
Measurement Protocol

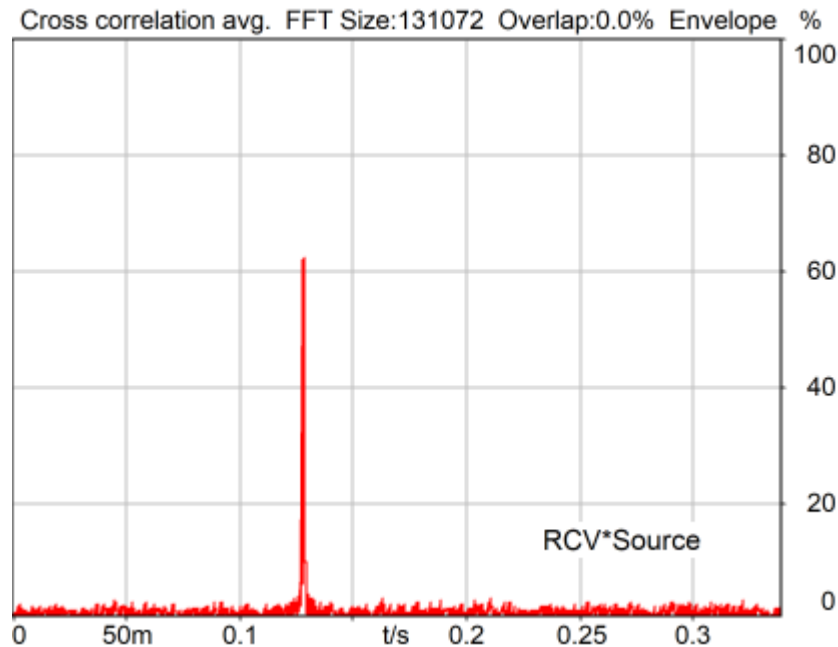
Measurement Object	FR1 n7_25 _DFT-s-OFDM_EVS NB 24.4kbps_CH507000
Description	CJWQ-W7L-P23120020 DTNC PM95

Project	TIA-5050 (2018-01)
Report Generation Date	2024/5/21 15:24
Responsible Person	audio

Overall Receive Delay NB, Index: 1	3
5.1a Receive Volume Control Performance 8N NB, Index: 1	3
5.1b Receive Volume Control Performance 2N NB, Index: 1	4
5.2 RCV Distortion and Noise - 400 Hz NB, Index: 1	5
5.2 RCV Distortion and Noise - 500 Hz NB, Index: 1	6
5.2 RCV Distortion and Noise - 630 Hz NB, Index: 1	7
5.2 RCV Distortion and Noise - 800 Hz NB, Index: 1	7
5.2 RCV Distortion and Noise - 1000 Hz NB, Index: 1	8
5.2 RCV Distortion and Noise - 1250 Hz NB, Index: 1	9
5.2 RCV Distortion and Noise - 1600 Hz NB, Index: 1	9
5.2 RCV Distortion and Noise - 2000 Hz NB, Index: 1	10
5.2 RCV Distortion and Noise - 2500 Hz NB, Index: 1	11
5.2 RCV Distortion and Noise - 3150 Hz NB, Index: 1	11
Report - Receive Distortion and Noise (Conversational Gain), Index: 1	12
5.2 RCV Distortion and Noise - 400 Hz NB, Index: 1	13
5.2 RCV Distortion and Noise - 500 Hz NB, Index: 1	13
5.2 RCV Distortion and Noise - 630 Hz NB, Index: 1	14
5.2 RCV Distortion and Noise - 800 Hz NB, Index: 1	15
5.2 RCV Distortion and Noise - 1000 Hz NB, Index: 1	15
5.2 RCV Distortion and Noise - 1250 Hz NB, Index: 1	16
5.2 RCV Distortion and Noise - 1600 Hz NB, Index: 1	17
5.2 RCV Distortion and Noise - 2000 Hz NB, Index: 1	17
5.2 RCV Distortion and Noise - 2500 Hz NB, Index: 1	18
5.2 RCV Distortion and Noise - 3150 Hz NB, Index: 1	19
Report - Receive Distortion and Noise (Conversational Gain), Index: 1	19
5.3 Frequency Response 8N FF HANB, Index: 1	20
5.3 Frequency Response 8N DF HANB, Index: 1	21
5.3 Frequency Response 2N FF HANB, Index: 1	21
5.3 Frequency Response 2N DF HANB, Index: 1	22

Overall Receive Delay NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ Preparation - Delay measurement



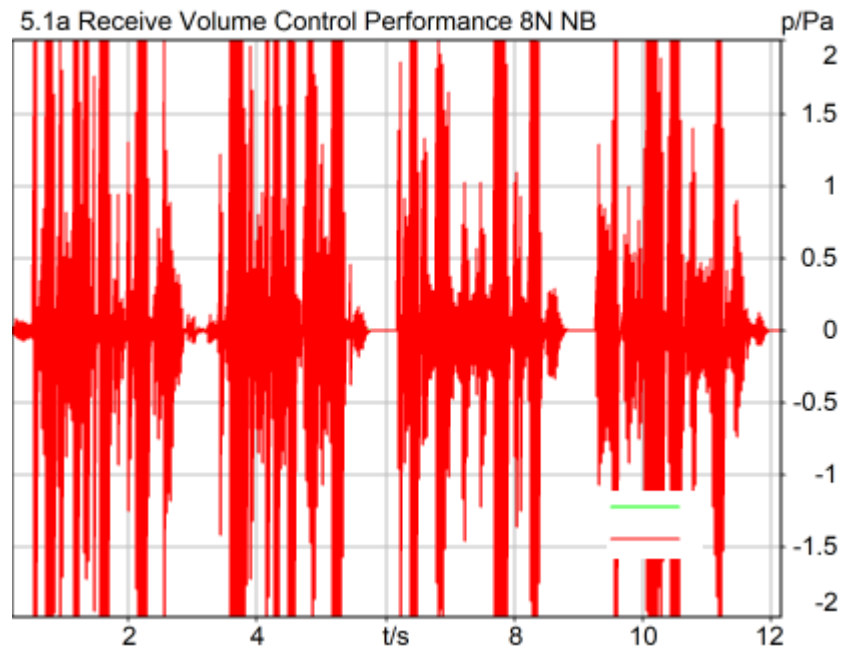
Delay (Cross): 128.4 ms

2024/3/20 9:46 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1a Receive Volume Control Performance 8N NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Correction

X - 70

Speech Level RCV: 88.25 dB[SPL], Act.: 80.33%

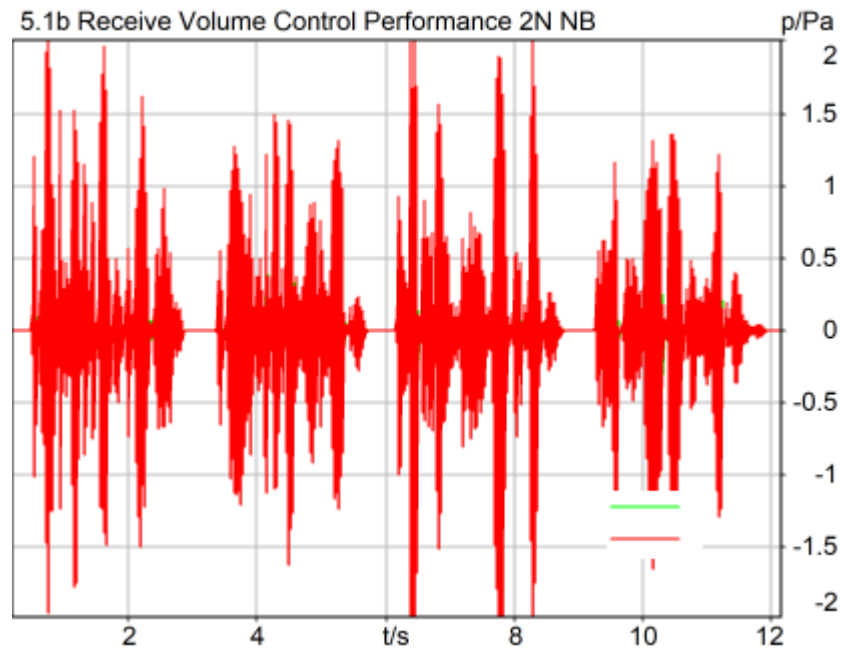
Corrected Speech Level: 18.25 dB[SPL] Ok

Ok

2024/3/20 9:51 ACQUA 5.1.200

5.1b Receive Volume Control Performance 2N NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Correction

X - 70

Speech Level RCV: 80.96 dB[SPL], Act.: 82.11%

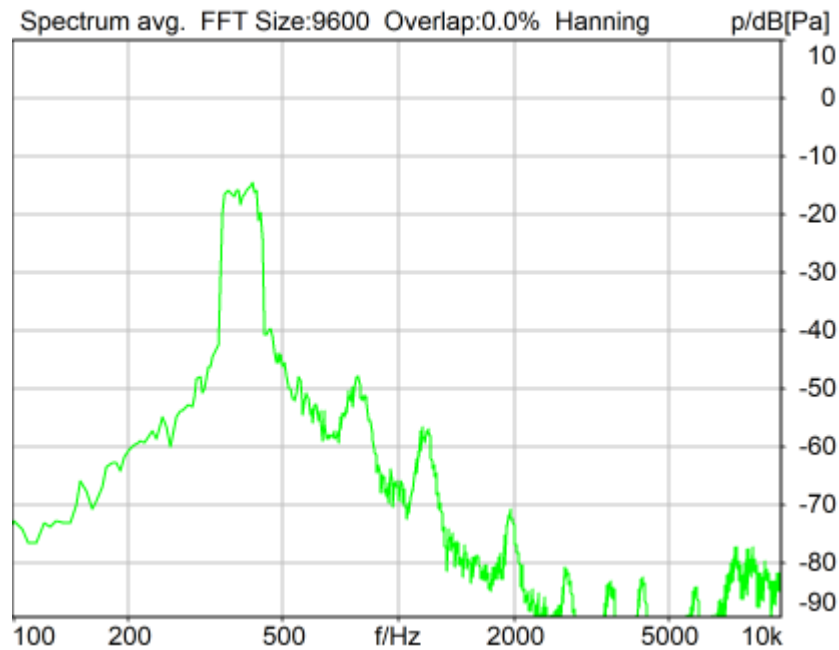
Corrected Speech Level: 10.96 dB[SPL] Ok

Ok

2024/3/20 10:19 ACQUA 5.1.200

5.2 RCV Distortion and Noise - 400 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 29.98 dB (3.17%) Ok

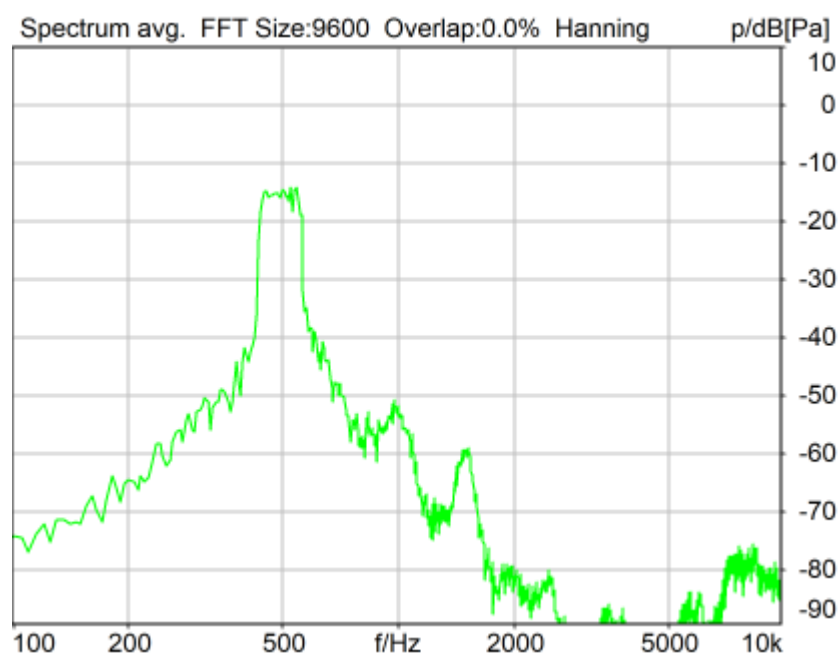
Ok

2024/3/20 9:51 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 28.62 dB (3.71%) Ok

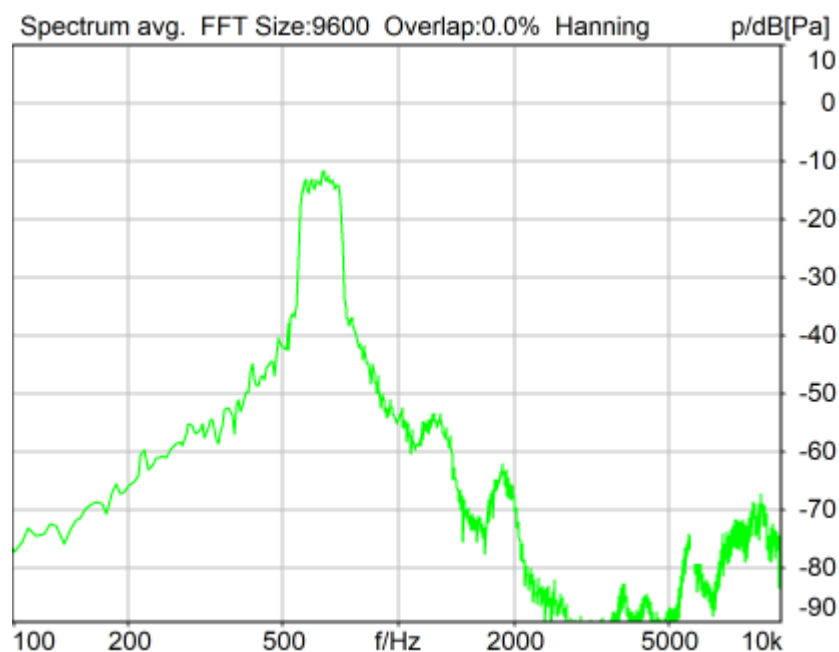
Ok

2024/3/20 9:51 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 27.80 dB (4.08%) Ok

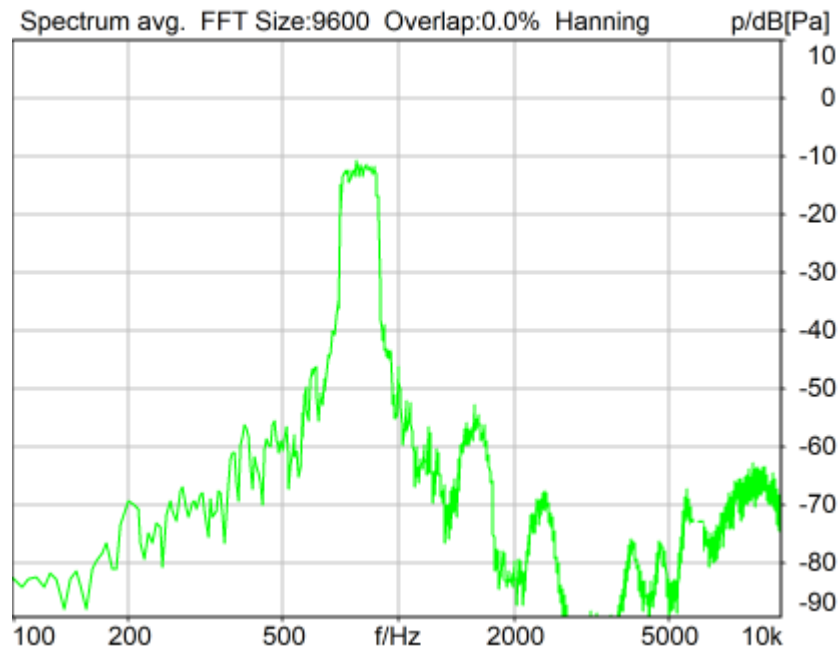
Ok

2024/3/20 9:52 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 33.78 dB (2.05%) Ok

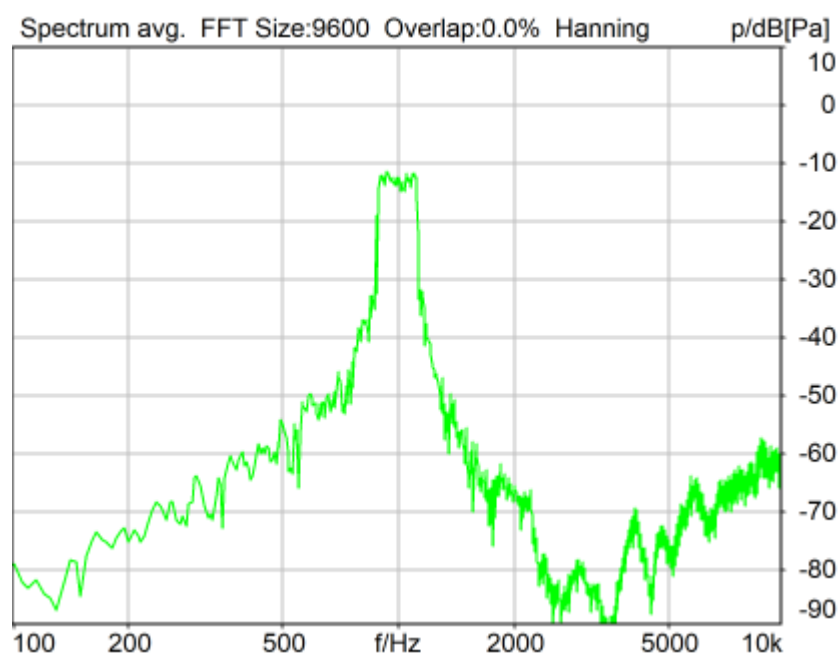
Ok

2024/3/20 9:52 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 26.99 dB (4.47%) Ok

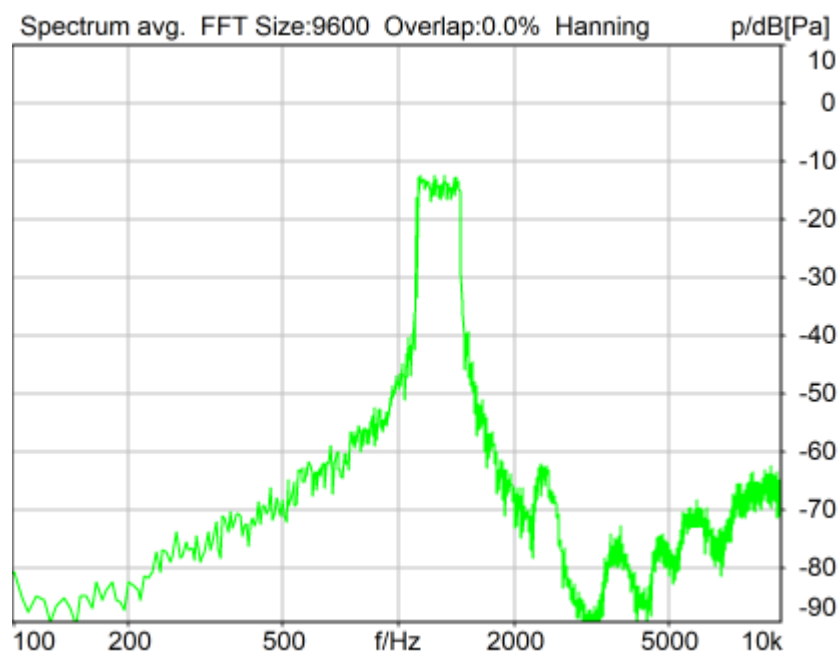
Ok

2024/3/20 9:53 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 27.41 dB (4.26%) Ok

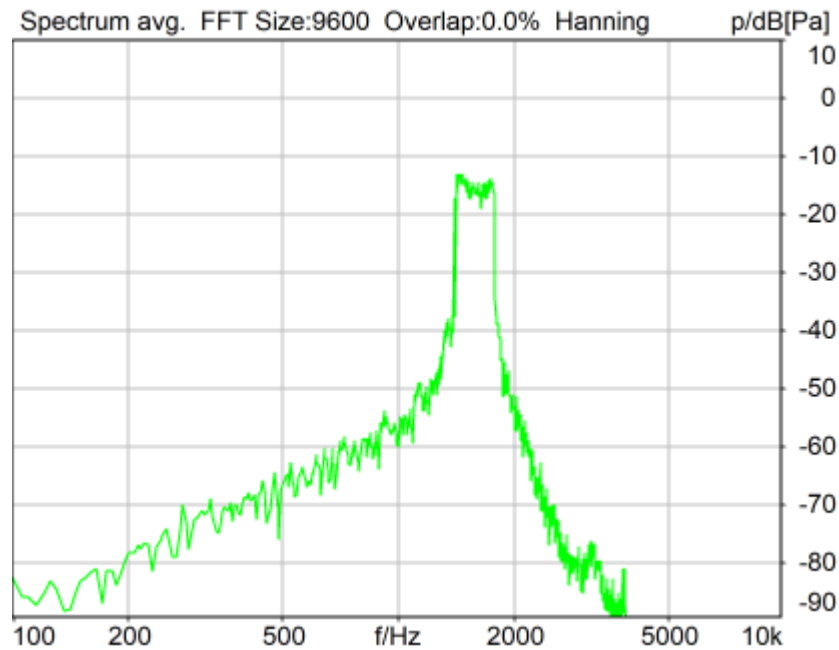
Ok

2024/3/20 9:53 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 28.47 dB (3.77%) Ok

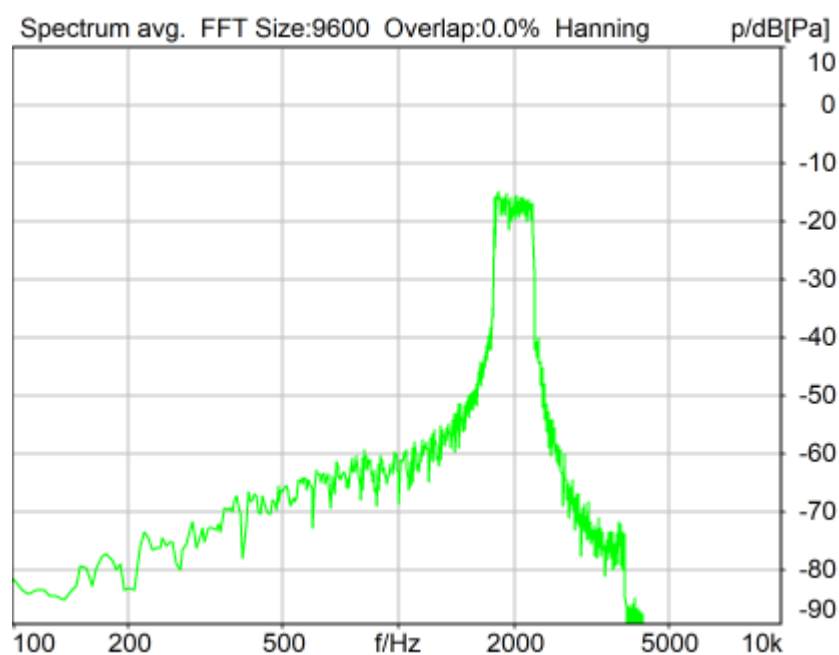
Ok

2024/3/20 9:53 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 27.11 dB (4.41%) Ok

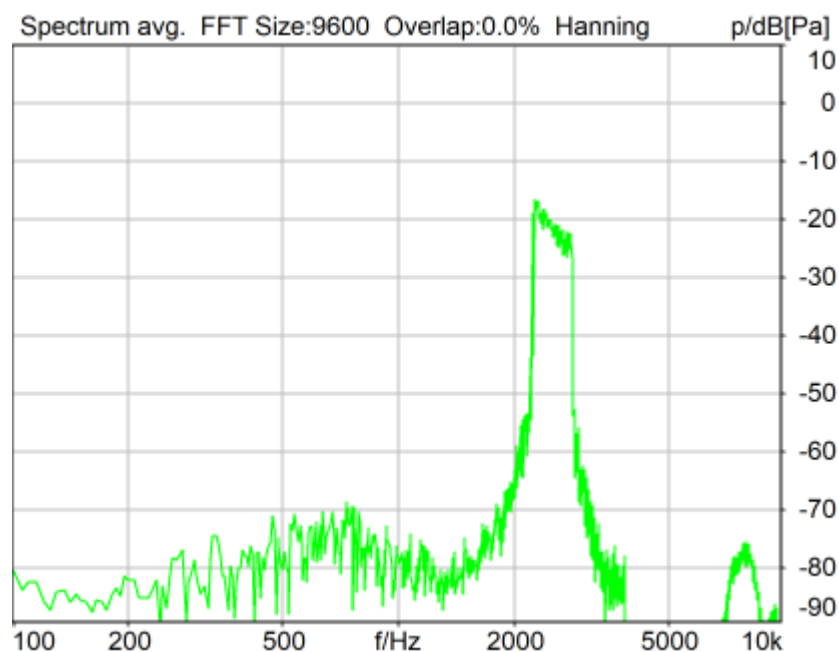
Ok

2024/3/20 9:54 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 37.65 dB (1.31%) Ok

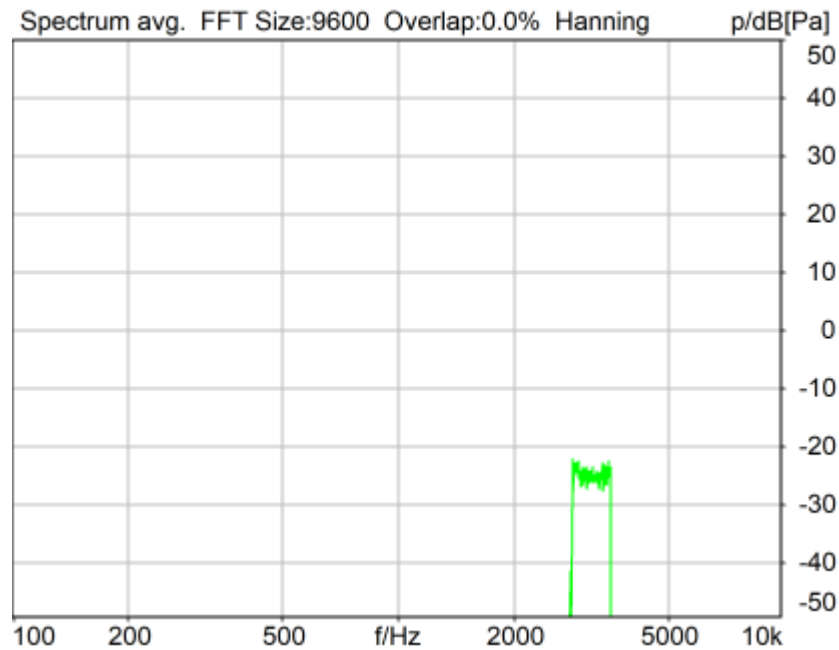
Ok

2024/3/20 9:54 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 40.99 dB (0.89%) Ok

Ok

2024/3/20 9:55 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain), Index:

1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N

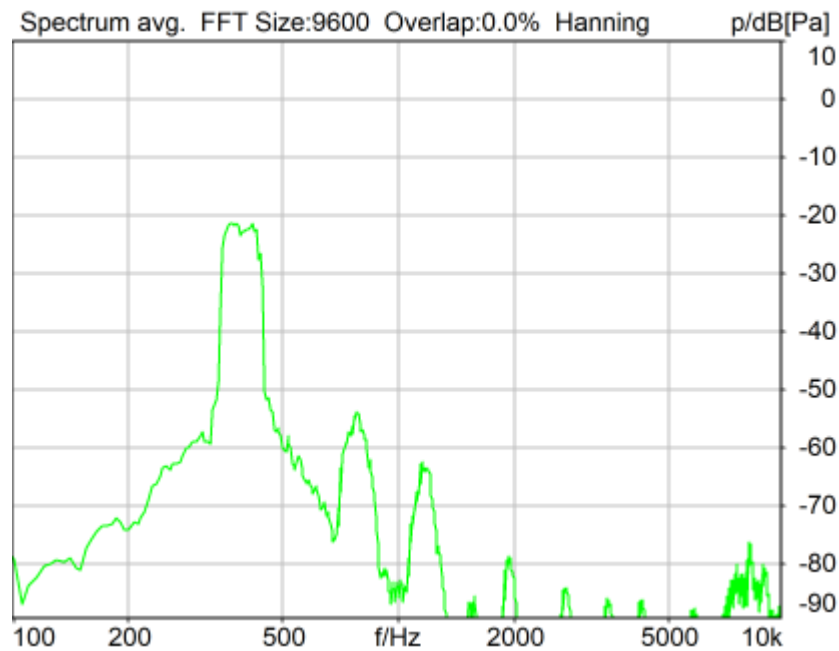
Region	Frequency	SDNR
1	400Hz	29.98 dB
2	500Hz	28.62 dB
3	630Hz	27.80 dB
4	800Hz	33.78 dB
5	1000Hz	26.99 dB
6	1250Hz	27.41 dB
7	1600Hz	28.47 dB
8	2000Hz	27.11 dB
9	2500Hz	37.65 dB
10	3150Hz	40.99 dB

All SDNRs were greater than 20.0 dB, requirement was met.
Smallest SDNR was 26.99dB at 1000Hz.

2024/3/20 9:55 ACQUA

5.2 RCV Distortion and Noise - 400 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 31.92 dB (2.54%) Ok

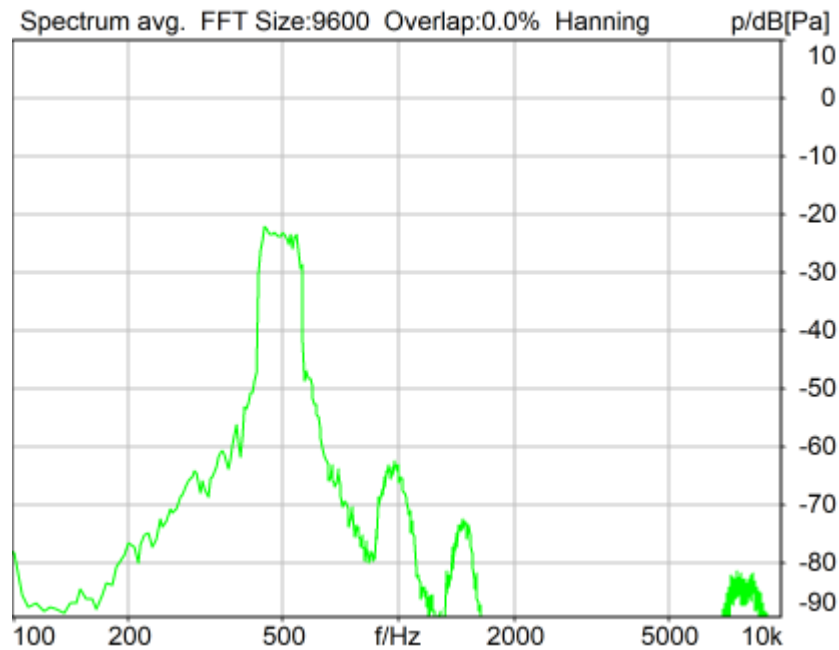
Ok

2024/3/20 10:19 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.88 dB (2.02%) Ok

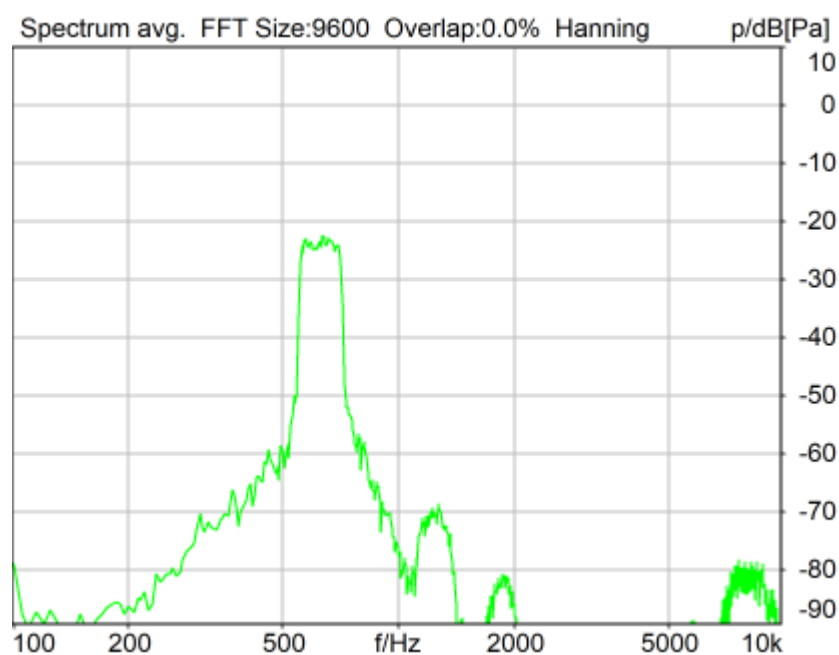
Ok

2024/3/20 10:20 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 34.87 dB (1.80%) Ok

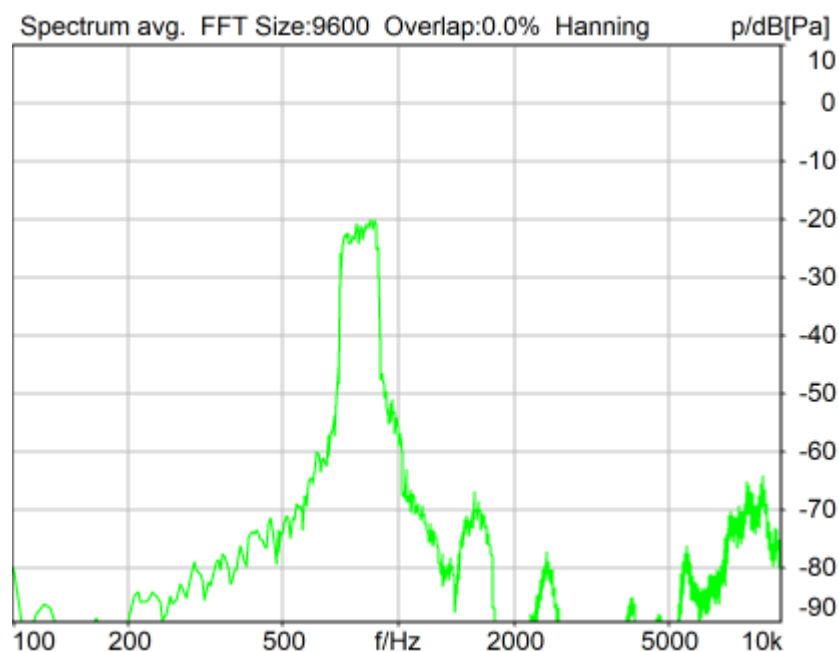
Ok

2024/3/20 10:20 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 32.49 dB (2.37%) Ok

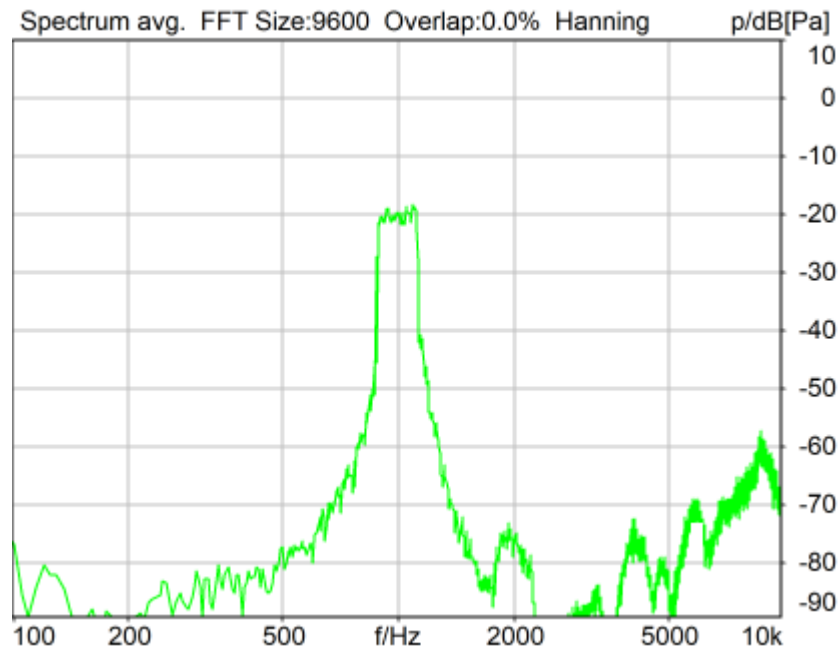
Ok

2024/3/20 10:21 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 30.55 dB (2.97%) Ok

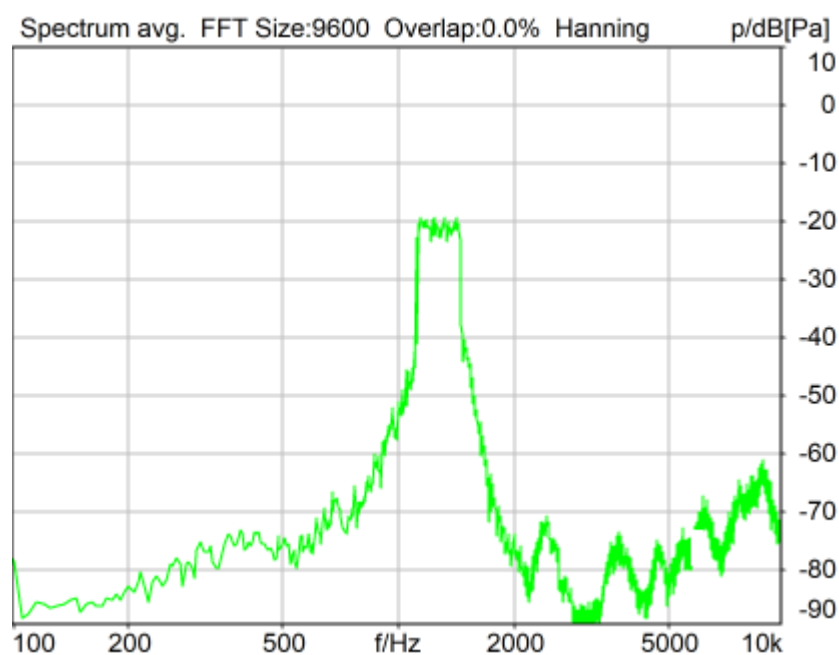
Ok

2024/3/20 10:21 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 24.84 dB (5.73%) Ok

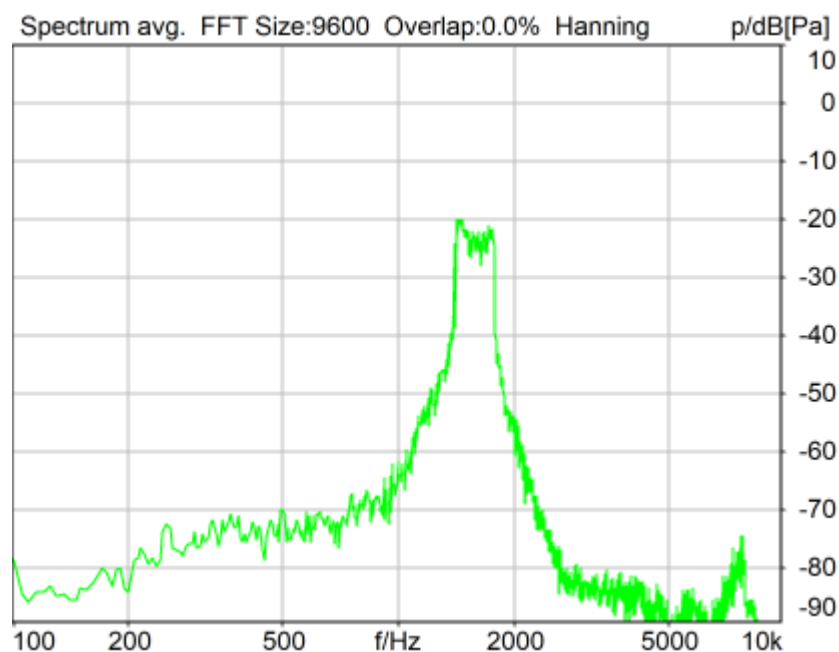
Ok

2024/3/20 10:21 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 24.23 dB (6.15%) Ok

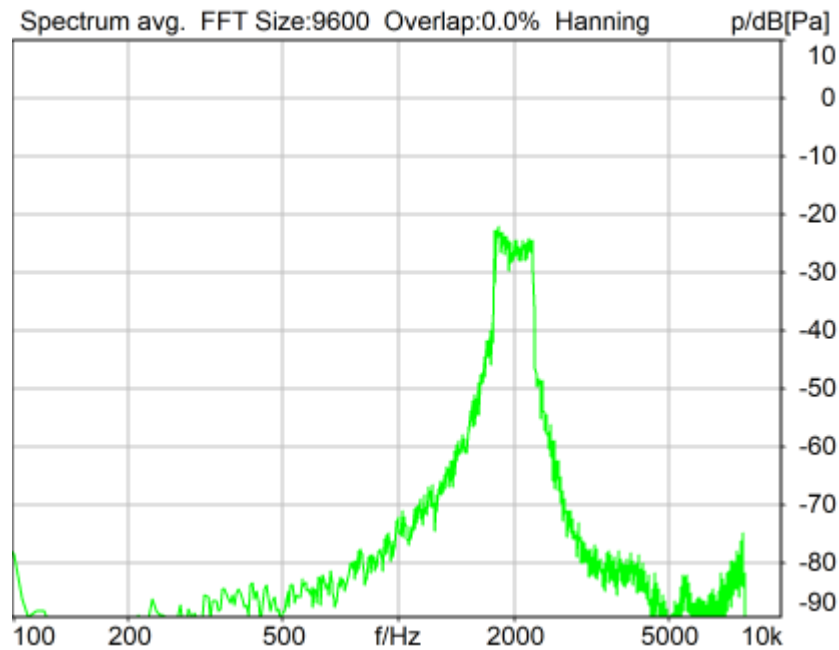
Ok

2024/3/20 10:22 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 22.38 dB (7.60%) Ok

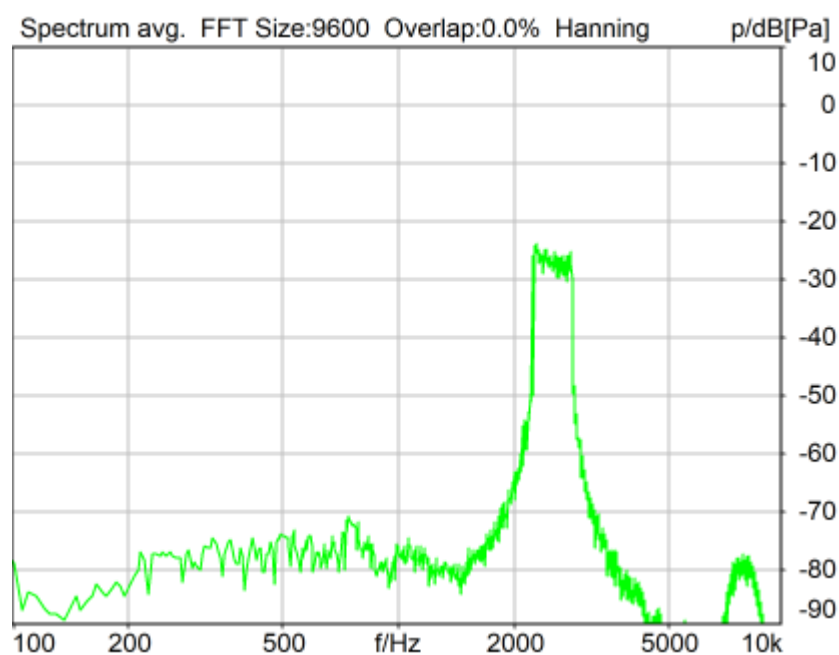
Ok

2024/3/20 10:22 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 30.48 dB (2.99%) Ok

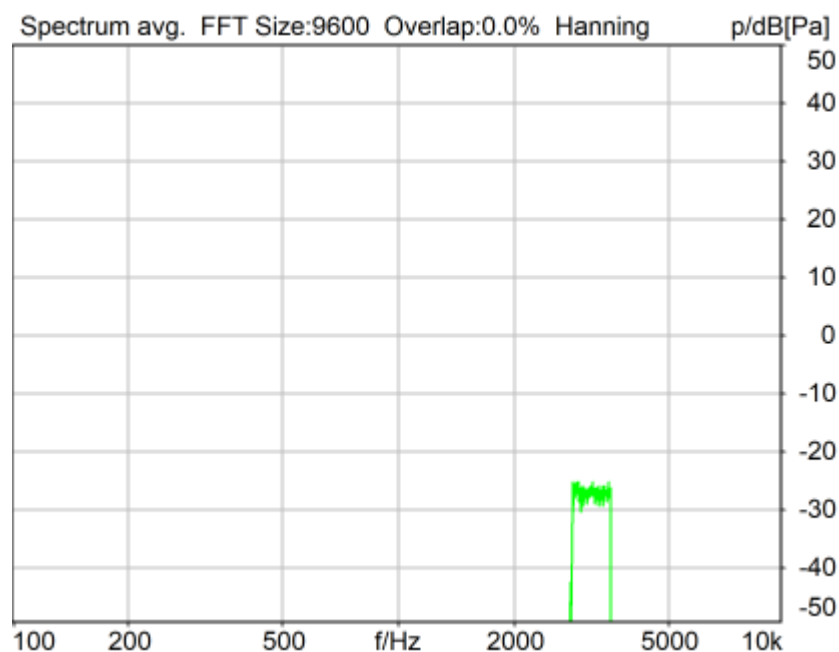
Ok

2024/3/20 10:23 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.61 dB (2.09%) Ok

Ok

2024/3/20 10:23 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain), Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N

Region	Frequency	SDNR
1	400Hz	31.92 dB

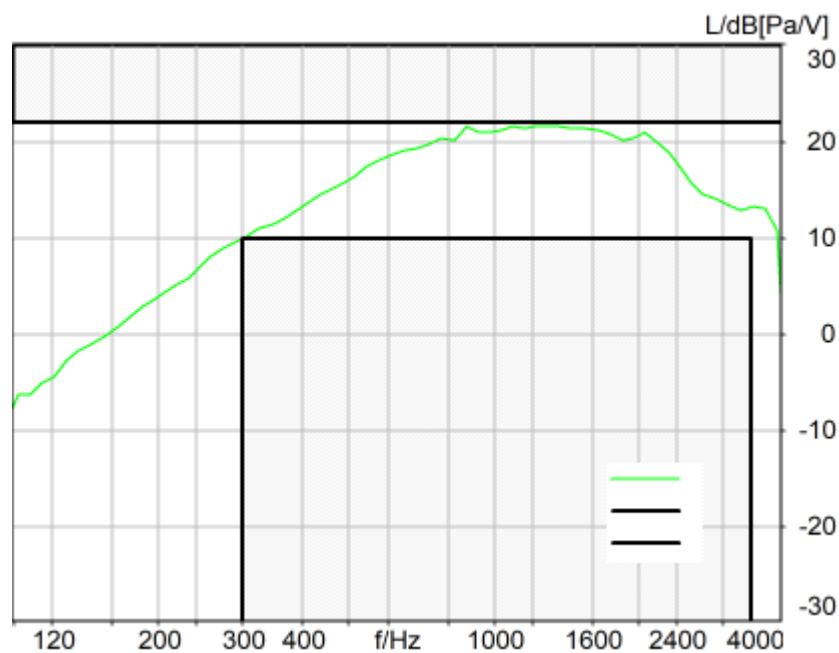
2	500Hz	33.88 dB
3	630Hz	34.87 dB
4	800Hz	32.49 dB
5	1000Hz	30.55 dB
6	1250Hz	24.84 dB
7	1600Hz	24.23 dB
8	2000Hz	22.38 dB
9	2500Hz	30.48 dB
10	3150Hz	33.61 dB

All SDNRs were greater than 20.0 dB, requirement was met.
Smallest SDNR was 22.38dB at 2000Hz.

2024/3/20 10:23 ACQUA

5.3 Frequency Response 8N FF HANB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance
0.25 dB at 1285.9 Hz Ok

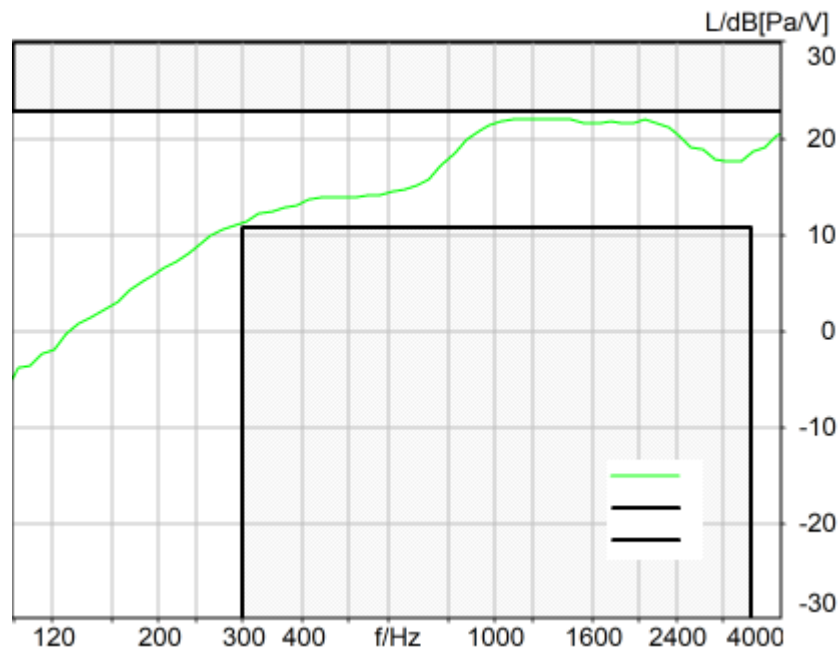
Ok

2024/3/20 9:55 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N DF HANB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance

0.72 dB at 1285.9 Hz Ok

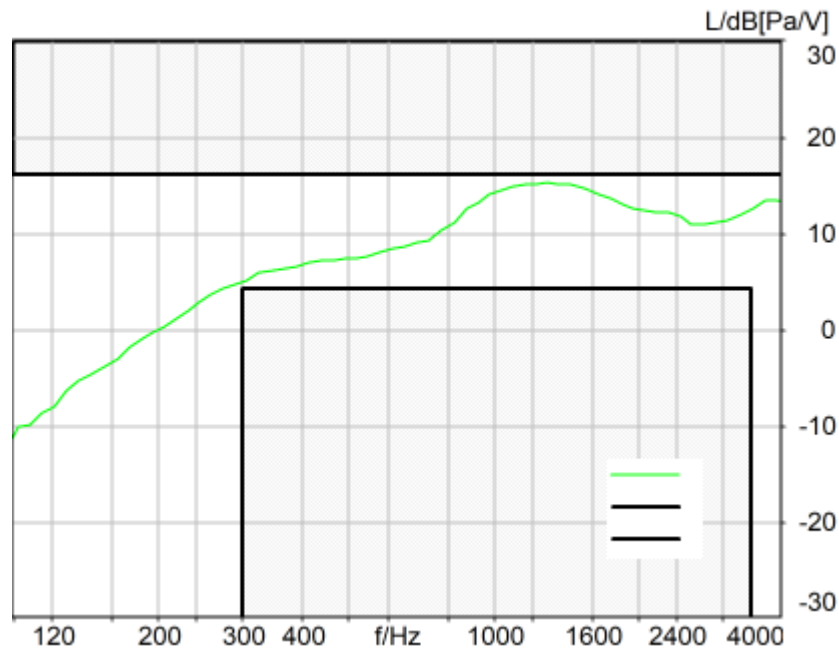
Ok

2024/3/20 10:53 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N FF HANB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



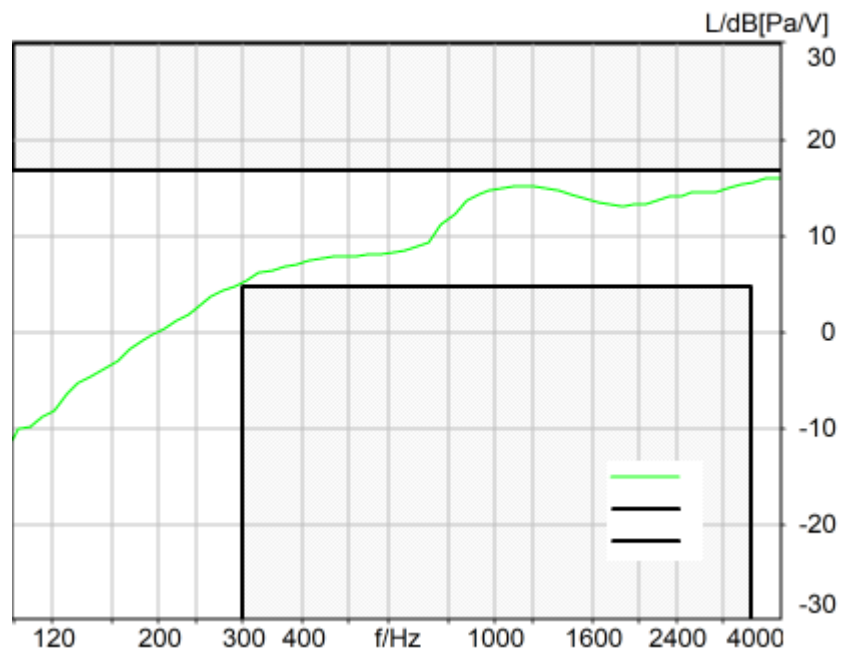
Absolute minimal distance
1.00 dB at 1285.9 Hz Ok

Ok

2024/3/20 10:24 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF HANB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance
0.66 dB at 3657.5 Hz Ok

Ok

2024/3/20 10:24 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

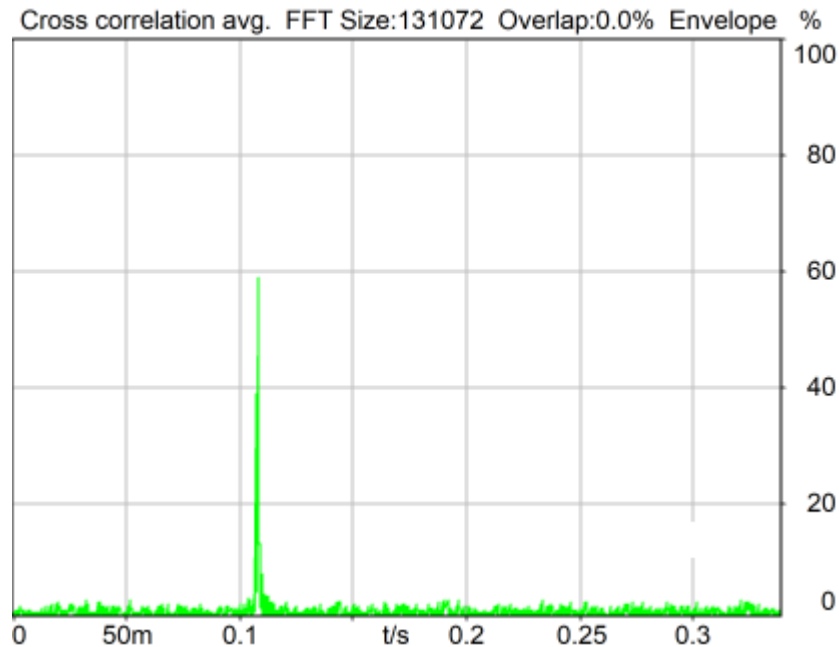
Measurement Object	FR1 n7_25 _DFT-s-OFDM_EVS WB128kbps_CH507000
Description	CJWQ-W7L-P23120020 DTNC PM95

Project	TIA-5050 (2018-01)
Report Generation Date	2024/5/21 15:26
Responsible Person	audio

Overall Receive Delay WB, Index: 1	3
5.1a Receive Volume Control Performance 8N WB, Index: 1	3
5.1b Receive Volume Control Performance 2N WB, Index: 1	4
5.2 RCV Distortion and Noise - 250 Hz WB, Index: 1	5
5.2 RCV Distortion and Noise - 315 Hz WB, Index: 1	6
5.2 RCV Distortion and Noise - 400 Hz WB, Index: 1	7
5.2 RCV Distortion and Noise - 500 Hz WB, Index: 1	7
5.2 RCV Distortion and Noise - 630 Hz WB, Index: 1	8
5.2 RCV Distortion and Noise - 800 Hz WB, Index: 1	9
5.2 RCV Distortion and Noise - 1000 Hz WB, Index: 1	9
5.2 RCV Distortion and Noise - 1250 Hz WB, Index: 1	10
5.2 RCV Distortion and Noise - 1600 Hz WB, Index: 1	11
5.2 RCV Distortion and Noise - 2000 Hz WB, Index: 1	11
5.2 RCV Distortion and Noise - 2500 Hz WB, Index: 1	12
5.2 RCV Distortion and Noise - 3150 Hz WB, Index: 1	13
5.2 RCV Distortion and Noise - 4000 Hz WB, Index: 1	13
5.2 RCV Distortion and Noise - 5000 Hz WB, Index: 1	14
Report - Receive Distortion and Noise (Conversational Gain), Index: 1	15
5.2 RCV Distortion and Noise - 250 Hz WB, Index: 1	15
5.2 RCV Distortion and Noise - 315 Hz WB, Index: 1	16
5.2 RCV Distortion and Noise - 400 Hz WB, Index: 1	17
5.2 RCV Distortion and Noise - 500 Hz WB, Index: 1	17
5.2 RCV Distortion and Noise - 630 Hz WB, Index: 1	18
5.2 RCV Distortion and Noise - 800 Hz WB, Index: 1	19
5.2 RCV Distortion and Noise - 1000 Hz WB, Index: 1	19
5.2 RCV Distortion and Noise - 1250 Hz WB, Index: 1	20
5.2 RCV Distortion and Noise - 1600 Hz WB, Index: 1	21
5.2 RCV Distortion and Noise - 2000 Hz WB, Index: 1	21
5.2 RCV Distortion and Noise - 2500 Hz WB, Index: 1	22
5.2 RCV Distortion and Noise - 3150 Hz WB, Index: 1	23
5.2 RCV Distortion and Noise - 4000 Hz WB, Index: 1	23
5.2 RCV Distortion and Noise - 5000 Hz WB, Index: 1	24
Report - Receive Distortion and Noise (Conversational Gain), Index: 1	25
5.3 Frequency Response 8N FF, Index: 1	25
5.3 Frequency Response 8N DF, Index: 1	26
5.3 Frequency Response 2N FF, Index: 1	27
5.3 Frequency Response 2N DF, Index: 1	28

Overall Receive Delay WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ Preparation - Delay measurement



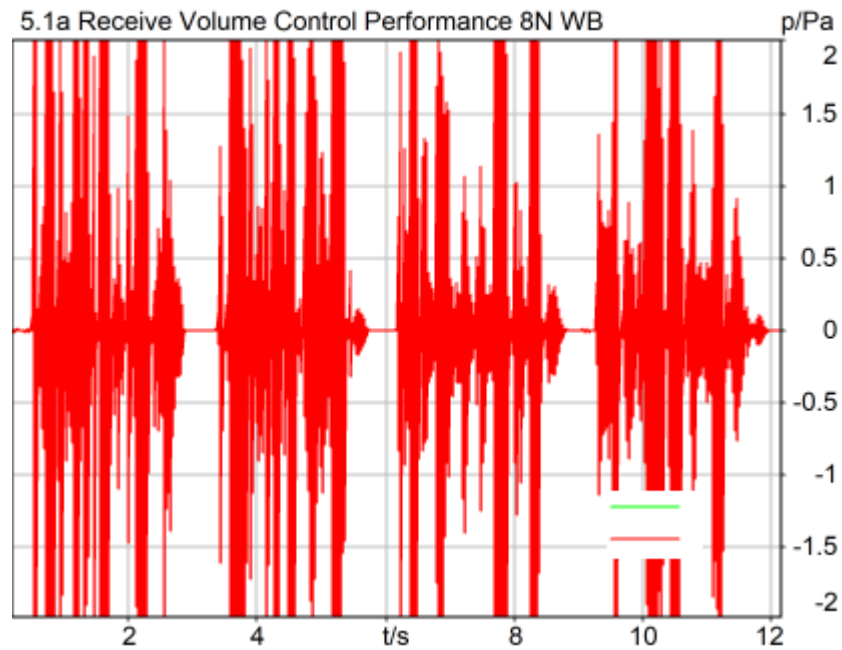
Delay (Cross): 108.4 ms

2024/3/20 9:57 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1a Receive Volume Control Performance 8N WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



Correction

X - 70

Speech Level RCV: 88.46 dB[SPL], Act.: 78.90%

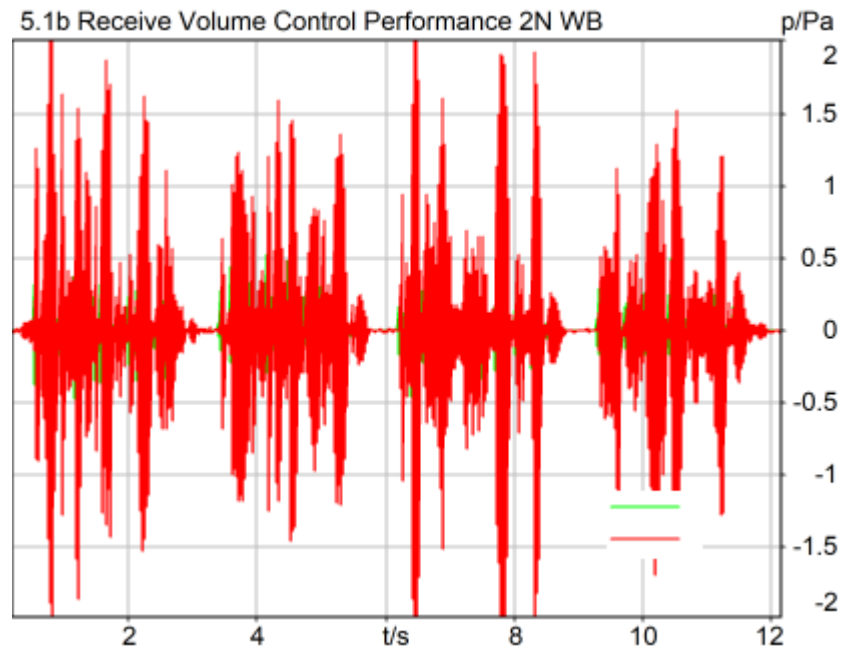
Corrected Speech Level: 18.46 dB[SPL] Ok

Ok

2024/3/20 9:57 ACQUA 5.1.200

5.1b Receive Volume Control Performance 2N WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



Correction

X - 70

Speech Level RCV: 80.77 dB[SPL], Act.: 82.98%

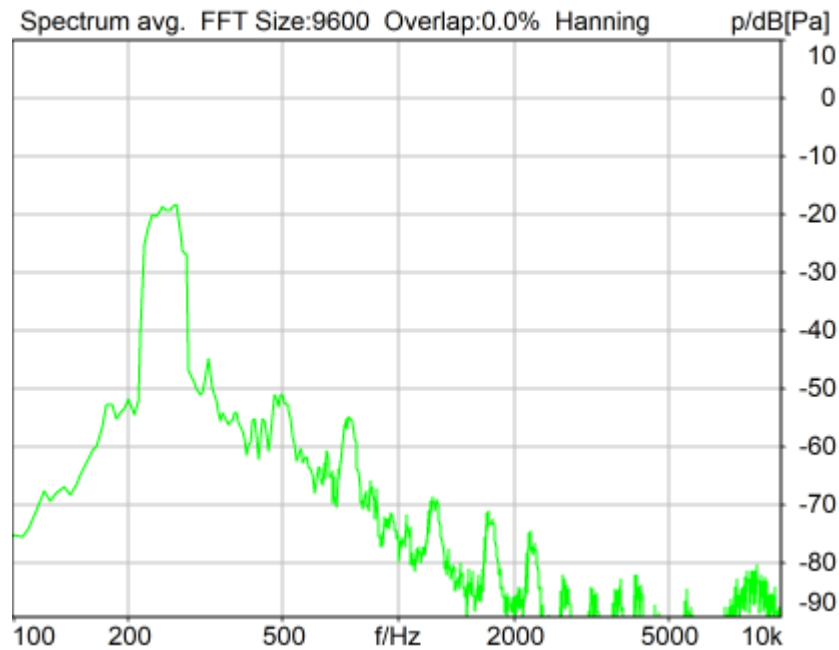
Corrected Speech Level: 10.77 dB[SPL] Ok

Ok

2024/3/20 10:12 ACQUA 5.1.200

5.2 RCV Distortion and Noise - 250 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 30.21 dB (3.09%) Ok

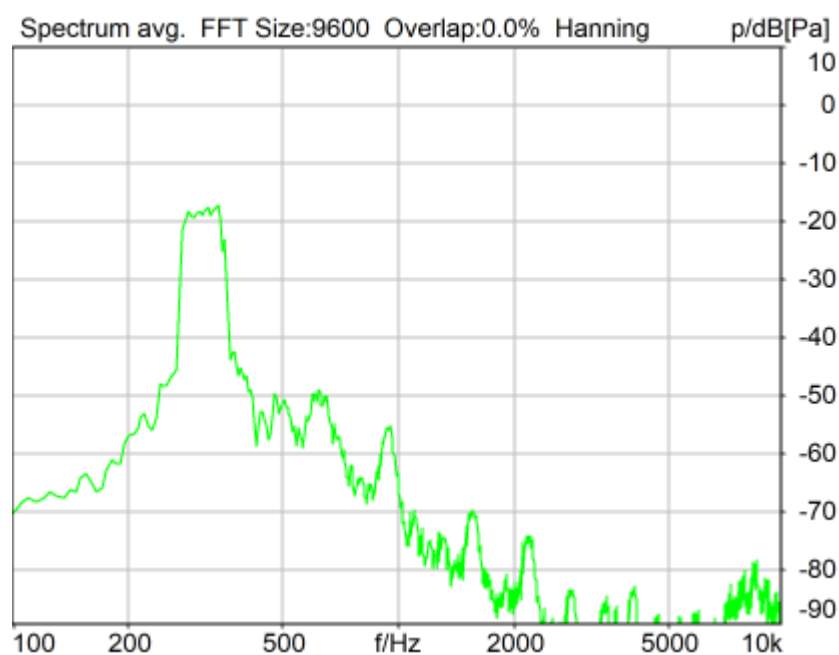
Ok

2024/3/20 9:58 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 315 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 29.40 dB (3.39%) Ok

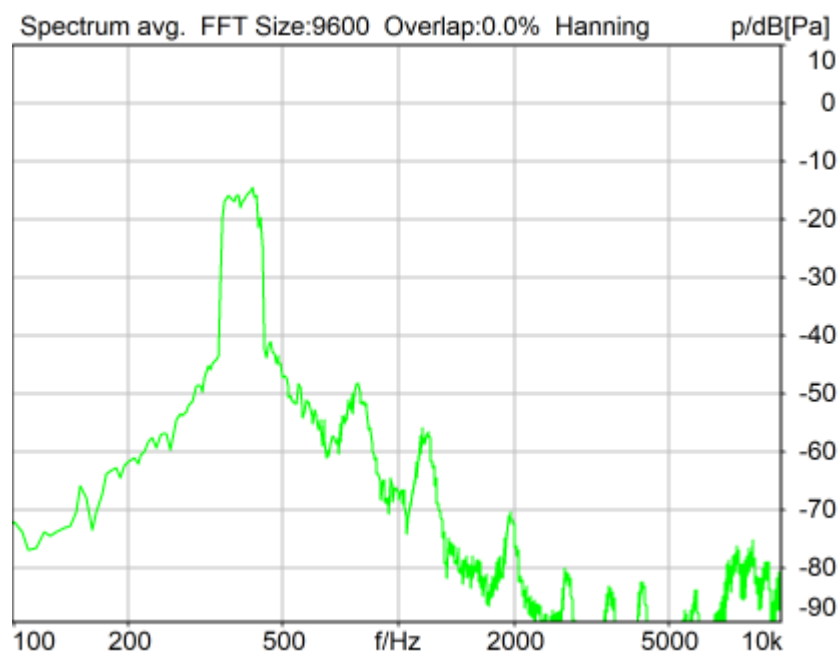
Ok

2024/3/20 9:58 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 30.15 dB (3.11%) Ok

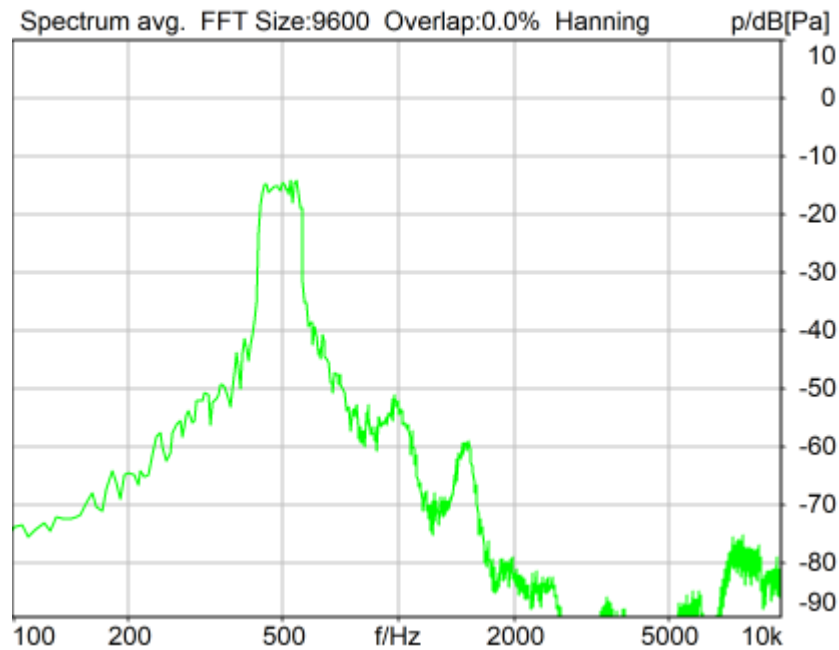
Ok

2024/3/20 9:59 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 28.70 dB (3.67%) Ok

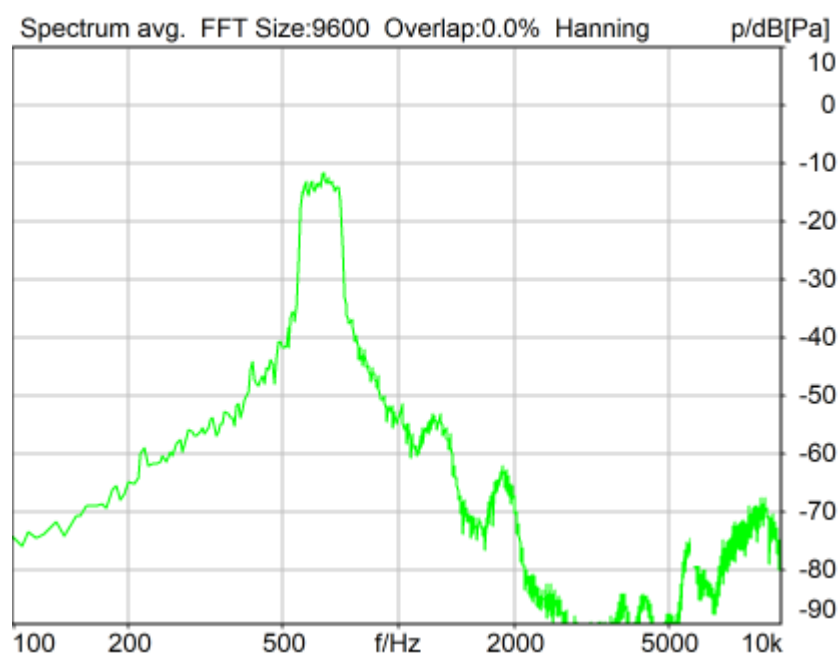
Ok

2024/3/20 9:59 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 27.89 dB (4.03%) Ok

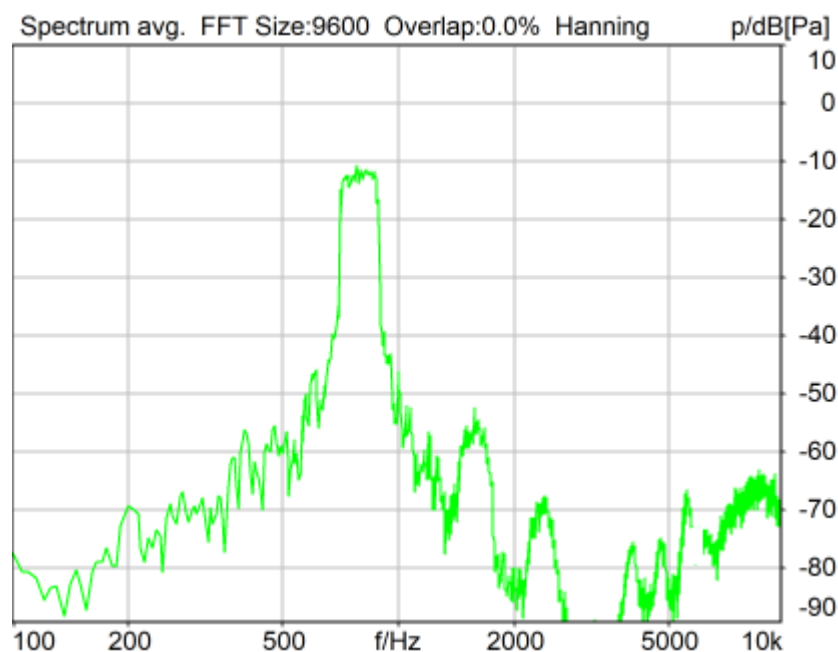
Ok

2024/3/20 9:59 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 33.76 dB (2.05%) Ok

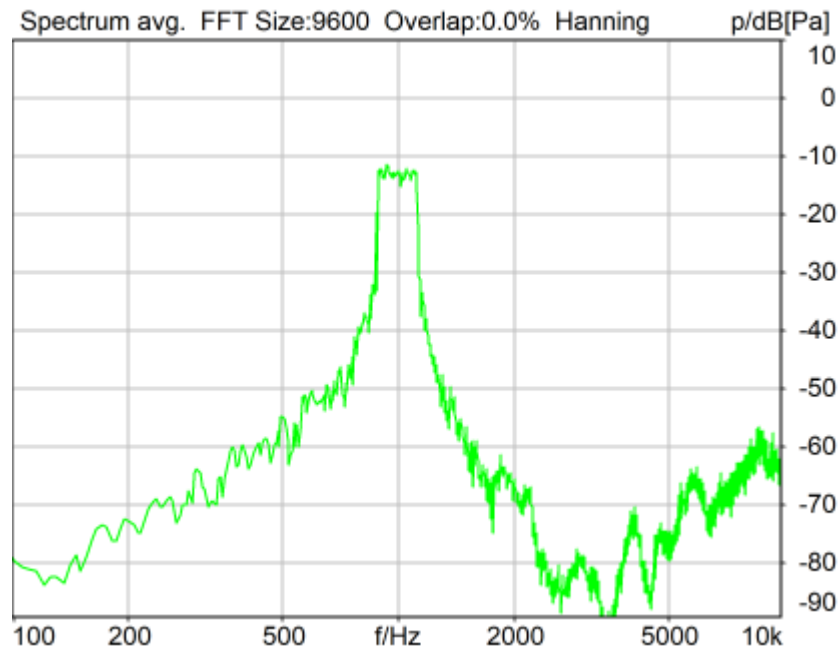
Ok

2024/3/20 10:00 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 27.34 dB (4.29%) Ok

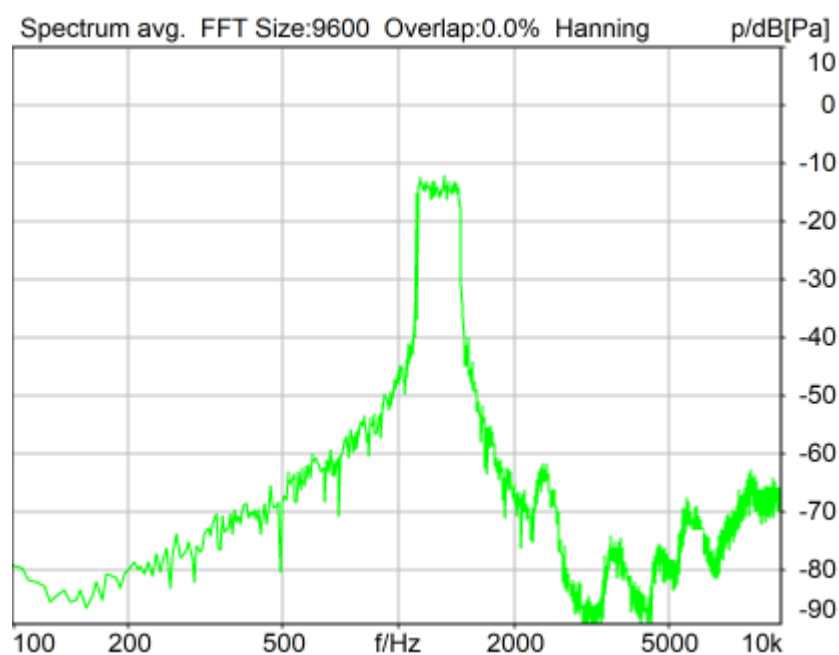
Ok

2024/3/20 10:00 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 27.53 dB (4.20%) Ok

