

HB7 Headphone Buffer



Overview

The HB7 headphone buffer is used to amplify signals for headphones. The HB7 is a two channel device. The outputs include both a stereo headphone jack and Left and Right BNC connectors. The output level can be controlled with a Gain knob, and there is a Differential switch that allows the LEFT input to be output to the Left and Right outputs resulting in an additional 6 dB of gain.

Power

The HB7 Headphone Buffer is powered via the System 3 zBus (ZB1PS). No PC interface is required.

Features

Inputs

The HB7 has two inputs for signals up to ± 10 V, accessed through front panel BNC connectors labeled LEFT and RIGHT.

Outputs

The outputs include both a stereo headphone jack labeled PHONO and Left and Right BNC connectors.

Note: When monitoring both output channels with only one input connected, users should short the unused input channel to ensure maximum channel separation.

Gain

A single GAIN knob provides control over the signal output level in 3 dB steps from 0 to -27 dB.

AC/DC Switch

The AC/DC switch can be used to switch from DC coupling to AC coupling mode. In AC coupling mode, a 0.5Hz high pass filter is applied to the signals.

DIFF Switch

The DIFF switch will switch to a differential output mode that gives 6 dB of additional gain when connected to a speaker. When DIFF is switched on (the switch in the up position), the left channel input goes to both the left and right channels and is inverted on the right channel (the right input BNC is not used). The differential output will usually only be used with speakers, not headphones. To connect the speaker, connect the left output to one pole of the speaker and the right output to the other pole of the speaker (neither ground of the left nor right output will be connected).

HB7 Technical Specifications

Input Signal Range	±10 V peak
Power Output	0.12 W into 4 Ohms, 0.25 W into 8 Ohms, 1.0 W into 32 Ohms
Spectral Variation	< 0.1 dB from 10 Hz to 200 kHz
Signal/Noise	117 dB (20 Hz to 80 kHz)
Noise Floor	9.2 μV rms
THD	< 0.0002% (1 kHz tone, +/- 7V peak)
Corner Frequency (AC-Coupled Mode)	0.5 Hz
Input Impedance	10 kOhm
Output Impedance	5 Ohm



