

S.M.S.L



M400

使用说明书

## 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。

## 产品特点

- 支持MQA全解码;
- 旗舰DAC芯片AK4499, 业界最高性能。
- 失真度低至惊人的0.000068%(-123dB)!  
在使用A计权测量时, 更是低至0.000058%(-124dB)!
- 动态范围高达131dB!
- USB使用XMOS第二代16核处理器XU216, 支持到原生DSD512和32位768kHz!
- 时钟系统使用2颗美国ACCUSILICON超低相噪。
- 使用ALTERA的高速CPLD对时钟进行处理,降低JITTER。
- 特别设计和强化的电源系统,提供超低噪声的电源, 输出底噪低至1.5uVrms!
- 最新蓝牙支持LDAC, APTX/HD, SBC, AAC和业界最高规格的24bit/192kHz的UAT格式!
- 支持LVDS电平的I2S传输(使用HDMI接口),可以最低JITTER地传输数字音频!
- 固件升级功能,用户可以自行升级系统和USB的固件。
- 使用彩色液晶显示屏和新开发的用户界面,全功能遥控。
- 使用美国TI的OPA1611, OPA1612顶级运放。
- 大量使用发烧级元器件,高精度、低温漂和电阻和电容。

## 技术参数

输入方式 .....	USB / 光纤/同轴/I²S/蓝牙		
输出方式 .....	单端线路/平衡线路		
THD+N .....	0.000068%(-123dB)		
.....	0.000058%(-124dB) (A-WTD)		
动态范围 .....	平衡线路	131dB	
.....	单端线路	125dB	
信噪比 .....	131dB		
USB传输方式 .....	异步传输		
USB兼容性 .....	Windows 7 / 8 / 8.1 / 10, Mac OSX, Linux		
位深 .....	USB / I²S	1bit, 16~32bit	
.....	光纤/同轴	1bit, 16~24bit	
采样率 .....	USB / I²S	PCM	44.1~768kHz
.....	.....	DSD	2.8224~22.5792MHz
.....	光纤/同轴	PCM	44.1~192kHz
蓝牙规格:			
UAT .....	24bit/192kHz (1200kbps/900kbps/600kbps)		
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 .....	.5W		
待机功耗 .....	<0.5W		
体积 .....	220X215X43mm(WxHxD)		
重量 .....	1.53kg		

## 温馨提示

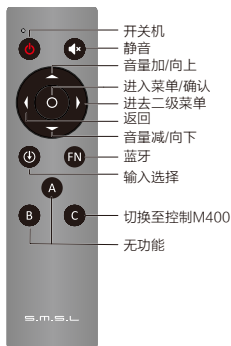
固件及驱动下载:

<http://www.smsl-audio.com/cn/download.asp>

## 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。

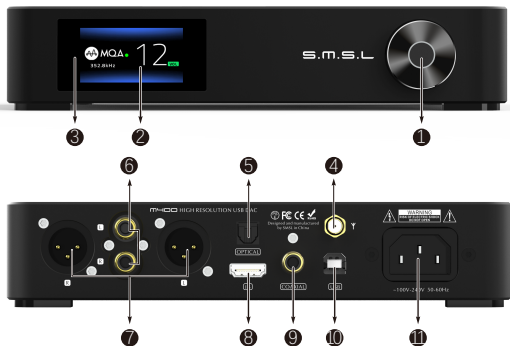
## 遥控器的使用



## 注意

1. 遥控器请使用2节7号(AAA)电池
2. 第一次操作M400时，先按C键

## 部件介绍



- |          |                      |          |
|----------|----------------------|----------|
| 1 功能旋钮   | 2 显示屏                | 3 红外接收窗  |
| 4 蓝牙天线   | 5 光纤输入               | 6 单端线路输出 |
| 7 平衡线路输出 | 8 I <sup>2</sup> S接口 | 9 同轴输入   |
| 10 USB输入 | 11 电源输入              |          |

