# SGI Desktop Audio Hardware Performance Specifications (Typical)

***Indigo***
***Indigo2***
***Indy***

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***NOTE:***
***All specifications subject to change without notice***

# INDIGO AUDIO PERFORMANCE

## ANALOG STEREO LINE LEVEL INPUTS

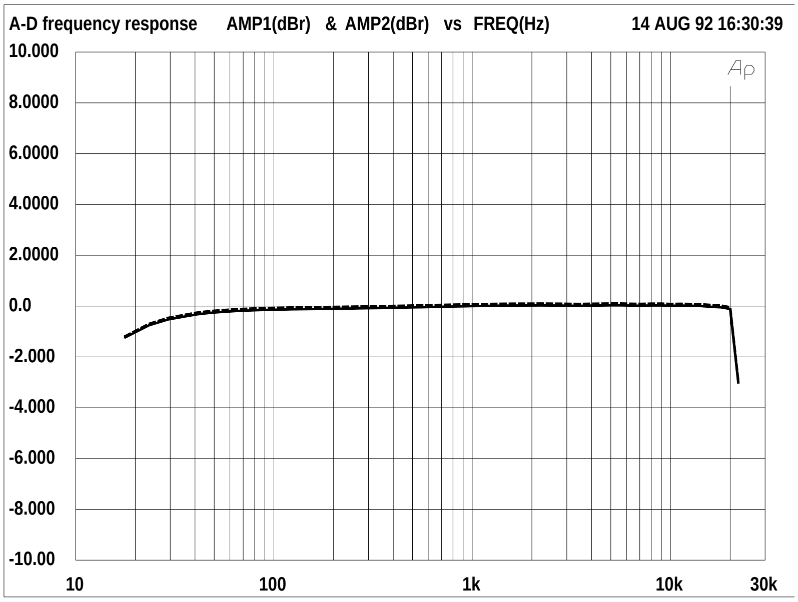
**Frequency Response:**
+/- 0.43dB 20Hz to 20kHz

**Total Harmonic Distortion + Noise:**
At 1kHz: 0.0027%  20Hz to 20kHz maximum: 0.0057%
(max occurs at 22.3Hz)

**Residual Noise, Unweighted:**
-90.77dB

**Residual Noise, A weighted:**
-93.73dB

**Interchannel Isolation:**
1kHz: -74.42dB
10kHz: -55.49dB
20kHz: -49.34dB




FREQUENCY RESPONSE

## PHYSICAL SPECIFICATIONS

**Connector:**
Single-ended 3.5mm stereo phone

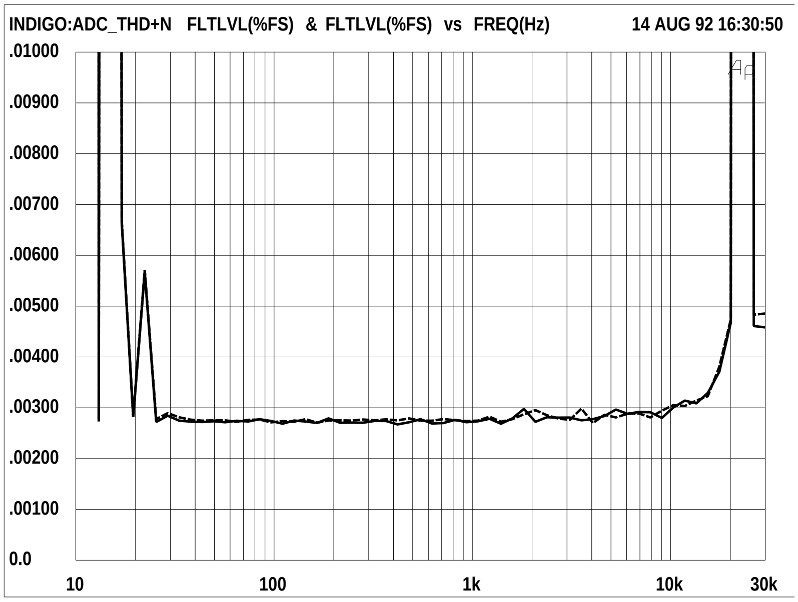
**Impedance:**
5kOhm nominal

**Amplitude at Full Scale:**
1Vpp to 10Vpp

**Level Control:**
2 independent digitally controlled analog attenuators

**Analog to Digital Converter:**
16 bit, Delta Sigma

**Sampling Rates:**
32kHz, 44.1kHz, 48kHz,
serial digital input rate,
divisors of above rates.
64x oversampling




TOTAL HARMONIC DISTORTION + NOISE

## TEST CONDITIONS

Unless otherwise stated, all parameters are measured under the following conditions:

**Analog Test Signal Level:**
1Vrms

**Test Signal Output Impedance:**
600 Ohms

**Sampling Rate:**
48kHz

**Measurement Bandwidth:**
17Hz to 22kHz, Unweighted

# INDIGO AUDIO PERFORMANCE

## ANALOG STEREO LINE LEVEL OUTPUTS

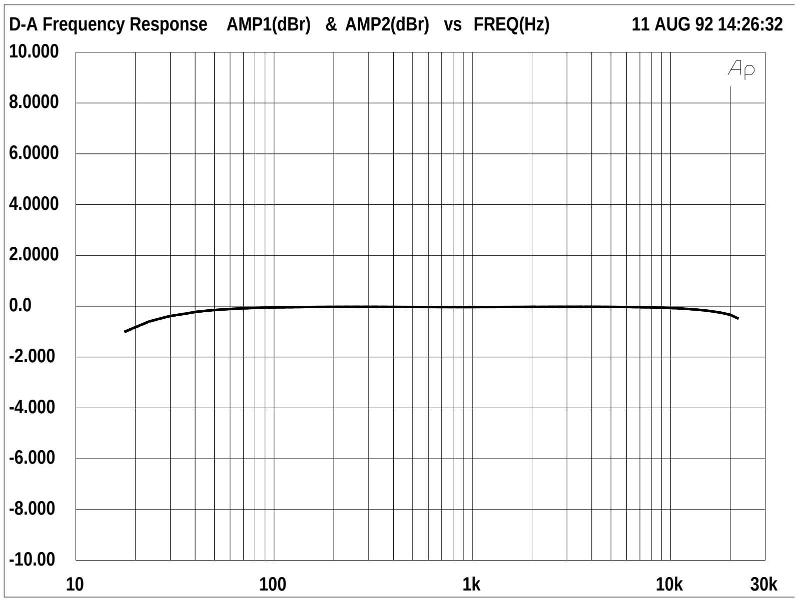
**Frequency Response:**
+/- 0.30dB 20Hz to 20kHz

