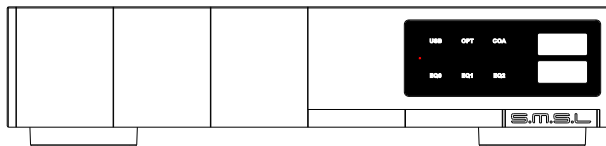


R100

使用说明书/USER MANUAL/取扱説明書



<http://www.smsl-audio.com/>

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

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

本説明書の内容は版によって予告なしに変更される

设计理念

R-2R DAC曾经代表着数字音频转换技术的巅峰，它以自然、真实、富有音乐感染力的声音表现，成为众多经典高端音频设备的核心技术。然而，经典并不意味着停留在过去。

SMSL R100并不是简单地复刻过去的设计，而是以现代音频工程技术重新审视和挖掘经典R-2R芯片的潜力。通过先进的数字处理技术、高精度时钟系统、优化的模拟输出设计以及现代化的电源管理方案，让这些经典芯片在新时代重新释放出更高水平的性能。

我们相信，真正的技术传承并不是重复过去，而是在理解经典的基础上，用今天最先进的技术赋予它新的生命。

SMSL R100，将经典R-2R架构的音乐韵味，与现代高解析音频技术完美融合，让经典芯片突破时代限制，展现出更加纯净、细腻、自然且充满生命力的声音表现。

这不仅是对经典的致敬，更是一次对R-2R潜力的重新探索。



产品特点

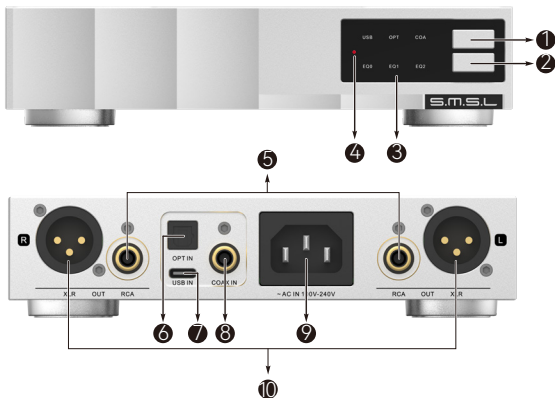
- 内置两片美国 ADI 公司高性能 AD1861-J DAC 芯片，采用经典 R-2R 架构，并搭载原厂去毛刺（De-glitch）电路，有效降低转换瞬态误差，带来更加纯净、自然的模拟声音表现；
- 采用经过原厂严格筛选的 J 档芯片，确保左右声道一致性及各台设备的性能稳定；
- 内置 MSB 精密调节电路，每台机器出厂前均进行独立校准，使 DAC 达到最佳工作状态，提升线性度与声音还原精度；
- 支持网页端 PEQ 自定义调节，用户可根据个人听音偏好自由调整声音风格，打造更加鲜明、丰富、个性化的音乐体验；
- 支持 Direct（直通）、EQ1、EQ2 三组声音模式保存，并可通过按键快速切换，满足不同音乐类型的播放需求；
- 采用自主研发 USB 音频接收方案，最高支持 PCM 768kHz / 32bit 高规格音频输入；
- 采用自主研发 SPDIF 接收算法，有效降低数字传输过程中的 JITTER（时钟抖动），提升声音稳定性与空间表现；
- 采用自主研发 FIR 数字滤波算法，为 R-2R DAC 提供 16 倍过采样处理，带外衰减低至 -160dB，在提升解析力的同时保持自然流畅的声音风格；
- 采用自主研发 DSD 转换算法，使经典 R-2R DAC 同样支持 DSD 音频输入，实现传统模拟韵味与高清数字音频的融合；
- 采用与上一代旗舰 VMV D3 相同理念的模拟滤波电路设计，进一步优化声音细节、动态表现及音乐空间感；
- 采用双超大透明镜片开窗设计，内部精密元件立体可见，展现高性能音频设备独特的机械美感；
- 采用 CNC 一体化铣削工艺打造机身结构，兼具坚固品质与简约时尚设计；
- 配备高品质镀金输入输出连接端子，保证长期可靠连接及优异信号传输性能；
- 通过日本音响协会（JAS）Hi-Res Audio 高解析音频认证。

