11 | 0-255 | Y location | 0 = Top, 128 = Medium, 255 = Bottom | | 8 Bit |
| 12 | 0-255 | Visible points | 0 ~ 100% | | 8 Bit |
| 13 | 0-255 | Scan rate | 0-31<br>33-223<br>225-255 | Default scan rate<br>6K ~ 29K<br>30K | 8 Bit |
| 14 | 0-255 | retain | | | 8 Bit |
| 15 | 0-255 | Color table | 0-31<br>33-223<br>225-255 | Original colors<br>Color table<br>white | 8 Bit |
| 16 | 0-255 | retain | Reserved | | 8 Bit |

## 2.2 V4 version

The 39-channel mode is shown below;

1. Place the GS888 in "Setup Mode". (Note that there is a two-second delay before initializing Setup Mode). Now limit the area where the laser may be projected.

2. Place the GS888 in "Play Mode". Perform actual performance performance and have the ability to broadcast programs.

During Setup Mode, channels 14 to 39 will ignore DMX/ART-NET changes.

During "playback mode", channels 2 to 13 will ignore DMX/ART-NET changes.

(base 255)

| passage | value | description | width |
|---|---|---|---|
| 1 | 0-255 Playback mode | 0-150 Turn off the light<br>150-190 Set the mode<br>200-240 Playback mode<br>240-255 Turn off the light | 8 Bit |
| 2 | 0-255 Maximum brightness | Define the maximum brightness to use in playback mode (0 ~ 100%) | 8 Bit |
| 3 | 0--255 Test the graph | (1 = Test Program 1, 255 = Test Program 255) | 8 Bit |
| 4,5 | 0-65535 X size | Define the maximum width to be used in playback mode (-100 ~ 100%, 0 = 32768) | 16 Bit |
| 6,7 | 0-65535 Y size | Define the maximum height to be used in playback mode (-100 ~ 100%, 0 = 32768) | 16 Bit |
| 8,9 | 0-65535 X position | Define the horizontal position in playback mode (-100 ~ 100%, 0 = 32768) | 16 Bit |
| 10,11 | 0-65535 Y position | Define the vertical position in playback mode (-100 ~ 100%, 0 = 32768) | 16 Bit |
| 12,13 | 0-65535 Z rotation angle | Define the rotation angle in playback mode (0~ 360°) | 16 Bit |
| 14 | 0-255 Page index | Page index, 1 = page 1, 255 = page 255 | 8 Bit |
| 15 | 0-255 Program Index | Program Index, (1 = 1st program, 255 = 255th program) | 8 Bit |
| 16 | 0-255 Playback speed | (0 = Original Speed, 1 – 255 = 1% ~ 255%) | 8 Bit |
| 17 | 0-255 brightness | (0 ~ 100%) | 8 Bit |
| 18,19 | 0-65535 size | (0 ~ 100%) | 16 Bit |
| 20,21 | 0-65535 X size | (-100 ~ 100%, 0 = 32768) | 16 Bit |
| 22,23 | 0-65535 Y size | (-100 ~ 100%, 0 = 32768) | 16 Bit |
| 24,25 | 0-65535 Z angle | Rotation Angle(0~ 360°) | 16 Bit |
| 26,27 | 0-65535 Z rotation | Rotation speed -60 ~ 60 Rpm ( 0 = original position, 1 ~ 32767 = -100% ~ -1% speed, 32768 = save stationary without rotation, 32769 ~ 65535 = 1% ~ 100% speed) | |
| 28,29 | 0-65535 X position | (-100 ~ 100%, 0 = 32768) | 16 Bit |
| 30,31 | 0-65535 Y position | (-100 ~ 100%, 0 = 32768) | 16 Bit |
| 32 | 0-255 Scan rate | (5k ~ 30K) | 8 Bit |
| 33 | 0-255 Red light brightness | (0 ~ 100%) | 8 Bit |
| 34 | 0-255 Green light brightness | (0 ~ 100%) | 8 Bit |
| 35 | 0-255 Blue light brightness | (0 ~ 100%) | 8 Bit |
| 36 | 0-255 RGB color change | (0 = Original Color, 1-255 = 0 ~ 100% Color Change) | 8 Bit |
| 37 | 0-255 Start showing the dots | (0 ~ 100%) | 8 Bit |