**Total Harmonic Distortion + Noise:**
At 1kHz: 0.0059%  20Hz to 20kHz maximum: 0.0270%
(max occurs at 10.19kHz)

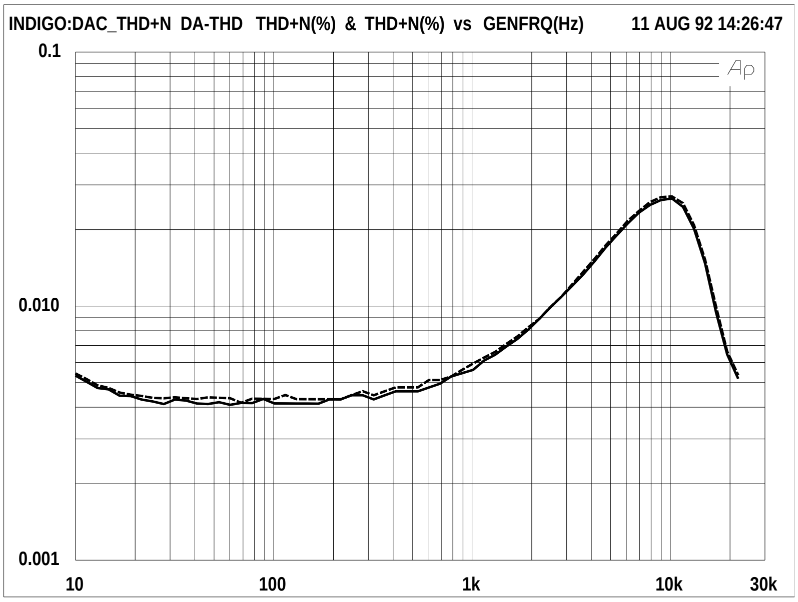
**Residual Noise, Unweighted:**
-87.52dB

**Residual Noise, A weighted:**
-91.04dB

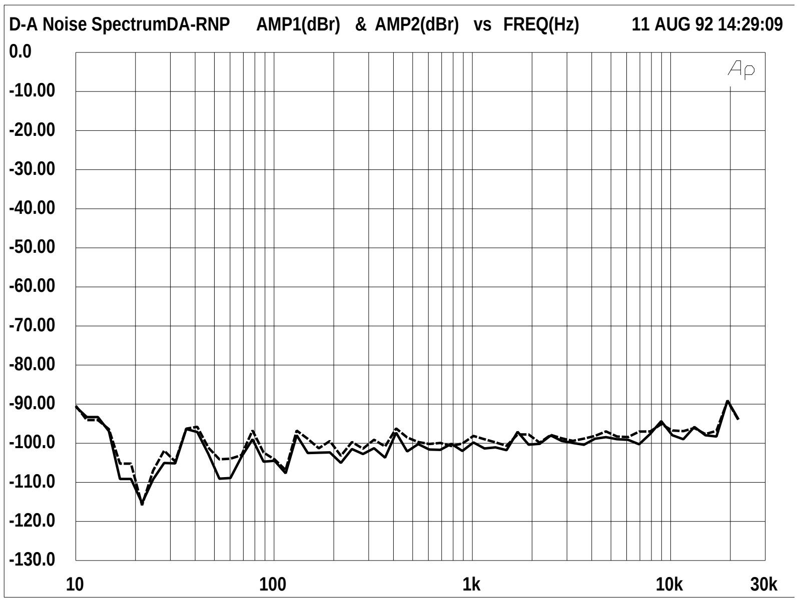
**Interchannel Isolation:**
1kHz: -74.90dB
10kHz: -63.75dB
20kHz: -59.74dB




FREQUENCY RESPONSE




TOTAL HARMONIC DISTORTION + NOISE




RESIDUAL NOISE

## PHYSICAL SPECIFICATIONS

**Connector:**
Single-ended 3.5mm stereo phone

**Impedance:**
600 Ohms nominal

**Amplitude at Full Scale:**
6.0Vpp

**Digital Output Filter:**
Linear Phase FIR
16 bit in, 18 bit out

**Digital to Analog Converter:**
18 bit
8x oversampling

**Sampling Rates:**
32kHz, 44.1kHz, 48kHz,
serial digital input rate,
divisors of above rates.

## TEST CONDITIONS

Unless otherwise stated, all parameters are measured under the following conditions:

**Digital Test Signal Level:**
100% of full scale

**Output Destination Impedance:**
5 kOhms

**Sampling Rate:**
48kHz

**Measurement Bandwidth:**
17Hz to 22kHz, Unweighted

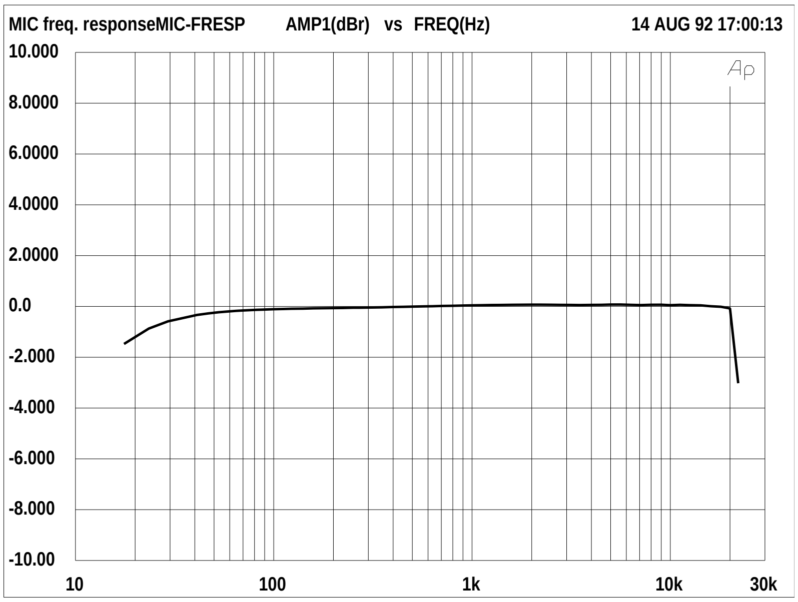
# INDIGO AUDIO PERFORMANCE

**MICROPHONE INPUT**

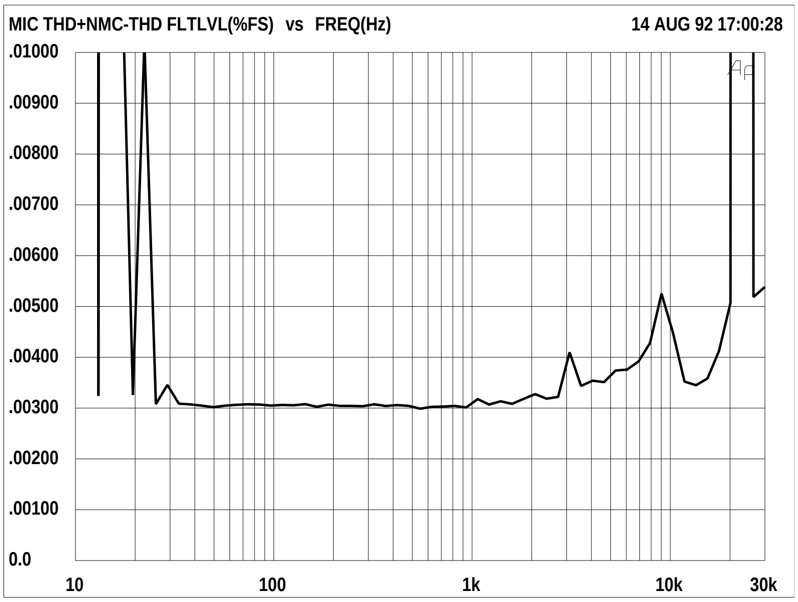
**Frequency Response:**
+/- 0.47dB 20Hz to 20kHz
**Total Harmonic Distortion + Noise:**
At 1kHz: 0.0030%  20Hz to 20kHz maximum: 0.0102%
(max occurs at 22.3Hz)
**Residual Noise, Unweighted:**
-90.54dB
**Residual Noise, A weighted:**
-93.51dB

