



Tisbury Audio
Challenge Amp 1

Reference Headphone Amplifier

Instruction Manual

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In the Box

1 x Challenge Amp 1 Headphone Amplifier

1 x 12 V AC Power Supply (plus international adaptor if required).

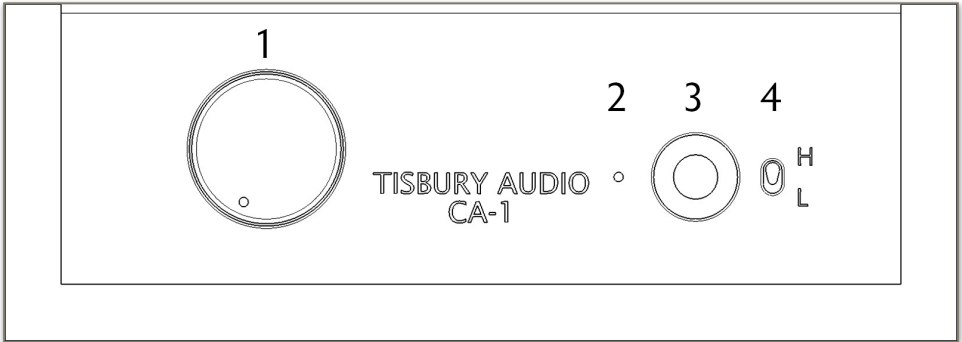
Overview

The Challenge Amp 1 is a reference class headphone amplifier, designed to deliver true and reliable transparency into virtually all headphones.

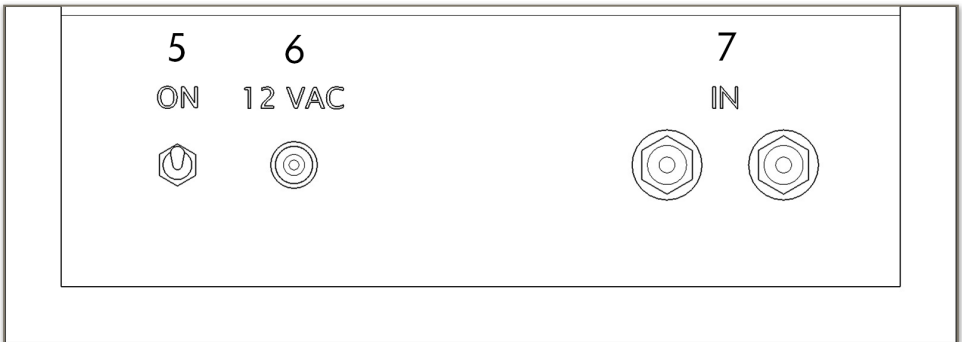
Features

- Two gain settings: 6 dB (2x), 16 dB (6.3x)
- High output power: 1 W into 50 ohms
- Ultra low distortion: 0.0003% THD (1 kHz, +6 dBu into 32 ohms)
- Low noise floor: -110 dBV, 128 dB dynamic range (A-weighted)
- Flat frequency response: -0.04 dB from 20 Hz to 20 kHz
- Top quality components: Alps "Blue Velvet" volume, Neutrik jack, Panasonic caps and Susumi 0.1% thin film resistors
- Muting relay for silent operation
- Compact footprint (W 204mm x D 170mm x H 74mm)

Front



Rear



1. Volume Control
2. Status LED (Blue = normal, Green = muting relay active)
3. 1/4" (6.35mm) Headphone Jack
4. Gain Switch (H = high, L = low)
5. Power Switch
6. Power Jack (Use included power adaptor only)
7. RCA Phono Input

Caution

The CA-1 is capable of driving headphones to extremely loud volumes that could cause permanent hearing damage. Never listen at a level that is uncomfortable and don't listen at high volumes for extended periods of time. For more information on listening safety and hearing damage, please visit: www.dangerousdecibels.org

Usage Instructions

WARNING: the powerful output of the CA-1 could damage your headphones if not used cautiously. We strongly recommend the following procedure when switching the amplifier on, especially when connecting a new pair of headphones for the first time:

1. Ensure all cables are connected
2. Set the volume to minimum and gain switch to "L"
3. Turn rear power switch on
4. Increase volume gradually to desired listening level
5. If more volume is required, set the gain switch to "H"

The gain stages are set to Low = 6 dB (2x) and High = 16 dB (6.3x).