| | | | |
|---|---|---|---|
| 38 | 0-255 End the display point | (0 ~ 100%) | 8 Bit |
| 39 | 0-255 Strobe | 0 = Strobe off<br>1-255 = 1 to 20 Hz | 8 Bit |

## 2.3 26 Channel version (255)

| passage | value | description | width |
|---|---|---|---|
| 1 | 0-255 Page index | page index,<br>0~3 Turn off the light<br>4~7 Page 1<br>8~11 Page 2<br>12~15 Page 3<br>……<br>252~255 page 63 | 8 Bit |
| 2 | 0-255 Program Index | 0~3 Program Index<br>4~7 Program 1<br>8~11 Program 2<br>12~15 Program 3<br>……<br>252~255 63 program | 8 Bit |
| 3 | 0-255 Playback speed | (0 = 原始速度, 1 – 255 = 1% ~ 255%) | 8 Bit |
| 4 | 0-255 brightness | (0 ~ 100%) | 8 Bit |
| 5,6 | 0-65535 size | (0 ~ 100%) | 16 Bit |
| 7,8 | 0-65535 X size | (-100 ~ 100%, 0 = 32768) | 16 Bit |
| 9,10 | 0-65535 Y size | (-100 ~ 100%, 0 = 32768) | 16 Bit |
| 11,12 | 0-65535 Z-angle | Rotation Angle(0~ 360°) | 16 Bit |
| 13,14 | 0-65535 Z rotation | Rotation speed -60 ~ 60 Rpm ( 0 = original position, 1 ~ 32767 = -100% ~ -1% speed, 32768 = save stationary without rotation, 32769 ~ 65535 = 1% ~ 100% speed) | |
| 15,16 | 0-65535 X position | (-100 ~ 100%, 0 = 32768) | 16 Bit |
| 17,18 | 0-65535 Y position | (-100 ~ 100%, 0 = 32768) | 16 Bit |
| 19 | 0-255 Scan rate | (5k ~ 30K) | 8 Bit |
| 20 | 0-255 Red light brightness | (0 ~ 100%) | 8 Bit |
| 21 | 0-255 Green light brightness | (0 ~ 100%) | 8 Bit |
| 22 | 0-255 Blue light brightness | (0 ~ 100%) | 8 Bit |
| 23 | 0-255 RGB color change | (0 = Original Color, 1-255 = 0 ~ 100% Color Change) | 8 Bit |
| 24 | 0-255 Start showing the dots | (0 ~ 100%) | 8 Bit |
| 25 | 0-255 End the display point | (0 ~ 100%) | 8 Bit |
| 26 | 0-255 Strobe | 0 = Strobe off<br>1-255 = 1 to 20 Hz | 8 Bit |

