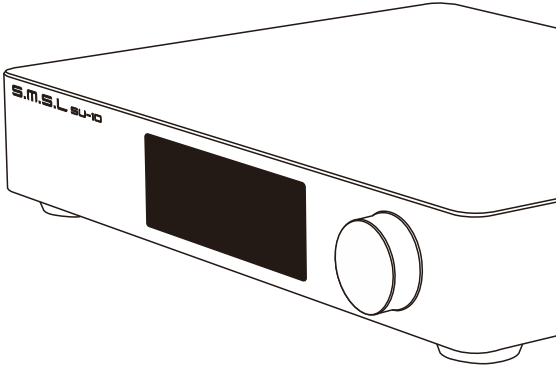
S.M.S.L

Hi-Res AUDIO

SU-10

使用说明书



本说明书的内容可能会随版本更改
如有变动, 恕不另行通知

Ver 1.1

安全注意事项

- 请将本音响系统安装在通风良好、阴凉、干燥、干净的位置，远离直射阳光热源、振动、灰尘、潮湿或寒冷。
- 只能使用本机指定的电压。使用高于指定数值的电压很危险，而且可能导致火灾，损坏本机或造成人身伤害。对于使用高于指定电压造成的任何损害，我司将不负任何责任。
- 不要试图自行改造或修理本机。如果需要任何服务，请与销售或者我司客服人员联系。不管有任何理由，都没有打开机壳的必要。
- 如果打算长时间不使用本机（比如度假时），请从墙壁交流电源插座上断开电源线的连接。

重要提示：

本说明书所提到的产品规格和资讯仅供参考。如有内容更新，恕不另行通知。

保修条款

一、服务期限

佛山双木三林科技有限公司承诺产品的良好品质，产品自售出之后7天内正常使用情况下出现故障，客户可以选择退货或者保修（不影响二次销售才可退货）。正常使用一年内出现故障可以免费保修。

二、购买日期以销售商开出的购机发票或收据日期为准，网购可以交易截图为准。

三、有以下情况都不能享受“三包”服务

1.一切人为因素损坏，包括非正常工作环境下使用或不按照说明书使用。
2.用户私自拆机、改装、维修。
3.使用非指定或许可的配件造成损坏的。
4.机身的QC或保修贴损毁。
5.不能出示有效购机凭证。
6.不属于本公司产品。

四、保修方式为送修

此条款只适于中国大陆，其它地区请参考当地销售代理商的规定和国家法规。

特点

- USB和SPDIF均支持 MQA 解码功能, 并且支持MQA-CD；
- 使用两片美国ESS公司高端ES9038PRO D/A芯片，并且使用了全部16个通道，总共使用了多达21个OPA1612A运算放大器；
- 搭配使用高性能供电系统，电源噪声低至1uVrms.
- 第三代ES9038PRO电路设计,失真度低至惊人的0.00005%（在5.1V输出时），并且更加稳定；
- 全新自主研发的CK-03时钟处理电路, 大大降低时钟抖动；
- USB使用XMOS XU-316，真正的32bit USB方案，支持DoP和原生DSD，PCM最高支持到768kHz，DSD支持到DSD512；
- USB、光纤、同轴、I^2S、AES支持DSD传输，同轴、光纤、AES支持DOP64；
- 使用全贴合钢化玻璃显示面板，更高的透光率，更长的使用寿命；
- 内置带屏蔽，低噪声电源处理，同时提高电源效率，功耗更低；
- 使用两组线性电源，给数字与模拟单元分别供电。搭配多个低噪声稳压电源，为SU-10提供稳定可靠高效低噪声的供电系统。
- 高通最新蓝牙支持LDAC，APTX/HD，SBC，AAC；
- 高品质镀金输入输出连接端子；
- 使用21颗高端双运放OPA1612及大量发烧元器件；
- 日本音频协会(JAS)Hi-Res认证；
- 配备遥控器和全功能遥控。

技术参数

输入方式 .....USB/光纤/同轴/蓝牙/I²S/AES
输出方式 .....单端线路/平衡线路
线路输出幅度.....平衡线路 5.1Vrms
单端线路 2.6Vrms
THD+N .....0.00005%(-125dB)(UN-WTD)
动态范围 .....135dB(XLR)
128dB(RCA)
信噪比 .....135dB(XLR)
128dB(RCA)
USB传输方式 USB2.0异步传输
USB兼容性 .....Windows 7 / 8 / 8.1 / 10 / 11(需要驱动)
Mac OSX10.6以上、Linux(不需要驱动)
MQA decoder.....USB / 光纤 / 同轴 / I²S / AES
MQA-CD decoder.....光纤 / 同轴 / AES
采样率与位深:

