

The Power of Original Sound

SGP1



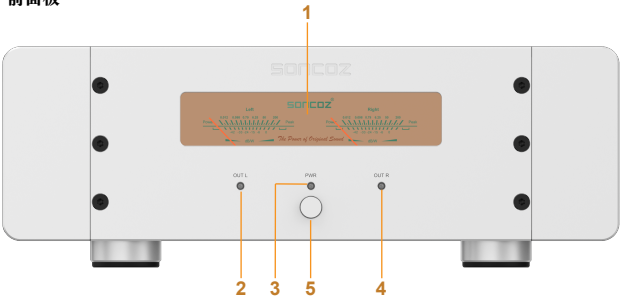
用户手册 V1.0

2022年8月

01 概述

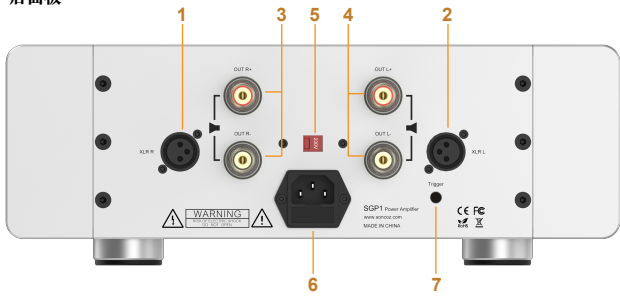
SGP1是一款专为高清录音和回放系统而设计的AB（甲乙）类参考级音频功率放大器。其卓越的SNR（信噪比）和THD（失真度）将全分立的AB类功率放大器的性能提升到一个全新的水平。由松果（SONCOZ）历时三年的研发与设计，最终实现量产制造。我们花几分钟时间来熟悉它的操作。

前面板



- 1 左右声道输出功率指针（UV表头）
- 2 左声道输出状态指示（OUT L）
- 3 电源状态指示（PWR）
- 4 右声道输出状态指示（OUT R）
- 5 自锁电源开关

后面板



- 1 右声道平衡卡侖输入（XLR R）
- 2 左声道平衡卡侖输入（XLR L）
- 3 右声道喇叭接线柱（OUT R+/-）
- 4 左声道喇叭接线柱（OUT L+/-）

- 5 电压等级切换开关（默认：交流~230V）：在SGP1开机之前请检查并确认正确的电压等级，错误的电压等级会毁坏SGP1
 - 115V档位：交流100~120V @50/60Hz
 - 230V档位：交流220~240V @50/60Hz
- 6 AC交流电源输入接口（内含备用保险丝）
- 7 触发器输入接口

02 快速上手

- 1 在开机之前正确连接线材
- 2 SGP1的输出喇叭接线柱切勿短路或接地
- 3 开机之前检查您本地电压等级
- 4 第一次开机时一定要调小音源（前级或带前级功能的设备）的音量
- 5 SGP1是一台纯后级功率放大器，音源设备需要有前级功能
- 6 为了避免损坏扬声器，请确保在您第一次启动时，前级的音量是较低的
- 7 如需更换或者拔除线材，请先将功放关机
- 8 如需关机请先按下SGP1的电源按键关机，再拔掉电源线或者关闭总电源

03 操作和状态指示

- 1 开/关电源
 - 第一次开机时需要调低音源的音量
 - 按下PWR按键开机或者关机
 - 在完全失去交流电源的情况下，所有指示灯将在30秒时间内缓慢熄灭
- 2 PWR：电源指示灯
 - 橙色LED灯灭 = 关机
 - 橙色LED灯亮 = 开机 = 正常可操作
- 3 OUT L/R：过热保护指示灯
 - 左或右声道输出橙色指示灯亮 = 正常工作
 - 左或右声道输出红色指示灯亮 = 过热保护（输出继电器和主电源都会关闭）

4 I/O触发器

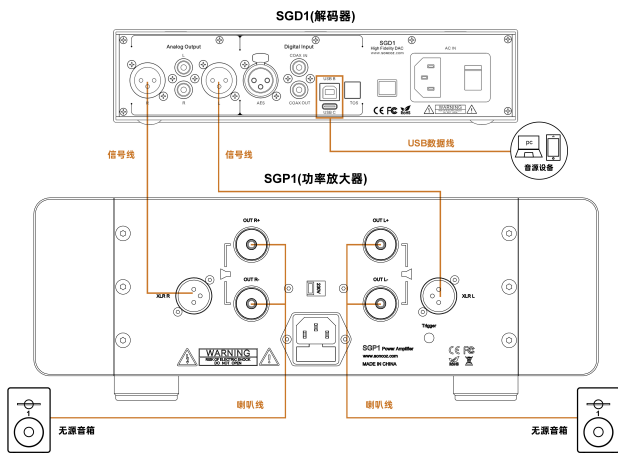
- SGP1上的触发器可以作为输入使用，该触发器可与其他音频组件按照时序自动开启或关闭SGP1
- 触发器的插孔为3.5 mm TRS接头，触发器外壳连接到机壳地，与电源接地没有构成环路

