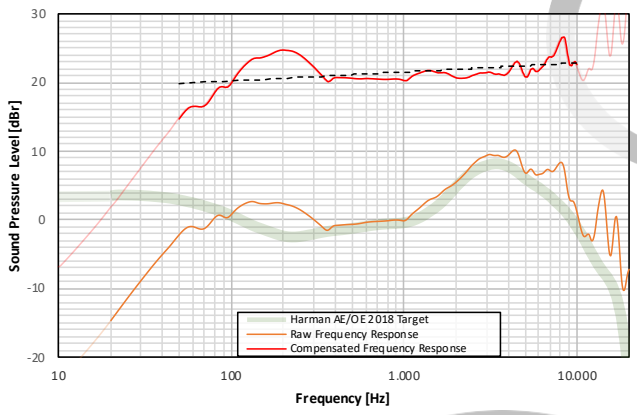
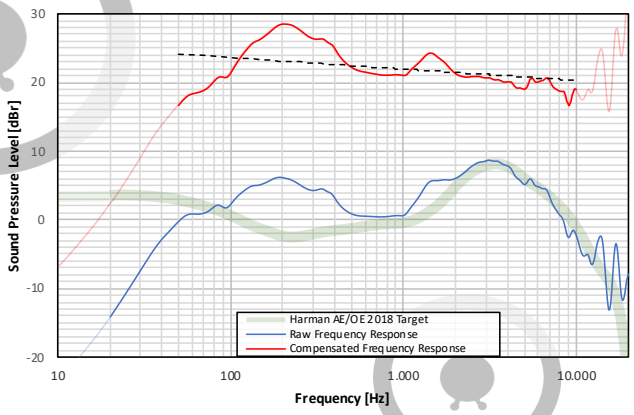
ORATORY1990

EQ setting for Audio Technica ATH-M40x

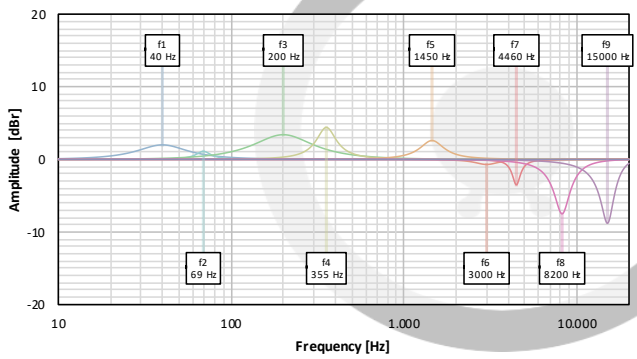
SPL Frequency Response without EQ



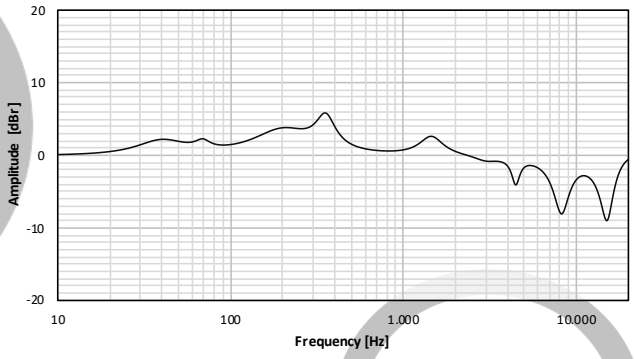
SPL Frequency Response with EQ



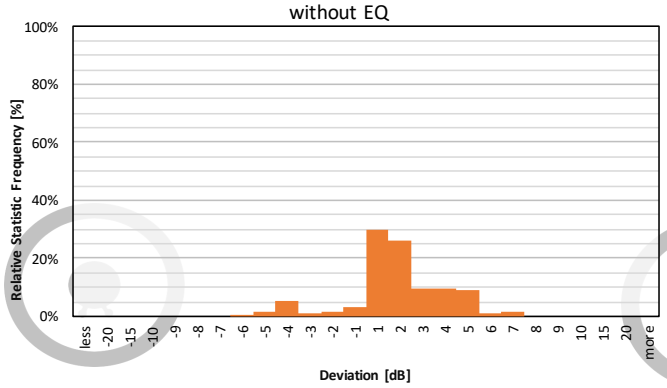
EQ Curve Individual Filters



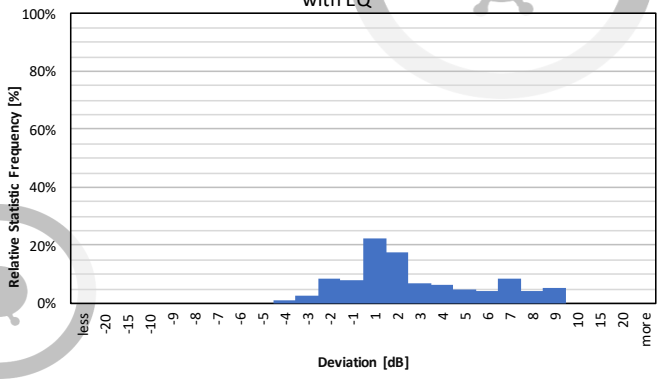
EQ Curve total



Error Curve Histogram without EQ



Error Curve Histogram with EQ



Filter Settings					
	Filter Type	Frequency	Gain	Q-Factor	BW
Band 1	PEAK	40 Hz	2,0 dB	1,2	1,17
Band 2	PEAK	69 Hz	1,1 dB	4,0	0,36
Band 3	PEAK	200 Hz	3,4 dB	1,0	1,39
Band 4	PEAK	355 Hz	4,4 dB	3,0	0,48
Band 5	PEAK	1450 Hz	2,6 dB	2,5	0,57
Band 6	PEAK	3000 Hz	-0,7 dB	2,5	0,57
Band 7	PEAK	4460 Hz	-3,5 dB	7,0	0,21
Band 8	PEAK	8200 Hz	-7,5 dB	3,0	0,48
Band 9	PEAK	15000 Hz	-8,8 dB	2,0	0,71
Band 10					

Preamp gain:
-5,9 dB

Deviation from Target	
Before EQ	After EQ
2,20 dB	2,81 dB

Preference Rating*	
Before EQ	After EQ
79/100	65/100

Adjust gain of band 2 to preference (Bass)
Adjust gain of band 6 to preference (Treble)
Adjust gain of band 10 to preference (airiness)

*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 GRAS43AC/43AG coupler with KB5000/5001 anthropometric pinna
BruelKjaer Nexus Type 2960 Low-Noise Signal Conditioner
APx515 or APx526 Signal Generator/Analyzer
APx1701 or GRAS 12AU amplifier

v2.9
by oratory1990
12.09.20