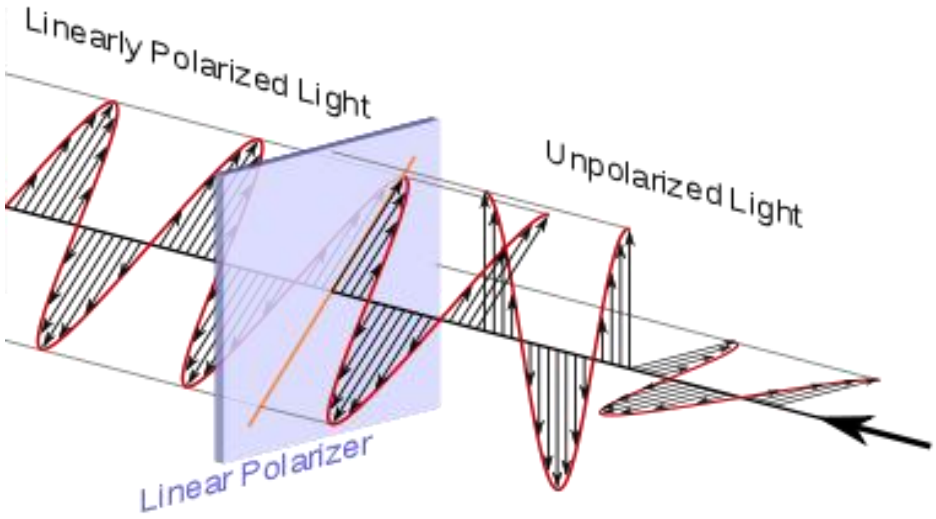
3D Polarization Modulator

YT-PS600C

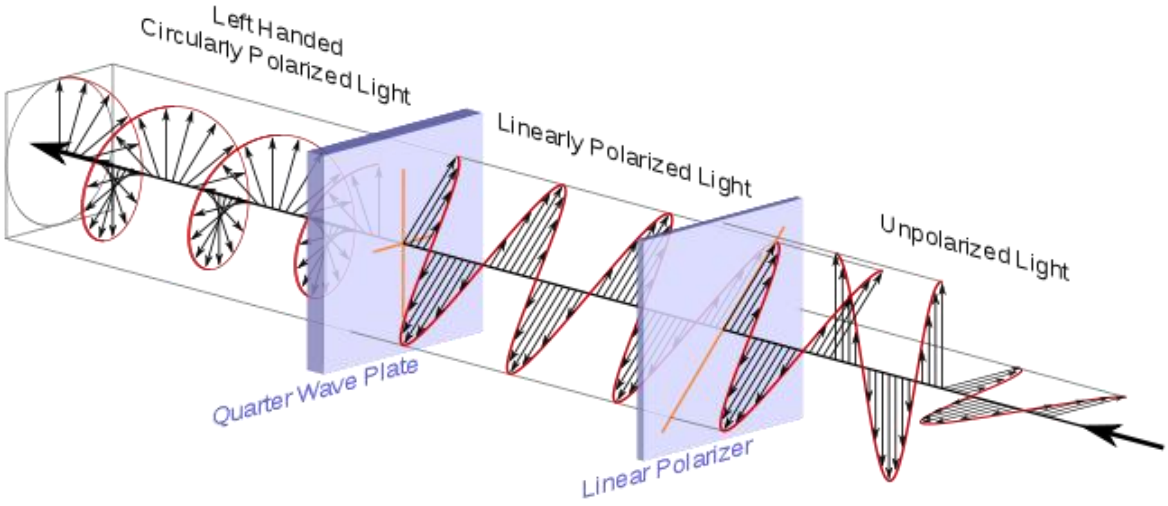
for DLP digital cinema

Basic principles

Illustrated linearly polarized light: Multiple directions of light (right). After pass through a linear polarizer, leaving only the light in the same direction as the polarizer polarities (left).



Illustrated circularly polarized light: Lights in multiple vibration directions (right) pass through a linear polarizer and become linearly polarized light (middle), and then pass through the waveplate to become circularly polarized light (left).



Learn more(video).....