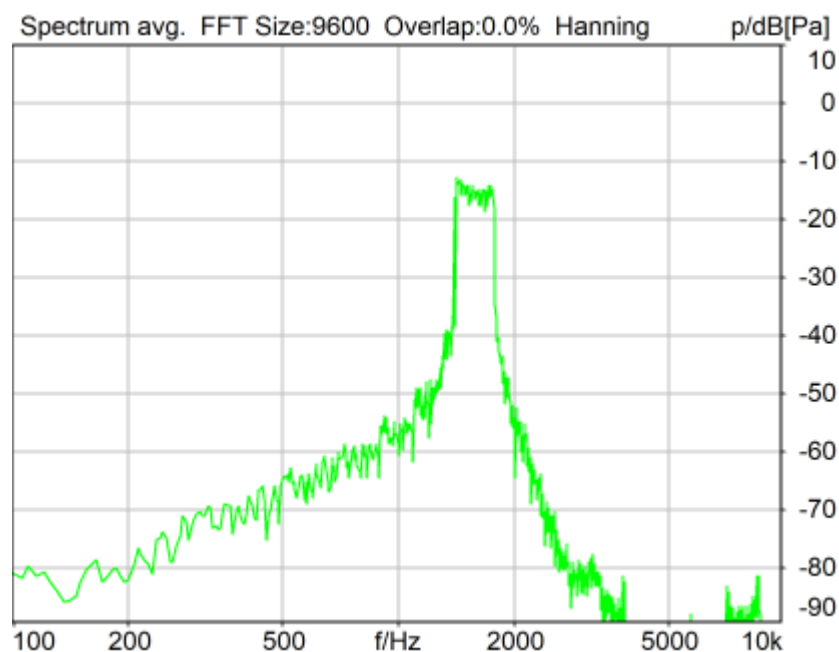
Ok

2024/3/20 10:01 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 28.91 dB (3.58%) Ok

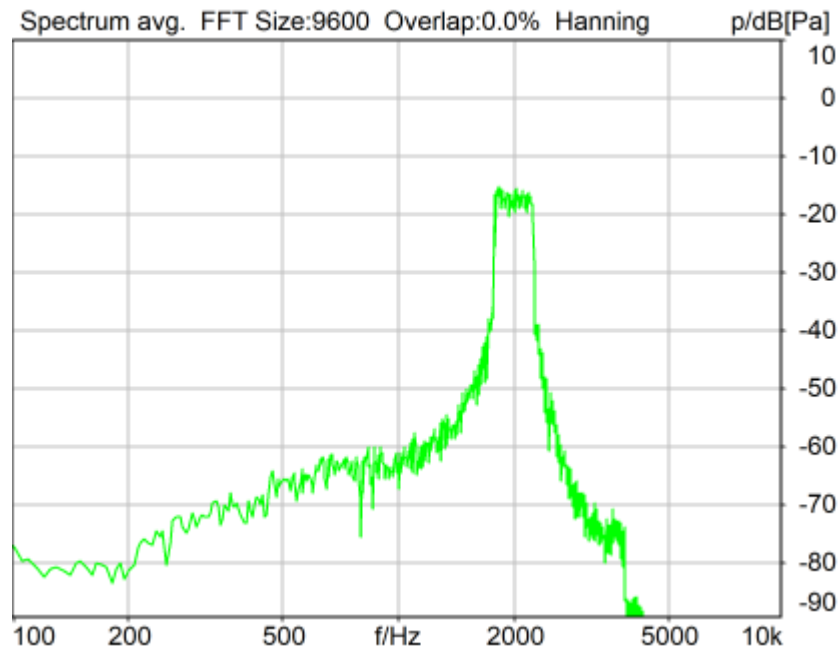
Ok

2024/3/20 10:01 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 26.29 dB (4.85%) Ok

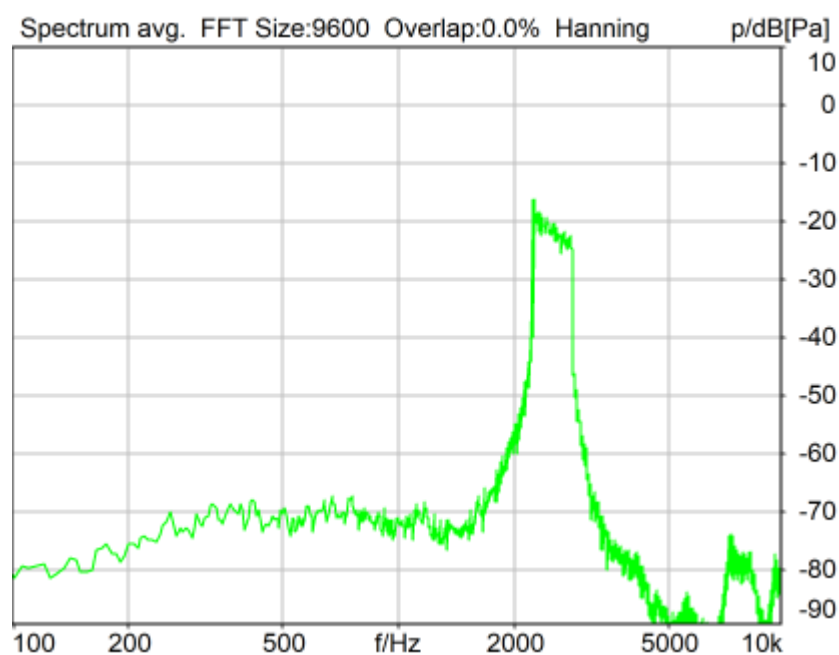
Ok

2024/3/20 10:01 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 29.57 dB (3.32%) Ok

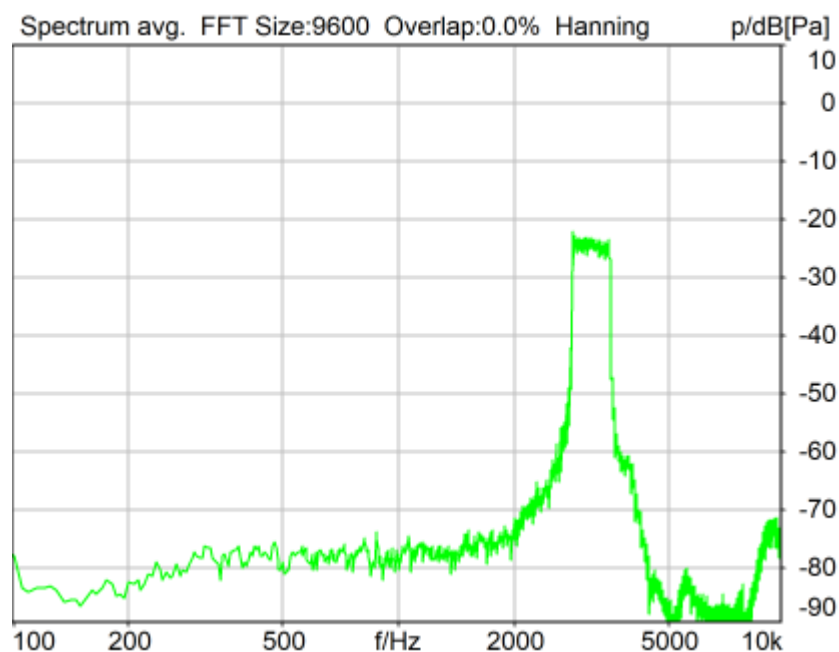
Ok

2024/3/20 10:06 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 31.82 dB (2.56%) Ok

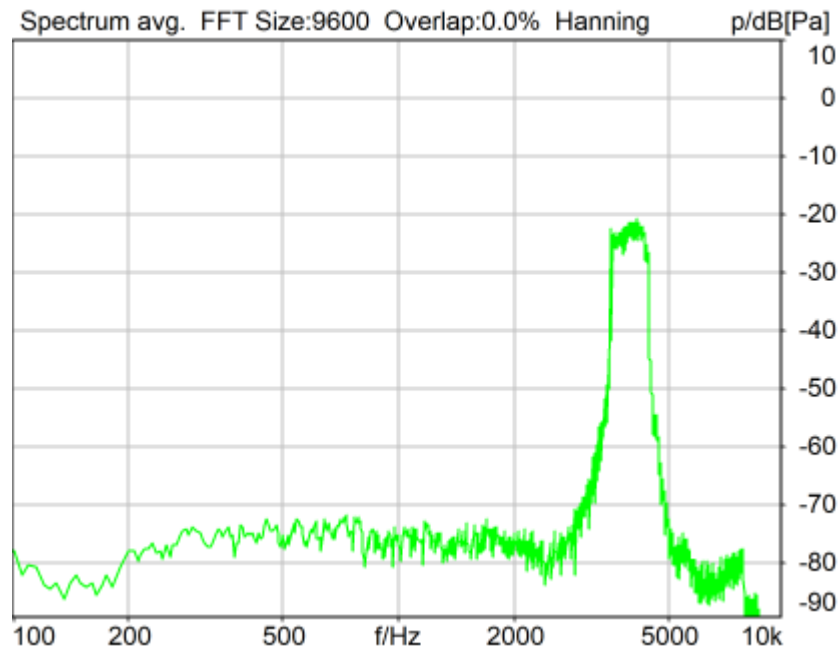
Ok

2024/3/20 10:07 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 4000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 31.80 dB (2.57%) Ok

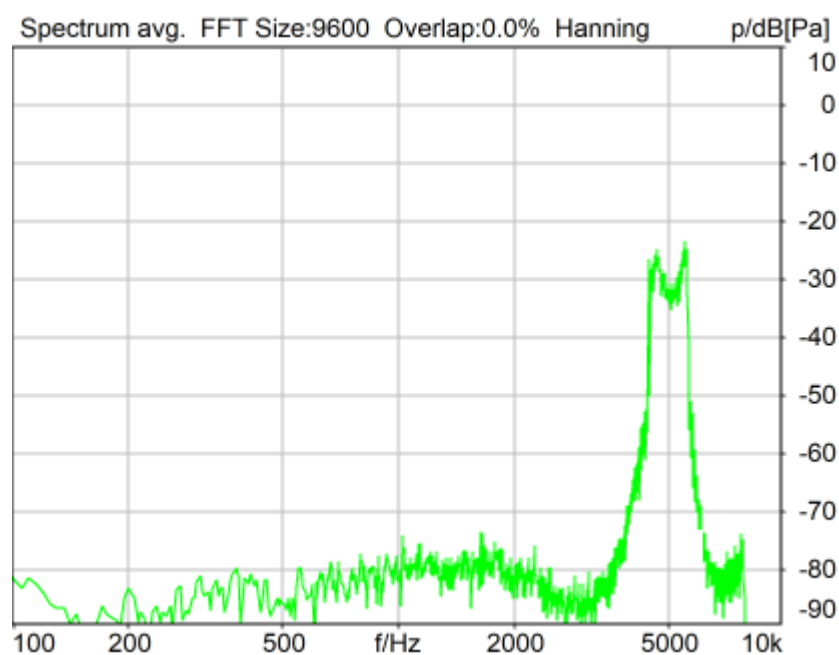
Ok

2024/3/20 10:07 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 5000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 30.00 dB (3.16%) Ok

Ok

2024/3/20 10:08 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain), Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N

Region	Frequency	SDNR
1	250Hz	30.21 dB
2	315Hz	29.40 dB
3	400Hz	30.15 dB
4	500Hz	28.70 dB
5	630Hz	27.89 dB
6	800Hz	33.76 dB
7	1000Hz	27.34 dB
8	1250Hz	27.53 dB
9	1600Hz	28.91 dB
10	2000Hz	26.29 dB
11	2500Hz	29.57 dB
12	3150Hz	31.82 dB
13	4000Hz	31.80 dB
14	5000Hz	30.00 dB

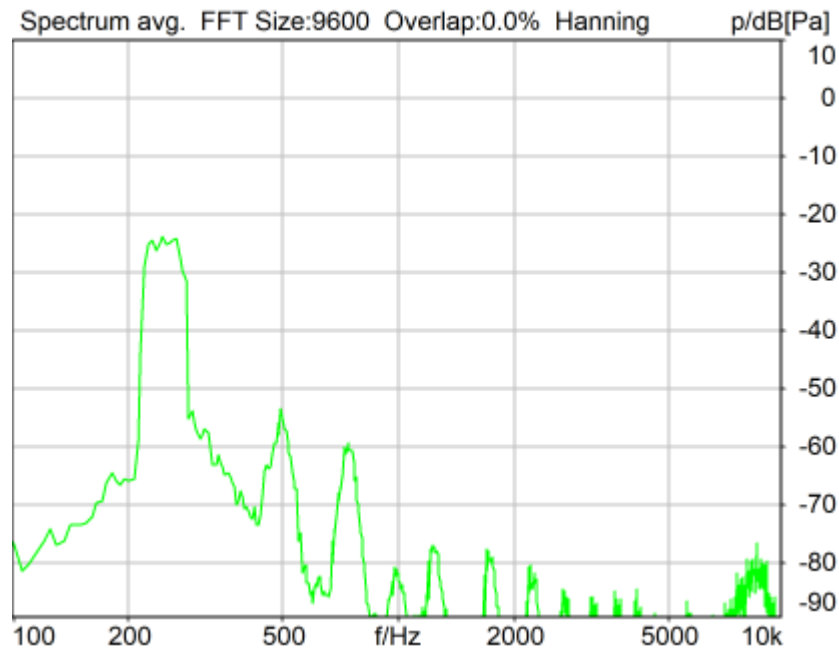
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 26.29dB at 2000Hz.

2024/3/20 10:08 ACQUA

5.2 RCV Distortion and Noise - 250 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 31.61 dB (2.63%) Ok

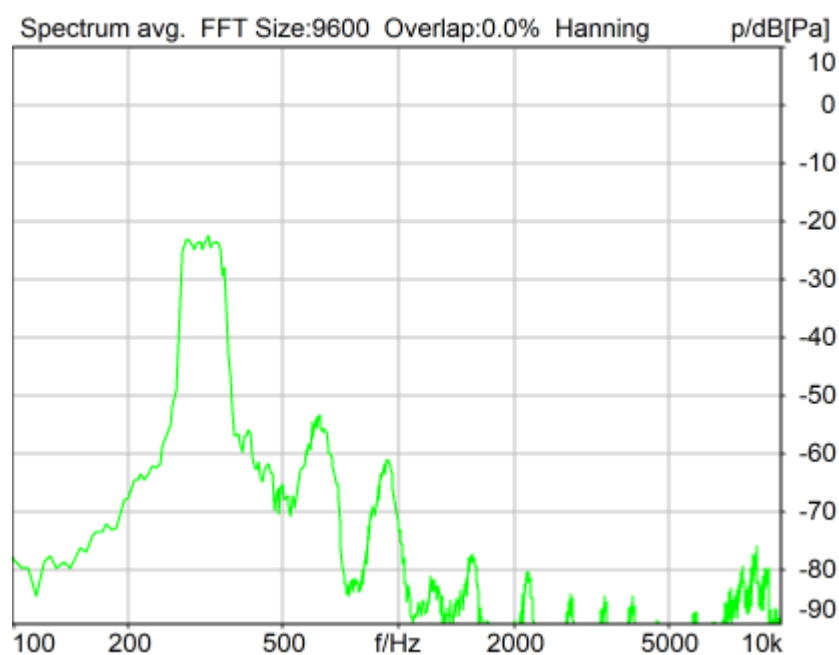
Ok

2024/3/20 10:12 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 315 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 30.98 dB (2.82%) Ok

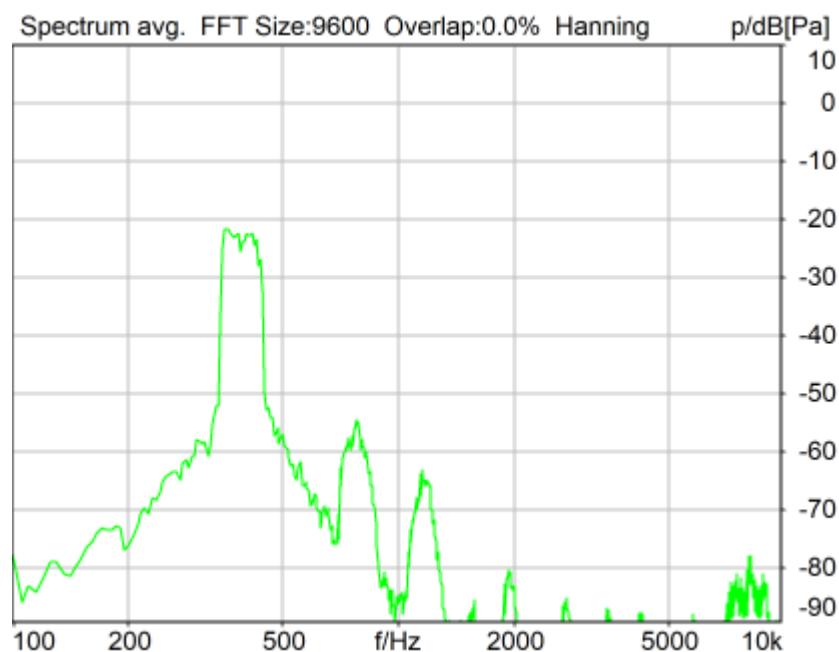
Ok

2024/3/20 10:13 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 32.26 dB (2.44%) Ok

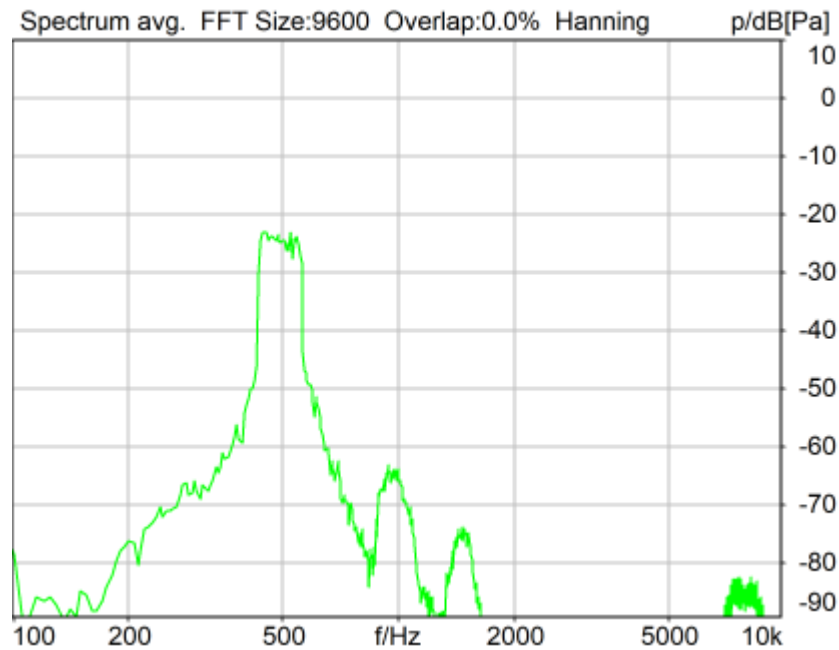
Ok

2024/3/20 10:13 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.17 dB (2.20%) Ok

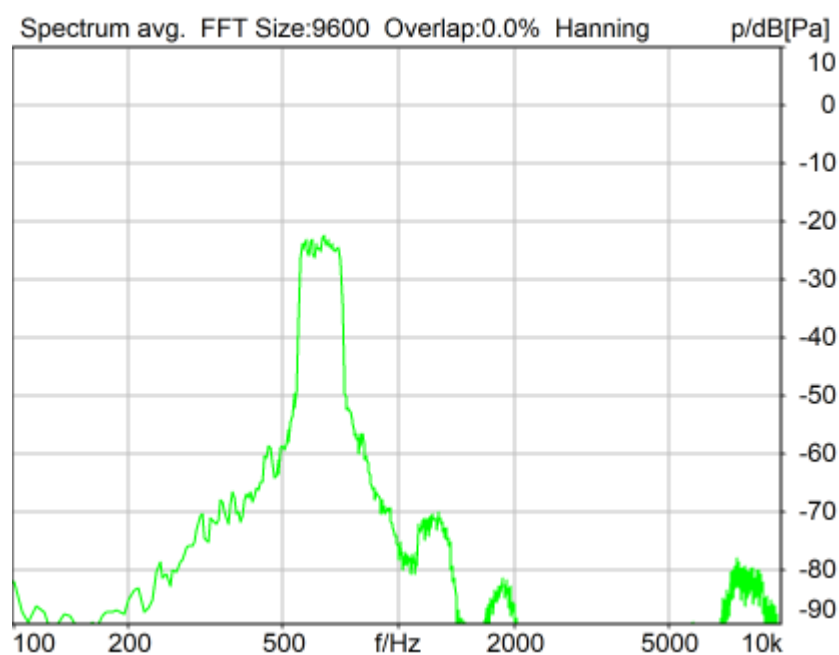
Ok

2024/3/20 10:13 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 34.04 dB (1.99%) Ok

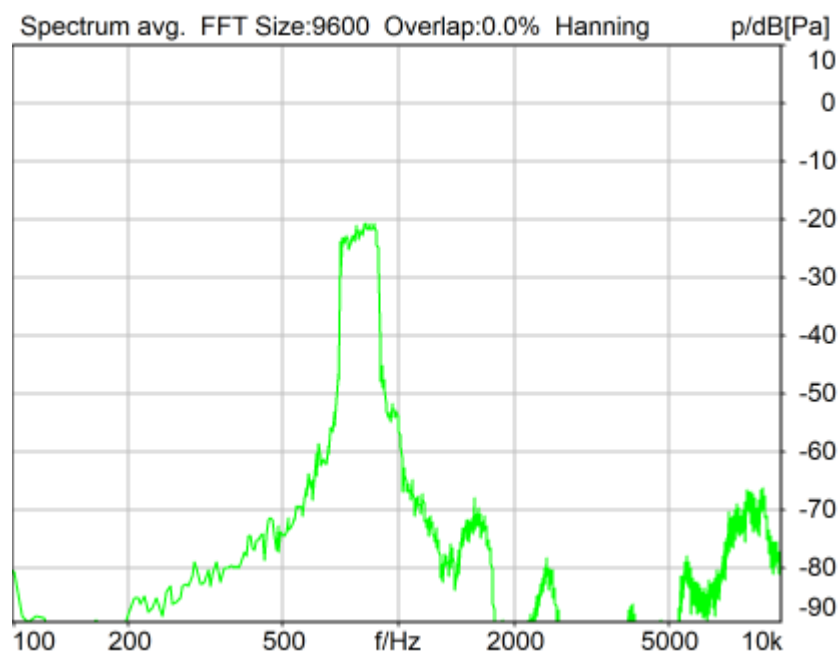
Ok

2024/3/20 10:14 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 32.37 dB (2.41%) Ok

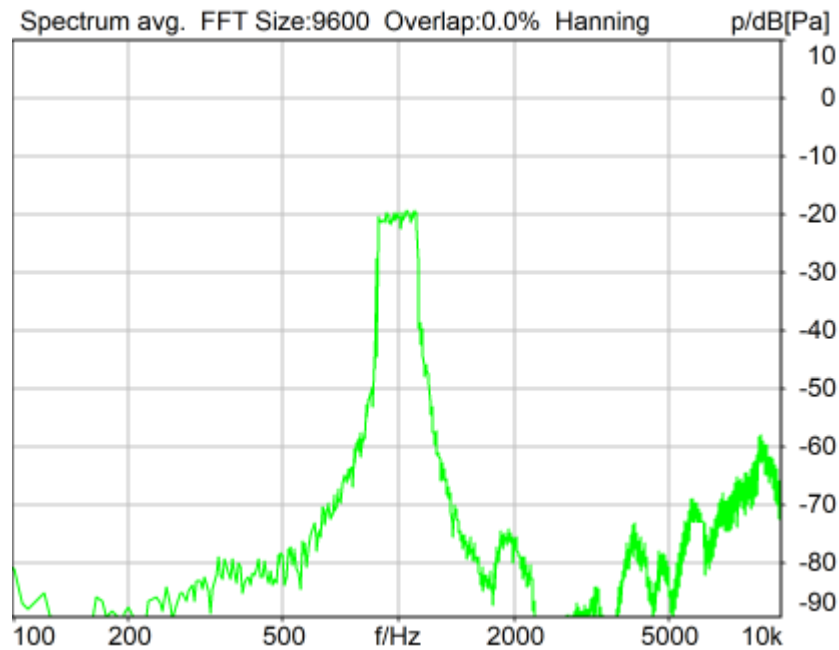
Ok

2024/3/20 10:14 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 29.93 dB (3.19%) Ok

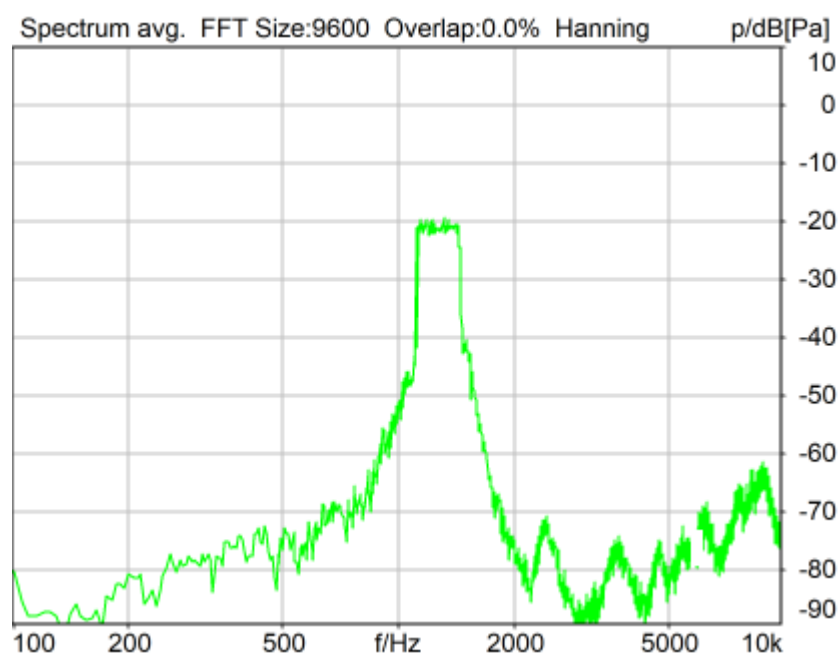
Ok

2024/3/20 10:15 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 23.90 dB (6.39%) Ok

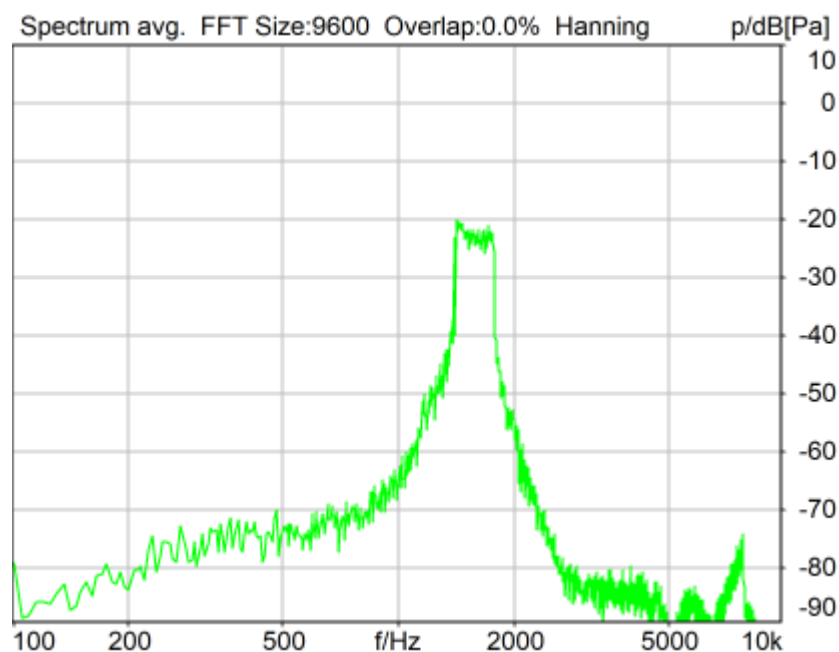
Ok

2024/3/20 10:15 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 24.28 dB (6.11%) Ok

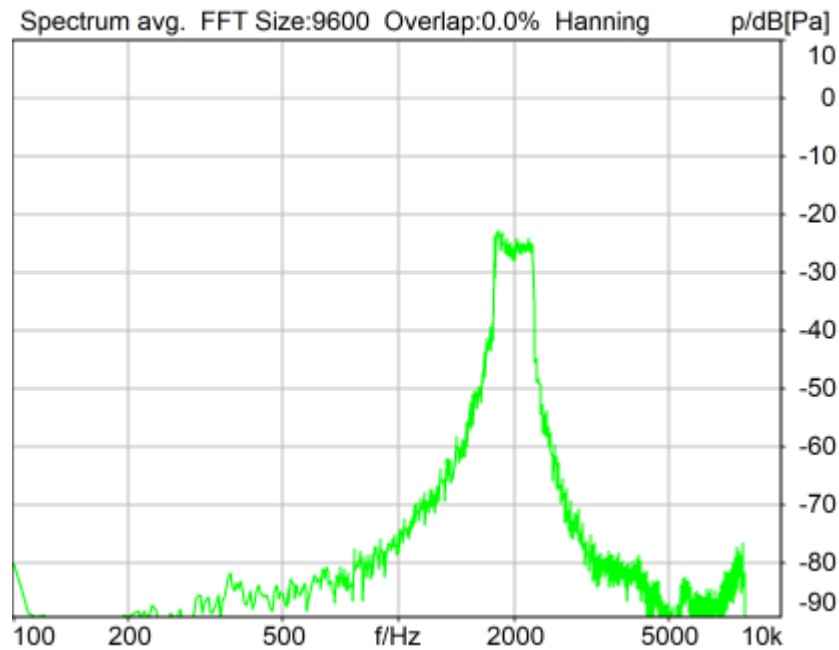
Ok

2024/3/20 10:15 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 22.10 dB (7.85%) Ok

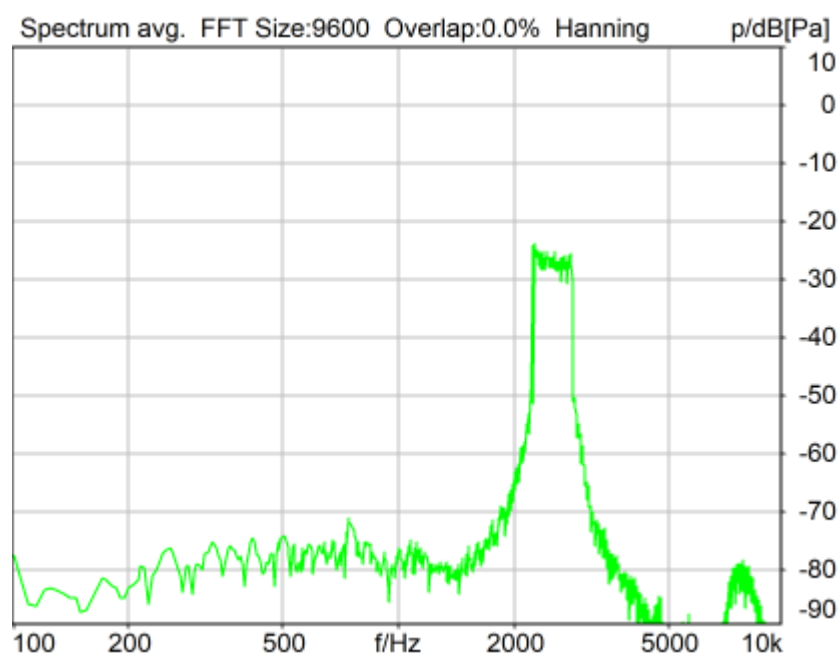
Ok

2024/3/20 10:16 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 30.22 dB (3.08%) Ok

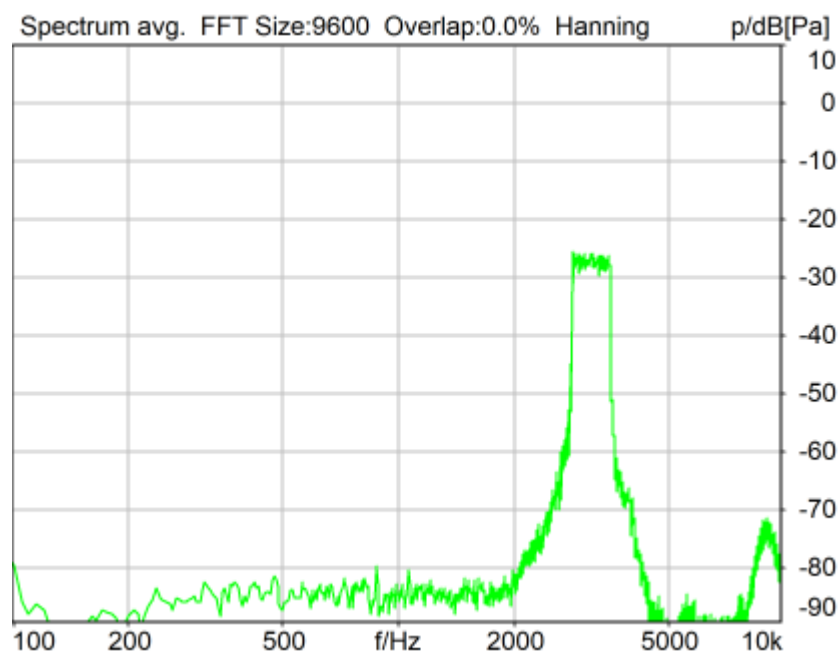
Ok

2024/3/20 10:16 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.25 dB (2.17%) Ok

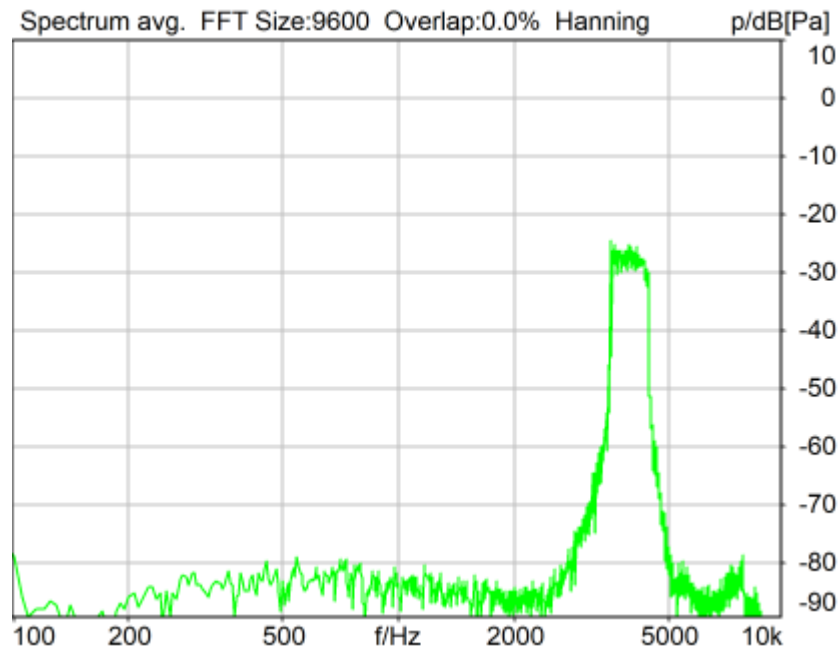
Ok

2024/3/20 10:17 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 4000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 32.50 dB (2.37%) Ok

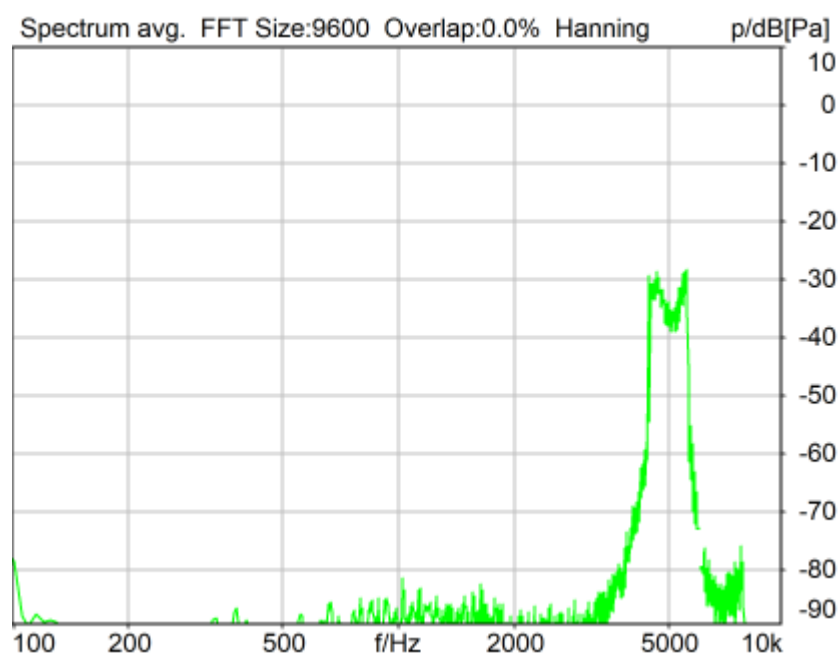
Ok

2024/3/20 10:17 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 5000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 31.11 dB (2.78%) Ok

Ok

2024/3/20 10:17 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain), Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N

Region	Frequency	SDNR
1	250Hz	31.61 dB
2	315Hz	30.98 dB
3	400Hz	32.26 dB
4	500Hz	33.17 dB
5	630Hz	34.04 dB
6	800Hz	32.37 dB
7	1000Hz	29.93 dB
8	1250Hz	23.90 dB
9	1600Hz	24.28 dB
10	2000Hz	22.10 dB
11	2500Hz	30.22 dB
12	3150Hz	33.25 dB
13	4000Hz	32.50 dB
14	5000Hz	31.11 dB

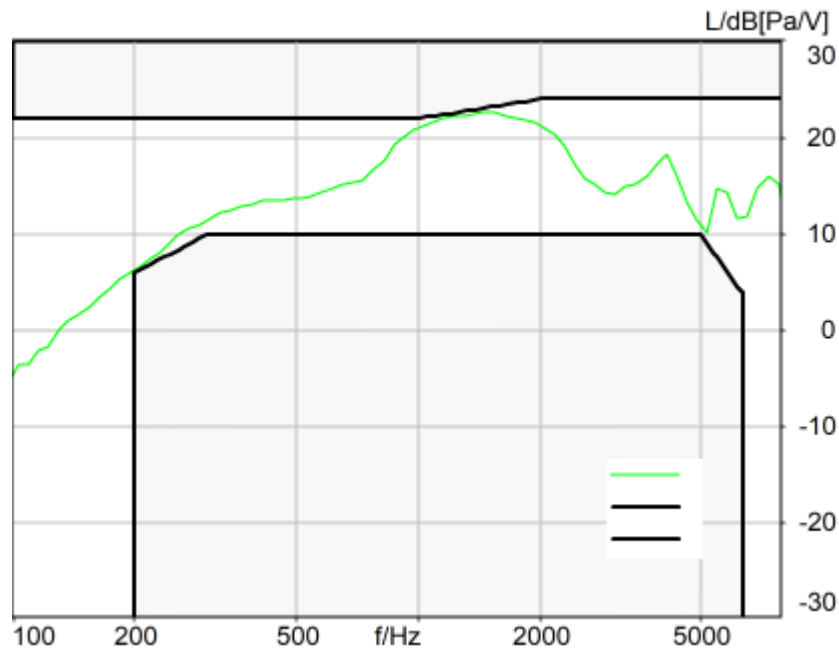
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 22.10dB at 2000Hz.

2024/3/20 10:18 ACQUA

5.3 Frequency Response 8N FF, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



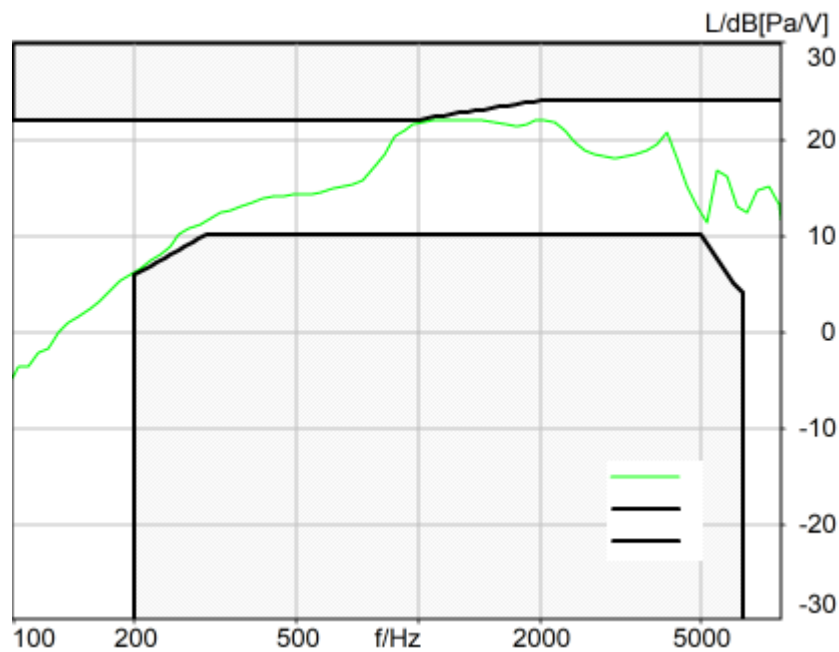
Absolute minimal distance
0.38 dB at 1151.2 Hz Ok

Ok

2024/3/20 10:10 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N DF, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



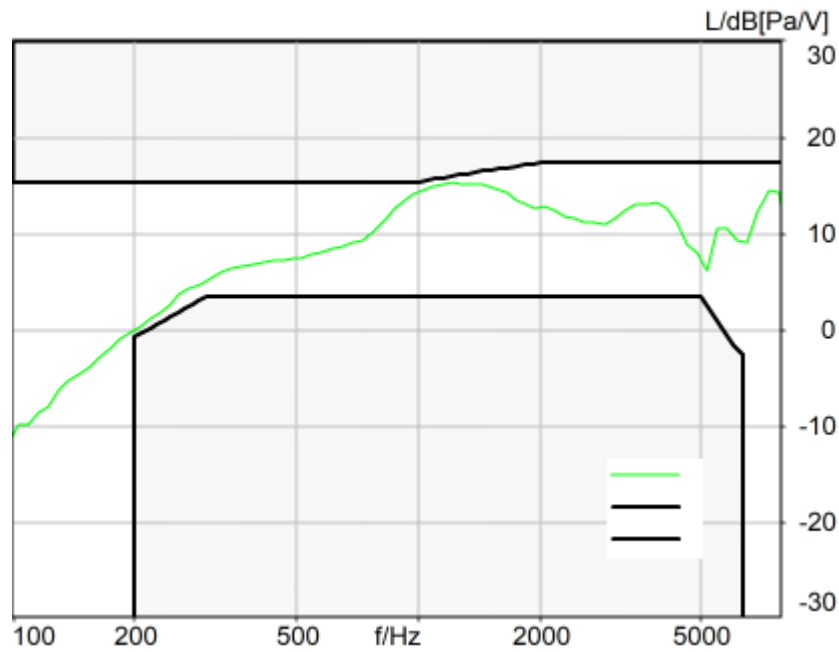
Absolute minimal distance
0.32 dB at 1088.7 Hz Ok

Ok

2024/3/20 10:10 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N FF, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



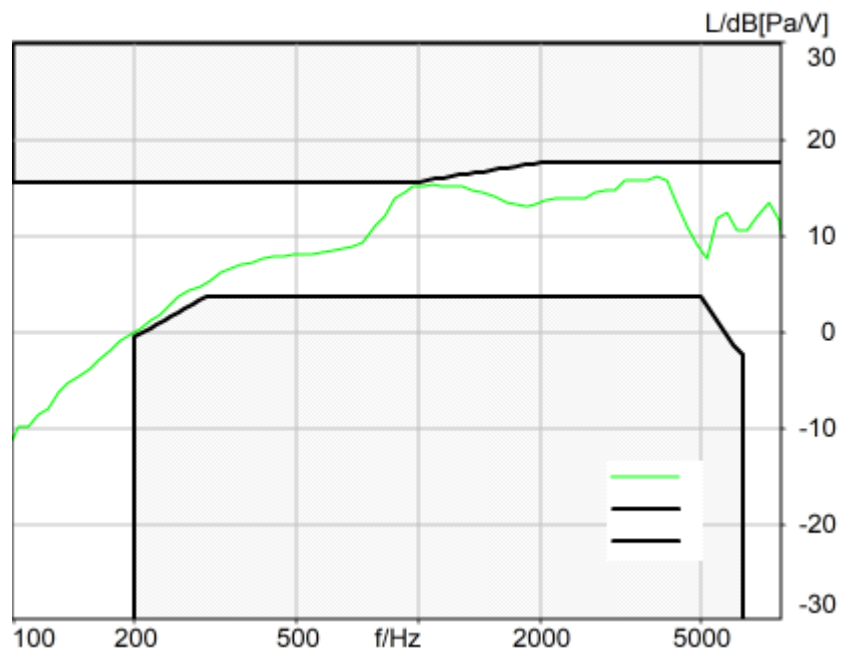
Absolute minimal distance
0.75 dB at 1216.1 Hz Ok

Ok

2024/3/20 10:18 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



Absolute minimal distance
0.52 dB at 1088.7 Hz Ok

Ok

2024/3/20 10:18 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

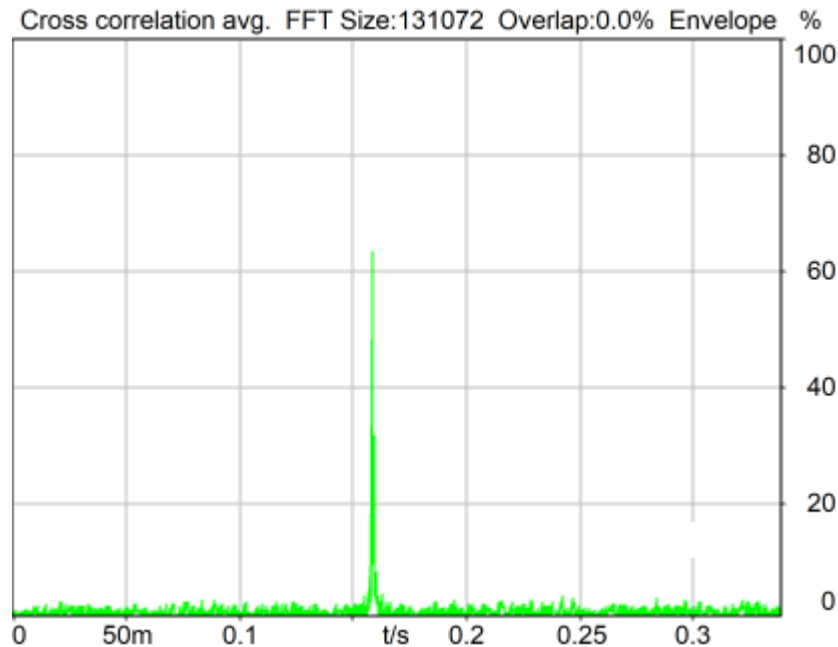
Measurement Object	FR1 n12_15 _DFT-s-OFDM_EVS NB 24.4kbps_CH141500
Description	CJWQ-W7L-P23120020 DTNC PM95

Project	TIA-5050 (2018-01)
Report Generation Date	2024/5/21 15:28
Responsible Person	audio

Overall Receive Delay NB, Index: 1	3
5.1a Receive Volume Control Performance 8N NB, Index: 1	3
5.1b Receive Volume Control Performance 2N NB, Index: 1	4
5.2 RCV Distortion and Noise - 400 Hz NB, Index: 1	5
5.2 RCV Distortion and Noise - 500 Hz NB, Index: 1	6
5.2 RCV Distortion and Noise - 630 Hz NB, Index: 1	7
5.2 RCV Distortion and Noise - 800 Hz NB, Index: 1	7
5.2 RCV Distortion and Noise - 1000 Hz NB, Index: 1	8
5.2 RCV Distortion and Noise - 1250 Hz NB, Index: 1	9
5.2 RCV Distortion and Noise - 1600 Hz NB, Index: 1	9
5.2 RCV Distortion and Noise - 2000 Hz NB, Index: 1	10
5.2 RCV Distortion and Noise - 2500 Hz NB, Index: 1	11
5.2 RCV Distortion and Noise - 3150 Hz NB, Index: 1	11
Report - Receive Distortion and Noise (Conversational Gain), Index: 1	12
5.2 RCV Distortion and Noise - 400 Hz NB, Index: 1	13
5.2 RCV Distortion and Noise - 500 Hz NB, Index: 1	13
5.2 RCV Distortion and Noise - 630 Hz NB, Index: 1	14
5.2 RCV Distortion and Noise - 800 Hz NB, Index: 1	15
5.2 RCV Distortion and Noise - 1000 Hz NB, Index: 1	15
5.2 RCV Distortion and Noise - 1250 Hz NB, Index: 1	16
5.2 RCV Distortion and Noise - 1600 Hz NB, Index: 1	17
5.2 RCV Distortion and Noise - 2000 Hz NB, Index: 1	17
5.2 RCV Distortion and Noise - 2500 Hz NB, Index: 1	18
5.2 RCV Distortion and Noise - 3150 Hz NB, Index: 1	19
Report - Receive Distortion and Noise (Conversational Gain), Index: 1	19
5.3 Frequency Response 8N FF HANB, Index: 1	20
5.3 Frequency Response 8N DF HANB, Index: 1	21
5.3 Frequency Response 2N FF HANB, Index: 1	21
5.3 Frequency Response 2N DF HANB, Index: 1	22

Overall Receive Delay NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ Preparation - Delay measurement



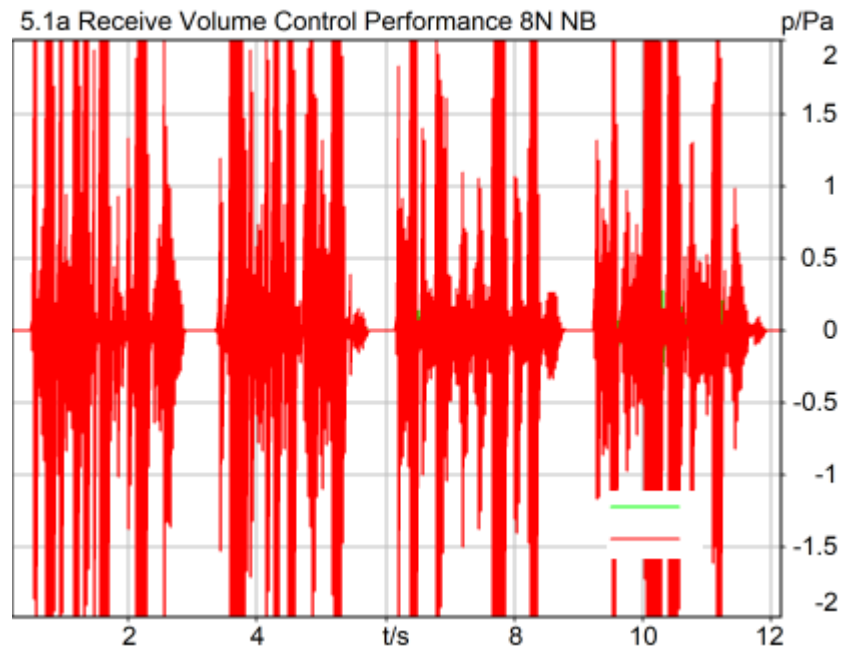
Delay (Cross): 159.2 ms

2024/3/19 12:51 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1a Receive Volume Control Performance 8N NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Correction

X - 70

Speech Level RCV: 88.71 dB[SPL], Act.: 79.94%

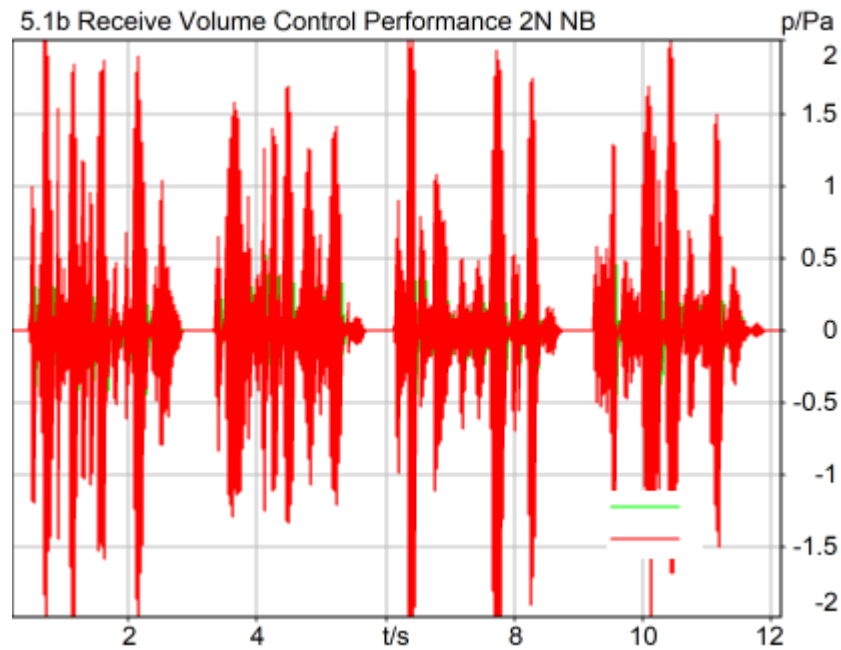
Corrected Speech Level: 18.71 dB[SPL] Ok

Ok

2024/3/19 12:51 ACQUA 5.1.200

5.1b Receive Volume Control Performance 2N NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Correction

X - 70

Speech Level RCV: 82.56 dB[SPL], Act.: 79.82%

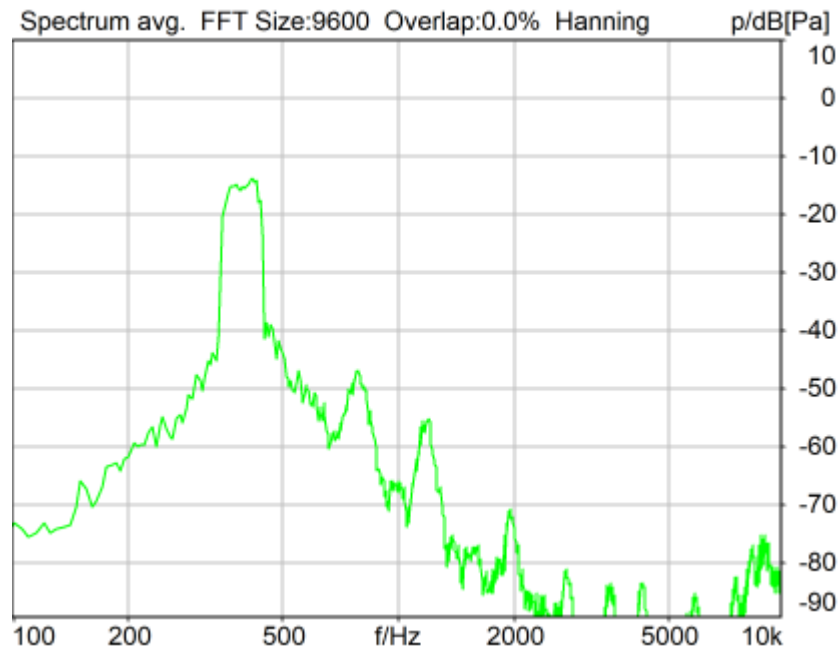
Corrected Speech Level: 12.56 dB[SPL] Ok

Ok

2024/3/19 13:00 ACQUA 5.1.200

5.2 RCV Distortion and Noise - 400 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 29.77 dB (3.25%) Ok

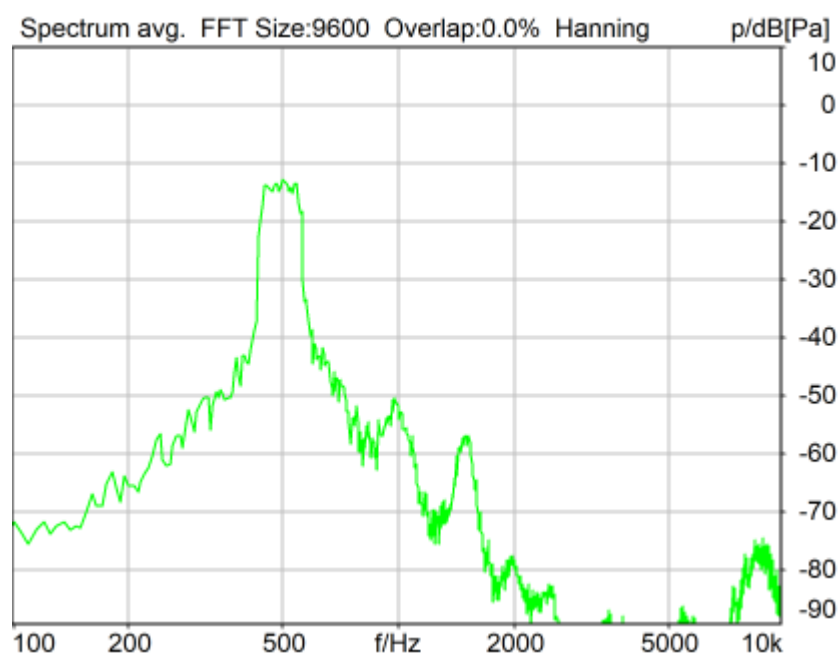
Ok

2024/3/19 12:52 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 29.92 dB (3.19%) Ok

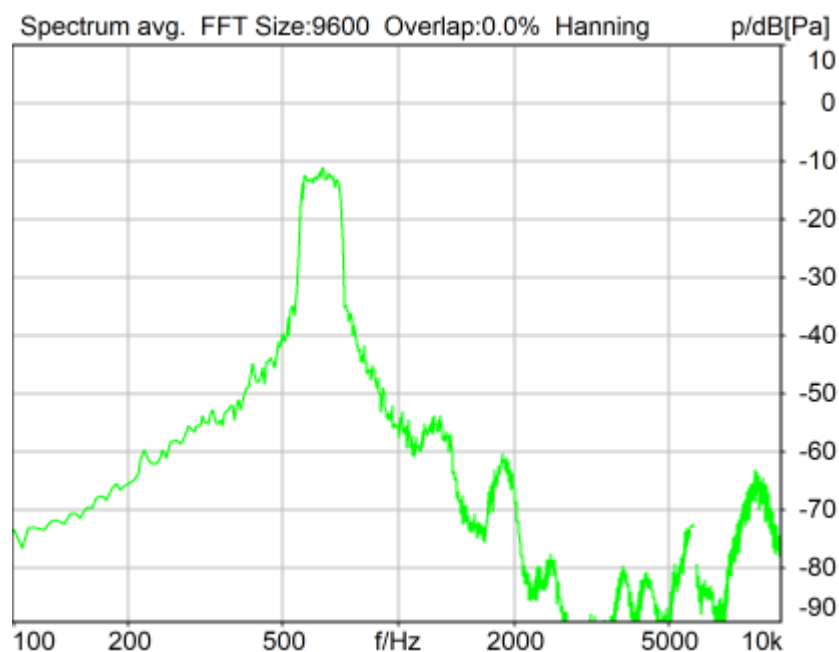
Ok

2024/3/19 12:52 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 28.55 dB (3.73%) Ok

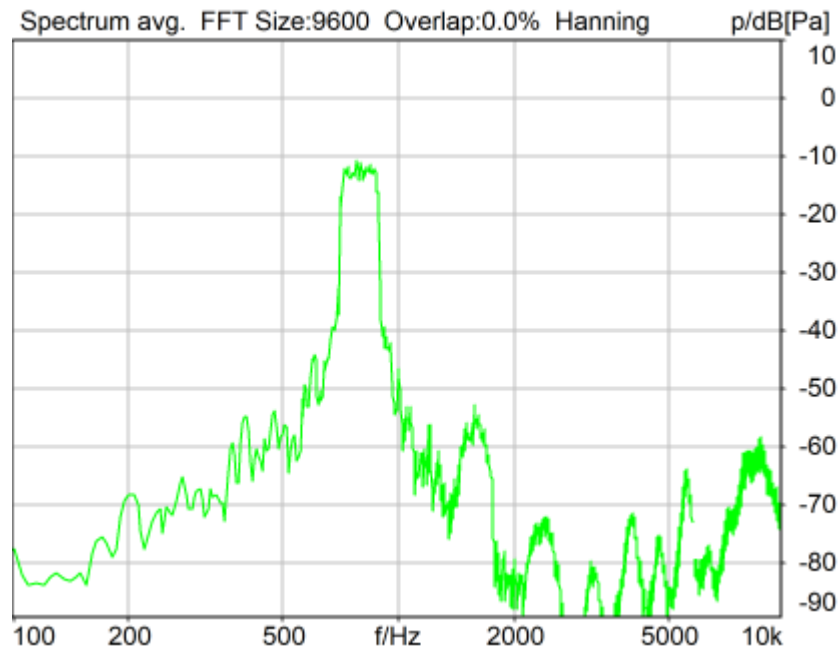
Ok

2024/3/19 12:52 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 32.64 dB (2.33%) Ok

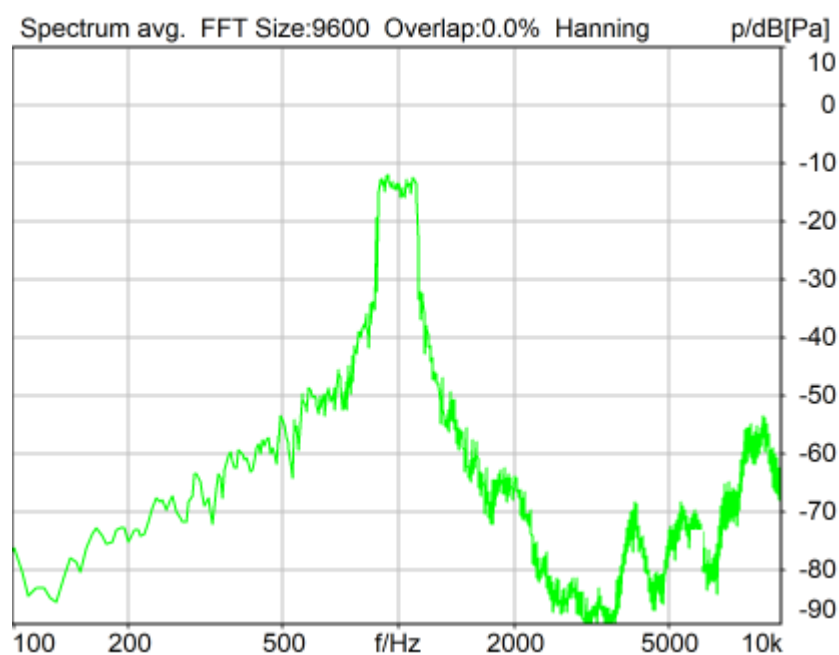
Ok

2024/3/19 12:53 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 26.36 dB (4.81%) Ok

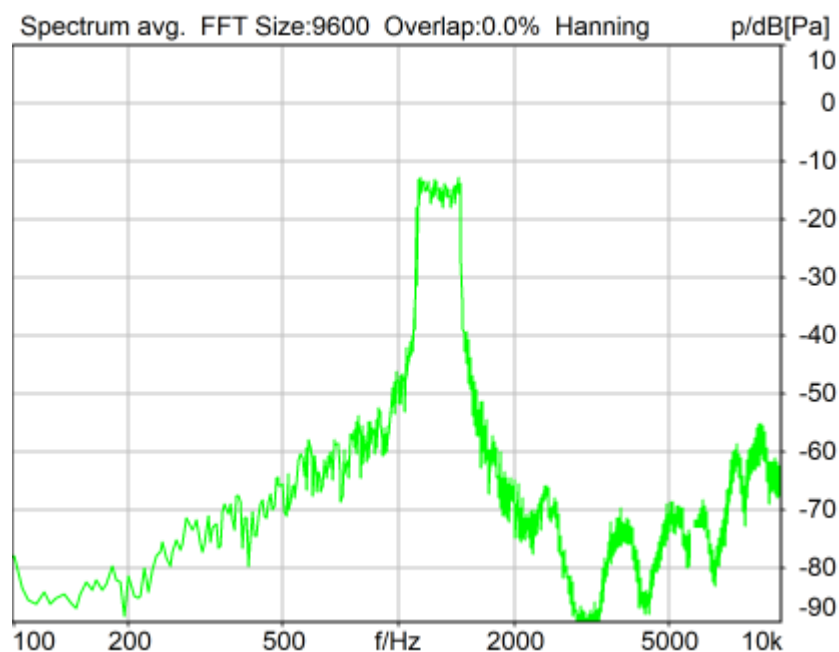
Ok

2024/3/19 12:53 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 26.31 dB (4.84%) Ok

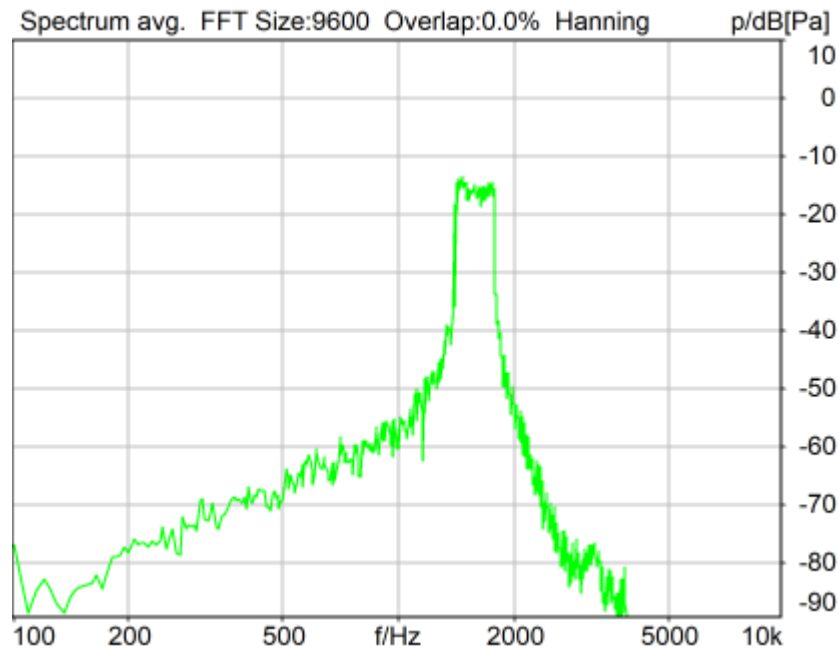
Ok

2024/3/19 12:54 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 28.05 dB (3.96%) Ok

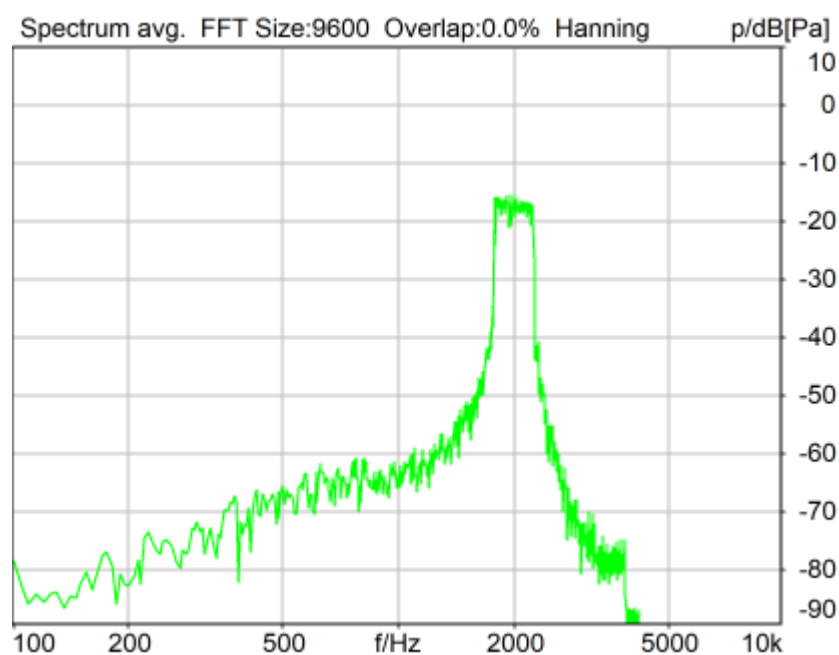
Ok

2024/3/19 12:54 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 28.38 dB (3.81%) Ok

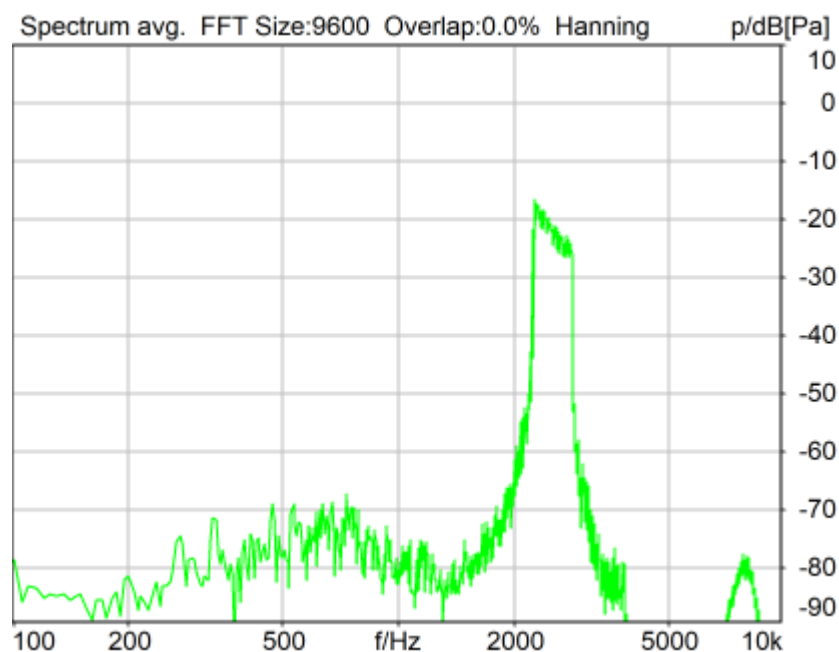
Ok

2024/3/19 12:55 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 35.92 dB (1.60%) Ok

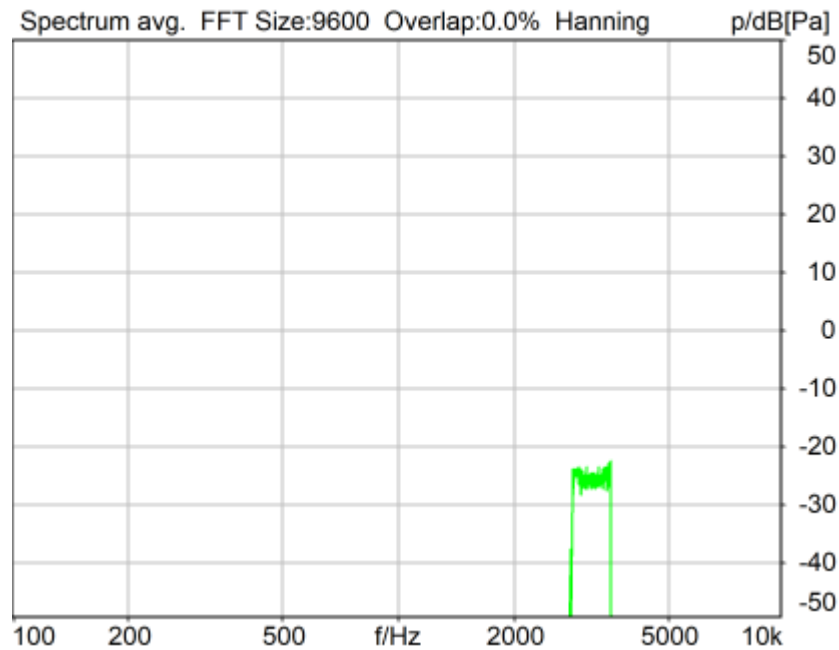
Ok

2024/3/19 12:55 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 39.06 dB (1.11%) Ok

Ok

2024/3/19 12:55 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain), Index: **1**

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N

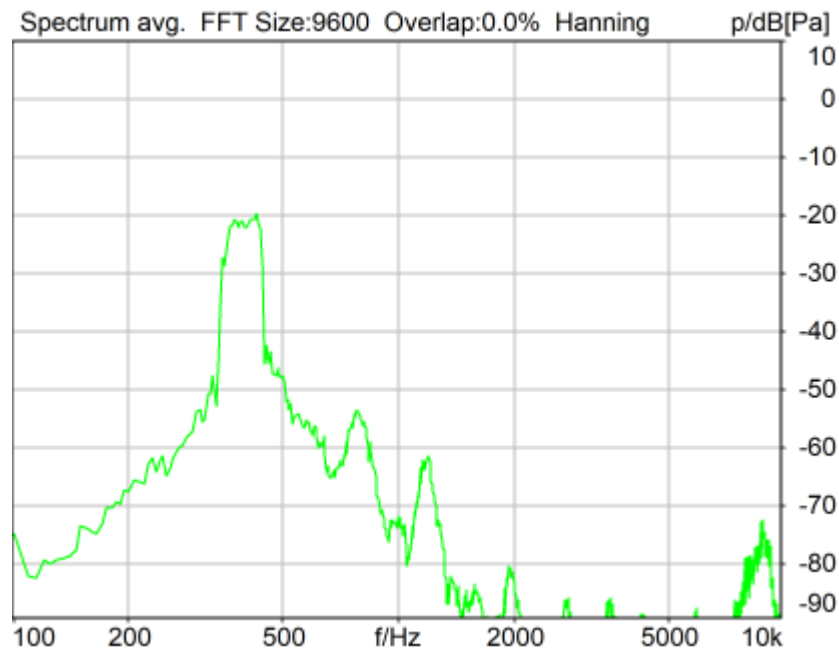
Region	Frequency	SDNR
1	400Hz	29.77 dB
2	500Hz	29.92 dB
3	630Hz	28.55 dB
4	800Hz	32.64 dB
5	1000Hz	26.36 dB
6	1250Hz	26.31 dB
7	1600Hz	28.05 dB
8	2000Hz	28.38 dB
9	2500Hz	35.92 dB
10	3150Hz	39.06 dB

All SDNRs were greater than 20.0 dB, requirement was met.
Smallest SDNR was 26.31dB at 1250Hz.