04 规格和参数

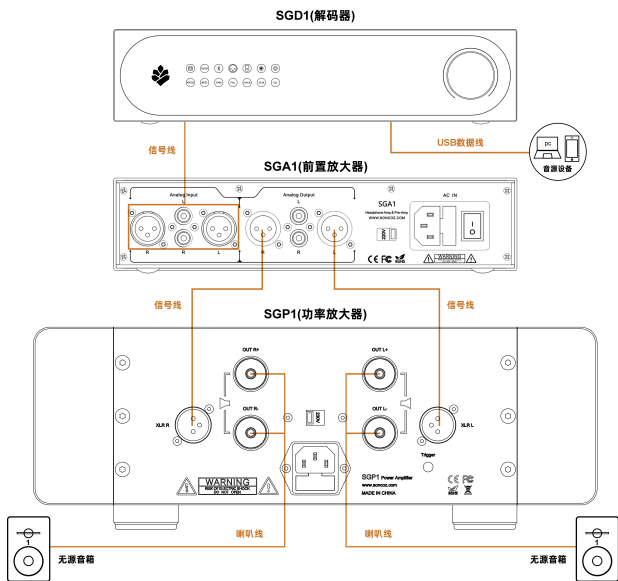
- 1 尺寸（含突出部分）：350 x 260 x 125 毫米
- 2 净重（不含包装及配件）：8 公斤
- 3 额定输出功率（最大不失真输出）：
 - 240 瓦 x 2 @ 4 欧姆
 - 120 瓦 x 2 @ 8 欧姆
- 4 信噪比（满额定功率输出）：130 分贝, A计权, 20 ~ 20k 赫兹
- 5 噪声+失真（满额定功率输出）：
 - < -110 分贝 (< 0.0003%) , A计权, 20 ~ 20k 赫兹
- 6 输出电流（负载阻抗 $\geq 2\Omega$ ）：每声道 8.5 A 峰值输出电流
- 7 输出电压（满额定功率输出）：每声道 95 Vpp峰峰值输出
- 8 输出配置（专利驱动模块）：每声道8只4并联对管推挽输出
- 9 频率响应（在 20 ~ 20k 赫兹）：
 - ± 0.12 分贝 @ 8 欧姆
 - ± 0.13 分贝 @ 4 欧姆
- 10 串扰：-145 ~ -120 分贝@ 1k ~ 20k 赫兹
- 11 输入灵敏度（固定增益输出）：2.5 Vrms 或者 28 分贝
- 12 输入阻抗（固定增益输出）：20k 欧姆
- 13 使用环境：
 - 0°C~50°C环境温度
 - 湿度大于80%，不凝结

05 典型应用

1 SGD1+SGP1



2 SGD1+SGA1+SGP1



06 故障保护

SGP1的设计可以检测过载、短路、温度过高和交流输入电压过低等故障。

当潜在的破坏性故障发生时，放大器进入“保护”模式，以防止对放大器或扬声器的损坏。如果故障触发了“保护”模式，请关闭SGP1。在重新开机之前，请排查机器，确认故障原因并纠正。

1 故障显示

- 电源灯亮，一个通道或者两个输出通道亮红灯

(注意：只有交流AC存在时，此故障显示才会持续。在完全失去交流电源的情况下，这个错误显示将保持约30秒，然后所有的灯将关闭。)