**PHYSICAL SPECIFICATIONS**

**Connector:**
Single-ended 3.5mm stereo phone
**Impedance:**
2kOhm
**Amplitude at Full Scale:**
0.25Vpp to 2.5Vpp
**Microphone Power Supply:**
+3V DC, 1mA max




FREQUENCY RESPONSE




TOTAL HARMONIC DISTORTION + NOISE

**TEST CONDITIONS**

Unless otherwise stated, all parameters are measured under the following conditions:

**Analog Test Signal Level:**
0.75Vrms
**Test Signal Output Impedance:**
600 Ohms
**Sampling Rate:**
48kHz
**Measurement Bandwidth:**
17Hz to 22kHz, Unweighted

**STEREO HEADPHONE OUTPUT**

# INDIGO AUDIO PERFORMANCE

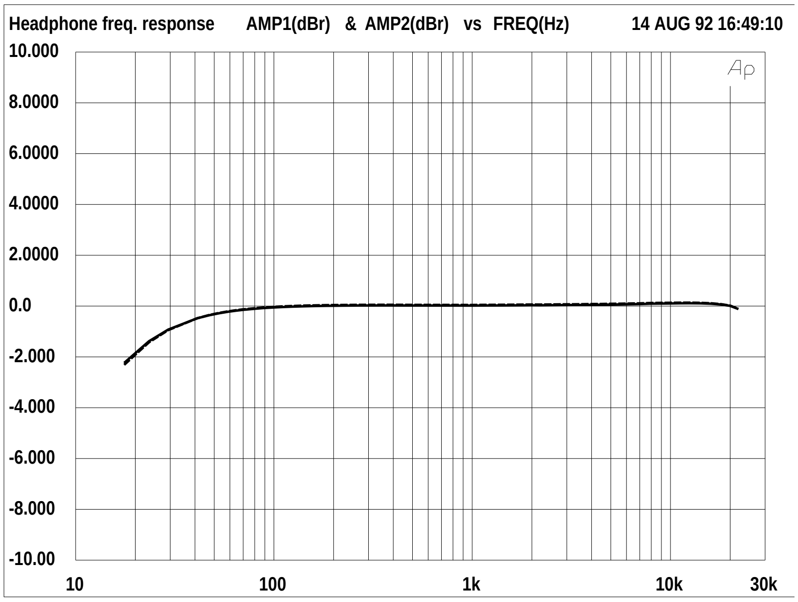
**Frequency Response:**
+/- 0.78dB 20Hz to 20kHz

**Total Harmonic Distortion + Noise:**
At 1kHz: 0.0744%  20Hz to 20kHz maximum: 0.3809%
(max occurs at 6.94kHz)

**Residual Noise, Unweighted:**
-89.77dB

**Residual Noise, A weighted:**
-94.55dB

**Interchannel Isolation:**
1kHz: -50.06dB
10kHz: -39.07dB
20kHz: -35.09dB




FREQUENCY RESPONSE

**PHYSICAL SPECIFICATIONS**

**Connector:**
Single-ended 3.5mm stereo phone

**Headphone Impedance:**
16 Ohms

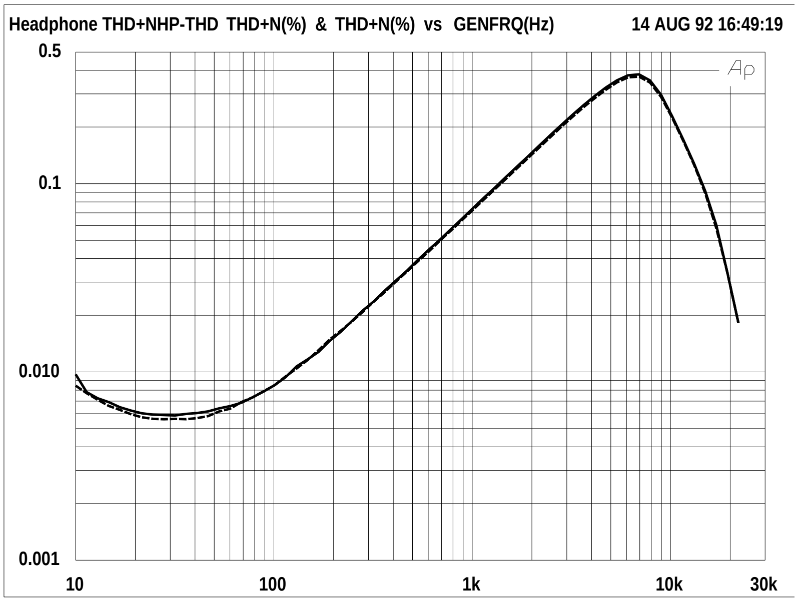
**Headphone Level:**
200mW into 32 Ohm load

**Headphone and Speaker Level Control:**
2 independent digitally controlled analog attenuators

**Speaker:**
2.6" diameter dynamic

**Speaker Sound Pressure Level:**
88dB/W

**Speaker Output Level:**
3W max, 1.5W nominal




TOTAL HARMONIC DISTORTION + NOISE

**TEST CONDITIONS**

Unless otherwise stated, all parameters are measured under the following conditions:

**Digital Test Signal Level:**
100% of full scale

**Output Destination Impedance:**
150 Ohms

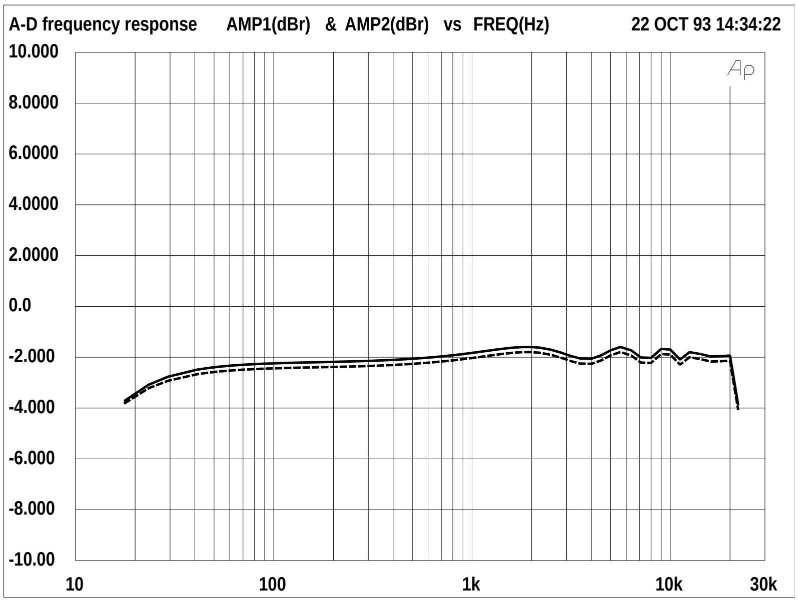
**Sampling Rate:**
48kHz

**Measurement Bandwidth:**
17Hz to 22kHz, Unweighted

# INDIGO2 AUDIO PERFORMANCE

## ANALOG STEREO LINE LEVEL INPUTS

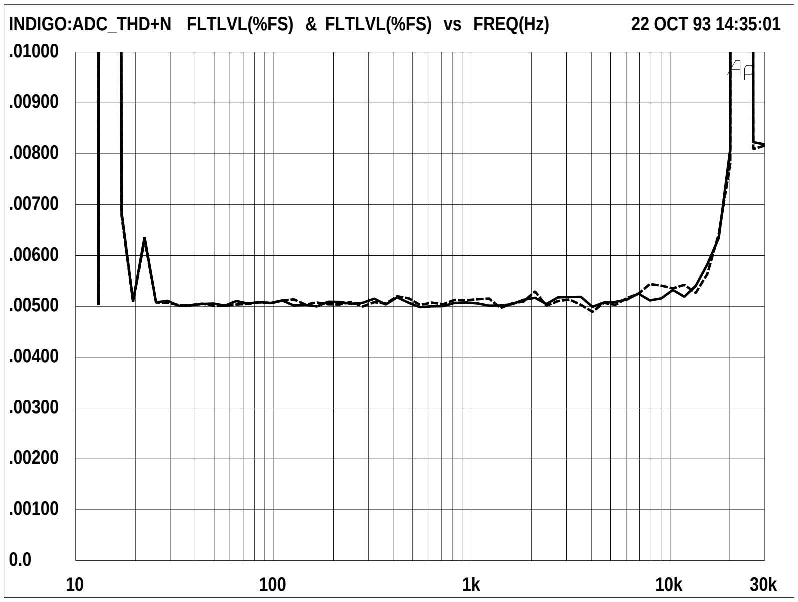
**Frequency Response:**
+/- 0.81dB 20Hz to 20kHz
**Total Harmonic Distortion + Noise:**
At 1kHz: <0.006%  20Hz to 20kHz maximum: <0.007%
**Residual Noise, Unweighted:**
-86dB
**Residual Noise, A weighted:**
-88dB
**Interchannel Isolation:**
1kHz: -82dB
10kHz: -72dB
20kHz: -67dB




FREQUENCY RESPONSE

## PHYSICAL SPECIFICATIONS

**Connector:**
Single-ended 3.5mm stereo phone
**Impedance:**
20kOhm nominal
**Amplitude at Full Scale:**
0.63Vpp to 8.4Vpp
**Level Control:**
2 2 independent digitally controlled amplifiers, internal to codecs
**Analog to Digital Converter:**
16 bit, Delta-Sigma
**Sampling Rates:**
32kHz, 44.1kHz, 48kHz, serial digital input rate, divisors of above rates.




TOTAL HARMONIC DISTORTION + NOISE

## TEST CONDITIONS

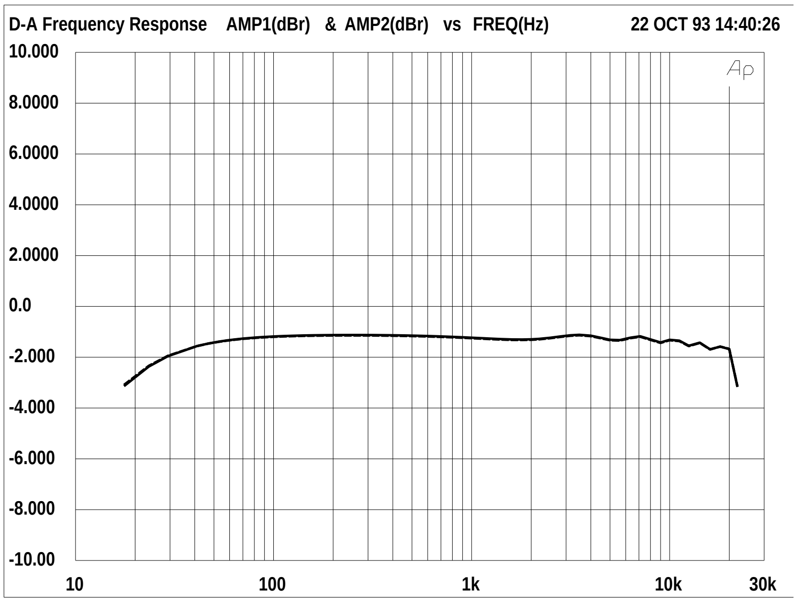
Unless otherwise stated, all parameters are measured under the following conditions:

**Analog Test Signal Level:**
1Vrms
**Test Signal Output Impedance:**
600 Ohms
**Sampling Rate:**
48kHz
**Measurement Bandwidth:**
17Hz to 22kHz, Unweighted

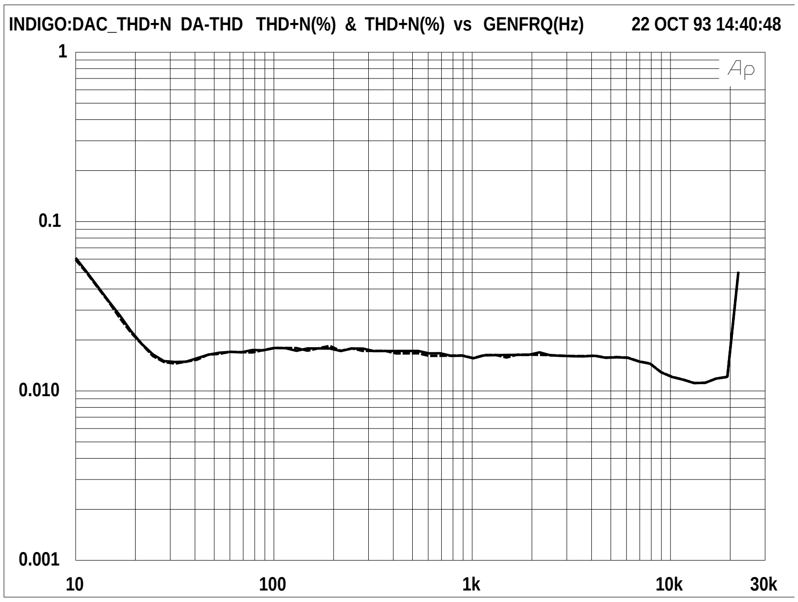
# INDIGO2 AUDIO PERFORMANCE

**ANALOG STEREO LINE LEVEL OUTPUTS**

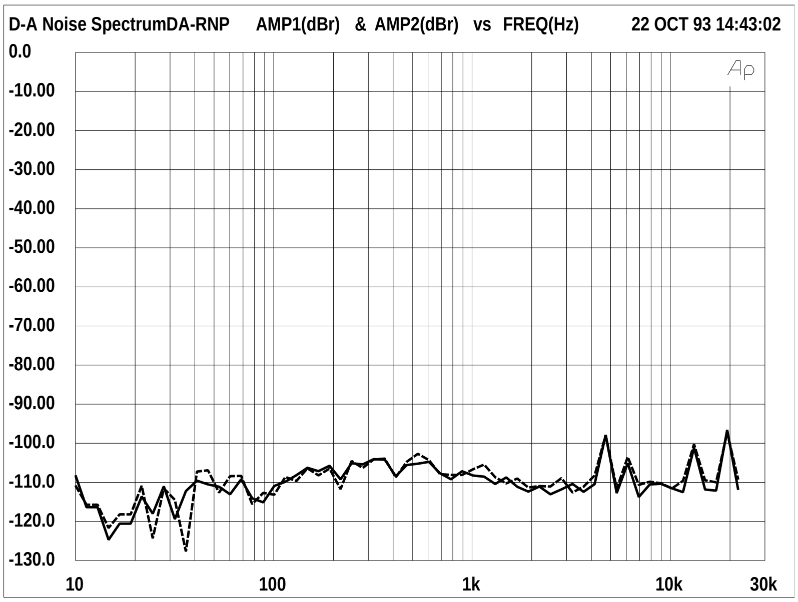
**Frequency Response:**
+/- 1.2dB 20Hz to 20kHz
**Total Harmonic Distortion + Noise:**
<0.02% 20Hz to 20kHz
**Residual Noise, Unweighted:**
-81dB
**Residual Noise, A weighted:**
-85dB
**Interchannel Isolation:**
1kHz: -80dB
10kHz: -75dB
20kHz: -71dB