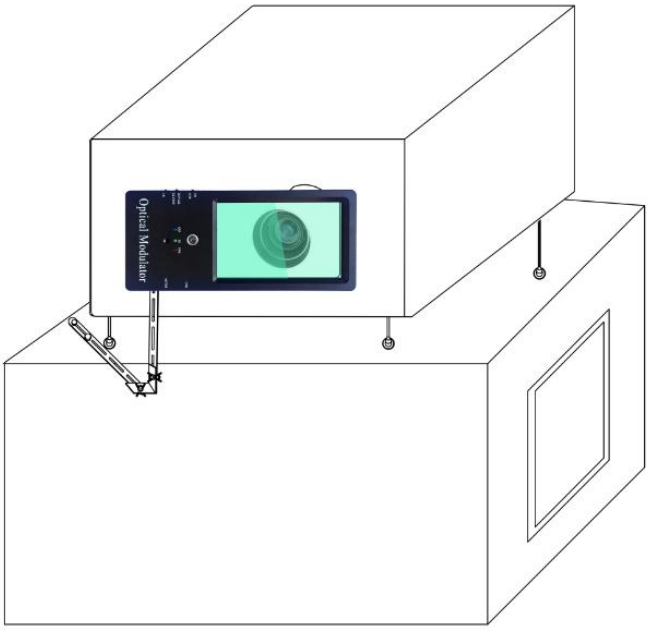
YANTOK YT-PS600C is a professional single-projector passive circular polarized 3D modulation device independently developed by yantuo electronics. As a high-brightness dedicated 3D solution for large commercial and engineering scenarios, this model supports projectors with an ultra-high brightness of up to 50,000 lumens, making it specially designed for projectors above 10,000 lumens, such as professional digital cinema projectors and large-scale engineering projectors.

Built with national patented optical technology and industrial-grade manufacturing standards, YT-PS600C features a CNC-machined aluminum alloy shell with laser engraving, which ensures excellent heat dissipation, high structural strength, and long-term durability. It adopts imported high-transmittance and ultra-fast-response polarization filters, paired with high-stability electronic components, to deliver ultra-low ghosting, high contrast, and immersive cinema-grade 3D images even under extreme brightness conditions.

The 3D modulator supports wired synchronization, with automatic 3D signal detection and intelligent 2D/3D switching that requires no remote control or manual operation. Its built-in high-precision spatial positioning sensor ensures accurate and stable 2D/3D spatial alignment for perfect image performance.

The fully sealed, fan-free structure prevents dust contamination, effectively avoiding brightness attenuation and mechanical failures, making it highly reliable for continuous long-term operation in high-temperature and high-brightness working environments. Installation is extremely simple and can be completed within 3 minutes, powered directly by the projector with no need for an external power supply.

YT-PS600C is widely applied in professional digital cinemas, large-scale 3D projection engineering projects, large exhibition halls, science museums, immersive theaters, and high-end commercial projection systems.


Optical Modulator


COM
MOTOR
PWR
3D
EXP
CW
CCW
DLP-Link
EX-SYNC
L/R
Optical Modulator

✅ **National Patent Technology**
YT-PS600C uses patented optical and control technology with independent intellectual property rights, ensuring stable and professional 3D modulation performance for high-power projection systems.

✅ **Supports Up to 50,000 Lumens Projectors**
This professional high-brightness version is specially designed for projectors above 10,000 lumens, making it the ideal 3D solution for digital cinemas and large-scale 3D engineering projects.

✅ **Industrial-Grade CNC Aluminum Alloy Shell**
The durable metal shell provides excellent heat dissipation, anti-collision performance, and stylish appearance, suitable for long-term heavy-duty use in commercial and engineering environments.

✅ **Imported High-End Optical Components**
Equipped with imported high-transmittance and ultra-fast-response polarization filters, ensuring sharp, clear, low-crosstalk 3D images even under ultra-high projector brightness.

✅ **Auto 2D/3D Switching**
It automatically detects 3D signals and switches between 2D and 3D modes without manual operation.

✅ **Fan-Free & Fully Sealed Dust-Proof Structure**
No fan, no noise, and fully sealed optical system to prevent dust, extend service life, and maintain stable light output for years.

✅ **3-Minute Quick Installation & Projector-Powered**
Super easy installation without complicated wiring. Powered directly by the projector, greatly simplifying deployment and maintenance.

✅ **Single-Projector RealD Circular Polarized 3D**
Achieves professional cinema-grade RealD 3D effect using only one projector, greatly reducing equipment investment and operation costs.