\*注：功能旋钮

- 1、旋钮：音量加减，菜单切换，功能选择
- 2、按键：短按，进入菜单，确认  
长按，退出菜单，开关机

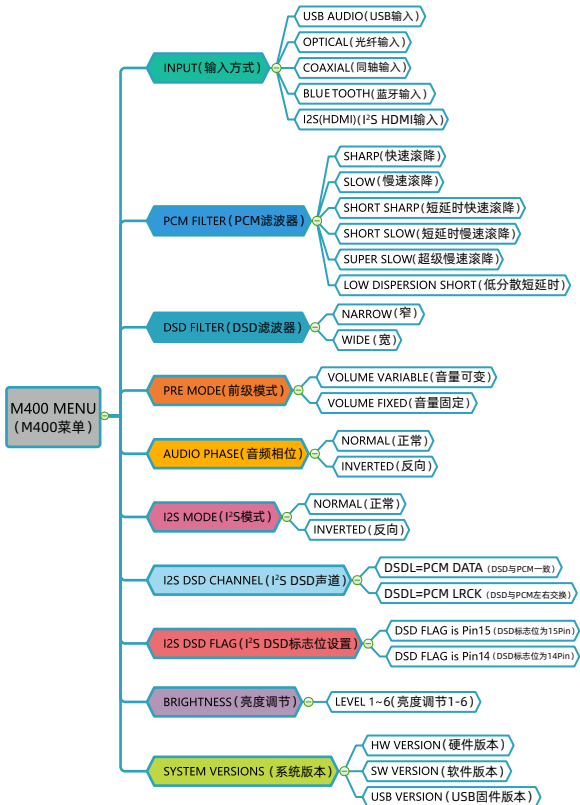
## 操作说明

### 1. 主界面



- 1、输入源
- 2、音量显示
- 3、音频显示格式/采样率

## 菜单功能介绍





## 功能介绍

### ■ PCM FILTER (PCM滤波器)

- SHARP (快速滚降)
- SLOW (慢速滚降)
- SHORT SHARP (短延时快速滚降)
- SHORT SLOW (短延时慢速滚降)
- SUPER SLOW (超级慢速滚降)
- LOW DISPERSION SHORT (低分散短延时)

### ■ DSD FILTER(DSD滤波器设置)

- NARROW 窄模式 (DSD64/37kHz, DSD128/74kHz)
- WIDE 宽模式 (DSD64/65kHz, DSD128/131kHz)

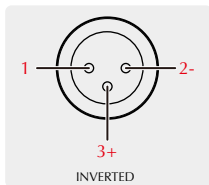
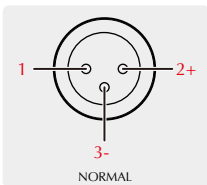
注: DSD256的频率响应为238kHz, DSD512为476kHz。

### ■ PRE MODE(前级模式)

- VOLUME FIXED (音量固定, 播放DSD时声音直通)
- VOLUME VARIABLE (音量可变)

### ■ AUDIO PHASE (音频输出相位设置)

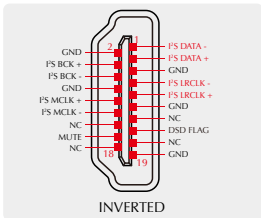
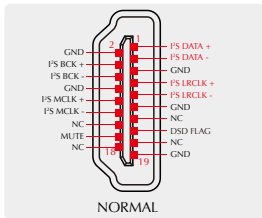
- NORMAL (2+,3-) 正常模式 (2+, 3-)
- INVERTED(2-,3+) 反向模式 (2-, 3+)



## 功能介绍

### ■ I<sup>2</sup>S MODE(I<sup>2</sup>S相位设置)

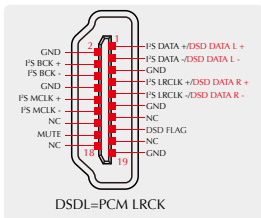
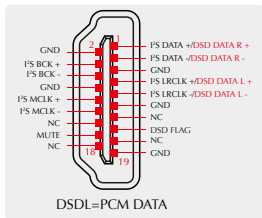
- NORMAL 常规相位
- INVERTED 反相



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。

### ■ I<sup>2</sup>S DSD CHANNEL(I<sup>2</sup>S 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)

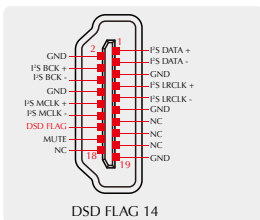
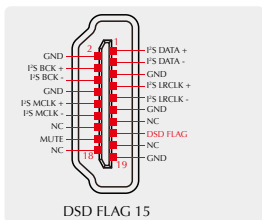


注: 在使用I<sup>2</sup>S接口播放DSD音频时, 如果发现左右声道不正确, 则可以使用这个选项来纠正。

## 功能介绍

### ■ I<sup>2</sup>S DSD FLAG (I<sup>2</sup>S DSD标志位设置)

- DSD FLAG=PIN15 DSD标志位为15Pin
- DSD FLAG=PIN14 DSD标志位为14Pin



### ■ BRIGHTNESS(亮度调节)

- LEVEL1-6



### ■ 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 HDBT”, 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:** 长按遥控器“蓝牙控制”按键。在清除配对后, 部分手机可能会出现无法再搜索到“SMSL HDBT”, 此时需要将手机保存的蓝牙设备“SMSL HDBT”删除掉, 然后再搜索配对。