2024/3/19 12:57 ACQUA

5.2 RCV Distortion and Noise - 400 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 29.05 dB (3.53%) Ok

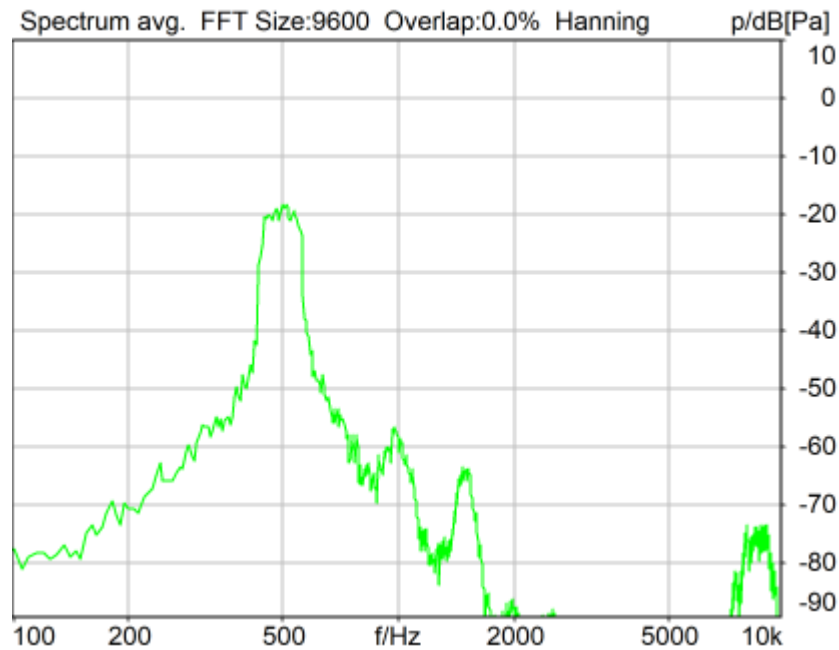
Ok

2024/3/19 13:00 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 30.22 dB (3.08%) Ok

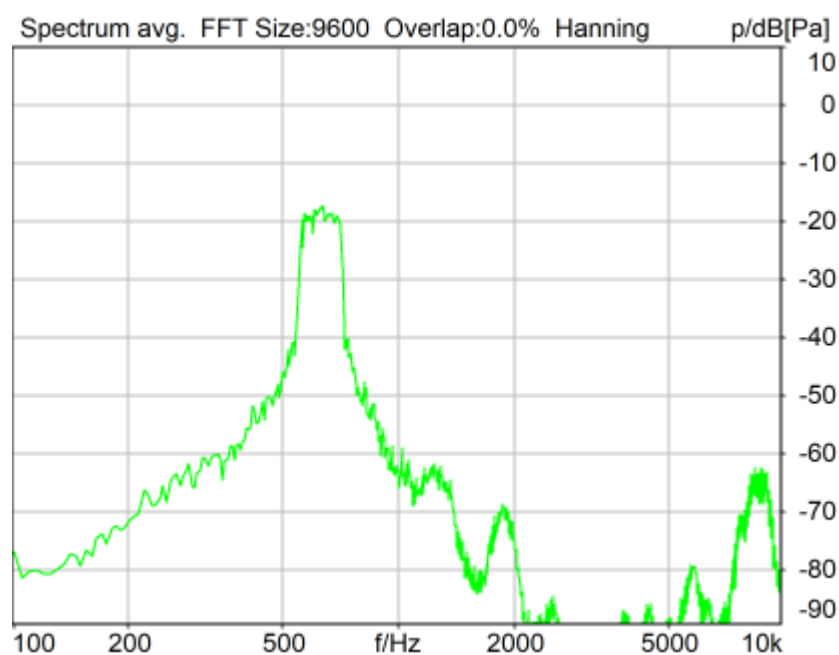
Ok

2024/3/19 13:00 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 28.72 dB (3.66%) Ok

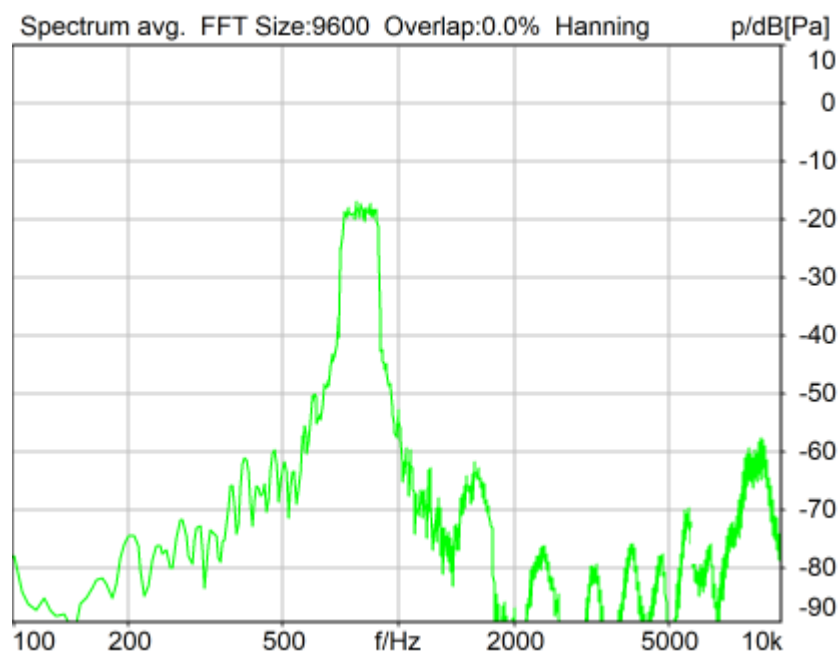
Ok

2024/3/19 13:01 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 30.46 dB (3.00%) Ok

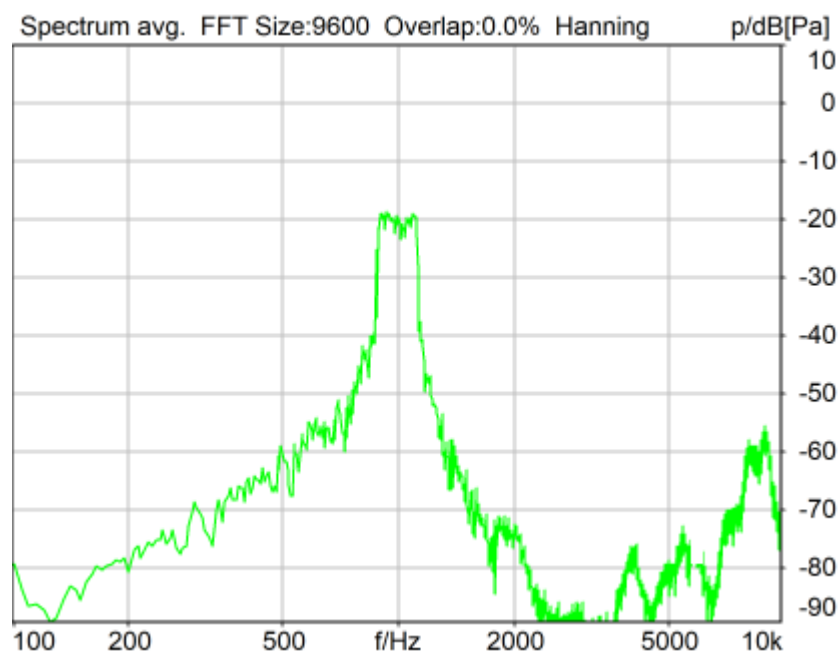
Ok

2024/3/19 13:01 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 25.89 dB (5.07%) Ok

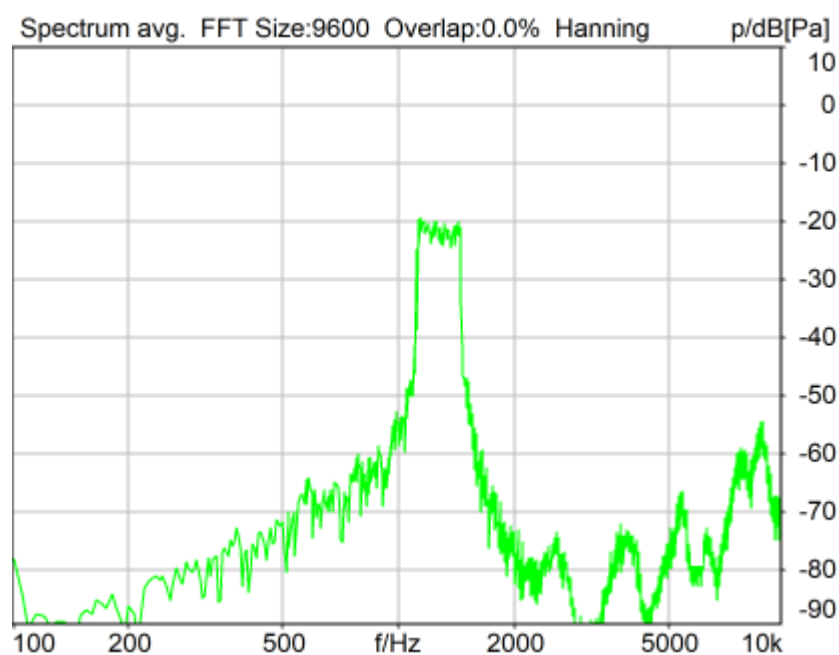
Ok

2024/3/19 13:02 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 25.72 dB (5.18%) Ok

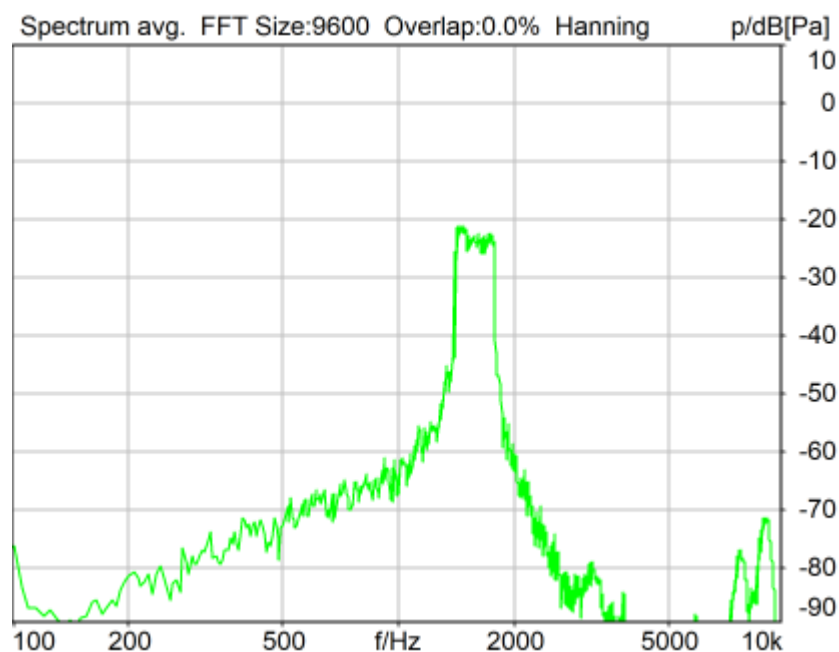
Ok

2024/3/19 13:02 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 27.71 dB (4.12%) Ok

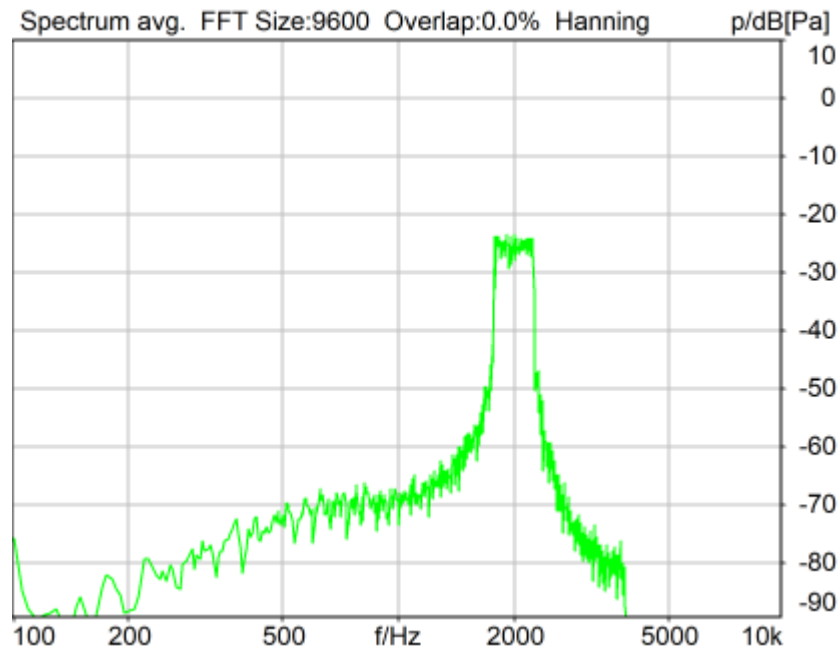
Ok

2024/3/19 13:02 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 27.06 dB (4.43%) Ok

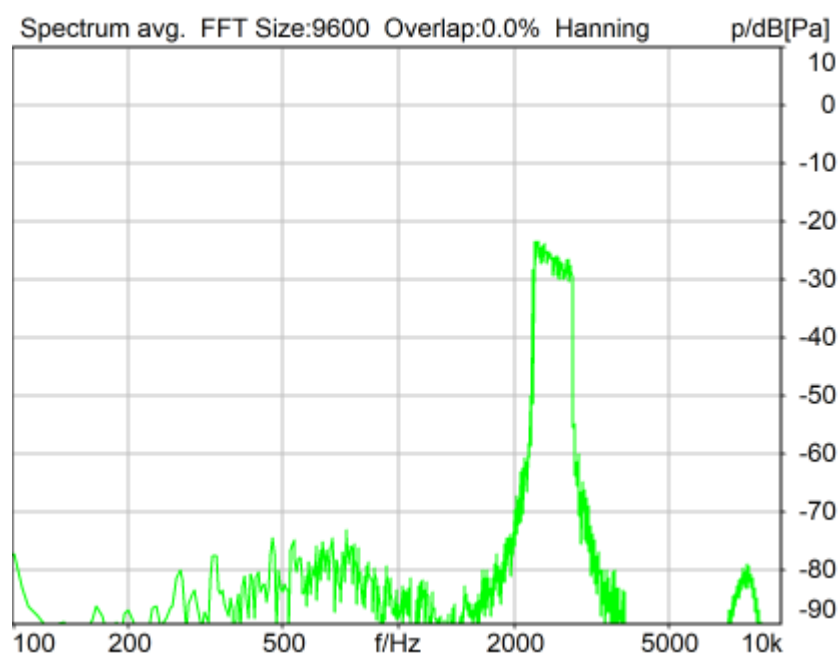
Ok

2024/3/19 13:03 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 36.92 dB (1.43%) Ok

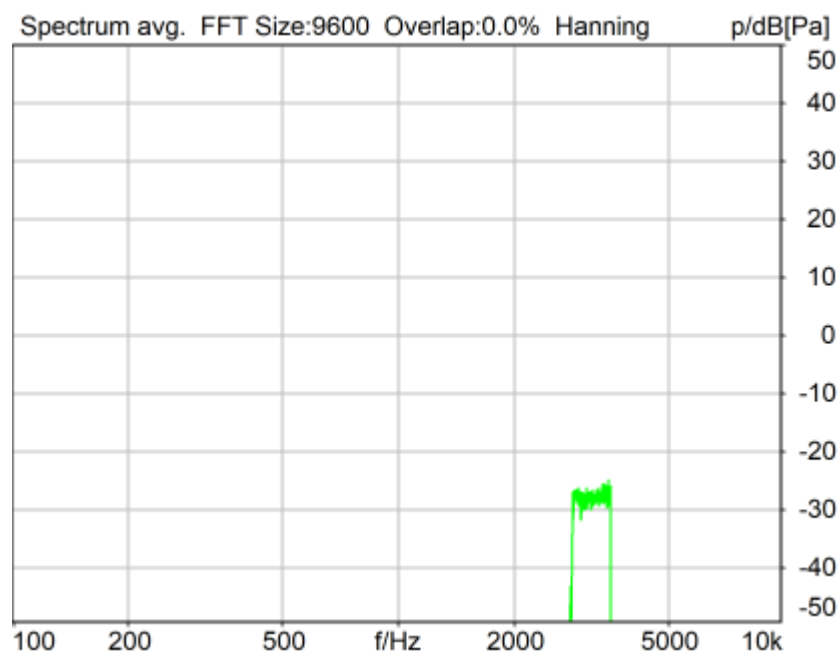
Ok

2024/3/19 13:03 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 40.05 dB (0.99%) Ok

Ok

2024/3/19 13:04 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain), Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N

Region	Frequency	SDNR
1	400Hz	29.05 dB

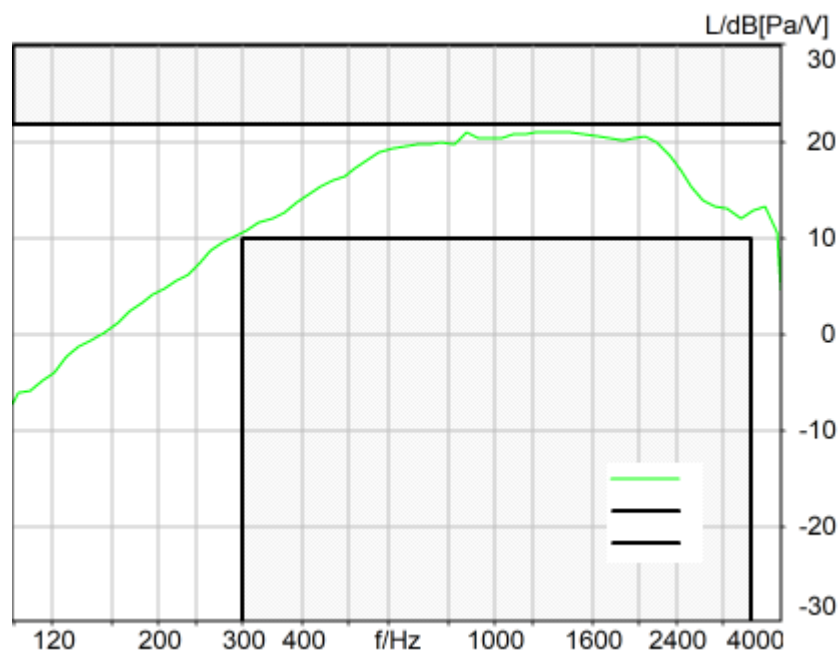
2	500Hz	30.22 dB
3	630Hz	28.72 dB
4	800Hz	30.46 dB
5	1000Hz	25.89 dB
6	1250Hz	25.72 dB
7	1600Hz	27.71 dB
8	2000Hz	27.06 dB
9	2500Hz	36.92 dB
10	3150Hz	40.05 dB

All SDNRs were greater than 20.0 dB, requirement was met.
Smallest SDNR was 25.72dB at 1250Hz.

2024/3/19 13:04 ACQUA

5.3 Frequency Response 8N FF HANB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance
0.89 dB at 873.9 Hz Ok

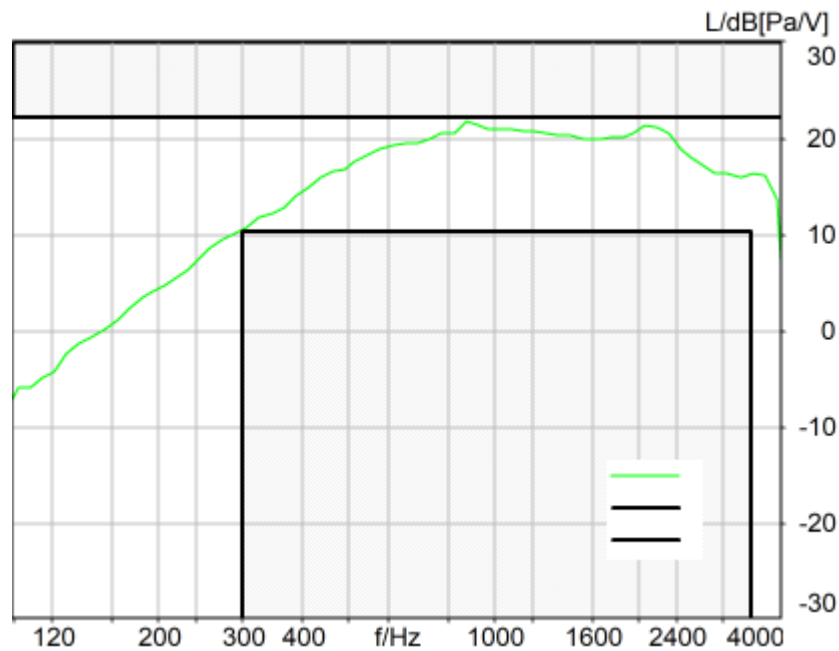
Ok

2024/3/19 12:57 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N DF HANB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance

0.44 dB at 873.9 Hz Ok

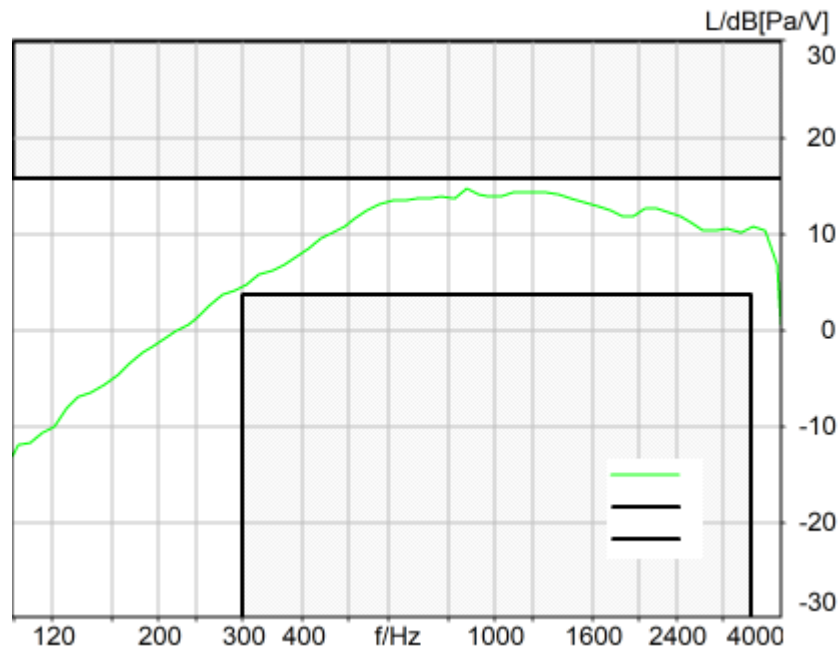
Ok

2024/3/19 12:58 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N FF HANB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



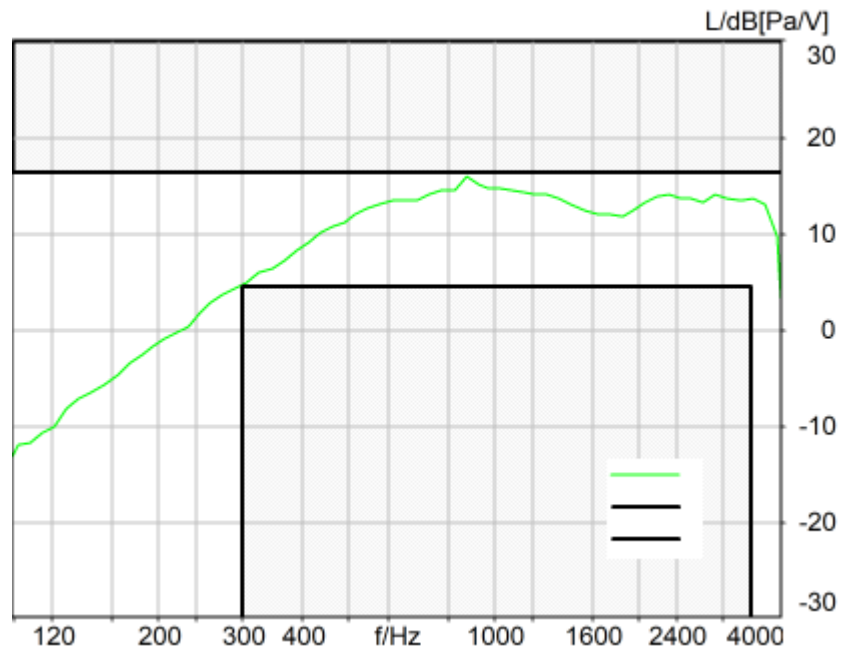
Absolute minimal distance
1.02 dB at 873.9 Hz Ok

Ok

2024/3/19 13:08 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF HANB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance
0.54 dB at 873.9 Hz Ok

Ok

2024/3/19 13:11 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

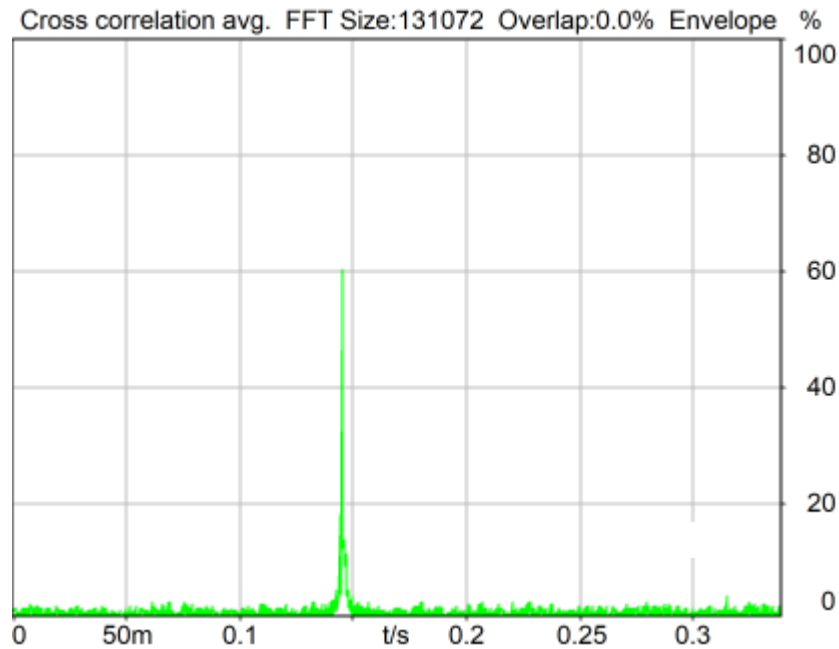
Measurement Object	FR1 n12_15 _DFT-s-OFDM_EVS WB 128kbps_CH141500
Description	CJWQ-W7L-P23120020 DTNC PM95

Project	TIA-5050 (2018-01)
Report Generation Date	2024/5/21 15:28
Responsible Person	audio

Overall Receive Delay WB, Index: 1	3
5.1a Receive Volume Control Performance 8N WB, Index: 1	3
5.1b Receive Volume Control Performance 2N WB, Index: 1	4
5.2 RCV Distortion and Noise - 250 Hz WB, Index: 1	5
5.2 RCV Distortion and Noise - 315 Hz WB, Index: 1	6
5.2 RCV Distortion and Noise - 400 Hz WB, Index: 1	7
5.2 RCV Distortion and Noise - 500 Hz WB, Index: 1	7
5.2 RCV Distortion and Noise - 630 Hz WB, Index: 1	8
5.2 RCV Distortion and Noise - 800 Hz WB, Index: 1	9
5.2 RCV Distortion and Noise - 1000 Hz WB, Index: 1	9
5.2 RCV Distortion and Noise - 1250 Hz WB, Index: 1	10
5.2 RCV Distortion and Noise - 1600 Hz WB, Index: 1	11
5.2 RCV Distortion and Noise - 2000 Hz WB, Index: 1	11
5.2 RCV Distortion and Noise - 2500 Hz WB, Index: 1	12
5.2 RCV Distortion and Noise - 3150 Hz WB, Index: 1	13
5.2 RCV Distortion and Noise - 4000 Hz WB, Index: 1	13
5.2 RCV Distortion and Noise - 5000 Hz WB, Index: 1	14
Report - Receive Distortion and Noise (Conversational Gain), Index: 1	15
5.2 RCV Distortion and Noise - 250 Hz WB, Index: 1	15
5.2 RCV Distortion and Noise - 315 Hz WB, Index: 1	16
5.2 RCV Distortion and Noise - 400 Hz WB, Index: 1	17
5.2 RCV Distortion and Noise - 500 Hz WB, Index: 1	17
5.2 RCV Distortion and Noise - 630 Hz WB, Index: 1	18
5.2 RCV Distortion and Noise - 800 Hz WB, Index: 1	19
5.2 RCV Distortion and Noise - 1000 Hz WB, Index: 1	19
5.2 RCV Distortion and Noise - 1250 Hz WB, Index: 1	20
5.2 RCV Distortion and Noise - 1600 Hz WB, Index: 1	21
5.2 RCV Distortion and Noise - 2000 Hz WB, Index: 1	21
5.2 RCV Distortion and Noise - 2500 Hz WB, Index: 1	22
5.2 RCV Distortion and Noise - 3150 Hz WB, Index: 1	23
5.2 RCV Distortion and Noise - 4000 Hz WB, Index: 1	23
5.2 RCV Distortion and Noise - 5000 Hz WB, Index: 1	24
Report - Receive Distortion and Noise (Conversational Gain), Index: 1	25
5.3 Frequency Response 8N FF, Index: 1	25
5.3 Frequency Response 8N DF, Index: 1	26
5.3 Frequency Response 2N FF, Index: 1	27
5.3 Frequency Response 2N DF, Index: 1	28

Overall Receive Delay WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ Preparation - Delay measurement



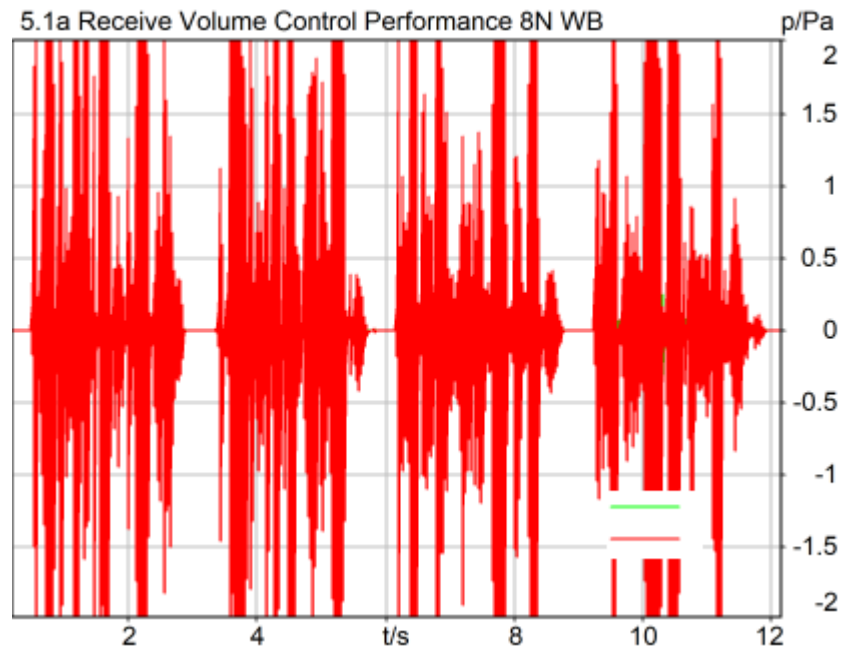
Delay (Cross): 145.1 ms

2024/3/19 13:30 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1a Receive Volume Control Performance 8N WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



Correction

X - 70

Speech Level RCV: 87.52 dB[SPL], Act.: 82.78%

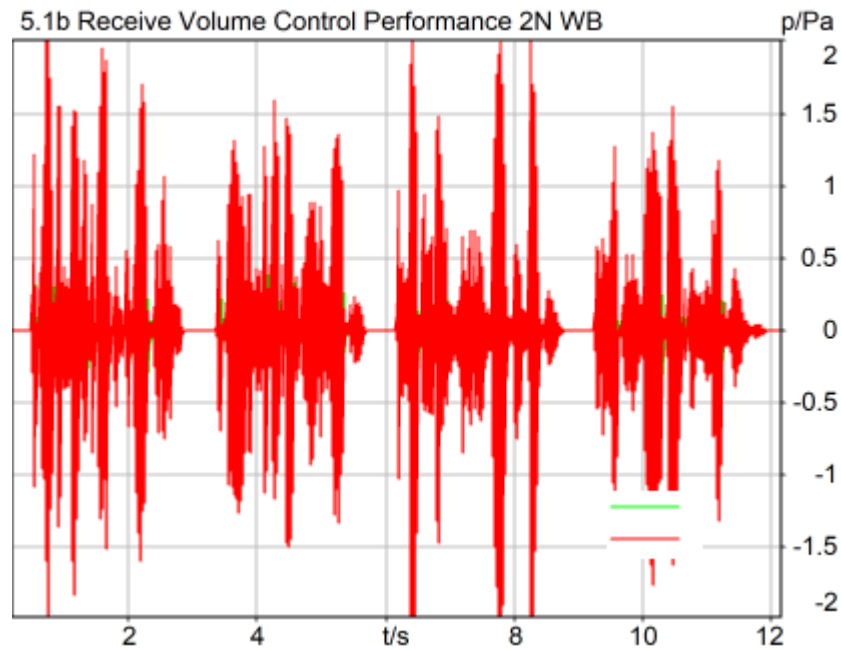
Corrected Speech Level: 17.52 dB[SPL] Ok

Ok

2024/3/19 13:30 ACQUA 5.1.200

5.1b Receive Volume Control Performance 2N WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



Correction

X - 70

Speech Level RCV: 81.28 dB[SPL], Act.: 83.45%

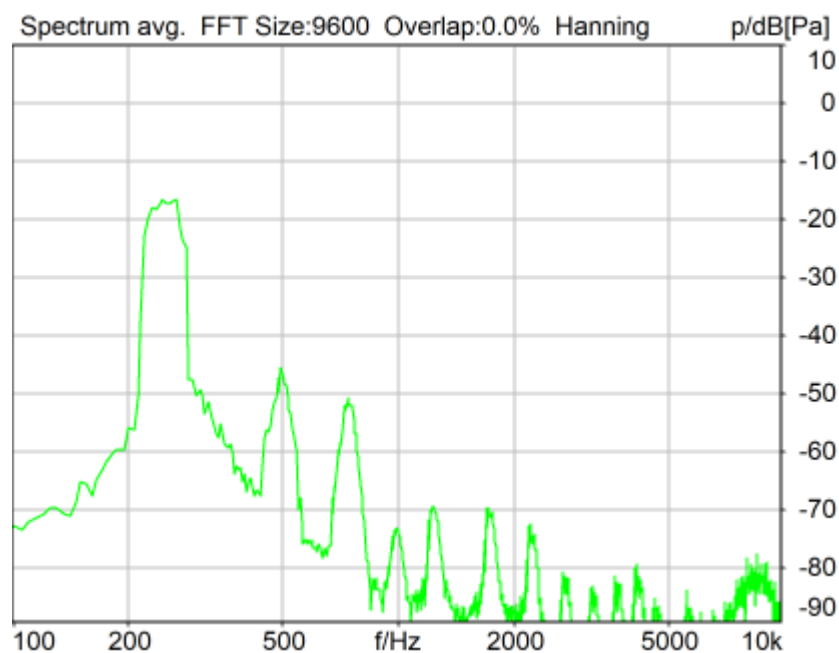
Corrected Speech Level: 11.28 dB[SPL] Ok

Ok

2024/3/19 13:41 ACQUA 5.1.200

5.2 RCV Distortion and Noise - 250 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 30.94 dB (2.84%) Ok

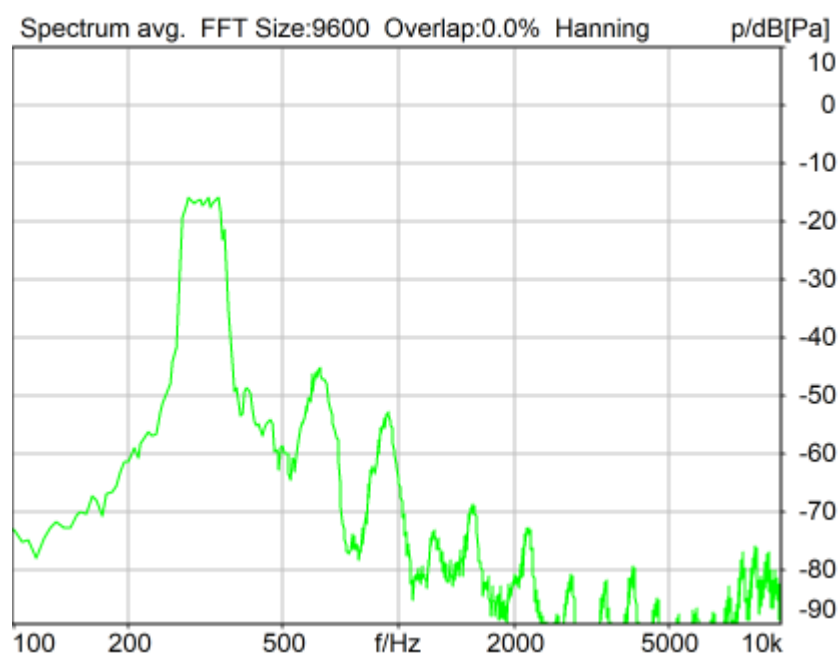
Ok

2024/3/19 13:31 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 315 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 30.16 dB (3.10%) Ok

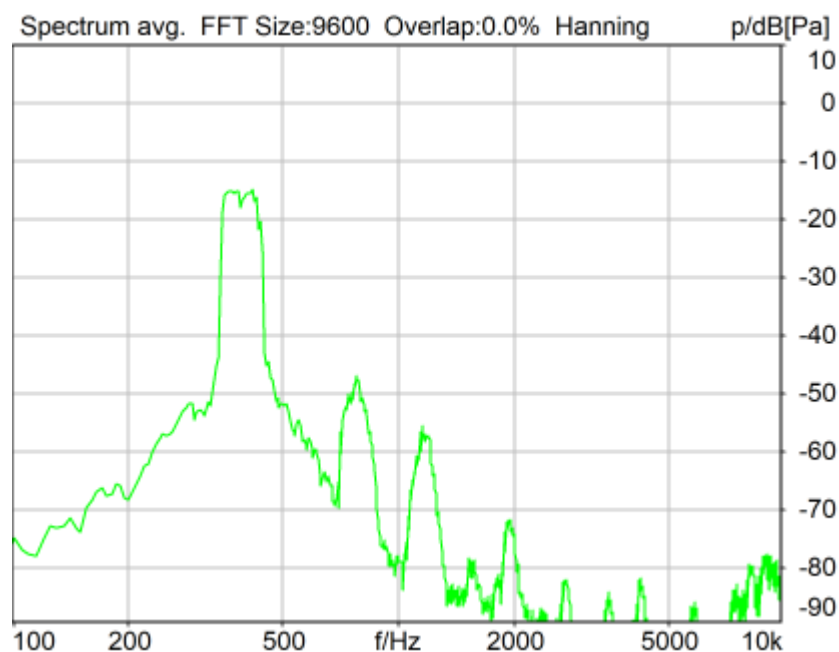
Ok

2024/3/19 13:31 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 32.09 dB (2.49%) Ok

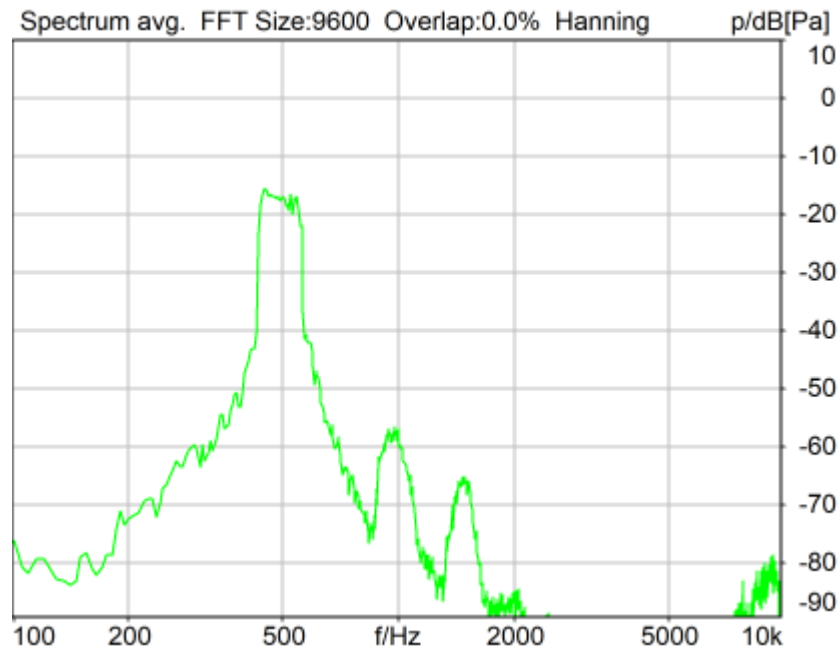
Ok

2024/3/19 13:32 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 34.39 dB (1.91%) Ok

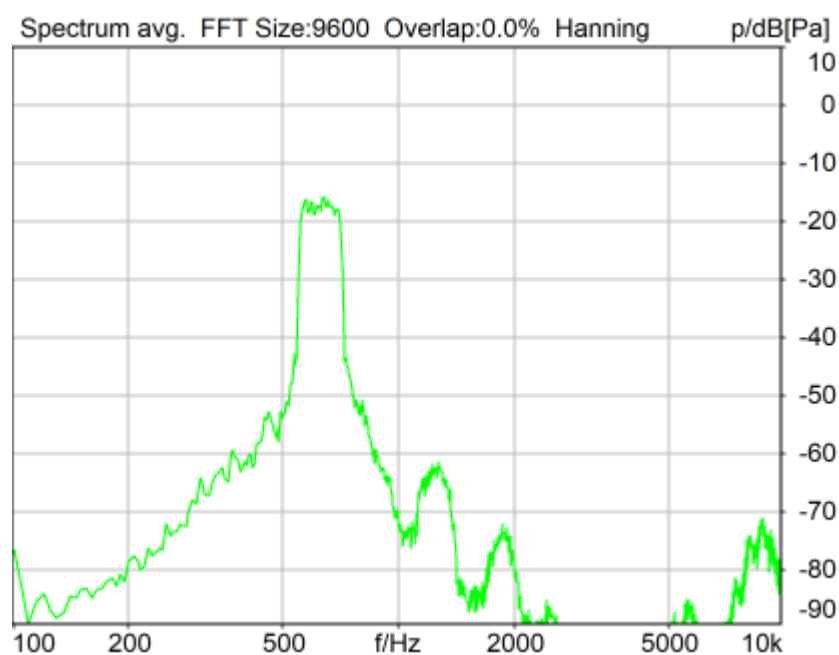
Ok

2024/3/19 13:32 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 34.84 dB (1.81%) Ok

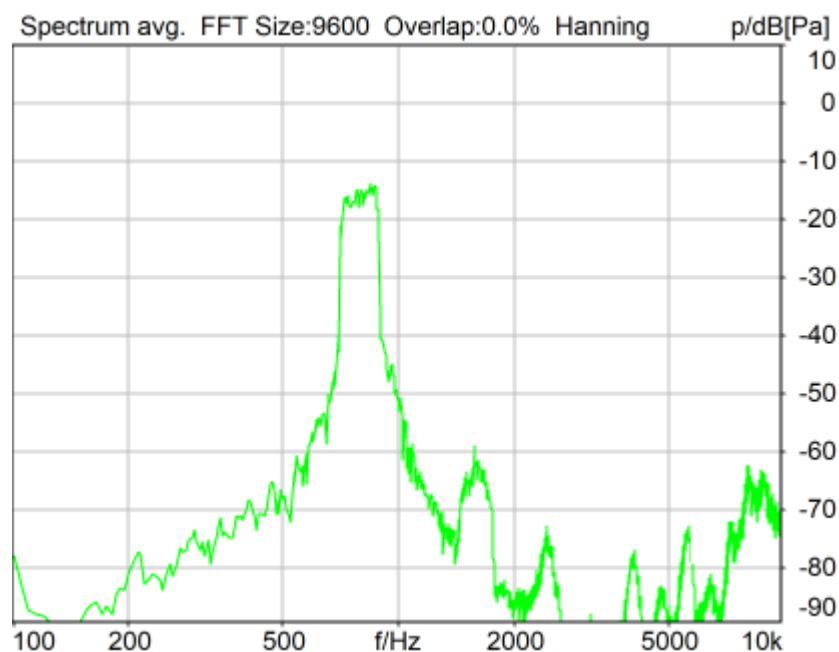
Ok

2024/3/19 13:32 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 32.85 dB (2.28%) Ok

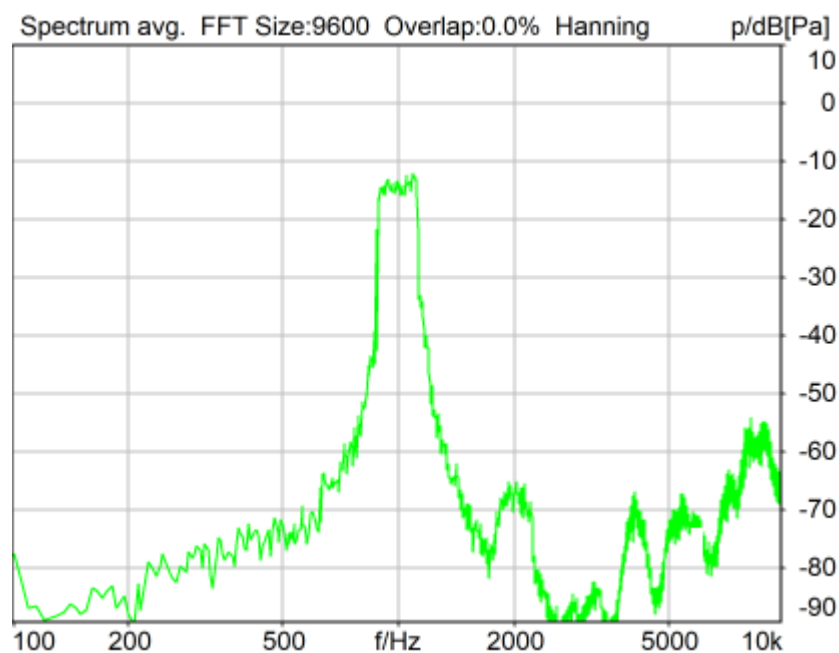
Ok

2024/3/19 13:33 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 30.92 dB (2.84%) Ok

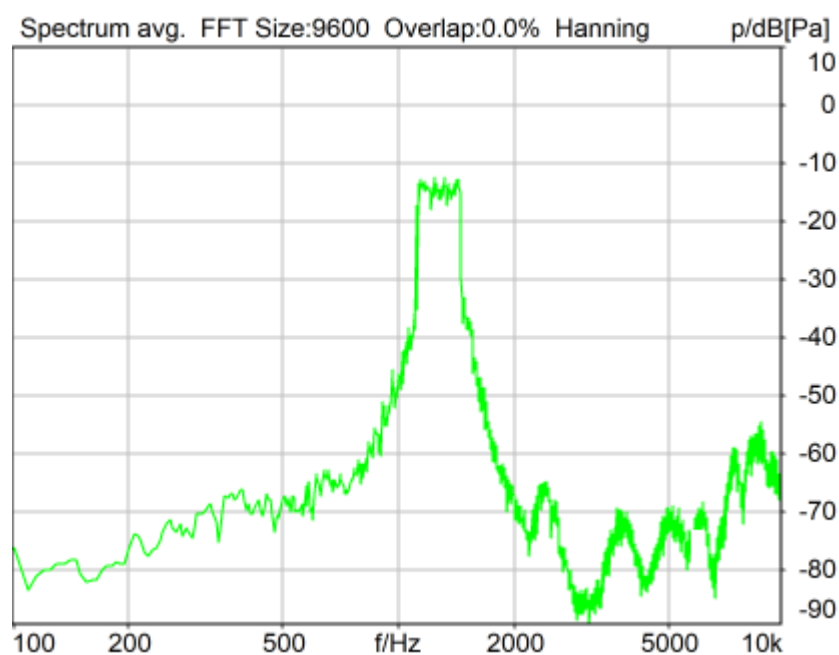
Ok

2024/3/19 13:33 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 24.56 dB (5.91%) Ok

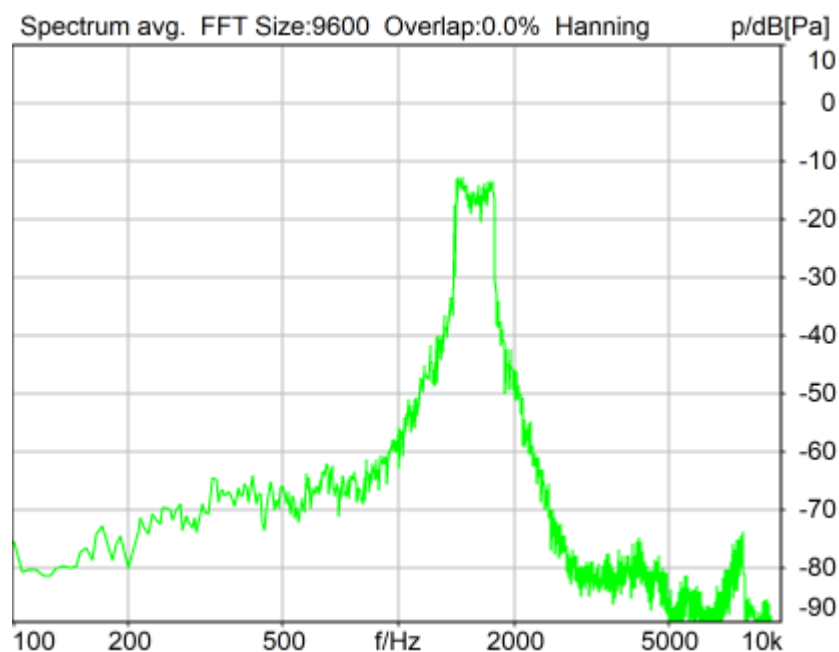
Ok

2024/3/19 13:34 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 24.61 dB (5.88%) Ok

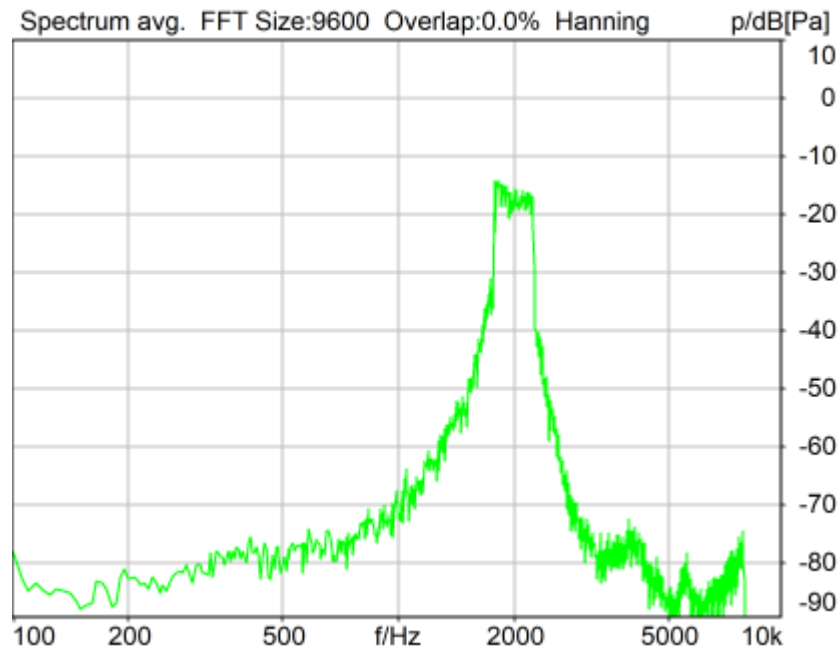
Ok

2024/3/19 13:34 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 22.98 dB (7.10%) Ok

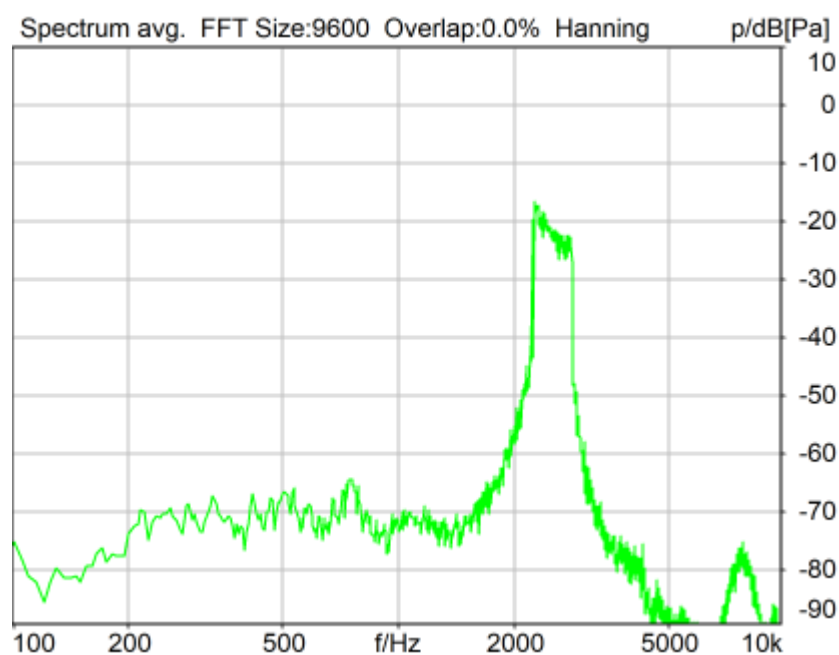
Ok

2024/3/19 13:34 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 30.02 dB (3.15%) Ok

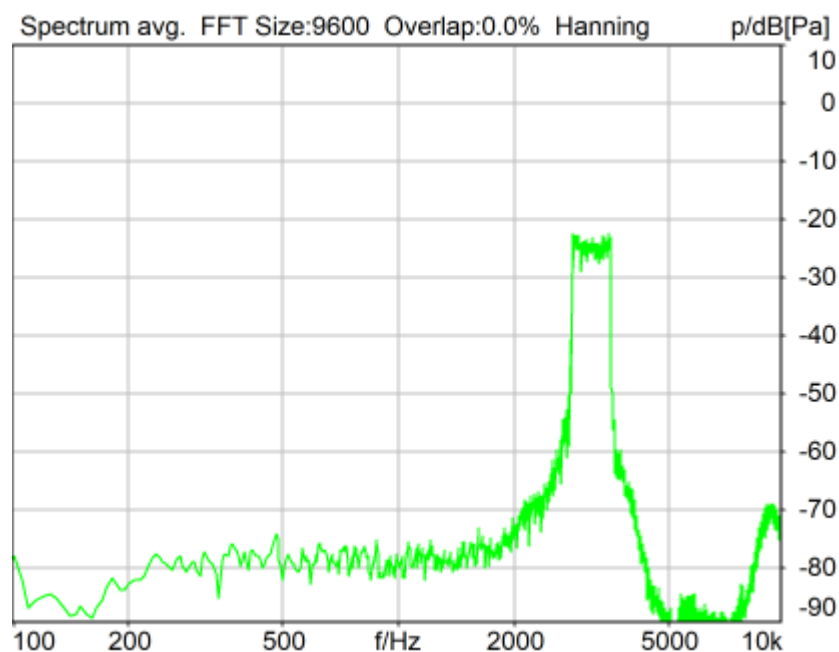
Ok

2024/3/19 13:35 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 32.81 dB (2.29%) Ok

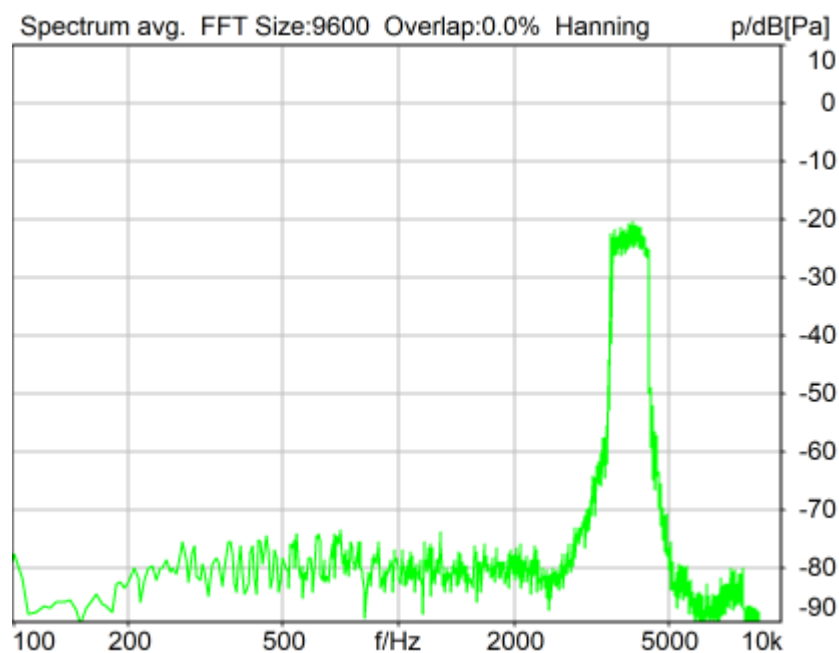
Ok

2024/3/19 13:35 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 4000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 36.46 dB (1.50%) Ok

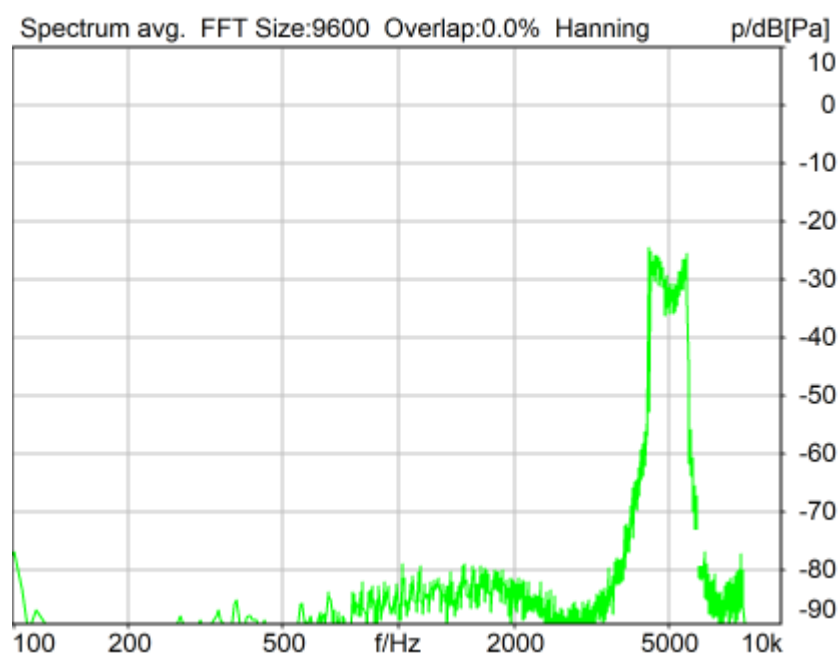
Ok

2024/3/19 13:36 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 5000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 33.42 dB (2.13%) Ok

Ok

2024/3/19 13:36 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain), Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N

Region	Frequency	SDNR
1	250Hz	30.94 dB
2	315Hz	30.16 dB
3	400Hz	32.09 dB
4	500Hz	34.39 dB
5	630Hz	34.84 dB
6	800Hz	32.85 dB
7	1000Hz	30.92 dB
8	1250Hz	24.56 dB
9	1600Hz	24.61 dB
10	2000Hz	22.98 dB
11	2500Hz	30.02 dB
12	3150Hz	32.81 dB
13	4000Hz	36.46 dB
14	5000Hz	33.42 dB

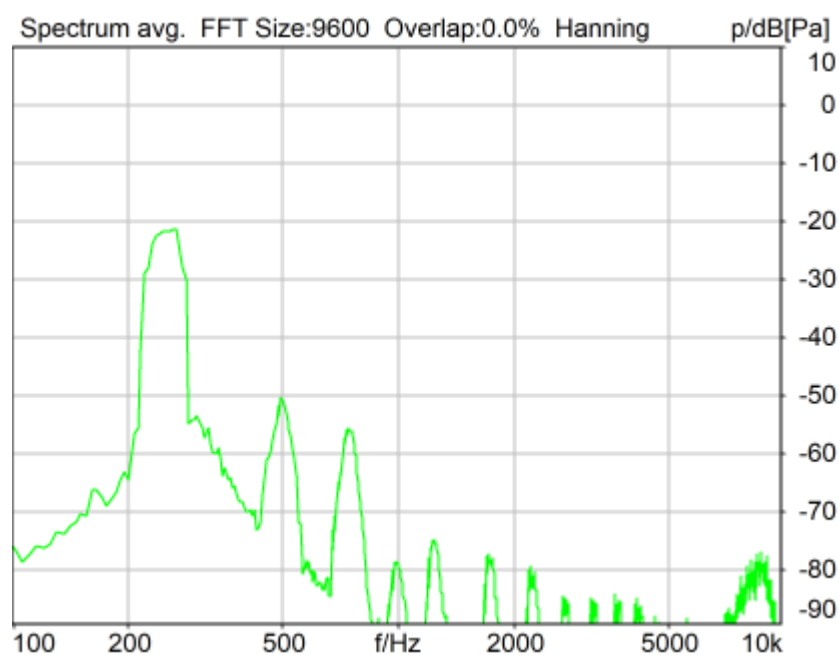
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 22.98dB at 2000Hz.

2024/3/19 13:36 ACQUA

5.2 RCV Distortion and Noise - 250 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 30.14 dB (3.11%) Ok

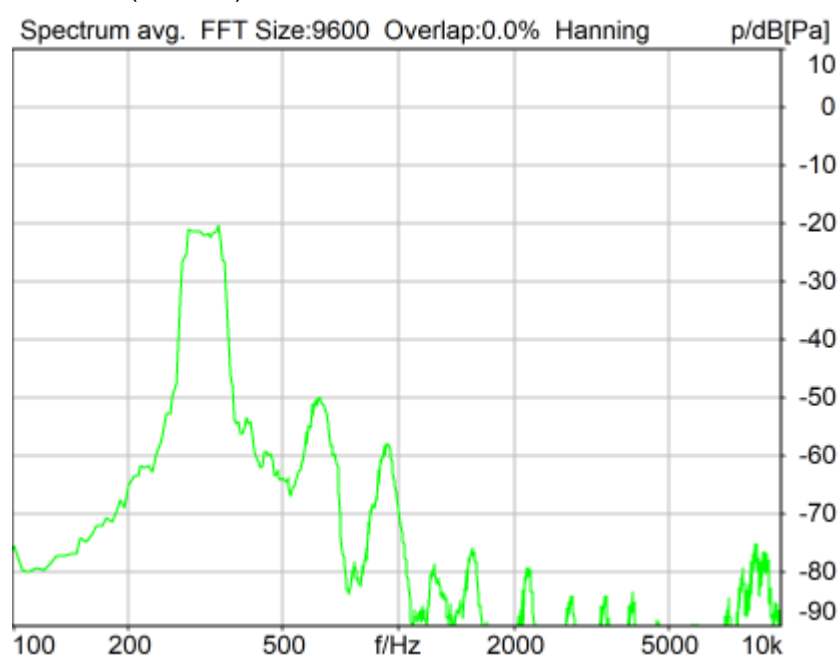
Ok

2024/3/19 13:42 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 315 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 29.57 dB (3.32%) Ok

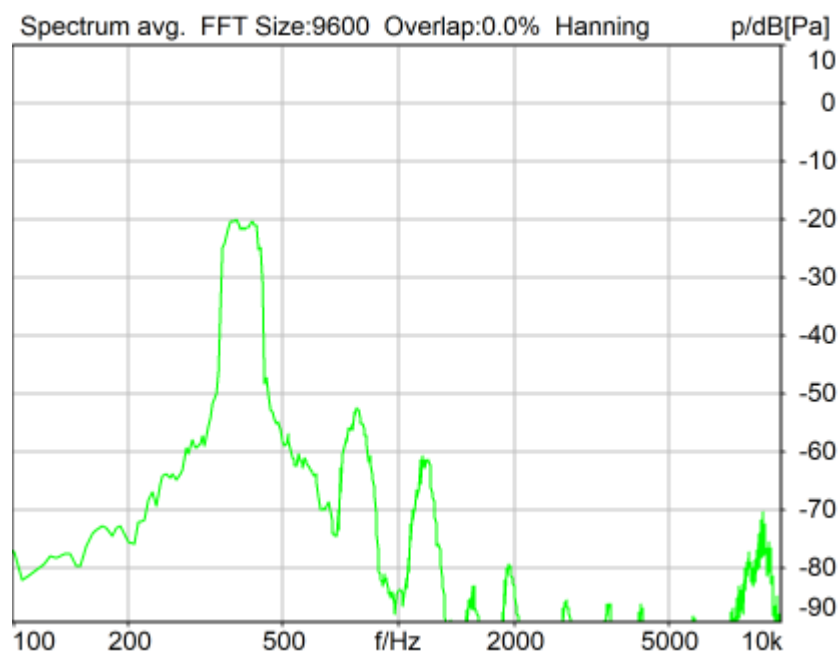
Ok

2024/3/19 13:43 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 31.59 dB (2.63%) Ok

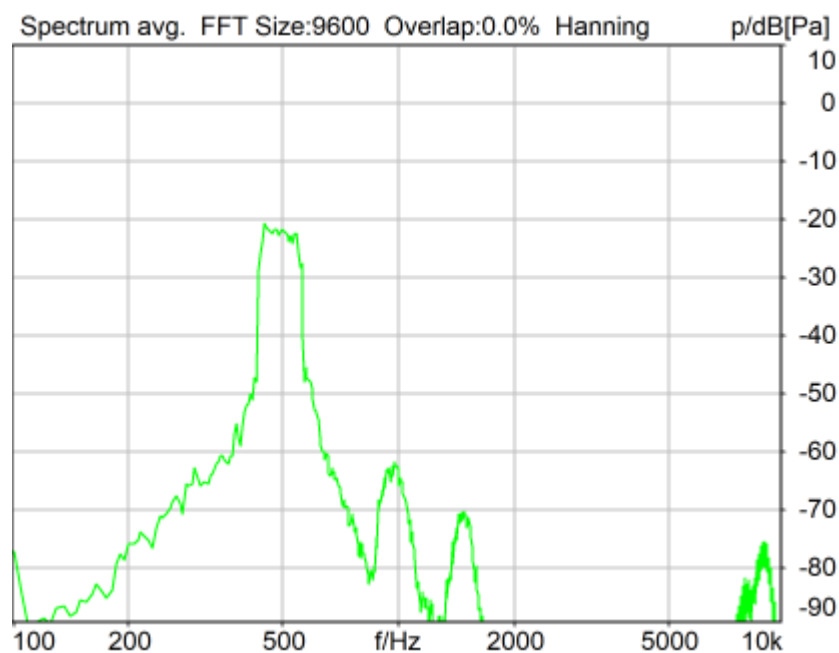
Ok

2024/3/19 13:43 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 34.46 dB (1.89%) Ok

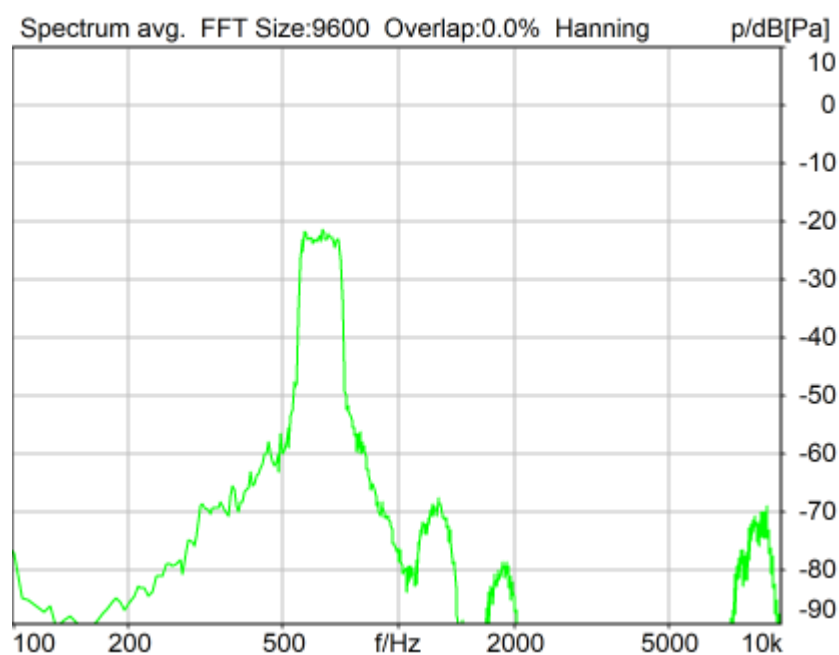
Ok

2024/3/19 13:43 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 34.57 dB (1.87%) Ok

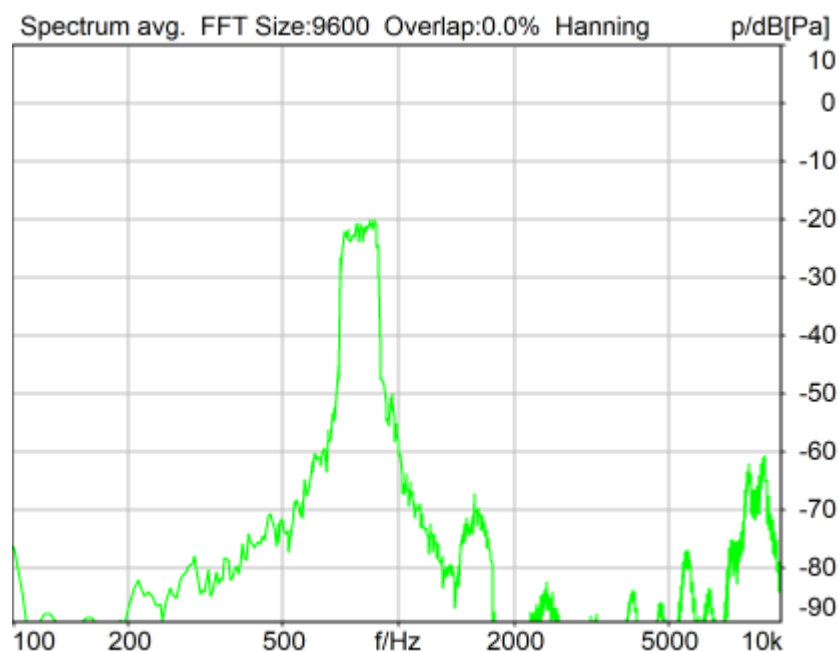
Ok

2024/3/19 13:44 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 32.10 dB (2.48%) Ok

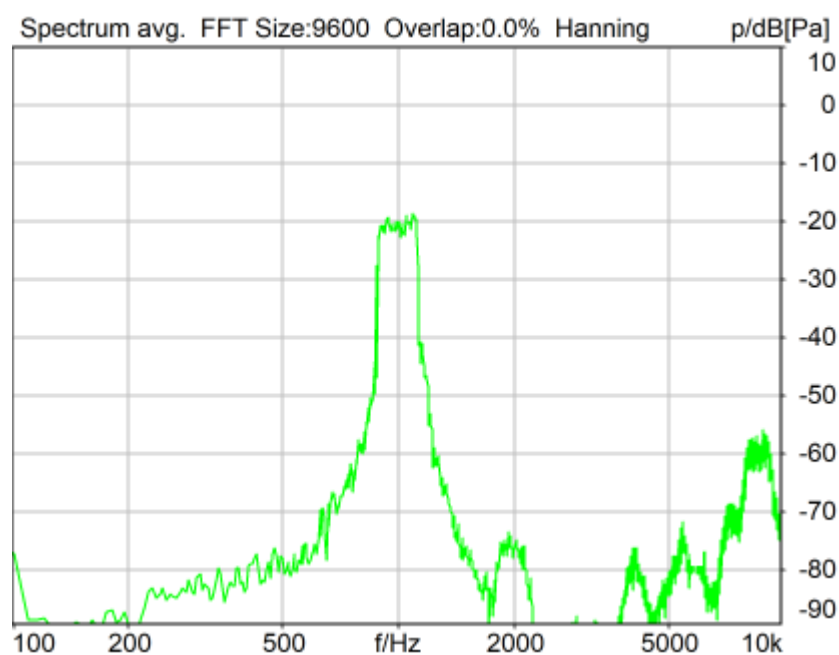
Ok

2024/3/19 13:44 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 29.16 dB (3.48%) Ok

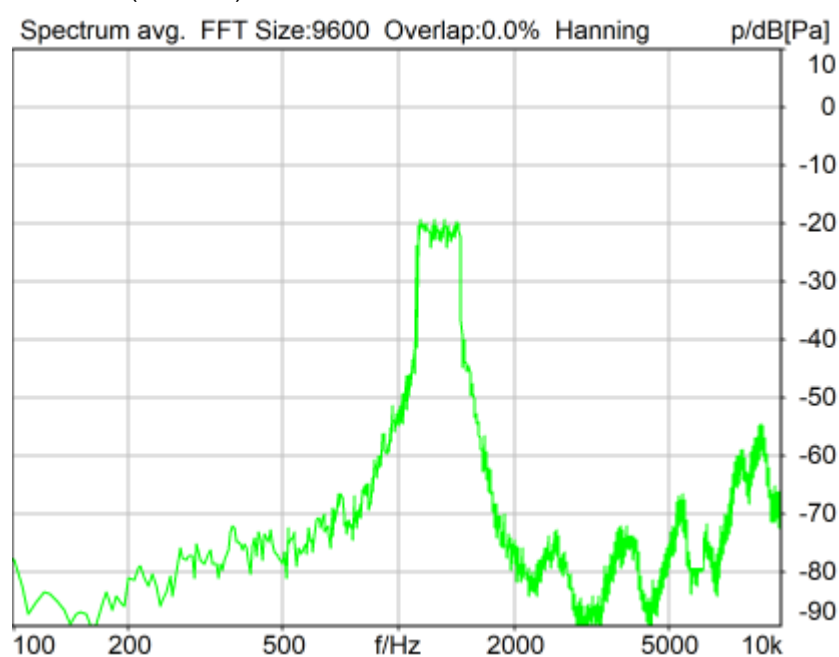
Ok

2024/3/19 13:45 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 24.39 dB (6.03%) Ok

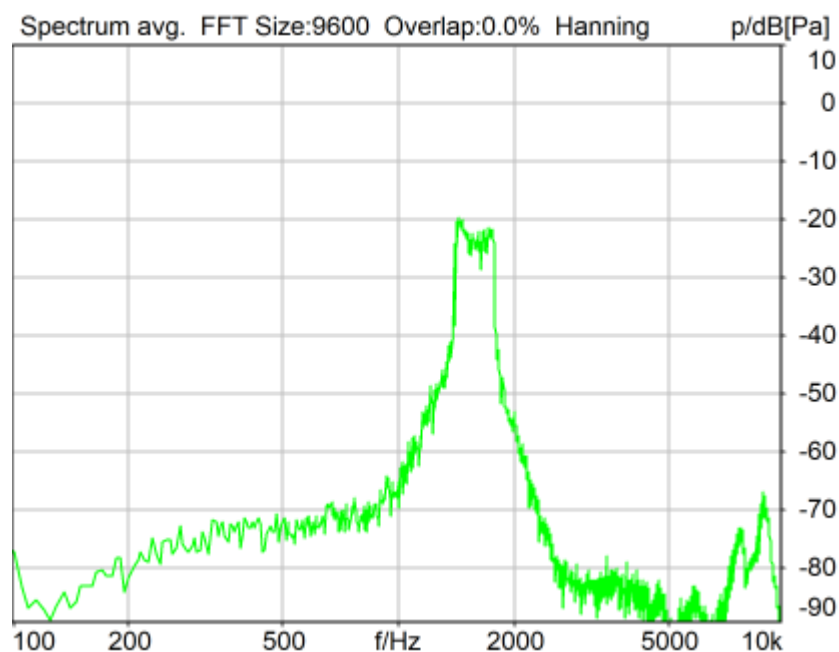
Ok

2024/3/19 13:45 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 24.65 dB (5.86%) Ok

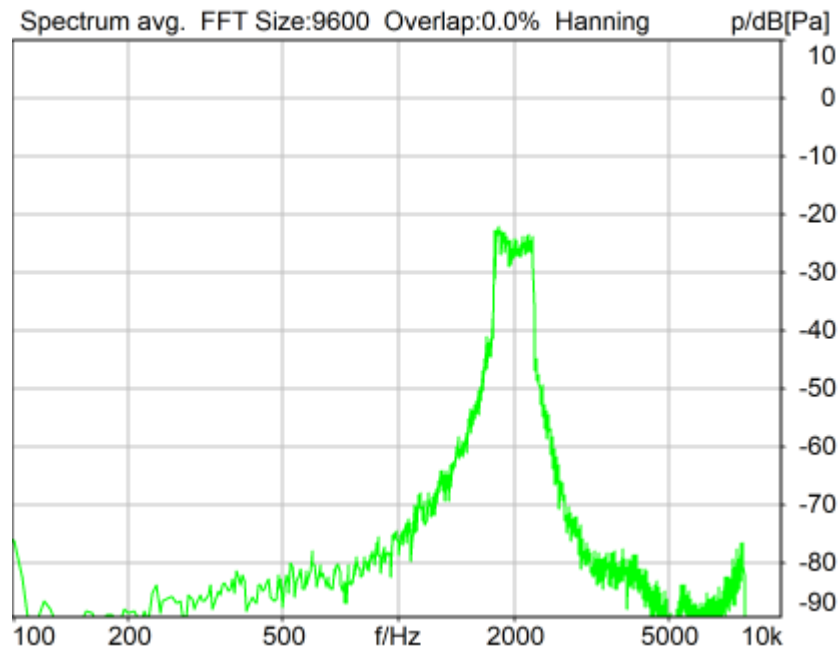
Ok

2024/3/19 13:45 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 22.70 dB (7.32%) Ok

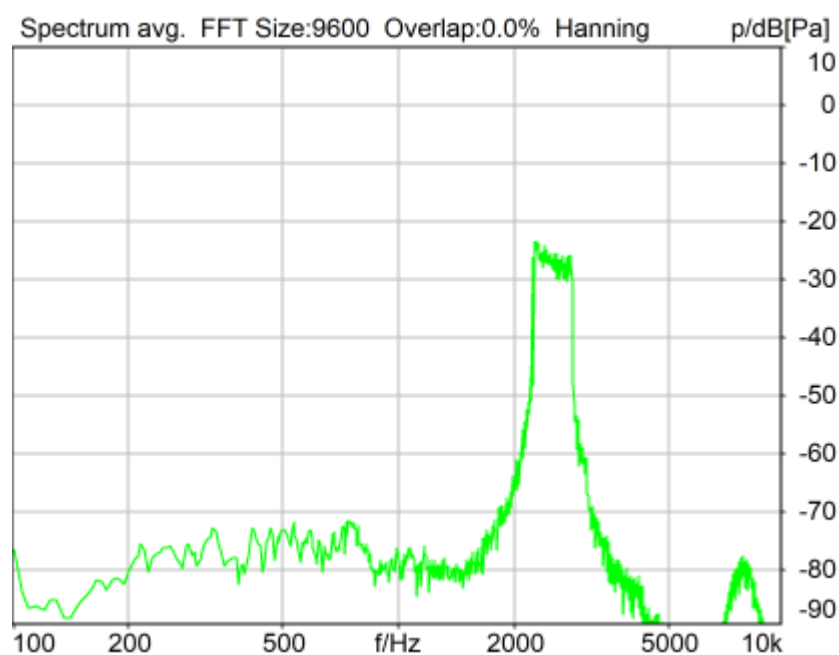
Ok

2024/3/19 13:46 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 30.31 dB (3.05%) Ok

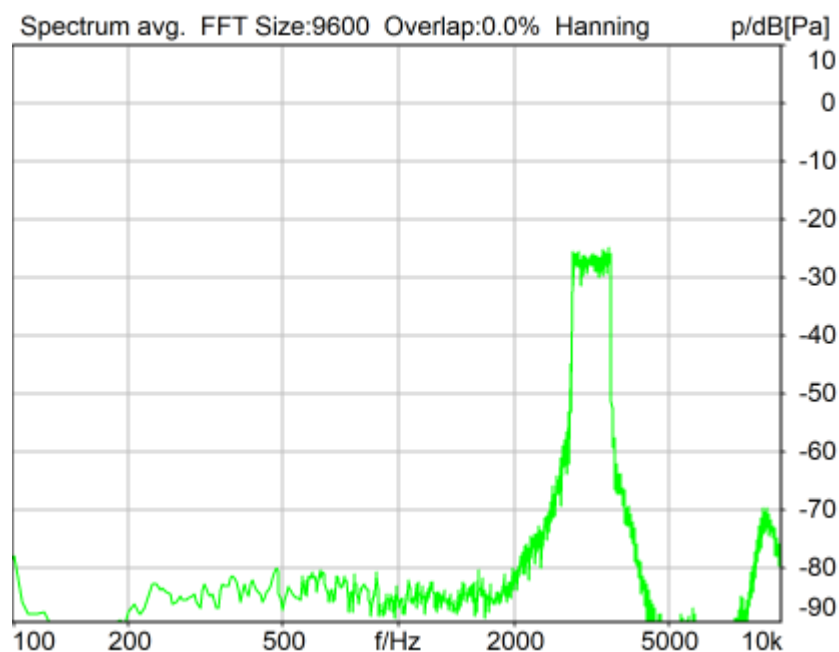
Ok

2024/3/19 13:46 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.80 dB (2.04%) Ok

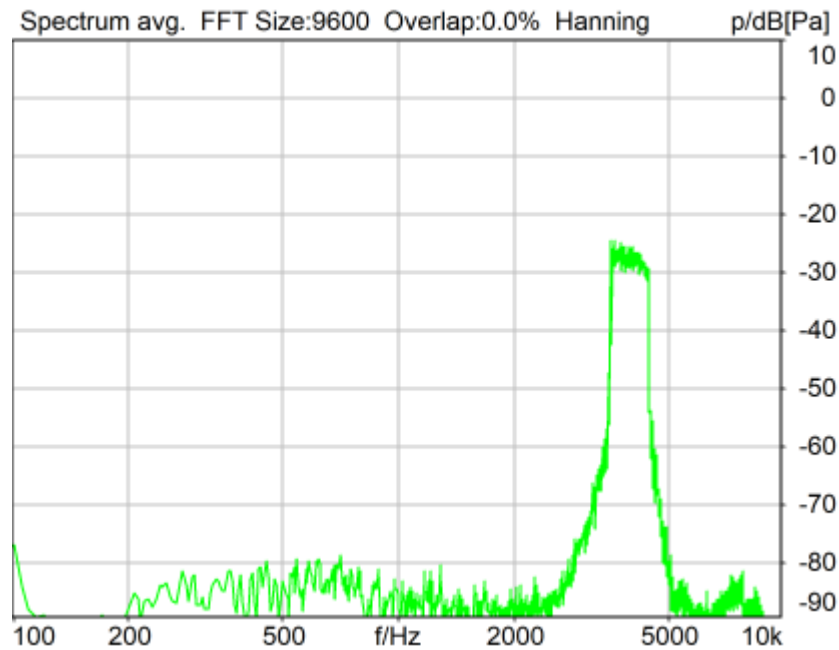
Ok

2024/3/19 13:47 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 4000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 34.99 dB (1.78%) Ok

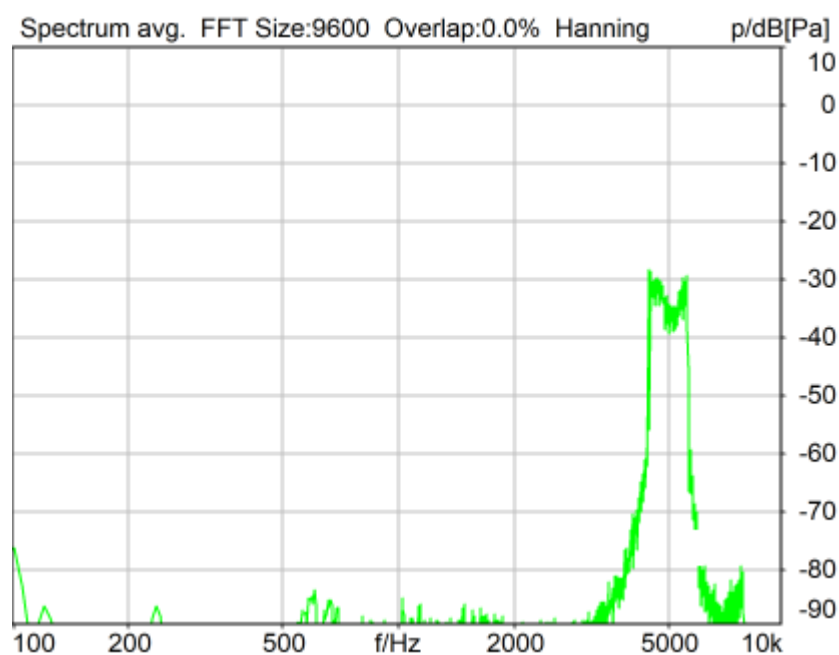
Ok

2024/3/19 13:47 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 5000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.99 dB (2.00%) Ok

Ok

2024/3/19 13:47 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain), Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N

Region	Frequency	SDNR
1	250Hz	30.14 dB
2	315Hz	29.57 dB
3	400Hz	31.59 dB
4	500Hz	34.46 dB
5	630Hz	34.57 dB
6	800Hz	32.10 dB
7	1000Hz	29.16 dB
8	1250Hz	24.39 dB
9	1600Hz	24.65 dB
10	2000Hz	22.70 dB
11	2500Hz	30.31 dB
12	3150Hz	33.80 dB
13	4000Hz	34.99 dB
14	5000Hz	33.99 dB

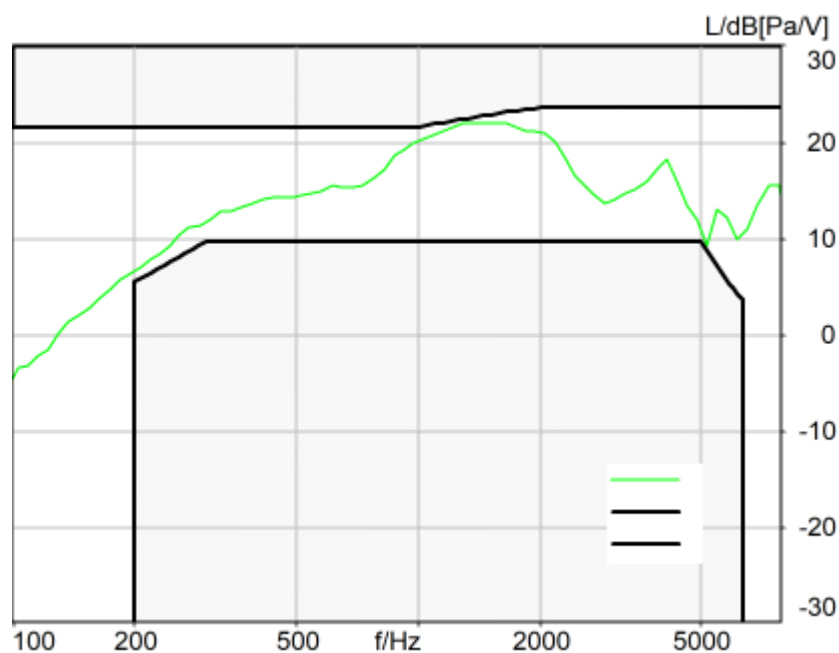
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 22.70dB at 2000Hz.