2 典型原因

- 交流电可能欠压
- 喇叭的负载阻抗可能太低
- 散热器散热通道被阻塞
- 功放在高输入的测试条件下过载

3 解决方案

- 检查交流电源
- 确保标称立体声负载阻抗为 3Ω 或更高
- 保持散热片周围足够的空间
- 预留时间让功放冷却
- 关掉音源
- 重启SGP1

07 包装内容

1 SGP1 X 1

2 交流AC电源线 X 1

3 触发连接线 X 1

4 用户手册 X 1

注意：SONCOZ产品的电子档说明书可在官网（www.soncoz.com）下载



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SGP1



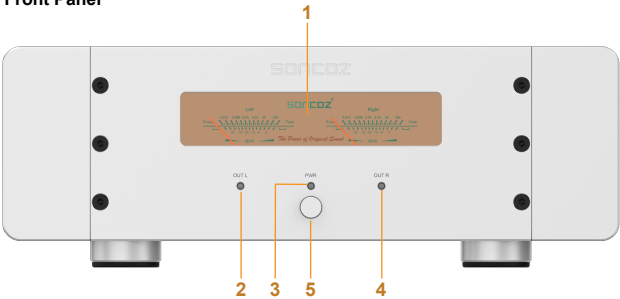
User Manual V1.0

Aug. 2022

01 OVERVIEW

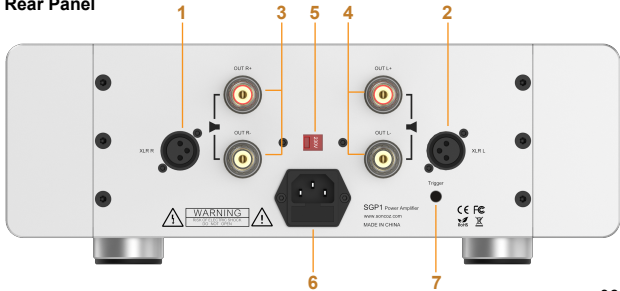
The SGP1 is a Class AB Reference-Grade Audio Power Amplifier that is designed specifically for High Resolution Audio(HRA) recording and playback system. The SNR and THD extraordinary performance of the SGP1 pushes the performance of fully discrete Class AB amplifiers to a whole new level. SGP1 has been developed and designed by SONCOZ Team for nearly 3 years, and finally achieved mass production. Please take a few moments to familiarize yourself with its operation.

Front Panel



- 1 Left and Right Channel Outputs Power Pointer
- 2 Left Channel Output Status Indicator(OUT L)
- 3 Power Status Indicator(PWR)
- 4 Right Channel Output Status Indicator(OUT R)
- 5 Power Switch(Latching Switch)

Rear Panel



- 1 Right Channel Balanced XLR Input(XLR R)
- 2 Left Channel Balanced XLR Input(XLR L)
- 3 Right Channel Speaker Binding Posts(OUT R+/R-)
- 4 Left Channel Speaker Binding Posts(OUT L+/L-)
- 5 Voltage Level Switch(Default: AC~230V): Please check the correct voltage before using SGP1 and the wrong voltage will damage it
 - 115V for AC 100~120V @50/60Hz
 - 230V for AC 220~240V @50/60Hz
- 6 AC Power Input Connector(Include Backup Fuse)
- 7 I/O Trigger Input Connector

02 QUICK START GUIDE

- 1 Connect all cables before turning the unit on
- 2 Ensure the Speaker Binding Posts(OUT R+/R-/L+/L-)do not short circuit or connect to ground
- 3 Check your local voltage level switches before turning the unit on
- 4 Turn down the audio source before turning the unit on for the first time
- 5 SGP1 is a pure power amplifier, which requires the audio source component to have Pre-Amp function
- 6 In order to avoid damaging the speaker, make sure that the Pre-Amp volume is low when you start it up for the first time
- 7 When you need to replace or disconnect a cable, please turn off SGP1 first
- 8 Please turn off SGP1 by press the power button first, then pull out the power cable or cut the main power

03 OPERATIONS AND STATUS INDICATORS

- 1 Turn On/Off the Power
 - Turn down the audio source before turning the unit on for the first time
 - Press the PWR button to turn the unit on or off
 - In the event of a total loss of AC power, all lights will slowly turn off within 30 seconds
- 2 PWR: Power Status Indicator
 - Orange LED light is Off = Power is Off
 - Orange LED light is On = Power is On = Normal operation

3 OUT L/R: Over-Heating Protection Indicator

- OUT L or OUT R orange LED light is on = Normal
- OUT L or OUT R red LED light is on = Over-heating protection (Both the output relay and the main power supply are shut down)

4 I/O TRIGGER

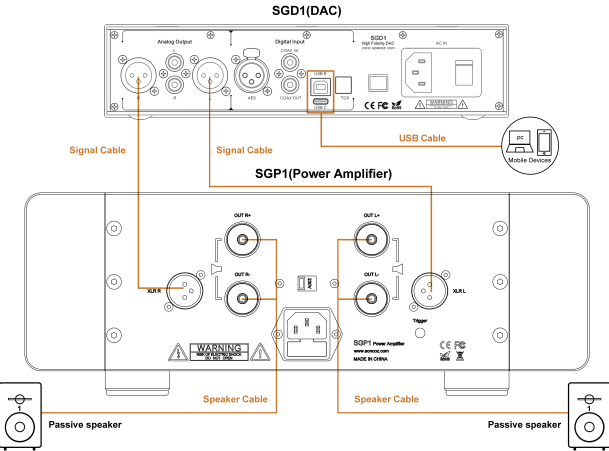
- The trigger connection on the SGP1 can be used as an input. The TRIGGER can be used to turn the SGP1 on or off automatically in sequence with other audio system components
- The jack is 3.5 mm TRS connector. The sleeve is wired to chassis ground and there is no connection to the power ground ring