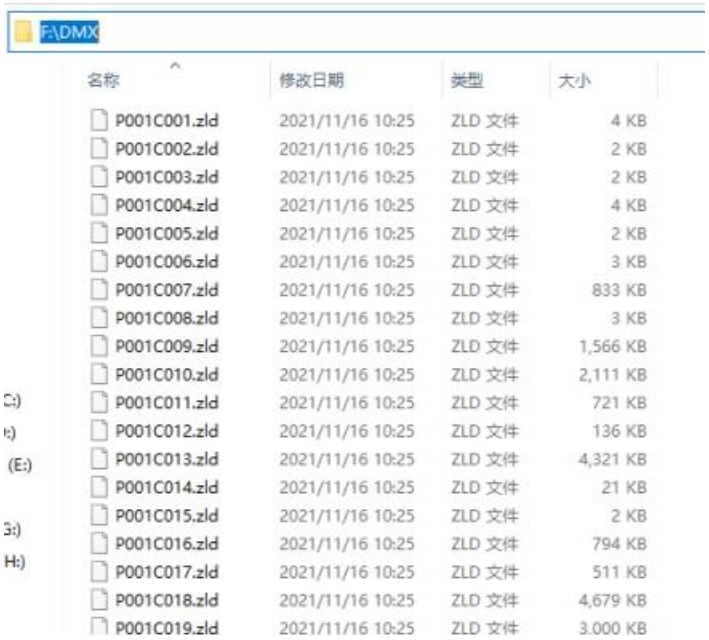
## 3.1 DMX File structure

DMX plays files in the DMX directory, and the file name range is P001C001.zld~P255C255.zld. P stands for Page and C stands for Cue.

In the 16-channel command of DMX, the Page index and Cue Index correspond to P001C001.zld~P009C048.zld, and a total of 9*48=432 files are supported.

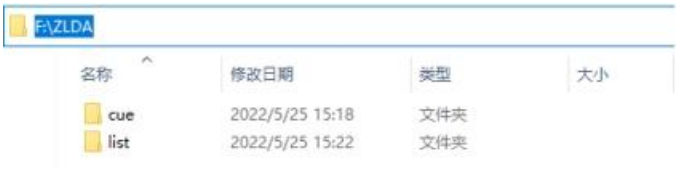
In the 39-channel command of DMX, Pages and Cues correspond to P001C001.zld~P255C255.zld, which supports a total of 255*255=65025 files.

In DMX playback, if you can't find the files corresponding to Pages and Cues, turn off the laser output.



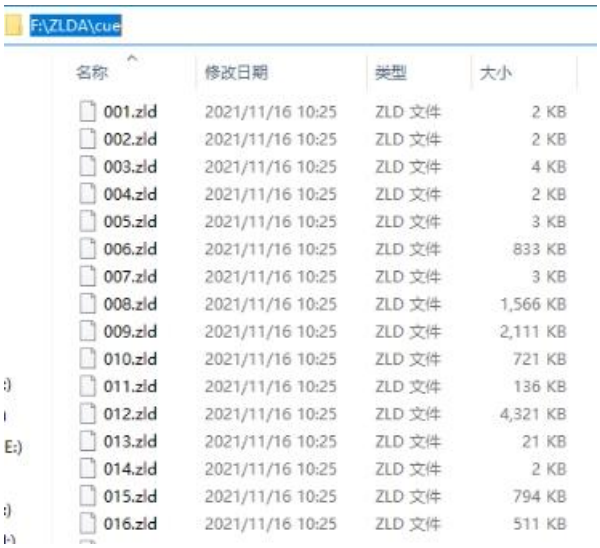

## 3.2 ZLDA File structure

There are two types of ZLDA playback, one is [Single] and the other is [List]. Corresponding to the zldacue and zldalist directories, respectively.



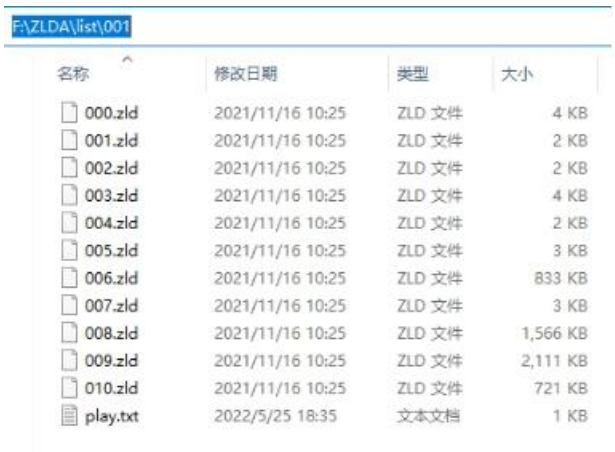

### 1. Single playback mode

In the zldacue directory, the file name range is 001.zld~999.zld, and the file name corresponds to [Current File] in the menu, a total of 999 files are supported. In ZLDA single mode playback, if the corresponding file cannot be found, the laser output is turned off.