USB	PCM	44.1~768kHz(32bit)
DSD		2.8224~22.5792MHz (1bit)
光纤/同轴		44.1~192kHz(24bit)
DoP		DoP256(USB),DoP64(光纤/同轴/AES)

蓝牙规格:
LDAC 24bit/96kHz (990kbps/660kbps/330kbps)
aptX-HD .....24bit/48 kHz_576kbps
aptX .....16bit/44.1 kHz_352kbps
SBC .....16bit/44.1 kHz_328kbps
AAC .....16bit/44.1 kHz_320kbps
消耗功率 .....<30W
待机功耗 .....<0.5W
体积 .....240x185x39mm (WxHxD)
重量 1.86kg/4.1lb

SMSL保留在不另行通知的情况下进行可能导致规格或特性更改的改进的权利。

关于遥控器

- 如果遥控器距离本机很近时操作仍无效，请用新电池更换。
- 如果要长时间不使用遥控器，请取出遥控器的电池。
- 按照电池处置的地方性法规处置废旧电池。

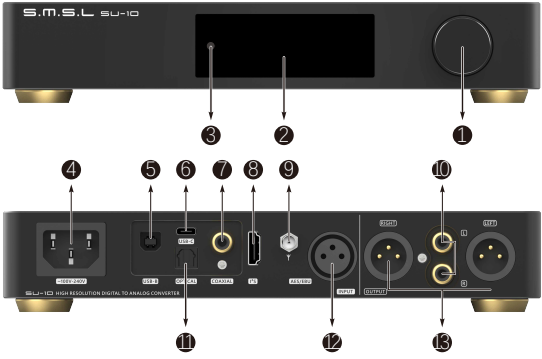
遥控器的使用

开关机
向上
进入菜单/确认
进入二级菜单
返回
向下
输入选择
静音
FN按键(在菜单中定义)
音量加
音量减

注 意

遥控器请使用2节7号(AAA)电池

部件介绍



1 功能旋钮*	2 显示屏	3 红外接收窗
4 电源输入	5 USB-B输入	6 USB-C输入
7 同轴输入	8 I^2S输入	9 蓝牙天线**
10 单端线路输出	11 光纤输入	12 平衡数字输入
13 平衡线路输出		

功能旋钮 *

- **旋钮:** 音量加减，菜单切换，功能选择。
- **按键:** 短按，进入菜单，确认；长按，退出菜单，开关机。

蓝牙操作说明 **

- **连接:** 将输入源切换至蓝牙，打开手机蓝牙功能，搜索"SMSL SU-10"，搜索到后点击配对连接，当手机显示“已连接”则已连接成功。
- **重连:** 在使用蓝牙过程中，如果失去连接，例如: 外出，然后回来，有些手机不会自动重新连接，在这个时候，短按遥控器上的蓝牙按键就可以重新连接。
- **清除配对:** 在蓝牙输入状态时，在“RESET”菜单中进行操作。在清除配对后，部分手机可能会出现无法再搜索到"SMSL SU-10"，此时需要将手机保存的蓝牙设备"SMSL SU-10"删除掉，然后再搜索配对。

功能介绍

INPUTS (输入方式)

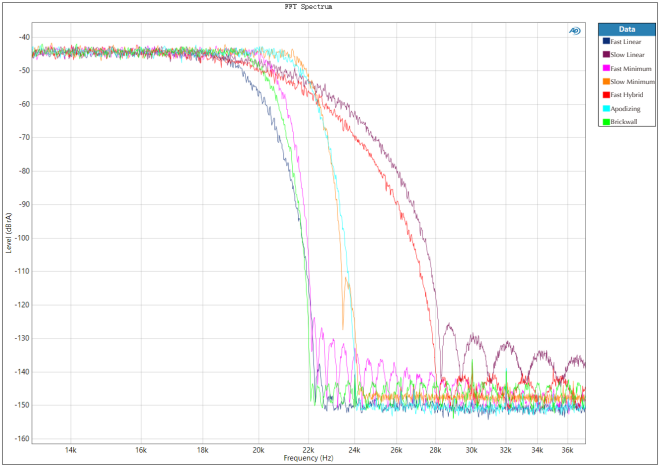
- USB TYPE B (USB TYPE B输入)
- USB TYPE C (USB TYPE C输入)
- BLUETOOTH (蓝牙输入)
- OPTICAL (光纤输入)
- COAXIAL (同轴输入)
- AES/EBU (蓝牙输入)
- I2S(HDMI) (I2S输入)