FREQUENCY RESPONSE




TOTAL HARMONIC DISTORTION + NOISE




RESIDUAL NOISE

**PHYSICAL SPECIFICATIONS**

**Connector:**
Single-ended 3.5mm stereo phone
**Impedance:**
600 Ohms nominal
**Amplitude at Full Scale:**
4.7Vpp
**Sampling Rates:**
32kHz, 44.1kHz, 48kHz, serial digital input rate, divisors of above rates.

**TEST CONDITIONS**

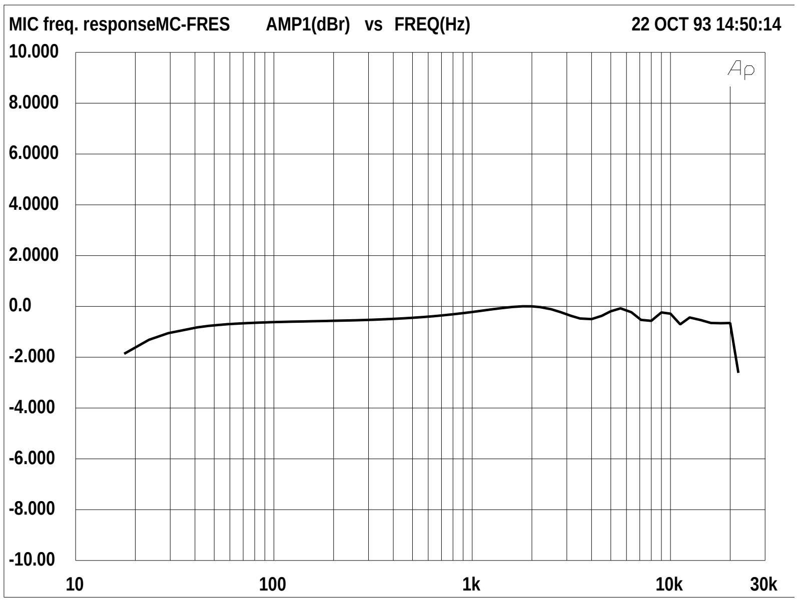
Unless otherwise stated, all parameters are measured under the following conditions:

**Digital Test Signal Level:**
100% of full scale
**Output Destination Impedance:**
5 kOhms
**Sampling Rate:**
48kHz
**Measurement Bandwidth:**
17Hz to 22kHz, Unweighted

# INDIGO2 AUDIO PERFORMANCE

**MICROPHONE INPUT**

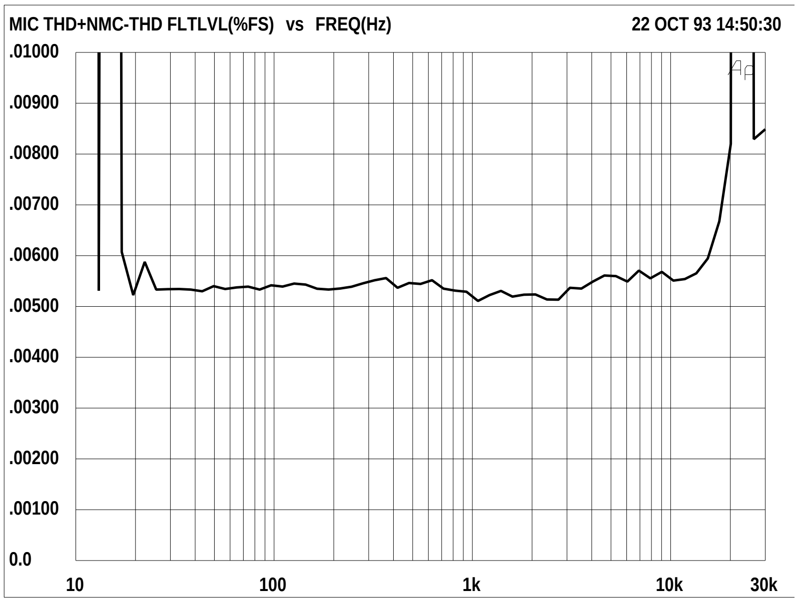
**Frequency Response:**
+/- 0.66dB 20Hz to 20kHz
**Total Harmonic Distortion + Noise:**
At 1kHz: 0.0053%  20Hz to 20kHz maximum: 0.0067%
(max occurs at 17.5kHz)
**Residual Noise, Unweighted:**
-86dB
**Residual Noise, A weighted:**
-89dB




FREQUENCY RESPONSE

**PHYSICAL SPECIFICATIONS**

**Connector:**
Single-ended 3.5mm stereo phone
**Impedance:**
1.5kOhm
**Amplitude at Full Scale:**
0.063Vpp to 0.84Vpp
**Microphone Power Supply:**
+3V DC, 1mA max




TOTAL HARMONIC DISTORTION + NOISE

**TEST CONDITIONS**

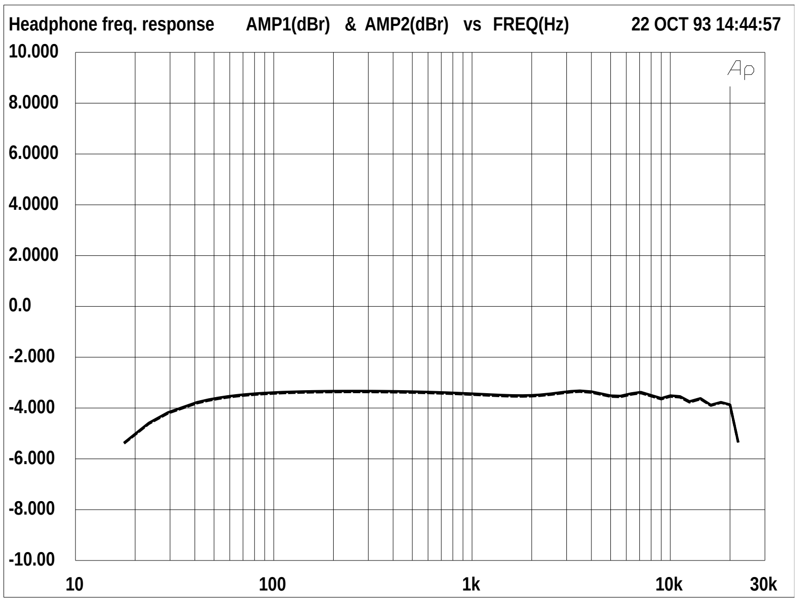
Unless otherwise stated, all parameters are measured under the following conditions:

**Analog Test Signal Level:**
0.1 Vrms
**Test Signal Output Impedance:**
600 Ohms
**Sampling Rate:**
48kHz
**Measurement Bandwidth:**
17Hz to 22kHz, Unweighted

**STEREO HEADPHONE OUTPUT**

# INDIGO2 AUDIO PERFORMANCE

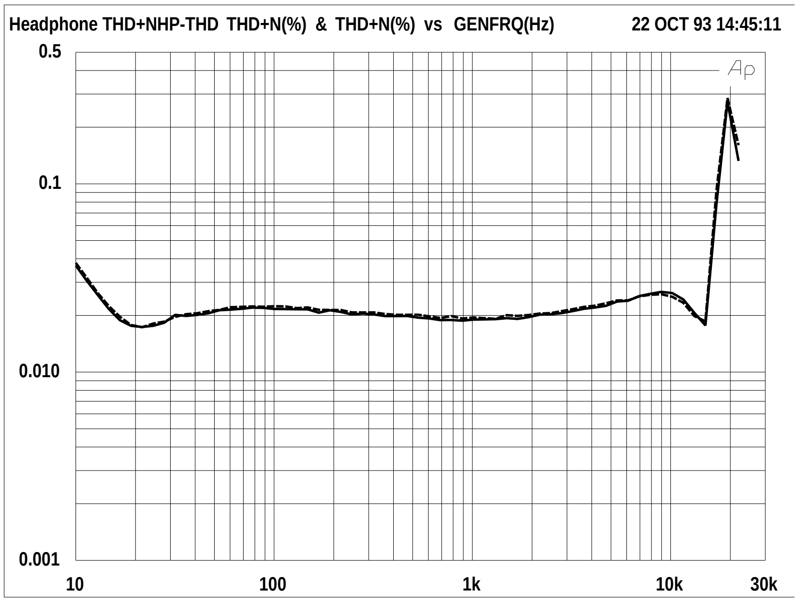
**Frequency Response:**
+/- 2.3dB 20Hz to 20kHz
**Total Harmonic Distortion + Noise:**
At 1kHz: 0.02%  20Hz to 20kHz maximum: 0.3%
(max occurs at 19.3kHz)
**Residual Noise, Unweighted:**
-88dB
**Residual Noise, A weighted:**
-90dB
**Interchannel Isolation:**
1kHz: -87dB
10kHz: -76dB
20kHz: -73dB




FREQUENCY RESPONSE

**PHYSICAL SPECIFICATIONS**

**Connector:**
Single-ended 3.5mm stereo phone
**Headphone Impedance:**
10 Ohms
**Headphone Level:**
57mW into 32 Ohm load
**Headphone and Speaker Level Control:**
2 independent digitally controlled analog attenuators
**Speaker**
70mm x 40mm
**Speaker Sound Pressure Level:**
80dB @ 1W, 1 meter




TOTAL HARMONIC DISTORTION + NOISE

**TEST CONDITIONS**

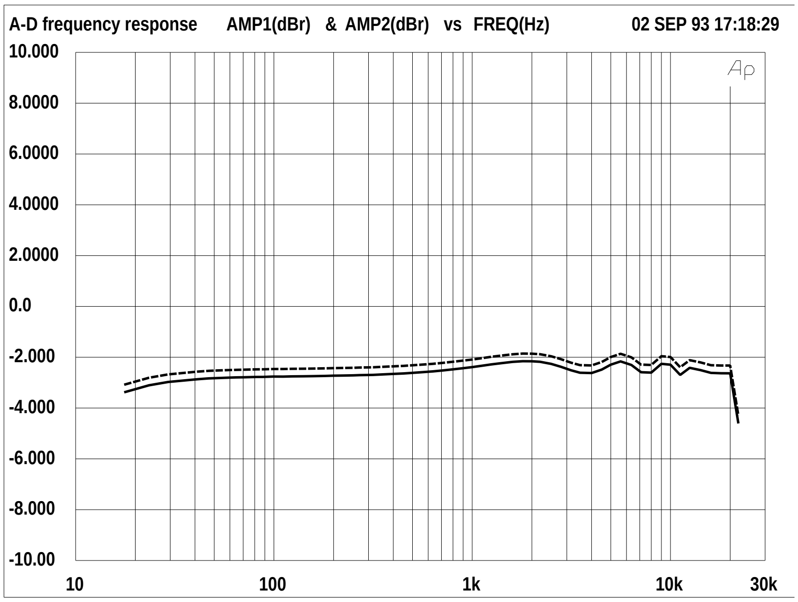
Unless otherwise stated, all parameters are measured under the following conditions:

**Digital Test Signal Level:**
100% of full scale
**Output Destination Impedance:**
150 Ohms
**Sampling Rate:**
48kHz
**Measurement Bandwidth:**
17Hz to 22kHz, Unweighted

# INDY AUDIO PERFORMANCE

## ANALOG STEREO LINE LEVEL INPUTS

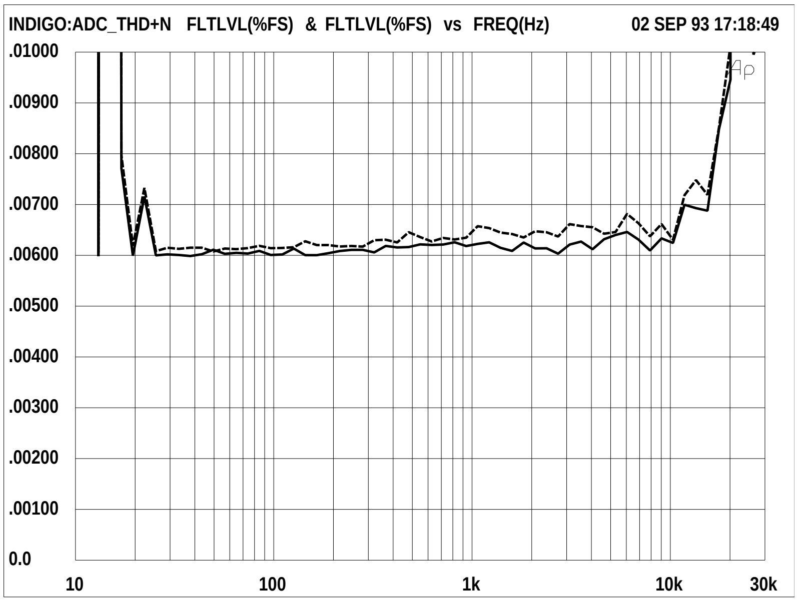
**Frequency Response:**
+/- 0.62dB 20Hz to 20kHz
**Total Harmonic Distortion + Noise:**
At 1kHz: 0.0063%  20Hz to 20kHz maximum: <0.009%
**Residual Noise, Unweighted:**
-84dB
**Residual Noise, A weighted:**
-87dB
**Interchannel Isolation:**
1kHz: -80dB
10kHz: -73dB
20kHz: -68dB




FREQUENCY RESPONSE

## PHYSICAL SPECIFICATIONS

**Connector:**
Single-ended 3.5mm stereo phone
**Impedance:**
10kOhm nominal
**Amplitude at Full Scale:**
0.63Vpp to 8.4Vpp
**Level Control:**
2 independent digitally controlled amplifiers, internal to codecs
**Analog to Digital Converter:**
16 bit, Delta Sigma
**Sampling Rates:**
32kHz, 44.1kHz, 48kHz, serial digital input rate, divisors of above rates.




TOTAL HARMONIC DISTORTION + NOISE

## TEST CONDITIONS

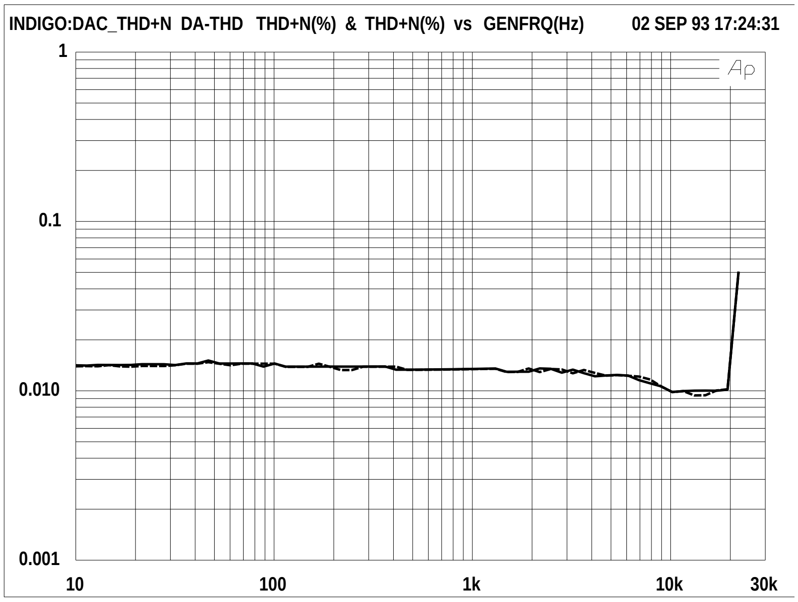
Unless otherwise stated, all parameters are measured under the following conditions:

**Analog Test Signal Level:**
1Vrms
**Test Signal Output Impedance:**
600 Ohms
**Sampling Rate:**
48kHz
**Measurement Bandwidth:**
17Hz to 22kHz, Unweighted

# INDY AUDIO PERFORMANCE

**ANALOG STEREO LINE LEVEL OUTPUTS**

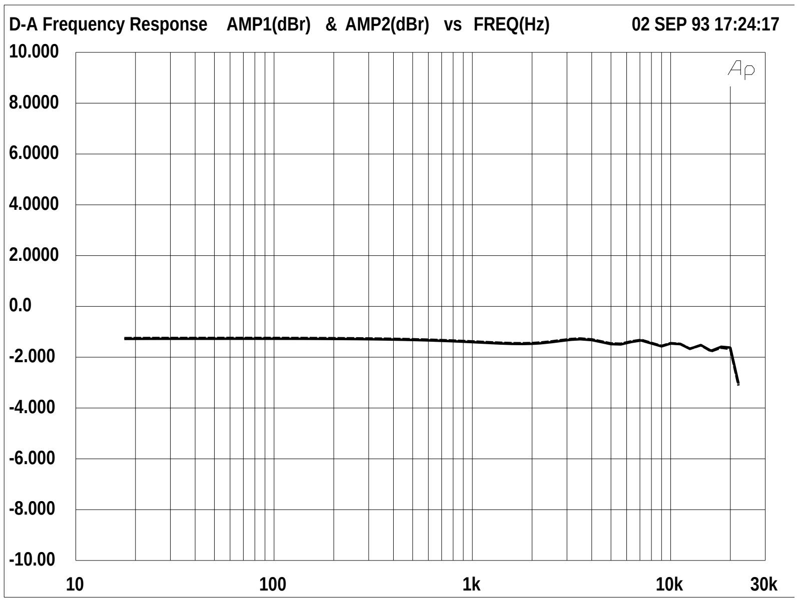
**Frequency Response:**
+/- 0.88dB 20Hz to 20kHz
**Total Harmonic Distortion + Noise:**
<0.02% 20Hz to 20kHz
**Residual Noise, Unweighted:**
-83dB
**Residual Noise, A weighted:**
-86dB
**Interchannel Isolation:**
1kHz: -82dB
10kHz: -68dB
20kHz: -64dB



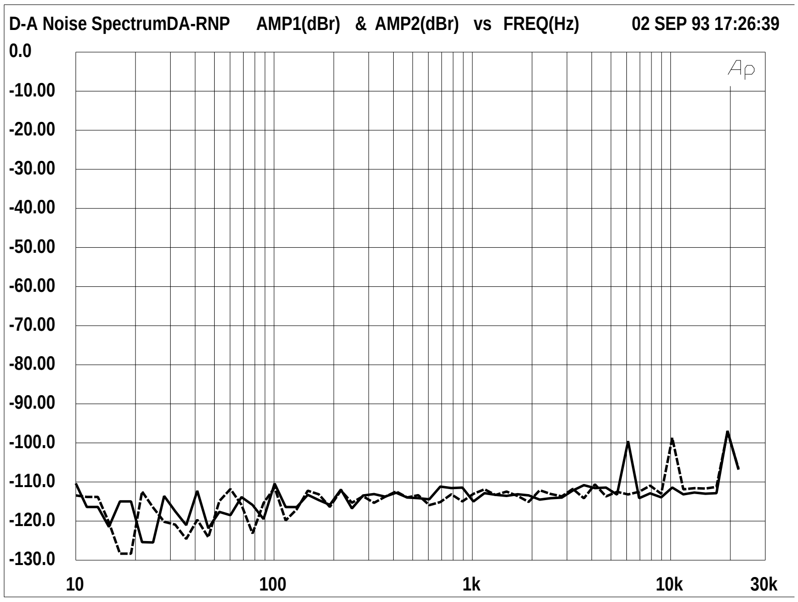

TOTAL HARMONIC DISTORTION + NOISE

**PHYSICAL SPECIFICATIONS**

**Connector:**
Single-ended 3.5mm stereo phone
**Impedance:**
600 Ohms nominal
**Amplitude at Full Scale:**
4.7Vpp
**Sampling Rates:**
32kHz, 44.1kHz, 48kHz, serial digital input rate, divisors of above rates.




FREQUENCY RESPONSE




RESIDUAL NOISE

**TEST CONDITIONS**

Unless otherwise stated, all parameters are measured under the following conditions:

**Digital Test Signal Level:**
100% of full scale
**Output Destination Impedance:**
5 kOhms
**Sampling Rate:**
48kHz
**Measurement Bandwidth:**
17Hz to 22kHz, Unweighted

## MICROPHONE INPUT

# INDY AUDIO PERFORMANCE

**Frequency Response:**
+/- 0.38dB 20Hz to 20kHz

**Total Harmonic Distortion + Noise:**
At 1kHz: 0.01%  20Hz to 20kHz maximum: 0.013%
(max occurs at 17.5kHz)

**Residual Noise, Unweighted:**
-80dB

**Residual Noise, A weighted:**
-83dB

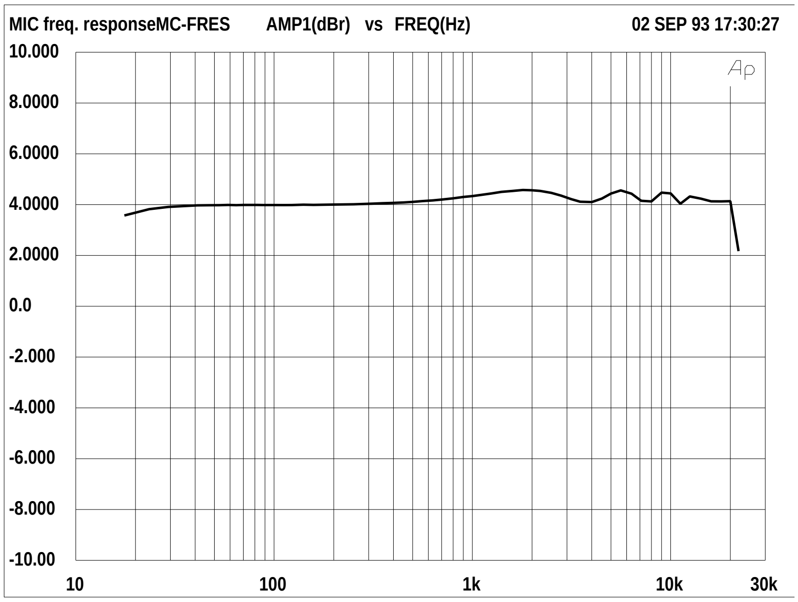
## PHYSICAL SPECIFICATIONS

**Connector:**
Single-ended 3.5mm stereo phone

**Impedance:**
2kOhm

**Amplitude at Full Scale:**
0.063Vpp to 0.84Vpp

**Microphone Power Supply:**
+3V DC, 1mA max




FREQUENCY RESPONSE

## TEST CONDITIONS

Unless otherwise stated, all parameters are measured under the following conditions:

**Analog Test Signal Level:**
0.1Vrms

**Test Signal Output Impedance:**
600 Ohms

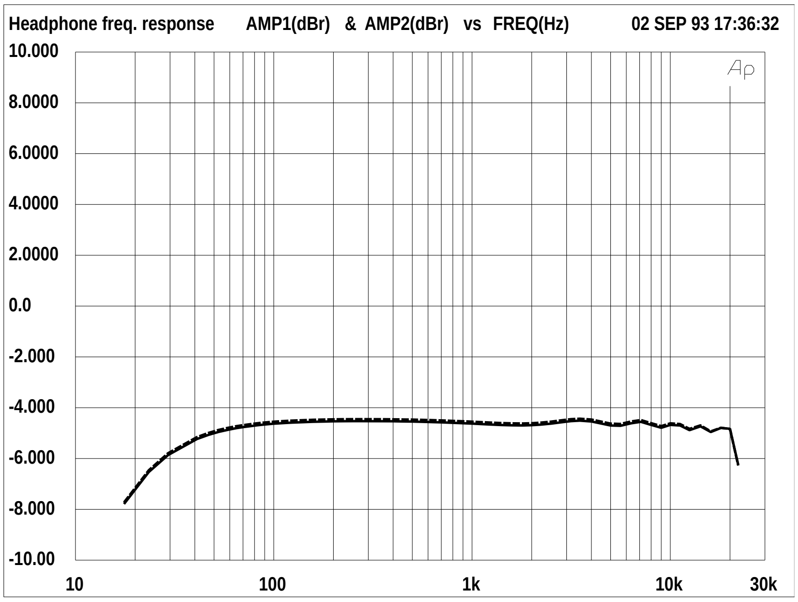
**Sampling Rate:**
48kHz

**Measurement Bandwidth:**
17Hz to 22kHz, Unweighted

**STEREO HEADPHONE OUTPUT**

# INDY AUDIO PERFORMANCE

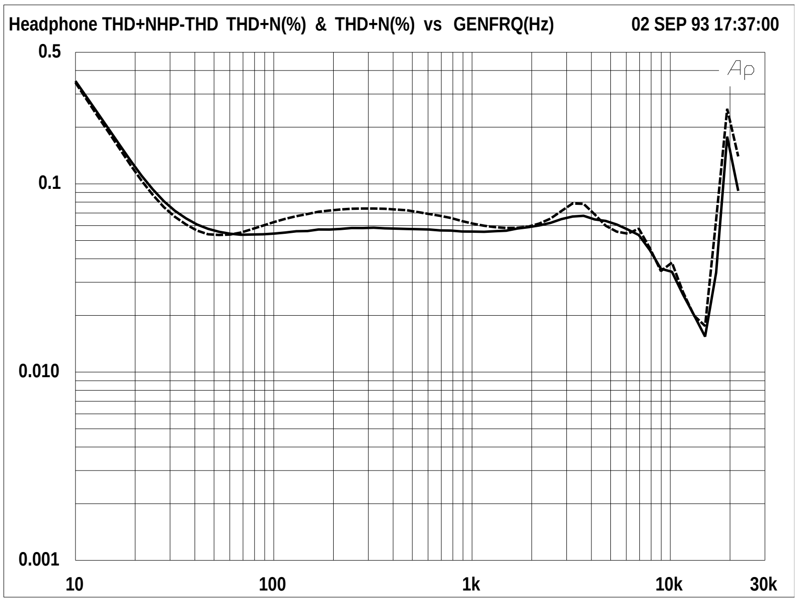
**Frequency Response:**
+/- 3.3dB 20Hz to 20kHz
**Total Harmonic Distortion + Noise:**
At 1kHz: 0.06%  20Hz to 20kHz maximum: 0.25%
(max occurs at 19.3kHz)
**Residual Noise, Unweighted:**
-90dB
**Residual Noise, A weighted:**
-93dB
**Interchannel Isolation:**
1kHz: -80dB
10kHz: -61dB
20kHz: -56dB




FREQUENCY RESPONSE

**PHYSICAL SPECIFICATIONS**

**Connector:**
Single-ended 3.5mm stereo phone
**Headphone Impedance:**
10 Ohms
**Headphone Level:**
57mW into 32 Ohm load
**Headphone and Speaker Level Control:**
2 independent digitally controlled analog attenuators
**Speaker**
70mm x 40mm
**Speaker Sound Pressure Level:**
80dB @ 1W, 1 meter




TOTAL HARMONIC DISTORTION + NOISE

**TEST CONDITIONS**

Unless otherwise stated, all parameters are measured under the following conditions:

**Digital Test Signal Level:**
100% of full scale
**Output Destination Impedance:**
150 Ohms
**Sampling Rate:**
48kHz
**Measurement Bandwidth:**
17Hz to 22kHz, Unweighted

## DIGITAL COAXIAL SERIAL INPUT/OUTPUT

**Connector:**
Single ended 3.5mm stereo phone
**Input Impedance:**
75 Ohms, transformer coupled
**Input Level:**
0.5Vpp nominal
**Input Sample Rates:**
30kHz to 50kHz
**Output Impedance:**
75 Ohms, transformer coupled
**Output Level:**
0.5Vpp into 75 Ohm load
**Output Sample Rates:**
32kHz, 44.1kHz, 48kHz,
serial input sample rate,
divisors of above rates.
**Resolution:**
Supports up to 24 bits per sample
**Coding:**
AES-3, IEC-958