SpacEND 300B 动圈耳机放大器

使用说明书

设计简述

SpacEND 300B 动圈耳机放大器采用全平衡电子管线路，输入采用瑞士原装 LUNDAHL 输入牛为第一级缓冲与全平衡倒相，音量调节采用日本 ALPS 遥控四联高精度电位器；线路电压放大采用四颗 ECC801s（12AT7）与 ECC802s（12AU7），推动级采用二颗 ECC802s（12AU7），输出采用四颗直热电子管 300B；八颗耦合电容采用美国 V-cap 特氟龙发烧电容与德国蒙多福铜箔高级发烧电容；电源变压器、扼流圈与输出变压器均采用英国双 C 铁芯，由专业音频工作室采用 5N 单晶铜绕制完成；信号通道与主工作电源部分机内线，采用单晶银与进口镀银无氧铜线材连接。

SpacEND 300B 动圈耳机放大器主电源设计，采用 300 瓦英国双 C 铁芯单晶铜绕制电源变压器结构，电压放大供电与输出供电完全独立，并在电压放大供电通道上引入 274B 电子管作为高压缓冲，整机采用直流灯丝供电。为提高整机信噪而引入了六个扼流圈的 CLC 滤波线路，外加前级线路稳压电路，整流部分采用四颗美国原装 MR760 二极管，高压滤波电容采用六颗日本原装 Nichicon KX 发烧高压电容，确保纯净、高速、充沛能量的放大器供电。

SpacEND ZERO Electrostatic Headphone Amplifier User Manual

Design Introduction

SpacEND 300B The dynamic headphone amplifier adopts a fully balanced electronic tube circuit, and the input adopts the original Swiss LUNDAHL input cow as the first stage buffer and fully balanced phase inversion. The volume adjustment adopts a Japanese ALPS remote control quad high-precision potentiometer; The line voltage amplification adopts four ECC801s (12AT7) and ECC802s(12AU7), the propulsion stage adopts two ECC802s(12AU7), and the output adopts four direct heating electron tubes 300B; Eight coupling capacitors are made of American V-cap Teflon fever capacitors and German Mundorf copper foil advanced fever capacitors; The power transformer, choke coil, and output transformer are all made of dual C iron cores from the UK, and are wound with 5N single crystal copper by a professional audio studio; The signal channel and the main working power supply are connected to the internal wires using single crystal silver and imported silver plated oxygen free copper wire.

SpacEND 300B The main power supply design of the dynamic headphone amplifier adopts a 300 watt British dual C iron core single crystal copper wound power transformer structure. The voltage amplification power supply and output power supply are completely independent, and 274B electronic tubes are introduced as high-voltage buffers on the voltage amplification power supply channel. The entire machine uses DC filament power supply. To

improve the overall signal-to-noise ratio, a CLC filtering circuit with six chokes has been introduced, along with a front stage circuit voltage stabilizing circuit. The rectifier section uses four American original MR760 diodes, and the high-voltage filtering capacitor uses six Japanese original Nichicon KX fever high-voltage capacitors, ensuring pure, high-speed, and high-energy amplifier power supply.

技术参数

适配耳机：动圈耳机

耳机阻抗输出：32 欧、150 欧、600 欧

前级线路输出：RCA（600 欧）

电子管型号：ECC801s(12AT7)*2、ECC802s(12AU7)*4、300B*4、274B*1

输出耳机功率：9W（32 欧）

整机失真：< 0.12%

测试条件 THD+N，输入：2V rms，RZ：600 ohm，BW：DC—20KHz，A 记权

信号输入：XLR 平衡输入（PIN1：Ground or Shield ; PIN2:Positive(+ or hot) ; PIN3:Negative(- or cold)）与 RCA 单端输入各一组

输入电压：AC 110-220V 可切换

通过电源主机内部（需打开主电源机箱）的输入电压开关调整输入电压。注意！开机前请确认当前本地工作电压，调整 300B 动圈耳机放大器交流电源输入电压与本地电压一致后开机使用

电源保险丝：AC 220V（3.15A）；AC 110V（5A）

整机消耗功率：200W

主机机箱尺寸：430mmx410mmx240mm

电源机箱尺寸：430mmx410mmx150mm

Technical Specifications

Adaptable Headphones：Dynamic earphones

Headphone impedance output：32 ohms, 150 ohms, 600 ohms

Front stage line output：RCA（600 ohms）

Type of Electronic Tube：ECC801s(12AT7)*2、ECC802s(12AU7)*4、300B*4、274B*1

Output headphone power：9W（32 ohms）

THD+N：< 0.12%

Testing Conditions：THD+N，input：2V rms；RZ：600 ohm；BW：DC—20KHz A-weighted

Signal Input： XLR Balanced Input *1 （PIN1：Ground or Shield；PIN2:Positive(+ or hot)；PIN3:Negative(- or cold)）and RCA Single-ended Input *1