OUTPUTS (输出方式)

- ALL LINE OUT (全部输出)
- BALANCED (平衡输出)
- UNBALANCED (单端输出)

PCM FILTER (PCM滤波器)

- Fast Linear (快速滚降，线性相位滤波器)
- Slow Linear (慢滚降，线性相位滤波器)
- Fast Minimum (快速滚降，最小相位滤波器)
- Slow Minimum (慢滚降，最小相位滤波器)
- Apodizing (切迹，快速滚降，线性相位滤波器)
- Fast Hybrid (混合，快速滚降，最小相位滤波器)
- Brickwall (矩形滤波器)



DSD FILTER (DSD滤波器)

DSD总共有4种数字滤波方式，它的作用是数字运算的方式把音频外的杂波过滤掉，分别为：

- 47kHz Cutoff (47kHz频率截止)
- 50kHz Cutoff (50kHz频率截止)
- 60kHz Cutoff (60kHz频率截止)
- 70kHz Cutoff (70kHz频率截止)

SOUND COLOR(音色菜单)

本机总共有9种音色模式，它是通过对DAC进行DSP处理，分别为：

- Rich1、Rich2、Rich3（泛音丰富）
- Tube1、Tube2、Tube3（胆味）
- Crystal1、Crystal2、Crystal3（高清晰度）

音色设置是使用ES9038PRO DSP，做出不同的音色效果，所有这些设置不会改变频率响应曲线。设置为Standard模式将禁用此功能!

功能介绍

PRE MODE(前级模式)

PRE MODE为输出接口的音量调节功能开关：

- Variable:输出接口音量是受控的。
- Fixed:输出接口音量是固定的。

FN KEY FOR (FN按钮)

- Outputs （输出选择）
- Bluetooth(蓝牙输入)

DPLL (DPLL设置)

- MIN ~ MAX

(共15种，默认为5。数字越大适应抖动的范围越强，数字越小抗时钟抖动的性能越好。)

这个DPLL设定是ESS系列产品特有的功能，它可以调整芯片内部DPLL数字锁相环电路的带宽，使芯片在抗时钟抖动和输入宽容度之间达到一个平衡。

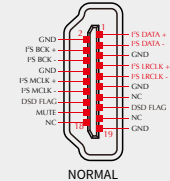
它的作用:

- 在输入信号的时钟稳定度好的情况，可以减小这个值，这样系统的时钟性能更佳;
- 在输入信号的时钟稳定度不好的情况下，声音有可能会有中断的现象，增大这个值可以避免声音中断现象的发生！特别是使用电视作为信号源时。

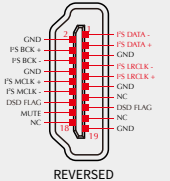
功能介绍

I2S MODE(自动熄屏)

- NORMAL(常规相位)
- REVERSED(反相)



NORMAL

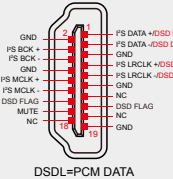


REVERSED

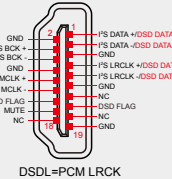
注: 这个选项用于匹配不同的I2S接口标准, 使用前请检查信号源的接口定义。

I²S DSD CHANNEL(DSD声道设置)

- DSDL = PCM DATA (DSD左声道和PCM的数据引脚共用)(默认)
- DSDL = PCM LRCK (DSD左声道和PCM的LRCK引脚共用)



DSDL=PCM DATA



DSDL=PCM LRCK

注: 在使用I²S接口播放DSD音频时, 如果发现左右声道不正确, 则可以使用这个选项来纠正。

功能介绍

DIMMER (自动熄屏)

- 5秒 ~ 60秒

(范围5秒 - 60秒, 设置后, 屏会在这个时间内自动熄灭, 遥控或者旋钮任意操作屏幕会重新点亮。这样可以很大程度减少光污染, 提升听音环境的舒适性!)