2024/3/19 13:49 ACQUA

5.3 Frequency Response 8N FF, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



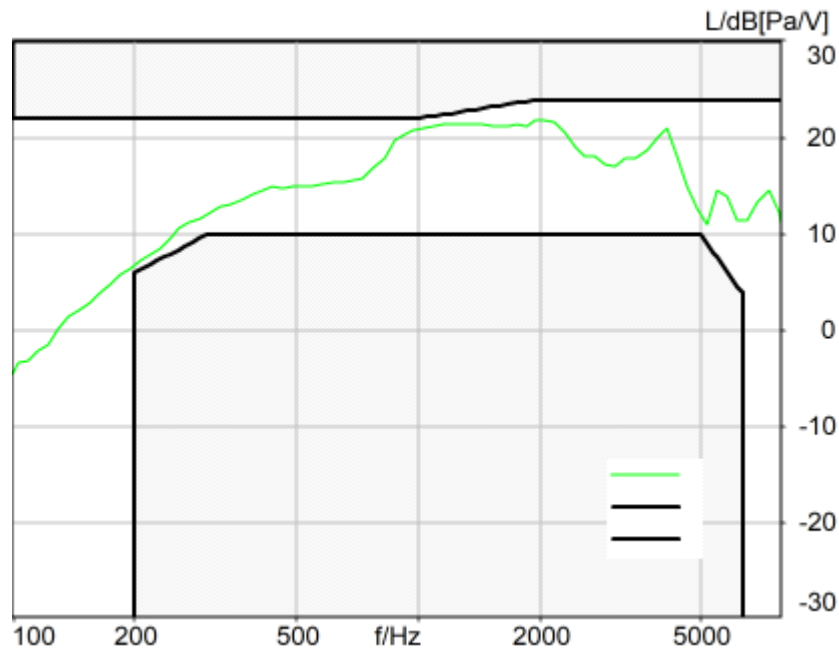
Absolute minimal distance
0.43 dB at 1285.9 Hz Ok

Ok

2024/3/19 13:37 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N DF, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



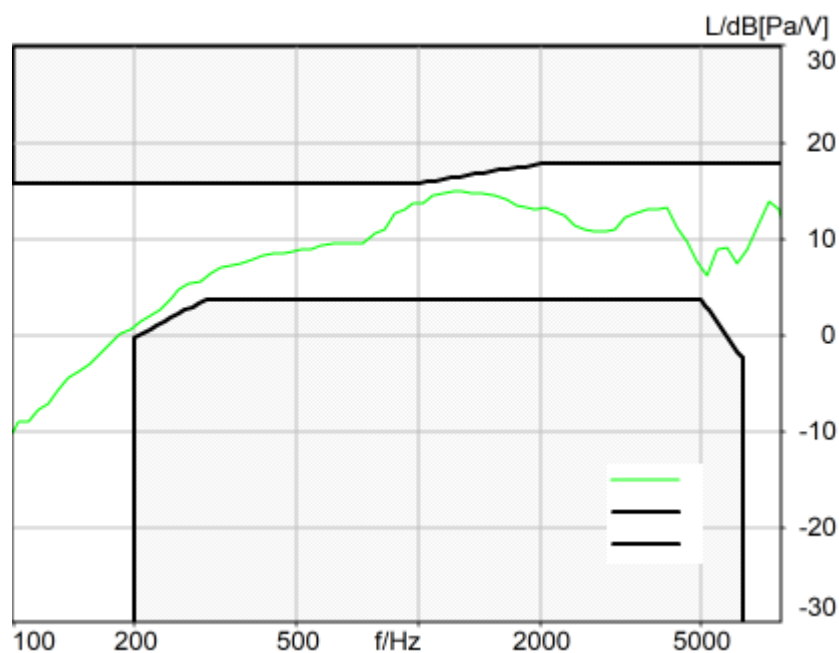
Absolute minimal distance
0.92 dB at 205.7 Hz Ok

Ok

2024/3/19 13:38 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N FF, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



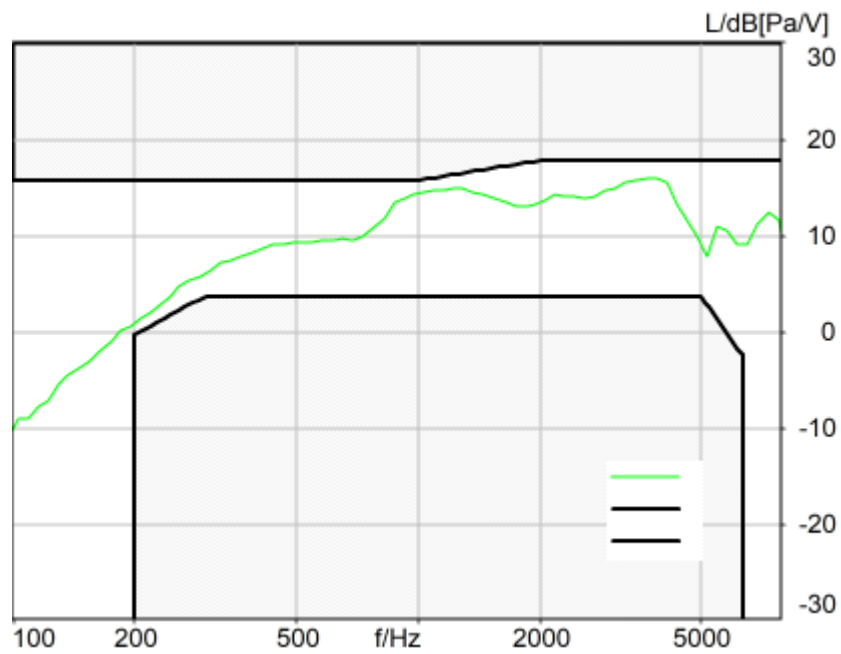
Absolute minimal distance
1.32 dB at 1216.1 Hz Ok

Ok

2024/3/19 13:49 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



Absolute minimal distance
1.30 dB at 1028.7 Hz Ok

Ok

2024/3/19 13:49 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

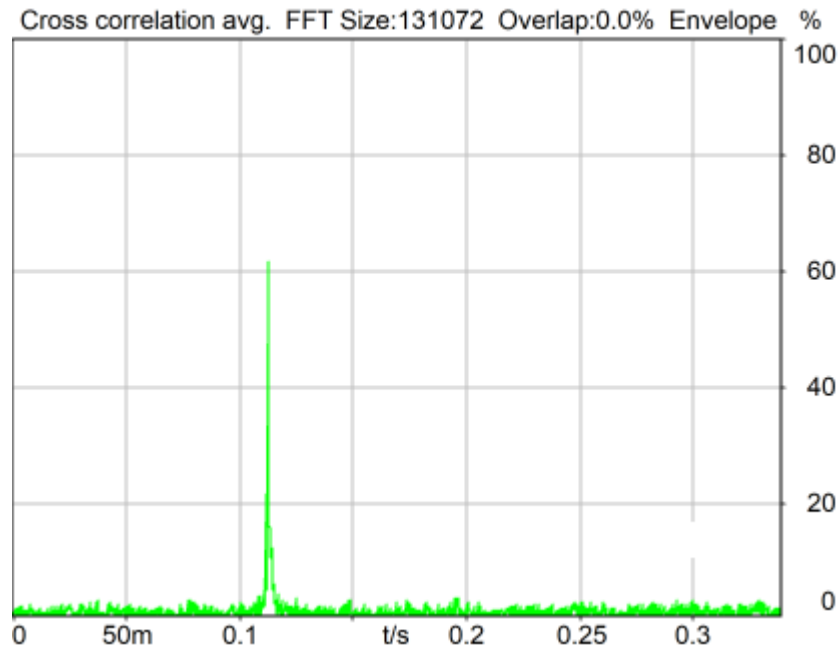
Measurement Object	FR1 n13_10 _DFT-s-OFDM_EVS NB 24.4kbps_CH156400
Description	CJWQ-W7L-P23120020 DTNC PM95

Project	TIA-5050 (2018-01)
Report Generation Date	2024/5/21 15:29
Responsible Person	audio

Overall Receive Delay NB, Index: 1	3
5.1a Receive Volume Control Performance 8N NB, Index: 1	3
5.1b Receive Volume Control Performance 2N NB, Index: 1	4
5.2 RCV Distortion and Noise - 400 Hz NB, Index: 1	5
5.2 RCV Distortion and Noise - 500 Hz NB, Index: 1	6
5.2 RCV Distortion and Noise - 630 Hz NB, Index: 1	7
5.2 RCV Distortion and Noise - 800 Hz NB, Index: 1	7
5.2 RCV Distortion and Noise - 1000 Hz NB, Index: 1	8
5.2 RCV Distortion and Noise - 1250 Hz NB, Index: 1	9
5.2 RCV Distortion and Noise - 1600 Hz NB, Index: 1	9
5.2 RCV Distortion and Noise - 2000 Hz NB, Index: 1	10
5.2 RCV Distortion and Noise - 2500 Hz NB, Index: 1	11
5.2 RCV Distortion and Noise - 3150 Hz NB, Index: 1	11
Report - Receive Distortion and Noise (Conversational Gain), Index: 1	12
5.2 RCV Distortion and Noise - 400 Hz NB, Index: 1	13
5.2 RCV Distortion and Noise - 500 Hz NB, Index: 1	13
5.2 RCV Distortion and Noise - 630 Hz NB, Index: 1	14
5.2 RCV Distortion and Noise - 800 Hz NB, Index: 1	15
5.2 RCV Distortion and Noise - 1000 Hz NB, Index: 1	15
5.2 RCV Distortion and Noise - 1250 Hz NB, Index: 1	16
5.2 RCV Distortion and Noise - 1600 Hz NB, Index: 1	17
5.2 RCV Distortion and Noise - 2000 Hz NB, Index: 1	17
5.2 RCV Distortion and Noise - 2500 Hz NB, Index: 1	18
5.2 RCV Distortion and Noise - 3150 Hz NB, Index: 1	19
Report - Receive Distortion and Noise (Conversational Gain), Index: 1	19
5.3 Frequency Response 8N FF HANB, Index: 1	20
5.3 Frequency Response 8N DF HANB, Index: 1	21
5.3 Frequency Response 2N FF HANB, Index: 1	21
5.3 Frequency Response 2N DF HANB, Index: 1	22

Overall Receive Delay NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ Preparation - Delay measurement



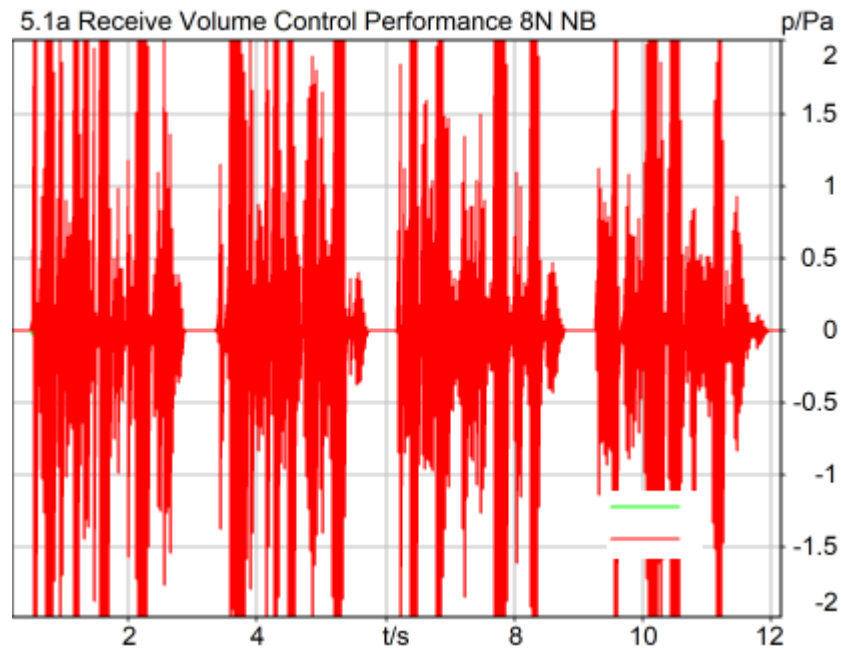
Delay (Cross): 113.0 ms

2024/3/19 14:35 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1a Receive Volume Control Performance 8N NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Correction

X - 70

Speech Level RCV: 87.25 dB[SPL], Act.: 84.15%

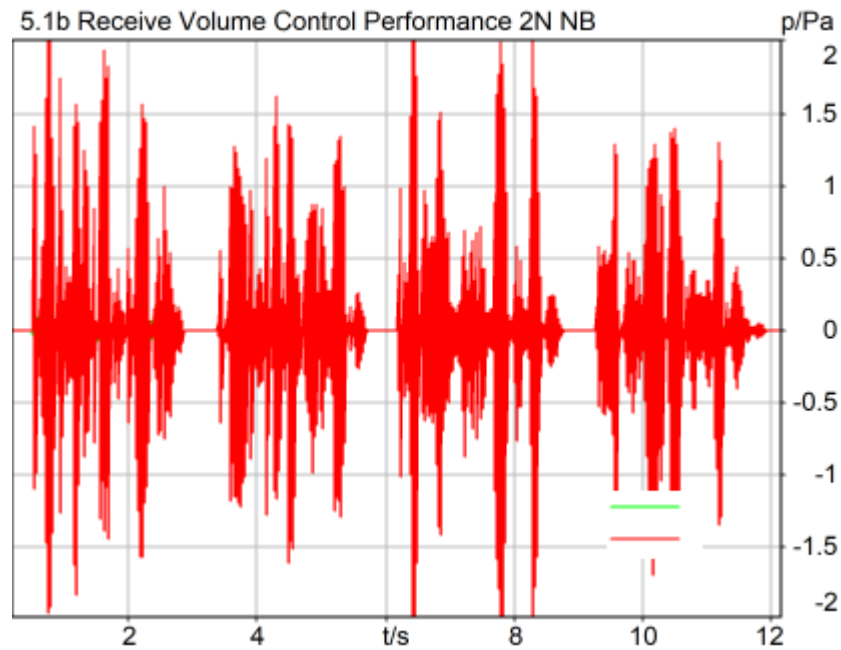
Corrected Speech Level: 17.25 dB[SPL] Ok

Ok

2024/3/19 14:35 ACQUA 5.1.200

5.1b Receive Volume Control Performance 2N NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Correction

X - 70

Speech Level RCV: 81.02 dB[SPL], Act.: 83.24%

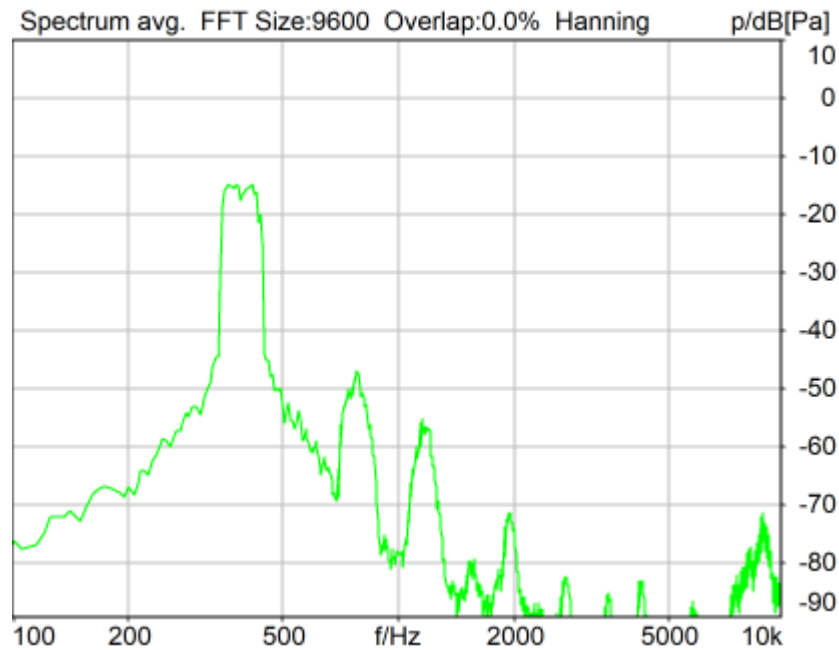
Corrected Speech Level: 11.02 dB[SPL] Ok

Ok

2024/3/19 14:42 ACQUA 5.1.200

5.2 RCV Distortion and Noise - 400 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 32.09 dB (2.49%) Ok

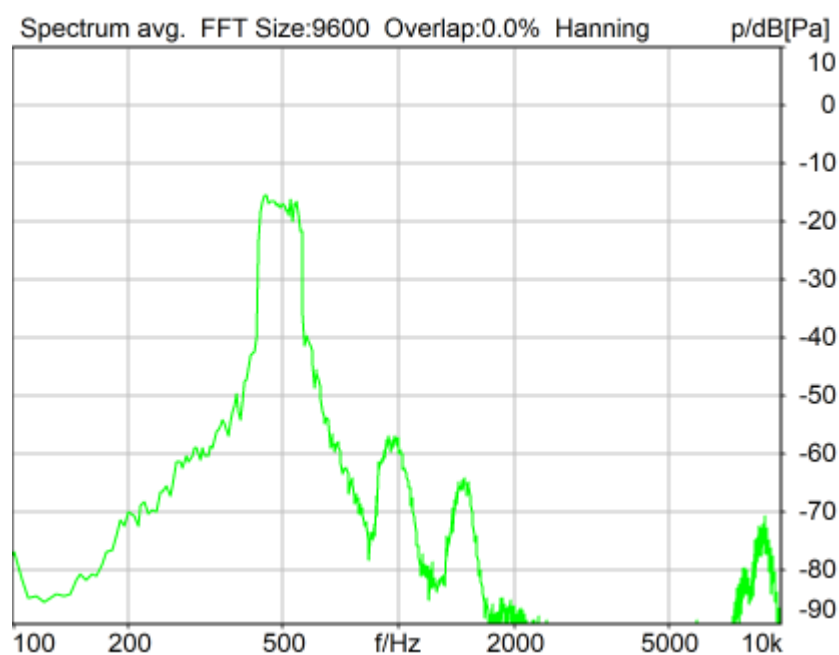
Ok

2024/3/19 14:36 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 33.75 dB (2.05%) Ok

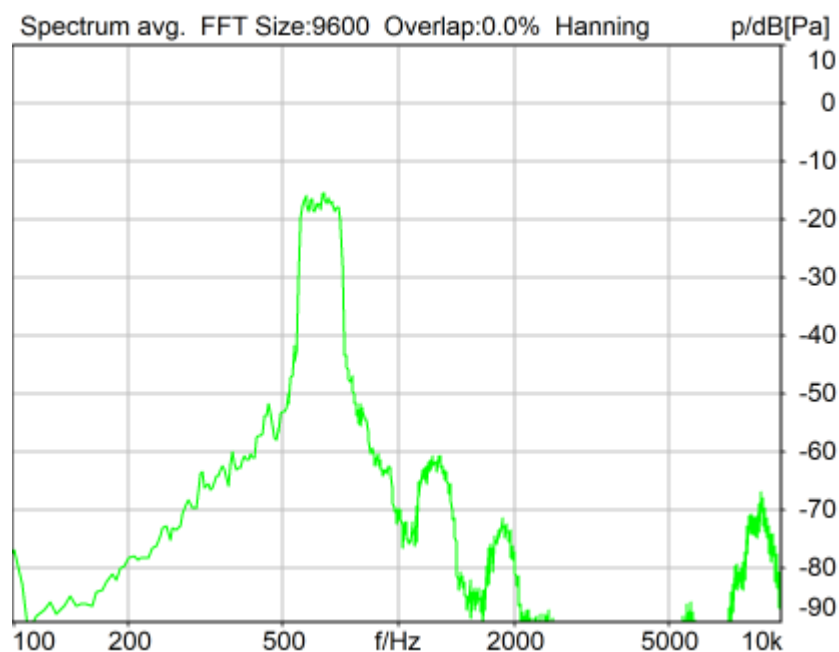
Ok

2024/3/19 14:36 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 34.94 dB (1.79%) Ok

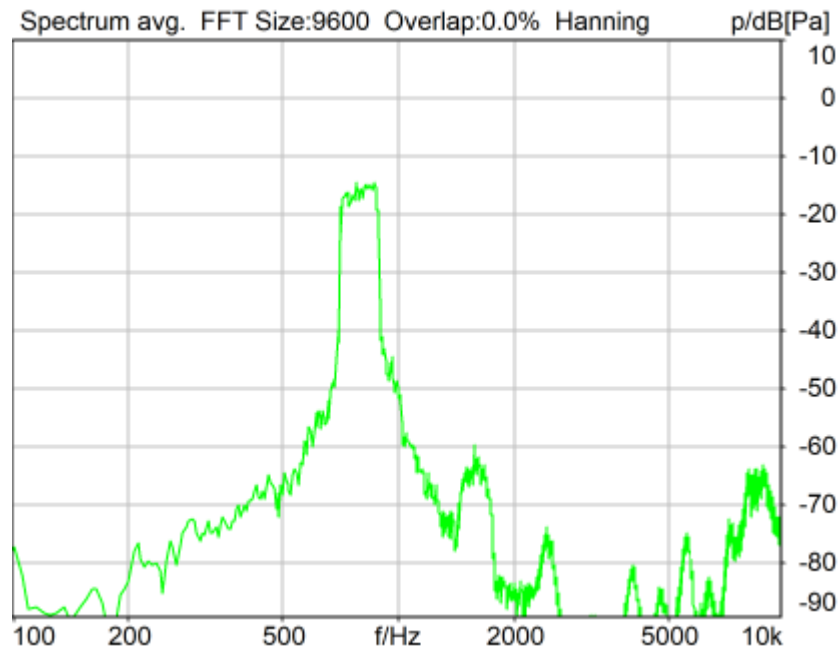
Ok

2024/3/19 14:37 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 33.22 dB (2.18%) Ok

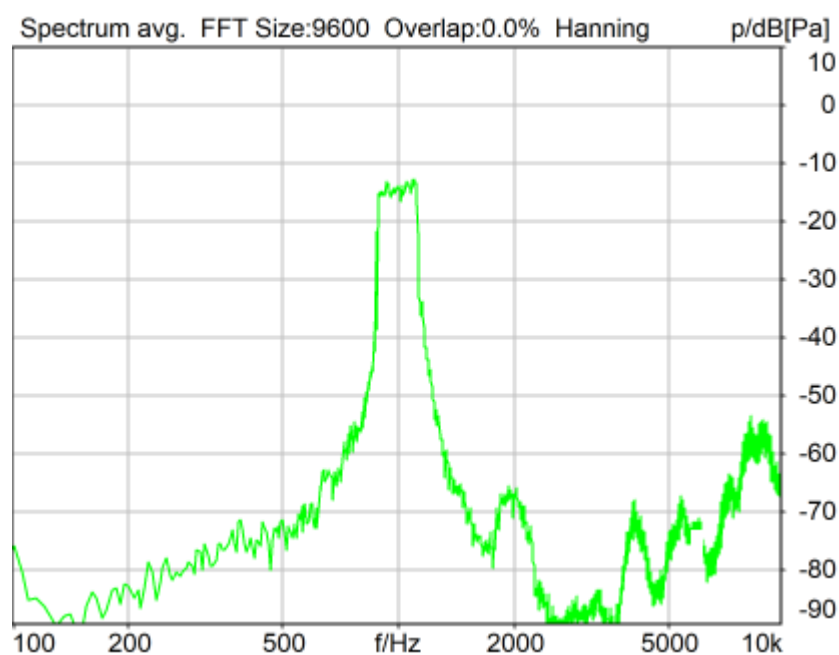
Ok

2024/3/19 14:37 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 30.65 dB (2.93%) Ok

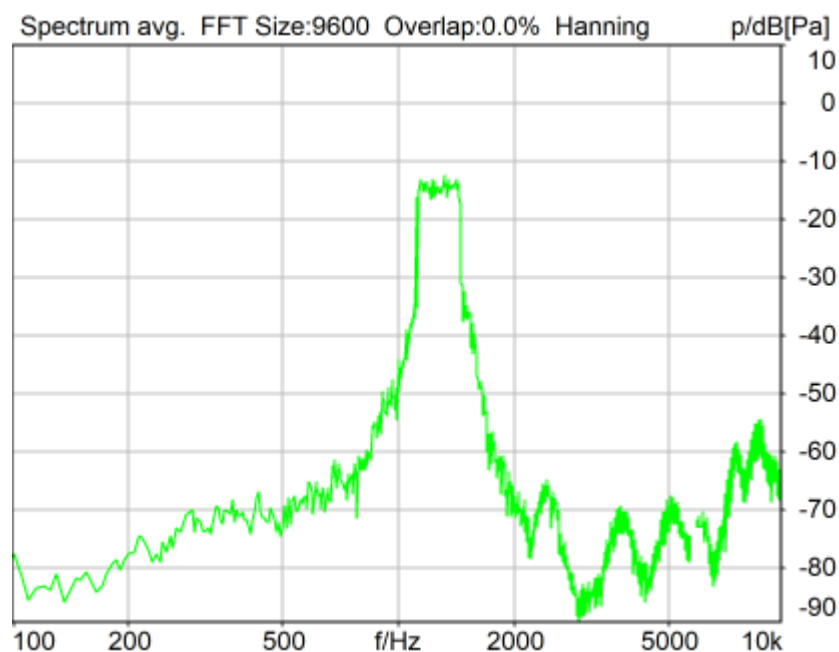
Ok

2024/3/19 14:38 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 23.89 dB (6.39%) Ok

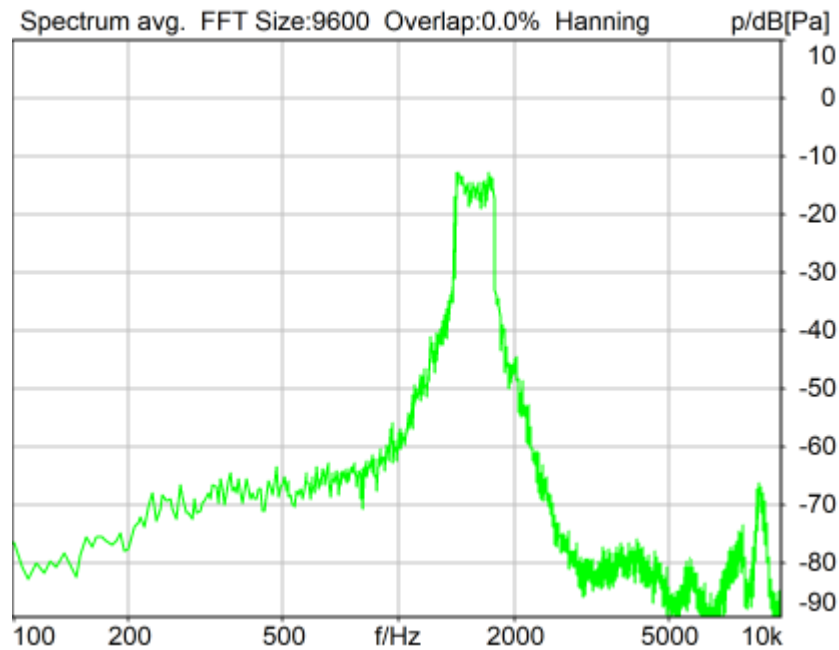
Ok

2024/3/19 14:38 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 24.70 dB (5.82%) Ok

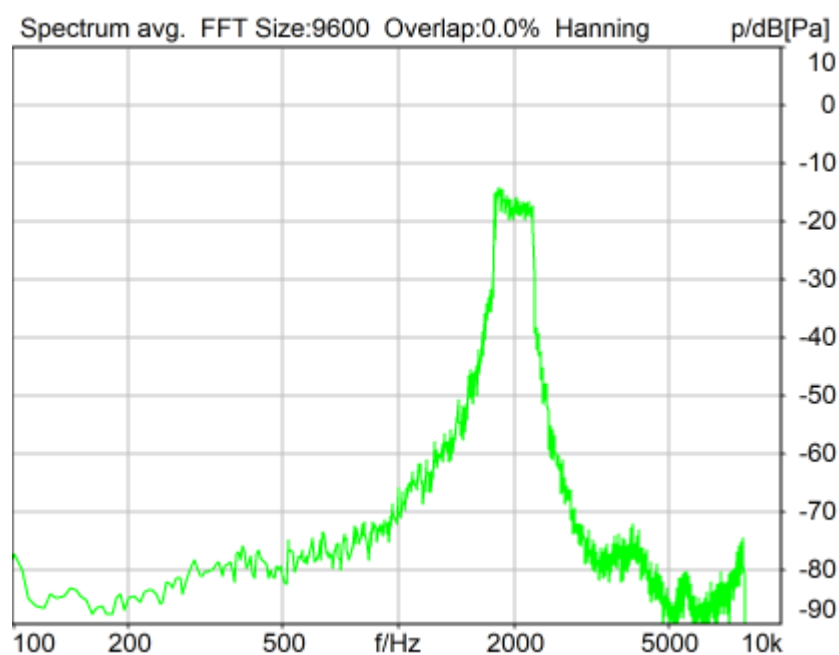
Ok

2024/3/19 14:38 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 22.97 dB (7.11%) Ok

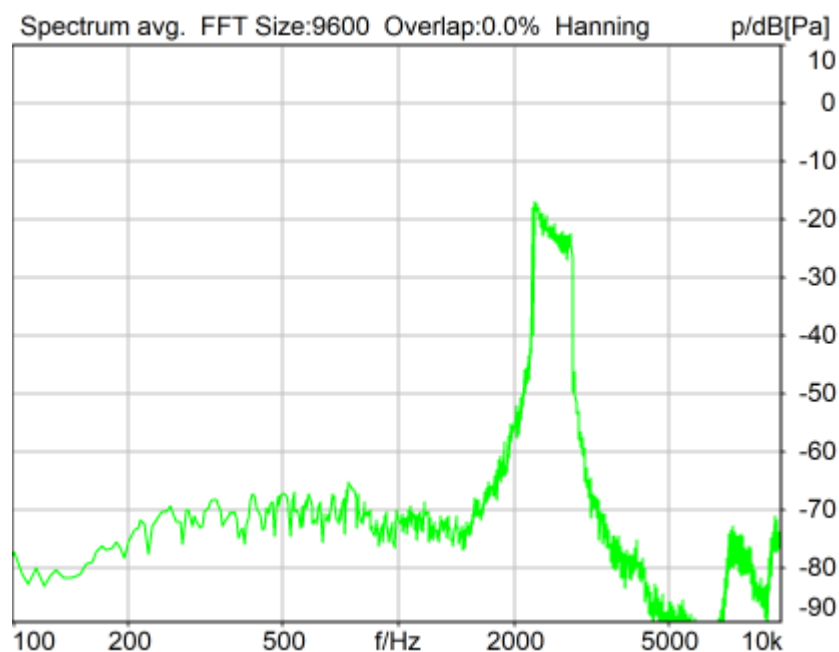
Ok

2024/3/19 14:39 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 29.00 dB (3.55%) Ok

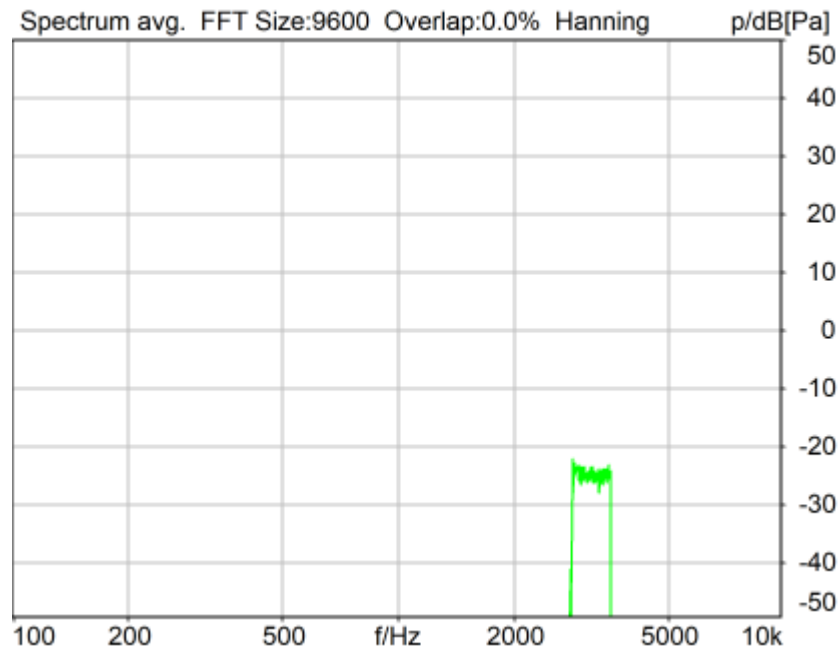
Ok

2024/3/19 14:39 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 32.25 dB (2.44%) Ok

Ok

2024/3/19 14:40 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain), Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N

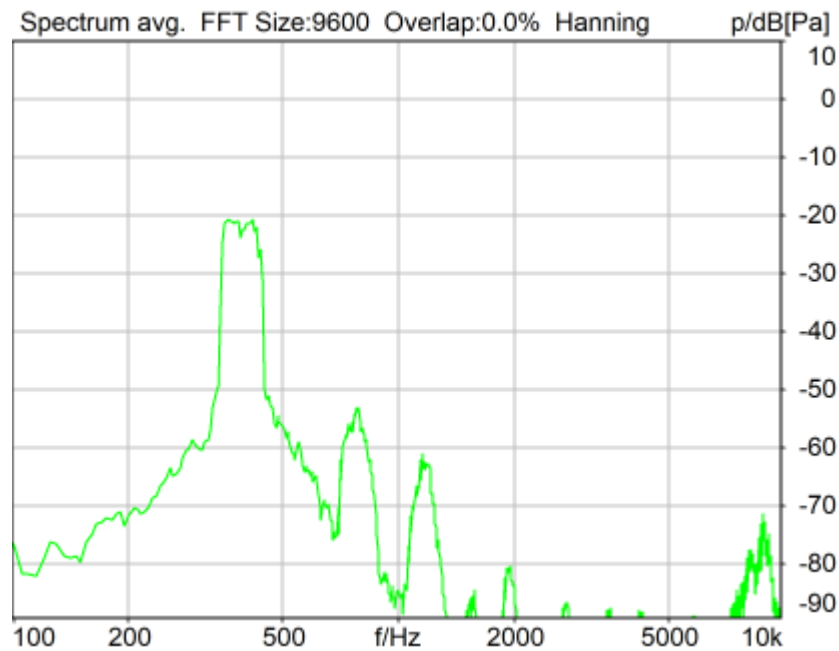
Region	Frequency	SDNR
1	400Hz	32.09 dB
2	500Hz	33.75 dB
3	630Hz	34.94 dB
4	800Hz	33.22 dB
5	1000Hz	30.65 dB
6	1250Hz	23.89 dB
7	1600Hz	24.70 dB
8	2000Hz	22.97 dB
9	2500Hz	29.00 dB
10	3150Hz	32.25 dB

All SDNRs were greater than 20.0 dB, requirement was met.
Smallest SDNR was 22.97dB at 2000Hz.

2024/3/19 14:40 ACQUA

5.2 RCV Distortion and Noise - 400 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 31.75 dB (2.59%) Ok

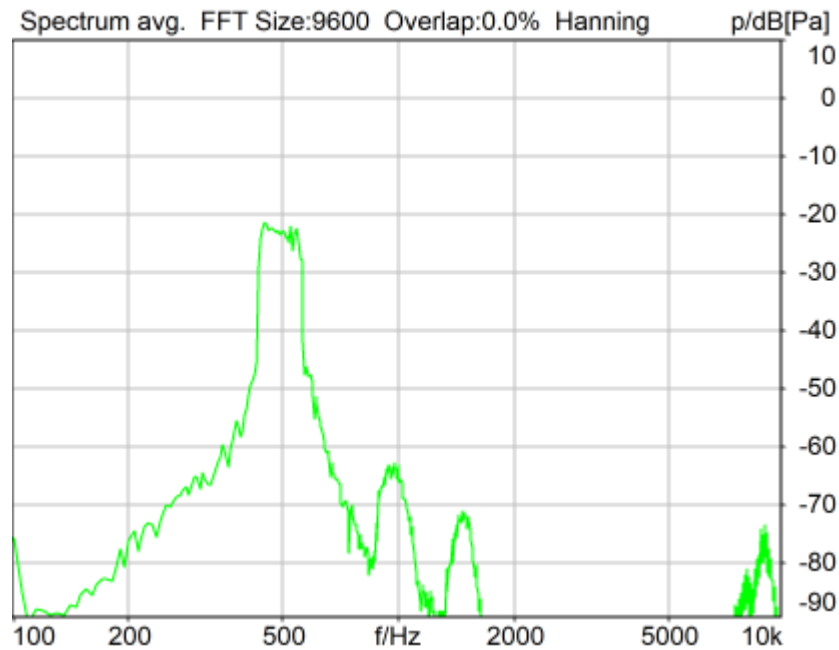
Ok

2024/3/19 14:43 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 34.07 dB (1.98%) Ok

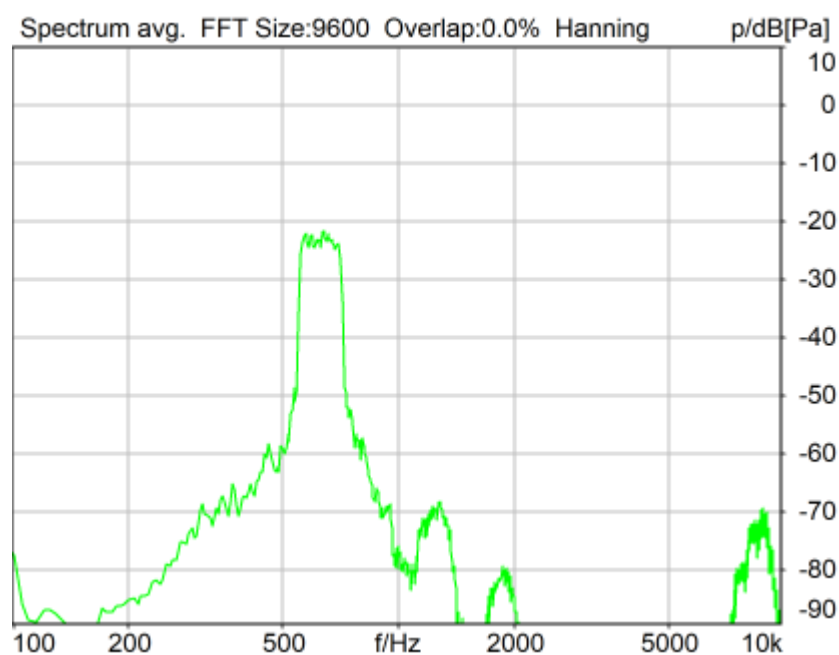
Ok

2024/3/19 14:43 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 34.45 dB (1.89%) Ok

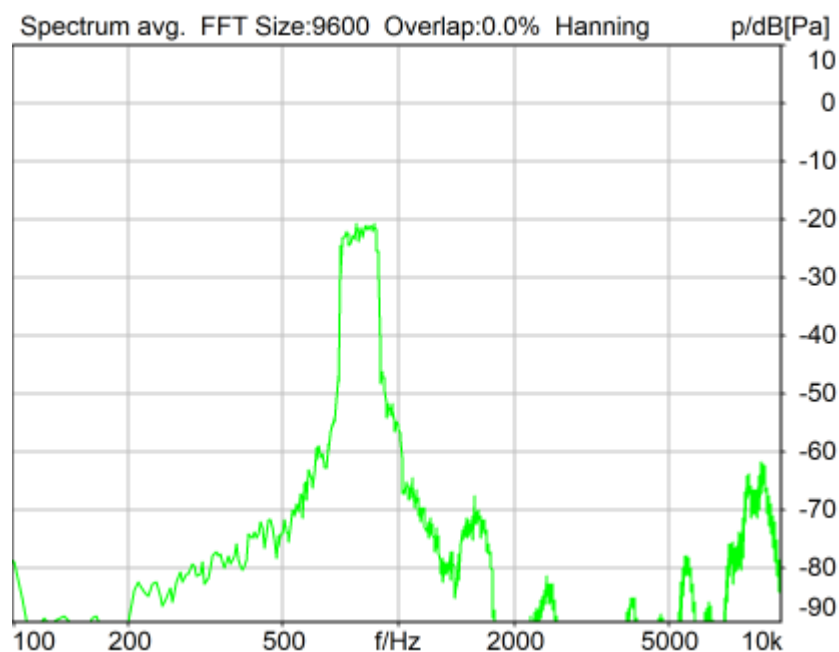
Ok

2024/3/19 14:44 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 31.95 dB (2.53%) Ok

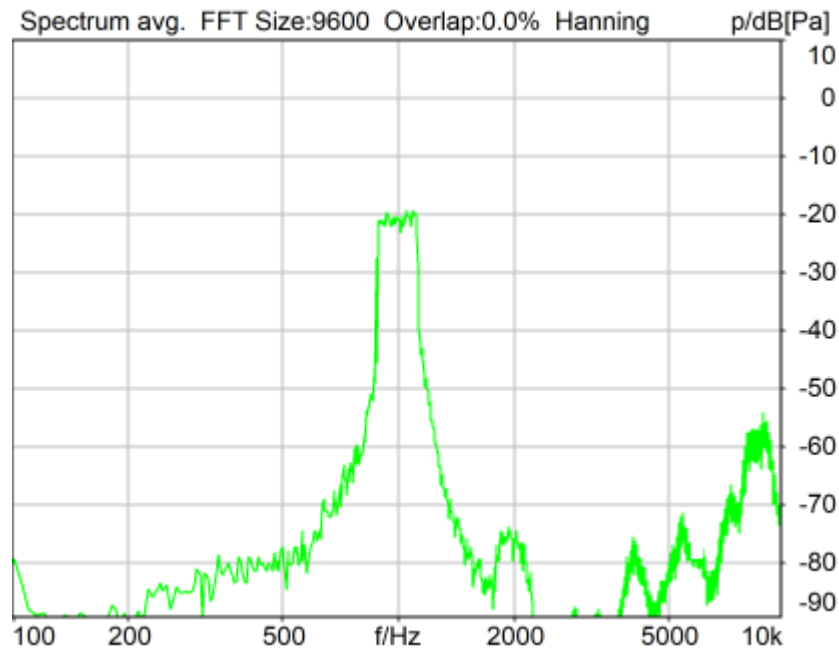
Ok

2024/3/19 14:44 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 29.40 dB (3.39%) Ok

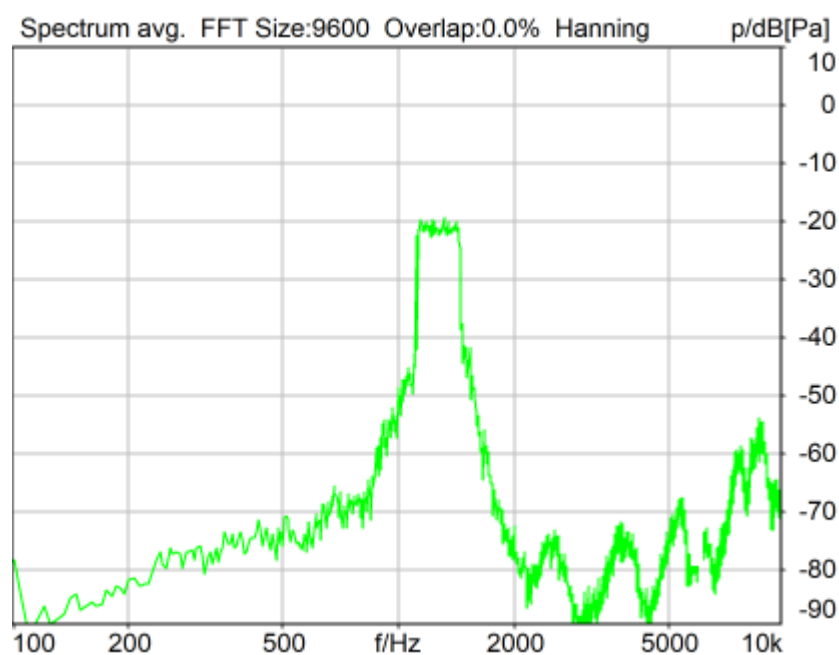
Ok

2024/3/19 14:45 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 23.76 dB (6.48%) Ok

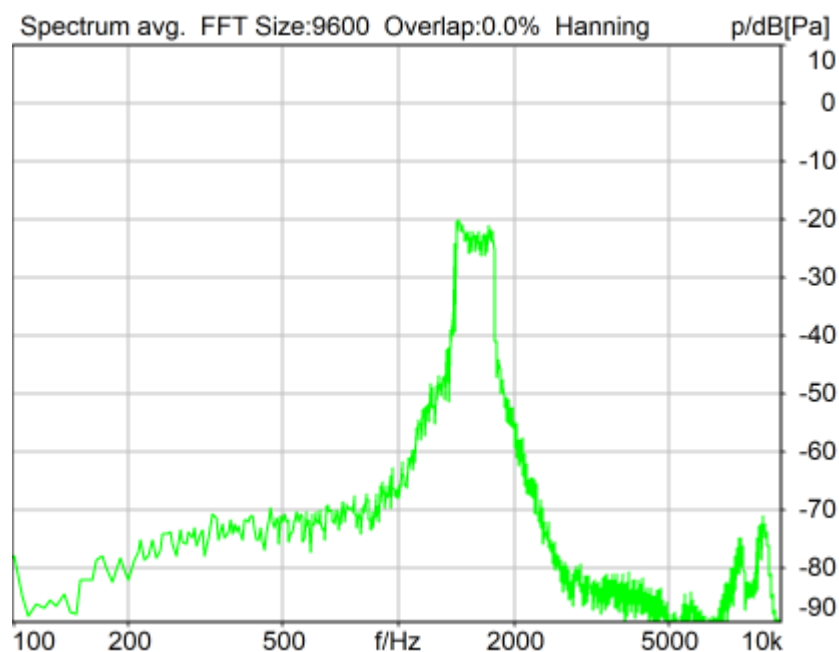
Ok

2024/3/19 14:45 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 24.43 dB (6.01%) Ok

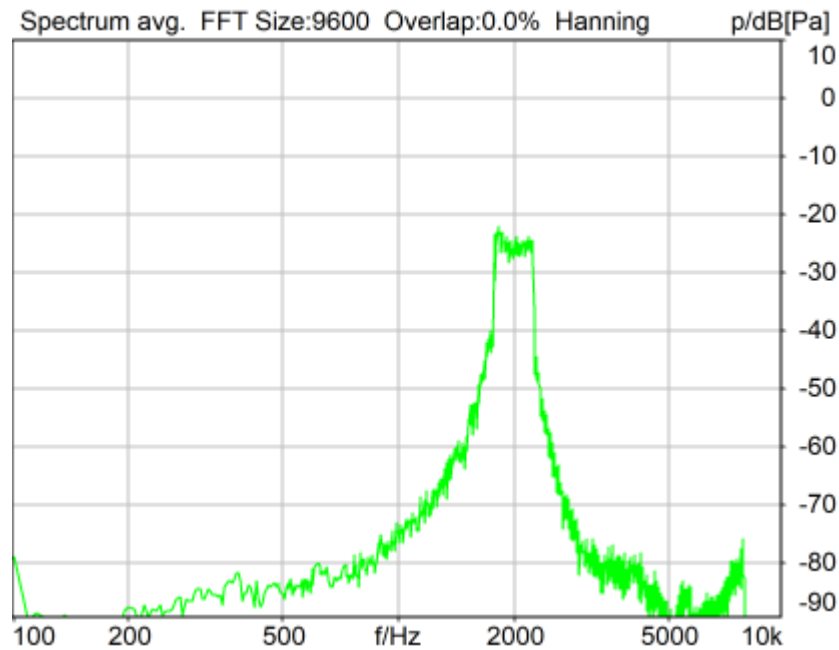
Ok

2024/3/19 14:45 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 22.53 dB (7.48%) Ok

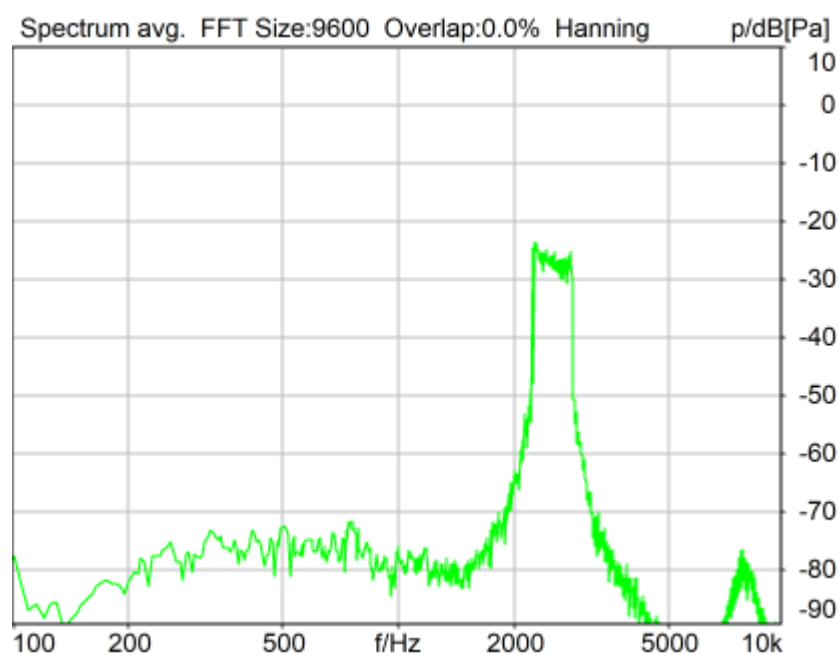
Ok

2024/3/19 14:46 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 30.26 dB (3.07%) Ok

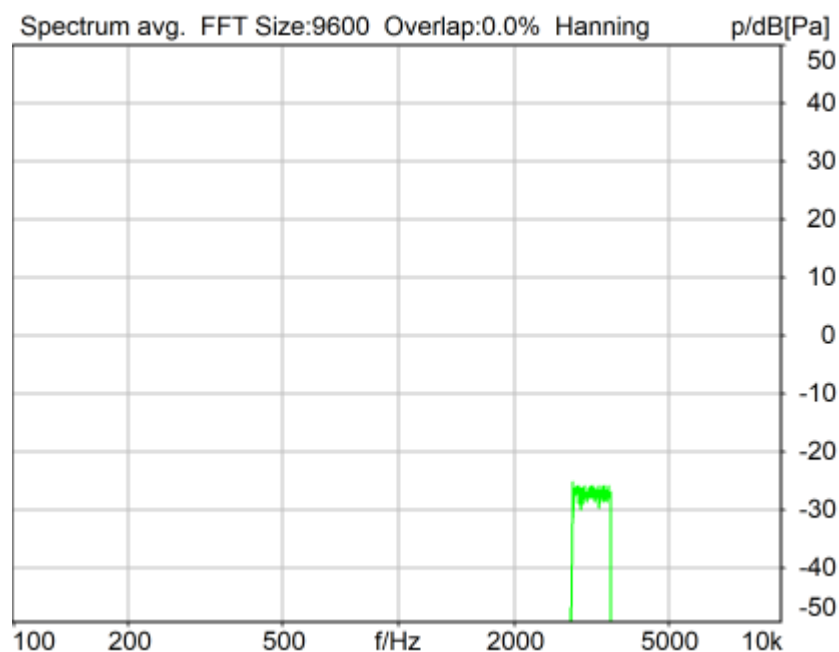
Ok

2024/3/19 14:46 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.29 dB (2.17%) Ok

Ok

2024/3/19 14:47 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain), Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N

Region	Frequency	SDNR
1	400Hz	31.75 dB

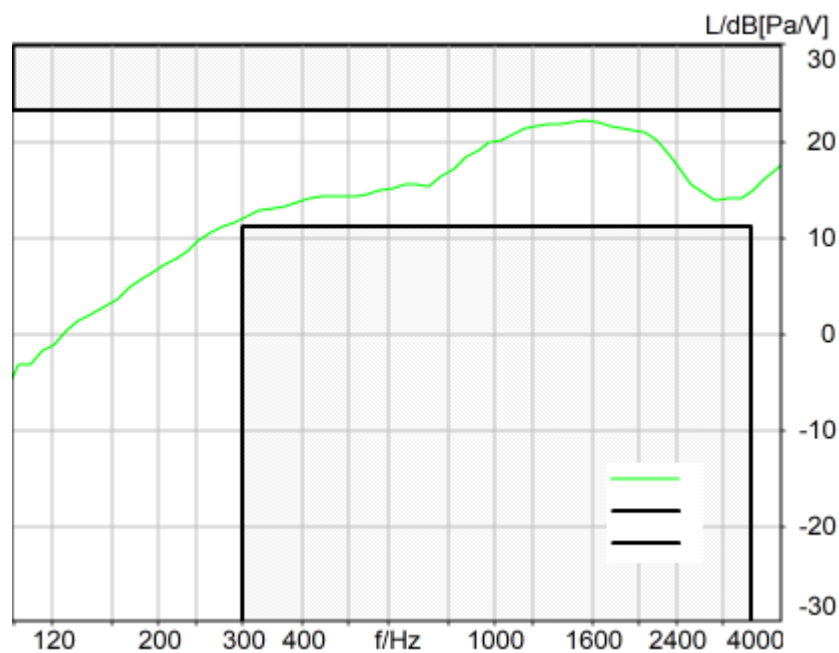
2	500Hz	34.07 dB
3	630Hz	34.45 dB
4	800Hz	31.95 dB
5	1000Hz	29.40 dB
6	1250Hz	23.76 dB
7	1600Hz	24.43 dB
8	2000Hz	22.53 dB
9	2500Hz	30.26 dB
10	3150Hz	33.29 dB

All SDNRs were greater than 20.0 dB, requirement was met.
Smallest SDNR was 22.53dB at 2000Hz.

2024/3/19 14:47 ACQUA

5.3 Frequency Response 8N FF HANB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance
1.08 dB at 1547.5 Hz Ok

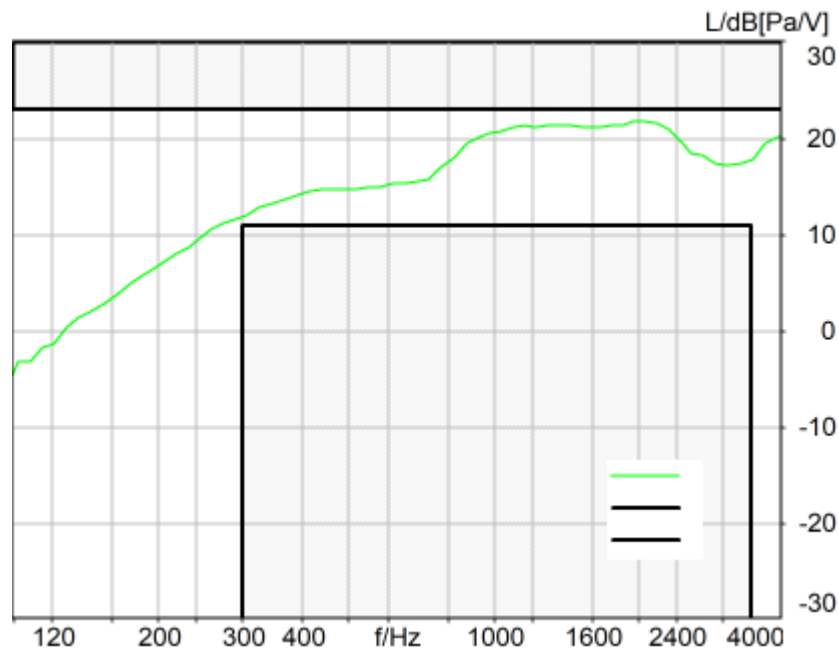
Ok

2024/3/19 14:40 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N DF HANB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance

1.14 dB at 2057.5 Hz Ok

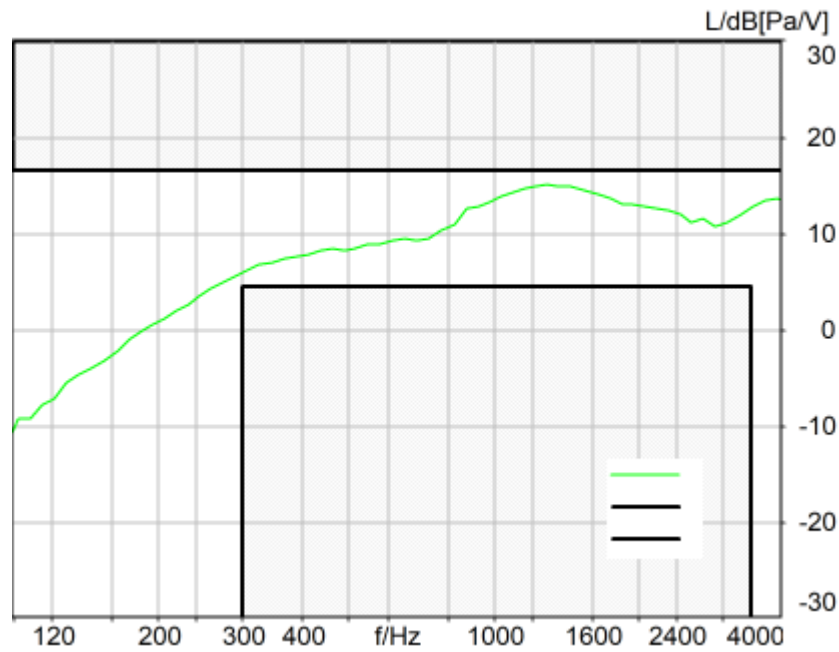
Ok

2024/3/19 14:41 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N FF HANB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



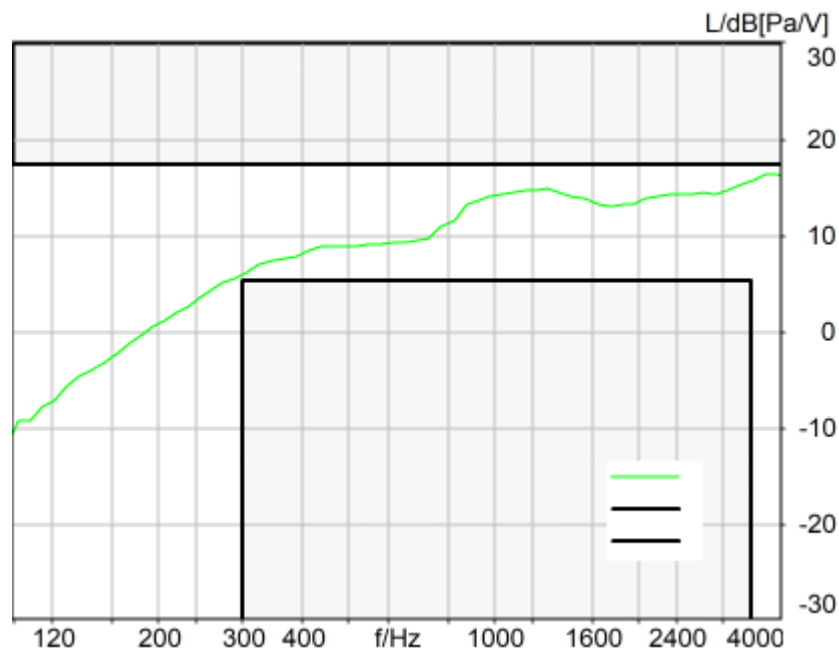
Absolute minimal distance
1.50 dB at 1285.9 Hz Ok

Ok

2024/3/19 14:47 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF HANB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance
0.85 dB at 3882.4 Hz Ok

Ok

2024/3/19 14:47 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

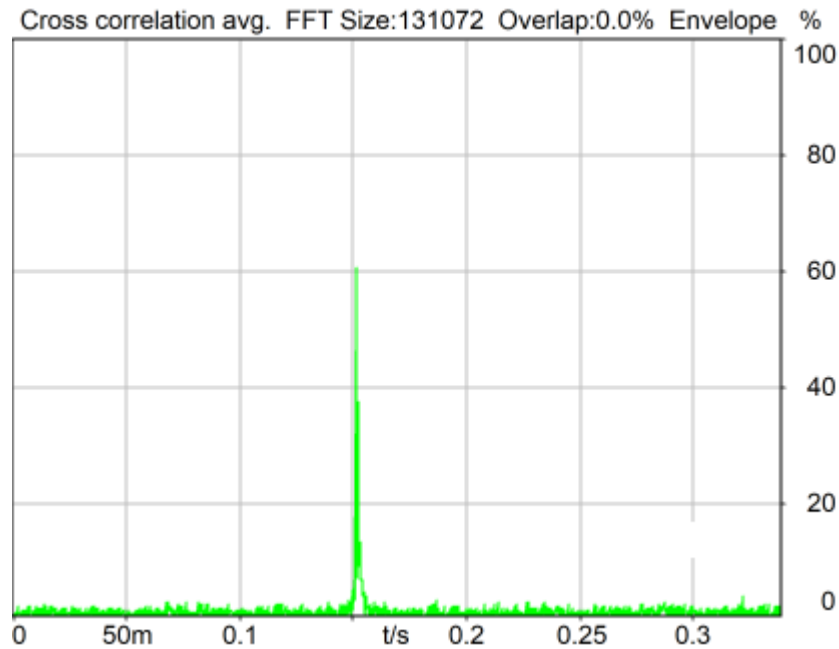
Measurement Object	FR1 n13_10 _DFT-s-OFDM_EVS WB 128kbps_CH156400
Description	CJWQ-W7L-P23120020 DTNC PM95

Project	TIA-5050 (2018-01)
Report Generation Date	2024/5/21 15:30
Responsible Person	audio

Overall Receive Delay WB, Index: 1	3
5.1a Receive Volume Control Performance 8N WB, Index: 1	3
5.1b Receive Volume Control Performance 2N WB, Index: 1	4
5.2 RCV Distortion and Noise - 250 Hz WB, Index: 1	5
5.2 RCV Distortion and Noise - 315 Hz WB, Index: 1	6
5.2 RCV Distortion and Noise - 400 Hz WB, Index: 1	7
5.2 RCV Distortion and Noise - 500 Hz WB, Index: 1	7
5.2 RCV Distortion and Noise - 630 Hz WB, Index: 1	8
5.2 RCV Distortion and Noise - 800 Hz WB, Index: 1	9
5.2 RCV Distortion and Noise - 1000 Hz WB, Index: 1	9
5.2 RCV Distortion and Noise - 1250 Hz WB, Index: 1	10
5.2 RCV Distortion and Noise - 1600 Hz WB, Index: 1	11
5.2 RCV Distortion and Noise - 2000 Hz WB, Index: 1	11
5.2 RCV Distortion and Noise - 2500 Hz WB, Index: 1	12
5.2 RCV Distortion and Noise - 3150 Hz WB, Index: 1	13
5.2 RCV Distortion and Noise - 4000 Hz WB, Index: 1	13
5.2 RCV Distortion and Noise - 5000 Hz WB, Index: 1	14
Report - Receive Distortion and Noise (Conversational Gain), Index: 1	15
5.2 RCV Distortion and Noise - 250 Hz WB, Index: 1	15
5.2 RCV Distortion and Noise - 315 Hz WB, Index: 1	16
5.2 RCV Distortion and Noise - 400 Hz WB, Index: 1	17
5.2 RCV Distortion and Noise - 500 Hz WB, Index: 1	17
5.2 RCV Distortion and Noise - 630 Hz WB, Index: 1	18
5.2 RCV Distortion and Noise - 800 Hz WB, Index: 1	19
5.2 RCV Distortion and Noise - 1000 Hz WB, Index: 1	19
5.2 RCV Distortion and Noise - 1250 Hz WB, Index: 1	20
5.2 RCV Distortion and Noise - 1600 Hz WB, Index: 1	21
5.2 RCV Distortion and Noise - 2000 Hz WB, Index: 1	21
5.2 RCV Distortion and Noise - 2500 Hz WB, Index: 1	22
5.2 RCV Distortion and Noise - 3150 Hz WB, Index: 1	23
5.2 RCV Distortion and Noise - 4000 Hz WB, Index: 1	23
5.2 RCV Distortion and Noise - 5000 Hz WB, Index: 1	24
Report - Receive Distortion and Noise (Conversational Gain), Index: 1	25
5.3 Frequency Response 8N FF, Index: 1	25
5.3 Frequency Response 8N DF, Index: 1	26
5.3 Frequency Response 2N FF, Index: 1	27
5.3 Frequency Response 2N DF, Index: 1	28

Overall Receive Delay WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ Preparation - Delay measurement



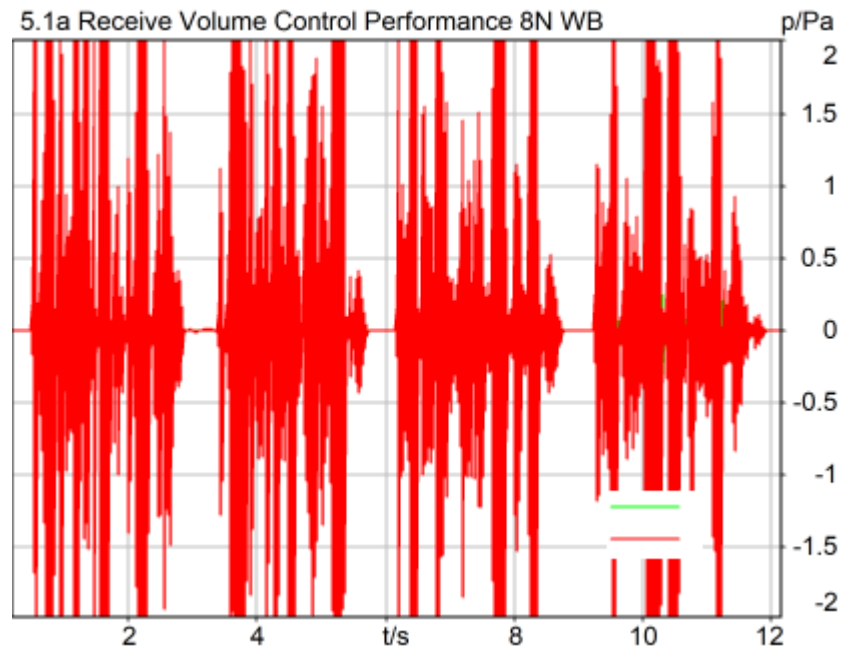
Delay (Cross): 152.1 ms

2024/3/19 14:27 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1a Receive Volume Control Performance 8N WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