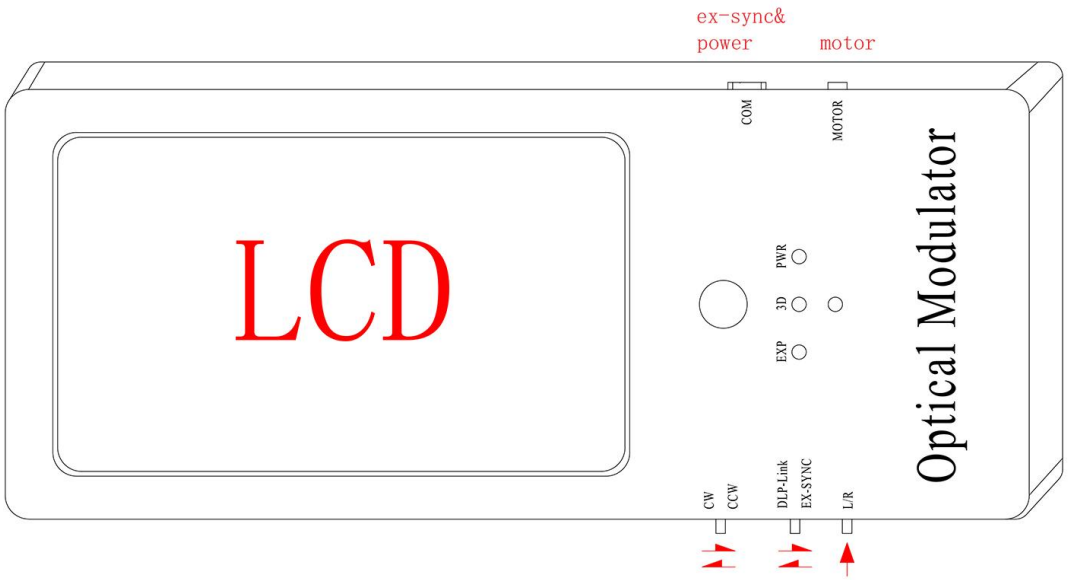
✅ **Ultra-Low-Cost 3D Glasses**
Compatible with universal low-cost passive circular polarized 3D glasses, making later use and replacement highly economical for large venues.

✅ **Stable Performance for Long-Term Operation**
Designed for continuous 24/7 operation, with strong resistance to high temperature and high load, perfect for commercial cinemas and large engineering projects.

Technical Specifications

1.Model:YT-PS600C;
2.Host material:Aluminium alloy;
3.Size of 3D filter:130mm x 80mm (opening area);
4.Light transmittance:41%±1.5% ;
5.Optical efficiency:17%±1.5% ;
6.Ghost rate： <0.5% ;
7.Principles of Optics：Circular polarizer;
8.Response speed of 3D filter：<150us;
9.Frame rate：80-600HZ ;
10.Maximum Screen Size：25m width;
11.Screen gain coefficient:2.0-3.0 (recommended 2.4);
12.Required screen polarization contrast ratio:>150:1;
13.exchange between 2D and 3D: automatic(Cinema TMS);
14. Support the largest brightness: <50000Lm;
15.Support projector: NEC/Bacro/Christie/DLP Engineering projector ect;
16.Sync port of projector:DB15/DB37/BNC;
17.Weight:2KG;
18.Outline Dimension:39CMX28CMX7CM;
19.Operating Temperature: 0-60 degree C.

Host interface and key description



Key function description:

A. CW/CCW is a toggle switch, which determines the 3D position relative direction of the host (Horizontal). When the English letter side faces you and the 3D indicator is bright (3D state), when the switch dials to CCW, the LCD will turn to your left hand side (Figure 1); when the switch dials to CW, the LCD will turn to your right hand side (Figure 2).

B. DLP-LINK/EX-SYNC is a toggle switch, which determines path selection for obtaining 3D signal source of the host. When the switch dials to DLP-LINK, the 3D signal comes from the wireless receiving mode (The projector needs a DLP-LINK function); when the switch dials to EX-SYNC, the 3D signal comes from the COM interface on the host.

C. L/R is a multi-function button. This key is short to switch the left and right eye signals; quickly press button for the three times to switch the host's 2D position relative direction. When the English letter side faces you and the 3D indicates is not bright(2D state), If the LCD is above the host (Figure 3), the LCD will turn below the host (Figure 4) after quickly press button for the three times. whenever you press three buttons quickly,the host will reverse between up and down for one time.

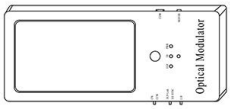


Figure1

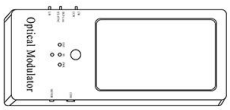


Figure2

Figure3

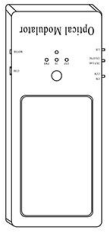


Figure4

Initialize the host rotation direction and position

Please strictly follow the steps below:

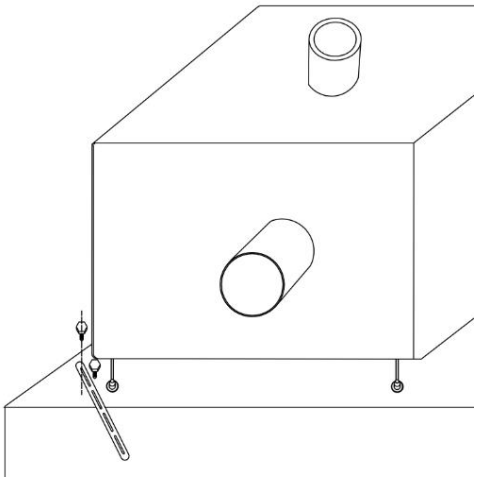
***step1**. Remove the main unit from the motor and place it on a **level** table. Make sure the side with "Optical Modulator" faces the ceiling.*

***Step2**. Power the host, the red power indicator light is on (See Figure below).*

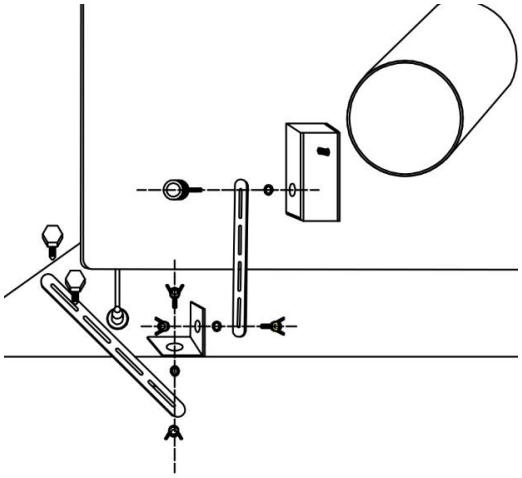
***Step3**. Press and hold the L/R button and wait until about 8 seconds, and immediately release the button (In this operation process, please ensure that the host does not move!!!), the blue and green LED indicators will flash one time, it will prove the host It has been configured. If the blue and green LEDs are not flashing, please wait for about 3 to 5 seconds,and then follow the third step again.*

Host placement Figure

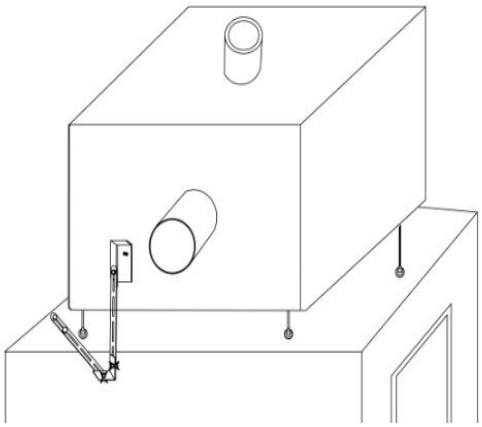
YT-PS600C installation example



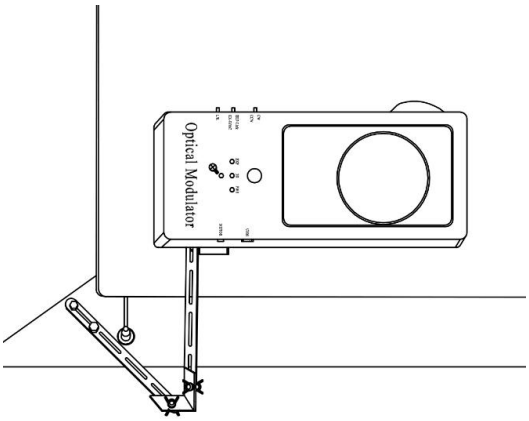
1.Use an electric drill with an M8 sleeve to lock the drill screw into the iron sheet and fix it;



2.Lock all the fittings as shown in the figure, then go to 3rd step;



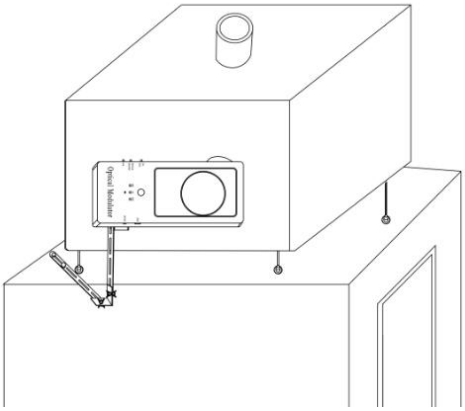
3.Locked effect;

