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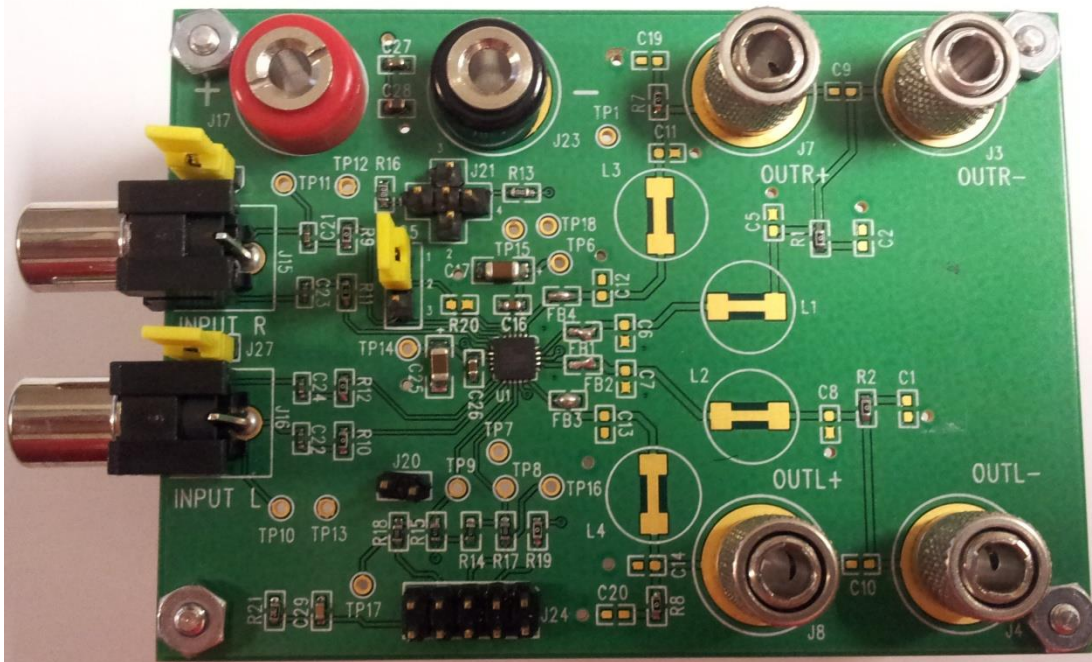
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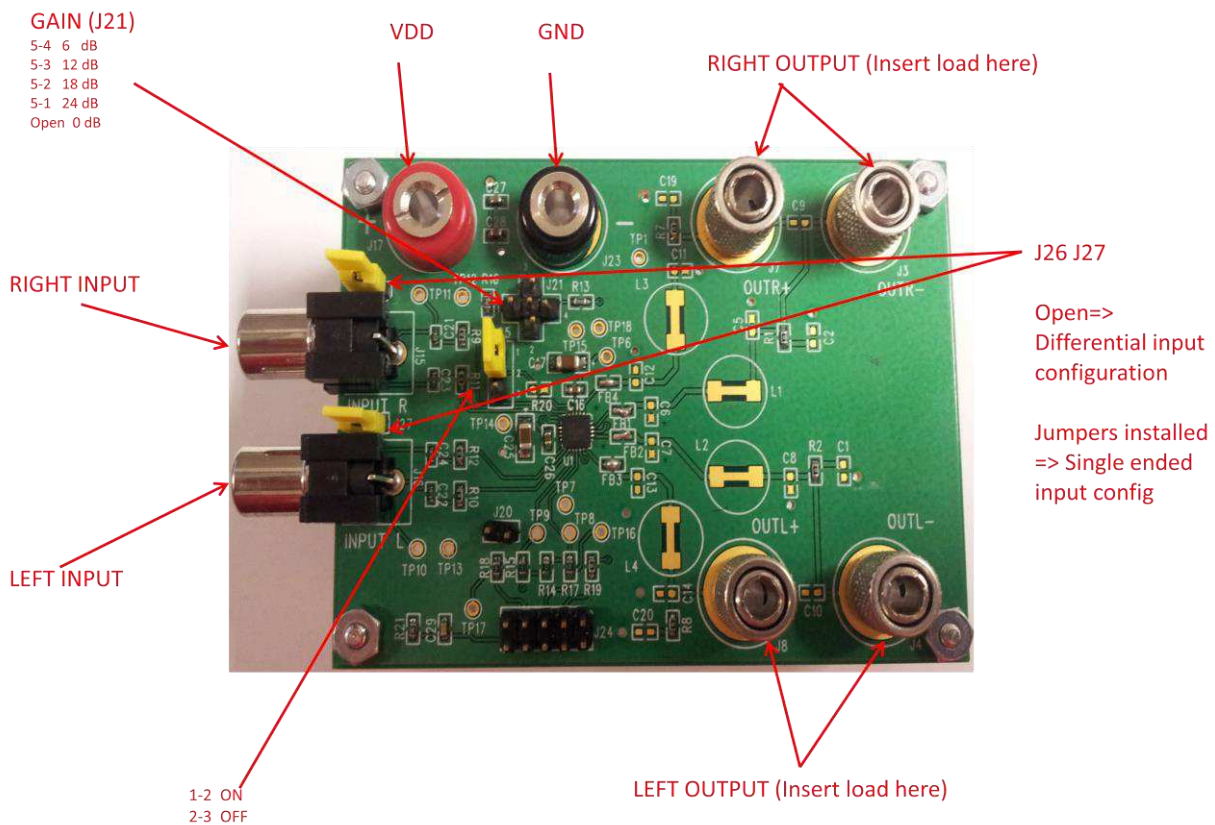


