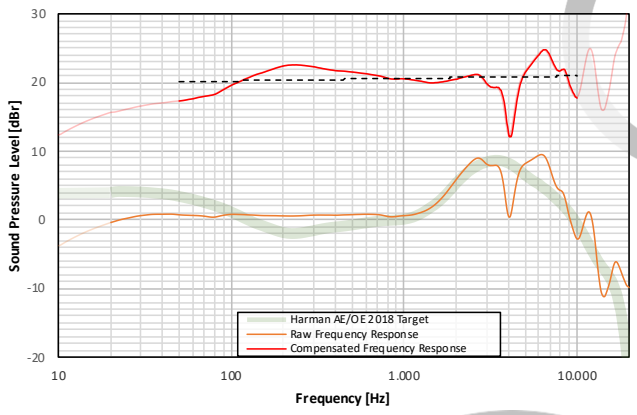
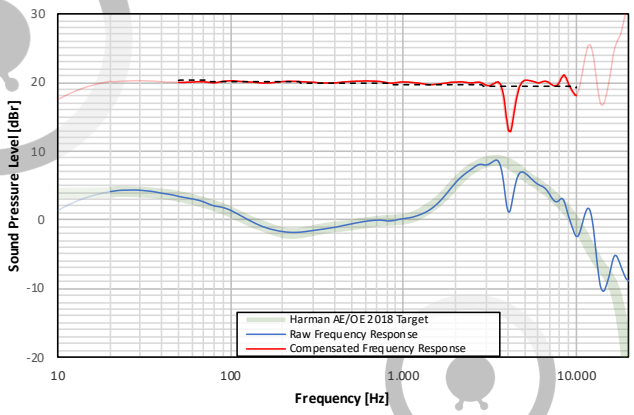
ORATORY1990

EQ setting for Beyerdynamic DT900 Pro X

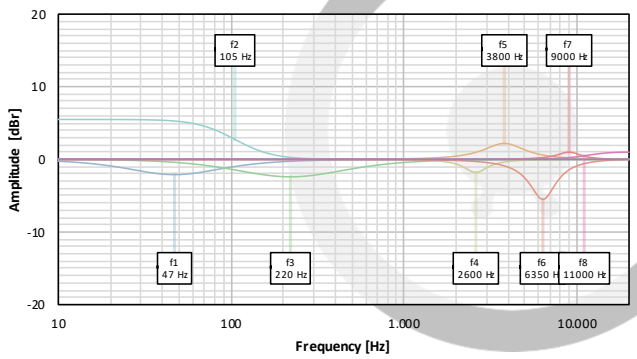
SPL Frequency Response without EQ



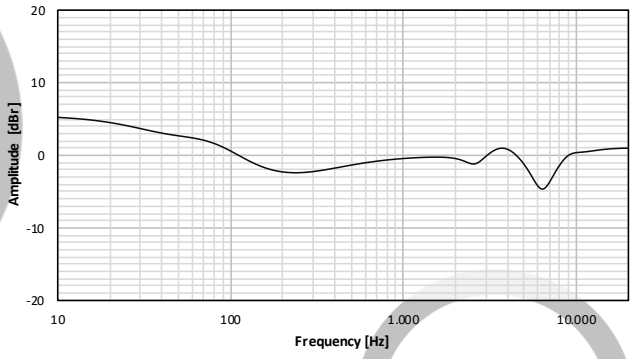
SPL Frequency Response with EQ



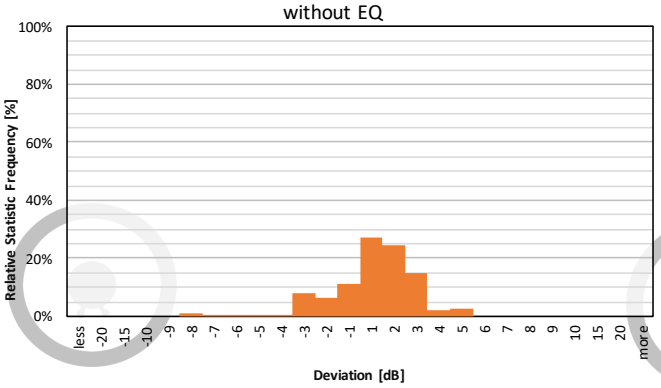
EQ Curve Individual Filters



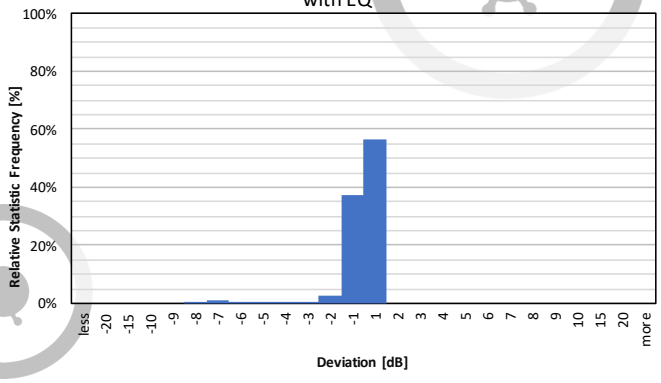
EQ Curve total



Error Curve Histogram without EQ



Error Curve Histogram with EQ



Filter Settings					
	Filter Type	Frequency	Gain	Q-Factor	BW
Band 1	PEAK	47 Hz	-2,1 dB	0,6	2,19
Band 2	LOW_SHELF	105 Hz	5,5 dB	0,71	1,89
Band 3	PEAK	220 Hz	-2,4 dB	0,5	2,54
Band 4	PEAK	2600 Hz	-1,8 dB	2,5	0,57
Band 5	PEAK	3800 Hz	2,2 dB	1,4	1,01
Band 6	PEAK	6350 Hz	-5,5 dB	2,0	0,71
Band 7	PEAK	9000 Hz	1,0 dB	2,0	0,71
Band 8	HIGH_SHELF	11000 Hz	1,0 dB	0,71	1,89
Band 9					
Band 10					

Preamp gain:
-5,3 dB

Deviation from Target	
Before EQ	After EQ
1,62 dB	0,33 dB

Preference Rating*	
Before EQ	After EQ
88/100	99/100

Adjust gain of band 2 to preference (bass)
Adjust gain of band 3 to preference (warmth)
Adjust gain of band 6 to preference (sharpness)
Adjust gain of band 8 to preference (airiness)

No, don't attempt to "fix" the notch at 4 kHz.

*preference rating prediction based on:
[1] S. Olive et al: "A Statistical Model That Predicts Listeners' Preference Ratings of In-Ear Headphones: Part 1" (2017)
[2] S. Olive et al: "A Statistical Model That Predicts Listeners' Preference Ratings of In-Ear Headphones: Part 2" (2017)
[3] S. Olive et al: "A Statistical Model That Predicts Listeners' Preference Ratings of Around-Ear and On-Ear Headphones" (2018)
The normalized preference ratings are used, where zero deviation from target equals a preference rating of 100

measured on GRAS45BC-10 KEMAR
GRAS KB5000/5001 anthropometric pinnae
APx515 or APx526 Signal Generator/Analyzer
APx1701 amplifier

v2.9
by oratory1990
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