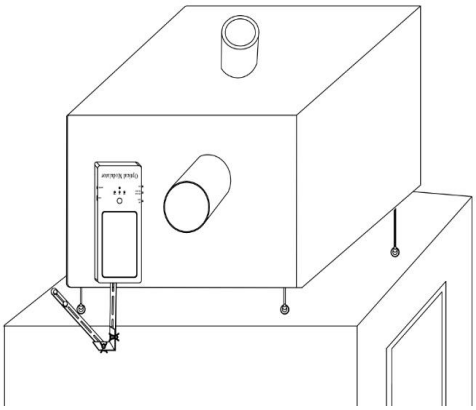


4.Use M3 screws to lock the Host onto the motor shaft;

【Notice!】

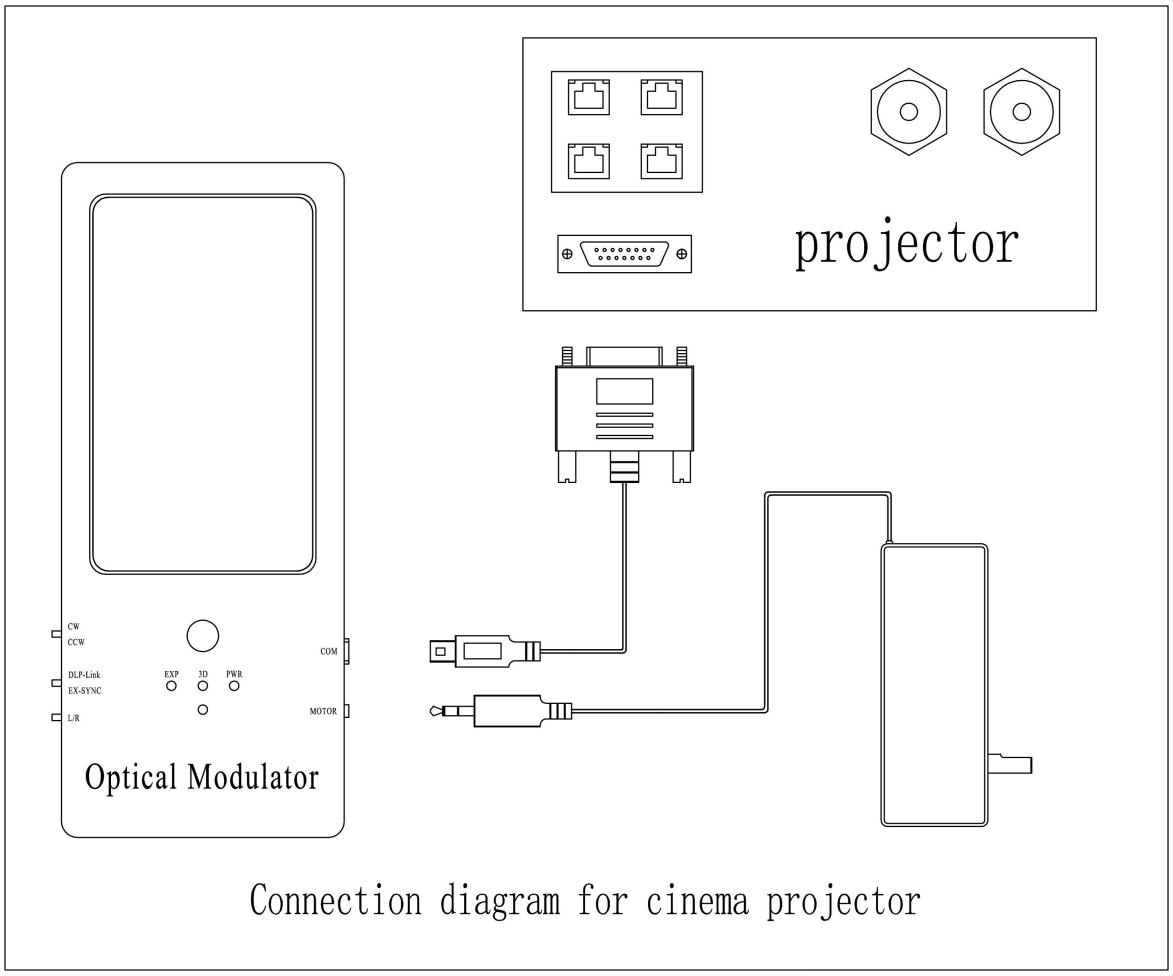
In the 3rd step, when the shaft of the motor is inserted into the corresponding hole position of the host, be sure to gently insert the corresponding gap on the host. Do not use too much power (insert depth is only 8 millimeters, do not be inserted through the host box!) In order to avoid damage to the host!