Correction

X - 70

Speech Level RCV: 87.43 dB[SPL], Act.: 82.71%

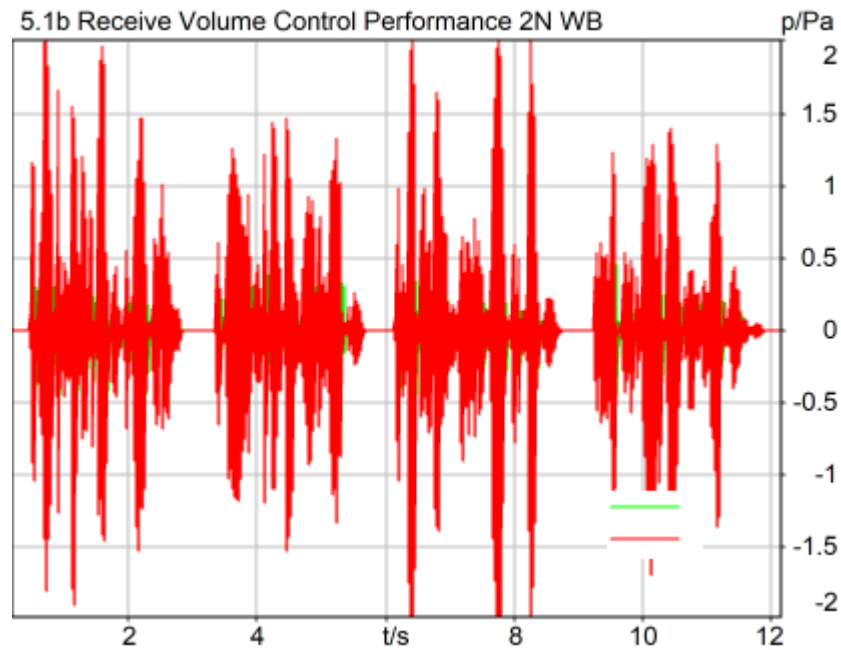
Corrected Speech Level: 17.43 dB[SPL] Ok

Ok

2024/3/19 14:27 ACQUA 5.1.200

5.1b Receive Volume Control Performance 2N WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



Correction

X - 70

Speech Level RCV: 80.95 dB[SPL], Act.: 83.81%

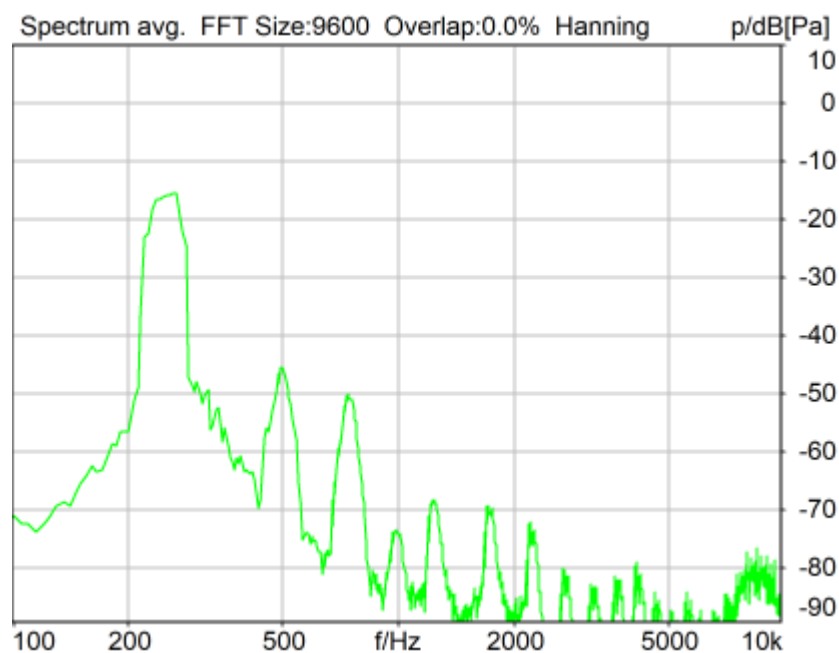
Corrected Speech Level: 10.95 dB[SPL] Ok

Ok

2024/3/19 14:48 ACQUA 5.1.200

5.2 RCV Distortion and Noise - 250 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 30.69 dB (2.92%) Ok

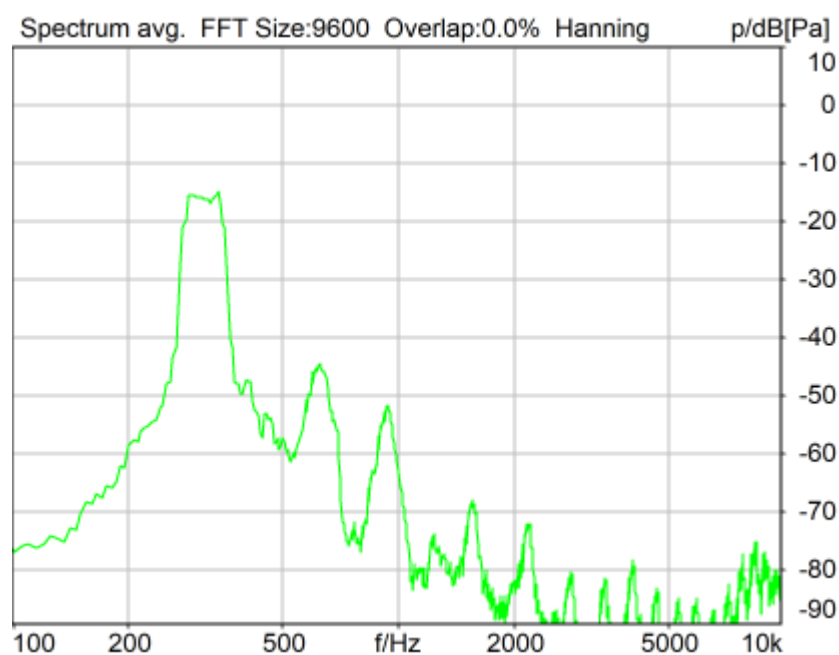
Ok

2024/3/19 14:28 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 315 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 29.72 dB (3.27%) Ok

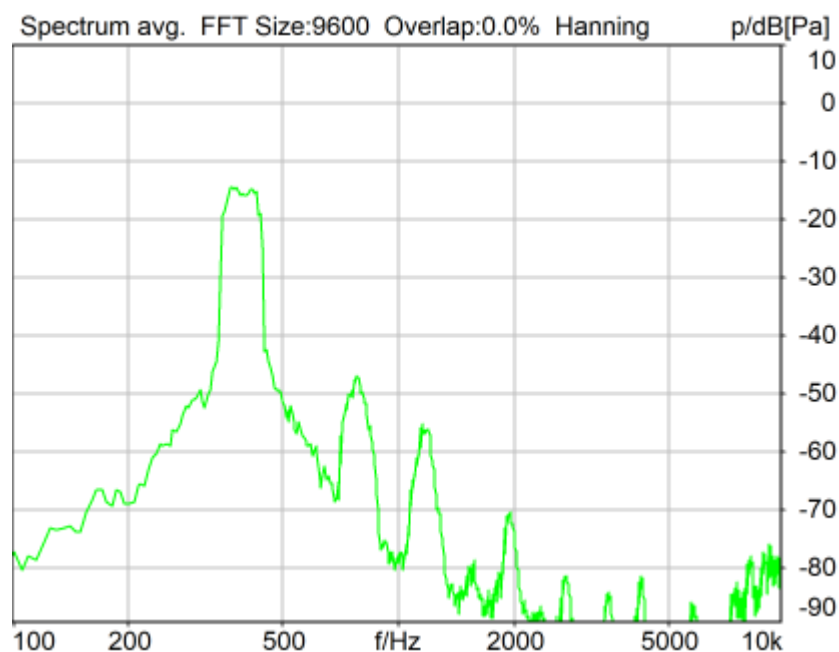
Ok

2024/3/19 14:29 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 31.86 dB (2.55%) Ok

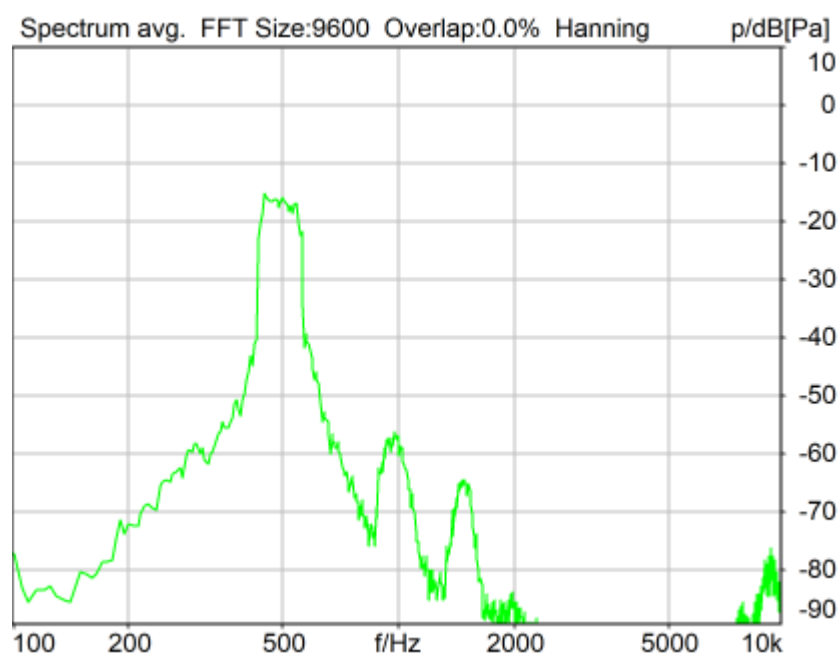
Ok

2024/3/19 14:29 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 34.30 dB (1.93%) Ok

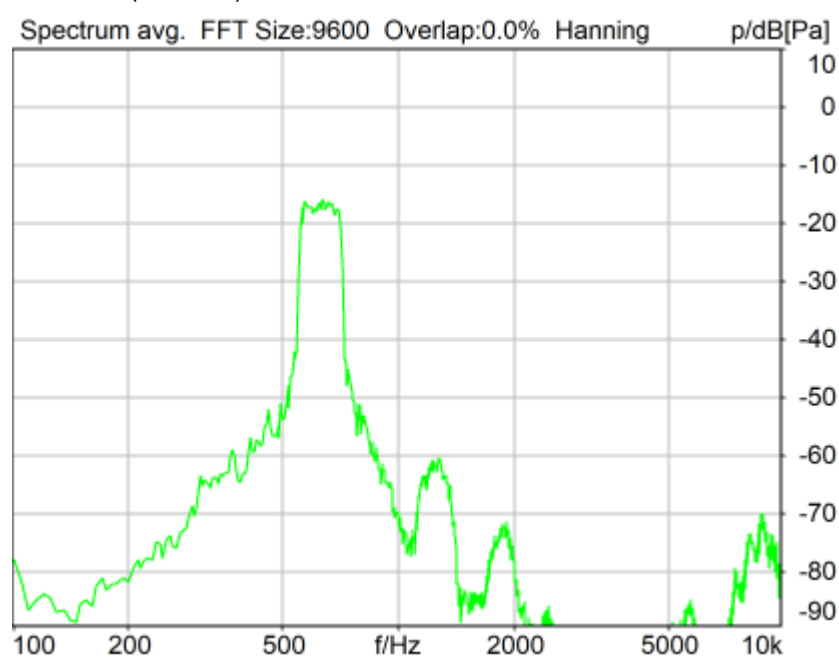
Ok

2024/3/19 14:30 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 35.21 dB (1.74%) Ok

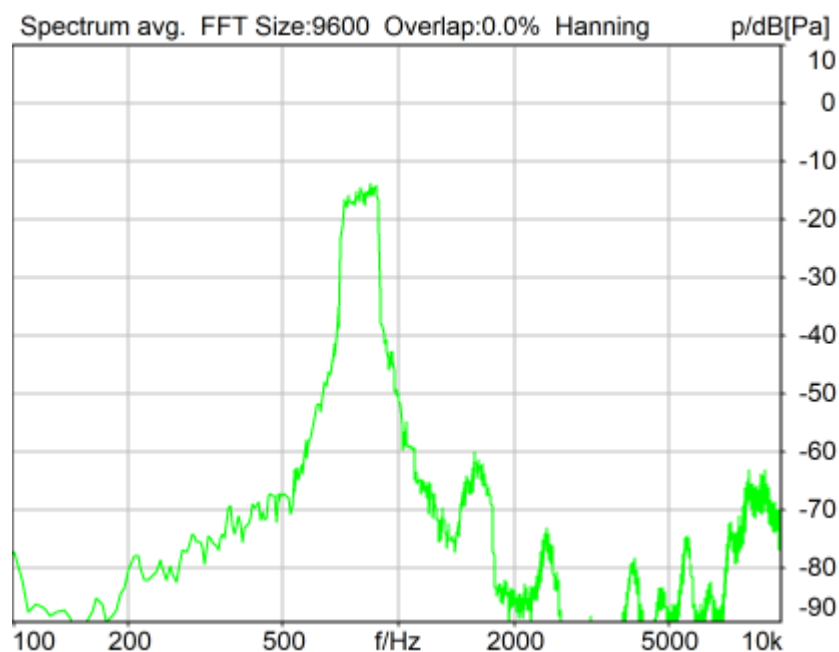
Ok

2024/3/19 14:30 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 31.06 dB (2.80%) Ok

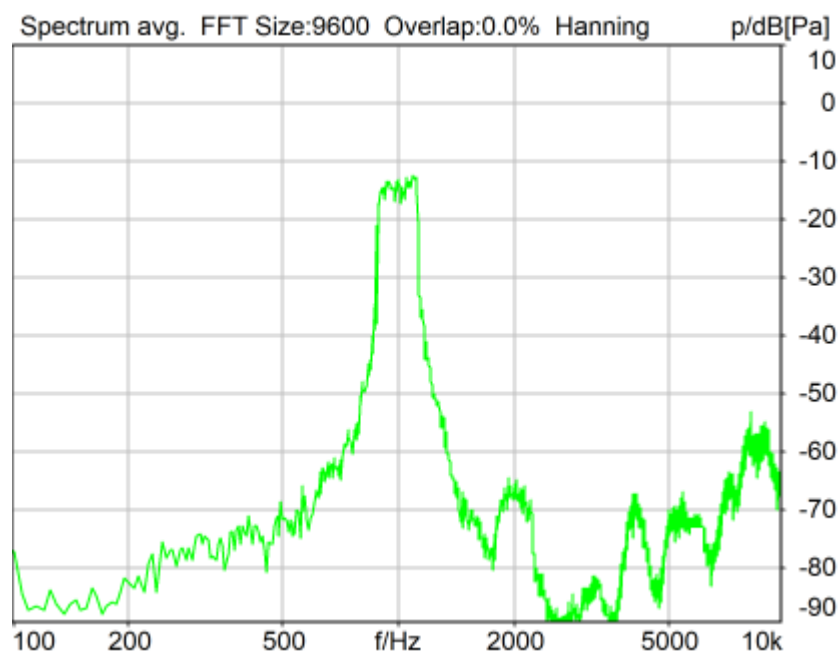
Ok

2024/3/19 14:30 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 30.72 dB (2.91%) Ok

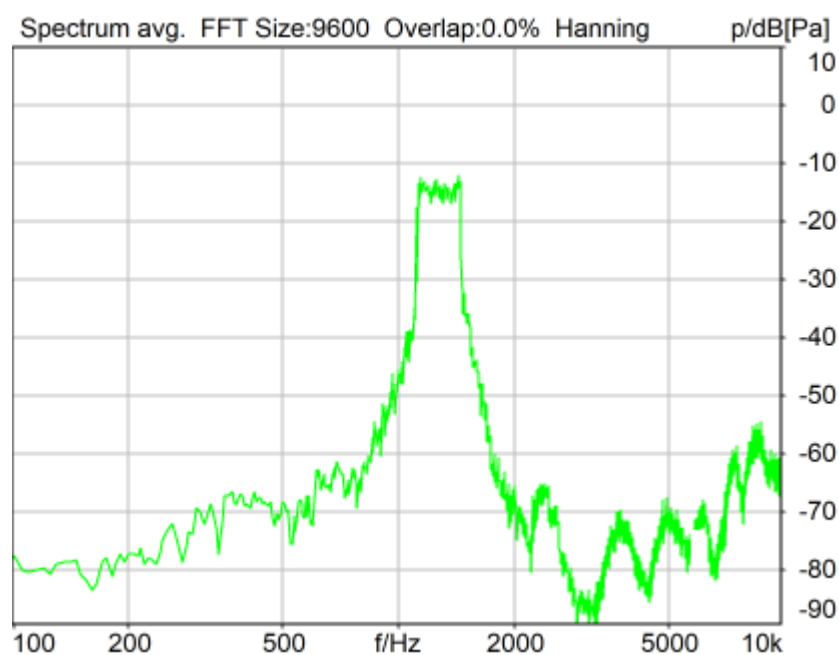
Ok

2024/3/19 14:31 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 23.60 dB (6.61%) Ok

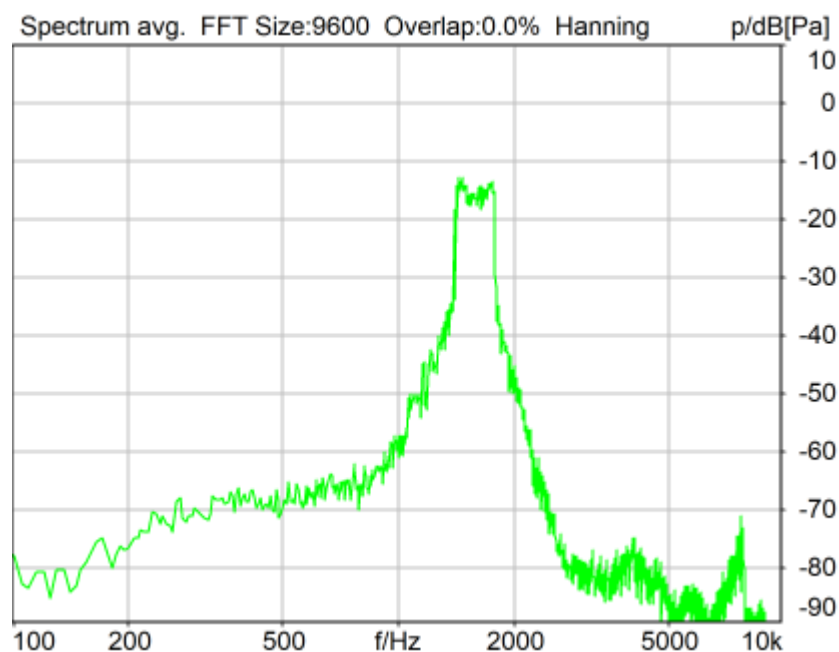
Ok

2024/3/19 14:31 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 24.66 dB (5.85%) Ok

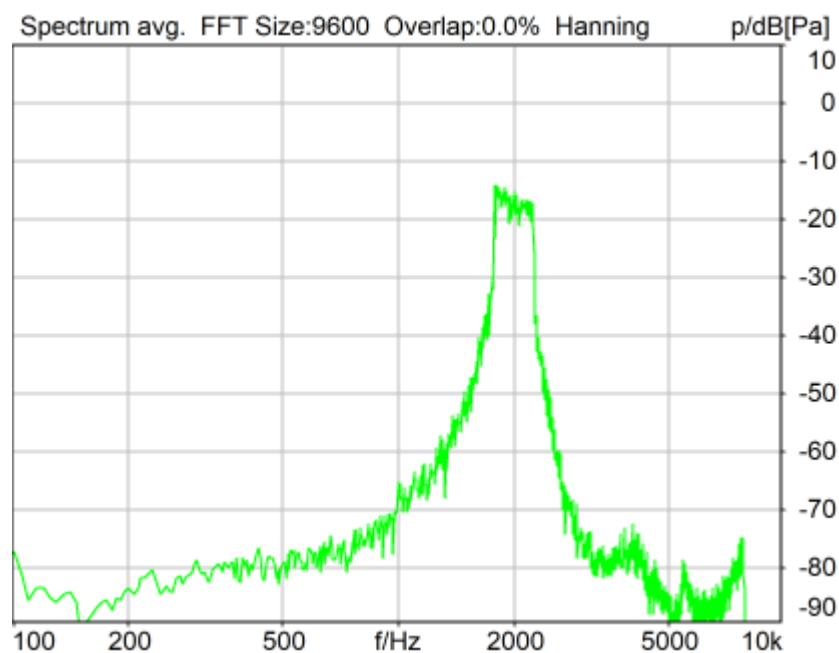
Ok

2024/3/19 14:32 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 23.61 dB (6.60%) Ok

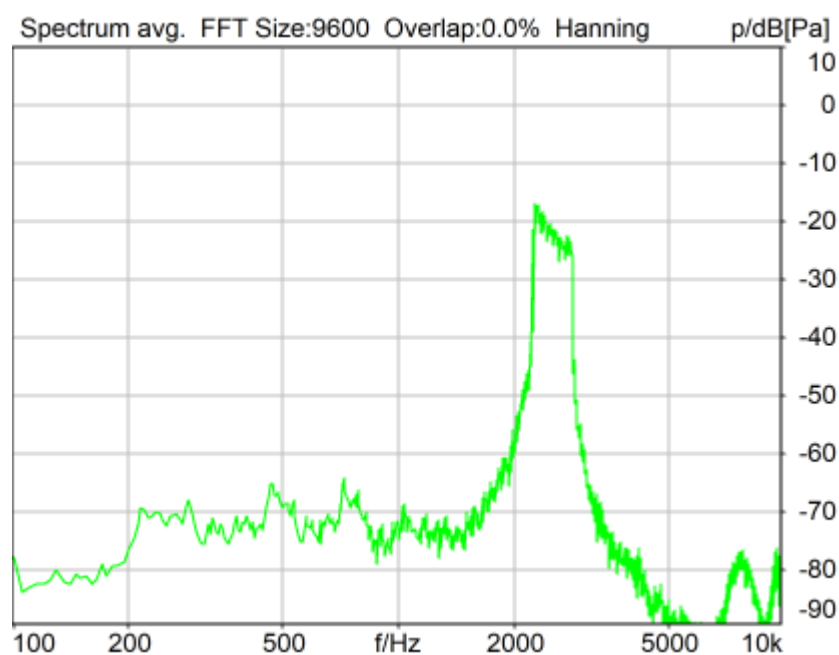
Ok

2024/3/19 14:32 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 30.34 dB (3.04%) Ok

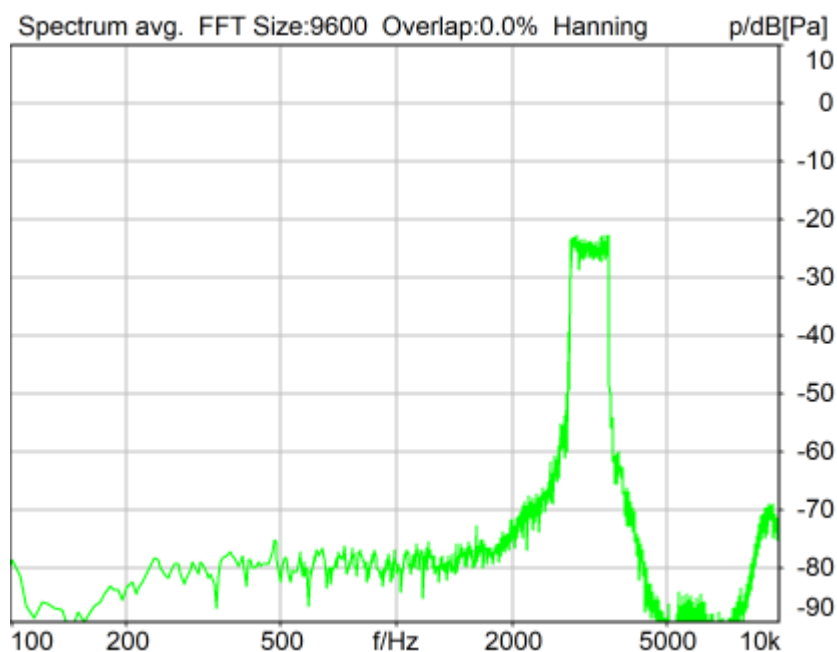
Ok

2024/3/19 14:32 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 32.91 dB (2.26%) Ok

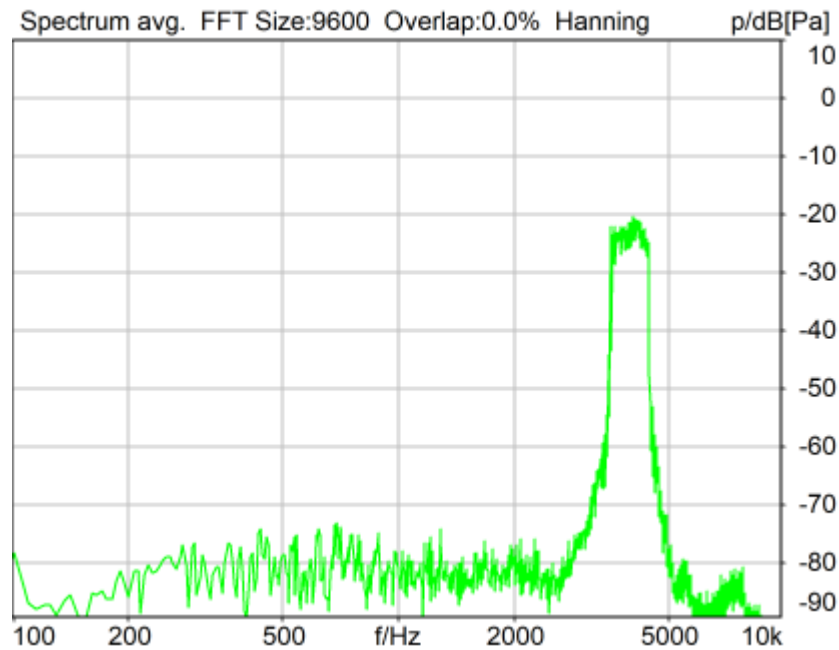
Ok

2024/3/19 14:33 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 4000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 37.45 dB (1.34%) Ok

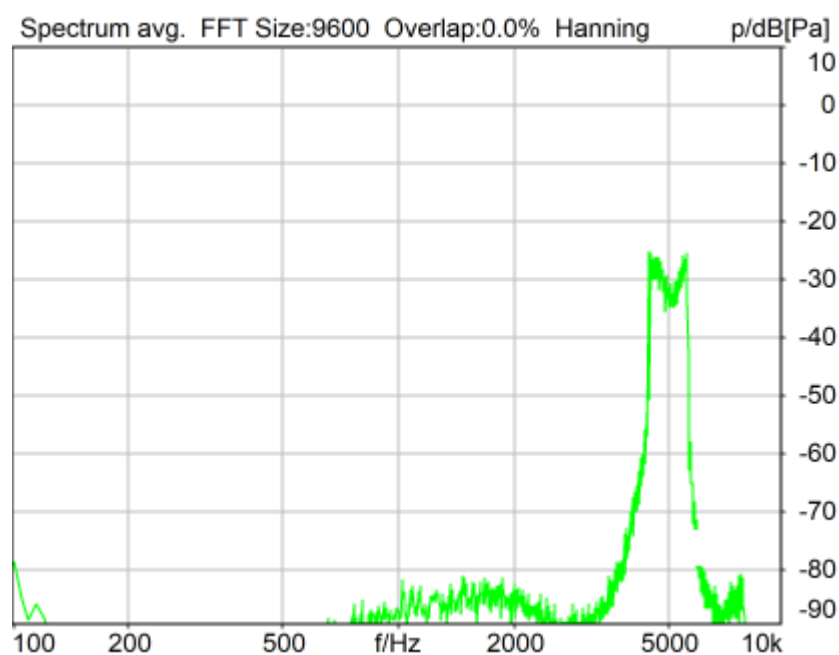
Ok

2024/3/19 14:33 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 5000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 34.47 dB (1.89%) Ok

Ok

2024/3/19 14:34 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain), Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N

Region	Frequency	SDNR
1	250Hz	30.69 dB
2	315Hz	29.72 dB
3	400Hz	31.86 dB
4	500Hz	34.30 dB
5	630Hz	35.21 dB
6	800Hz	31.06 dB
7	1000Hz	30.72 dB
8	1250Hz	23.60 dB
9	1600Hz	24.66 dB
10	2000Hz	23.61 dB
11	2500Hz	30.34 dB
12	3150Hz	32.91 dB
13	4000Hz	37.45 dB
14	5000Hz	34.47 dB

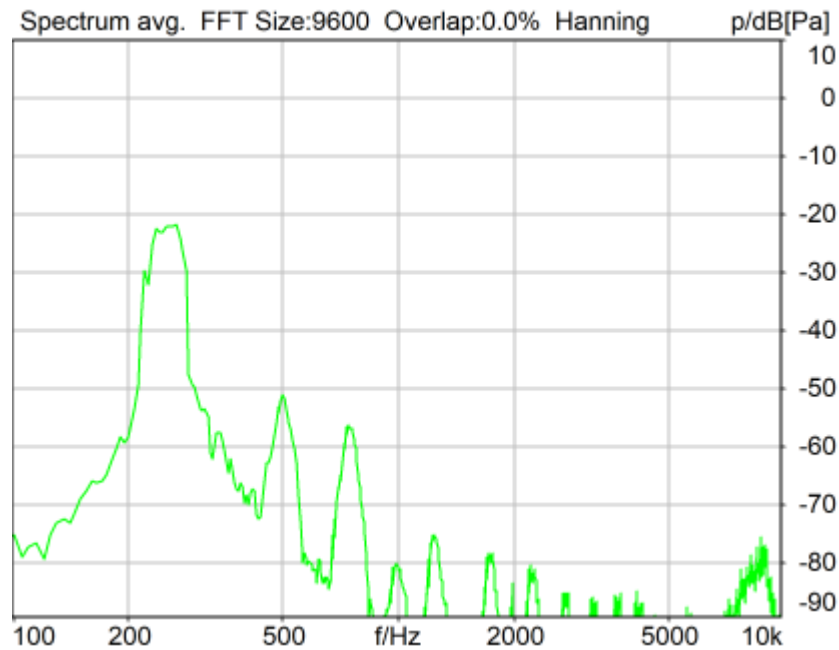
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 23.60dB at 1250Hz.

2024/3/19 14:34 ACQUA

5.2 RCV Distortion and Noise - 250 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 30.26 dB (3.07%) Ok

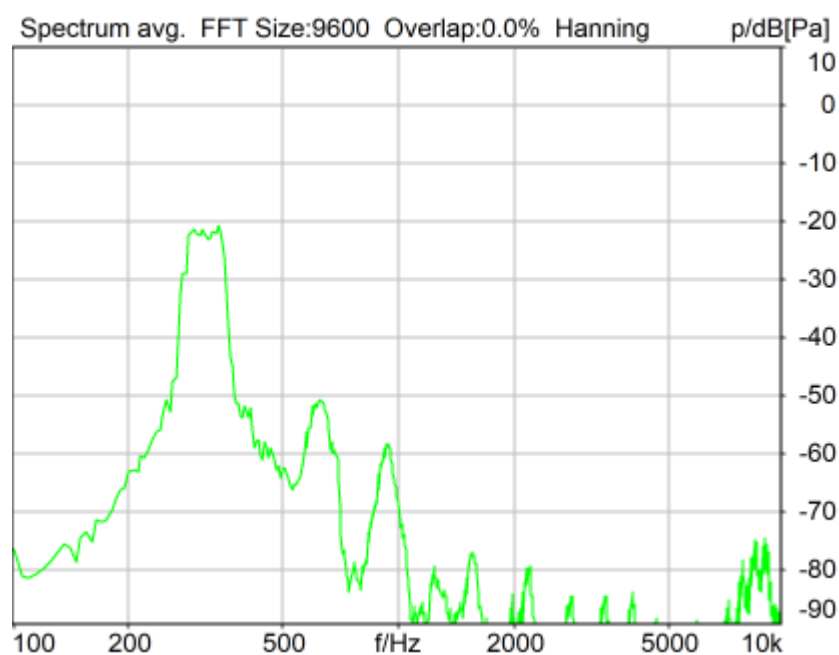
Ok

2024/3/19 14:49 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 315 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 29.44 dB (3.37%) Ok

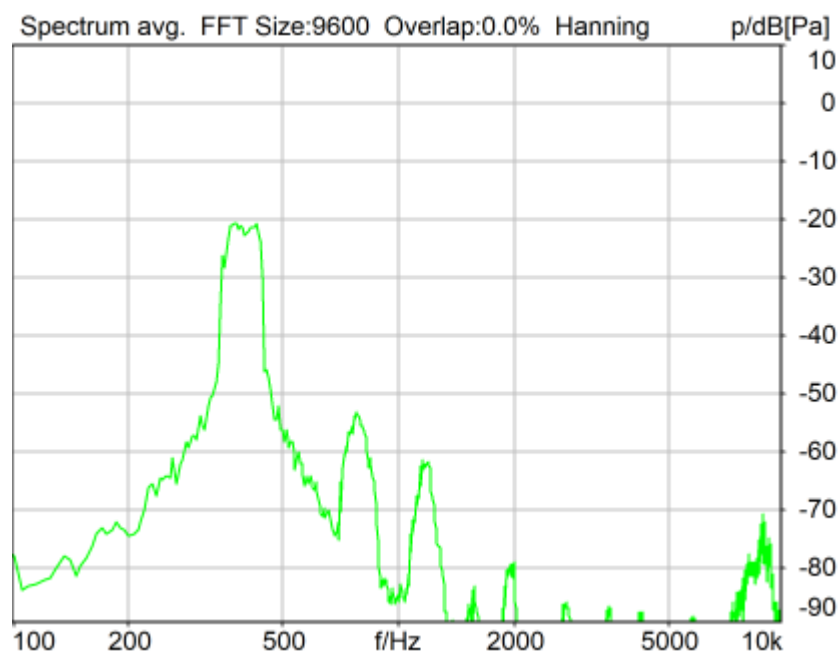
Ok

2024/3/19 14:49 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 31.48 dB (2.67%) Ok

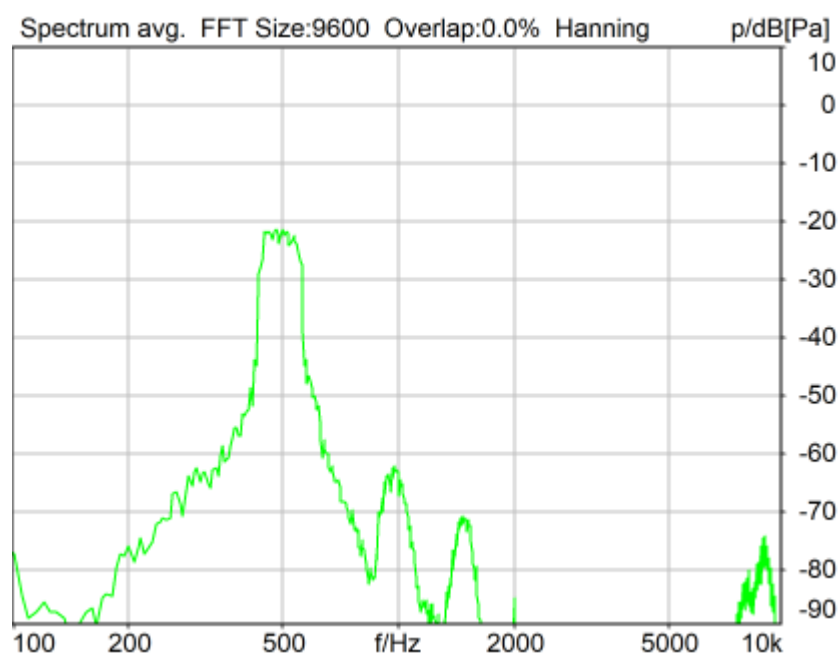
Ok

2024/3/19 14:50 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.34 dB (2.15%) Ok

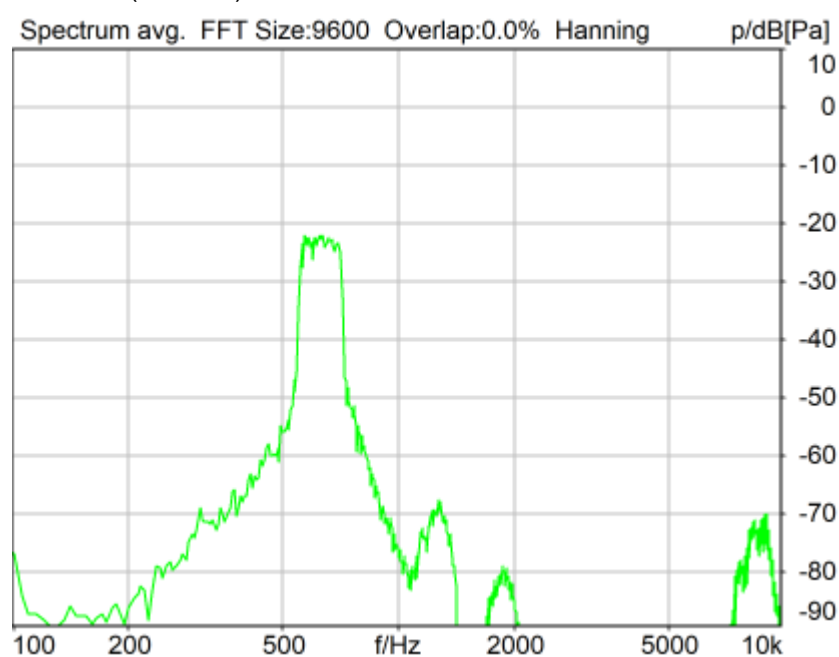
Ok

2024/3/19 14:50 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 32.90 dB (2.26%) Ok

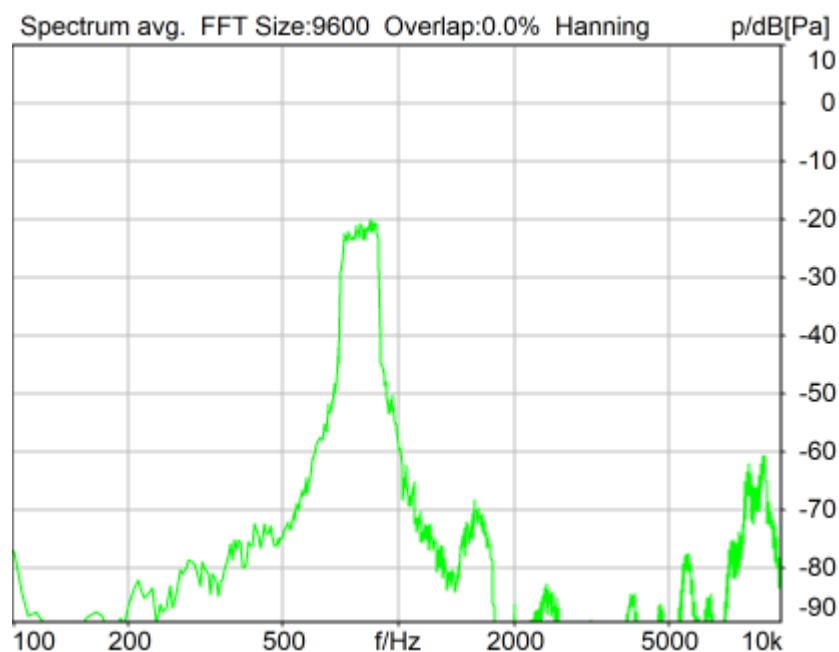
Ok

2024/3/19 14:50 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 31.04 dB (2.80%) Ok

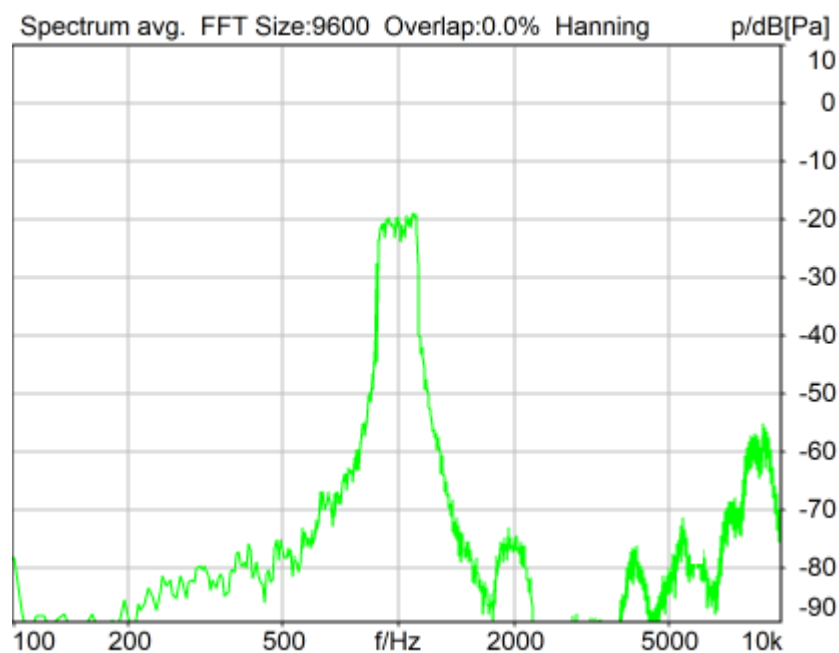
Ok

2024/3/19 14:51 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 29.09 dB (3.51%) Ok

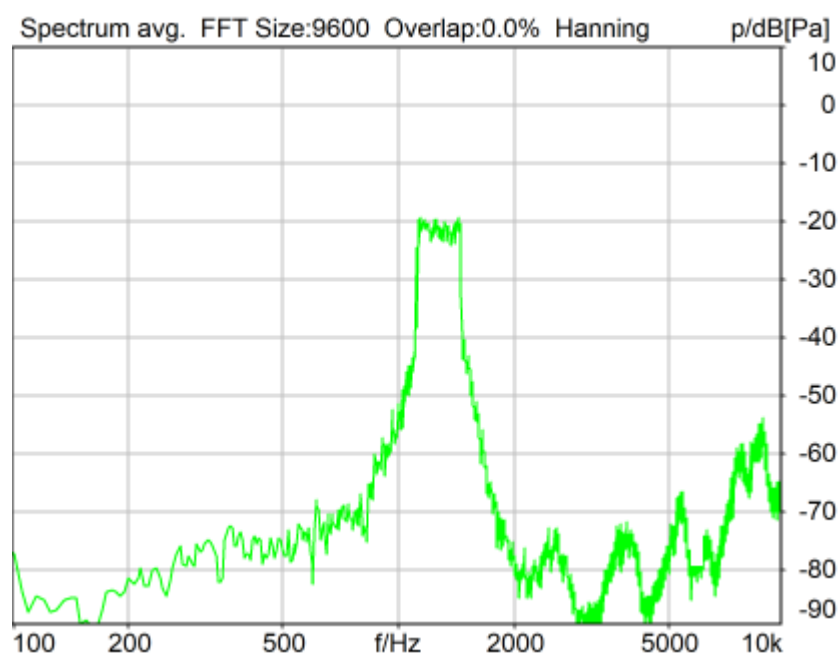
Ok

2024/3/19 14:51 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 23.59 dB (6.61%) Ok

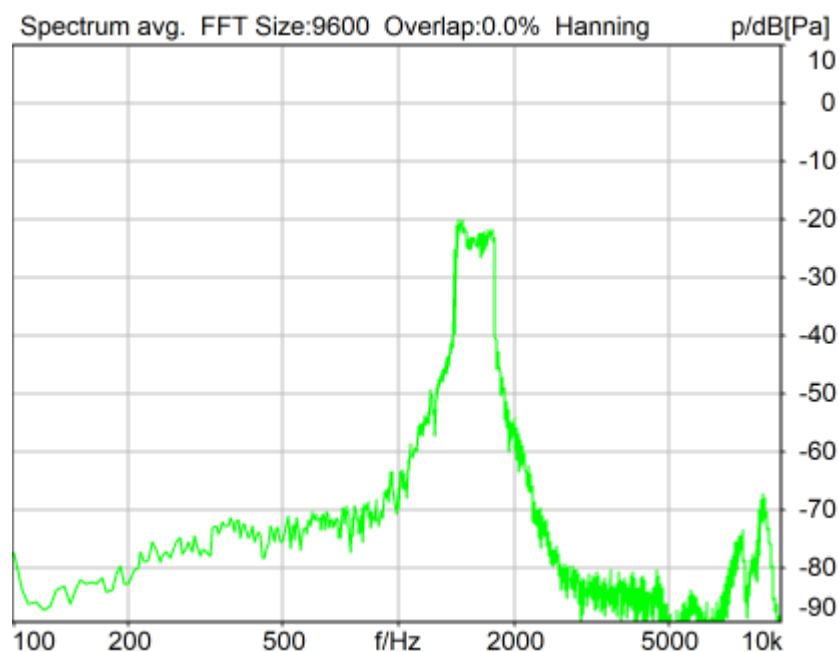
Ok

2024/3/19 14:52 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 24.55 dB (5.92%) Ok

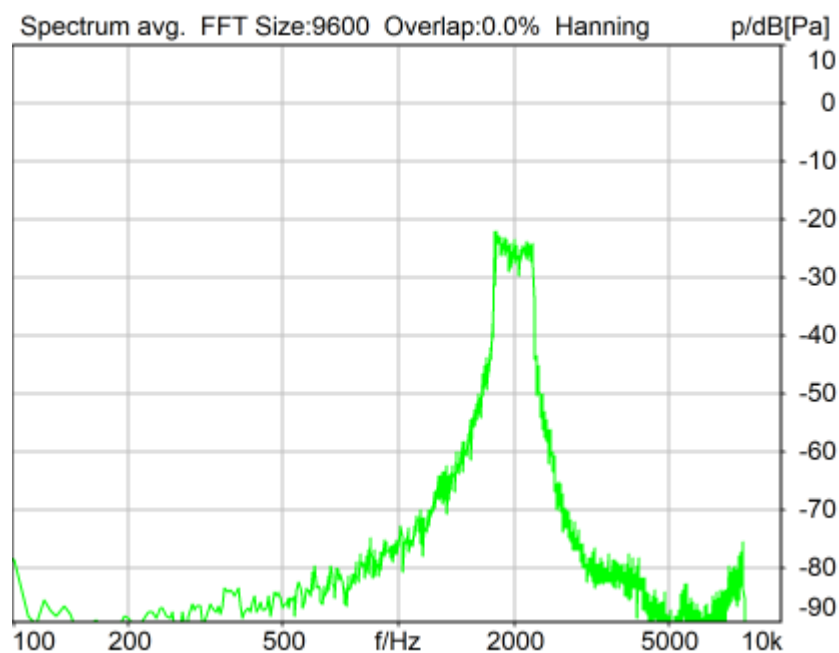
Ok

2024/3/19 14:52 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 23.77 dB (6.48%) Ok

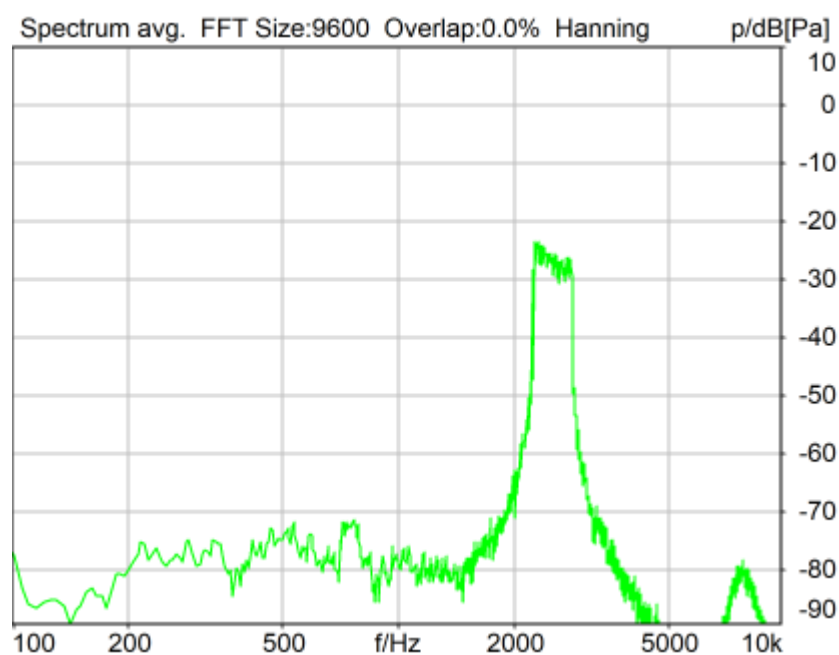
Ok

2024/3/19 14:52 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 30.79 dB (2.89%) Ok

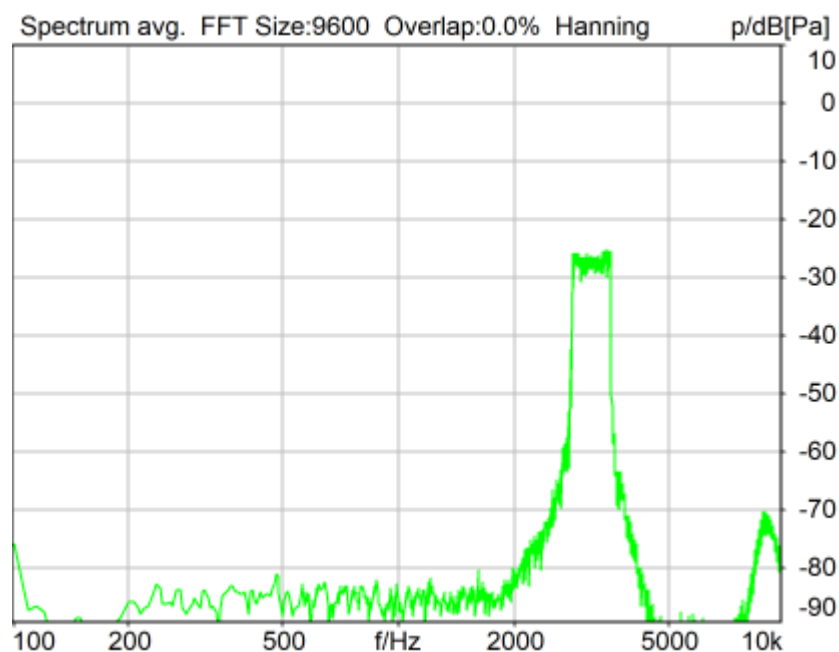
Ok

2024/3/19 14:53 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.93 dB (2.01%) Ok

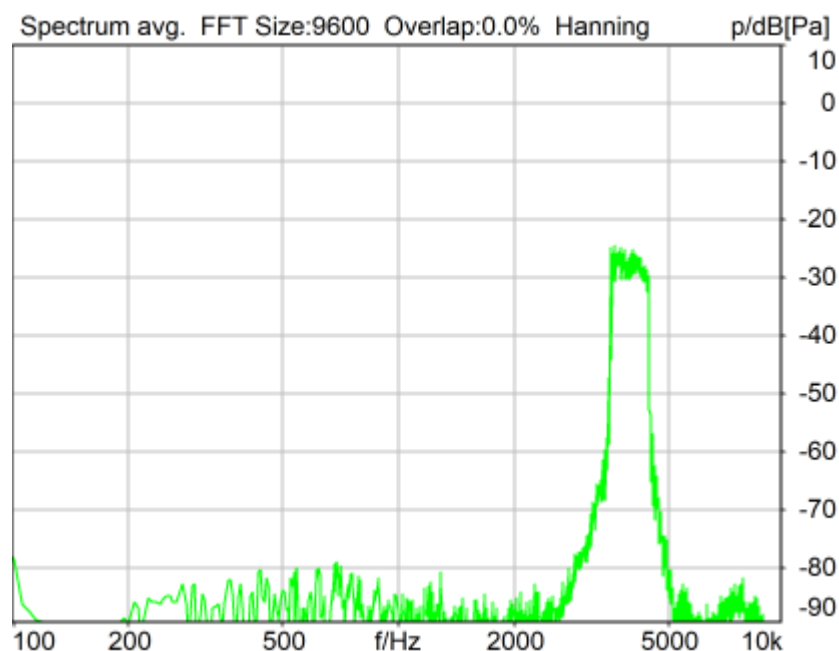
Ok

2024/3/19 14:53 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 4000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 36.08 dB (1.57%) Ok

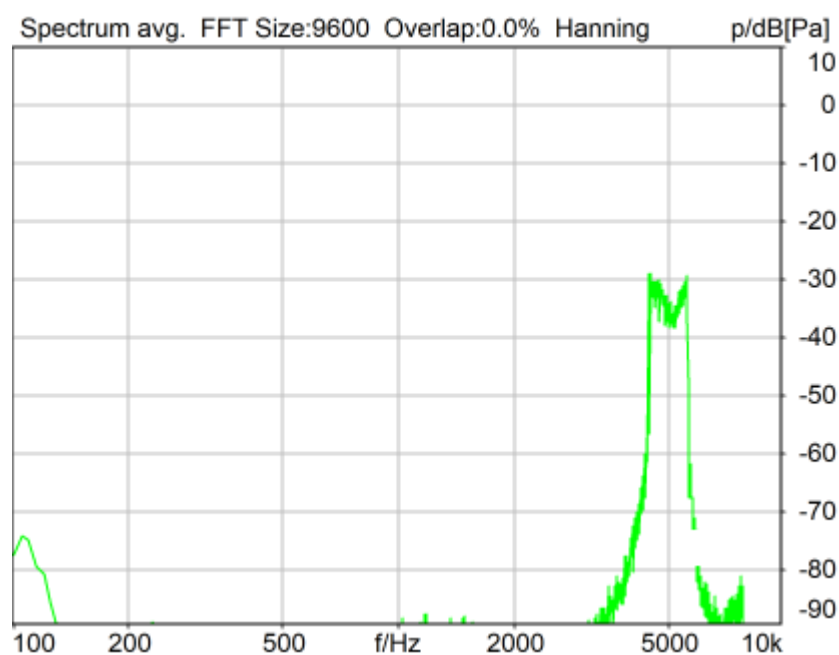
Ok

2024/3/19 14:54 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 5000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 34.93 dB (1.79%) Ok

Ok

2024/3/19 14:54 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain), Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N

Region	Frequency	SDNR
1	250Hz	30.26 dB
2	315Hz	29.44 dB
3	400Hz	31.48 dB
4	500Hz	33.34 dB
5	630Hz	32.90 dB
6	800Hz	31.04 dB
7	1000Hz	29.09 dB
8	1250Hz	23.59 dB
9	1600Hz	24.55 dB
10	2000Hz	23.77 dB
11	2500Hz	30.79 dB
12	3150Hz	33.93 dB
13	4000Hz	36.08 dB
14	5000Hz	34.93 dB

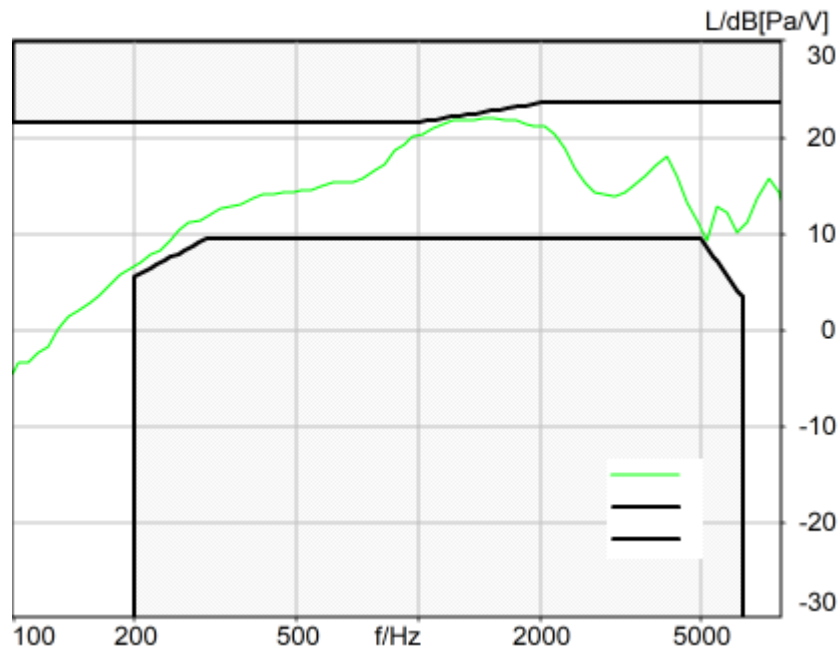
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 23.59dB at 1250Hz.

2024/3/19 14:54 ACQUA

5.3 Frequency Response 8N FF, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



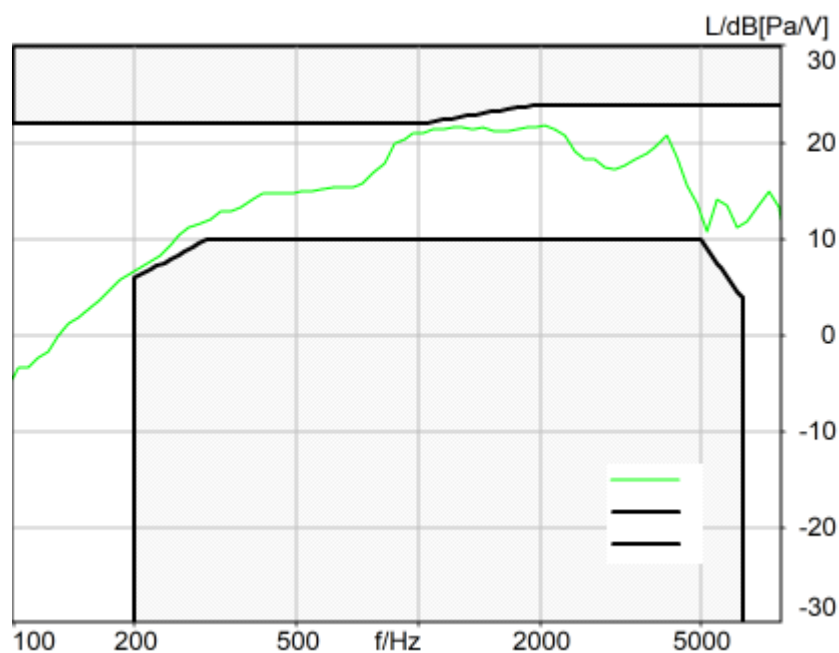
Absolute minimal distance
0.42 dB at 1216.1 Hz Ok

Ok

2024/3/19 14:34 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N DF, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



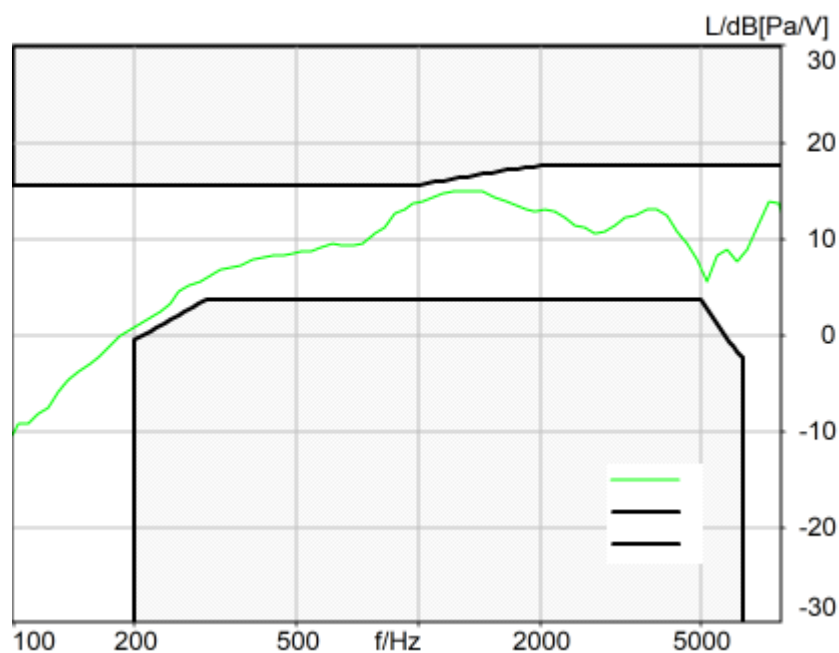
Absolute minimal distance
0.82 dB at 1088.7 Hz Ok

Ok

2024/3/19 14:35 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N FF, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



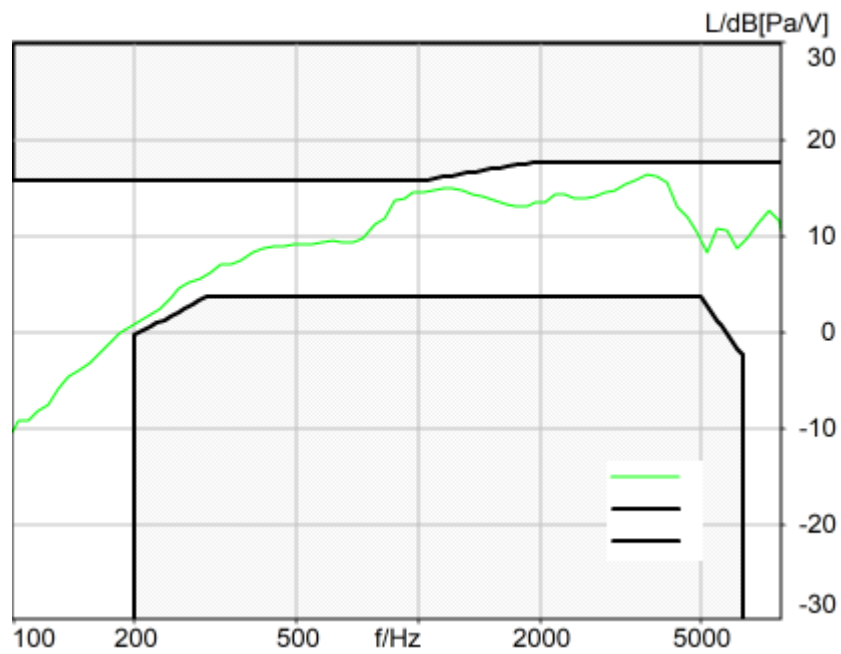
Absolute minimal distance
1.30 dB at 1216.1 Hz Ok

Ok

2024/3/19 14:55 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



Absolute minimal distance
1.17 dB at 1088.7 Hz Ok

Ok

2024/3/19 14:55 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

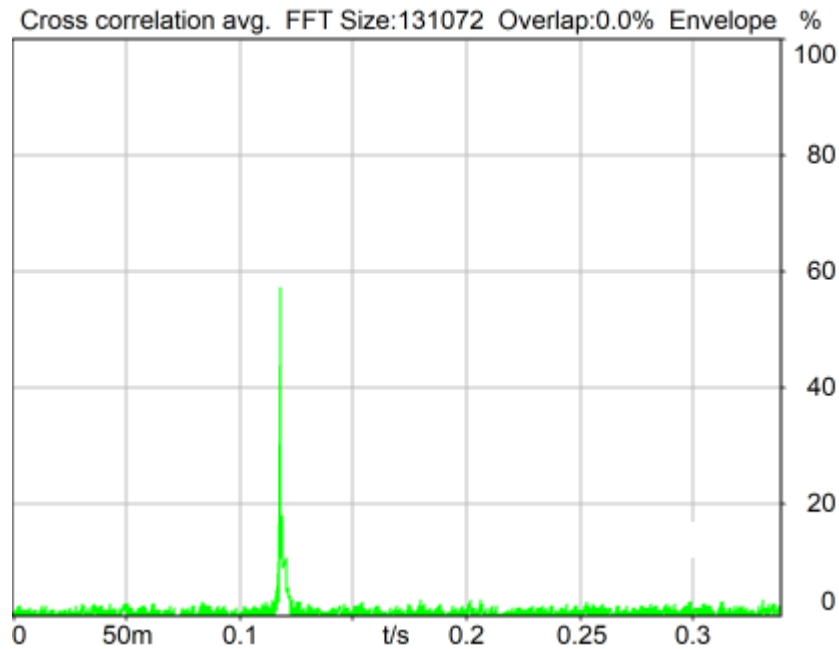
Measurement Object	FR1 n14_10_DFT-s-OFDM_EVS NB 24.4kbps_CH158600
Description	CJWQ-W7L-P23120020 DTNC PM95

Project	TIA-5050 (2018-01)
Report Generation Date	2024/5/21 15:30
Responsible Person	audio

Overall Receive Delay NB, Index: 1	3
5.1a Receive Volume Control Performance 8N NB, Index: 1	3
5.1b Receive Volume Control Performance 2N NB, Index: 1	4
5.2 RCV Distortion and Noise - 400 Hz NB, Index: 1	5
5.2 RCV Distortion and Noise - 500 Hz NB, Index: 1	6
5.2 RCV Distortion and Noise - 630 Hz NB, Index: 1	7
5.2 RCV Distortion and Noise - 800 Hz NB, Index: 1	7
5.2 RCV Distortion and Noise - 1000 Hz NB, Index: 1	8
5.2 RCV Distortion and Noise - 1250 Hz NB, Index: 1	9
5.2 RCV Distortion and Noise - 1600 Hz NB, Index: 1	9
5.2 RCV Distortion and Noise - 2000 Hz NB, Index: 1	10
5.2 RCV Distortion and Noise - 2500 Hz NB, Index: 1	11
5.2 RCV Distortion and Noise - 3150 Hz NB, Index: 1	11
Report - Receive Distortion and Noise (Conversational Gain), Index: 1	12
5.2 RCV Distortion and Noise - 400 Hz NB, Index: 1	13
5.2 RCV Distortion and Noise - 500 Hz NB, Index: 1	13
5.2 RCV Distortion and Noise - 630 Hz NB, Index: 1	14
5.2 RCV Distortion and Noise - 800 Hz NB, Index: 1	15
5.2 RCV Distortion and Noise - 1000 Hz NB, Index: 1	15
5.2 RCV Distortion and Noise - 1250 Hz NB, Index: 1	16
5.2 RCV Distortion and Noise - 1600 Hz NB, Index: 1	17
5.2 RCV Distortion and Noise - 2000 Hz NB, Index: 1	17
5.2 RCV Distortion and Noise - 2500 Hz NB, Index: 1	18
5.2 RCV Distortion and Noise - 3150 Hz NB, Index: 1	19
Report - Receive Distortion and Noise (Conversational Gain), Index: 1	19
5.3 Frequency Response 8N FF HANB, Index: 1	20
5.3 Frequency Response 8N DF HANB, Index: 1	21
5.3 Frequency Response 2N FF HANB, Index: 1	21
5.3 Frequency Response 2N DF HANB, Index: 1	22

Overall Receive Delay NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ Preparation - Delay measurement



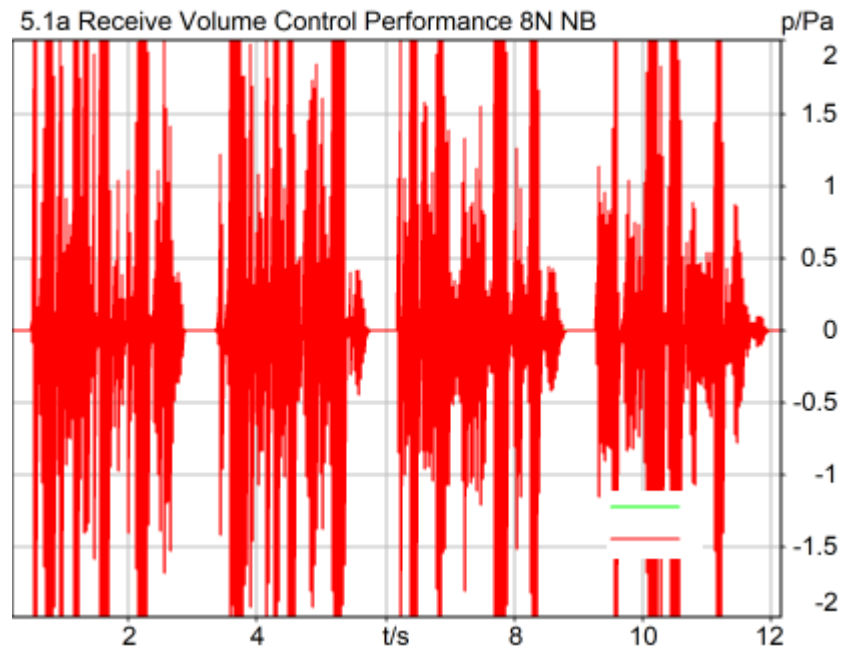
Delay (Cross): 118.7 ms

2024/3/20 10:26 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1a Receive Volume Control Performance 8N NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Correction

X - 70

Speech Level RCV: 87.44 dB[SPL], Act.: 83.78%

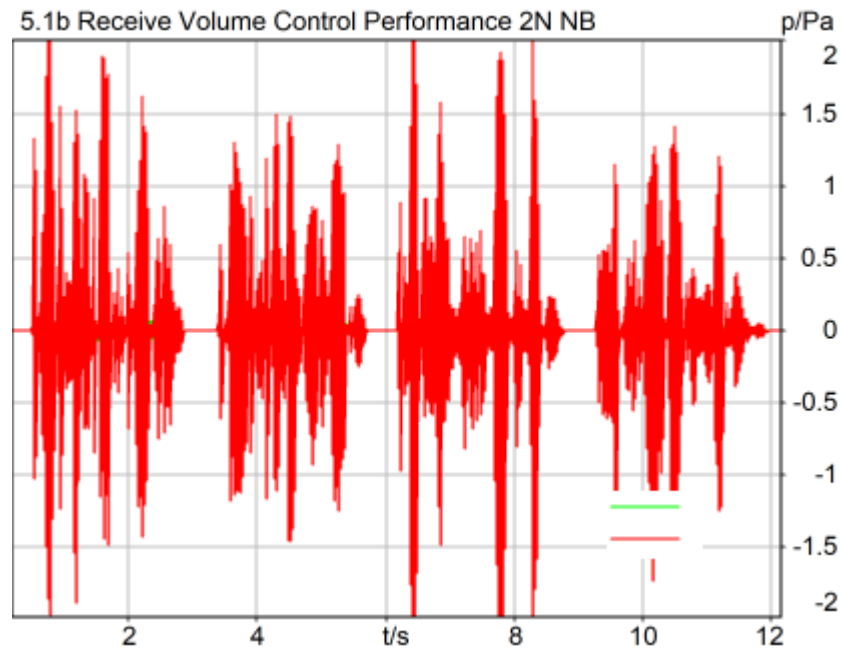
Corrected Speech Level: 17.44 dB[SPL] Ok

Ok

2024/3/20 10:48 ACQUA 5.1.200

5.1b Receive Volume Control Performance 2N NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Correction

X - 70

Speech Level RCV: 80.77 dB[SPL], Act.: 83.06%

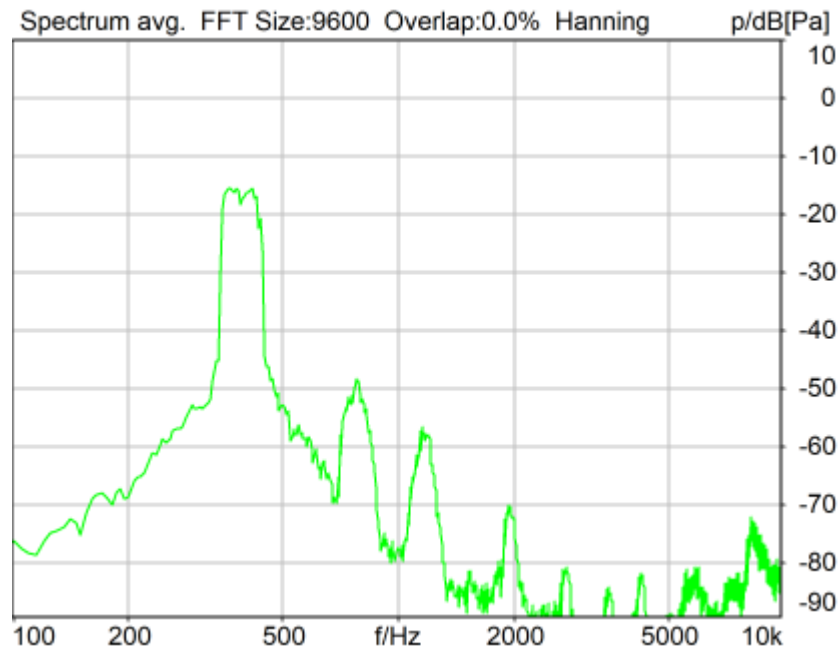
Corrected Speech Level: 10.77 dB[SPL] Ok

Ok

2024/3/20 10:27 ACQUA 5.1.200

5.2 RCV Distortion and Noise - 400 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 32.50 dB (2.37%) Ok

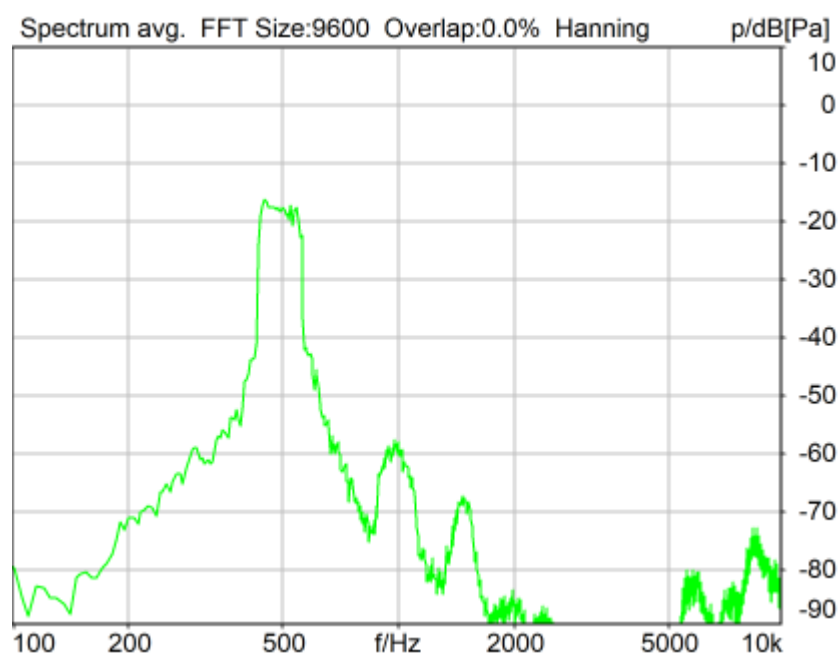
Ok

2024/3/20 10:48 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 33.83 dB (2.03%) Ok

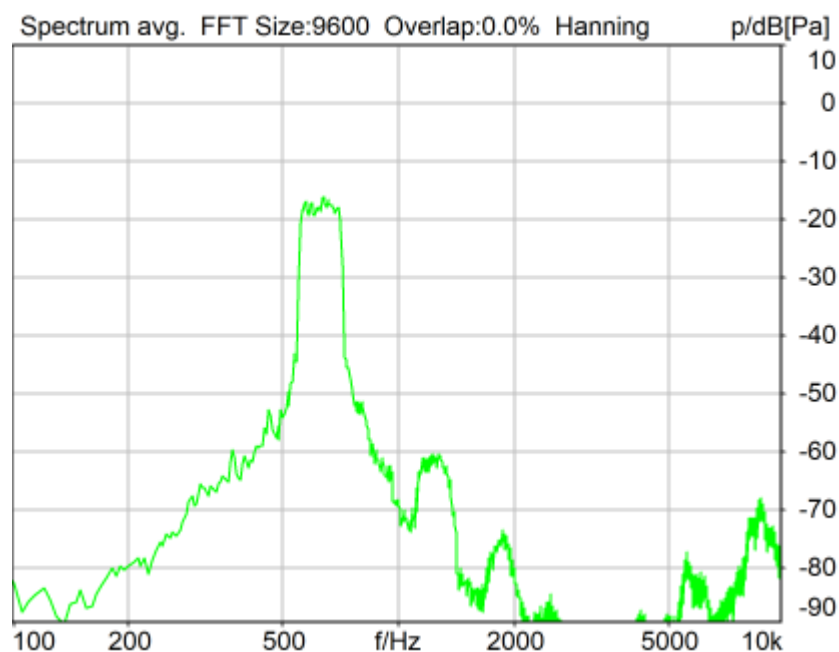
Ok

2024/3/20 10:49 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 34.32 dB (1.92%) Ok

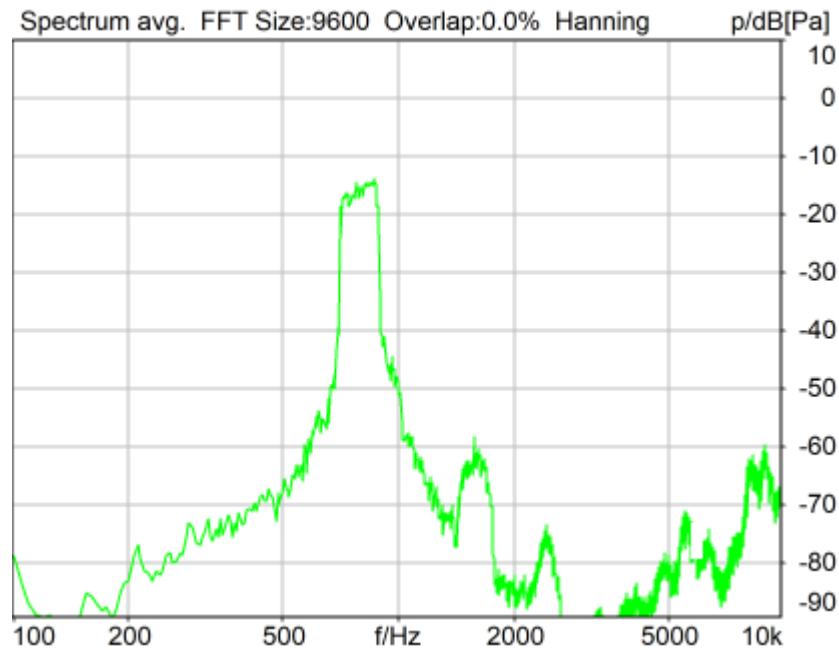
Ok

2024/3/20 10:49 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 32.61 dB (2.34%) Ok