## 1. List playback mode

In the zldalist directory, you can build a total of 999 directories of 001~999, each directory is used as a list, and the corresponding file name corresponds to the selection of [current file] in the menu. In the zldalist001 directory, the file name ranges 001.zld~999.zld. A play.txt file is also required to indicate the order of playback.




The content of play.txt is as shown below, and the number and order of files can be customized. Files can also be reused. Each file name is required to occupy one line, and there can be no other content except for the 001~999 file name.

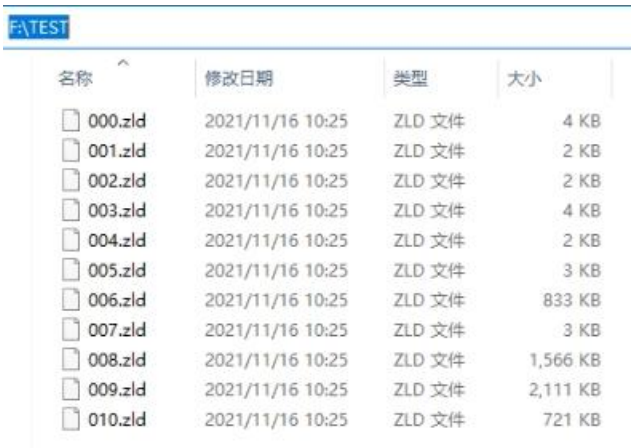
In ZLDA list mode playback, if the corresponding file cannot be found, the laser output is turned off.


## 3.3 ILDA File structure

It's similar to ZLDA playback, but in *.ild file format.

## 3.4 TEST File structure

In the test directory, the file name range is 001.zld~999.zld, and the file name corresponds to [current file] in the menu, a total of 999 files are supported. You can put some files that are only used for testing in the change directory, and if you can't find the corresponding file in TEST mode, turn off the laser output.



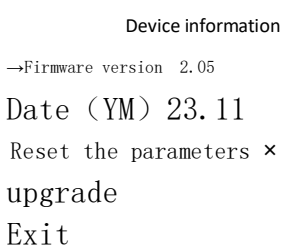

## 4.1 Upgrade with TF card

1. Prepare the documents

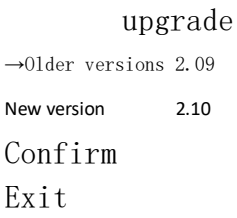
Put the upgrade file into the root directory of the TF card, the file name is ZQS05******.zqb, the file name prefix "ZQS05" and the extension ".zqb" are required, otherwise the device will not recognize it.


## 2. Upgrade your device

Insert the TF card, start the device, in the device information menu, find the upgrade, click to enter the upgrade interface, if the firmware is invalid, you cannot enter the upgrade interface.
Please carefully confirm the version information before upgrading, click OK to confirm the final upgrade, and do not power off during the upgrade process, if it happens, the firmware will be lost.






## 六、Safety instructions

**For safety reasons, please follow the instructions below:**

- Do not disassemble or alter the unit.
- Do not drop flammable liquids, water and metals into the machine.

**Avoid using the machine in the following situations：**

- The relative humidity is too high.
- Concussive or collision environments.
- The room temperature is above 40 degrees Celsius and the room temperature is below 0 degrees Celsius.

caution：

- If you encounter serious difficulties in use, please stop using it immediately and contact the agent or manufacturer for inspection.
- Never disassemble the unit, there are no repair parts inside.
- Please ask for an inspection by a person who meets the specifications.