If your music source has its own volume control, for best audio quality you should set this to maximum and adjust the listening level with the CA-1's volume.

Caring for the Wooden Enclosure

With proper care, the amplifier's wooden enclosure will last a lifetime. A few precautions will ensure it stays in perfect condition:

- Do not place near any heat source or on top of any hot equipment
- Avoid leaving in direct sunlight for long periods of time
- Avoid leaving in excessively dry or humid environments for long periods of time

Warranty

The CA-1 is covered by a 3 year warranty for materials and workmanship.

Warranty Repair Procedure:

1. Contact us with full details of the problem. If repairs are required, we will issue you an RMA number (Return Merchandise Authorisation).
2. Package items thoroughly, preferably in their original box.
3. Write your RMA number clearly on the box.
4. Return goods using a tracked and insured shipping service to:

Tisbury Audio
K2 Cooper House
2 Michael Road
London
SW6 2AD
United Kingdom

5. Items will be repaired, replaced or refunded at our discretion.

You pay the shipping costs to us and we pay the shipping costs back to you. Responsibility for loss or damage during transit is accepted by the respective sender.

The following are excluded from, or will void warranty coverage:

- Damage to Tisbury Audio products caused by misuse, neglect, accident, modification or abnormal operating conditions including use of an incorrect power adaptor.
- Modification or repair to products by any person or company not authorised by Tisbury Audio to carry out such works.
- Any products purchased from a non-authorized dealer.
- Any products whose serial numbers or labels have been modified or removed.
- Damage to products caused in transit, when the buyer is shipping their unit to us.
- Any change in appearance or warping of the wooden enclosure caused by exposure to sunlight, heat or humidity.

Warranty extends to original purchaser only or the original recipient if purchased as a gift and is not transferrable.

Tisbury Audio does not assume liability for loss of use or damage to any associated or connected equipment.

For any Tisbury Audio product in need of repair whose warranty is expired or void, please contact us for a repair quote.

Technical Specifications

Distortion	Percent	Level	Notes
THD 100 Hz	0.0004%	+6 dBu, 32 Ω	See (1)
THD 1 kHz	0.0003%	+6 dBu, 32 Ω	See (1)
THD 20 kHz	0.003%	+6 dBu, 32 Ω	See (1)
IMD CCIF	0.0004%	+6 dBu, 32 Ω	See (2)
Max Output	Volts (RMS)	Power	Notes
16 ohms	3.4 V	725 mW	See (3)
32 ohms	5.5 V	945 mW	See (3)
50 ohms	7.1 V	1010 mW	See (3)
100 ohms	8.1 V	655 mW	See (3)
300 ohms	8.2 V	225 mW	See (3)
600 ohms	8.3 V	115 mW	See (3)
Gain: Low / High	6 dB (2x)	16 dB (6.3x)	
Noise Floor: Low Gain	-110 dBV	3.2 μ V RMS	See (4)
Noise Floor: High Gain	-107 dBV	4.5 μ V RMS	See (4)
Dynamic Range	> 128 dB		See (4)
Output Impedance	< 0.2 ohms		
Input Impedance	10 kohms		
Freq. Response: 20 Hz - 20 kHz	\leq -0.04 dB		
Ch. Balance: full vol. / -45 dB	< 0.01 dB	< 1 dB typ.	
Crosstalk: 600 Ω / 32 Ω	-97 dB	-80 dB	1 kHz, 0 dBV
Power Supply	12 V AC	\geq 1000 mA	
Max Power Consumption	12 W		

All tests BW = 20 Hz - 22 kHz, except THD 20 kHz BW = 20 Hz to 96 kHz.

- (1) THD: 10 pass average, high gain setting, 1 V RMS input.
- (2) IMD: 19 kHz / 20 kHz 1:1, no averaging, high gain setting, 1 V RMS input.
- (3) Max continuous output, both channels driven, 1 kHz sine, \leq 1% THD.
- (4) Noise: A-weighted, no averaging. Dynamic range: ref. 8.3 V RMS.

Specifications are subject to change without notice.