BRIGHTNESS (显示屏亮度设置)

- LEVEL 1 ~ LEVEL 6

RESET (系统复位)

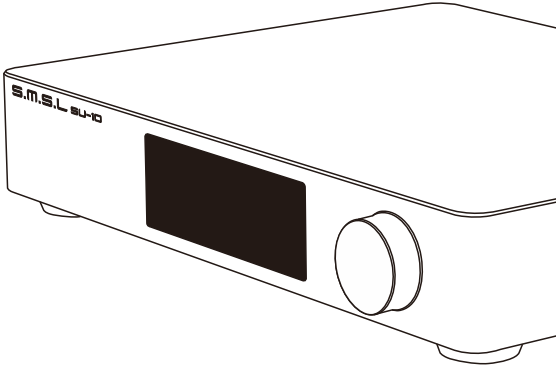
- 在蓝牙输入时, 长按旋钮中键 , 系统只会重置蓝牙配对状态;
- 在其它输入时, 长按旋钮中键 , 系统清除所有设定, 包括蓝牙。

S.M.S.L

Hi-Res AUDIO

SU-10

USER MANUAL



The contents of this manual may be changed with the edition
and are subject to change without notice

Ver 1.1

Safety Notes

- Install this unit in a well ventilated, cool, dry, clean place-away from direct sunlight, heat sources, vibration, dust, moisture, or cold..
- Use the voltage specified on this unit Only. Using this unit with a higher voltage than specified is dangerous and may cause fire , damage to this unit, or personal injury. Our company will not be held responsible for any damage resulting from the use of this unit with a voltage other than that specified.
- Do not attempt to modify or fix this unit by yourself. Contact alesperson or customer service when any service is needed. The cabinet should never be opened for any reason.
- When not planning to use this unit for long periods of time (i.e. when going on vacation), disconnect the power cable from the AC wall outlet.

  Important note:
  The product specifications and information mentioned in this manual are for reference only. The content of this manual is subject to change without notice.

Warranty Terms

1.The Term of Service
Foshan Shuangmusanlin Technology Co., Ltd promises to offer good-quality products. If the product is broken in 7 days after purchasing when you use it normally, you can choose to send it back for return, replacement or repairing (only the product does not affect the second sales can be returned). Repairing for free in one year if you use it normally.

2.Date of purchase is in accordance with the date on invoice or receipt uesd by seller, and if you buy it on line, you can show the screenshot of trade.

3.If an inappropriate usage causes the unit damaged, the warranty will be void. As below.

- All damages by inappropriate use, including using it under non-normal working environment or without following the instructions.
- Dismantling, refitting, repairing by user in private.
- Causing damage by using some fittings instead of the designative or accredited ones.
- Cannot provide credible proof of purchase.

4.Sending it back to our company for repairing.

5.Contact your S.M.S.L Audio reseller for a return or replacement.

Features

- Both USB and SPDIF support MQA decoding function, and support MQA-CD;
- Using two high-end ES9038PRO D/A chips from ESS, and using all 16 channels, up to 21 OPA1612A operational amplifiers in total;
- Combined with a high-performance power supply system, the noise is as low as 1uVrms;
- The 3rd ES9038PRO circuit design has a surprisingly low distortion of 0.00005% and is more stable;
- The new self-developed CK-03 clock processing circuit greatly reduces clock jitter;
- Use USB XMOS XU-316, a 32-bit USB scheme, which supports DoP and native DSD, with PCM up to 768kHz and DSD up to DSD512;
- USB, Optical, Coaxial, I2S, AES support DSD, Coaxial , Optical and AES support DOP64;
- Use tempered glass display panel for higher light transmission and longer service life;
- Built-in shielded, low noise power supply processing, while improving power efficiency, lower power consumption;
- Two sets of linear power are used to supply to the digital and analog units respectively. Equipped with multiple low-noise regulated power for providing SU-10 a stable, reliable, efficient and low-noise power supply system;
- Qualcomm's latest Bluetooth chip supports LDAC, APTX/HD, SBC, AAC;
- High quality gold-plated input and output jacks;
- 21 high-end dual op-amps OPA1612 and a lot of audio grade components are used;
- JAS Hi-Res certification;
- Equipped with full-function remote control.