## NAU8223 Evaluation Board User Manual

## 1. General Description

The NAU8223 is a stereo high efficiency filter-free Class-D audio amplifier, which is capable of driving a 4Ω load with up to 3W output power. This device provides chip enable pin with extremely low standby current and fast start-up time. The ability to configure with either single-ended or differential inputs is included. The NAU8223 has four selectable gain settings of 0dB, 6dB, 12dB, 18dB and 24dB, which can be controlled by a single gain pin. The NAU8223 also has the provision for finer volume control using the I<sup>2</sup>C bus and the bundled GUI. With 87dB PSRR, 91% efficiency, ultra low quiescent current (i.e. 2.1mA at 3.7V for 2 channels) and superior EMI performance the NAU8223 is ideal for the portable applications of battery drive.

## 2. EVB Set Up



## Power Connection

An external DC Voltage supply with a compliance of at least 2 Amperes should be connected to J17 & J23. The supply leads should be kept short in order to avoid  $I \times R$  supply voltage drop at the amplifier.

## Jumper Settings

Install J25 on Pins 1-2 to turn ON the device, installing it on 2-3 turns the device OFF.

J21 is for Gain setting. J21 open means setting the gain of the device to 0dB. Installing a jumper in the following pins sets the gain of the device as follows:

5-4: (Center – Right Pin) 6dB  
5-3: (Center – Top Pin) 12dB  
5-2: (Center -- Left Pin) 18dB  
5-1: (Center – Bottom Pin) 24dB.

## Input Connection

Jumpers J26 and J27 are for selecting the input configuration mode to either, single ended (install jumpers) or differential (no jumpers installed).

## Output Connection

An 8 ohm 68uH load should be connected on each channel (J3- J7) and (J4 - J8). Connect the outputs to the inputs of the Audio Precision Analyzer (Balanced) via the AP0025 Aux Filter.