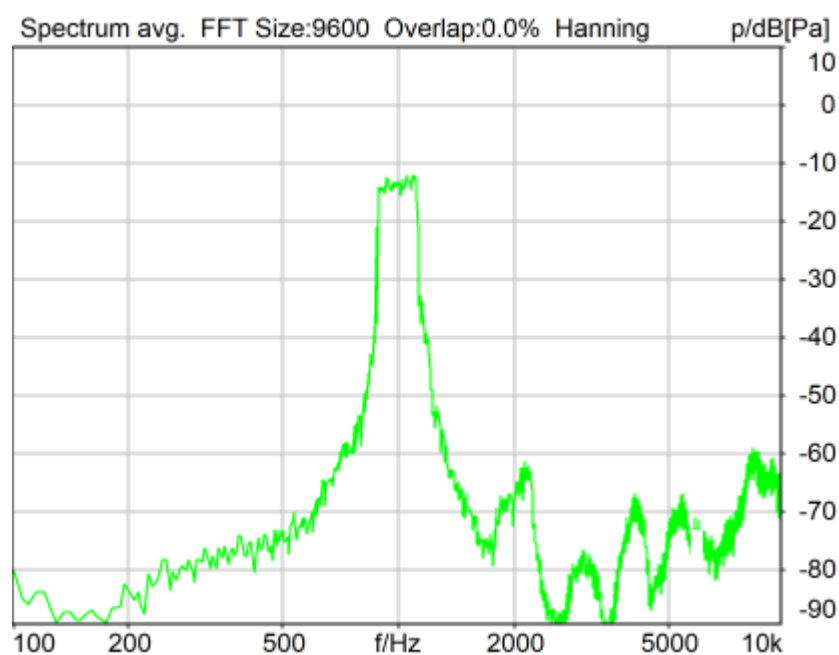
Ok

2024/3/20 10:49 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 31.36 dB (2.70%) Ok

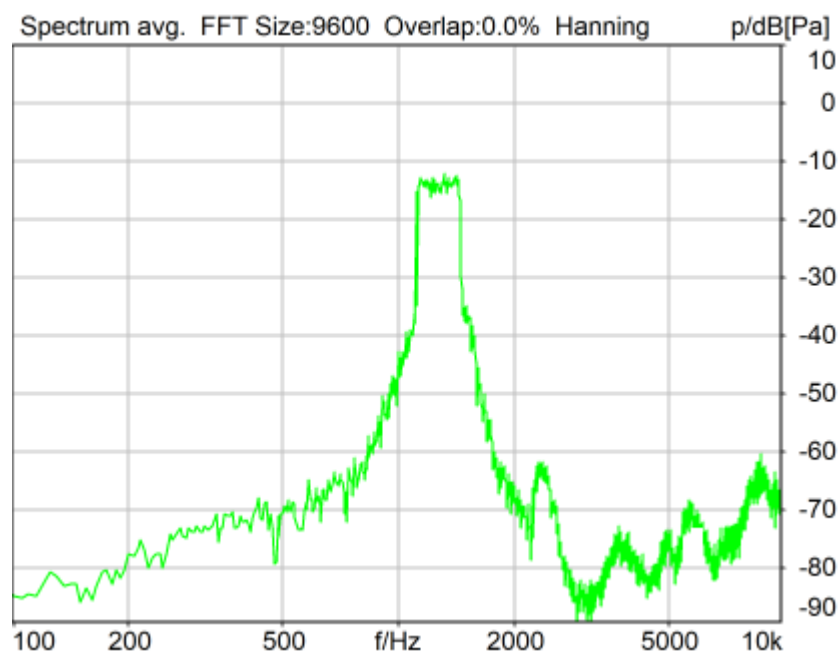
Ok

2024/3/20 10:50 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 24.76 dB (5.78%) Ok

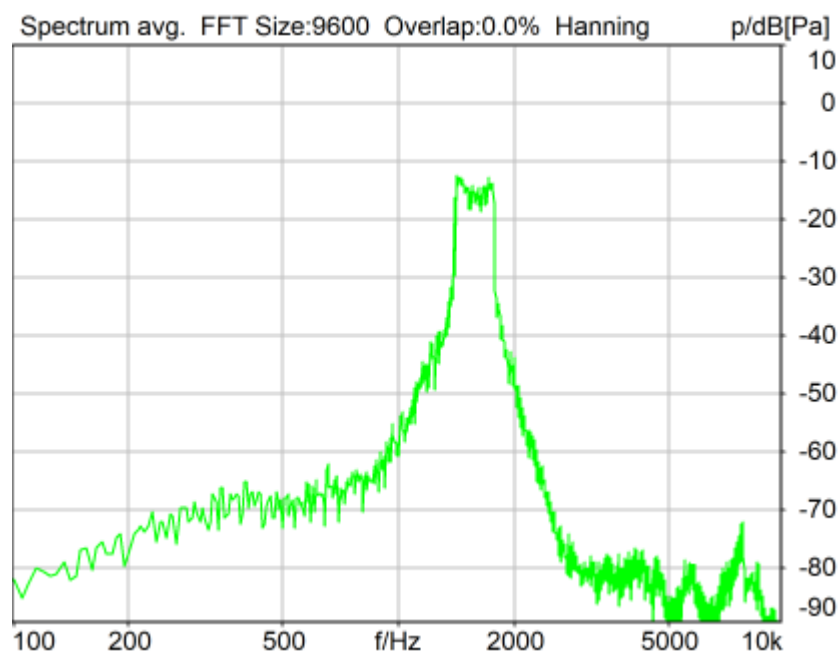
Ok

2024/3/20 10:50 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 24.48 dB (5.97%) Ok

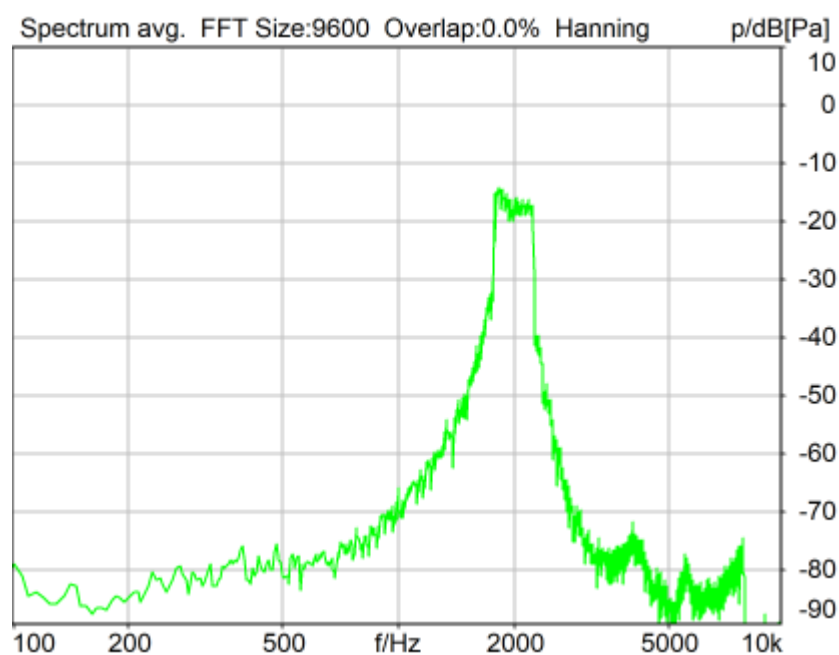
Ok

2024/3/20 10:51 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 22.91 dB (7.15%) Ok

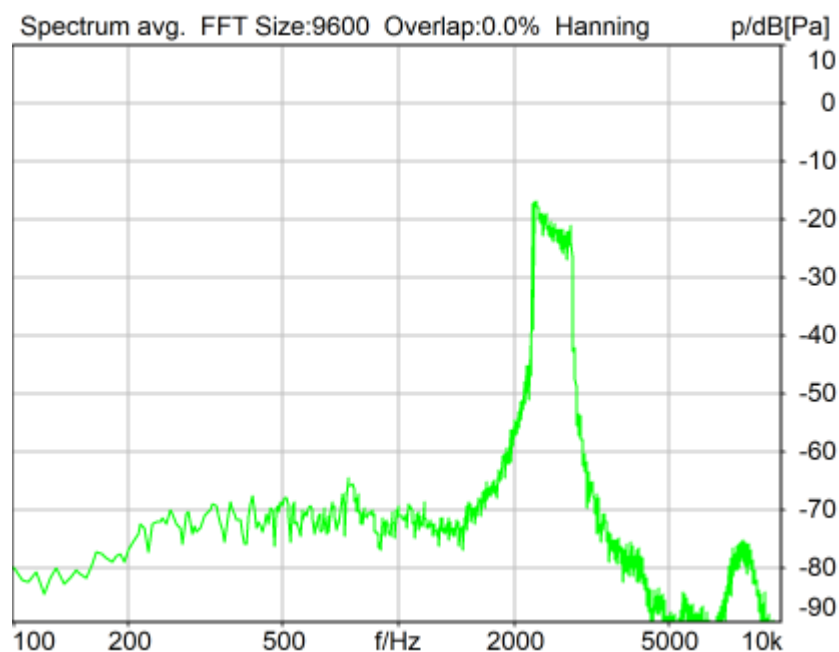
Ok

2024/3/20 10:51 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 29.63 dB (3.30%) Ok

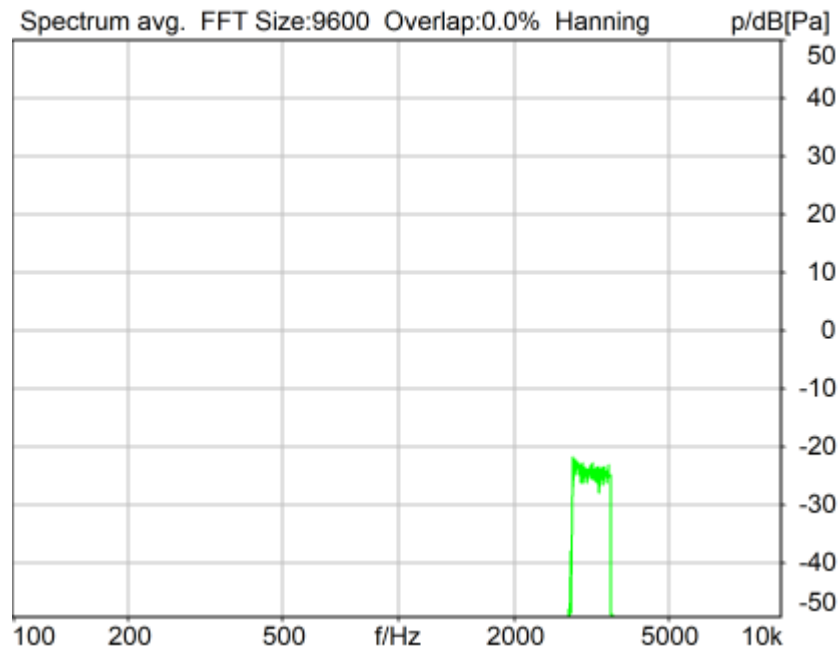
Ok

2024/3/20 10:51 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 32.30 dB (2.43%) Ok

Ok

2024/3/20 10:52 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain), Index:

1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N

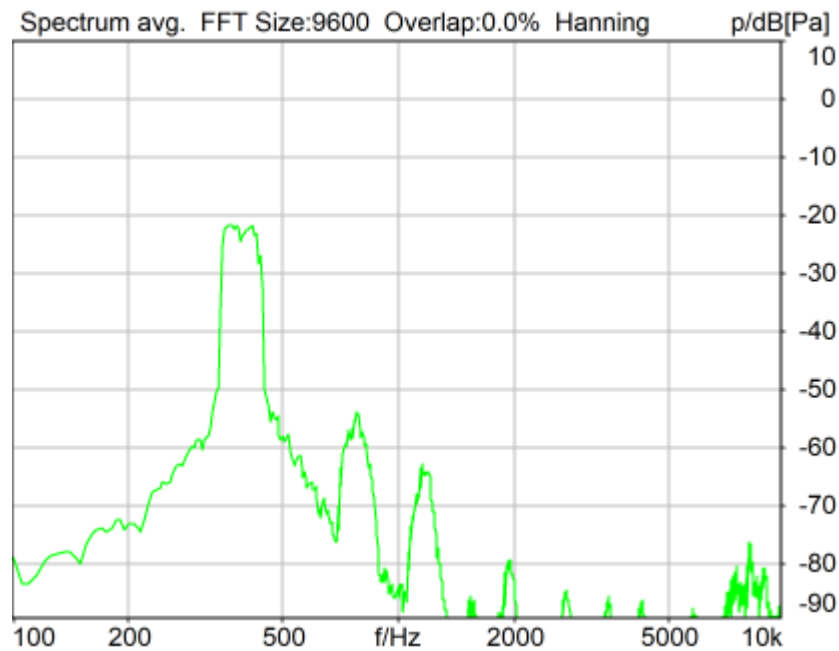
Region	Frequency	SDNR
1	400Hz	32.50 dB
2	500Hz	33.83 dB
3	630Hz	34.32 dB
4	800Hz	32.61 dB
5	1000Hz	31.36 dB
6	1250Hz	24.76 dB
7	1600Hz	24.48 dB
8	2000Hz	22.91 dB
9	2500Hz	29.63 dB
10	3150Hz	32.30 dB

All SDNRs were greater than 20.0 dB, requirement was met.
Smallest SDNR was 22.91dB at 2000Hz.

2024/3/20 10:52 ACQUA

5.2 RCV Distortion and Noise - 400 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 31.95 dB (2.53%) Ok

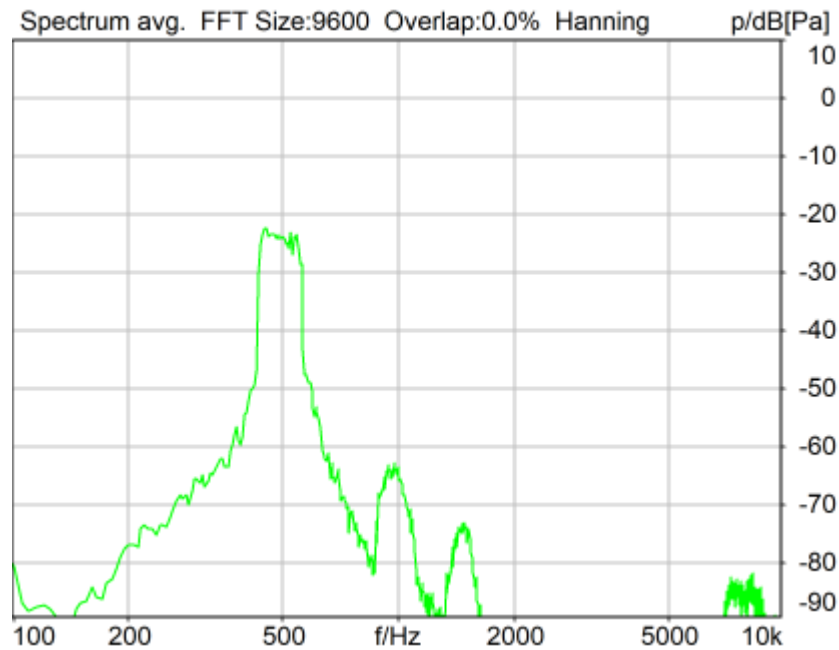
Ok

2024/3/20 10:27 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 34.02 dB (1.99%) Ok

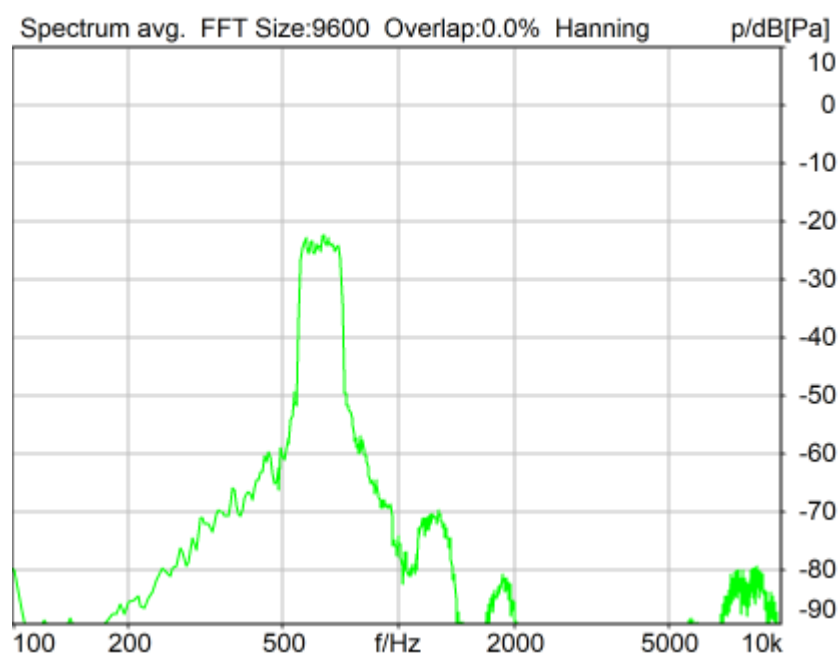
Ok

2024/3/20 10:27 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 34.51 dB (1.88%) Ok

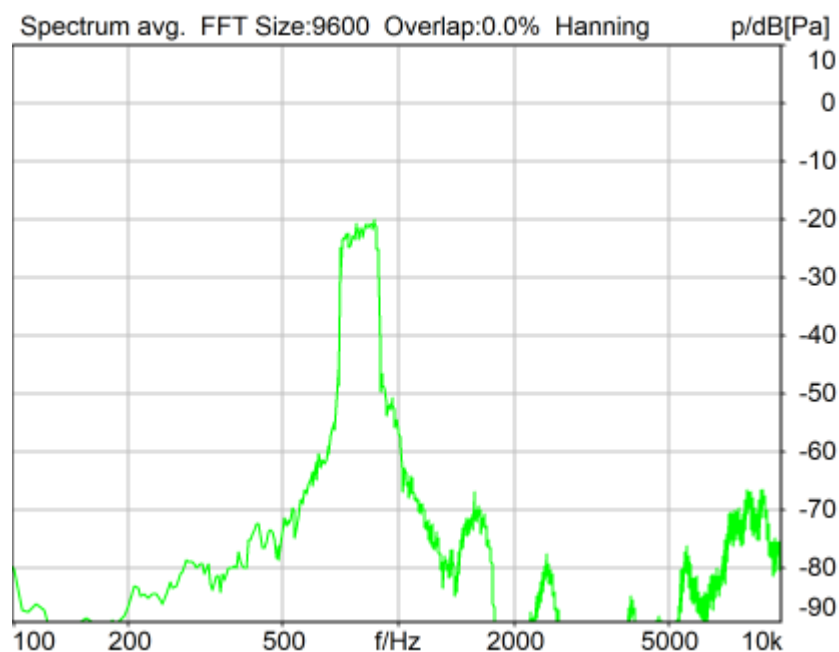
Ok

2024/3/20 10:28 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 32.37 dB (2.41%) Ok

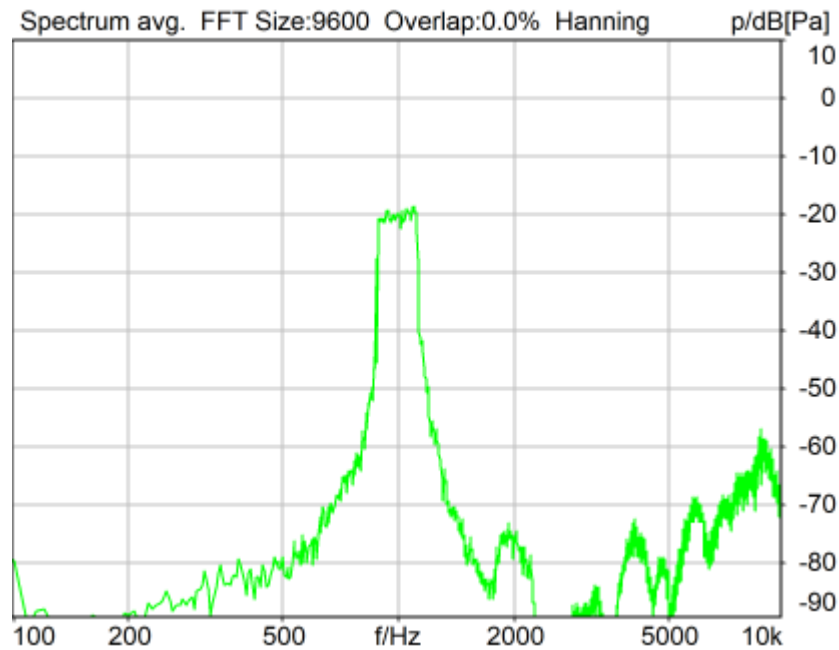
Ok

2024/3/20 10:28 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 30.84 dB (2.87%) Ok

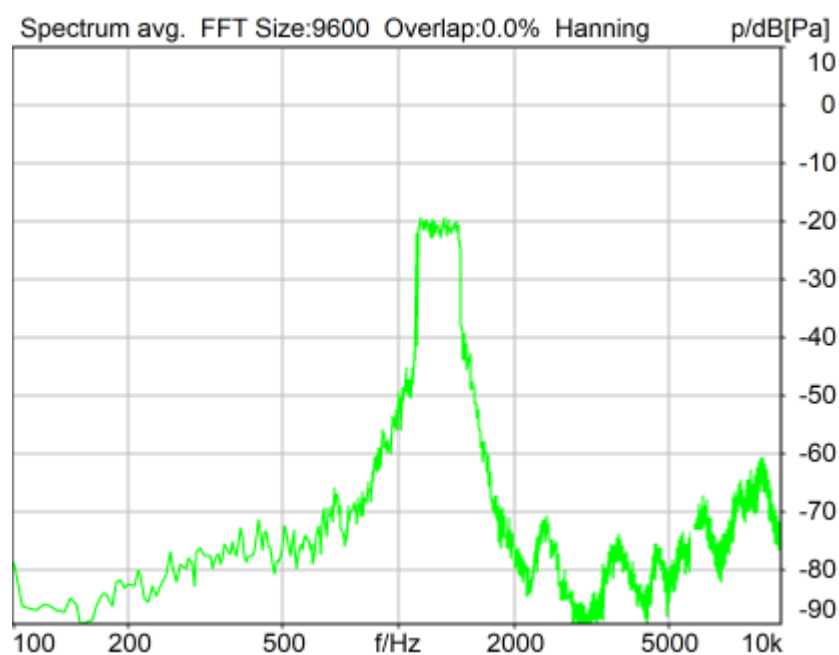
Ok

2024/3/20 10:29 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 24.33 dB (6.07%) Ok

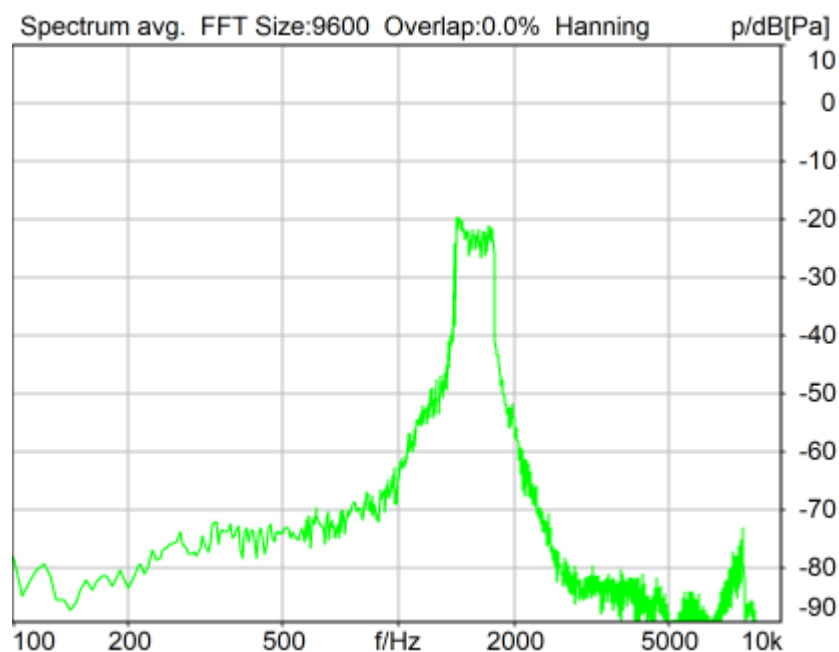
Ok

2024/3/20 10:29 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 24.85 dB (5.72%) Ok

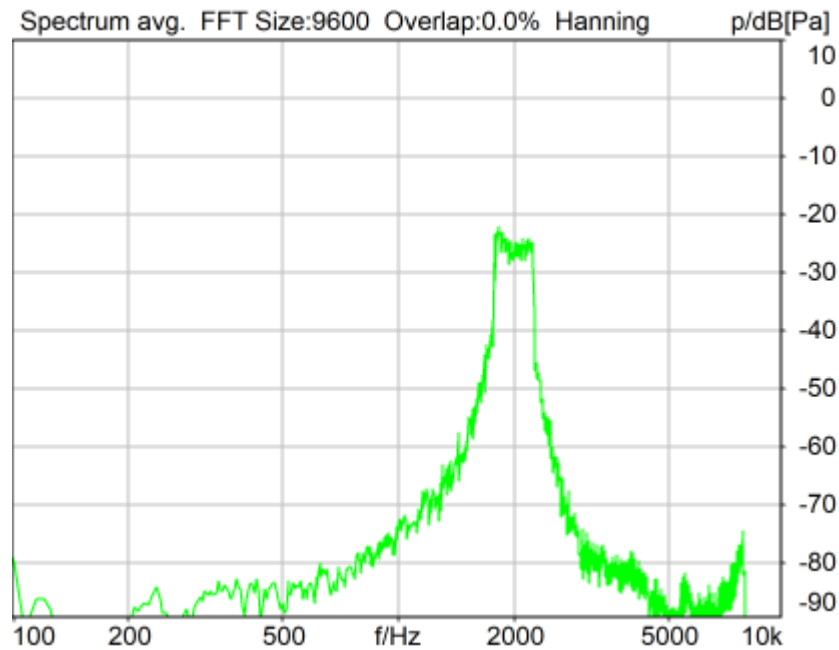
Ok

2024/3/20 10:29 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 22.67 dB (7.35%) Ok

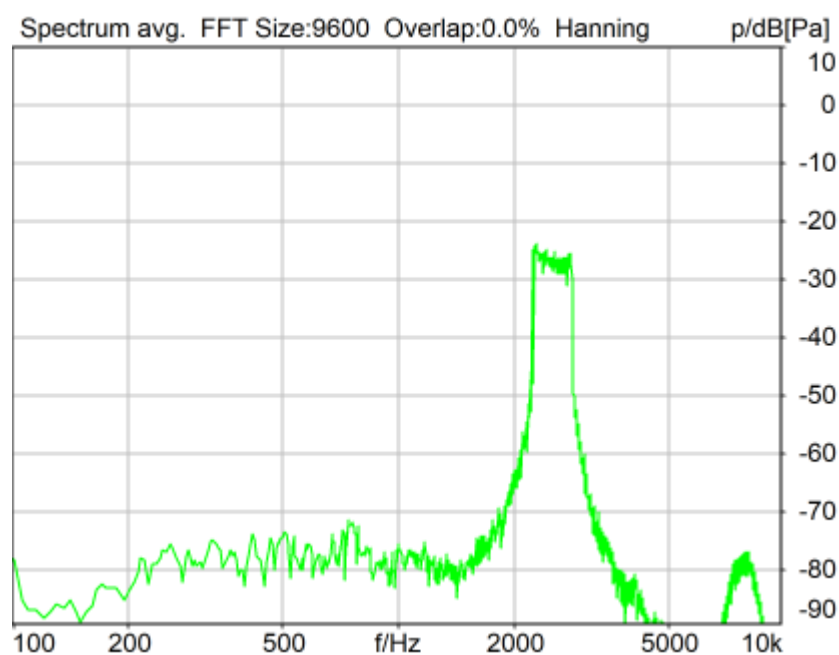
Ok

2024/3/20 10:30 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 30.30 dB (3.06%) Ok

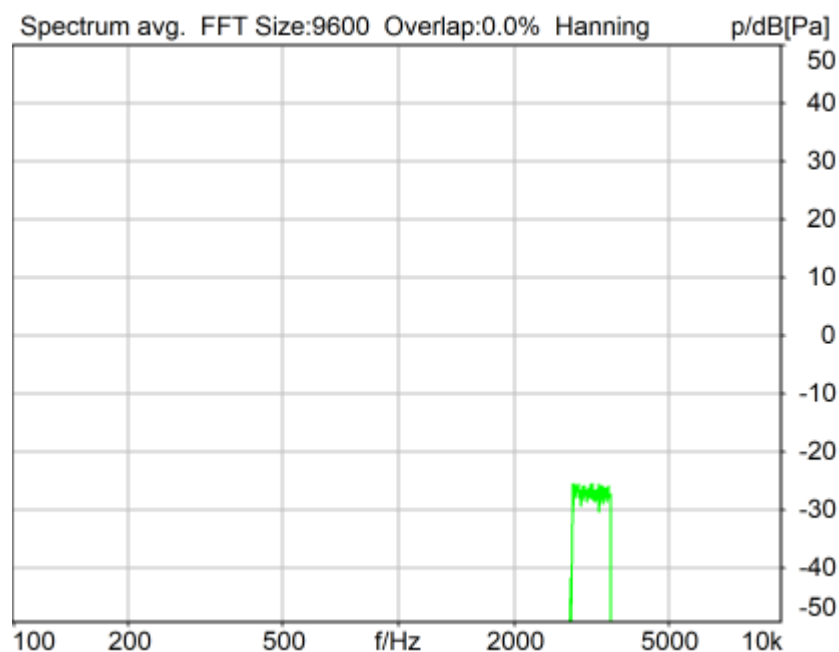
Ok

2024/3/20 10:30 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.43 dB (2.13%) Ok

Ok

2024/3/20 10:31 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain), Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N

Region	Frequency	SDNR
1	400Hz	31.95 dB

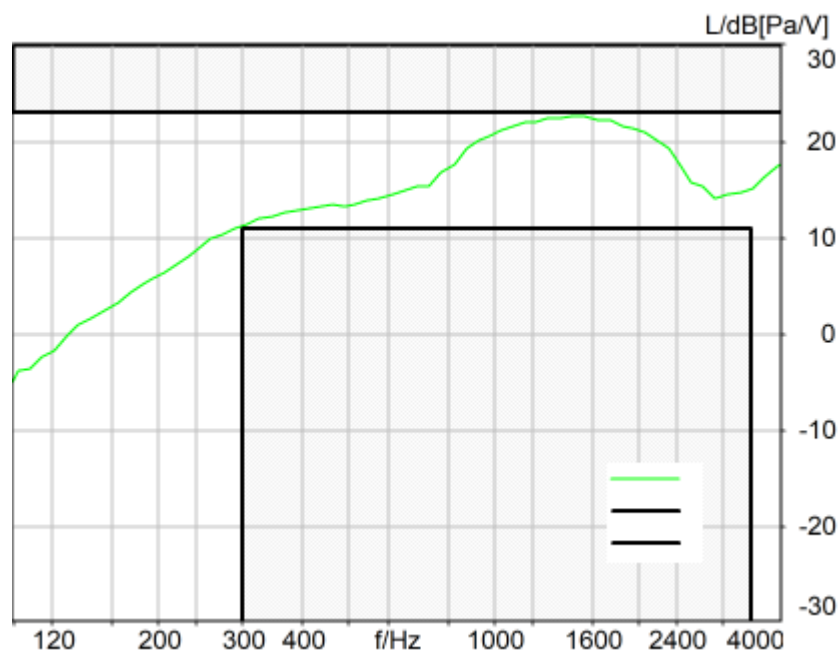
2	500Hz	34.02 dB
3	630Hz	34.51 dB
4	800Hz	32.37 dB
5	1000Hz	30.84 dB
6	1250Hz	24.33 dB
7	1600Hz	24.85 dB
8	2000Hz	22.67 dB
9	2500Hz	30.30 dB
10	3150Hz	33.43 dB

All SDNRs were greater than 20.0 dB, requirement was met.
Smallest SDNR was 22.67dB at 2000Hz.

2024/3/20 10:31 ACQUA

5.3 Frequency Response 8N FF HANB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance
0.47 dB at 1547.5 Hz Ok

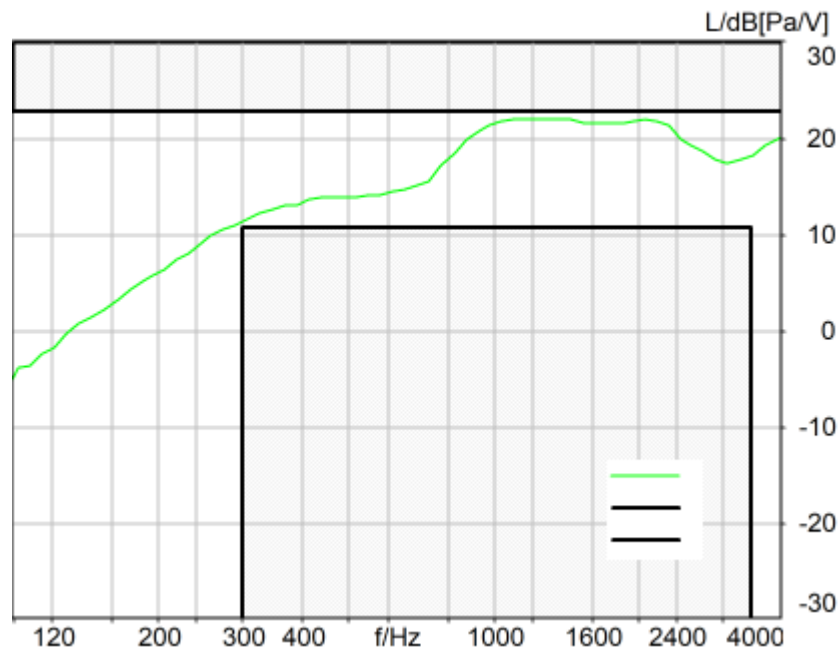
Ok

2024/3/20 10:52 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N DF HANB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance

0.76 dB at 1285.9 Hz Ok

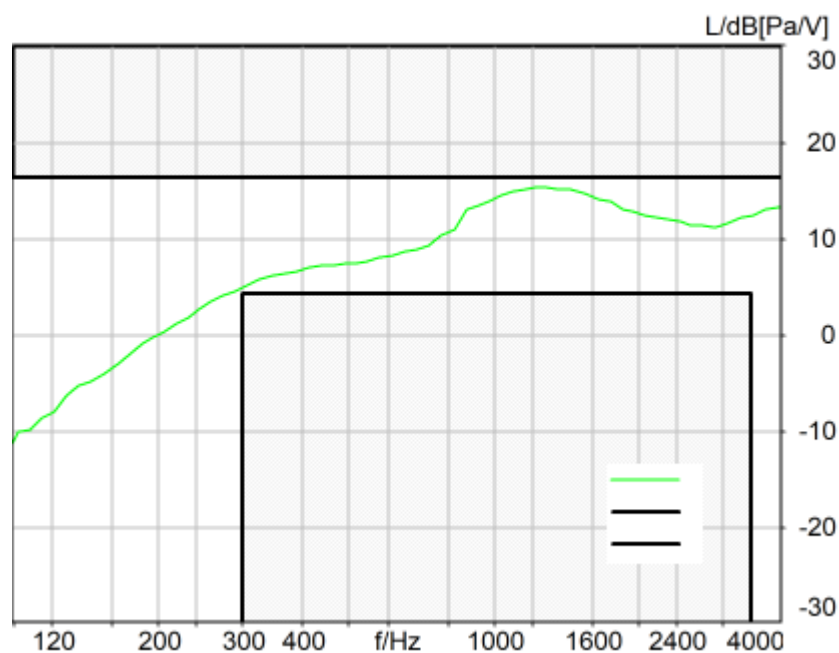
Ok

2024/3/20 10:53 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N FF HANB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



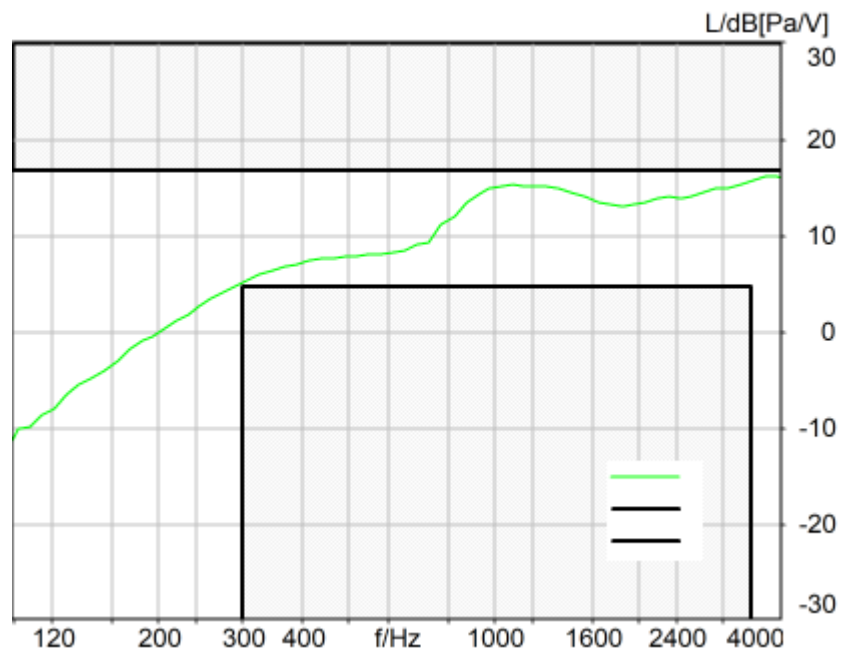
Absolute minimal distance
0.92 dB at 305.9 Hz Ok

Ok

2024/3/20 10:31 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF HANB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance
0.54 dB at 3657.5 Hz Ok

Ok

2024/3/20 10:31 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

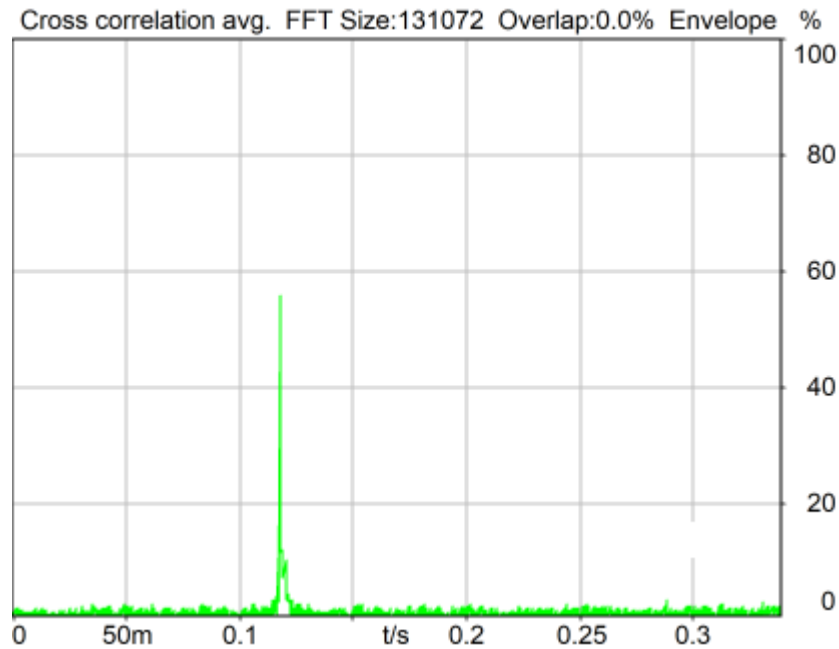
Measurement Object	FR1 n14_10_DFT-s-OFDM_EVS WB 128kbps_CH158600
Description	CJWQ-W7L-P23120020 DTNC PM95

Project	TIA-5050 (2018-01)
Report Generation Date	2024/5/21 15:31
Responsible Person	audio

Overall Receive Delay WB, Index: 1	3
5.1a Receive Volume Control Performance 8N WB, Index: 1	3
5.1b Receive Volume Control Performance 2N WB, Index: 1	4
5.2 RCV Distortion and Noise - 250 Hz WB, Index: 1	5
5.2 RCV Distortion and Noise - 315 Hz WB, Index: 1	6
5.2 RCV Distortion and Noise - 400 Hz WB, Index: 1	7
5.2 RCV Distortion and Noise - 500 Hz WB, Index: 1	7
5.2 RCV Distortion and Noise - 630 Hz WB, Index: 1	8
5.2 RCV Distortion and Noise - 800 Hz WB, Index: 1	9
5.2 RCV Distortion and Noise - 1000 Hz WB, Index: 1	9
5.2 RCV Distortion and Noise - 1250 Hz WB, Index: 1	10
5.2 RCV Distortion and Noise - 1600 Hz WB, Index: 1	11
5.2 RCV Distortion and Noise - 2000 Hz WB, Index: 1	11
5.2 RCV Distortion and Noise - 2500 Hz WB, Index: 1	12
5.2 RCV Distortion and Noise - 3150 Hz WB, Index: 1	13
5.2 RCV Distortion and Noise - 4000 Hz WB, Index: 1	13
5.2 RCV Distortion and Noise - 5000 Hz WB, Index: 1	14
Report - Receive Distortion and Noise (Conversational Gain), Index: 1	15
5.2 RCV Distortion and Noise - 250 Hz WB, Index: 1	15
5.2 RCV Distortion and Noise - 315 Hz WB, Index: 1	16
5.2 RCV Distortion and Noise - 400 Hz WB, Index: 1	17
5.2 RCV Distortion and Noise - 500 Hz WB, Index: 1	17
5.2 RCV Distortion and Noise - 630 Hz WB, Index: 1	18
5.2 RCV Distortion and Noise - 800 Hz WB, Index: 1	19
5.2 RCV Distortion and Noise - 1000 Hz WB, Index: 1	19
5.2 RCV Distortion and Noise - 1250 Hz WB, Index: 1	20
5.2 RCV Distortion and Noise - 1600 Hz WB, Index: 1	21
5.2 RCV Distortion and Noise - 2000 Hz WB, Index: 1	21
5.2 RCV Distortion and Noise - 2500 Hz WB, Index: 1	22
5.2 RCV Distortion and Noise - 3150 Hz WB, Index: 1	23
5.2 RCV Distortion and Noise - 4000 Hz WB, Index: 1	23
5.2 RCV Distortion and Noise - 5000 Hz WB, Index: 1	24
Report - Receive Distortion and Noise (Conversational Gain), Index: 1	25
5.3 Frequency Response 8N FF, Index: 1	25
5.3 Frequency Response 8N DF, Index: 1	26
5.3 Frequency Response 2N FF, Index: 1	27
5.3 Frequency Response 2N DF, Index: 1	28

Overall Receive Delay WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ Preparation - Delay measurement



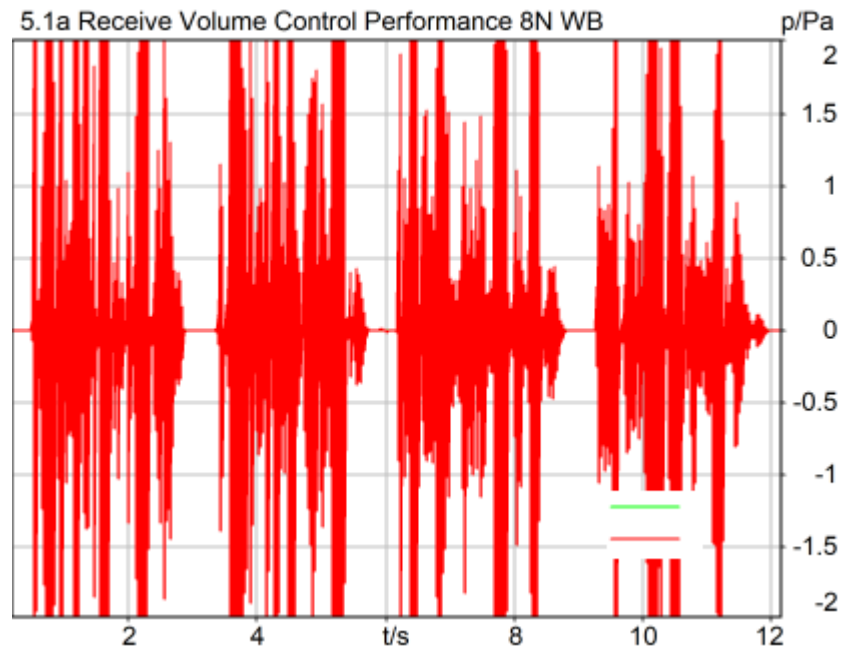
Delay (Cross): 118.6 ms

2024/3/20 10:32 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1a Receive Volume Control Performance 8N WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



Correction

X - 70

Speech Level RCV: 87.43 dB[SPL], Act.: 82.73%

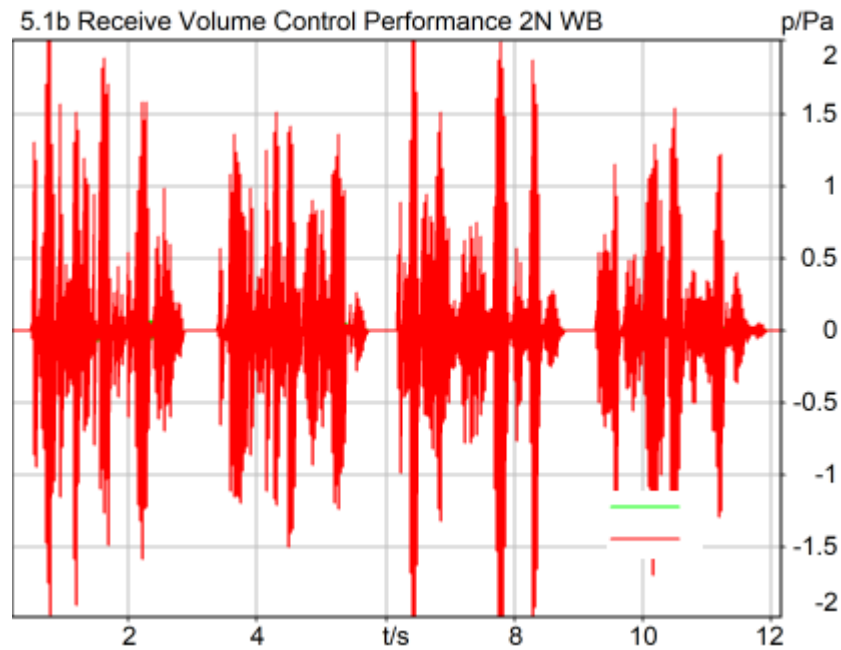
Corrected Speech Level: 17.43 dB[SPL] Ok

Ok

2024/3/20 10:40 ACQUA 5.1.200

5.1b Receive Volume Control Performance 2N WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



Correction

X - 70

Speech Level RCV: 80.82 dB[SPL], Act.: 82.55%

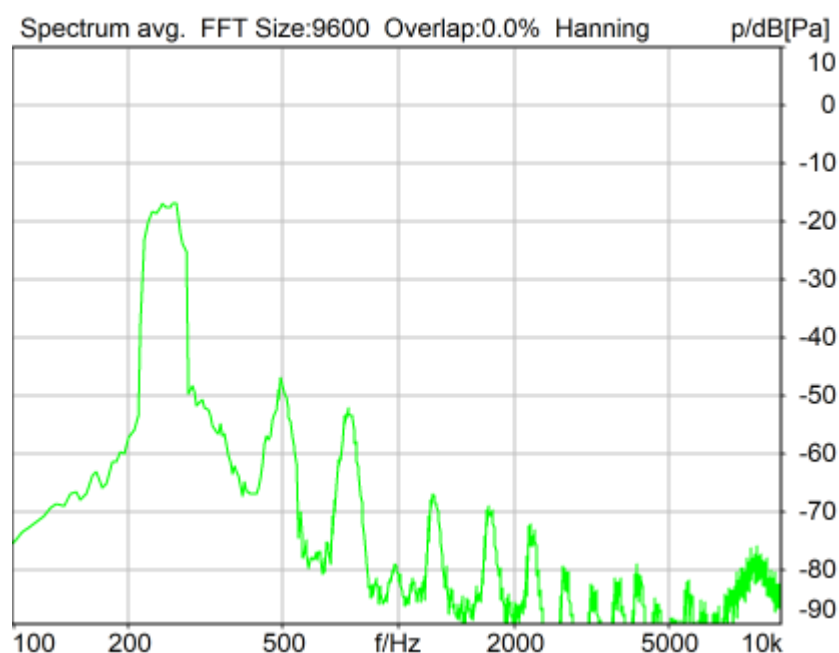
Corrected Speech Level: 10.82 dB[SPL] Ok

Ok

2024/3/20 10:32 ACQUA 5.1.200

5.2 RCV Distortion and Noise - 250 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 31.71 dB (2.60%) Ok

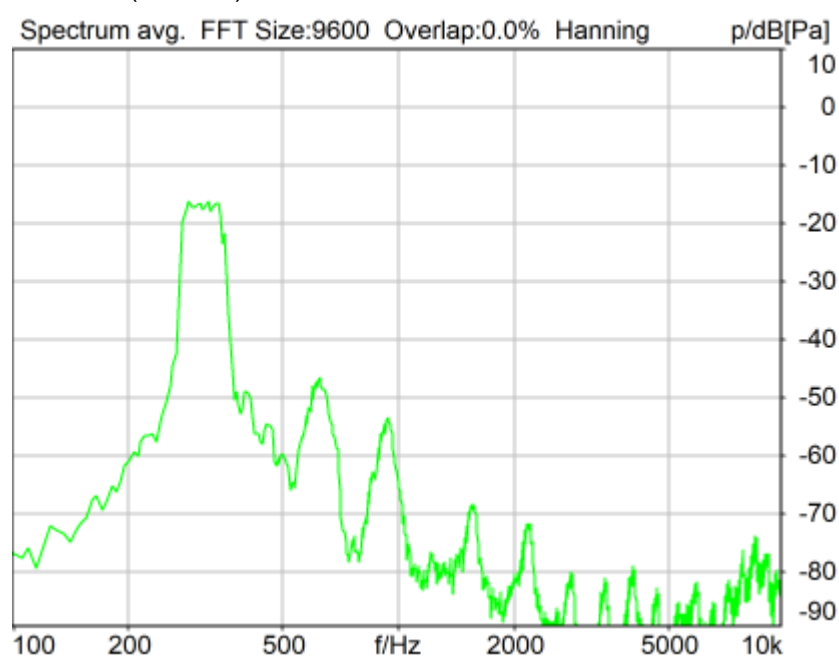
Ok

2024/3/20 10:41 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 315 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 30.74 dB (2.90%) Ok

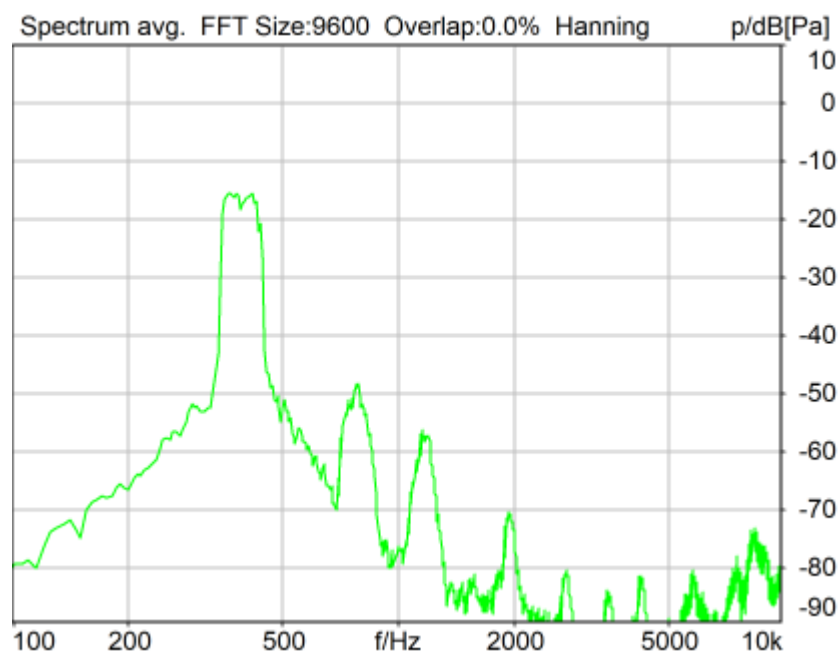
Ok

2024/3/20 10:41 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 32.23 dB (2.45%) Ok

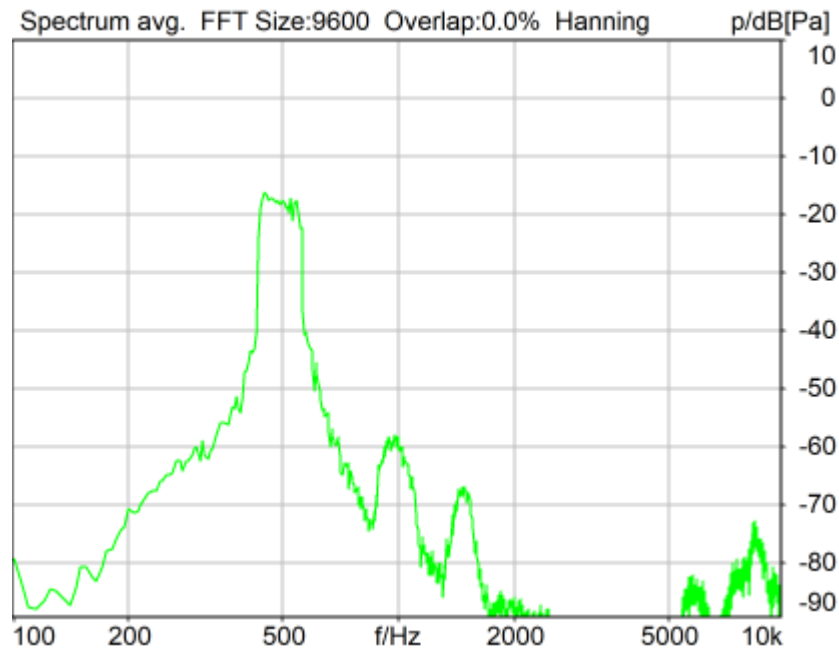
Ok

2024/3/20 10:42 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 33.97 dB (2.00%) Ok

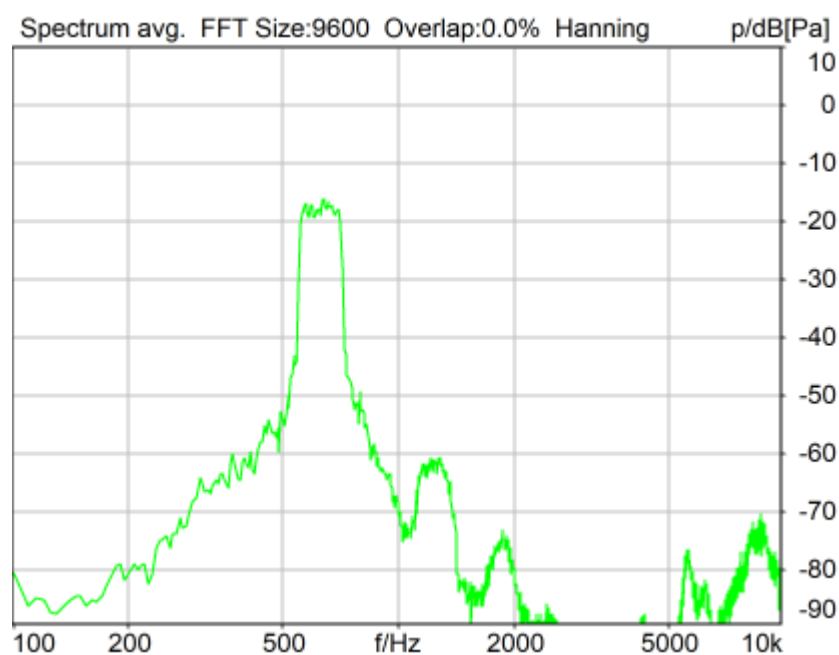
Ok

2024/3/20 10:42 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 34.46 dB (1.89%) Ok

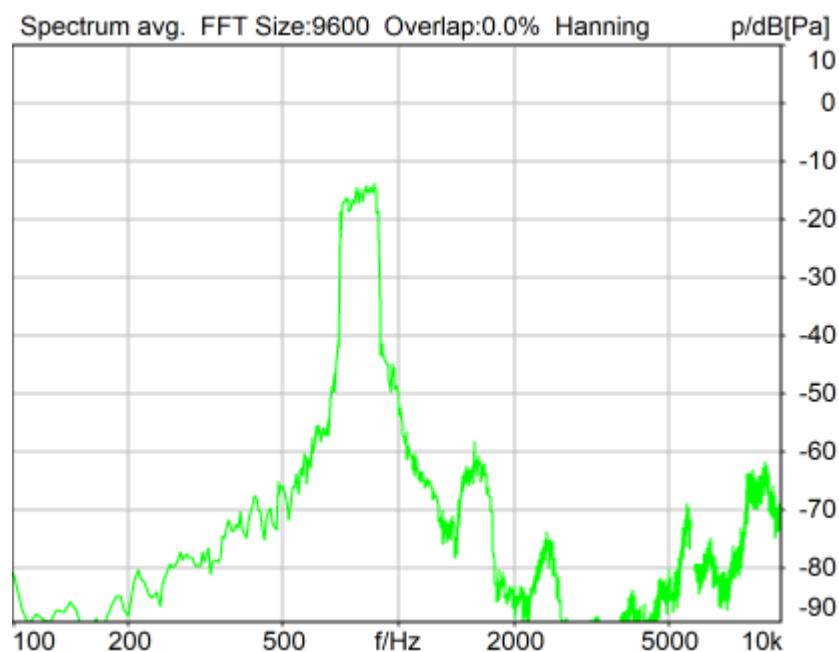
Ok

2024/3/20 10:43 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 33.07 dB (2.22%) Ok

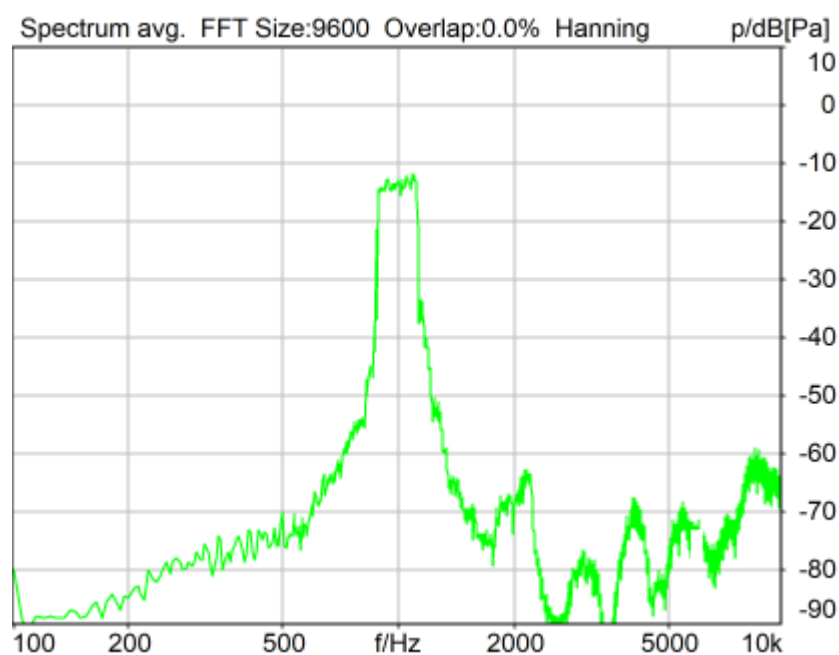
Ok

2024/3/20 10:43 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 31.73 dB (2.59%) Ok

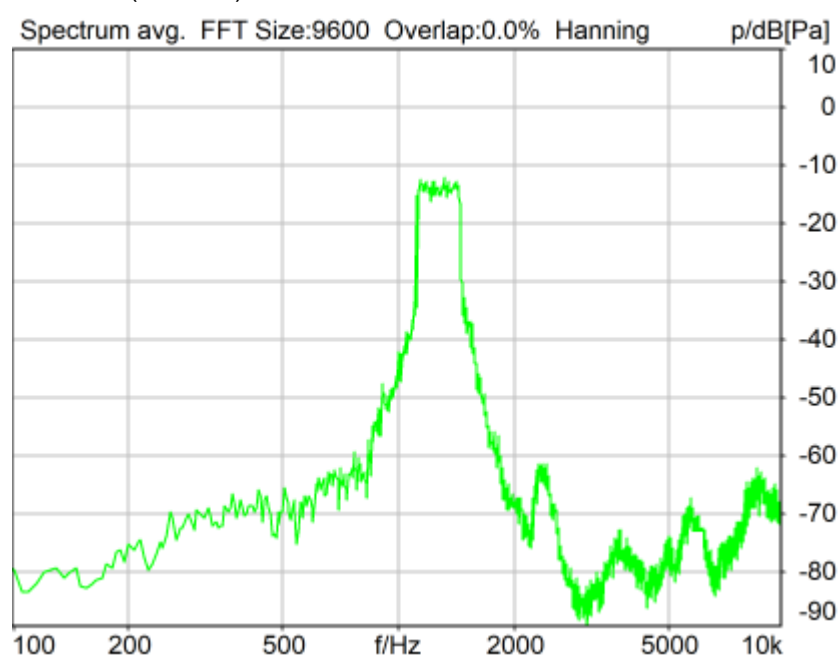
Ok

2024/3/20 10:43 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 24.00 dB (6.31%) Ok

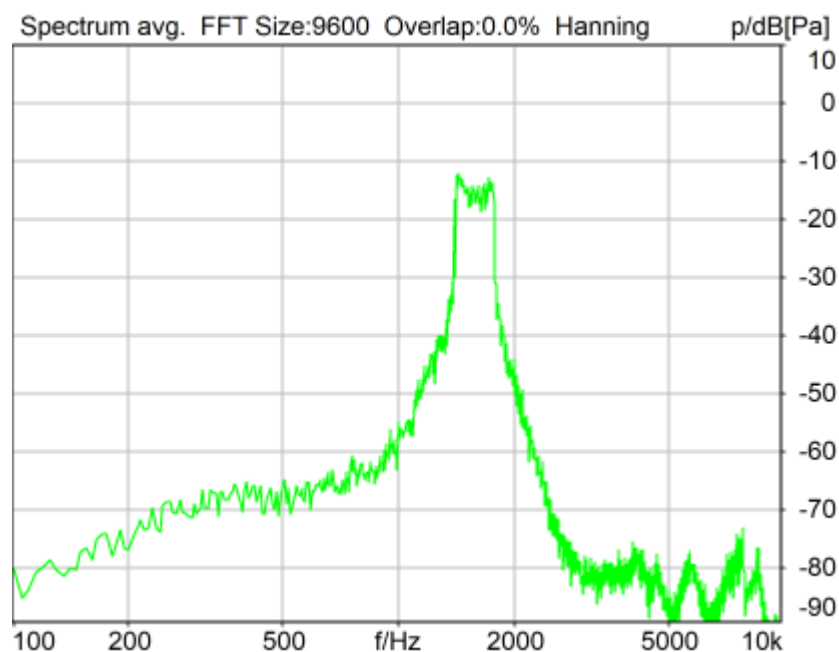
Ok

2024/3/20 10:44 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 24.69 dB (5.83%) Ok

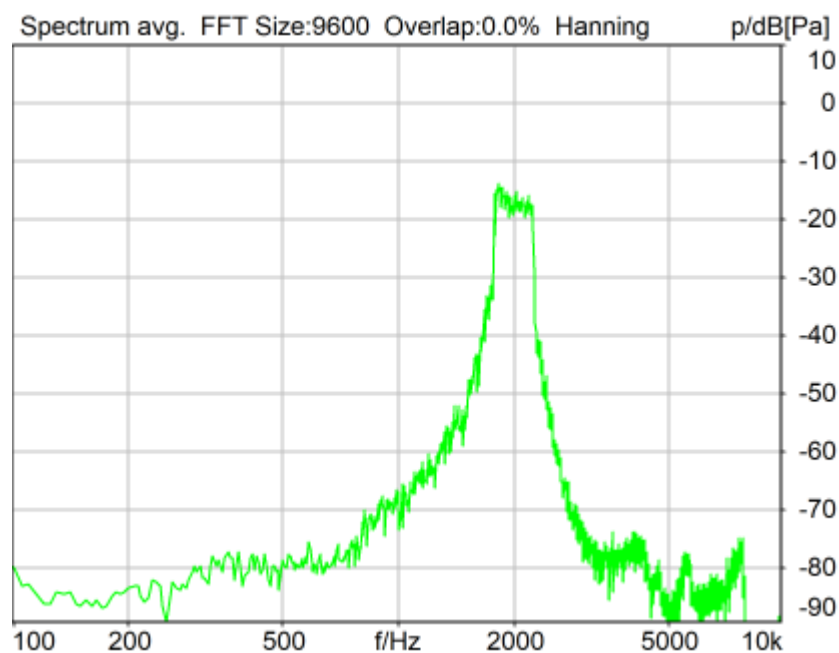
Ok

2024/3/20 10:44 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 22.93 dB (7.14%) Ok

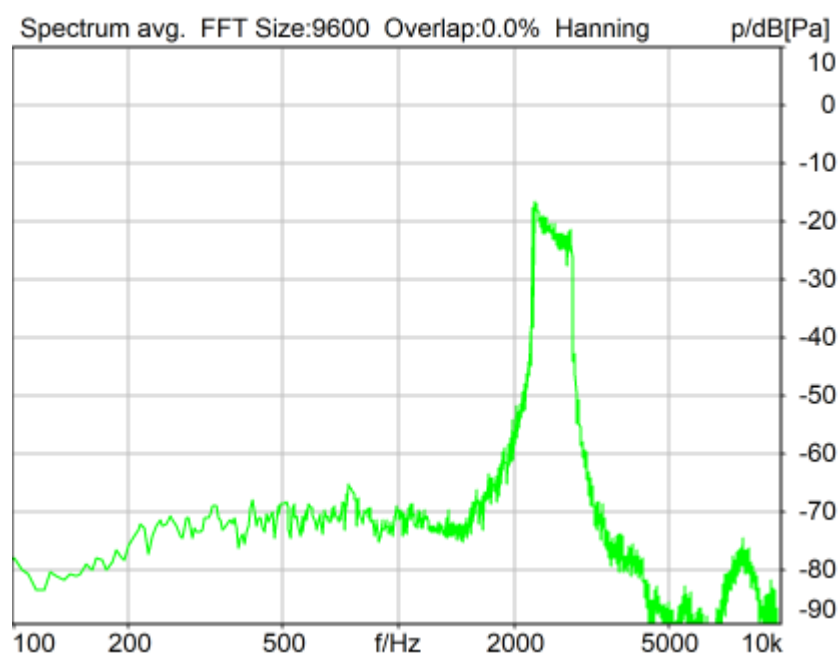
Ok

2024/3/20 10:45 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 29.28 dB (3.44%) Ok

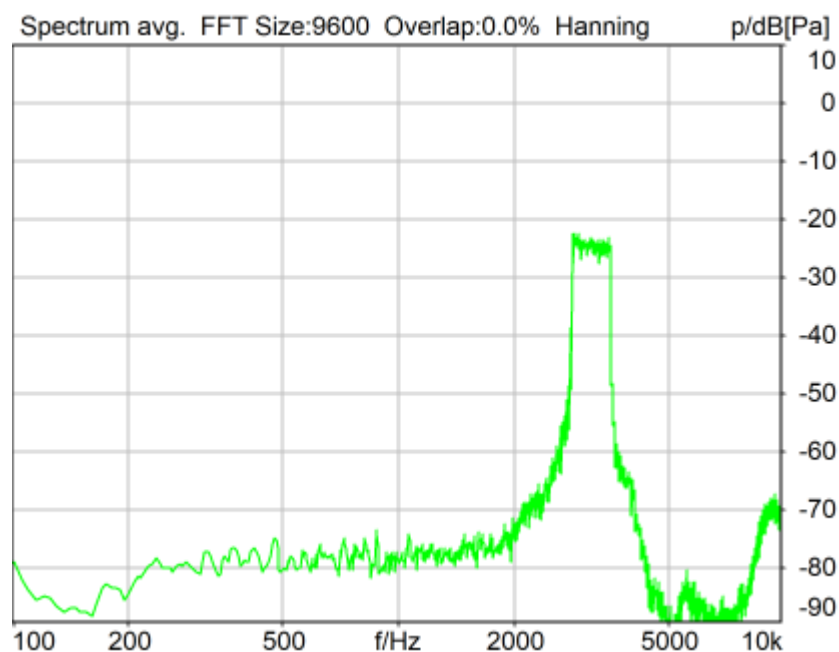
Ok

2024/3/20 10:45 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 32.29 dB (2.43%) Ok

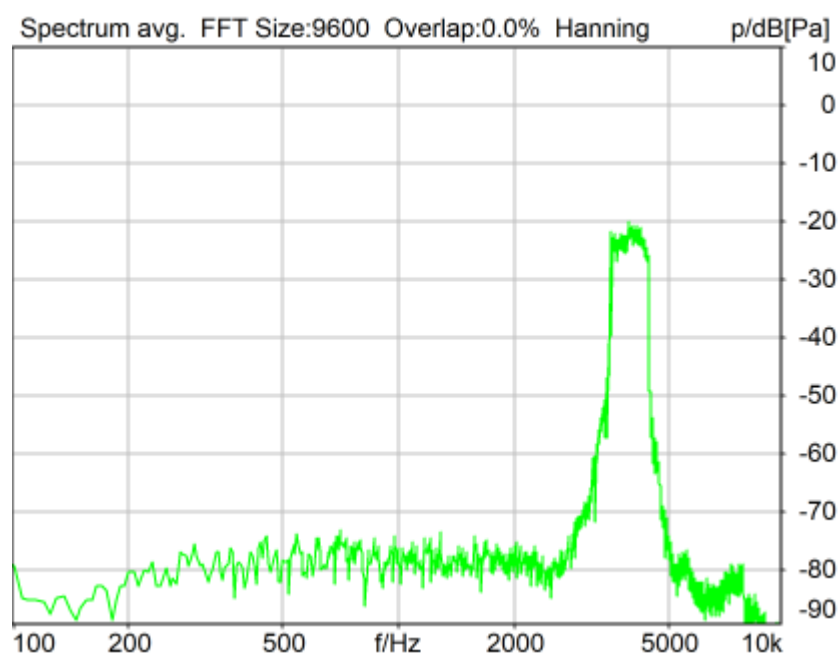
Ok

2024/3/20 10:45 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 4000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 31.73 dB (2.59%) Ok

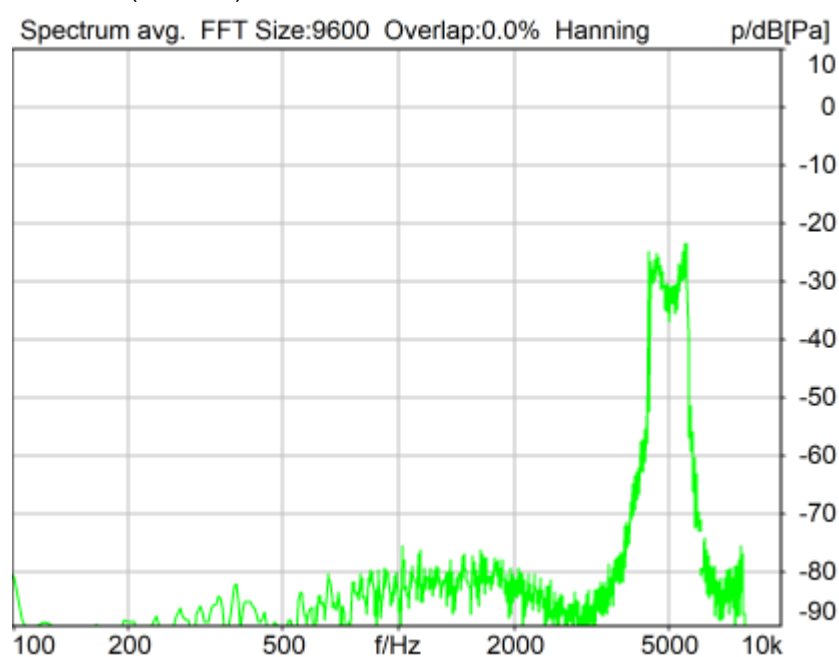
Ok

2024/3/20 10:46 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 5000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 31.47 dB (2.67%) Ok

Ok

2024/3/20 10:46 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain), Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N

Region	Frequency	SDNR
1	250Hz	31.71 dB
2	315Hz	30.74 dB
3	400Hz	32.23 dB
4	500Hz	33.97 dB
5	630Hz	34.46 dB
6	800Hz	33.07 dB
7	1000Hz	31.73 dB
8	1250Hz	24.00 dB
9	1600Hz	24.69 dB
10	2000Hz	22.93 dB
11	2500Hz	29.28 dB
12	3150Hz	32.29 dB
13	4000Hz	31.73 dB
14	5000Hz	31.47 dB

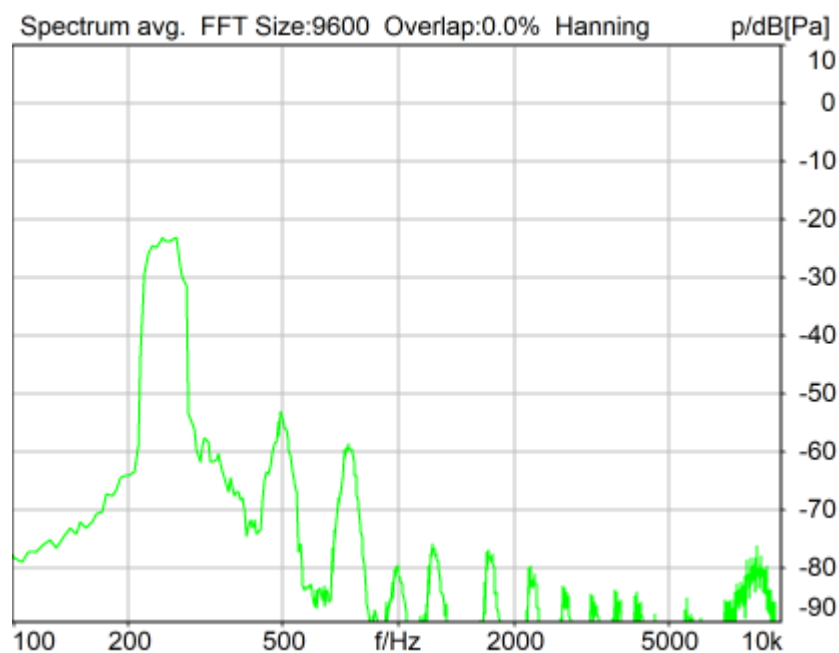
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 22.93dB at 2000Hz.