Specifications

Input ..... USB / Optical / Coaxial / Bluetooth / I²S / AES

Output ..... RCA / XLR

Line output amplitude .....XLR 5.1Vrms

RCA 2.6Vrms

THD+N ..... 0.00005%(-125dB)(UN-WTD)

Dynamic range .....135dB(XLR),128dB(RCA)

SNR .....135dB(XLR),128dB(RCA)

USB Spec.....USB 2.0 Asynchronization

USB compatibility .....Windows 7 / 8 / 8.1 / 10(Needs Driver)

Mac OSX10.6 or Later、Linux(Driverless)

MQA decoder ..... USB / Optical / Coaxial / I²S / AES

MQA-CD decoder ..... Optical / Coaxial / AES

Sampling rate & Bit Width:

USB	PCM	44.1 ~ 768kHz(32bit)
	DSD	2.8224 ~ 22.5792MHz(1bit)
	Optical / Coaxial	44.1 ~ 192kHz(24bit)
	DoP	DoP256(USB),DoP64(Optical / Coaxial / AES)

Bluetooth: 5.0

LDAC 24bit/96kHz (990kbps/660kbps/330kbps)

aptX-HD .....24bit/48 kHz_576kbps

aptX .....16bit/44.1 kHz_352kbps

SBC .....16bit/44.1 kHz_328kbps

AAC .....16bit/44.1 kHz_320kbps

Power Consumption .....<30W

Standby power ..... <0.5W

Size .....240x185x39mm (WxHxD)

Weight 1.86kg/4.1lb

SMSL reserves the right to make improvements which may result in specification or feature changes without notice.

Remote control

- Install 2 x AAA batteries as instructions.
- When using the remote control, point it toward the remote con-trol signal receiver on the main unit from a distance of 5 m (16 ft) or less. Do not place obstructions between the main unit and the remote control.
- The remote control might not work if the remote control signal receiver on the unit is exposed to direct sunlight or bright light. If this occurs, try moving the unit.Beware that use of this remote control could cause the unin-tentional operation of other devices that can be controlled by infra.

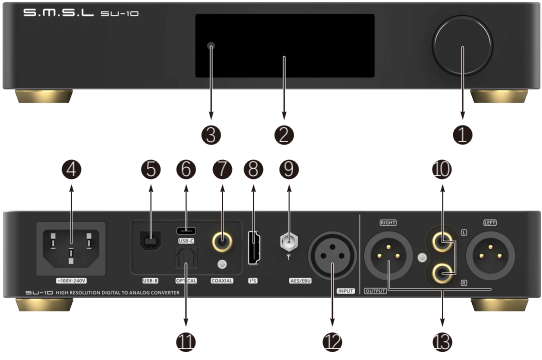
Operating the remote control

Power ON/OFF
Up
MENU/OK
Next level menu
Return
Down
Input select
Mute
FN(Define in the menu)
Volume +
Volume -

Note

This remote controller use 2 x R03/AAA batteries.

Display Interface and Instructions



1 Knob*
2 Display
3 Remote window
4 AC IN
5 USB-B input
6 USB-C input
7 Coaxial input
8 I²S input
9 Bluetooth antenna**
10 RCA output
11 Optical input
12 AES/EBU input
13 Balanced output

Note: Knob*

- Konb: Volume/Menu up or down
- Button: Press to Menu/Enter
  Hold to Return or Power ON/OFF

Bluetooth operating instructions**

Connection:

- Step 1: Switch the input source in the SETTING MENU or press the Bluetooth button of the remote;
- Step 2: Turn on the Bluetooth function of the mobile phone, search for "SMSL SU-10", and tap to pairing. When the mobile phone displays "connected", it has been successfully connected.

Re-connection:

When you had lost the connection with the SU-10, for example,going out, and back home, some phones will not re-connect the SU-10 if the SU-10 has not been re-boot, so you can press the Bluetooth button on the remote to Re-connect.

Clear pairing: Long press the "Bluetooth" button on the remote control. After clearing the pairing, some phones may no longer be able to search for "SMSL SU-10". In this case, you need to delete the Bluetooth device "SMSL SU-10" which saved in the phone, and then search and pairing again.

Instructions

INPUTS

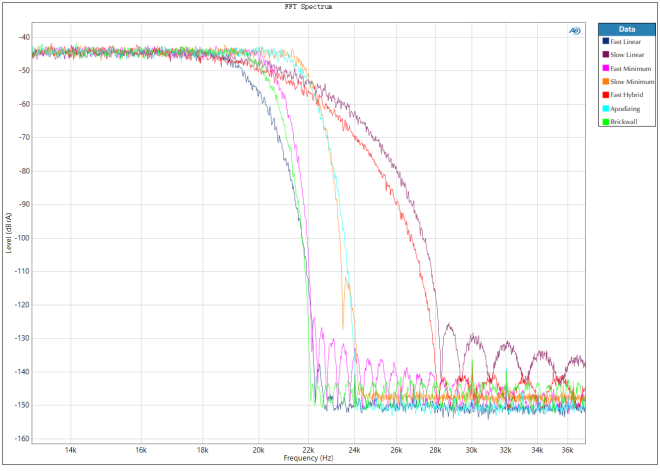
- USB TYPE B
- USB TYPE C
- BLUETOOTH
- OPTICAL
- COAXIAL
- AES/EBU
- I2S(HDMI)

OUTPUT

- ALL LINE OUT
- BALANCED
- UNBALANCED

PCM FILTER

- Fast Linear
- Slow Linear
- Fast Minimum
- Slow Minimum
- Apodizing
- Fast Hybrid
- Brickwall



DSD FILTER

There are 4 kinds of digital filtering in total.It's the way that the digital operation means the clutter outside the audioFilter out,respectively

- 47kHz Cutoff
- 50kHz Cutoff
- 60kHz Cutoff
- 70kHz Cutoff

SOUND COLOR

There are 9 sound color settings in SU-10.

- Rich1、 Rich2、 Rich3
- Tube1、 Tube2、 Tube3
- Crystal1、 Crystal2、 Crystal3

This setting is usingthe DSP of ES9038PRO,to make some different sound color, all of these settings will not change the frequency res ponse curve.When set to "Standard", this setting will be bypassed.

Instructions

PRE MODE

Volume control enable or disable.

- Vol Fixed : In this mode, volume is fixed on max output level, and the SU-10 will ignore the volume operations.
- Vol Variable: In this mode, volume can be adjust by remote controller, and make SU-10 a pre-amplifier.

FN KEY FOR

- OUTPUTS
- BLUETOOTH

DPLL

- MIN ~ MAX

(A total of 15 kinds, the default is 5 kinds. The larger the number is, the stronger the range to adapt to jitter, and the smaller the number, the better the performance against clock jitter.)

This DPLL setting is a special function of ESS series products. It can adjust the internal DPLL digital phase locked loop circuit Bandwidth, so that the chip achieves a balance between anti clock jitter and input tolerance.

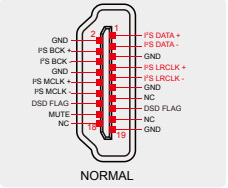
Its function:

- When the clock stability of the input signal is good, this value can be reduced, so that the clock performance of the system is better;
- When the clock stability of the input signal is not good, the sound may be interrupted. Increase this value can avoid the sound interruption! Especially when using TV as signal source!

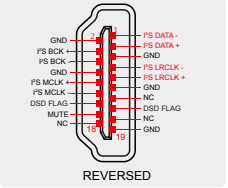
Instructions

I²S MODE

- NORMAL
- REVERSED



NORMAL

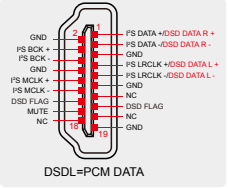


REVERSED

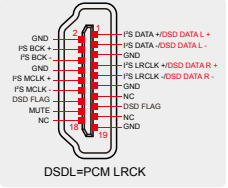
Note: This option is used to match different I2S interface standards, please check the interface definition of the signal source before use

I²S DSD CHANNEL

- DSDL=PCM DATA (The DSD left channel using the PCM DATA pin)
- DSDL=PCM LRCK (The DSD left channel using the PCM LRCK pin)



DSDL=PCM DATA



DSDL=PCM LRCK

Note: When using the I2S input to streaming DSD audio, if you find that the left and right channels are incorrect, you can use this option to correct it.

Instructions

DIMMER

- 5 seconds ~ 60 seconds

(The range is 5 seconds-60 seconds. After setting, the screen will automatically go off within this time, and the screen will re-light up if you operate the remote control or the knob at any time.)

BRIGHTNESS

- LEVEL 1 ~ LEVEL 6

RESET

- During Bluetooth input, long press the middle button of the knob, the system will only reset the Bluetooth pairing status;
- During other input, long press the middle button of the knob, the system will clear all settings, including Bluetooth.