

Laboratory Test Report

Date: 4-Feb-05

Test Report No. T-Pro Ears PE24

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ANSI S3.19-1974 Testing – Model PE24 Earmuffs

Performed For: Ridgeline, Inc.
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- 1.0 **Test Articles** – Ten Model PE24 Earmuff Hearing Protectors.
- 2.0 **Applicable Specifications** – ANSI S3.19-1974 (R1990), Real Ear Method
- 3.0 **Test Results** – The results of the hearing protector acoustical tests and the Noise Reduction Rating (NRR) calculations are presented in Table 3.1. Table 3.2 shows the earmuff mean attenuation levels. In accordance with 40CFR PART 211 – Product Noise Labeling, "Spectral uncertainty. Possible variation in exposure to the noise spectra in the workplace. (To avoid the under protection that would result from these variations relative to the assumed "Pink Noise" used to determine the NRR, an extra three decibel reduction is included when computing the NRR.)" The NRR rating in accordance with 40CFR211 is shown in Table 3.1.

Table 3.1: PE24 Earmuff NRR Calculation Worksheet

1/3 octave centerband frequency	Measured 1/3-octave Data			Exterior to Earmuff		A-weighted Sound Levels in Earmuff
	Sound levels exterior to Earmuff	Average Earmuff Attenuation	Standard Deviation of Attenuation	C-weighted Sound Levels	A-weighted Sound Levels	
125	90.7	12.6	1.5	90.5	74.6	63.4
160	88.7	14.2	2.1	88.6	75.3	63.1
200	87.8	15.5	3.0	87.8	76.9	64.4
250	87.9	18.4	1.6	87.9	79.3	62.5
315	86.8	21.8	1.9	86.8	80.2	60.3
400	87.8	24.7	2.5	87.8	83.0	60.8
500	87.3	28.4	2.4	87.3	84.1	58.1
630	90.1	34.2	2.2	90.1	88.2	56.2
800	90.7	37.6	2.2	90.7	89.9	54.5
1000	94.0	41.9	2.4	94.0	94.0	54.5
1250	94.3	39.6	2.4	94.3	94.9	57.6
1600	98.8	35.8	3.6	98.7	99.8	67.5
2000	104.5	38.1	5.2	104.3	105.7	72.8
2500	104.5	35.2	6.0	104.2	105.8	76.5
3150	101.5	30.3	4.0	101.0	102.7	76.4
4000	94.0	30.8	6.2	93.2	95.0	70.4
5000	90.5	37.9	9.2	89.2	91.0	62.3
6300	76.1	38.5	6.3	74.1	76.0	43.7
8000	71.8	39.7	5.2	68.8	70.7	36.2
Overall C Weighted Level =				109.4		
Overall A Weighted Level =				81.4		
Ear Muff NRR Value =				28		

Table 3.2: PE24 Ear Muff Mean Attenuation Levels

Frequency	125	250	500	1000	2000	3150	4000	6300	8000
Mean Attenuation	11	18	28	40	36	33	31	38	39
Standard Deviation	0.7	1.1	1.2	1.2	2.5	1.1	3.2	3.5	2.4