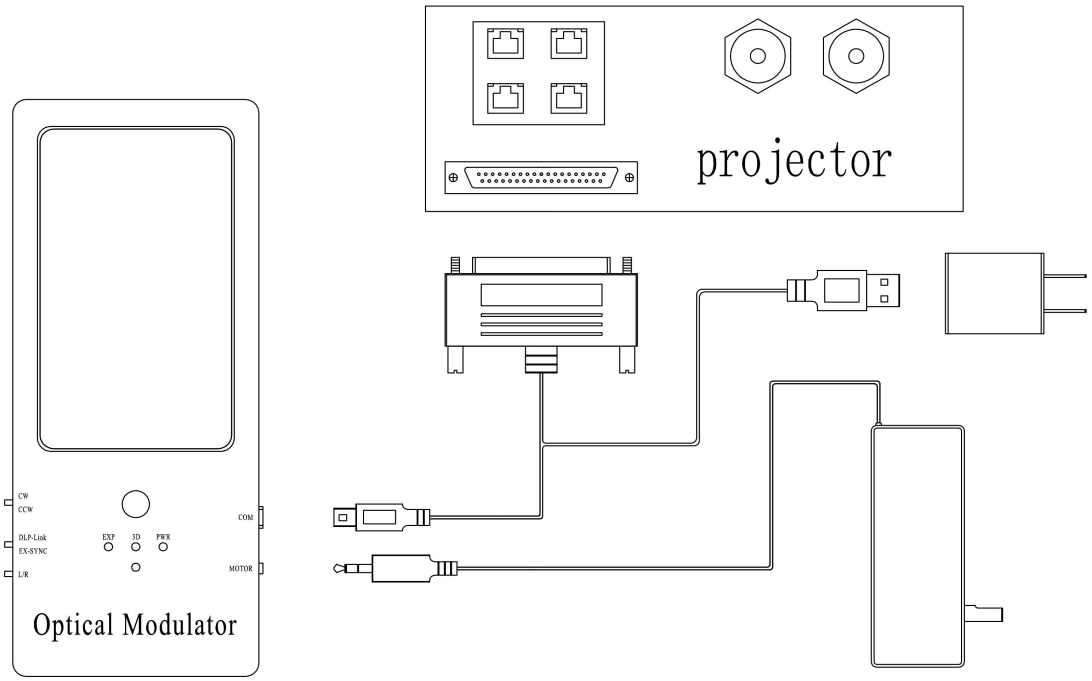


5. Lock all component effects (3D status position); 6. 2D status position.

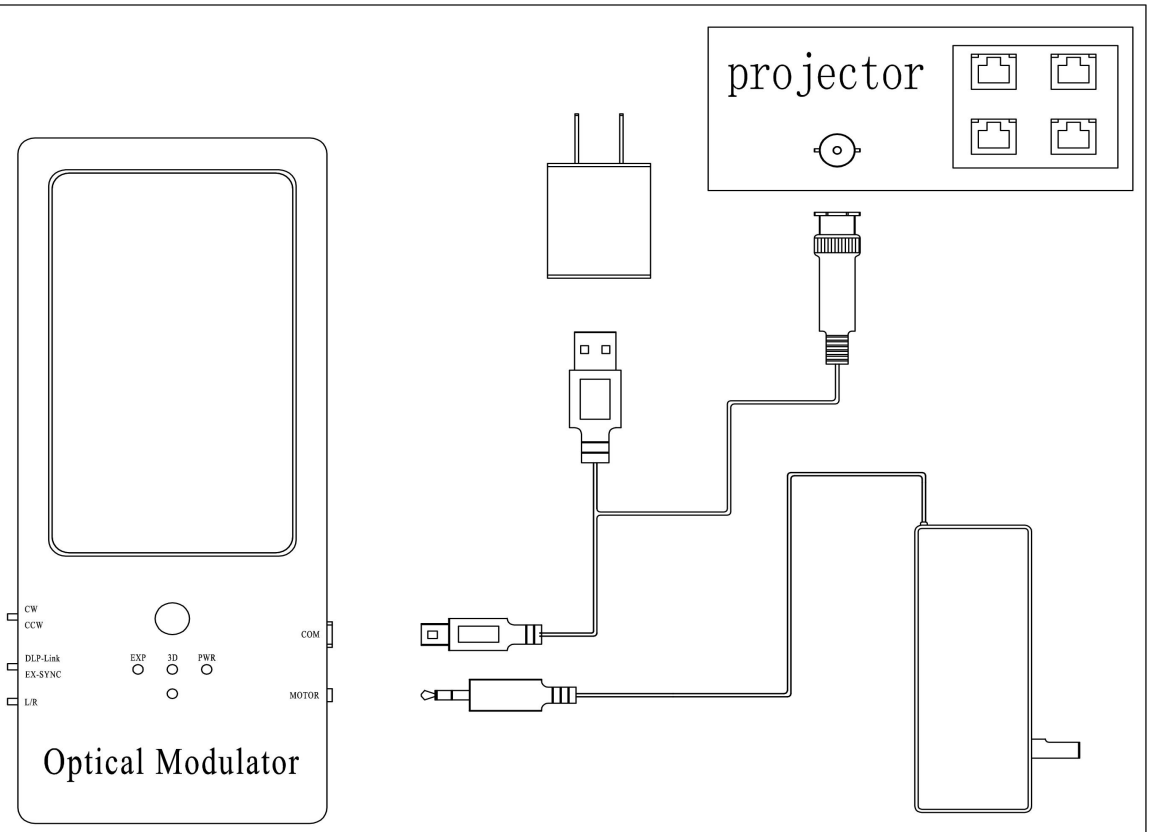