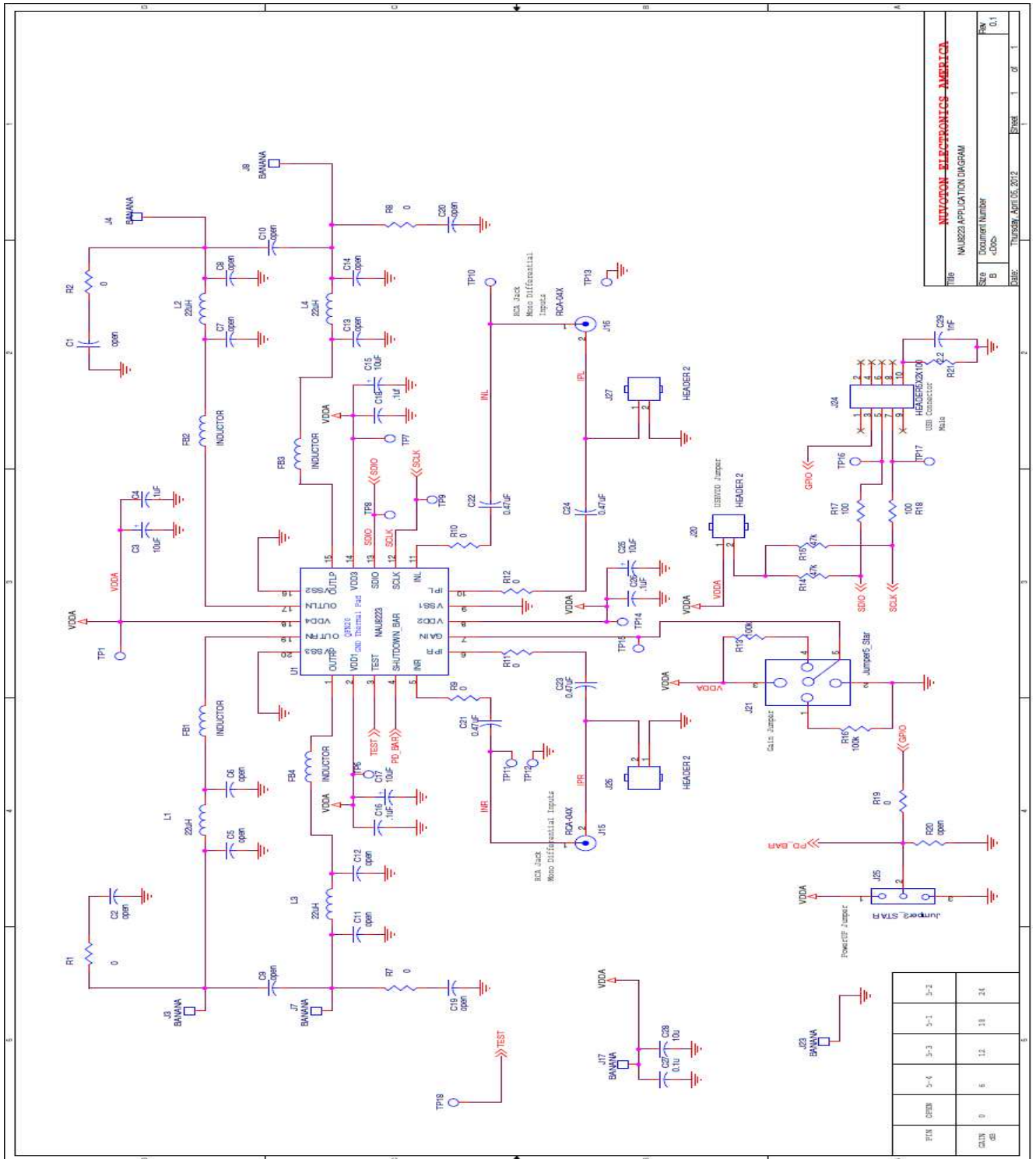
## Power Up

For optimum performance the board should be power up with J25 in the power down state. Once the power is applied J25 can be set to power up the board. Then, the input signal can be applied.

### Important note:

When using a power supply, it is recommended to use a 330 $\mu$ F capacitor across the power pins to suppress any supply glitches, as a safety measure. When a battery is used, the capacitor is not required. In normal applications too, the capacitor is not required.

3. Schematic:



**1 Revision History**

VERSION	DATE	PAGE/ CHAP.	DESCRIPTION
V.05	Oct. 8, 2013	-	First Release.
V1.0	April, 2016	-	Updated content

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