Input Voltage：AC 110-220V

Adjust the input voltage through the input voltage switch inside the power host (which requires opening the main power supply chassis). Attention! Before starting up, please confirm the current local working voltage and adjust the AC power input voltage of the 300B dynamic earphone amplifier to match the local voltage before starting up and using it

Power Fuse：AC 220V（3.15A）；AC 110V（5A）

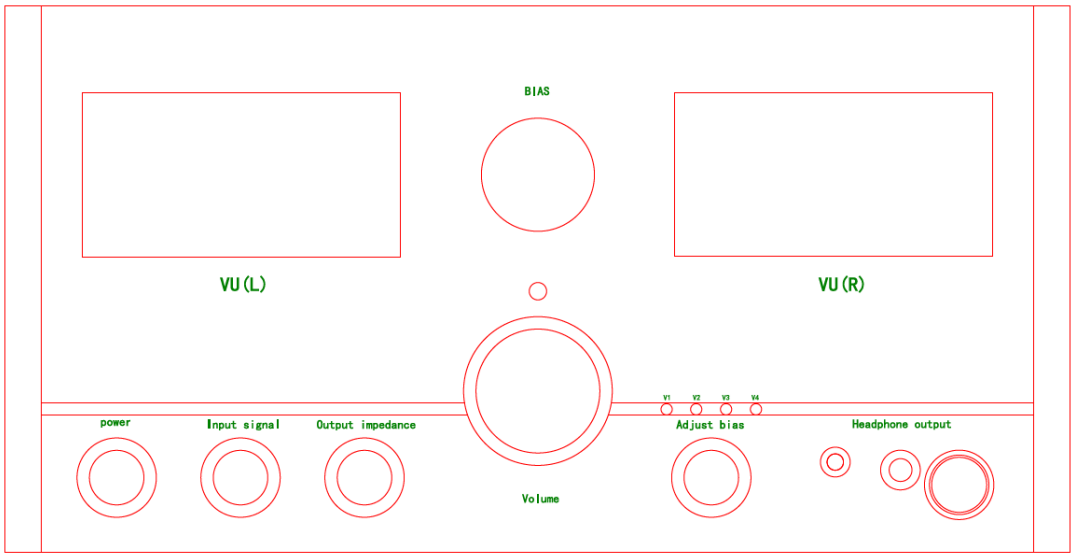
Power Consumption：200W

Main Unit Size： 430mmx410mmx240mm

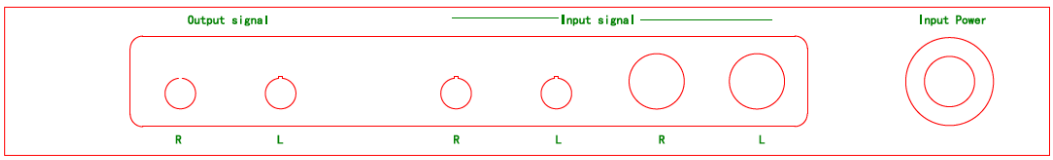
Power Supply Size: 430mmx410mmx150mm

前后面板（Front & Rear Panel）

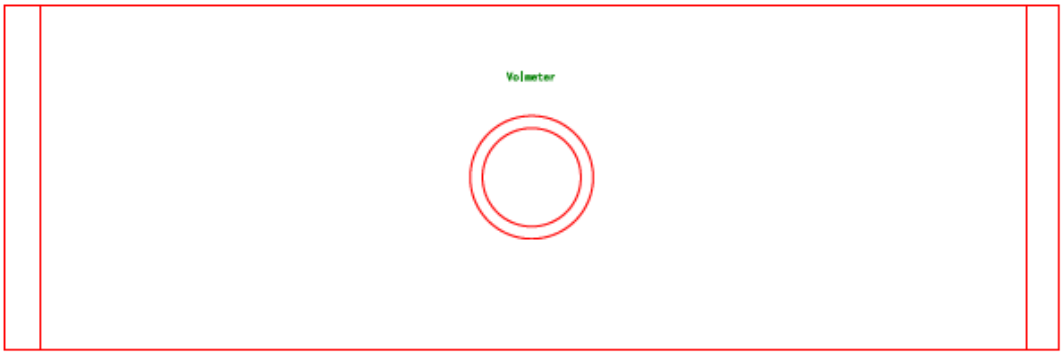
图一(主机前面板)