Product connection diagram



Connection diagram for cinema projector



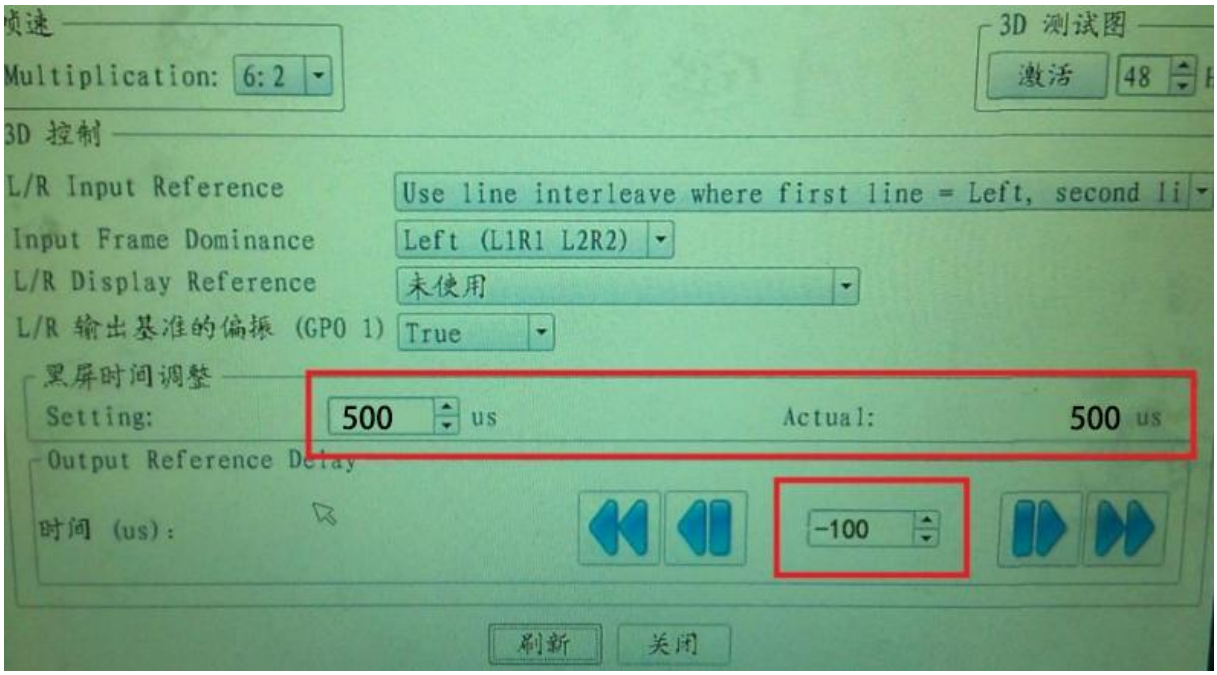
Connection diagram for old cinema projector



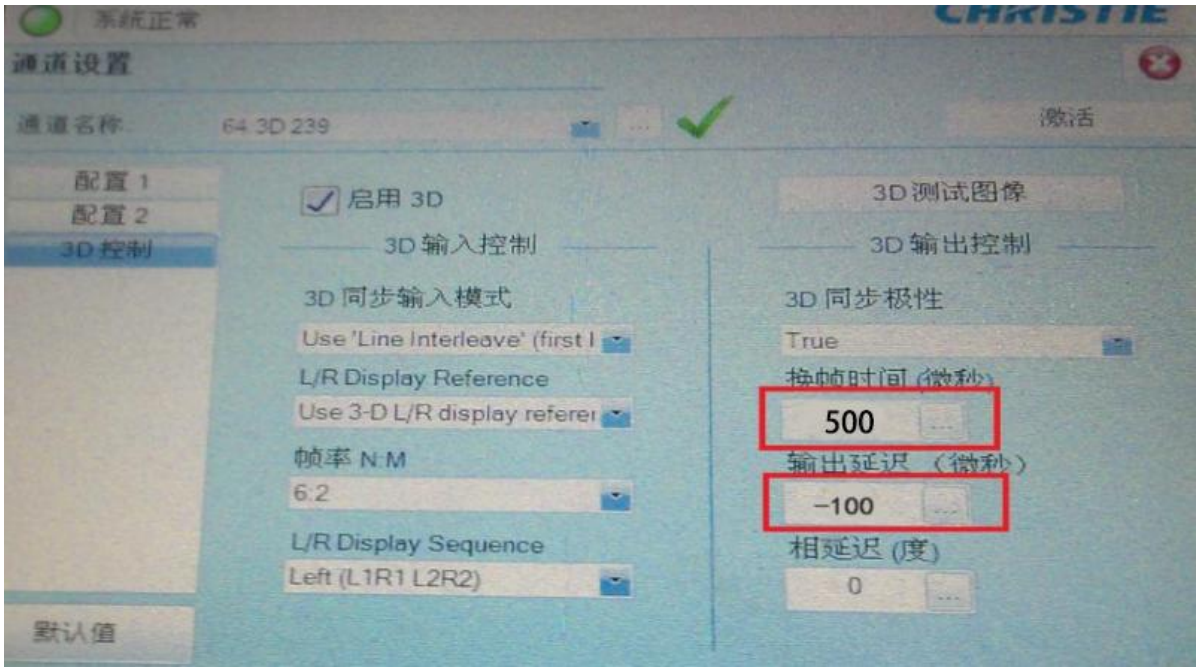
Connection diagram for Engineering projector

3D Parameter Setting of cinema projector

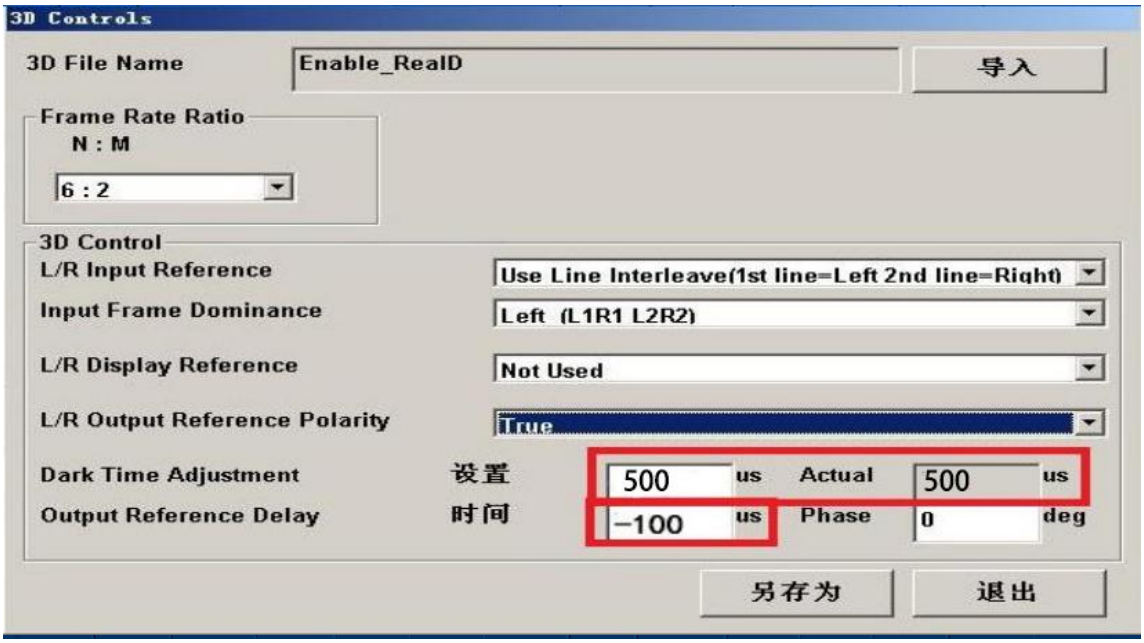
◎Bacro



◎Christie



◎NEC


3D Controls
3D File Name
Enable_RealD
导入
Frame Rate Ratio
N : M
6 : 2
3D Control
L/R Input Reference
Use Line Interleave(1st line=Left 2nd line=Right)
Input Frame Dominance
Left (L1R1 L2R2)
L/R Display Reference
Not Used
L/R Output Reference Polarity
True
Dark Time Adjustment
设置
500
us
Actual
500
us
Output Reference Delay
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