2024/3/20 10:46 ACQUA

5.2 RCV Distortion and Noise - 250 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 31.50 dB (2.66%) Ok

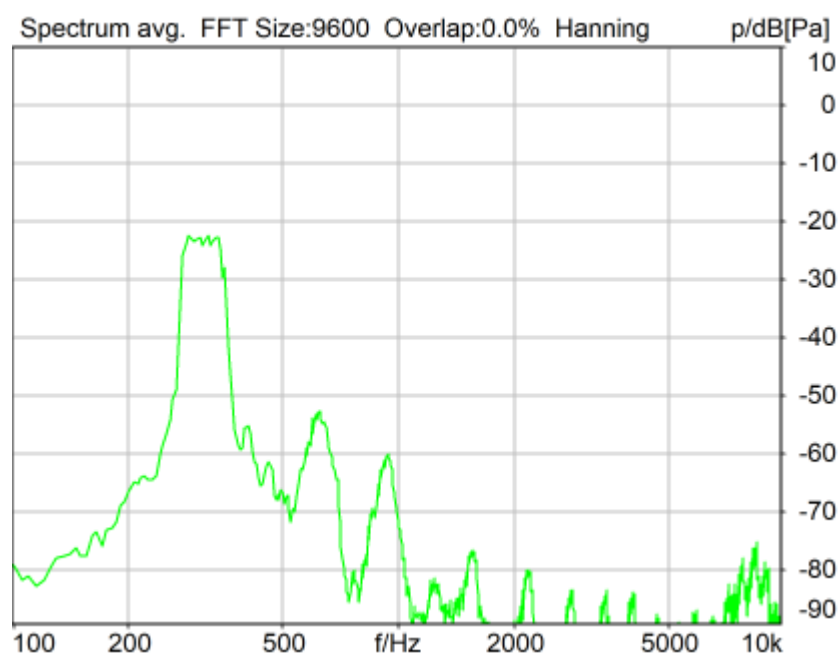
Ok

2024/3/20 10:33 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 315 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 30.72 dB (2.91%) Ok

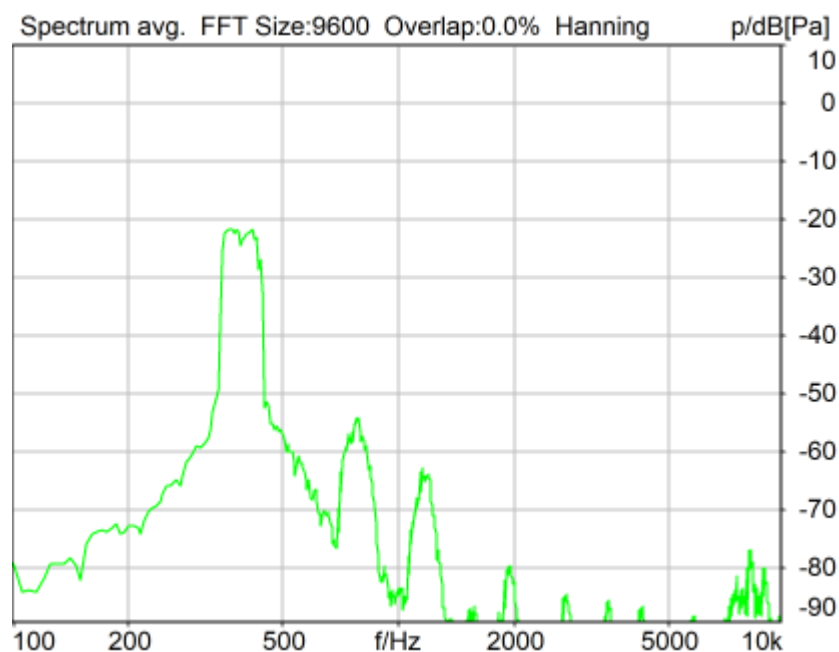
Ok

2024/3/20 10:33 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 31.89 dB (2.54%) Ok

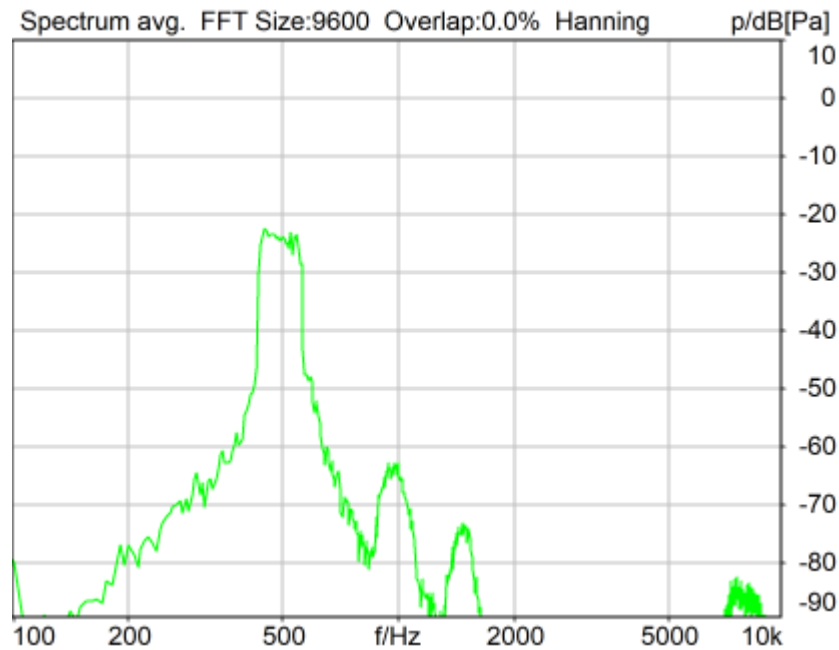
Ok

2024/3/20 10:34 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.62 dB (2.08%) Ok

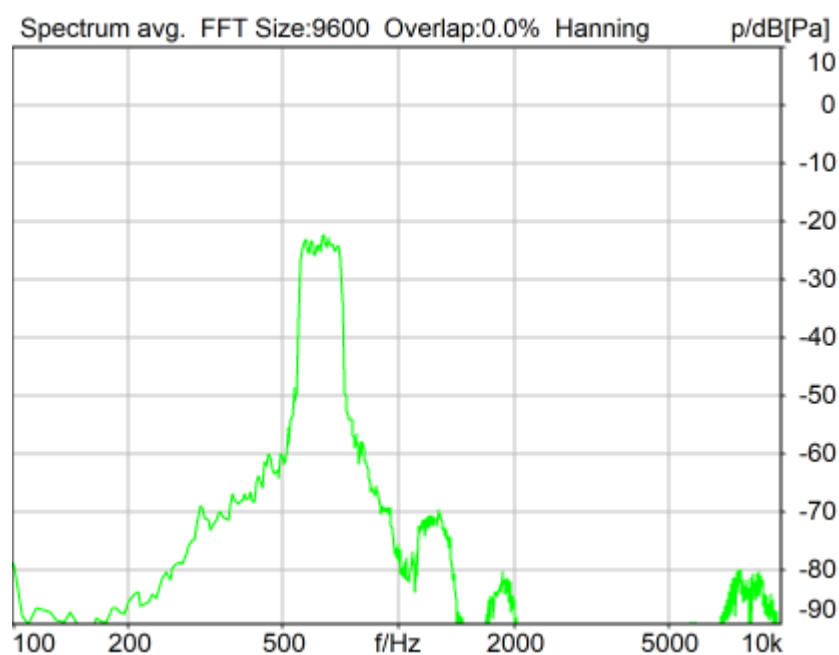
Ok

2024/3/20 10:34 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 35.02 dB (1.77%) Ok

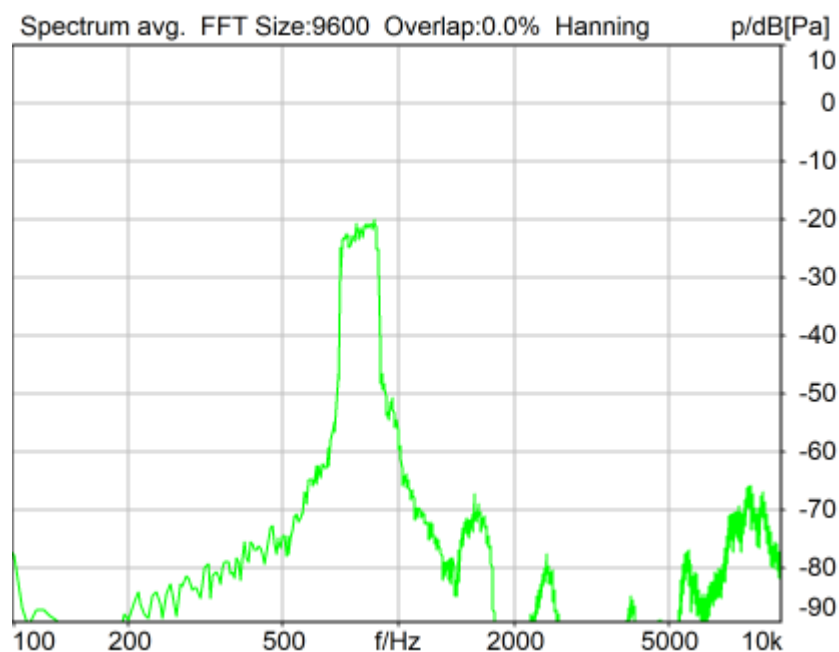
Ok

2024/3/20 10:35 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 32.65 dB (2.33%) Ok

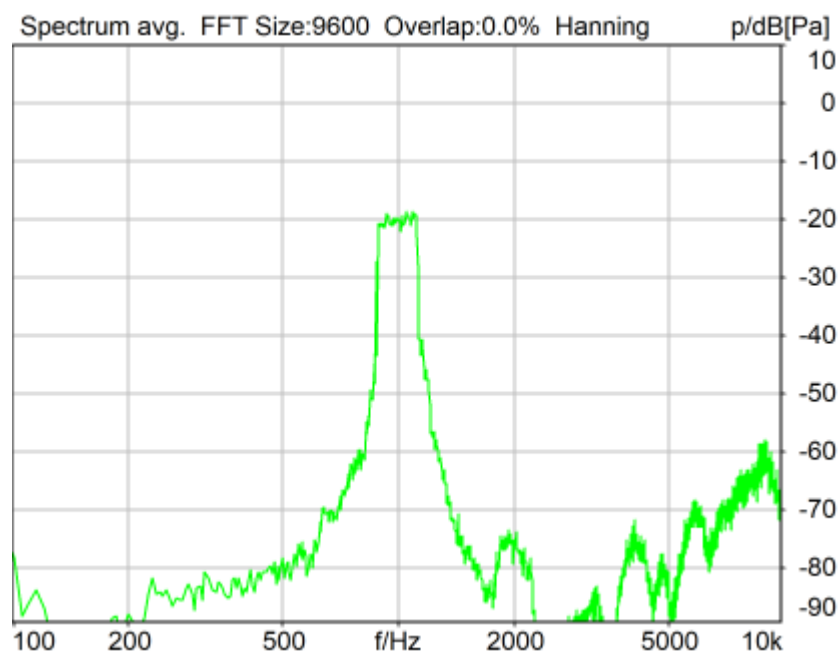
Ok

2024/3/20 10:35 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 30.07 dB (3.14%) Ok

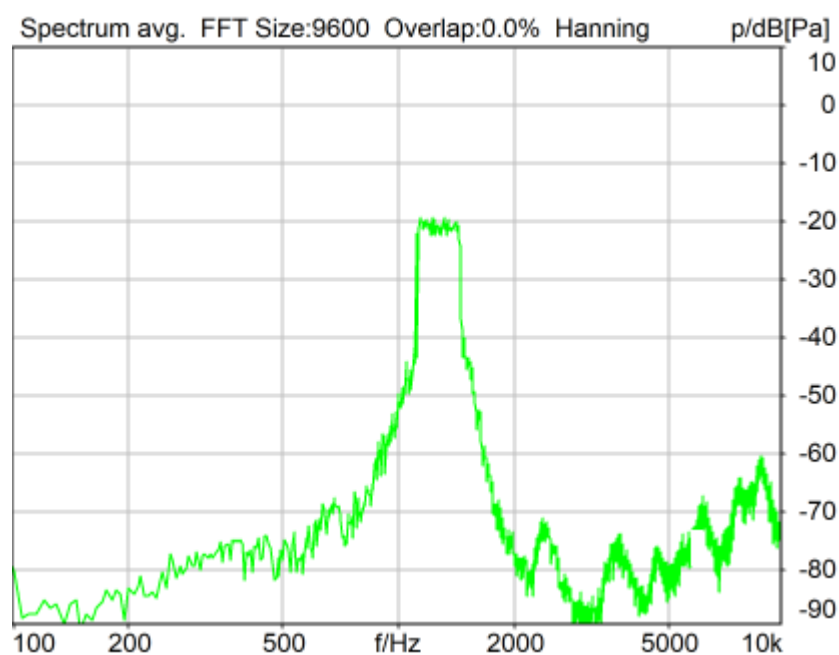
Ok

2024/3/20 10:35 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 24.39 dB (6.03%) Ok

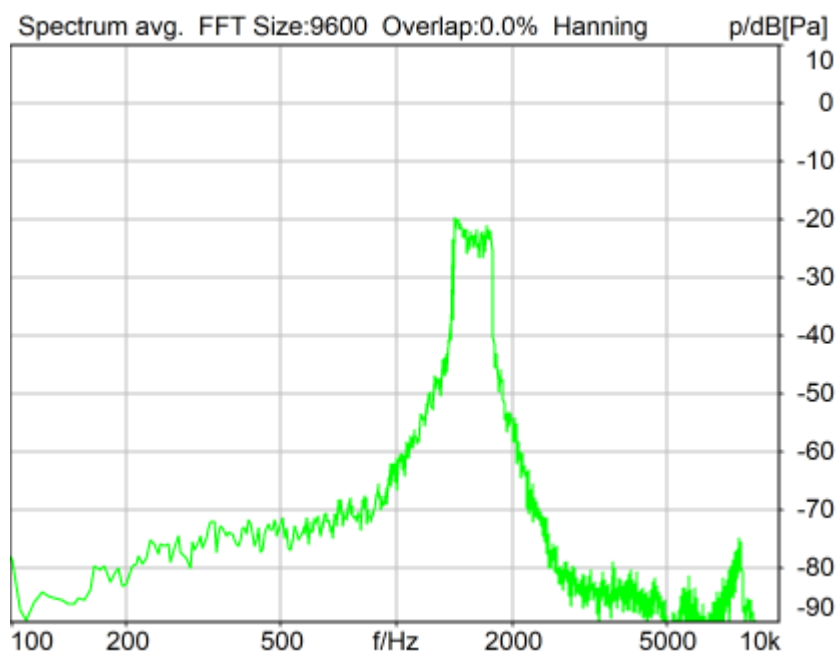
Ok

2024/3/20 10:36 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 24.47 dB (5.98%) Ok

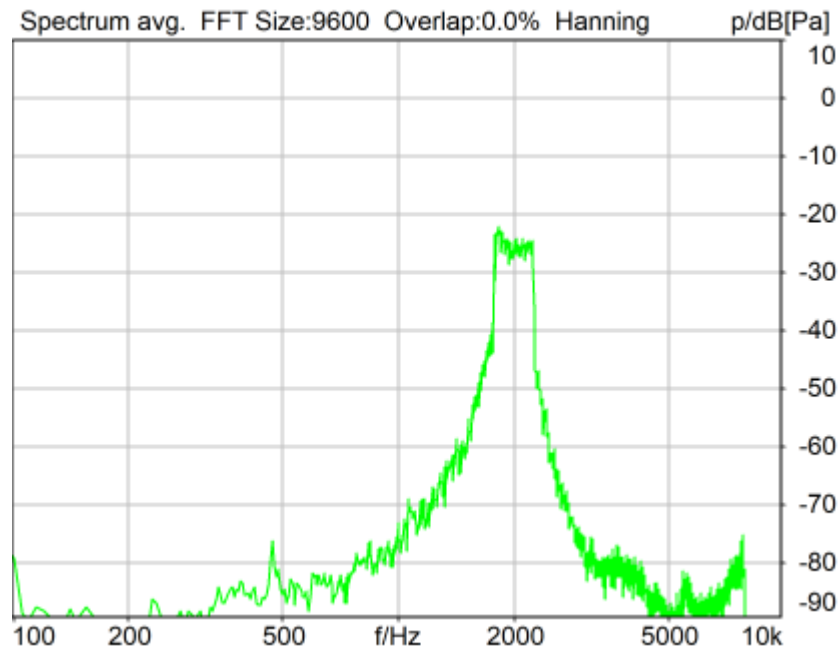
Ok

2024/3/20 10:36 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 22.64 dB (7.38%) Ok

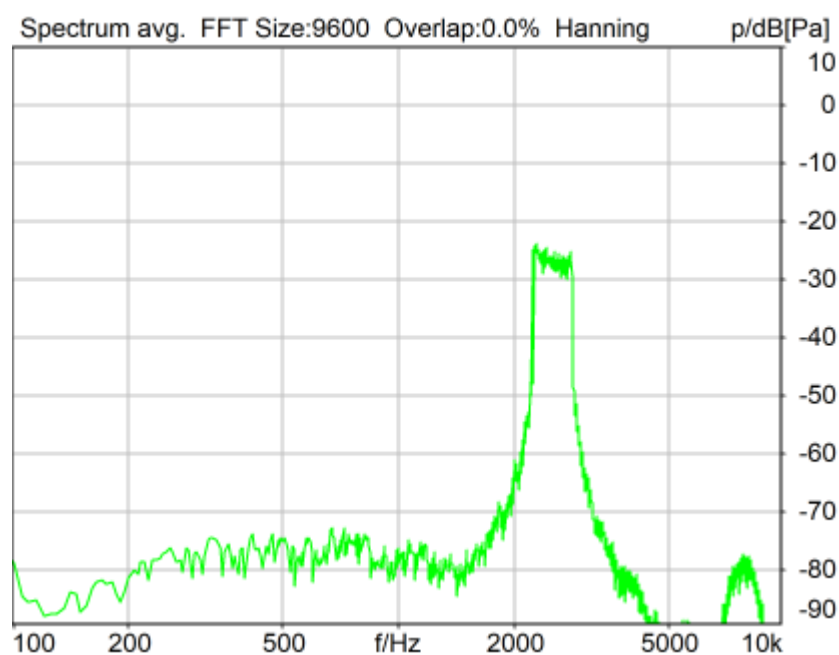
Ok

2024/3/20 10:37 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 29.89 dB (3.20%) Ok

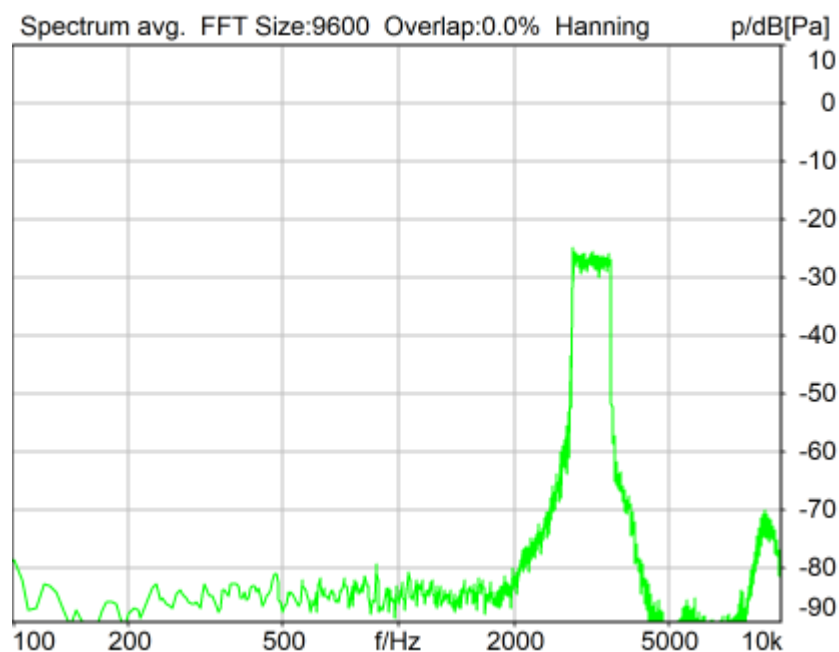
Ok

2024/3/20 10:37 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.45 dB (2.13%) Ok

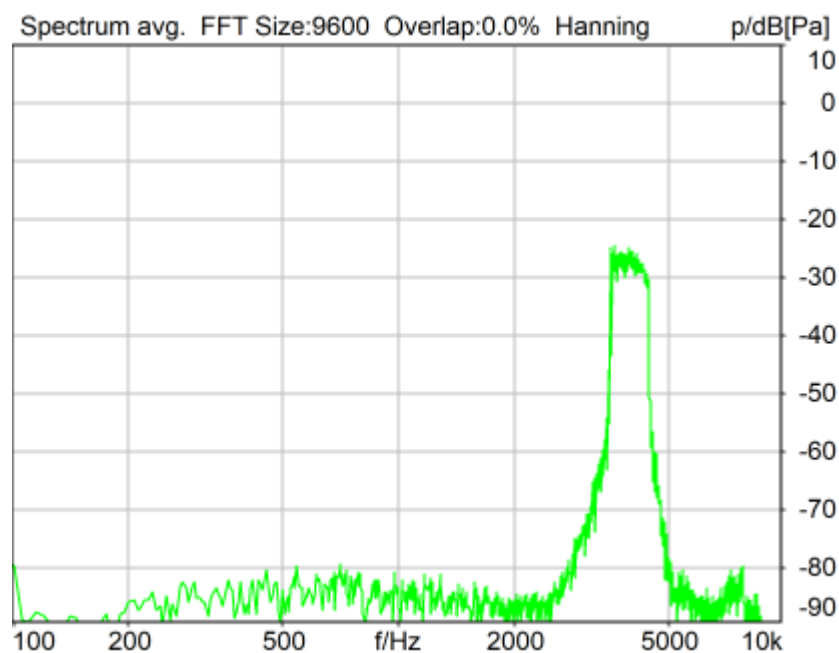
Ok

2024/3/20 10:38 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 4000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.64 dB (2.08%) Ok

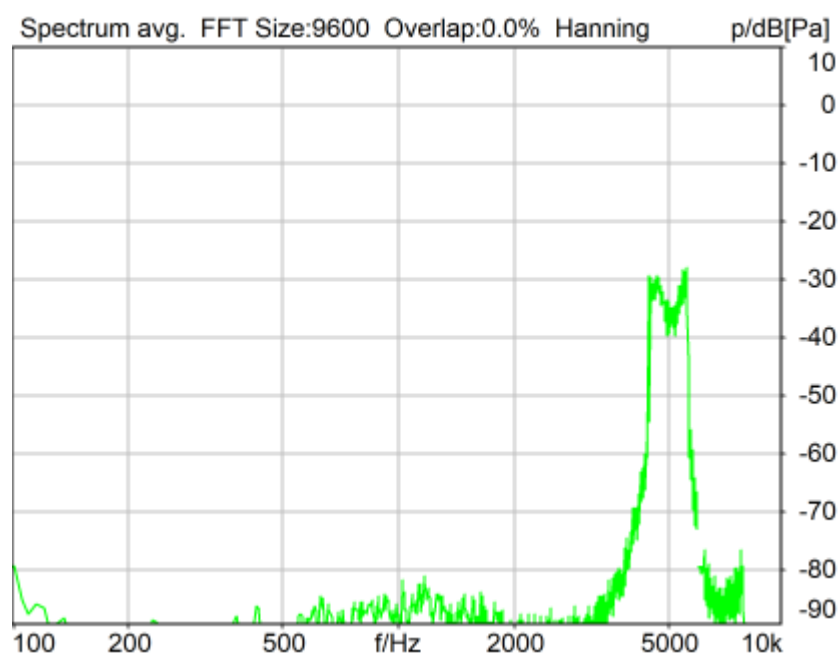
Ok

2024/3/20 10:38 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 5000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 31.79 dB (2.57%) Ok

Ok

2024/3/20 10:38 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain), Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N

Region	Frequency	SDNR
1	250Hz	31.50 dB
2	315Hz	30.72 dB
3	400Hz	31.89 dB
4	500Hz	33.62 dB
5	630Hz	35.02 dB
6	800Hz	32.65 dB
7	1000Hz	30.07 dB
8	1250Hz	24.39 dB
9	1600Hz	24.47 dB
10	2000Hz	22.64 dB
11	2500Hz	29.89 dB
12	3150Hz	33.45 dB
13	4000Hz	33.64 dB
14	5000Hz	31.79 dB

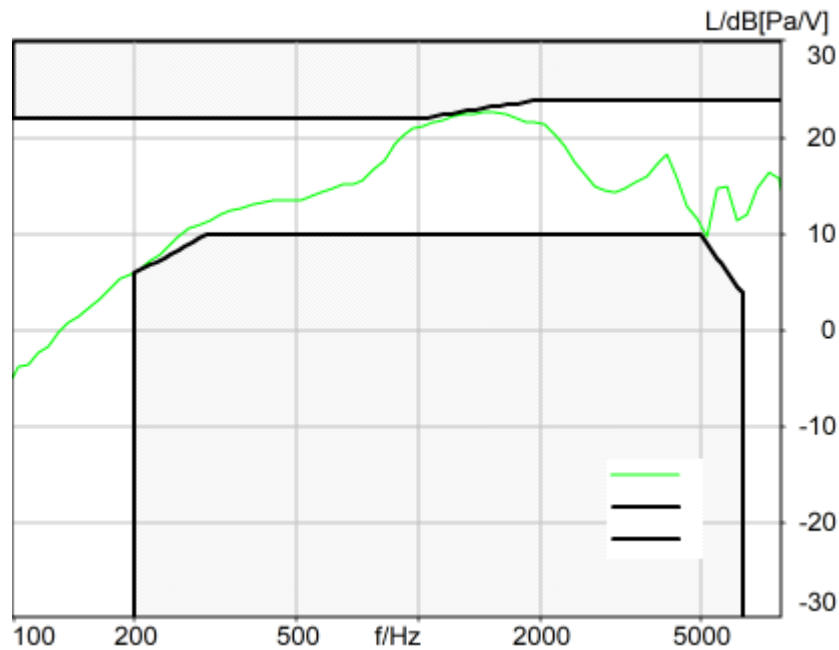
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 22.64dB at 2000Hz.

2024/3/20 10:39 ACQUA

5.3 Frequency Response 8N FF, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



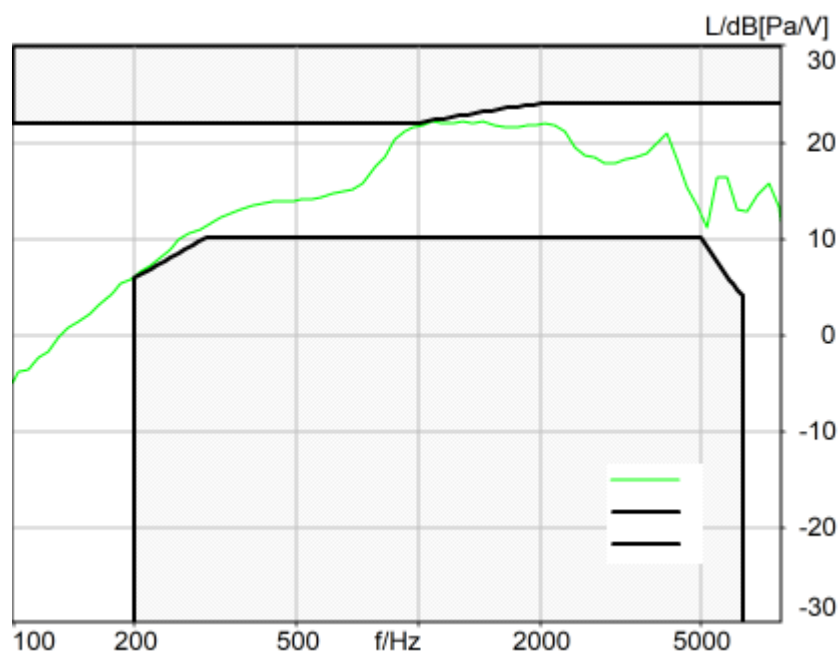
Absolute minimal distance
0.29 dB at 1285.9 Hz Ok

Ok

2024/3/20 10:47 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N DF, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



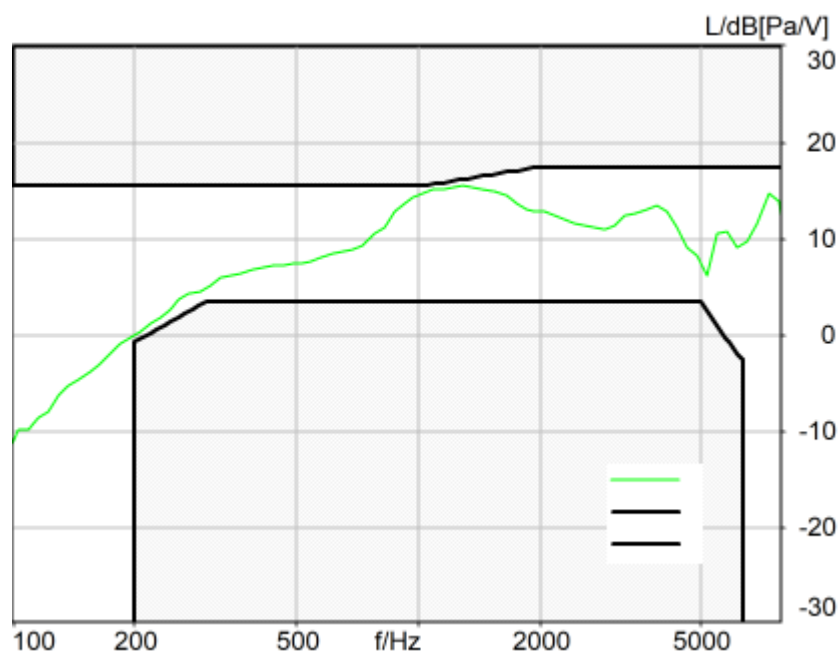
Absolute minimal distance
0.16 dB at 1088.7 Hz Ok

Ok

2024/3/20 10:47 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N FF, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



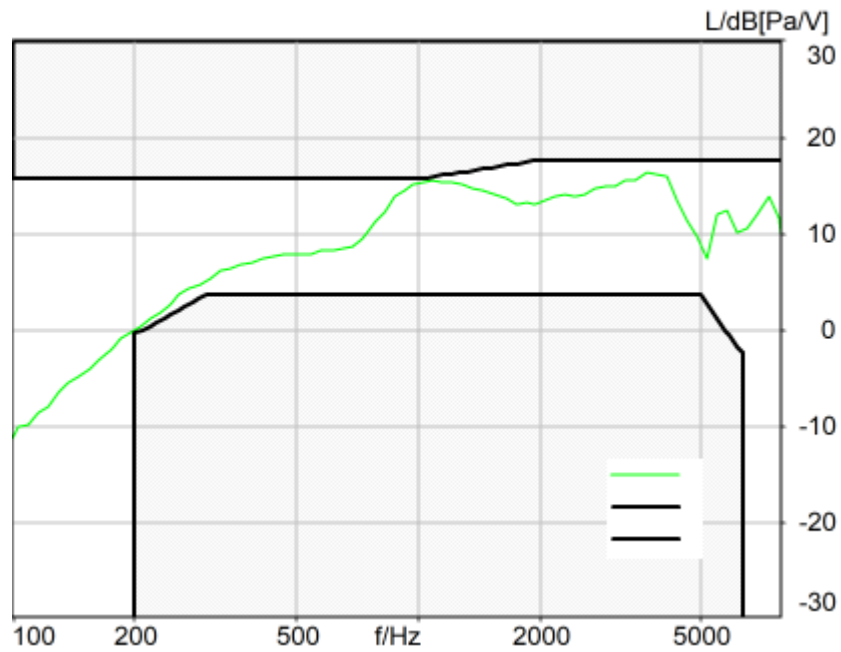
Absolute minimal distance
0.64 dB at 1088.7 Hz Ok

Ok

2024/3/20 10:39 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



Absolute minimal distance
0.40 dB at 1088.7 Hz Ok

Ok

2024/3/20 10:39 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

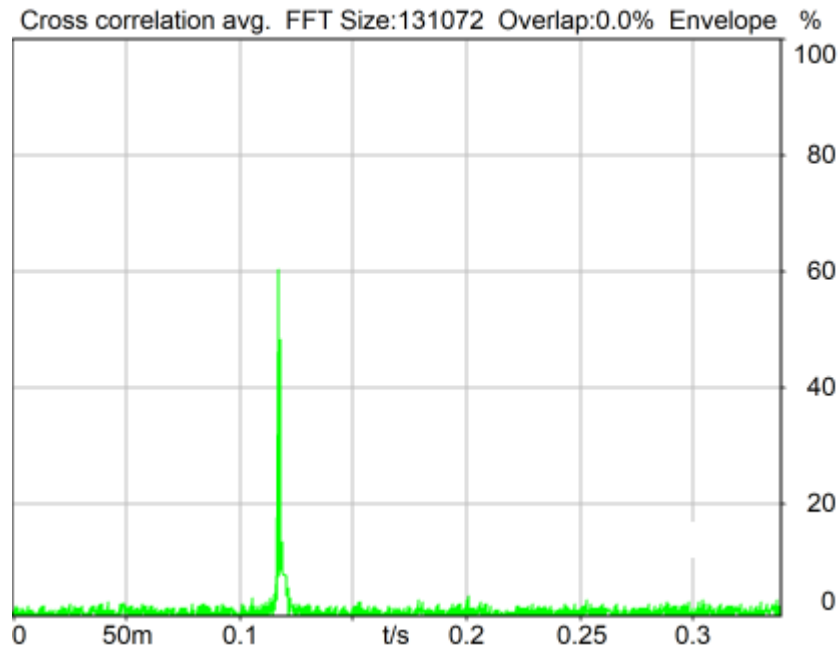
Measurement Object	FR1 n25_40 _DFT-s-OFDM_EVS NB 24.4kbps_CH376500
Description	CJWQ-W7L-P23120020 DTNC PM95

Project	TIA-5050 (2018-01)
Report Generation Date	2024/5/21 15:32
Responsible Person	audio

Overall Receive Delay NB, Index: 1	3
5.1a Receive Volume Control Performance 8N NB, Index: 1	3
5.1b Receive Volume Control Performance 2N NB, Index: 1	4
5.2 RCV Distortion and Noise - 400 Hz NB, Index: 1	5
5.2 RCV Distortion and Noise - 500 Hz NB, Index: 1	6
5.2 RCV Distortion and Noise - 630 Hz NB, Index: 1	7
5.2 RCV Distortion and Noise - 800 Hz NB, Index: 1	7
5.2 RCV Distortion and Noise - 1000 Hz NB, Index: 1	8
5.2 RCV Distortion and Noise - 1250 Hz NB, Index: 1	9
5.2 RCV Distortion and Noise - 1600 Hz NB, Index: 1	9
5.2 RCV Distortion and Noise - 2000 Hz NB, Index: 1	10
5.2 RCV Distortion and Noise - 2500 Hz NB, Index: 1	11
5.2 RCV Distortion and Noise - 3150 Hz NB, Index: 1	11
Report - Receive Distortion and Noise (Conversational Gain), Index: 1	12
5.2 RCV Distortion and Noise - 400 Hz NB, Index: 1	13
5.2 RCV Distortion and Noise - 500 Hz NB, Index: 1	13
5.2 RCV Distortion and Noise - 630 Hz NB, Index: 1	14
5.2 RCV Distortion and Noise - 800 Hz NB, Index: 1	15
5.2 RCV Distortion and Noise - 1000 Hz NB, Index: 1	15
5.2 RCV Distortion and Noise - 1250 Hz NB, Index: 1	16
5.2 RCV Distortion and Noise - 1600 Hz NB, Index: 1	17
5.2 RCV Distortion and Noise - 2000 Hz NB, Index: 1	17
5.2 RCV Distortion and Noise - 2500 Hz NB, Index: 1	18
5.2 RCV Distortion and Noise - 3150 Hz NB, Index: 1	19
Report - Receive Distortion and Noise (Conversational Gain), Index: 1	19
5.3 Frequency Response 8N FF HANB, Index: 1	20
5.3 Frequency Response 8N DF HANB, Index: 1	21
5.3 Frequency Response 2N FF HANB, Index: 1	21
5.3 Frequency Response 2N DF HANB, Index: 1	22

Overall Receive Delay NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ Preparation - Delay measurement



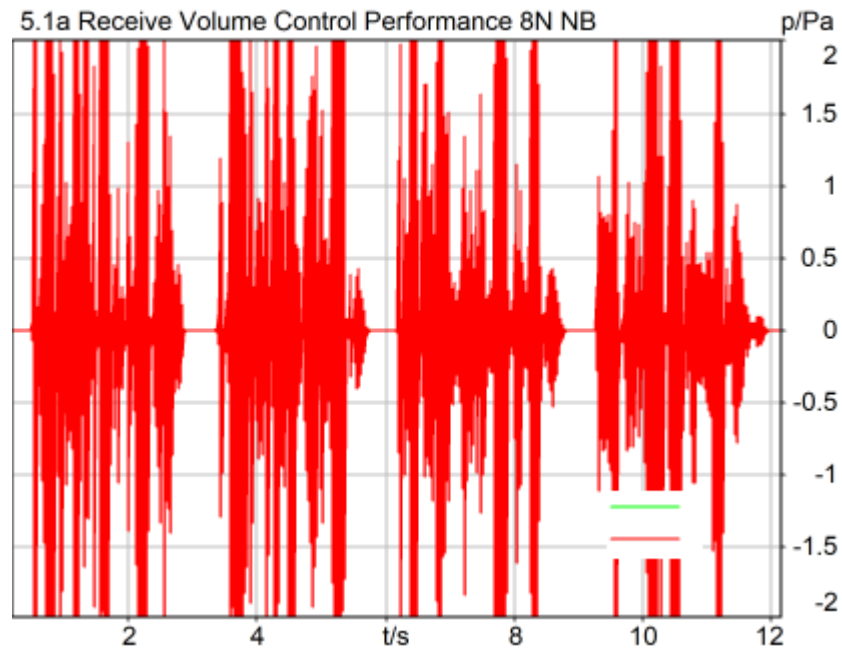
Delay (Cross): 118.2 ms

2024/3/20 10:57 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1a Receive Volume Control Performance 8N NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Correction

X - 70

Speech Level RCV: 87.38 dB[SPL], Act.: 82.73%

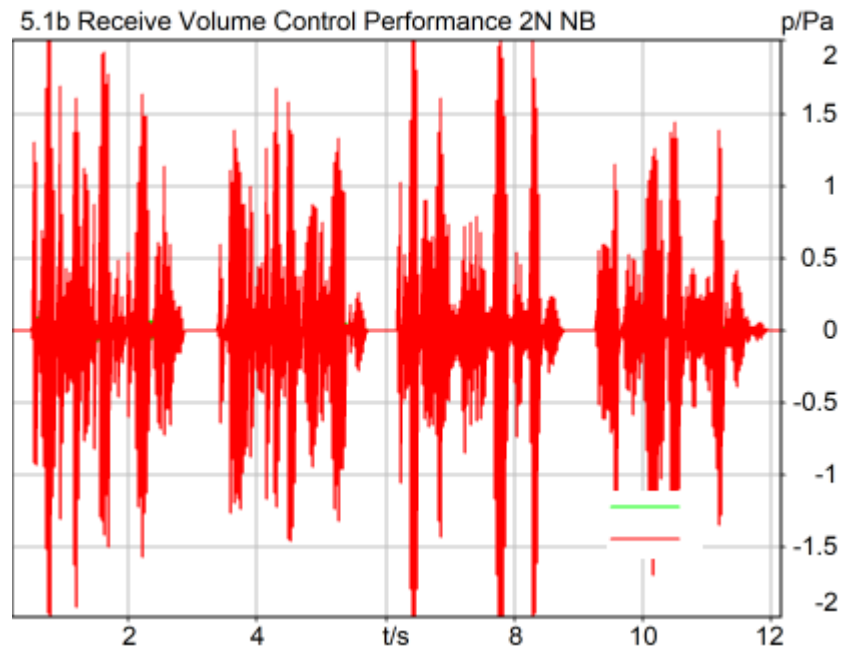
Corrected Speech Level: 17.38 dB[SPL] Ok

Ok

2024/3/20 10:58 ACQUA 5.1.200

5.1b Receive Volume Control Performance 2N NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Correction

X - 70

Speech Level RCV: 80.97 dB[SPL], Act.: 84.08%

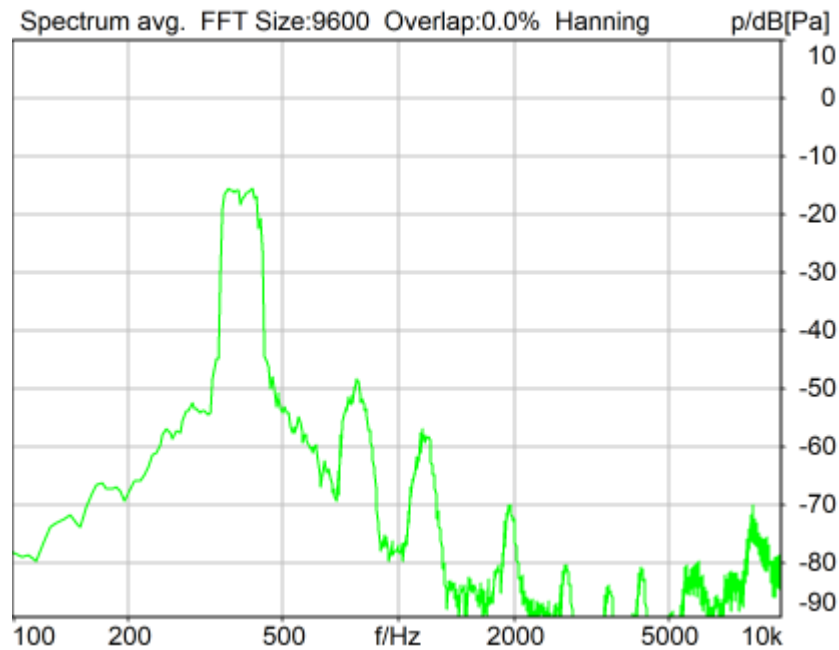
Corrected Speech Level: 10.97 dB[SPL] Ok

Ok

2024/3/20 11:20 ACQUA 5.1.200

5.2 RCV Distortion and Noise - 400 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 32.43 dB (2.39%) Ok

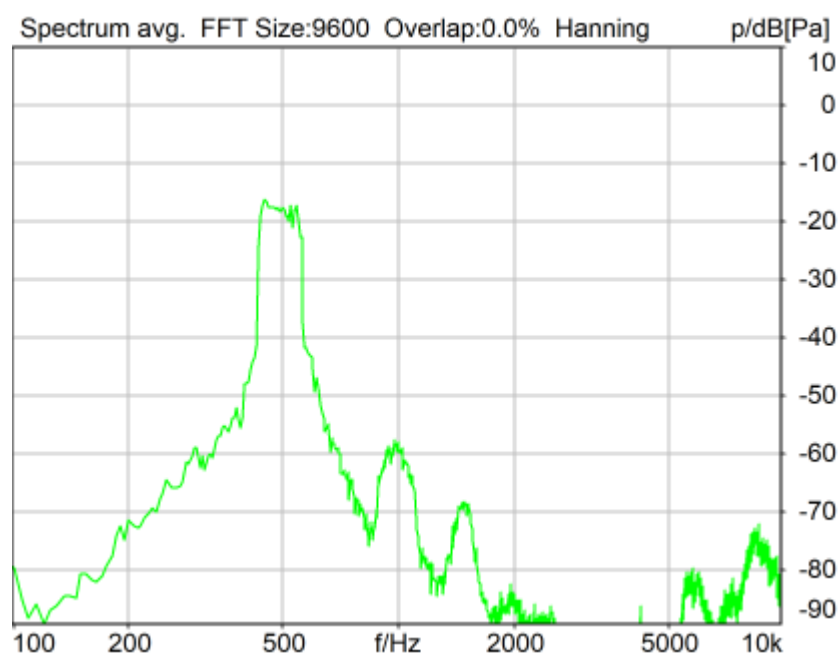
Ok

2024/3/20 10:58 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 33.86 dB (2.03%) Ok

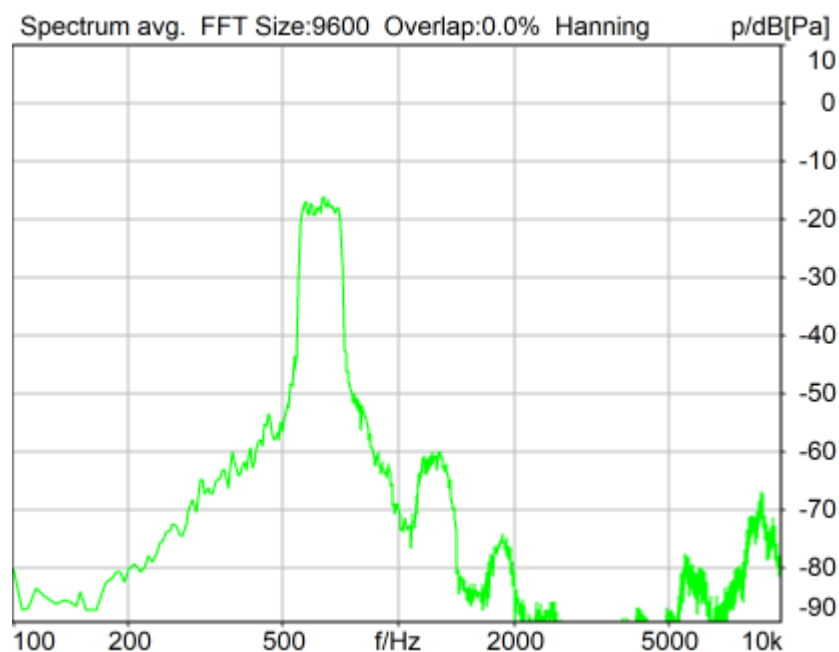
Ok

2024/3/20 10:59 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 34.40 dB (1.91%) Ok

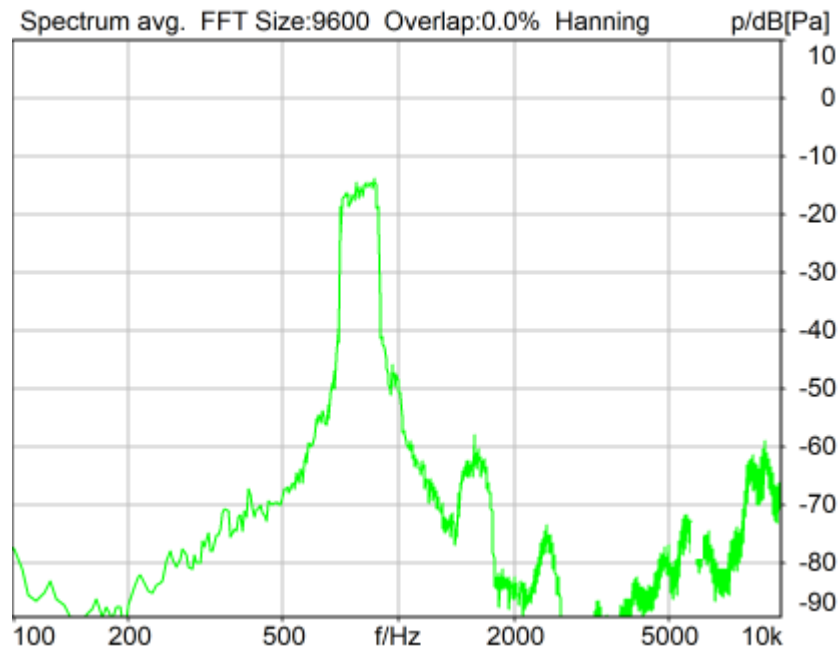
Ok

2024/3/20 10:59 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 33.09 dB (2.22%) Ok

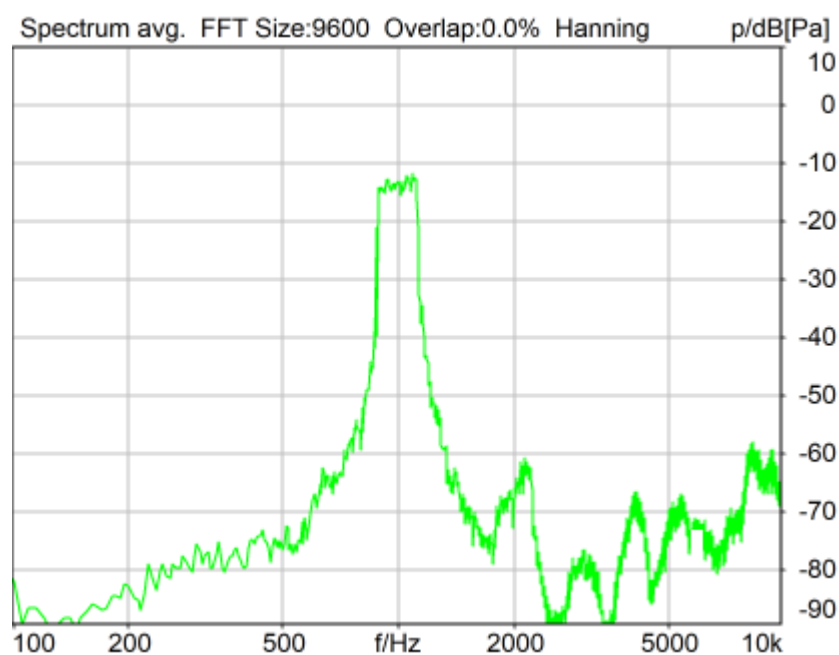
Ok

2024/3/20 10:59 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 32.91 dB (2.26%) Ok

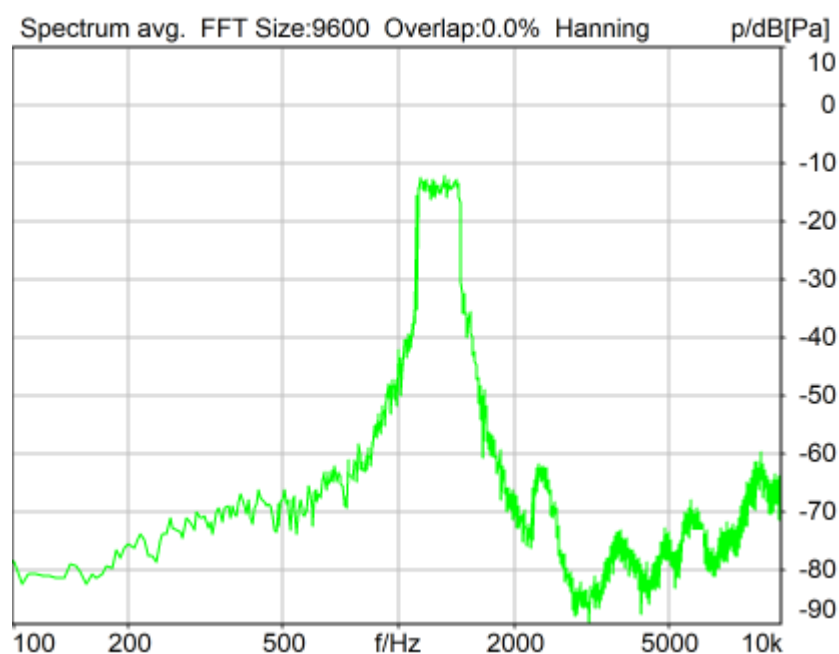
Ok

2024/3/20 11:00 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 24.63 dB (5.86%) Ok

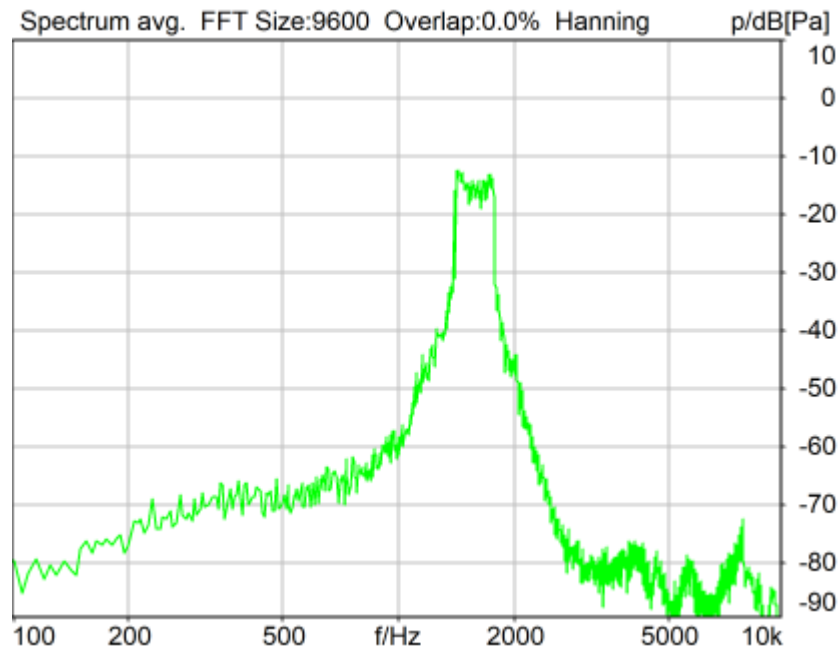
Ok

2024/3/20 11:00 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 24.68 dB (5.83%) Ok

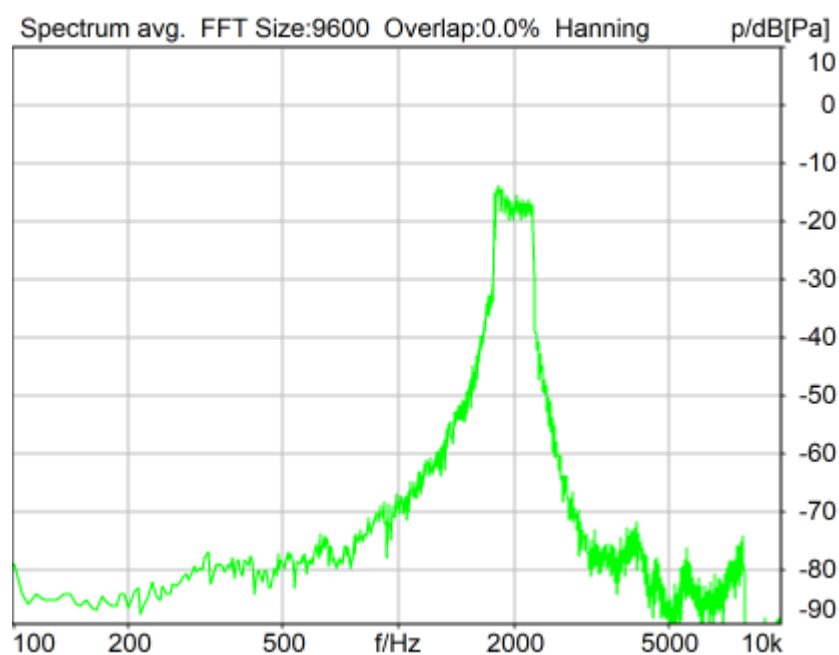
Ok

2024/3/20 11:01 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 23.15 dB (6.96%) Ok

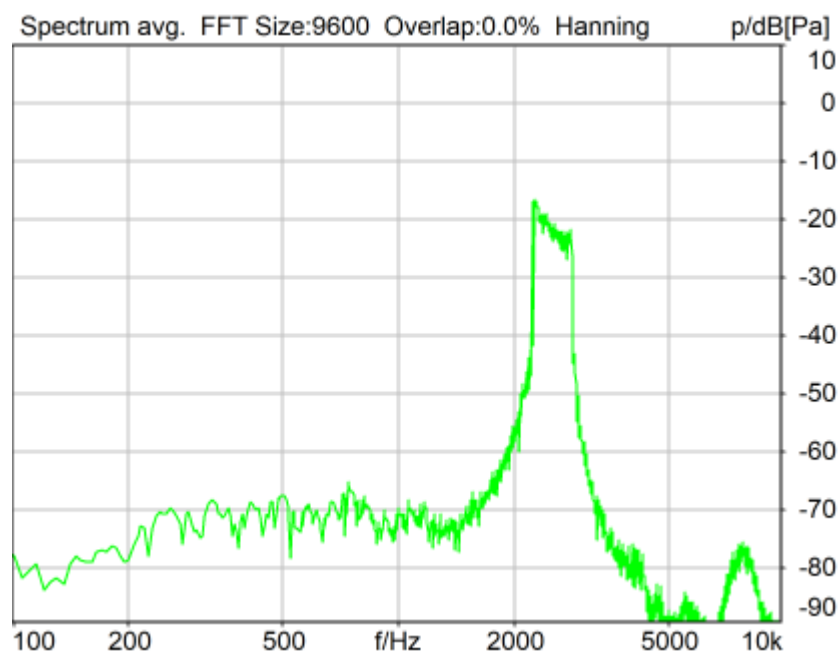
Ok

2024/3/20 11:01 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 29.41 dB (3.39%) Ok

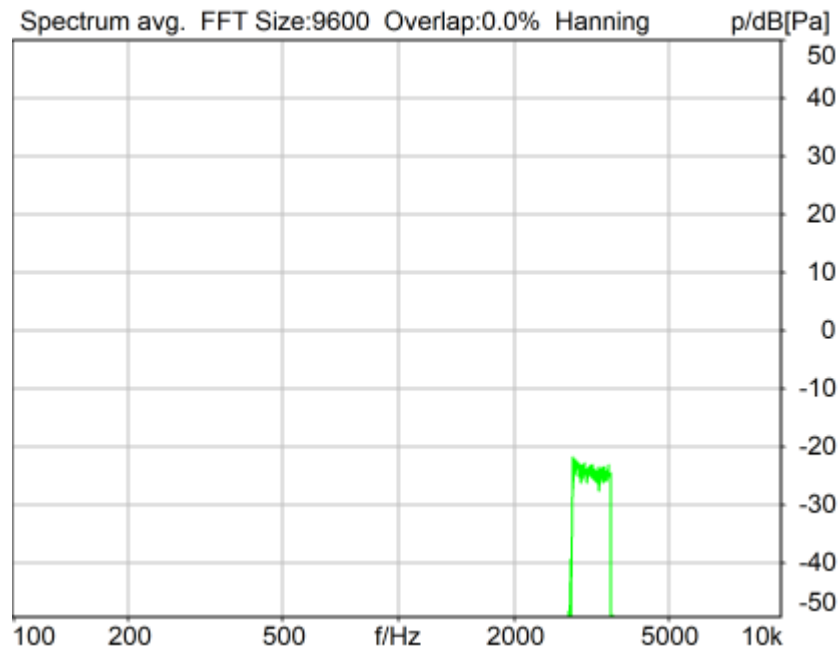
Ok

2024/3/20 11:01 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 32.30 dB (2.43%) Ok

Ok

2024/3/20 11:02 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain), Index:

1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N

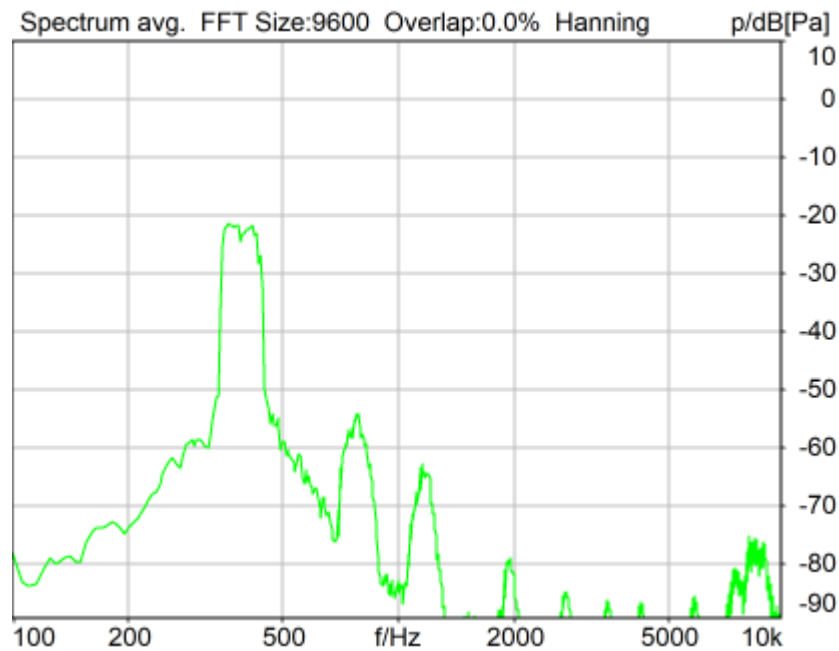
Region	Frequency	SDNR
1	400Hz	32.43 dB
2	500Hz	33.86 dB
3	630Hz	34.40 dB
4	800Hz	33.09 dB
5	1000Hz	32.91 dB
6	1250Hz	24.63 dB
7	1600Hz	24.68 dB
8	2000Hz	23.15 dB
9	2500Hz	29.41 dB
10	3150Hz	32.30 dB

All SDNRs were greater than 20.0 dB, requirement was met.
Smallest SDNR was 23.15dB at 2000Hz.

2024/3/20 11:02 ACQUA

5.2 RCV Distortion and Noise - 400 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 32.10 dB (2.48%) Ok

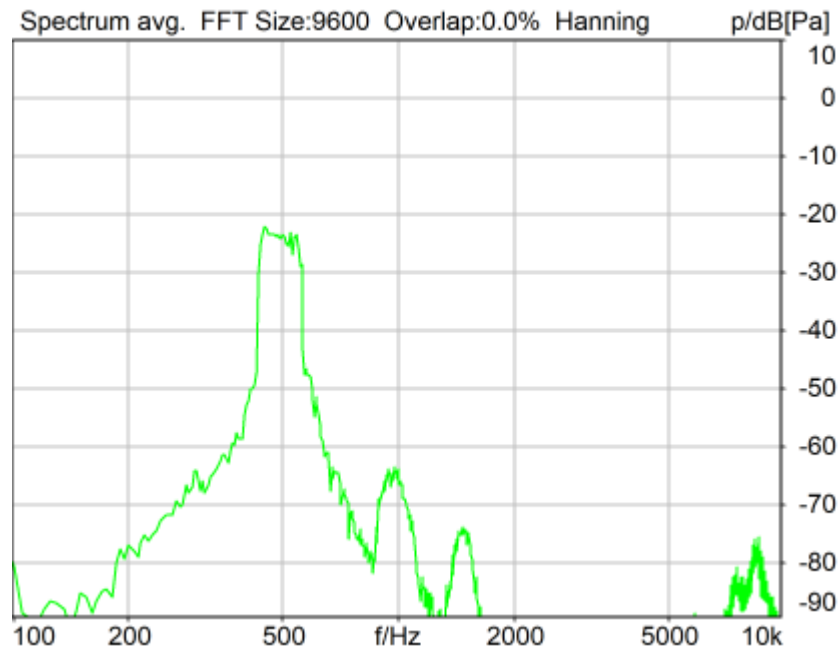
Ok

2024/3/20 11:21 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.75 dB (2.05%) Ok

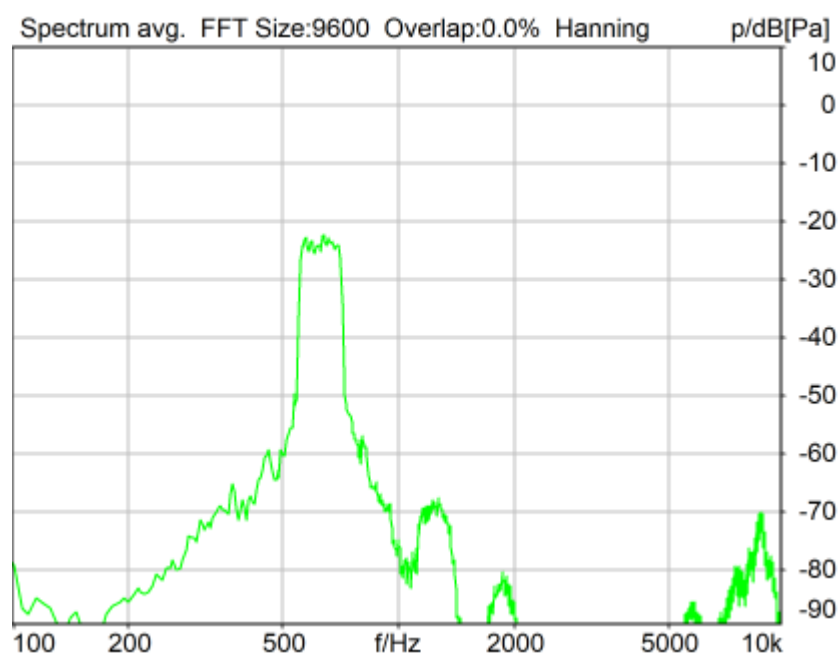
Ok

2024/3/20 11:21 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 34.13 dB (1.97%) Ok

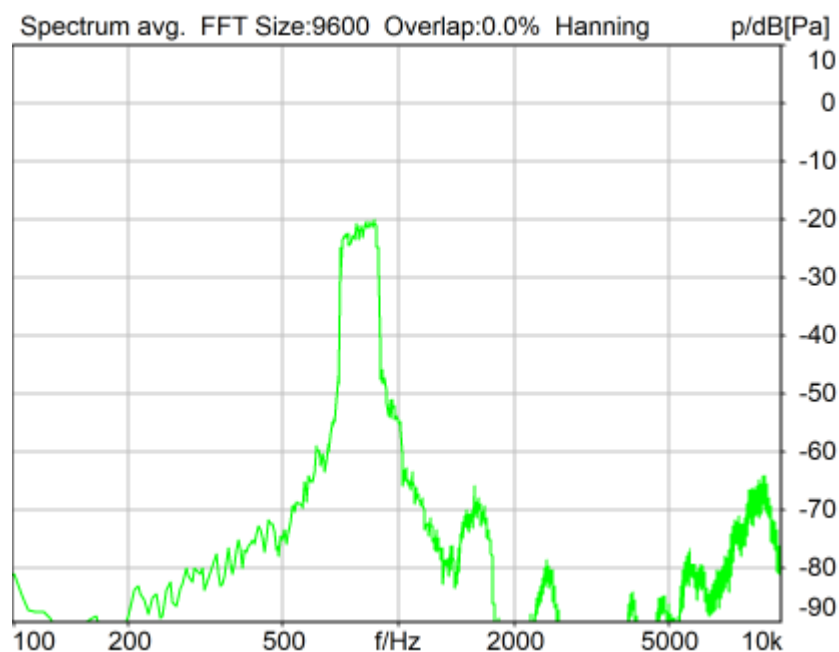
Ok

2024/3/20 11:21 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 31.93 dB (2.53%) Ok

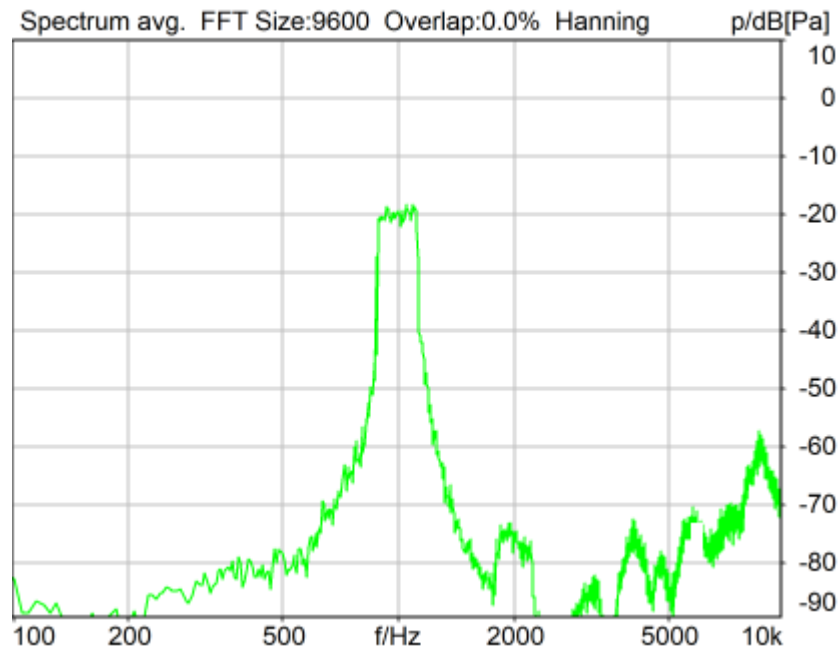
Ok

2024/3/20 11:22 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 31.05 dB (2.80%) Ok

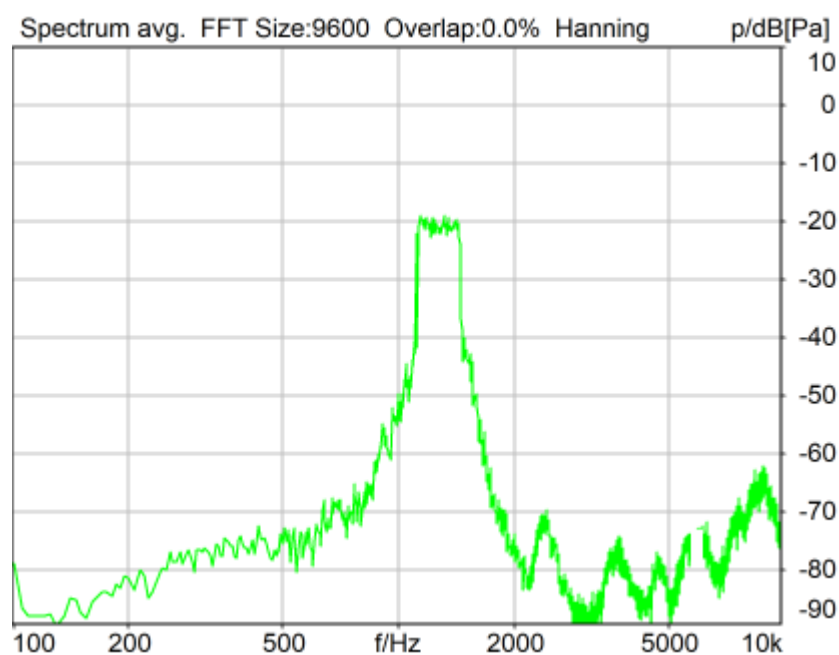
Ok

2024/3/20 11:22 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 24.57 dB (5.91%) Ok

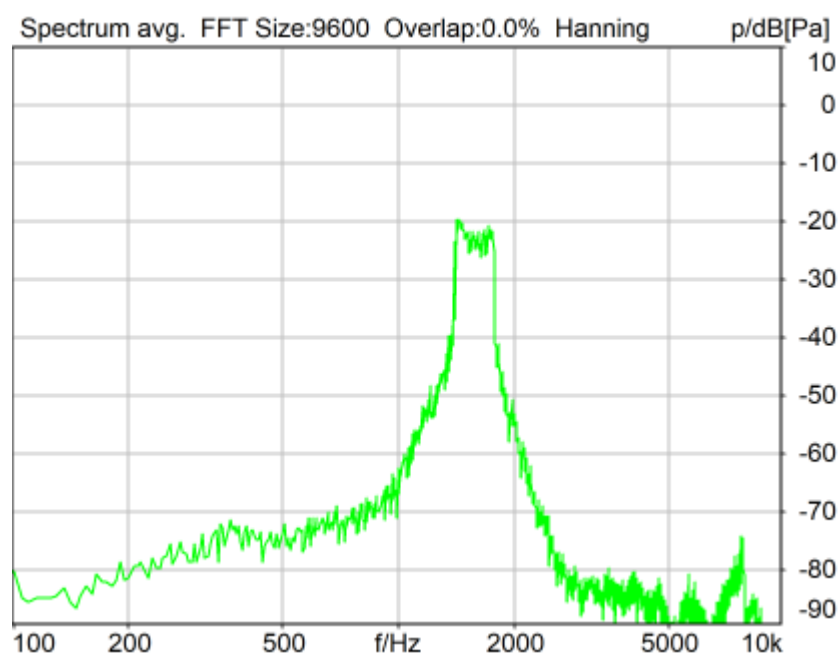
Ok

2024/3/20 11:23 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 24.24 dB (6.14%) Ok

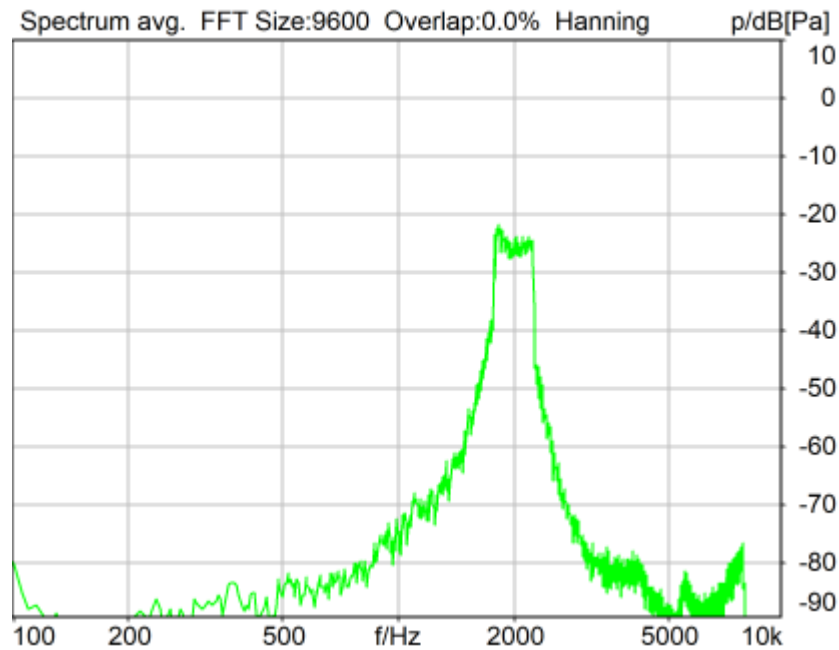
Ok

2024/3/20 11:23 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 21.81 dB (8.12%) Ok

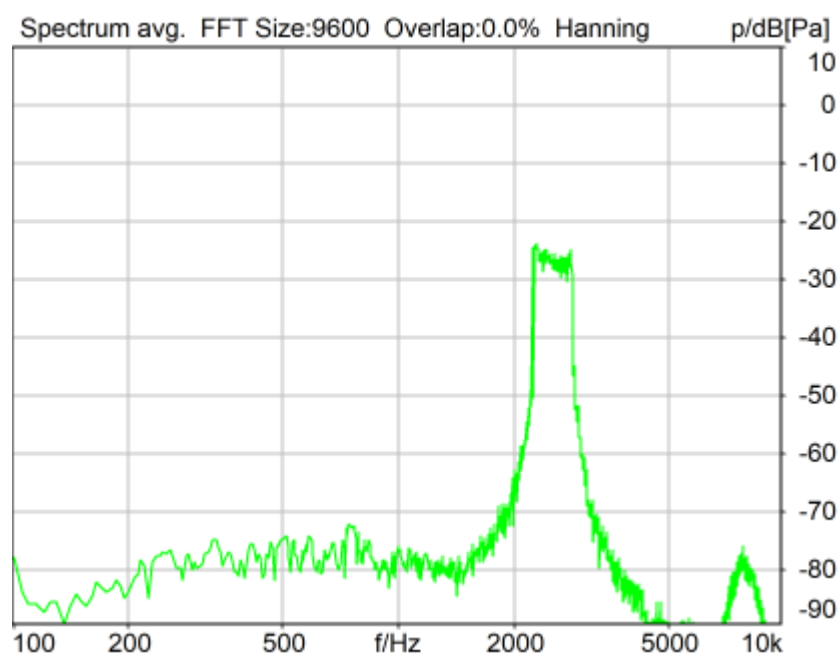
Ok

2024/3/20 11:23 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 29.47 dB (3.36%) Ok

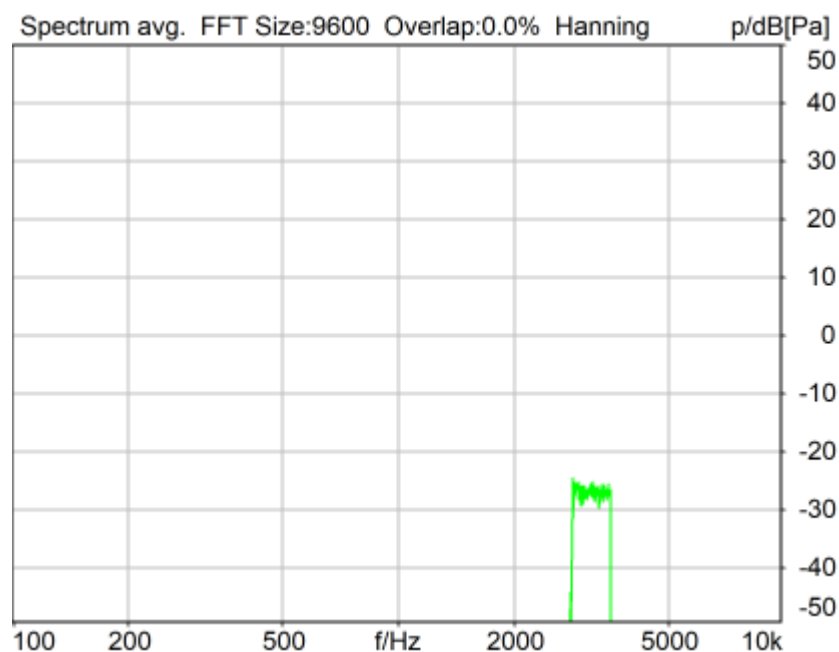
Ok

2024/3/20 11:24 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz NB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.36 dB (2.15%) Ok

Ok

2024/3/20 11:24 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain), Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N

Region	Frequency	SDNR
1	400Hz	32.10 dB

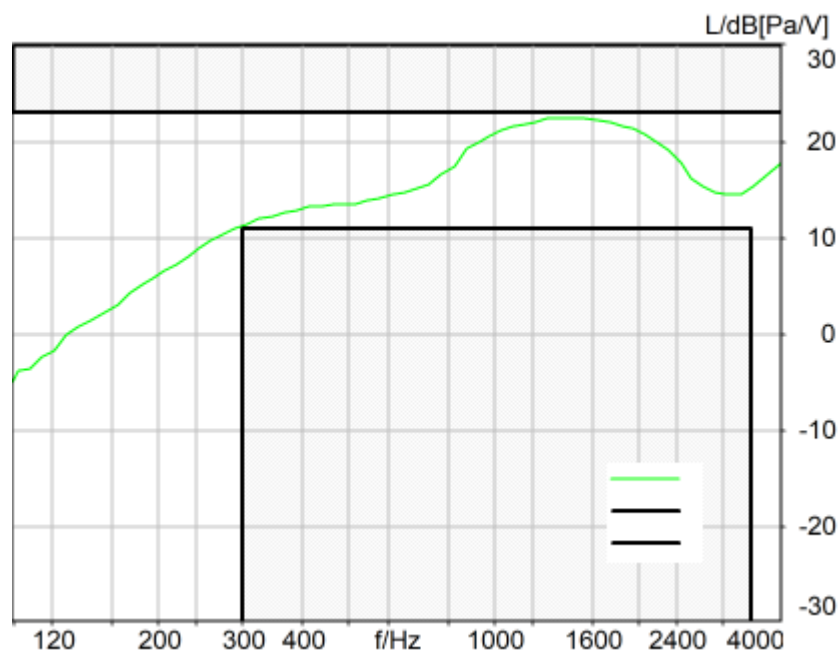
2	500Hz	33.75 dB
3	630Hz	34.13 dB
4	800Hz	31.93 dB
5	1000Hz	31.05 dB
6	1250Hz	24.57 dB
7	1600Hz	24.24 dB
8	2000Hz	21.81 dB
9	2500Hz	29.47 dB
10	3150Hz	33.36 dB

All SDNRs were greater than 20.0 dB, requirement was met.
Smallest SDNR was 21.81dB at 2000Hz.