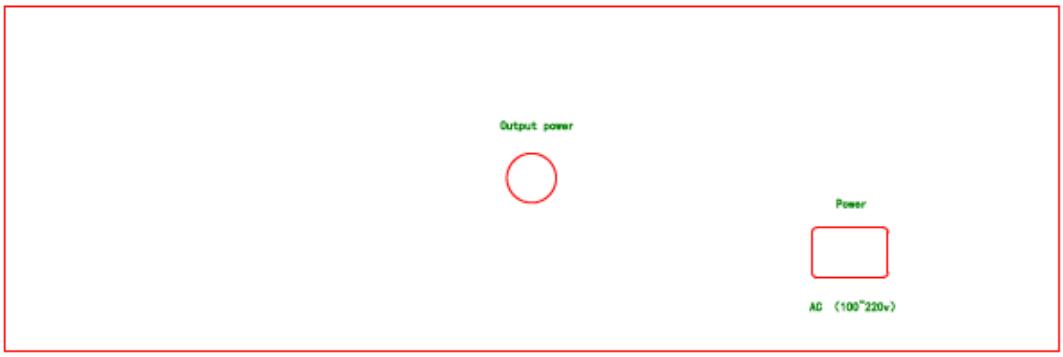
图二(主机后面板)



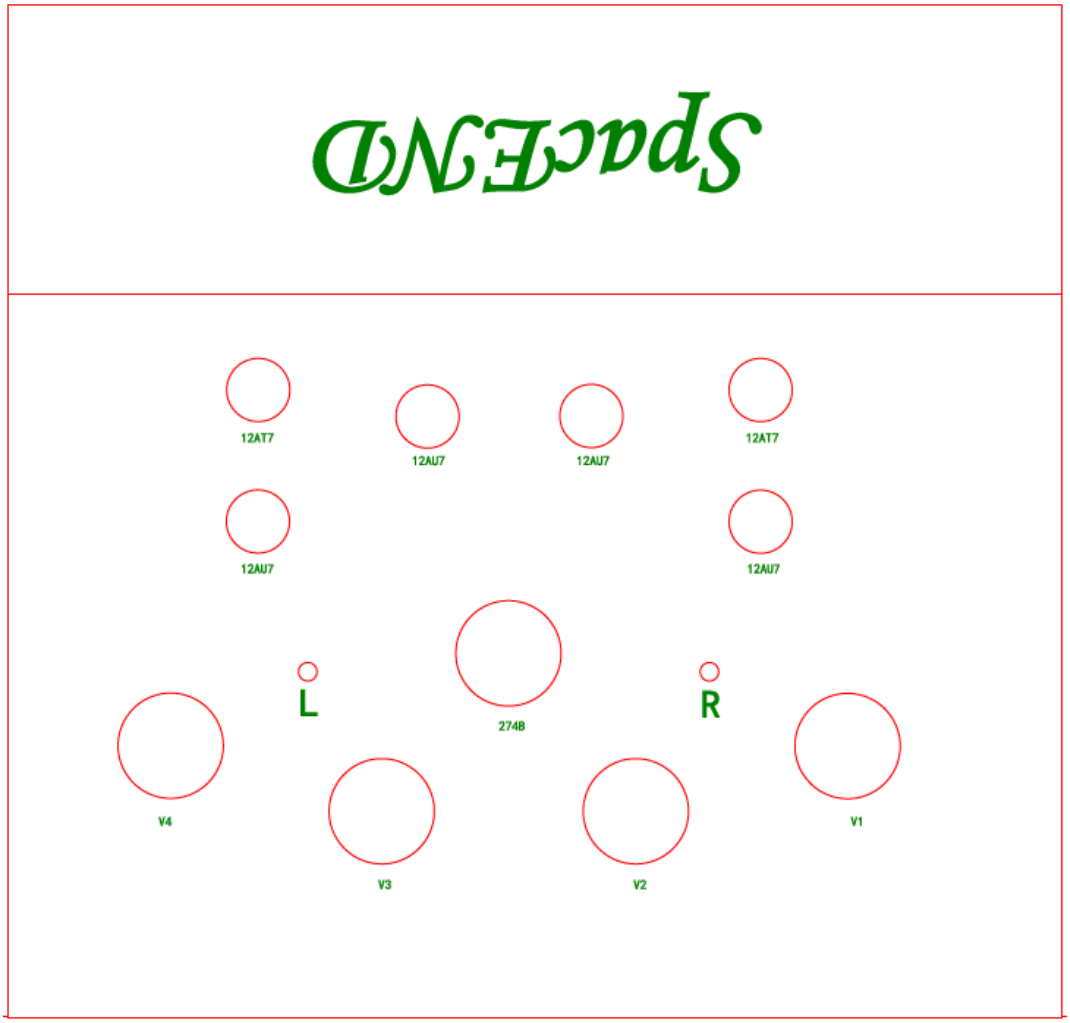
图三(电源前面板)



图四(电源后面板)



调整图例（Adjustment Scheme）



图五

工作点调整

在更换电子管及进行一年定期维护时，需要对主机 V1~V4 工作点进行调整，达到最高信噪比的要求。

具体操作步骤：

1. 插入耳机音量电位器开到最小，打开耳机放大器主电源，输出指示灯亮后开始进行调整；

2. 第一步图五上 R 与 L 的电位器逆时针调整到最小；
3. 第二步打开图一 Adjust bias 旋钮至 V1，中间 BIAS 表头点亮，调节面板上 V1 电位器，调整至 BIAS 表读数 50ma，V2~V3 依次重复前面操作，使得 V1~V4 的 BIAS 表的读数都达到 50ma；
4. 第三步关闭 Adjust bias 旋钮（BIAS 表灯灭），分别顺时针或逆时针调整 V2（R 声道）与 V4（左声道）至左右声道噪声最小；
5. 第四步分别调整图五中的电位器 R 与 L，可以调整至耳放最小噪声；
6. 最后在打开 Adjust bias 旋钮（BIAS 表头点亮），调整 V1~V4 工作电流至 50ma 即可，关闭 Adjust bias 旋钮（BIAS 表灯灭），完成工作点调整。

   注：调整采用高灵敏度低阻耳机为佳。

保修条款

整机保修一年，电子管因外力造成损坏不在保修范围内，机器停产后负责维修五年

附件清单

1、 300B 动圈耳机放大器主机一台

2、 300B 动圈耳机放大器电源一台

3、 300B 动圈耳机放大器电源与主机连接线一条

4、 300B 电子管四枚

5、 ECC801s(12AT7)电子管两枚、ECC802s(12AU7)电子管四枚、274B 电子管一枚

6、 备用保险丝一枚

7、 使用说明书一本（U 盘）

警告

1. 300B 动圈耳机放大器电源与主机连接未完全接通前，严禁开启工作电源（AC220/100 伏）
2. 拆卸主机与静电耳机放大器电源之间的连接电源线时，必须切断电源（AC220/100 伏）超过 3 分钟
3. 当主机反复连接到 300B 动圈耳机放大器的电源时，两者之间的间隔不能少于 5 分钟。

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Working Point Adjustment

When replacing electronic tubes and conducting one-year regular maintenance, it is necessary to adjust the operating points of the host V1~V4 to meet the requirements of the highest signal-to-noise ratio.

Specific operating steps:

1. Insert the earphone volume potentiometer to the minimum, turn on the main power supply of the earphone amplifier, and start adjusting after the output indicator light is on;

2. Adjust the potentiometers of R and L on Figure 5 counterclockwise to the minimum in the first step;

3. In the second step, turn on the Adjust bias knob in Figure 1 to V1, turn on the middle BIAS meter head, adjust the V1 potentiometer on the panel, and adjust it to a reading of 50ma on the BIAS meter. Repeat the previous steps for V2~V3, so that the readings of the BIAS meters for V1~V4 all reach 50ma;

4. Step 3: Turn off the Adjust bias knob (BIAS meter light off), and adjust V2 (R channel) and V4 (left channel) clockwise or counterclockwise to minimize the noise in the left and right channels;

5. Step 4: Adjust the potentiometers R and L in Figure 5 to minimize the noise of the ear amplifier;

6. Finally, turn on the Adjust bias knob (BIAS meter head lit), adjust the V1~V4 working current to 50ma, turn off the Adjust bias knob (BIAS meter light off), and complete the adjustment of the working point.

Note: It is better to adjust to use high sensitivity and low impedance headphones.

Warranty

The whole set is guaranteed for one year. Any tube damage caused by

external force is not covered by the warranty. It is responsible for the maintenance for five years after the model is discontinued

Accessories

1. One 300B dynamic headphone amplifier host
2. One 300B dynamic headphone amplifier power supplyNational standard power cord *1
3. One 300B dynamic headphone amplifier power supply and host connection cable
4. 300B tube *4
5. Pre-installed ECC801s(12AT7) tube *2、ECC802s(12AU7) tube *4、274B tube *1
6. One spare fuse
7. One user manual (USB flash drive)

Warnings

1. It is STRICTLY FORBIDDEN to turn on the power supply (AC220/100V) before connecting to the main unit
2. Before disconnecting the power cord between the main unit and the power supply, turn off the power (AC220/100 volts) and wait for AT LEAST

3 minutes

3. When the main unit is repeatedly connected to the power supply, the interval between the two SHOULD NOT be less than 5 minutes

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