04 SPECIFICATIONS

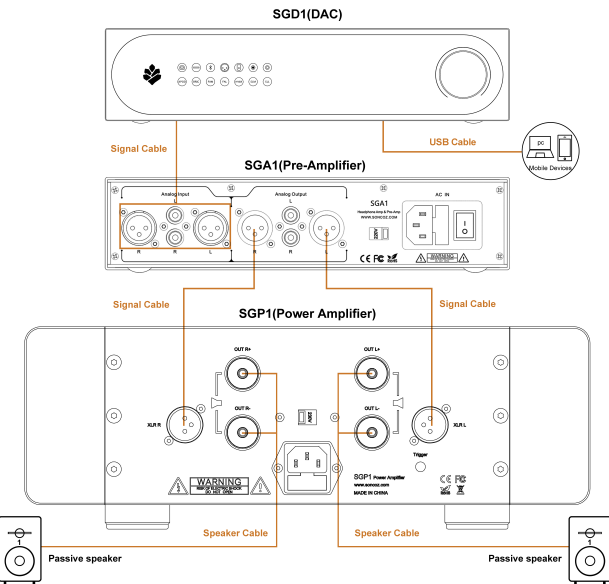
- 1 Dimensions(Containing Protrusion): 350 * 260 * 125 mm
- 2 Weight(Packaging and Accessories are not Included): 8 Kg
- 3 Rated Output Power(Maximum Undistorted Output):
 - 240 W x 2 @ 4 Ω ; 120 W x 2 @ 8 Ω
- 4 SNR(Full Rated Power Output): 130 dB, A-Wt., 20 ~ 20k Hz
- 5 THD+N(Full Rated Power Output):
 - < -110 dB(< 0.0003%), A-Wt., 20 ~ 20k Hz
- 6 Output Current(Load Impedance $\geq 2 \Omega$): 8.5A Peak Output Current per Channel
- 7 Output Voltage(Full Rated Power Output):
 - 95 Vpp Peak-to-Peak Output per Channel
- 8 Output Configuration(Patented Driver Module):
 - Bipolar 4-Parallel Push-Pull per Channel
- 9 Frequency Response(@ 20 ~ 20k Hz): ± 0.12 dB @ 8 Ω ; ± 0.13 dB @ 4 Ω
- 10 Crosstalk: -145 ~ -120 dB@ 1k ~ 20k Hz
- 11 Input Sensitivity(Fixed Gain Output): 2.5 Vrms or 28 dB
- 12 Input Impedance(Fixed Gain Output): 20k Ω
- 13 Environmental:
 - 0 $^{\circ}$ C to 50 $^{\circ}$ C Ambient Temperature
 - Up to 80% Humidity, Non-condensing

05 TYPICAL APPLICATIONS

1 SGD1+SGP1



2 SGD1+SGA1+SGP1



06 FAULT PROTECTION

The SGP1 is designed to detect Overloads, Short Circuits, Excessive Temperatures, and Low AC Input Voltages. When a potentially-damaging fault occurs, the SGP1 enters a "PROTECT" mode to protect against damage to the amplifier or speakers. If a fault has triggered the "PROTECT" mode, please turn off the SGP1. Identify and correct the cause of the fault before restarting it.

1 Fault Display

- PWR light is on, one or both OUT Red lights on (Note: This fault display will only persist if AC is present. In the event of a total loss of AC power, this error display will stay on for about 30 seconds and then all lights will turn off.)

2 Typical Causes

- The AC line voltage may have dropped below allowable limits for a few seconds
- The load Impedance of the speakers may be too low
- Heat sinks may be obstructed
- Amplifier has been overloaded with a high-amplitude test tone

3 Required Actions

- Check the AC power source
- Make sure the nominal STEREO load impedance is 3 Ohms or higher
- Maintain adequate clearance around heat sinks
- Allow time for the amplifier to cool
- Turn down the audio source
- Restart the SGP1

07 CONTENTS LIST

1 SGP1 X 1

2 AC power cable X 1

3 Trigger cable X 1

4 User manual X 1

Note: You can download the user manual on SONCOZ website(www.soncoz.com)