技术参数

输入方式	·····	USB/光纤/同轴
输出方式	·····	平衡线路/单端线路
输出幅度:	平衡线路	····· 3.5Vrms
	单端线路	····· 1.75Vrms
THD+N	·····	0.003%(-90dB)
动态范围:	平衡线路	····· 107dB
	单端线路	····· 108dB
信噪比:	平衡线路	····· 107dB
	单端线路	····· 108dB
输出阻抗	·····	33Ω
USB传输方式	·····	Windows 7/8/8.1/10/11(需要安装驱动)
USB兼容性	·····	Mac OSX10.6 or Later、Linux(不需要安装驱动)
位深:	USB	····· 1bit, 16~32bit
	光纤/同轴	····· 1bit, 16~24bit
采样率:	USB	PCM ····· 44.1~768kHz
		DSD ····· 2.8224~22.5792MHz
		DoP ····· 2.8224~11.2896MHz
	光纤/同轴	PCM ····· 44.1~192kHz
		DSD ····· DSD64(DoP)
消耗功率	·····	2.6W
待机功率	·····	<1W
体积	·····	170X39.8X136mm(WxHxD)
重量	·····	712g/1.57lbs

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。

部件介绍



- | | |
|------------|------------------------|
| 1 输入选择按键 | 6 光纤输入 |
| 2 EQ模式选择按键 | 7 USB输入 |
| 3 显示屏 | 8 同轴输入 |
| 4 待机灯 | 9 AC电源输入接口(AC100-240V) |
| 5 单端线路输出 | 10 平衡线路输出 |

包装清单

- 1x S.M.S.L R100
- 1x USB线 (Type-A转C)
- 1x 保修卡
- 1x 说明书
- 1x AC电源线

操作说明

■ 按键使用说明:

- 机器上电即开机
- 短按输入选择按键切换模式，长按按键待机
- 短按EQ模式选择按键切换EQ模式

■ EQ模式自定义设置说明:

- 连接电源线使机器开机
- USB数据线连接电脑与机器
- 在电脑端键入网址“<https://dsptuner.com>”
- 点击开始调音，左上角选择“SMSL R100”连接机器
- 在EQ1、EQ2模式中调节心仪的EQ曲线点击左下角保存心仪的EQ设置
- 尽情享受音乐!

功能介绍

■ INPUT (输入方式)

- USB (USB输入)
- OPT (光纤输入)
- COA (同轴输入)

■ EQ模式选择

- EQ0 (关闭EQ)
- EQ1 (EQ模式1)
- EQ2 (EQ模式2)

安全注意事项

- 请将设备安装在通风良好、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。

Design Philosophy

The R-2R DAC architecture once represented the pinnacle of digital audio conversion technology. With its natural, realistic, and highly musical sound signature, it became the heart of many legendary high-end audio products. However, true classics should not simply remain in the past.

The SMSL R100 is not a simple reproduction of traditional designs. Instead, it re-examines and unlocks the full potential of classic R-2R technology through modern audio engineering. By combining advanced digital processing, ultra-precise clock management, optimized analog output design, and sophisticated power supply solutions, the R100 allows these legendary DAC chips to achieve a level of performance that exceeds their original era.

We believe that true technological heritage is not about repeating the past, but about understanding its essence and giving it new life with the most advanced technologies available today.

The SMSL R100 perfectly combines the musical character of classic R-2R architecture with modern high-resolution audio technology, allowing this legendary approach to digital conversion to deliver a cleaner, more detailed, more natural, and more engaging listening experience.

This is not only a tribute to a classic technology — it is a new exploration of the ultimate potential of R-2R digital audio.



Features

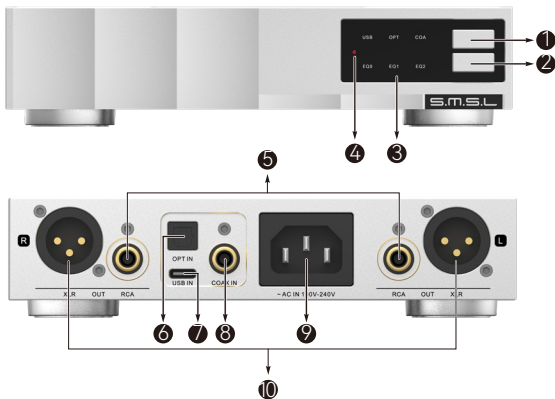
- Equipped with two premium ADI AD1861-J DAC chips, featuring a classic R-2R architecture and built-in de-glitching circuitry. This advanced design effectively minimizes switching errors and delivers a pure, natural, and highly musical analog sound performance.
- Selected J Grade chips are carefully screened to ensure excellent channel matching, outstanding consistency, and reliable performance across every unit.
- Features a precision MSB adjustment circuit. Each unit is individually calibrated before shipment to optimize DAC linearity and achieve the best possible conversion accuracy.
- Supports web-based PEQ customization, allowing users to fine-tune the sound signature according to personal preferences and create a more distinctive, dynamic, and personalized listening experience.
- Provides three customizable sound modes: Direct, EQ1, and EQ2. Users can save different tuning profiles and switch between them instantly with front-panel controls.
- Features a proprietary USB audio receiver supporting ultra-high-resolution PCM playback up to 768kHz / 32-bit, fully unlocking the potential of high-resolution digital sources.
- Employs a proprietary SPDIF receiver algorithm to significantly reduce JITTER (clock instability), improving timing accuracy, sound stability, and spatial resolution.
- Utilizes a self-developed FIR digital filtering algorithm with 16× oversampling processing for the R-2R DAC. With stopband attenuation down to -160dB, it effectively suppresses high-frequency imaging while preserving a smooth and natural sound character.
- Features a proprietary DSD conversion algorithm, enabling the classic R-2R DAC architecture to support DSD audio input and combine traditional analog musicality with modern high-resolution digital formats.
- Adopts an analog filter circuit design based on the previous flagship VMV D3 platform, optimizing transient response, musical detail, and overall sound texture.
- Two oversized transparent viewing windows reveal the precision internal components in three-dimensional detail, showcasing the beauty of high-end audio engineering.
- The chassis is manufactured using CNC integrated milling technology, combining exceptional structural rigidity with a clean and elegant modern aesthetic.
- Equipped with premium gold-plated input and output connectors, ensuring long-term durability, reliable connectivity, and excellent signal transmission performance.
- Certified by the Japan Audio Society (JAS) with Hi-Res Audio certification, meeting the standards for high-quality high-resolution audio reproduction.

Technical Parameters

Input	USB / Optical / Coaxial
Output	XLR / RCA
Output Level:	XLR 3.5Vrms
	RCA 1.75Vrms
THD+N	0.003%(-90dB)
Dynamic range:	XLR 107dB
	RCA 108dB
SNR:	XLR 107dB
	RCA 108dB
Output impedance	33Ω
USB transmission	Windows 7/8/8.1/10/11(Needs Driver)
USB compatibility	Mac OSX10.6 or Later、Linux(Driverless)
Bit depth:	USB 1bit, 16~32bit
	Optical / Coaxial 1bit, 16~24bit
Sampling rate:	USB PCM 44.1~768kHz
	DSD 2.8224~22.5792MHz
	DoP 2.8224~11.2896MHz
	Optical / Coaxial PCM 44.1~192kHz
	DSD DSD64(DoP)
Power Consumption	2.6W
Standby power	<1W
Size	170X39.8X136mm(WxHxD)
Weight	712g/1.57lbs

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

Components Introduction



- | | |
|----------------------------|------------------------------|
| 1 Input Switch | 6 Optical Input |
| 2 EQ Mode Selection Button | 7 USB Input |
| 3 Display | 8 Coaxial Input |
| 4 Standby Indicator | 9 AC power input(AC100-240V) |
| 5 RCA Output | 10 XLR Output |

Package list

- 1x S.M.S.L R100
- 1x USB cable (Type- A to C)
- 1x Warranty card
- 1x User manual
- 1x AC power cable

Instructions

■ Button Usage Instructions:

- The unit powers on automatically when connected to power supply.
- Short press the Input Selection Button to switch modes; long press the button to enter standby mode.
- Short press the EQ Mode Selection Button to switch EQ modes

■ EQ Mode Customization Instructions:

- Connect the power cord to power on the unit.
- Connect the computer and the unit via a USB data cable.
- Enter the URL "https://dsptuner.com" on your computer.
- Click Start Tuning, then select "SMSL R100" in the upper-left corner to connect to the unit.
- Adjust your preferred EQ curves under EQ1 and EQ2 modes, and click the lower-left button to save your EQ settings.
- Enjoy your music!

Function introduction

■ INPUT

- USB (USB INPUT)
- OPT (OPTICAL INPUT)
- COA (COAXIAL INPUT)

■ EQ Mode Selection

- EQ0 (EQ OFF)
- EQ1 (EQ MODE 1)
- EQ2 (EQ MODE 2)

Safety Notes

1. Warranty Policy

- SMSL/VMV Audio warrants that the product shall be free from defects in function under normal use for a period of 24 months from the date of original retail purchase by the end-user (the "Warranty Period").
- This warranty is valid only for products purchased through authorized distributors or retailers. Proof of purchase (original receipt or invoice) is required.
- This warranty does not cover: damage caused by accident, misuse, abuse, unauthorized modifications, commercial use, or failure to follow product instructions.

2. Returns & Repair

- For defective products within the Warranty Period, please contact our customer service or the authorized seller from whom you made the purchase to initiate a return or exchange or repair.

3. Service Process

- All after-sales requests must be initiated through the point of purchase (e.g., the specific online platform store or authorized distributor).
- Please have your order number, product serial number, and a description/video of the issue ready.
- Do not return any product without first obtaining a Return Merchandise Authorization (RMA) number. Unauthorized returns may be refused.
- Ship the product to the address provided in your RMA instructions by online platform store or authorized distributor. We will inspect it and notify you of the resolution.

S.M.S.L