### ■ 恢复出厂设置

- 机器在未通电状态下, 按住开机键再通电, 直到显示屏显示文字之后, 松开按键。

S.M.S.L



M400  
USER MANUAL

## 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 used 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

- Support MQA decoding.
- Flagship DAC chip AK4499, the audio industry's highest performance.
- The THD+N is as low as 0.000068% (-123dB)!  
When using A-weighted measurement, it is as low as 0.000058% (-124dB)!
- Dynamic range up to 131dB!
- USB uses the second XMOS XU216, support native DSD and 32bit 768kHz!
- The clock system uses 2 ACCUSILICON ultra-low phase noise crystal oscillators.
- Using ALTERA's high-speed CPLD to process the clock and reduce the JITTER.
- Specially designed and enhanced power supply system provides ultra-low noise power supply with output noise as low as 1.5uVrms!
- The latest Bluetooth supports LDAC, APTX / HD, SBC, AAC and the industry's highest specification 24bit / 192kHz UAT format!
- Support LVDS level differential I<sup>2</sup>S reception (using HDMI interface), it can accept the lowest jitter digital audio!
- Users can update the system and USB firmware through the USB interface.
- Using color LCD screen and newly developed user interface, full-function remote control.
- Use USA ti's opa1611, opa1612 top-level op amp.
- Using lots of audiophile grade components, high precision, low temperature drift and resistors and capacitor!

## Specifications

Input .....	USB / Optical / Coaxial / PS / Bluetooth		
Output .....	RCA / XLR		
THD+N .....	0.000068%(-123dB)		
.....	0.000058%(-124dB) (A-WTD)		
Dynamic range .....	XLR	131dB	
	RCA	125dB	
SNR .....	131dB		
USB transmission .....	Asynchronization		
USB compatibility .....	Windows 7 / 8 / 8.1 / 10, Mac OSX、Linux		
Bit depth .....	USB / PS	1bit, 16 ~ 32bit	
	Optical / Coaxial	1bit, 16 ~ 32bit	
Sampling rate .....	USB / PS	PCM	44.1 ~ 768kHz
		DSD	2.8224 ~ 22.5792MHz
	Optical / Coaxial	PCM	44.1 ~ 192kHz
Bluetooth specification:			
UAT .....	24bit/192kHz (1200kbps/900kbps/600kbps)		
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 .....	5W		
Standby power .....	<0.5W		
Size .....	220X215X43mm (WxHxD)		
Weight .....	1.53kg		

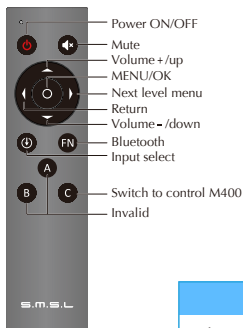
### Note

Firmware and driver download:  
<http://www.smsl-audio.com/cn/download.asp>

## Remote control

- Install 2 x AAA batteries as instructions.
- When using the remote control, point it toward the remote control 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 unintentional operation of other devices that can be controlled by infra.

## Operating the remote control

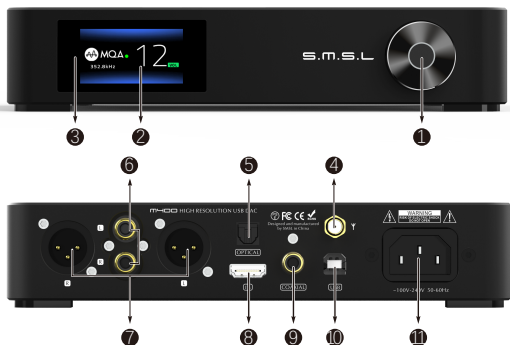


### Note

1. This remote controller use 2 x R03/AAA batteries.
2. When you first operate M400, press the C key first.



## Display Interface and Instructions



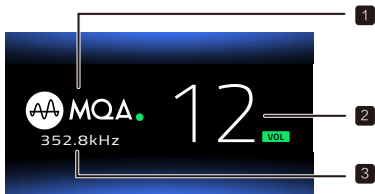
- |                     |                 |                 |
|---------------------|-----------------|-----------------|
| 1 Knob              | 2 Display       | 3 Remote window |
| 4 Bluetooth antenna | 5 Optical input | 6 RCA output    |
| 7 Balanced output   | 8 I²S input     | 9 Coaxial input |
| 10 USB input        | 11 AC IN        |                 |

★ Note: Knob

1. Knob: Volume/Menu up or down
2. Button: Press to Menu/Enter  
Hold to Return or Power ON/OFF

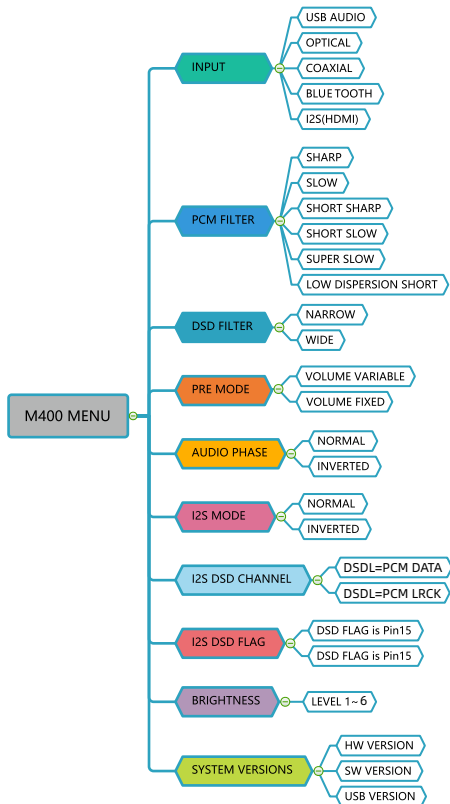
## User interface

### 1. Main



- 1、 Input source
- 3、 Volume Level
- 4、 Audio format / Sampling rate

## Instructions



## Instructions

### ■ PCM FILTER

- SHARP
- SLOW
- SHORT SHARP
- SHORT SLOW
- SUPER SLOW
- LOW DISPERSION SHORT

### ■ DSD FILTER

- NARROW ( DSD64/37kHz , DSD128/74kHz )
- WIDE ( DSD64/65kHz , DSD128/131kHz )  
DSD256 / 238KHz , DSD512 / 476KHz

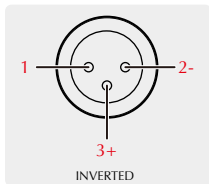
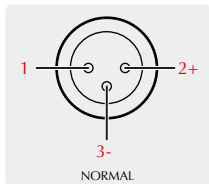
Note: The frequency response of DSD256 is 238kHz, DSD512 is 476kHz.

### ■ PRE MODE

- VOLUME FIXED
- VOLUME VARIABLE

### ■ AUDIO PHASE

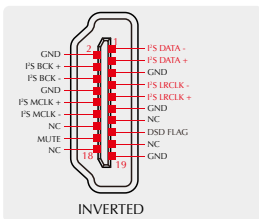
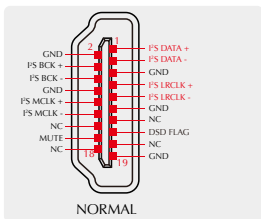
- NORMAL (2+,3-)
- INVERTED(2-,3+)



## Instructions

### I<sup>2</sup>S MODE

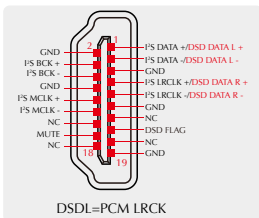
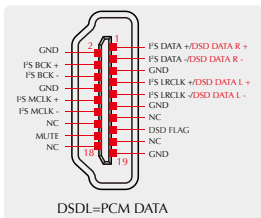
- NORMAL
- INVERTED



Note: This option is used to match different I<sup>2</sup>S interface standards, please check the interface definition of the signal source before use

### I<sup>2</sup>S 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)

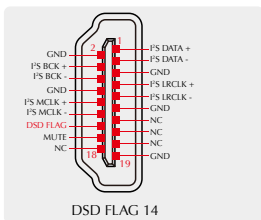
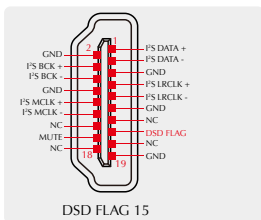


Note: When using the I<sup>2</sup>S input to streaming DSD audio, if you find that the left and right channels are incorrect, you can use this option to correct it.

## Instructions

### ■ I²S DSD FLAG

- DSD FLAG=PIN15
- DSD FLAG=PIN14



### ■ BRIGHTNESS

- LEVEL1-6



### ■ 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 HDBT", 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 M400, for example, going out, and back home, some phones will not re-connect the M400 if the M400 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 HDBT". In this case, you need to delete the Bluetooth device "SMSL HDBT" which saved in the phone, and then search and pairing again.

### ■ Factory Reset

- Connect the power cord when pressing the power button, until the screen shows the logo. Then stop pressing and restart the unit.