2024/3/20 11:24 ACQUA

5.3 Frequency Response 8N FF HANB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance
0.49 dB at 305.9 Hz Ok

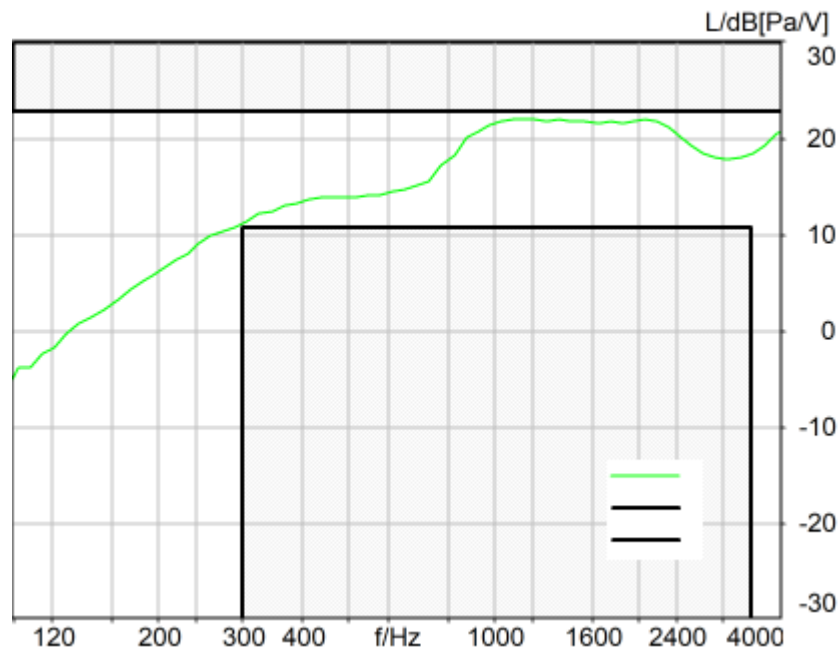
Ok

2024/3/20 11:02 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N DF HANB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance

0.71 dB at 1088.7 Hz Ok

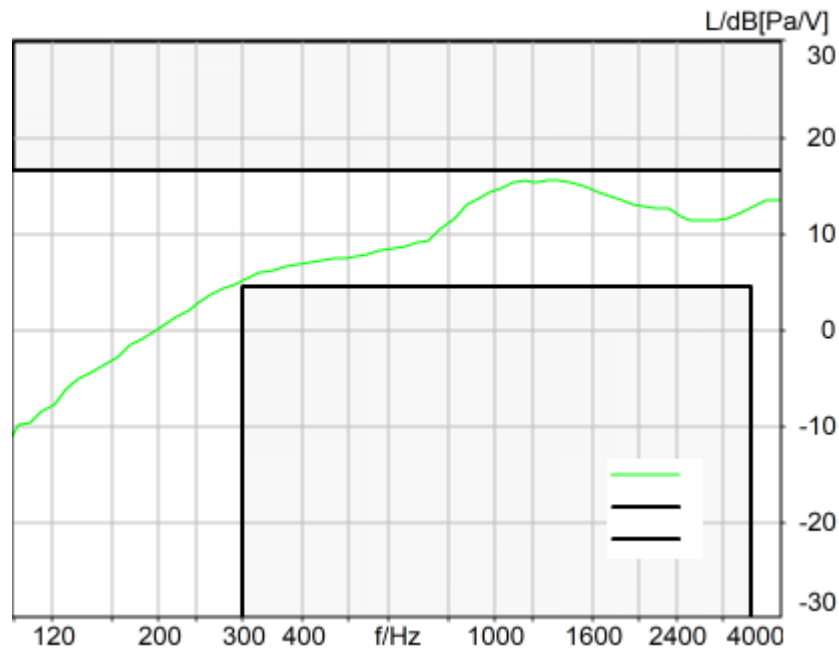
Ok

2024/3/20 11:03 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N FF HANB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



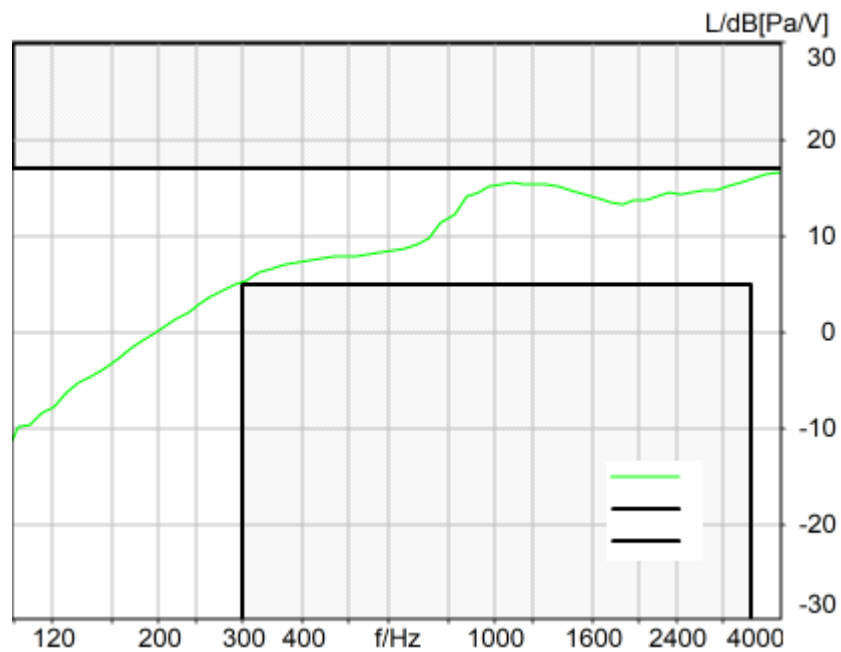
Absolute minimal distance
0.93 dB at 1285.9 Hz Ok

Ok

2024/3/20 11:25 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF HANB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance
0.44 dB at 3882.4 Hz Ok

Ok

2024/3/20 11:25 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

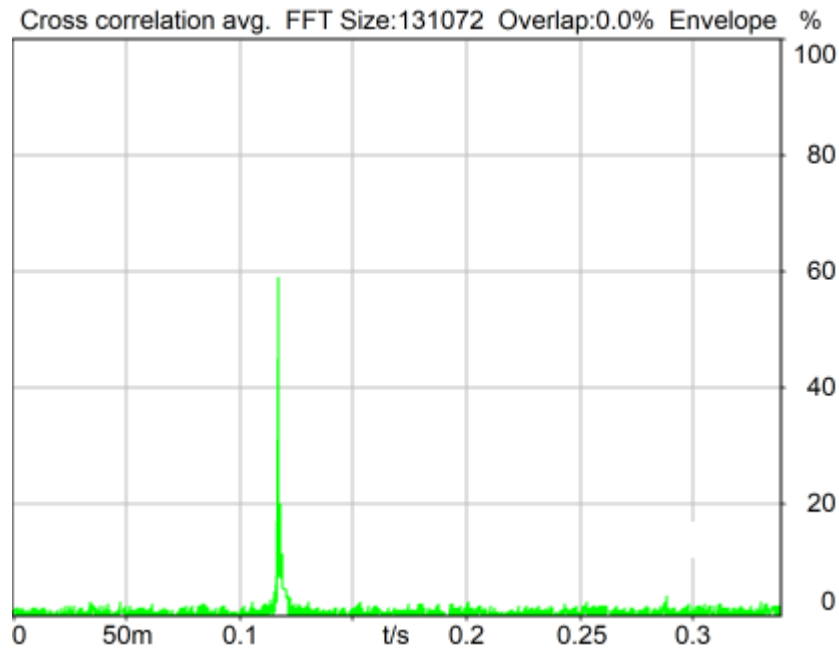
Measurement Object	FR1 n25_40 _DFT-s-OFDM_EVS WB128kbps_CH376500
Description	CJWQ-W7L-P23120020 DTNC PM95

Project	TIA-5050 (2018-01)
Report Generation Date	2024/5/21 15:32
Responsible Person	audio

Overall Receive Delay WB, Index: 1	3
5.1a Receive Volume Control Performance 8N WB, Index: 1	3
5.1b Receive Volume Control Performance 2N WB, Index: 1	4
5.2 RCV Distortion and Noise - 250 Hz WB, Index: 1	5
5.2 RCV Distortion and Noise - 315 Hz WB, Index: 1	6
5.2 RCV Distortion and Noise - 400 Hz WB, Index: 1	7
5.2 RCV Distortion and Noise - 500 Hz WB, Index: 1	7
5.2 RCV Distortion and Noise - 630 Hz WB, Index: 1	8
5.2 RCV Distortion and Noise - 800 Hz WB, Index: 1	9
5.2 RCV Distortion and Noise - 1000 Hz WB, Index: 1	9
5.2 RCV Distortion and Noise - 1250 Hz WB, Index: 1	10
5.2 RCV Distortion and Noise - 1600 Hz WB, Index: 1	11
5.2 RCV Distortion and Noise - 2000 Hz WB, Index: 1	11
5.2 RCV Distortion and Noise - 2500 Hz WB, Index: 1	12
5.2 RCV Distortion and Noise - 3150 Hz WB, Index: 1	13
5.2 RCV Distortion and Noise - 4000 Hz WB, Index: 1	13
5.2 RCV Distortion and Noise - 5000 Hz WB, Index: 1	14
Report - Receive Distortion and Noise (Conversational Gain), Index: 1	15
5.2 RCV Distortion and Noise - 250 Hz WB, Index: 1	15
5.2 RCV Distortion and Noise - 315 Hz WB, Index: 1	16
5.2 RCV Distortion and Noise - 400 Hz WB, Index: 1	17
5.2 RCV Distortion and Noise - 500 Hz WB, Index: 1	17
5.2 RCV Distortion and Noise - 630 Hz WB, Index: 1	18
5.2 RCV Distortion and Noise - 800 Hz WB, Index: 1	19
5.2 RCV Distortion and Noise - 1000 Hz WB, Index: 1	19
5.2 RCV Distortion and Noise - 1250 Hz WB, Index: 1	20
5.2 RCV Distortion and Noise - 1600 Hz WB, Index: 1	21
5.2 RCV Distortion and Noise - 2000 Hz WB, Index: 1	21
5.2 RCV Distortion and Noise - 2500 Hz WB, Index: 1	22
5.2 RCV Distortion and Noise - 3150 Hz WB, Index: 1	23
5.2 RCV Distortion and Noise - 4000 Hz WB, Index: 1	23
5.2 RCV Distortion and Noise - 5000 Hz WB, Index: 1	24
Report - Receive Distortion and Noise (Conversational Gain), Index: 1	25
5.3 Frequency Response 8N FF, Index: 1	25
5.3 Frequency Response 8N DF, Index: 1	26
5.3 Frequency Response 2N FF, Index: 1	27
5.3 Frequency Response 2N DF, Index: 1	28

Overall Receive Delay WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ Preparation - Delay measurement



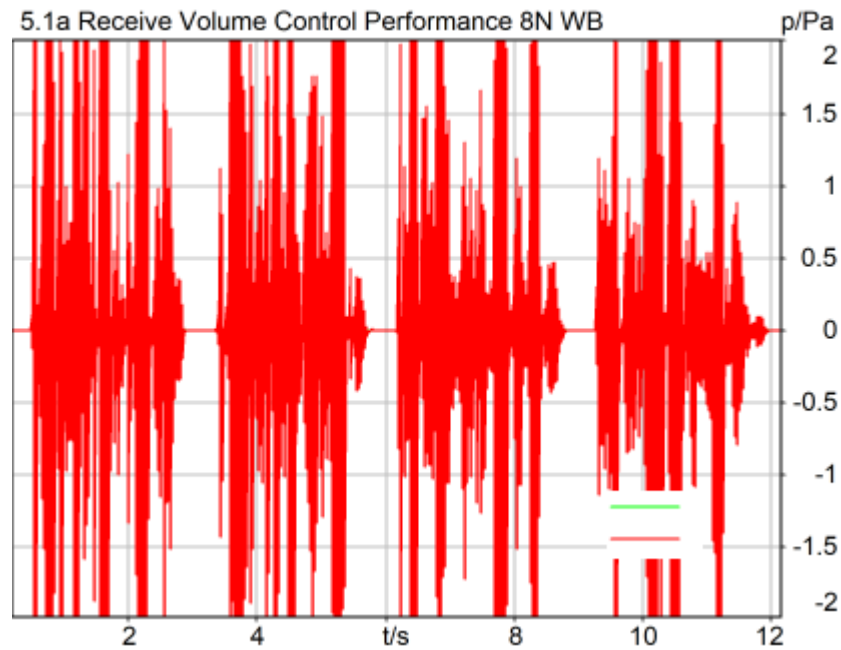
Delay (Cross): 118.0 ms

2024/3/20 11:03 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1a Receive Volume Control Performance 8N WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



Correction

X - 70

Speech Level RCV: 87.38 dB[SPL], Act.: 82.55%

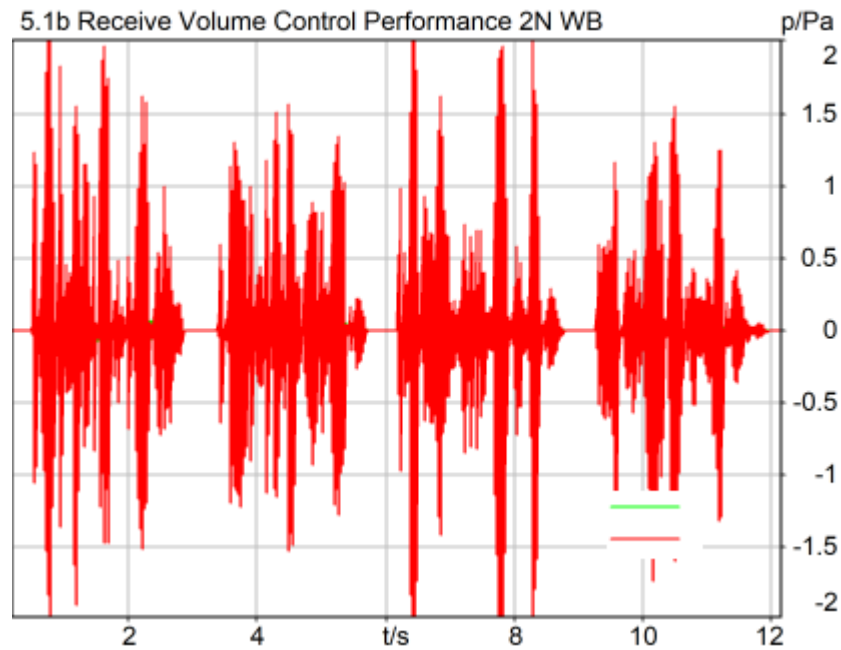
Corrected Speech Level: 17.38 dB[SPL] Ok

Ok

2024/3/20 11:04 ACQUA 5.1.200

5.1b Receive Volume Control Performance 2N WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



Correction

X - 70

Speech Level RCV: 81.06 dB[SPL], Act.: 83.24%

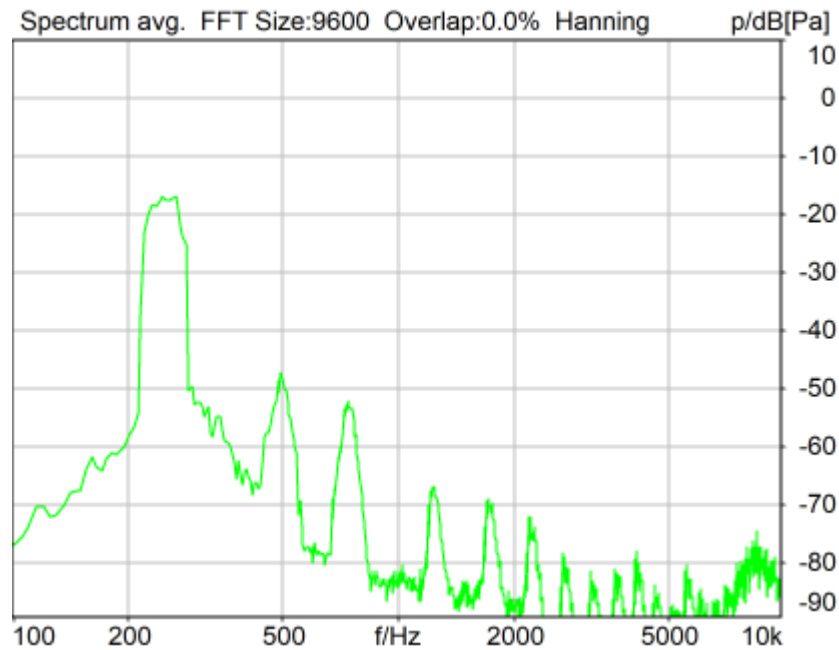
Corrected Speech Level: 11.06 dB[SPL] Ok

Ok

2024/3/20 11:12 ACQUA 5.1.200

5.2 RCV Distortion and Noise - 250 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 31.73 dB (2.59%) Ok

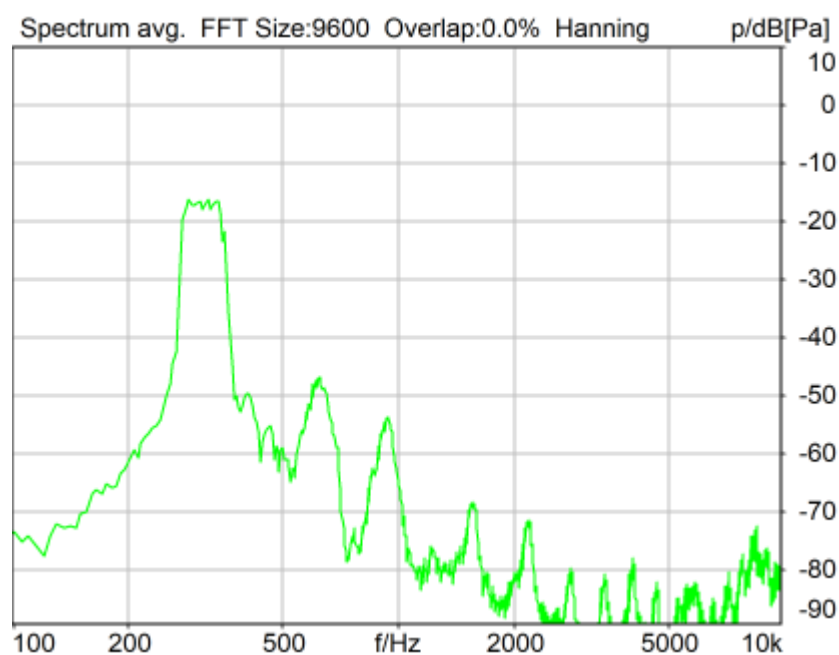
Ok

2024/3/20 11:04 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 315 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 30.82 dB (2.88%) Ok

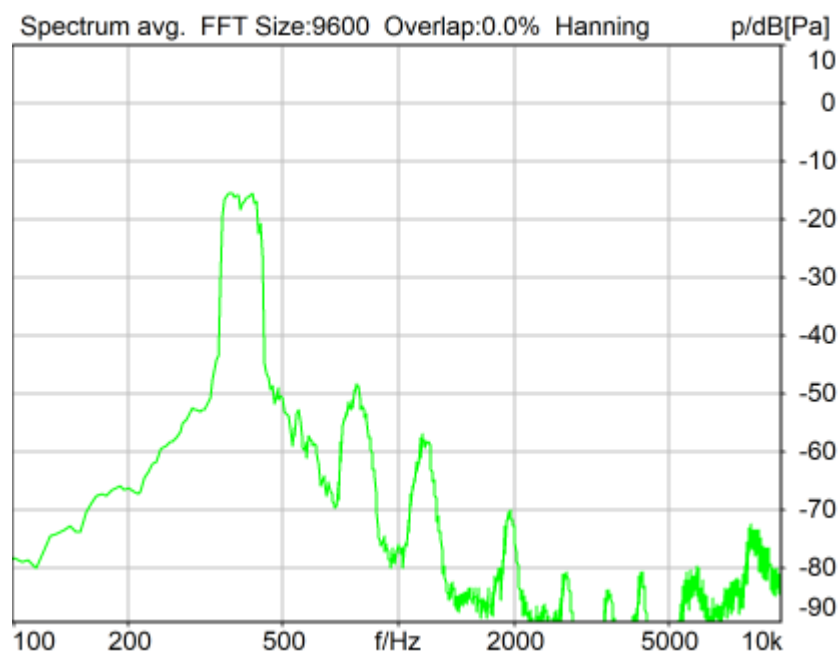
Ok

2024/3/20 11:05 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 32.27 dB (2.43%) Ok

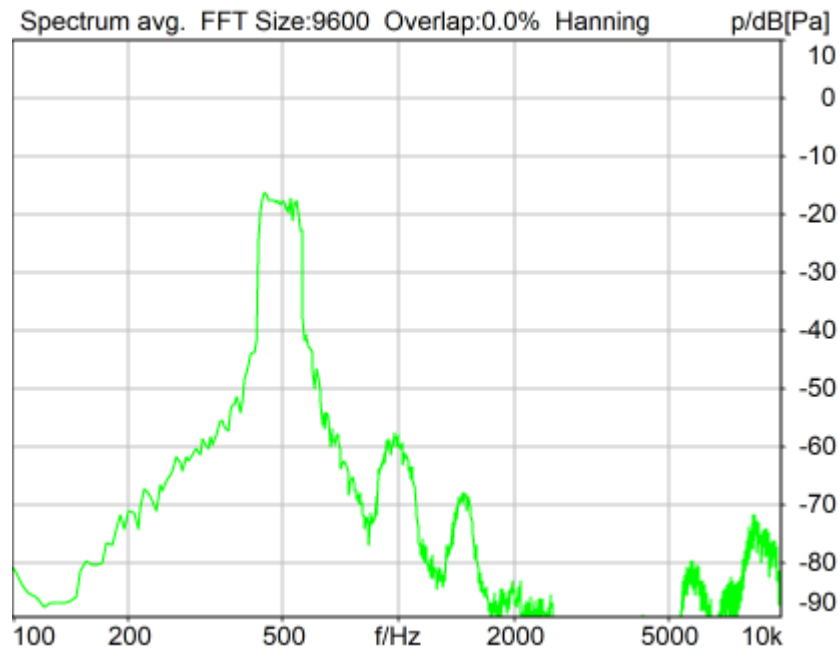
Ok

2024/3/20 11:05 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 33.88 dB (2.02%) Ok

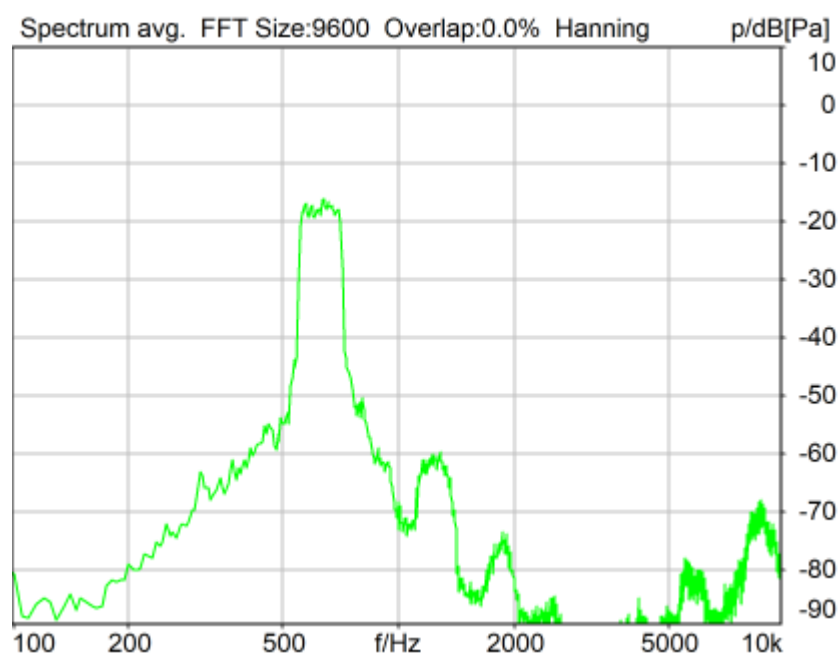
Ok

2024/3/20 11:06 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 33.99 dB (2.00%) Ok

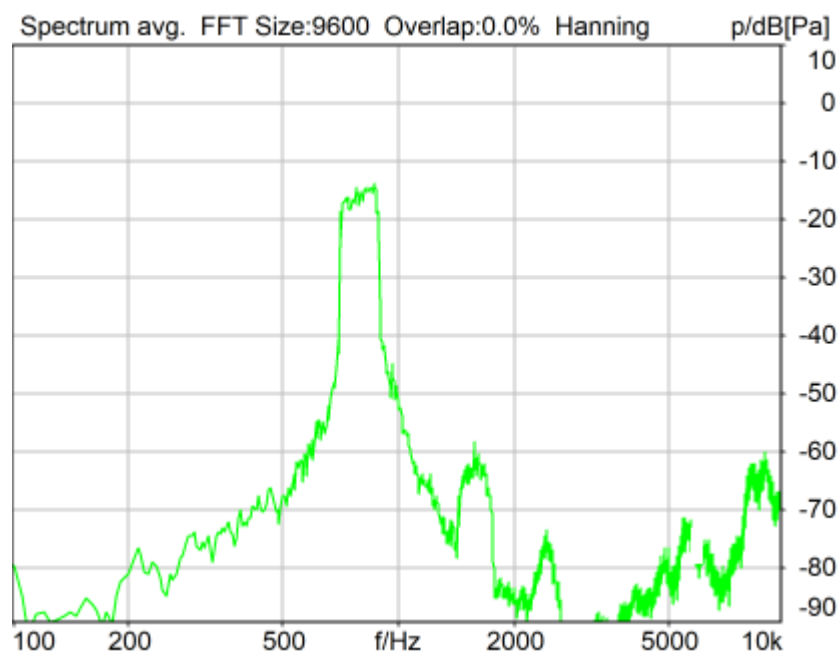
Ok

2024/3/20 11:06 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 33.11 dB (2.21%) Ok

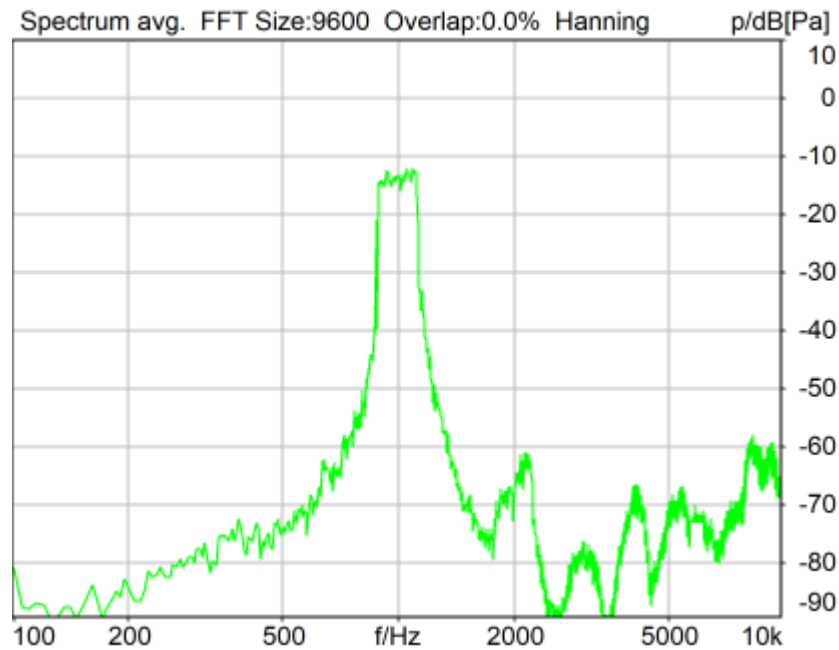
Ok

2024/3/20 11:06 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 31.59 dB (2.63%) Ok

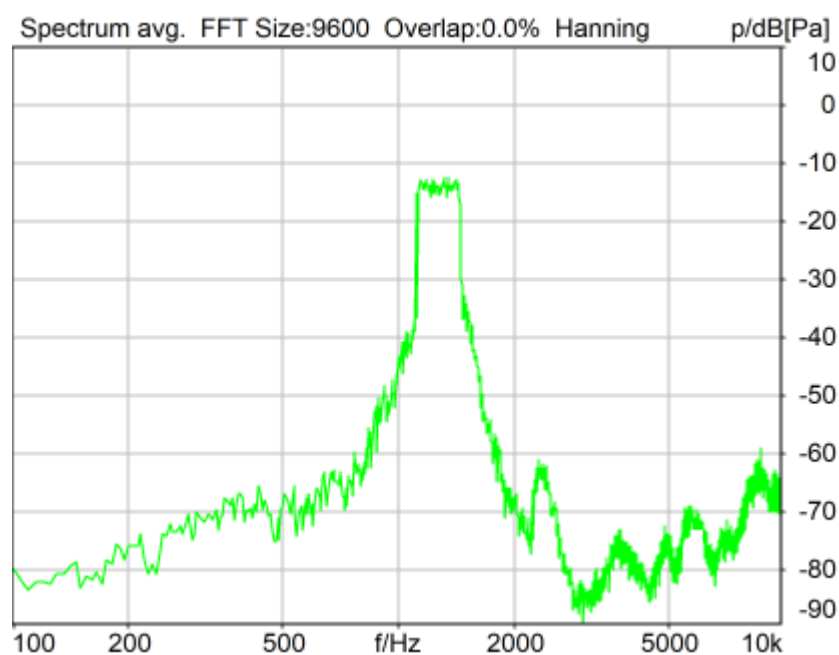
Ok

2024/3/20 11:07 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 24.14 dB (6.21%) Ok

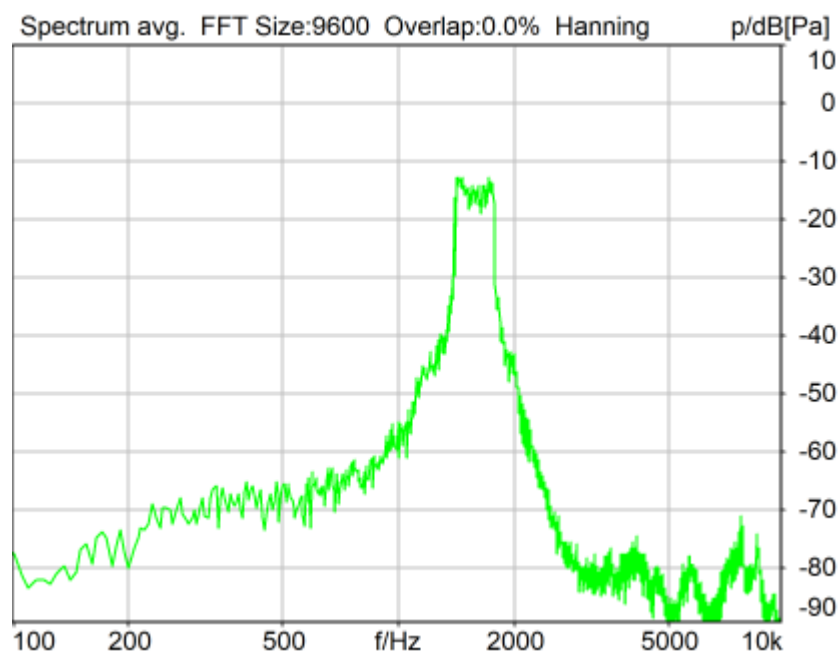
Ok

2024/3/20 11:07 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 24.83 dB (5.73%) Ok

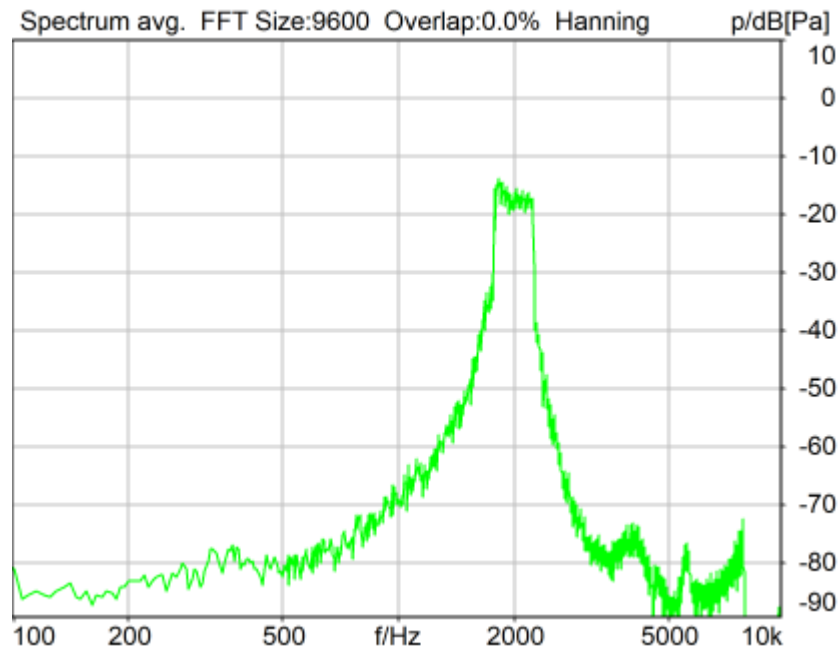
Ok

2024/3/20 11:08 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 23.19 dB (6.92%) Ok

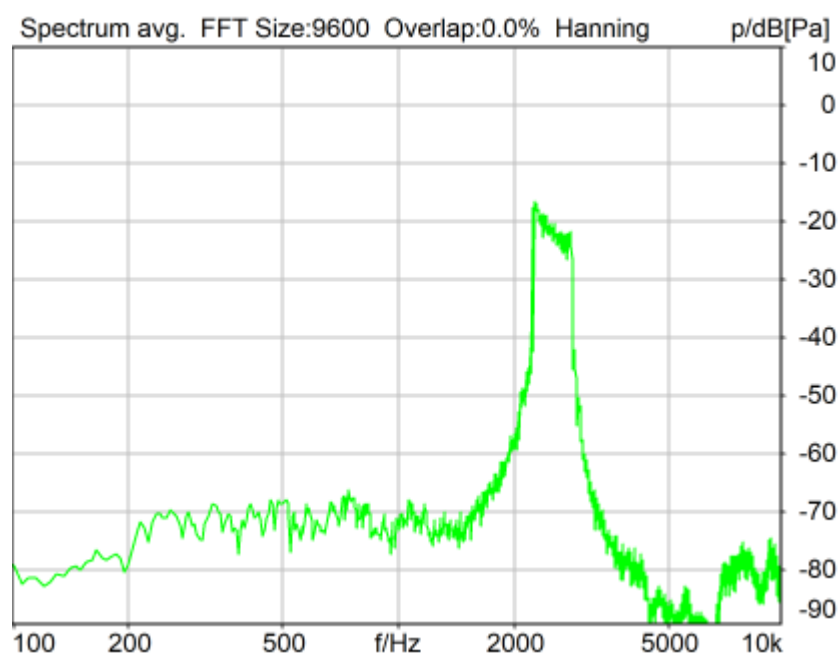
Ok

2024/3/20 11:08 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 29.05 dB (3.53%) Ok

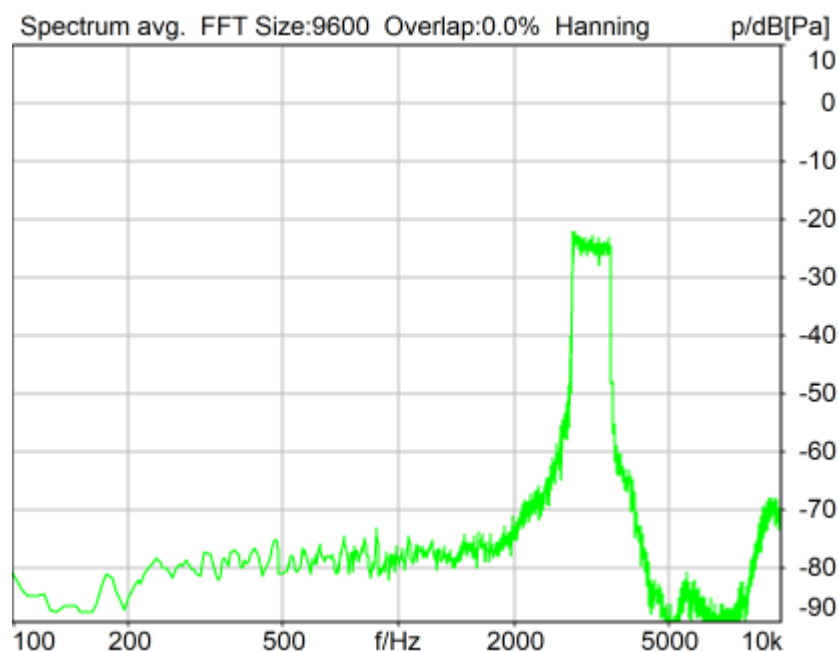
Ok

2024/3/20 11:09 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 32.31 dB (2.42%) Ok

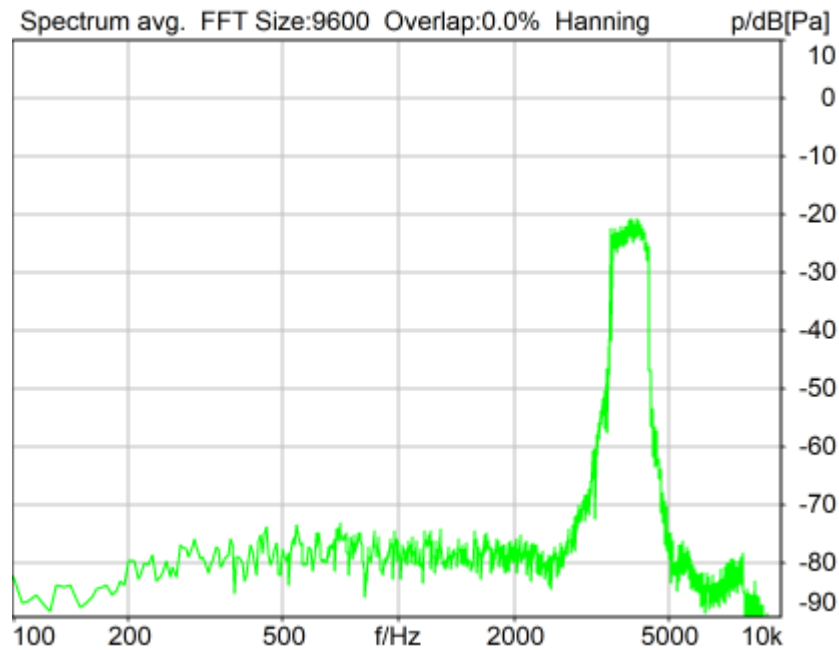
Ok

2024/3/20 11:09 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 4000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 31.63 dB (2.62%) Ok

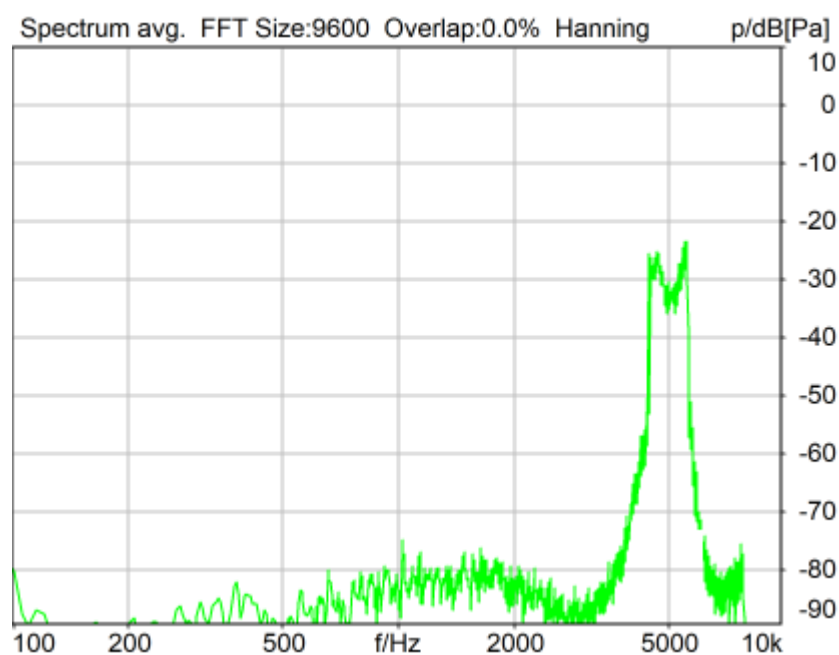
Ok

2024/3/20 11:09 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 5000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 31.34 dB (2.71%) Ok

Ok

2024/3/20 11:10 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain), Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N

Region	Frequency	SDNR
1	250Hz	31.73 dB
2	315Hz	30.82 dB
3	400Hz	32.27 dB
4	500Hz	33.88 dB
5	630Hz	33.99 dB
6	800Hz	33.11 dB
7	1000Hz	31.59 dB
8	1250Hz	24.14 dB
9	1600Hz	24.83 dB
10	2000Hz	23.19 dB
11	2500Hz	29.05 dB
12	3150Hz	32.31 dB
13	4000Hz	31.63 dB
14	5000Hz	31.34 dB

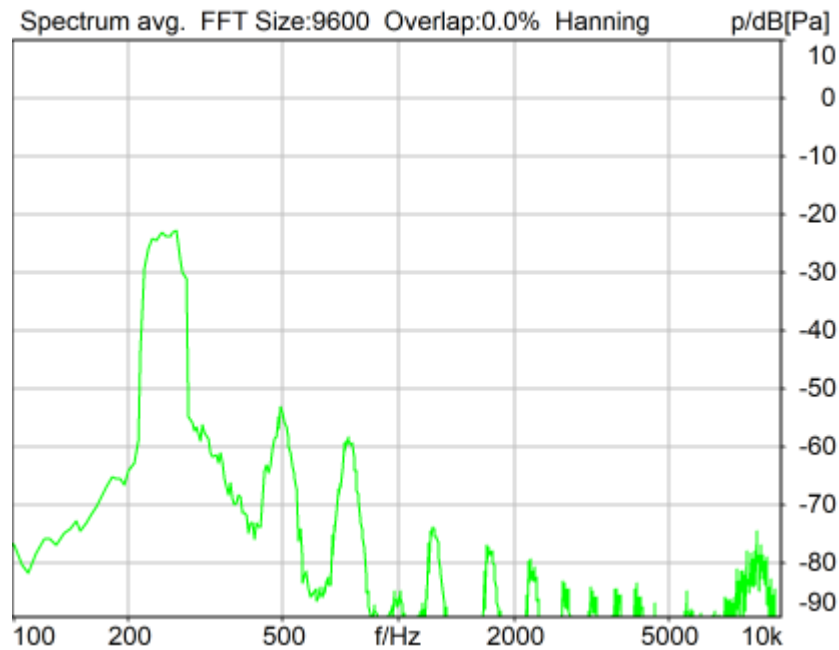
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 23.19dB at 2000Hz.

2024/3/20 11:10 ACQUA

5.2 RCV Distortion and Noise - 250 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 31.54 dB (2.65%) Ok

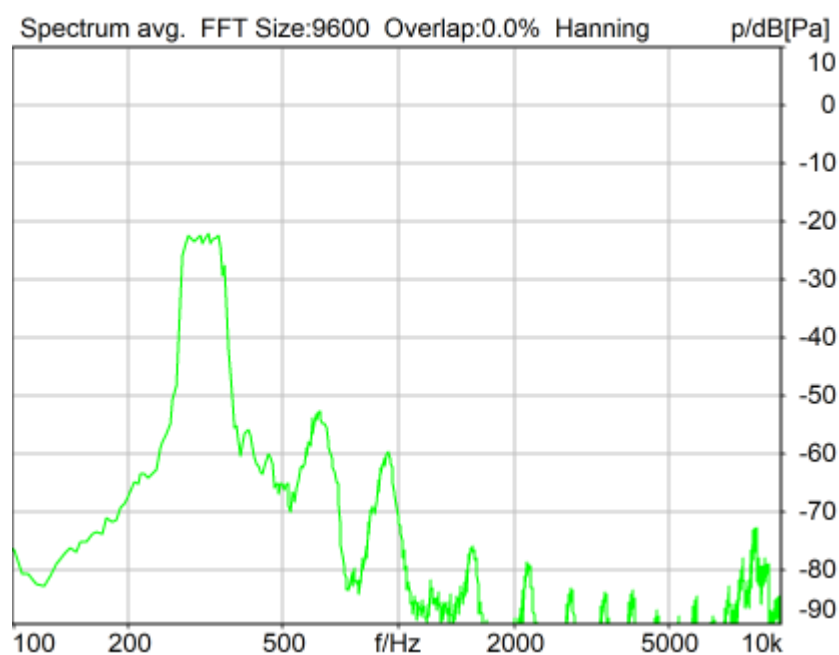
Ok

2024/3/20 11:13 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 315 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 30.71 dB (2.92%) Ok

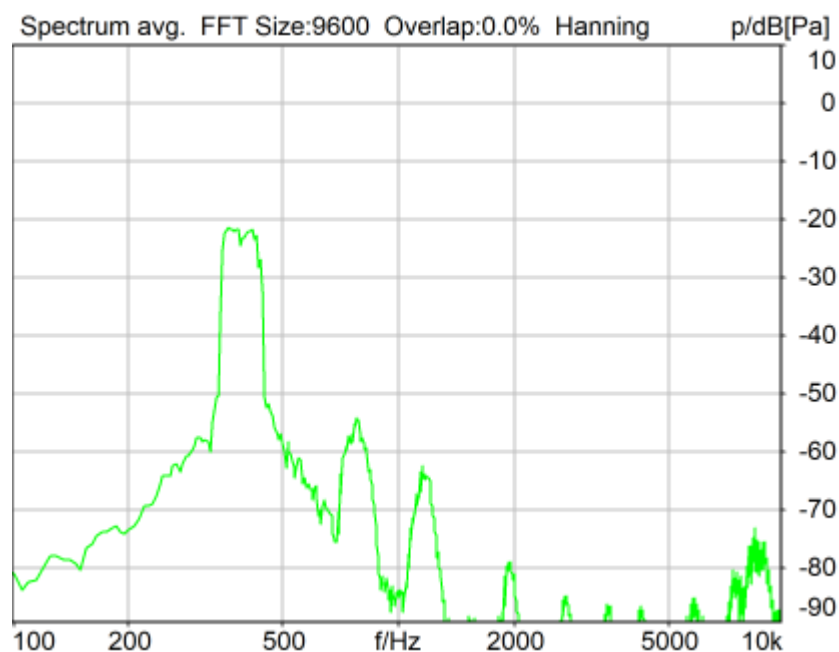
Ok

2024/3/20 11:14 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 32.13 dB (2.47%) Ok

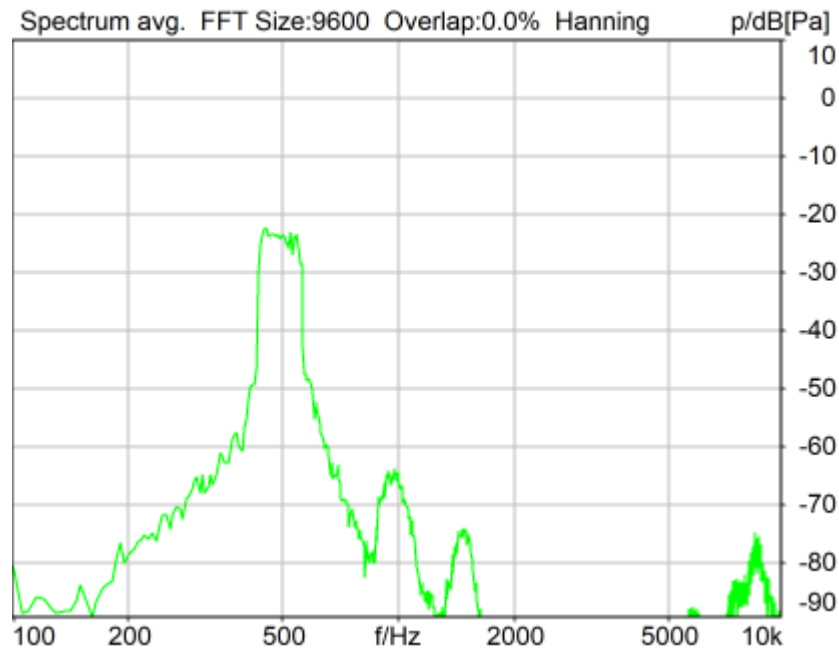
Ok

2024/3/20 11:14 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.81 dB (2.04%) Ok

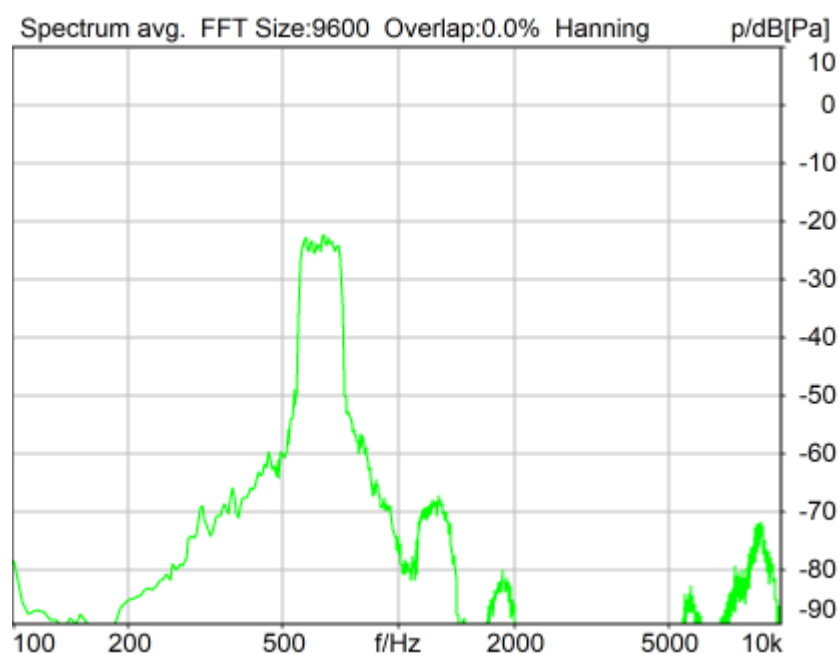
Ok

2024/3/20 11:14 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.95 dB (2.01%) Ok

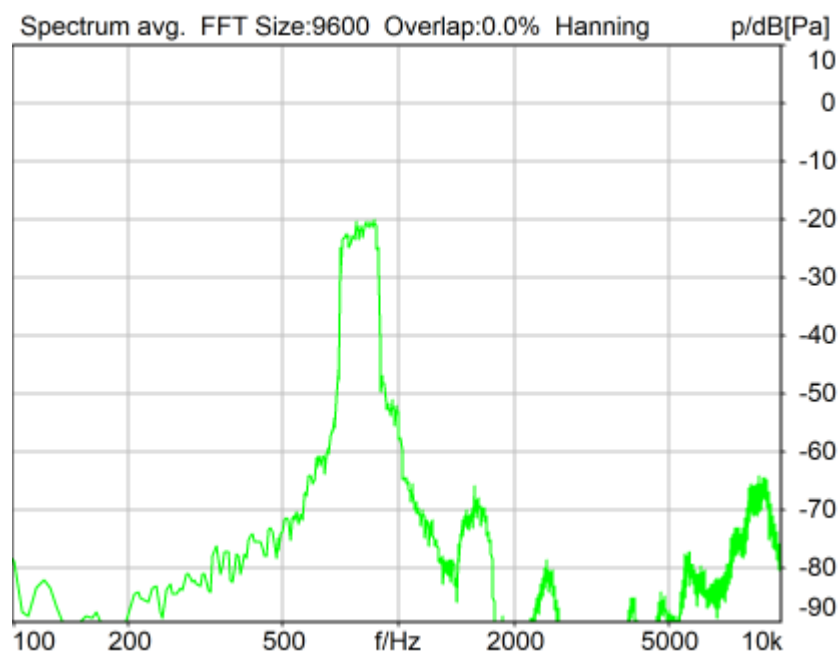
Ok

2024/3/20 11:15 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 32.13 dB (2.47%) Ok

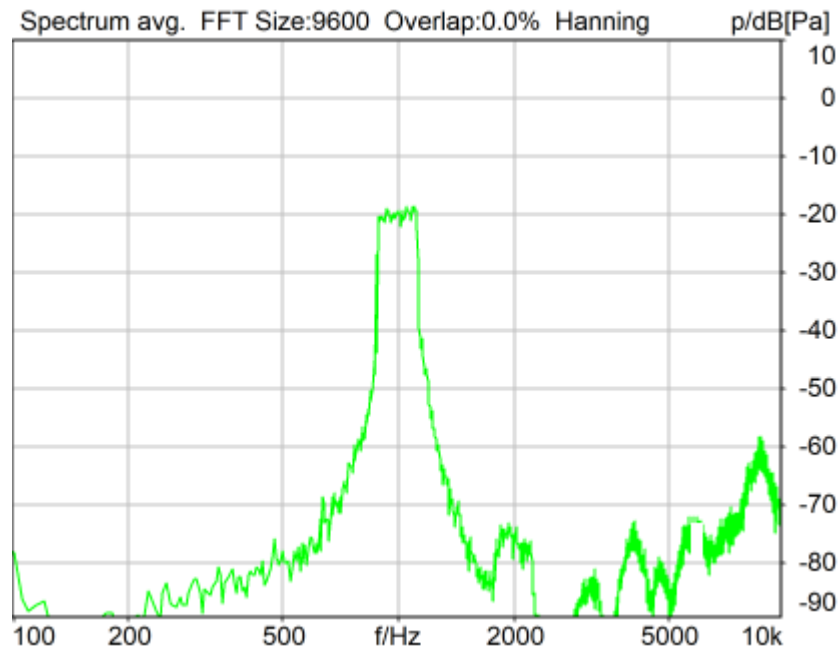
Ok

2024/3/20 11:15 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 31.07 dB (2.80%) Ok

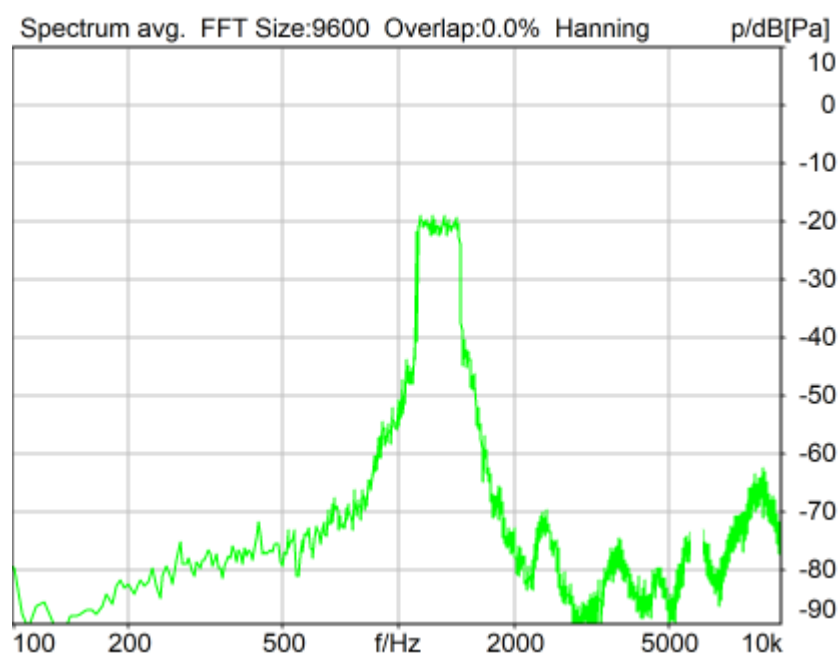
Ok

2024/3/20 11:16 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 24.58 dB (5.90%) Ok

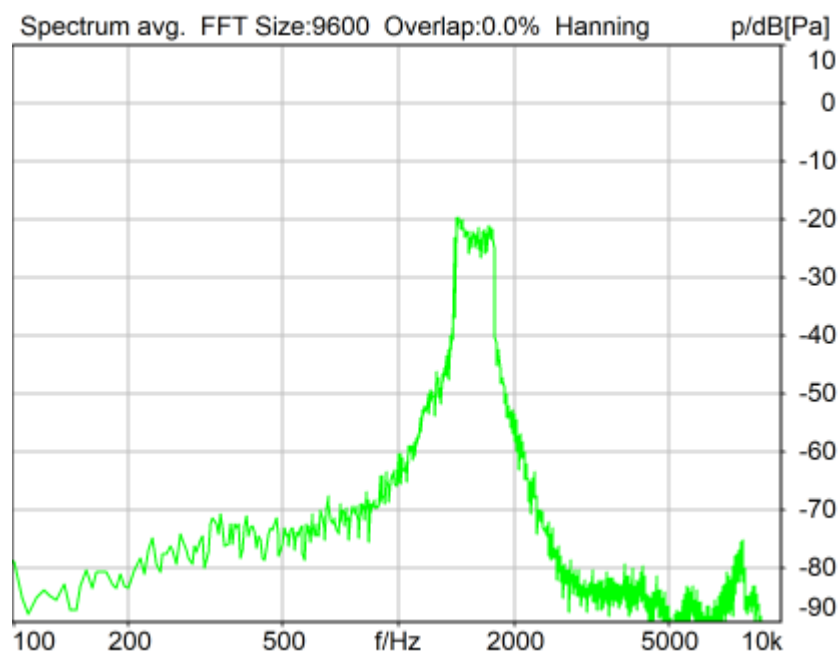
Ok

2024/3/20 11:16 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 24.45 dB (5.99%) Ok

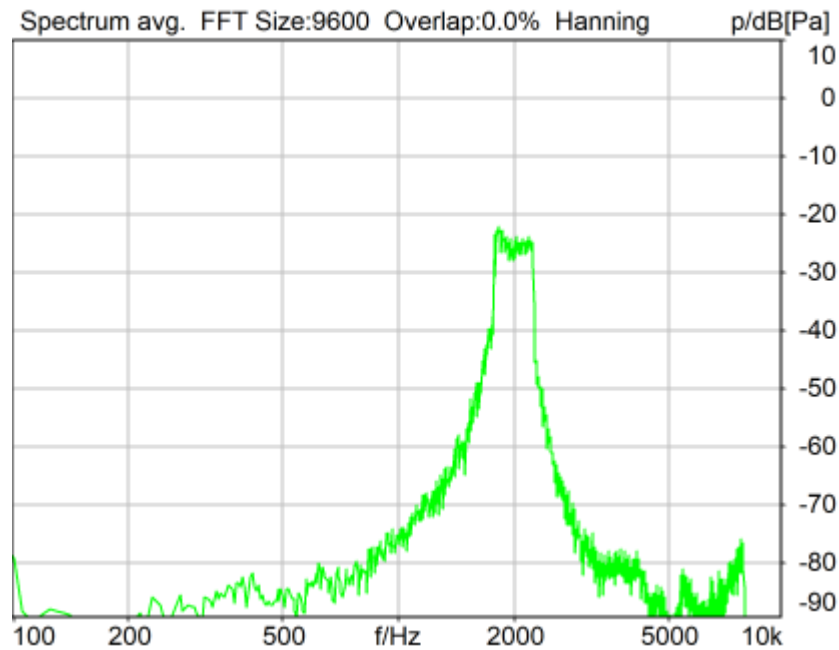
Ok

2024/3/20 11:16 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 21.99 dB (7.95%) Ok

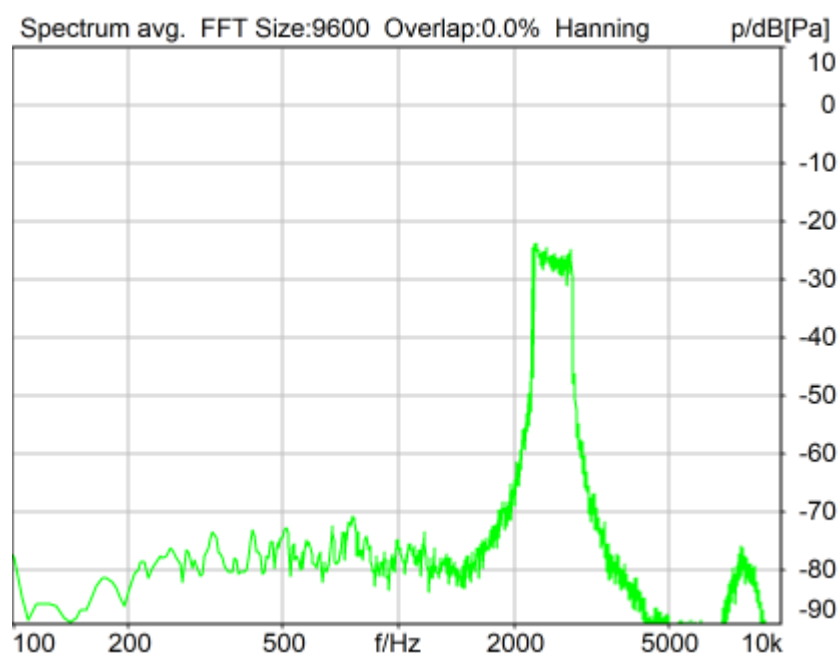
Ok

2024/3/20 11:17 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 29.48 dB (3.36%) Ok

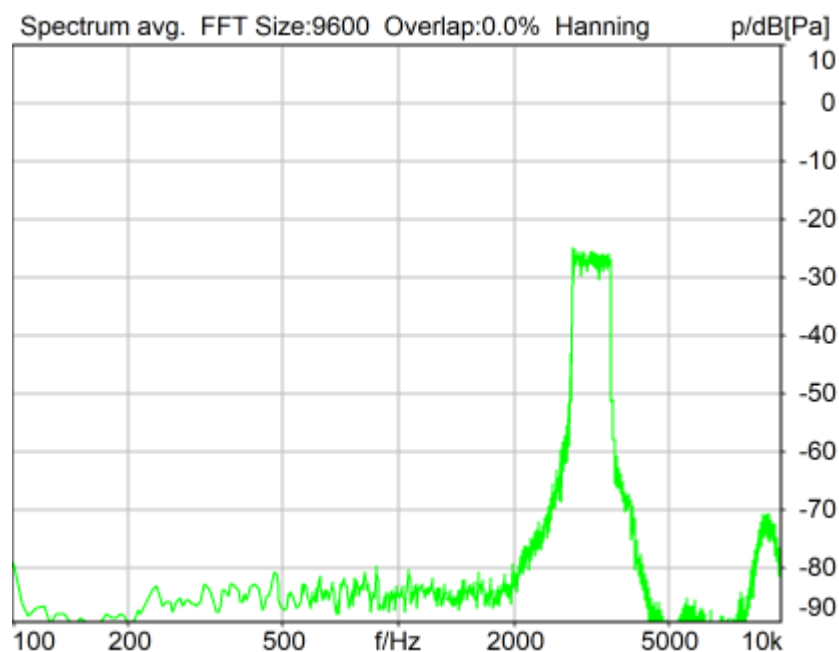
Ok

2024/3/20 11:17 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.35 dB (2.15%) Ok

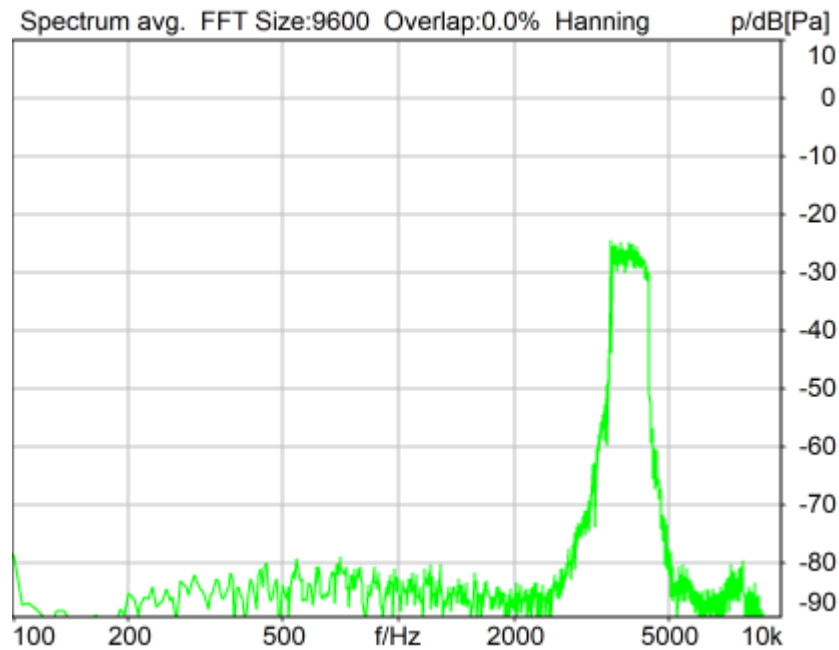
Ok

2024/3/20 11:18 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 4000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 30.32 dB (3.05%) Ok

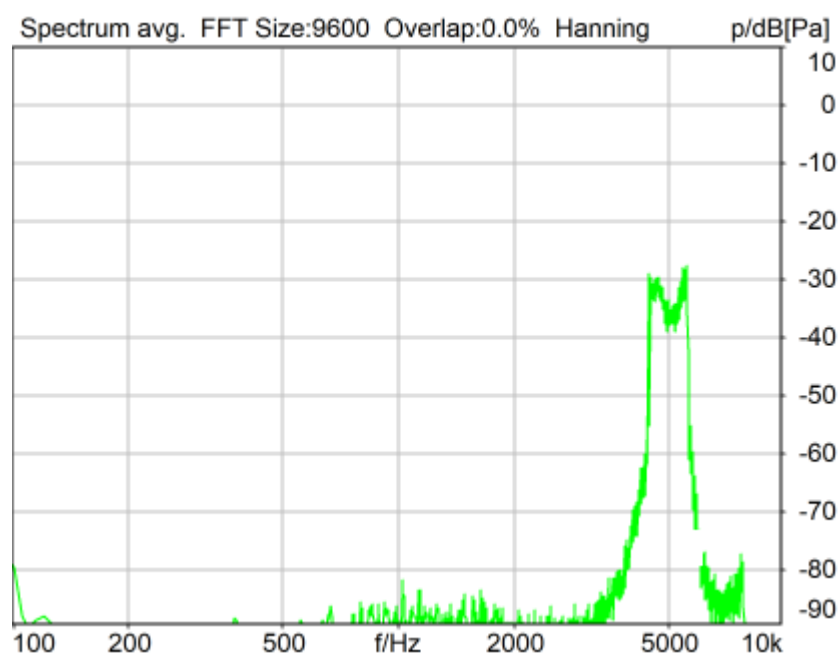
Ok

2024/3/20 11:18 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 5000 Hz WB, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 31.80 dB (2.57%) Ok

Ok

2024/3/20 11:18 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain), Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N

Region	Frequency	SDNR
1	250Hz	31.54 dB
2	315Hz	30.71 dB
3	400Hz	32.13 dB
4	500Hz	33.81 dB
5	630Hz	33.95 dB
6	800Hz	32.13 dB
7	1000Hz	31.07 dB
8	1250Hz	24.58 dB
9	1600Hz	24.45 dB
10	2000Hz	21.99 dB
11	2500Hz	29.48 dB
12	3150Hz	33.35 dB
13	4000Hz	30.32 dB
14	5000Hz	31.80 dB

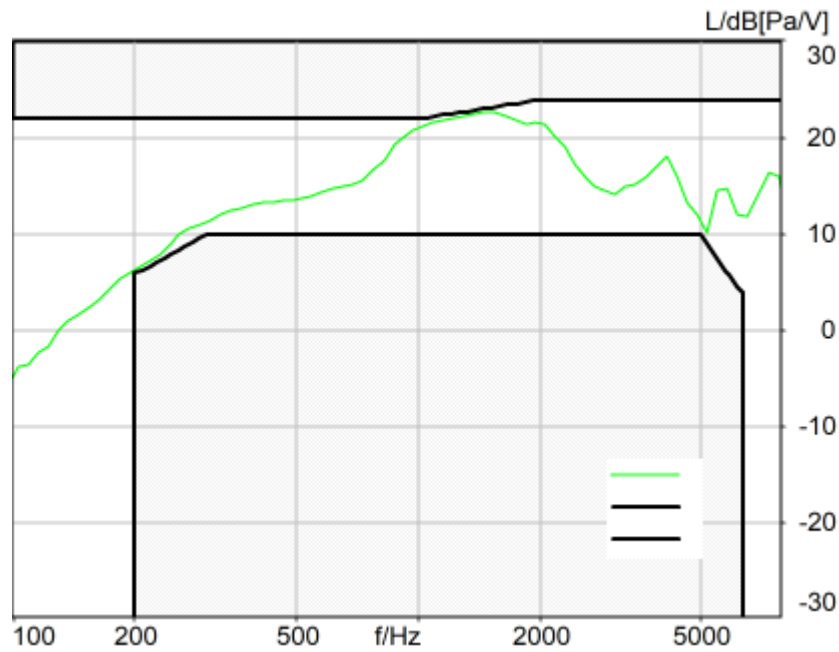
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 21.99dB at 2000Hz.

2024/3/20 11:18 ACQUA

5.3 Frequency Response 8N FF, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



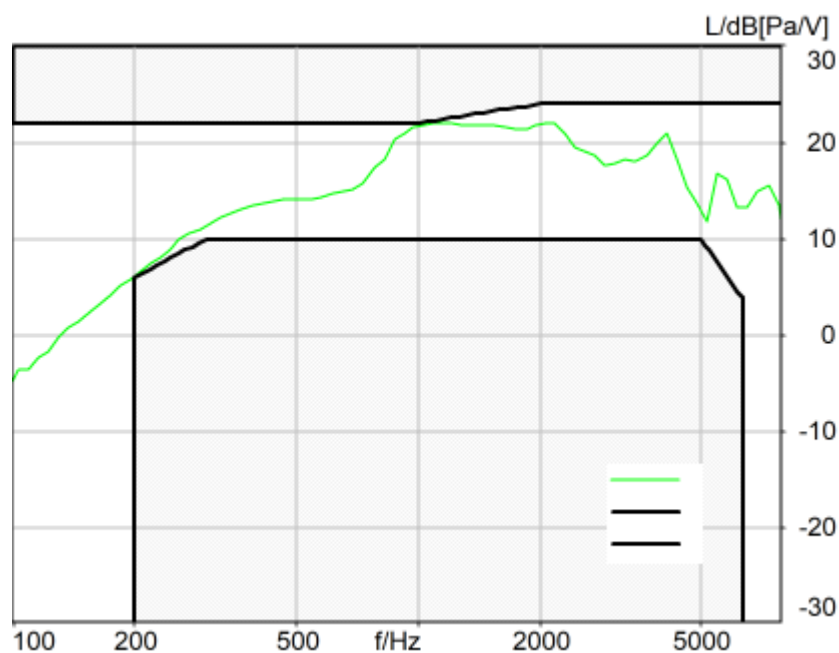
Absolute minimal distance
0.38 dB at 1216.1 Hz Ok

Ok

2024/3/20 11:10 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N DF, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



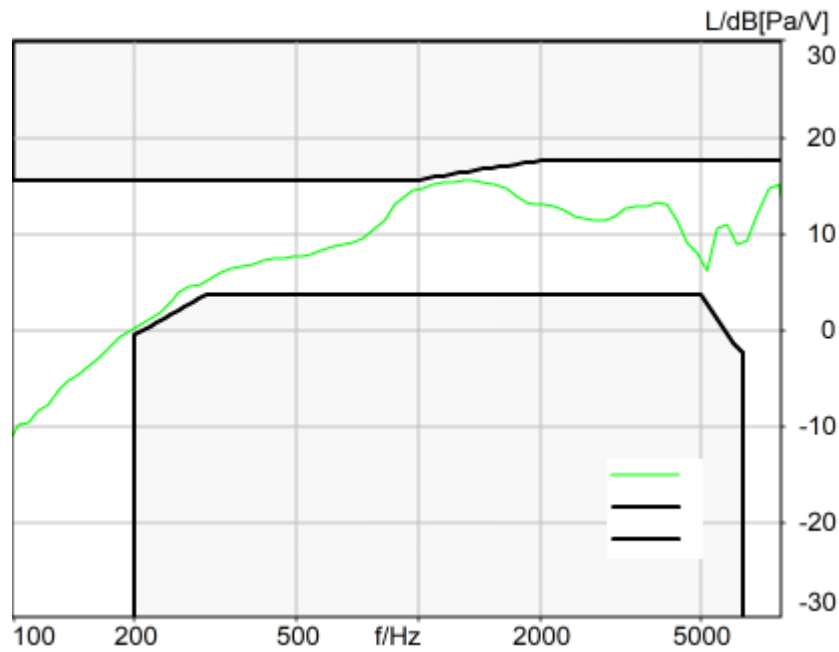
Absolute minimal distance
0.30 dB at 1028.7 Hz Ok

Ok

2024/3/20 11:11 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N FF, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



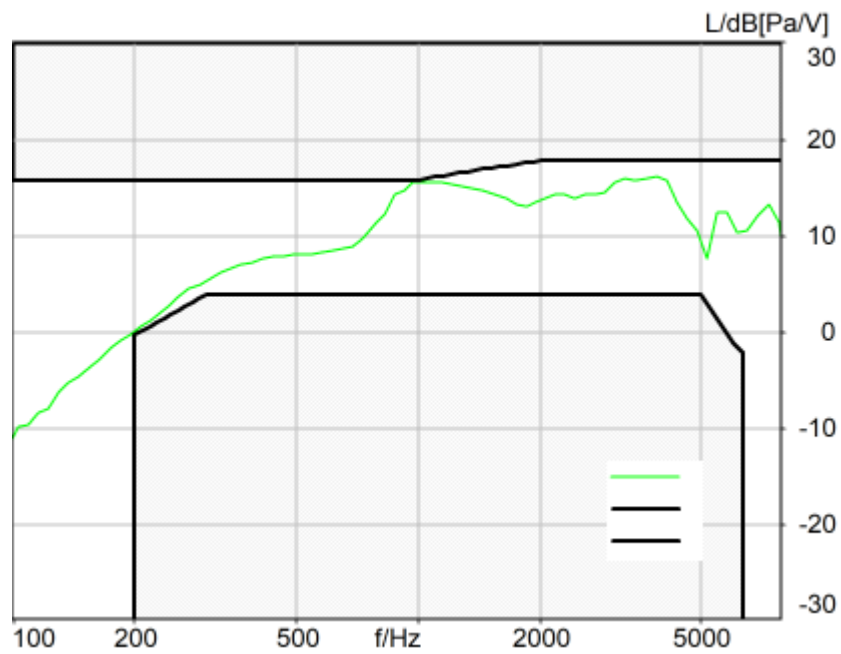
Absolute minimal distance
0.61 dB at 1151.2 Hz Ok

Ok

2024/3/20 11:19 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF, Index: 1

TIA-5050 (2018-01) \ Measurements \ Wideband



Absolute minimal distance
0.39 dB at 974.0 Hz Ok

Ok

2024/3/20 11:19 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor