31-band EQ values-31-band_EQ_values_for_selected_FR_targets_and_over-ear_headphones

↓HP model / dB→	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630	800	1K	1.25K	1.6K	2K	2.5K	3.15K	4K	5K	6.3K	8K	10K	12.5K	16K	20K
(FR target curves)																															
Diffuse field (H&M)	0	0	0	0	0	0	0	0	0	0.5	0.8	1	1.2	1.5	2	3	3.5	4	5	8	11	15.5	15.5	13	10.5	10	9.5	7	4	0	-3.6
Diffuse field (B&K)	0	0.3	0.5	0.2	0.3	0.2	0.5	0.3	0.2	0.3	0	0.4	1	1.3	2.5	2.5	4	5	4.7	5.7	10	15	17.3	15	11.6	10.7	2.3	4.2	9.2	0	-4.5
-1dB/oct room gain	5	4.7	4.5	4.1	3.8	3.5	3.2	2.8	2.6	2.1	1.9	1.5	1.1	0.8	0.5	0.2	-0.8	-0.5	-0.3	-1.2	-1.5	-1.7	-2.1	-2.4	-2.7	-3	-3.4	-3.8	-4.2	-4.7	-5
-0.9dB/oct room gain	4.5	4.3	4	3.6	3.3	3	2.7	2.5	2.2	1.7	1.5	1.3	1	0.7	0.3	0	-0.3	-0.7	-1	-1.3	-1.6	-1.8	-2	-2.5	-2.8	-3	-3.3	-3.7	-4	-4.3	-4.5
B&K room gain	2.5	2.7	2.9	3	3	3	3	2.9	2.8	2.7	2.5	2.2	2	1.8	1.6	1.5	1.1	0.9	0.6	0.3	0	-0.3	-0.5	-1.1	-1.2	-1.6	-2	-2.2	-2.6	-3.1	-3.6
DF+RG (H&M/B&K)	-0.3	-0.1	0.1	0.2	0.2	0.2	0.2	0.1	0	0.4	0.5	0.4	0.4	0.5	0.8	1.7	1.8	2.1	2.8	5.5	8.2	12.4	12.2	9.1	6.5	5.6	4.7	2	-1.4	-5.9	-10
DF+RG (B&K/B&K)	0	0.5	0.9	0.7	0.8	0.7	1	0.7	0.5	0.5	0	0.1	0.5	0.6	1.6	1.5	2.6	3.4	2.8	3.5	7.5	12.2	14.3	11.4	7.9	6.6	-2.2	-0.5	4.1	-5.6	-10.6
DF+ 1dB/oct (H&M)	2.7	2.4	2.2	1.8	1.5	1.2	0.9	0.5	0.3	0.3	0.4	0.2	0	0	0.2	0.9	0.4	1.2	2.4	4.5	7.2	11.5	11.1	8.3	5.5	4.7	3.8	0.9	-2.5	-7	-10.9
Etymotic target Cr	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3	-1.1	-1	-0.8	-0.4	-0.2	0.5	1.3	2.1	2.7	3.5	7.9	11.5	11	8.1	6.6	3.4	2.5	0	-2.5	-4.5	-7
Harman 2013	3.8	3.8	4	4	3.8	3.6	2.7	2.5	1.5	0.8	0.3	0	1	1.4	1.8	2.1	2.6	2.7	3.4	6	7.7	11.3	12	10.4	8	6.6	3.5	0.2	-4	-8	-7
Harman ’13 -2 bass	1.8	1.8	2	2	1.8	1.6	1.7	1.5	0.5	0.3	0	0	1	1.4	1.8	2.1	2.6	2.7	3.4	6	7.7	11.3	12	10.4	8	6.6	3.5	0.2	-4	-8	-7
Harman ’13 w/o bass	0	0	0	0	0	0	0	0	0	0	0	0	1	1.4	1.8	2.1	2.6	2.7	3.4	6	7.7	11.3	12	10.4	8	6.6	3.5	0.2	-4	-8	-7
Harman 2018	5.5	6.2	6.1	5.8	5.6	5	4.4	3.4	2	1	0.1	0	0.5	1	1.3	1.7	1.9	2	3	5.2	7.4	9.6	10.6	10.3	9.5	7	4.6	1.6	-3	-6	-18
Harman ’18 (Or’s -2 bass)	3.8	3.8	3.7	3.7	3.5	3.2	2.6	1.7	0.9	0.3	0	0	0.4	0.8	1	1.4	1.7	1.8	2.5	4.4	7	9.3	10.4	10.2	8.2	6.6	4.2	1.1	-2.5	-6.7	-18.6
Harman ’18 w/o bass	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8	1	1.4	1.7	1.8	2.5	4.4	7	9.3	10.4	10.2	8.2	6.6	4.2	1.1	-2.5	-6.7	-18.6
(Headphones)																															
AKG K361 Or	1.6	2.2	2.5	2.8	1.8	-0.3	-0.4	0	0.2	0.5	-1.9	-3.3	-3.9	-3.6	-2.8	-2.1	-0.8	0	1.8	3.7	5.4	6.1	6.6	-0.4	0.2	1.5	-1.1	-3.7	-7.4	-11.1	-13.8
AKG K371 Or	5.7	5.9	5.3	4.9	3.2	0.9	1	0.9	0.6	-0.3	-0.8	-1.8	-1.8	-1.8	-1.5	-1.1	-0.6	0	0.7	2.3	4.2	7.3	7.3	2	4.2	4.3	3	-3.3	-6.2	-15	-16.5
AKG K550 IF	2.4	3	3.2	3	2.3	1.4	-0.4	0.9	1.7	-0.8	-0.3	-0.6	-0.8	-1.2	-1	-2	-1.8	0	2.1	2.7	2.9	5.6	7.6	4	1.8	3.7	2.7	2.1	-4.9	-12.5	-5.3
AKG K601 Or	-9	-7.5	-6	-5	-5	-5	-2.5	-2	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	2	6	10	13.5	11.5	10.5	5	6	7	-9	-7	-3	-10
AKG K701 Rt	-6	-4	-4	-3	-2.5	-2	-2	-1.5	-1	-1	-1	-1	-1	-1	-1	-2	-1.5	0	1.5	4	9	13	11.5	7.5	6.5	9.5	10	-1	1	-10	-7
AKG K712 Or	1	2	2.8	3.4	3.9	4.2	4.3	4.3	3.9	3.9	4.4	4.6	4.6	4.5	4.1	3.1	1.8	0	-2.1	2.1	7.3	8.2	6.6	9.1	10.3	8.7	6.8	-5.2	1.8	-3.4	-11.1
AKG Q701 Rt	-5	-4	-3	-2	-1.5	-1	-1	-0.5	0	0	0	0	0	0	-0.5	-1	-0.5	0	1	4	9	12	9.5	7	6.5	10	9	-3	3	-11	-7
Audeze LCD-1 Or	-5.3	-4.6	-4	-3.7	-3.6	-3.1	-2.1	-2.2	-2.3	-2.3	-2.1	-1.9	-1.6	-1.2	-1.2	-1.4	-1.2	0	-0.9	-2.2	-0.6	5.1	8.7	5.9	0.1	-3.2	-1.9	-5.7	-5.6	-3.5	-12.9
Audeze LCD-2 Class Rt	-5	-4.8	-3.8	-2.9	-2.8	-2.9	-3	-3	-2.9	-2.8	-2.8	-2.7	-2.4	-2.2	-2.5	-0.8	1.2	0	0.8	0.2	2.2	4.5	1.7	-5	-2.2	1.5	0.1	-13	-4.4	-7.9	-10.1
Audeze LCD-2 Or	-3.3	-2.8	-1.8	-1.8	-2.1	-1.9	-1.8	-1.7	-1.7	-1.7	-1.6	-1.7	-2.1	-1.8	-1	-0.4	0	0	-0.3	1.5	1.5	2.6	4	-0.6	-1.8	2.8	-1.8	-2.2	-4.9	-11.1	-5.1
Audeze LCD-X IF	-4.7	-3.9	-0.3	0.1	0	-0.3	-0.3	-0.1	-0.3	-0.5	-0.2	-0.4	0	-0.3	0.1	-0.5	0	0	-0.7	1.3	3.5	5.3	6.2	4.7	4.5	0.9	-3.1	0.5	-3.1	-4	-4
Audeze LCD-X Cr2	-5.2	-4.6	-4.3	-3.7	-3.3	-2.6	-2.5	-2.5	-2.4	-2.2	-2	-1.6	-1.2	-1.3	-0.8	0.7	0.6	0	-2.6	-3.2	-2	-1.7	-3.4	-4.3	2.7	1.2	-3.4	-10.3	-3.5	-4.4	-6.8
Audio-T M40x Rt	-0.3	1.2	2.7	3.8	4.3	4.2	3.2	3.7	4.3	2.9	1.1	-1.6	-3.8	-3.7	-3.2	-2.2	-1.4	0	2.2	3.8	5.3	7.2	8.3	6.1	3.4	0.9	7.7	4.6	-1.1	1.3	-9.1
Audio-T M40x Or	-14.5	-11.4	-8.1	-4.9	-2.1	-1.3	0.5	1	2.7	2.4	2.5	1.6	-0.3	-1.3	-1.4	-0.1	0.1	0	2.1	3.8	5.6	8.3	9.6	9.4	6.7	6.5	8.8	2.3	-2.6	-5.8	-8
Audio-T M50x Or	-7.8	-4.9	-2	0	0.3	0.2	-0.4	0.8	0.6	0.6	-0.3	-3	-3.5	-2	-0.7	-0.2	-0.1	0	1.2	2.7	6.3	10.6	11.2	10.7	7.1	3.6	8.6	-0.3	3.2	3.7	-9.2
Audio-T M50x Cr	3.8	5.1	5.4	6.4	5.7	4.4	3.3	2.1	2.5	1.8	-0.7	-2.7	-3.4	-1.5	-0.5	0.1	0.8	0	0	1.5	6.6	10.5	9.8	7.8	3.1	3.8	3.6	-0.5	-3.2	-1.2	-11.2
Audio-T M50x Cr2	1	1.7	2.3	2.9	2.7	1.3	2.3	2.8	3.2	2.6	0.9	-1.4	-1.4	-1.4	-1.4	-0.4	0.2	0	0.3	1.4	4	6.3	7.4	7.5	5.1	3.5	1.3	-1.9	-2.9	-8.8	-7.9
Audio-T MSR7b Cr2	-1.5	1	2.2	3.3	3.9	3.7	3.9	4.6	3.8	2.2	-1.1	-4.2	-3.9	-2.3	-1.4	-0.5	-0.1	0	0.7	2.7	5.4	6.9	4.7	6.2	6.4	4.8	2.5	-1.3	-5.2	-17.1	-10.3
AudioQ Nighthawk IF	8.4	8.3	8.2	8	7.8	7.4	7.4	8.4	8.1	7.9	8.3	8.1	7.6	6.6	5.7	3.4	1.8	0	1.6	5.2	5.8	5.6	8.4	5	2.1	3.9	4.6	5	-1.9	-6	-0.6
Aurora Borealis Rslv	-7.4	-6.7	-5	-3.5	-2.7	-2.4	-2.3	-2.5	-3	-3.7	-3.2	-3.9	-4.1	-4	-3.4	-2.7	-1.4	0	0.3	0	0.9	3	3.3	3.6	3.3	0.8	-2.7	-13.7	-12.7	-11	-14.7
Aurora Borealis Or	-9	-7	-5	-3.7	-2.9	-2.2	-2.1	-2.6	-3.2	-3.8	-3.5	-4	-4.1	-4	-3.6	-2.9	-1.5	0	0.1	0	1	2	3.5	3.6	3	0	-2	-13	-13	-11	-14
Beats Solo HD IF	8.4	8	7.4	6.5	4.7	0.5	9	7	5.5	4	1.9	1	0	-3.7	-3.9	-2.2	-0.8	0	0.3	0	0.2	1.5	5.1	4.8	0.5	-10.5	-11.5	-8.5	-15.5	-19.5	-19.5
Beats Solo3 Wireless Rt	10	10	10	9.5	9.5	9.5	9	9	8.5	8	7	5	2	1	0.5	-0.5	-1	0	2	4.5	7	10	14	9	7	6	7	2	-3	-8	-13
bey DT 770/80 Or	-9.2	-7.3	-5.9	-5.1	-5.3	-5.3	-7	4.8	7.3	4.6	3.2	2.2	1.4	0.8	0.2	-0.2	-0.2	0	1.5	3.7	7.3	8.3	6	2.3	2.5	4	5.9	-2.3	1.7	-9.9	-20.6
bey DT 770/250 Or	5.8	6.5	7	7.2	7	6.2	3.8	-2.7	2.4	-0.2	-6.4	-6.1	-4	-2.9	-2.3	-2.3	-1.4	0	-0.8	1.2	3.9	6.6	3.4	6.1	6.1	9.2	5	-0.9	4.3	-1.7	-10.8
bey DT 880/250 IF	-5.3	-4.1	-2.6	-2	-1.2	-0.5	-0.7	0.3	0.4	0.6	0.8	0.8	0.6	0.4	0.5	0	0.2	0	0	1.1	3.2	5.6	9.6	6.8	2.8	4.7	4.1	3.9	-4.8	-13.8	-3.4
bey DT 880 Or	-5.8	-5.1	-4.5	-3.8	-3.4	-3.2	-3.5	-2.5	-2	-1.7	-1.5	-1.4	-1.3	-1.2	-1.5	-0.9	-0.9	0	0.3	2.2	5.3	8.5	10.1	9.3	7.1	10.5	3.5	-7.1	-2.5	-6.5	-9
bey DT 990/250 Or	-2.8	-1.4	0	1.3	2.3	2.9	3.1	2.5	2.6	2	1.3	0.2	-0.9	-1.9	-1.7	-2.1	-1.9	0	1.6	2.8	5.2	8.8	10.7	10.5	10.1	10.8	11.5	4.2	7.1	2.4	-3.1
bey DT 1770 L pads Rt	5.7	6.1	5.8	5.1	4.2	5.3	7.1	7.6	7.8	6	1.3	-2.7	-1.4	-0.4	-0.1	-0.4	-0.3	0	0.2	-0.1	-0.1	2.1	2.7	0.5	1.1	5.9	5.6	0.1	-4.5	-18.6	-26.4
bey DT 1990 A pads Or	-2.2	-1.6	-1	-0.5	0	0.3	0.5	0.6	0.8	1.2	1.2	1.3	1.1	0.8	0.5	0.2	-0.1	0	1.3	3.3	5.1	8	7.8	4.1	6.9	5.9	12.7	1	1.7	1.8	-13.5
bey DT 1990 B pads Cr2	1.2	1.8	2.3	2.6	2.8	2.8	2.5	2.9	2.9	2.9	2.6	2.3	1.7	0.9	0	-0.1	-0.1	0	0.6	2.7	5.3	7.6	8.7	8.4	6.4	7.4	9.4	0.2	0.4	-7.4	-4.2
bey TYGR 300 R Cr2	-0.8	0.8	1.8	2.7	3.2	3.3	2.7	2.8	2.8	2.4	2.3	1.8	0.8	0	-0.7	-1.4	-1	0	1.5	2.8	4.3	6.1	7.4	8.4	8.4	6.2	6.8	0.8	-1	-2.3	-5.7
BLON B20 Cr2	-1.1	-0.8	-0.5	-0.3	-0.3	-0.2	-0.3	-0.3	-0.3	-0.2	-0.6	-0.9	-0.1	-0.1	-0.8	-0.1	-0.6	0	0.8	1.3	1.7	6.2	8.7	7.9	2	-4	0.8	-4.3	2	-16.8	-22.4
Bose QC25 Or	-1.6	1.1	3	3.7	3.3	2.5	1.9	1.4	0.9	0.4	-0.1	-0.8	-1.4	-1.9	-1.8	-1.6	-0.3	0	2.9	3.7	64	8.5	0.5	10.1	3.6	8.5	-4	-5.2	-1.7	-11.8	-18.5
Bose QC35 II active	5.7	5.6	6	6.6	6.5	6.4	6	5.1	4.5	3.9	3.3	3	2.5	1.6	1.7	1.6	1	0	0.3	3.1	6.6	10.2	11.4	12.3	10.4	12	5.1	-4	0.4	-16.4	-13.2
Bose QC35 II passive	-3.8	-2.1	-1.8	-0.6	-2.2	-1.6	1.7	4.1	5.9	3.7	-0.3	-3.6	-5.9	-6.1	-4.9	-2.8	-0.4	0	-1.7	-4.6	-3.1	1.7	3.3	6.3	4.5	4.4	-7.7	-9.1	-5.7	-19.3	-13.7
Creative Aur Live 2 IF	4.7	5.4	5.8	6	6	5.7	4.8	4.9	4.4	3.8	3.6	2.9	1.7	-0.7	-0.3	0.2	0.8	0	-1.2	-2.8	-2.4	0.3	1.9	2.7	-1.4	-3	-2.3	2.1	-12.1	-8.5	-9.2
DCA Aeon 1 Closed Or	0.9	1	1.2	1.3	1.3	0.3	0.6	0	-1.3	-2.8	-1.5	-1	-0.7	-0.7	0.4	0.9	1.2	0	1.4	2.3	2.4	4.3	6.7	6.3	1.7	2.3	3.7	-2.5	-2.8	-14	-9
DCA Aeon 2 Closed Or	5.1	5.4	5.6	5.4	5.2	4.6	4.4	5.4	4.7	1.9	0	1.2	1.9	2.2	1.5	0.8	0.6	0	1.4	0.7	1.7	3.3	4.2	3.1	5.6	7.1	4.4	-8.6	-0.4	-0.1	-2.9
DCA Aeon 2 Open Cr2	4.9	5.2	5.2	5.1	4.9	4.7	5.6	6.1	6.1	5.5	4.7	3.9	3.2	2.3	2.6	1.1	0.7	0	-0.4	1.6	4.6	7.4	6	2.5	7.2	7.7	4.6	-8.5	-1.2	1.5	-2.7
Drop-THX Panda Cr2	1	1.2	1.3	1	1.4	1.4	2.2	3.7	3.9	3.4	2.4	1.4	0.6	0	1	1.7	1.3	0	0.3	-0.8	-0.8	2.2	5.1	5.2	3	6.4	1.4	-11.1	-4.7	-16.5	-16
Focal Clear Or	-4	-3.3	-2.7	-2.2	-1.9	-1.6	-1.5	-1.5	-1.7	-2	-2.3	-2.6	-2.7	-2.8	-2.7	-2.3	-1.3	0	2.1	2.8	3.2	5.1	7.4	2.5	1.9	0.9	-4.4	-10.2	-2	-5.6	-13.4
Focal Clear Rslv	-5.1	-3	-0.9	1.2	2.2	3.3	4.1	4.9	5.1	5.1	4.8	4.4	3.8	3.2	2.5	1.5	0.6	0	-1	-1.7	-0.2	1.7	5	7.1	9.7	10.8	1.1	-1.4	3.5	-6.9	-4.6
Focal Elear Or	-2.5	-1.5	-1.1	-0.6	-0.4	-0.3	-0.1	-0.2	-0.3	-0.6	-0.8	-1.1	-1.3	-1.4	-1.3	-1	-0.4	0	0.9	2.5	1.9	4.1	4.5	-0.4	-1.6	0.5	-6.9	-8.9	-9.7	-13.3	-13.5
Focal Elear Rt	-7.5	-6.2	-4.8	-3.3	-2.2	-1.2	-0.6	-0.5	-0.4	-0.6	-1.1	-1.6	-1.8	-2	-1.8	-1.5	-0.8	0	1.3	3.1	4.8	7.2	7.9	-2.4	-4	0.2	2.7	-6.4	-4.2	-6.9	-3
Focal Elegia Or	-0.1	0	-0.1	-0.7	-0.8	-0.9	1.2	1.5	-2.8	-3.6	-3.3	-2.1	-1.2	-1.1	-0.8	-0.9	-0.5	0	0.5	3.1	2.7	5.5	4	-6.8	-3.1	0.1	0.1	-8.9	-2.9	-10.6	-8.5
Focal-Drop Elex Or	-3	-2.1	-2.1	-1.5	-1.2	-0.9	-0.8	-0.8	-1	-1.4	-1.7	-2.1	-2.4	-2.5	-2.4	-2.1	-1.2	0	1.9	2.5	1.8	3.8	6.8	5.5	4.6	1.7	-5.9	-6.5	-7.3	-8.2	-5.1
Focal Radiance Rslv	5.2	4.6	5.2	4.1	1.9	1.8	4	5.4	6.5	5.1	2.1	0.6	0.4	0.9	1.2	2.3	3.3	3.9	4.1	6.4	7.2	6.7	5	6.3	5.5	-3.6	-5.1	-8	-1.5	8.4	-9.6
Focal Utopia Or	-5.5	-4.9	-4.4	-3.9	-3.5	-3.2	-2.9	-2.7	-2.7	-2.6	-2.7	-2.8	-2.9	-3	-2.9	-2.4	-1.4	0	1.6	1	0.2	5.8	6.2	5.9	4.1	3.4	-2.6	-5.3	-7.9	-5.2	-5.7
Focal Utopia Rslv	-3.4	-2.2	-1.5	-0.9	-0.7	-0.4	-0.4	-0.2	-0.4	-0.7	-1.1	-1.4	-1.7	-2.1	-2	-1.9	-1.1	0	1.6	0.4	0.8	4.8	5.7	5.1	-0.2	-1.7	-2.1	-13.2	-8.7	-6.2	-14
Fostex Purpleheart Or	-2.1	0.3	2	2.8	2.9	2.3	2	1.6	1.2	0.7	0.1	-0.4	-0.7	-0.1	-2.1	-3.3	-2.4	0	1.2	3.3	5.6	8.1	0	0.1	6.5	4.5	3	-1.8	-1	-11.1	-9.9
Grado SR60e Or	-12	-9.7	-7	-4.2	-2.2	-0.6	0.1	0	-0.6	-1.2	-1.6	-2.1	-2.6	-1.1	-1.4	-1.2	-0.6	0	0.9	5.1	15.4	12.8	10.2	10.8	8.9	6.5	5.5	-2	-4.8	-2	-14.9
Grado SR225e Rt	-9.7	-7.7	-5.3	-3.2	-1.6	-0.5	-0.2	-0.3	-0.6	-1.2	-1.7	-2	-1.7	-1.8	-1.5	-1.1	-0.6	0	1.1	3.9	12	13.7	11.4	6.3	7.4	5.8	9	10.5	3.8	-11	-22.9
Hifiman-Drop HE4XX Or	-11.4	-8.7	-6.6	-4.2	-2.6	-1.4	-0.8	-1	-1.5	-1.6	-1.9	-2	-2.2	-1.9	-2.5	-2.6	-1.3	0	0.3	-1.4	-0.5	7.6	10.8	7.3	1.9	6.1	7.1	-4.2	-10.1	1.8	-11.1
HiFiman-Drop HE4XX IF	-2.4	-1.3	-0.4	-0.2	-0.1	0.6	0.5	0.3	0.1	-0.1	0.1	-0.2	0.1	0.3	-0.1	0.4	-0.1	0	-0.5	-0.4	0.9	6.4	11.4	7.9	5.1	5.6	4.2	2.8	-2.7	-10.7	-5
Hifiman Sundara IF	-3.3	-2.6	-2.1	-2	-2	-1.4	-1.3	-1.5	-1.8	-1.9	-1.7	-1.5	-1.2	-0.9	-1.3	-0.8	0.2	0	-0.7	-0.9	0.3	4.8	11.4	8.9	7.1	-0.2	0.1	-6.3	1.7	-10.7	-9.2

Hifiman Sundara Or	-3.3	-2.3	-1.9	-1.6	-1.6	-1.4	-1.4	-1.4	-1.6	-1.8	-1.8	-1.6	-1.5	-1.5	-1.5	-0.5	0.3	0	-0.9	-1.2	-0.3	5.6	10.4	10.2	8.1	0.8	2.5	-5	0.3	-3.5	-17.2	
Hifiman Sundara Rslv	-5.1	-4.1	-3.3	-2.3	-1.8	-1.4	-1.7	-1.9	-2.1	-2.1	-1.9	-1.8	-1.8	-1.4	-2.4	-1.1	-0.3	0	0.9	0.6	3.6	4.5	6	6.3	5.4	2.3	-0.1	-2.1	-3.6	-6.6	-12.1	
Hifiman Sundara Rt	-4.4	-3.1	-1.8	-1.1	-0.6	-0.3	-0.4	-0.5	-0.6	-0.8	-0.8	-0.7	-0.5	-0.2	-0.9	0.3	1.1	0	0.5	1.1	2.2	6.1	10.1	8.5	8.4	3.9	6.7	-1.8	0	-4.7	-9.8	
Hifiman Ananda Rt	-3.5	-2.8	-2	-1.4	-0.9	-0.6	-0.7	-1	-1	-1	-1.1	-1.2	-2.2	-1.2	-0.5	-0.5	-1.2	0	-1.4	-1.7	1.9	8	9.6	6.2	3.3	3.8	6.4	-7.9	-1.2	-4.4	-2.1	
Hifiman Arya Or	-0.8	-0.8	-0.8	-0.8	-0.8	-0.7	-0.6	-0.6	-0.4	-0.2	-0.8	-1	0.5	-0.9	1.2	-0.5	-,8	0	0.1	-1.3	1.3	7.3	8.8	4.3	10	7.7	5.5	-3.1	2.3	-11.5	-10.1	
Koss Porta Pro Rt	-6.9	-4.7	-2.2	0.1	2	3.4	4.3	4.6	4.5	3.8	2.9	1.8	1.2	0.4	-0.1	-0.2	-0.3	0	1.4	4.2	7.2	9.3	8.7	-0.7	5.3	-1.5	0.6	0	-8.9	-15.3	-23.8	
Koss KSC75 Rt	-15.5	-12.9	-9.9	-7	-4.4	-1.8	0.3	1.3	1.7	1.3	0.5	0	-0.3	-0.7	-0.8	-0.7	-0.5	0	1.1	3.9	8.1	12.1	12	2.4	11.1	1.8	5.7	1.5	-3.8	-7.1	-9.5	
Meze 99 Classics Or	9.7	10.4	10.9	11.2	11.3	11.2	10.5	9.3	9.4	9.6	9.3	7.5	2.6	-0.2	1.7	2.8	2.1	0	2	5.7	8	8.3	7.3	2.7	13.9	11	8.2	-6	6.8	-4.3	-14.1	
Meze Empyrean Or	2.8	2.8	3	3.1	3	3	3.1	3.2	3.2	3.3	3	2.4	2	2.1	1	1.2	1.4	0	-0.8	-1.3	-0.1	3.8	7.1	8.4	6.2	3.4	0.5	-5.7	-4.7	1.1	-10.5	
Monoprice M1060 Or	-1.8	-1.7	-1.2	-0.9	-0.4	0	-0.1	-0.1	-0.1	0	0.1	-0.1	-1.4	-1.8	-0.7	0.7	1.1	0	1.8	4.1	7.3	9.2	10.2	8.1	4.3	2	-5.7	-1.4	-4.9	-1.5	-1.5	
Neumann NDH 20 Or	8.4	8.9	9.3	9.2	8.8	7.8	5.9	4.6	4.7	4.1	3.1	2.4	1.6	1.1	1.3	1.4	1	0	-1.4	-1.5	0	3.1	8.2	11.1	8.2	5	7.5	-3.9	-6.2	-8.4	-7.4	
Oppo PM-3 Rt	3	2.4	1.8	1.2	0.9	1.4	2.2	2.6	2.7	2.3	1.4	0.1	-1.2	-1.5	-0.2	1.4	1.1	0	2.7	4.9	7.3	11.5	11.3	7.3	4.2	4.3	11.4	4.5	-4.5	-12.5	-13.1	
Oppo PM-3 Or	1.1	0.8	0.2	-0.6	-1.1	0.6	2.1	2.9	2.9	2.2	0.6	-1.4	-3	-3.1	-1.9	-0.7	-0.4	0	2.5	4.9	7.5	10	10.4	8.2	5.7	9.2	5.4	-11.8	2.2	-10.8	-17.5	
Philips SHP9500 Or	-9.9	-8.1	-6	-4.1	-2.6	-1.5	-1.1	-0.5	-0.5	-0.6	-0.2	-1.4	-1.7	-1.6	-1.5	-1.3	-0.6	0	0.8	1.5	2.2	4.7	8.3	9.5	10.8	12.4	-0.9	-0.2	1.6	-4.9	-16.6	
Philips Fid. X2HR Or	-5	-3.1	-1	0.9	2.3	2.8	2.7	1.9	1	-0.5	-1.1	-0.1	-0.6	-0.9	-0.6	-0.3	0.5	0	-1	3.8	2.5	5.4	5.9	0.1	10.2	5.8	-0.3	-3.5	-6.2	-11.7	-13.7	
Sendy Aiva Cr	-6.7	-6	-5.2	-4.2	-3.5	-3	-3.2	-3.3	-3.3	-3.4	-3.3	-3.1	-2.7	-2	-2	-1.7	0	0	-0.5	-6.3	-2.5	3.5	5.5	-0.3	-2.5	-1.2	-6.1	-3.8	-4.5	-5.5	-12	
Senn-Drop PC38X HdFi	-5	-3.5	-2.5	-1.5	-0.7	-0.1	-0.6	-0.6	-0.7	-2	-2.2	-2.5	-2.5	-2.7	-2.5	-2	-1.3	0	1.3	2.5	3.1	5.5	7.4	7	7.3	1.6	-0.7	-3	-3	-7.5	-10	
Senn-Drop HD 58X Or	-7	-5.3	-3.9	-2.7	-1.8	-1.2	-0.8	0	0.2	0	-0.2	-0.4	-0.5	-0.8	-0.9	-0.9	-0.6	0	1.2	1.5	1.9	3.3	6.6	6.1	7.4	1.1	-1.2	-7.2	-5.8	-11.4	-9.1	
Senn HD 560S Rslv	-2.2	-1.8	-1.4	-0.3	-0.2	-0.8	-1.1	-0.6	-0.9	-1.6	-2	-2.4	-2.6	-2.3	-1.9	-1.8	-1.2	0	1.5	2	3.2	5.7	8.1	7.1	6.8	3.3	0.2	-12.4	-5.4	-3.9	-8.4	
Senn HD 579 Cr2	-5.9	-4.2	-2.5	-1.1	-0.1	0.3	0.6	1.8	2.1	2.1	1.8	1.4	1	0.5	0.1	-0.1	-0.1	0	0.8	2.7	5.4	7.6	11.1	8.4	7.5	4.8	2.5	-0.6	-5.1	-5.2	-10.6	
Senn HD 580 IF	-8.6	-6.7	-4.9	-3.7	-2.5	-2	-1.4	-0.4	-0.4	-0.5	-0.6	-0.8	-1	-1.4	-0.8	-1.2	-0.4	0	1.5	3.1	4.7	7.4	11.2	8.5	4.2	-3.4	-3.8	-0.7	-9.9	-11	-4.9	
Senn HD 599 Or	-7.5	-5.7	-3.9	-2.3	-1.4	-0.4	0.5	1.5	1.9	2	1.8	1.2	0.9	0.6	0.2	-0.2	-0.2	0	0.4	1.2	4.6	8.3	10.8	8.2	4.7	2.2	2.9	0	-7.7	-14.5	-9.6	
Senn HD 599 Rt	-3.7	-2.5	-1.1	-0.1	0.8	1.7	2.2	2.7	3	2.8	2.3	1.7	1.2	0.5	0.2	0	-0.2	0	0	-0.7	2.9	6.7	10.4	7.7	5.4	2.9	2.3	-3.4	-5.1	-11.6	-7.7	
Senn HD 600 IF	-10	-7.7	-5.3	-3	-1.5	-0.3	0.5	1.5	1.6	1.5	1.2	0.9	0.5	0	0.4	-0.3	0.2	0	1.6	2.5	3.9	7	11.4	8.4	4.5	-1.6	-1.5	-0.5	-9	-10.5	-6	
Senn HD 600 Or	-6.7	-4.7	-3.3	-2.1	-1.3	-1.1	-0.3	0.2	0.2	-0.1	-0.5	-0.8	-1.1	-1.4	-1.4	-1.1	-1.2	0	1.4	2.7	5.2	7.8	10.6	6.4	6.3	4.8	2.7	-4.1	0	-5	-13	
Senn HD 600 Cr2	-11.5	-9.3	-7.5	-5.7	-4.6	-3.5	-2.1	-1.4	-1.1	-1.5	-1.2	-1.3	-1.5	-1.5	-1.4	-1.1	-0.7	0	1.4	2.9	4.3	7.2	9	7.4	5	-2.4	3.3	-7	-6.2	-9.7	-9.7	
Senn HD 650 Or	-6.7	-5.3	-3.9	-2.7	-2.3	-1.7	-0.2	0.6	0.8	1	0.8	0.5	0.4	0.2	0.1	0.1	0.5	0	1.3	2.1	3.8	6.7	9.1	5.7	5.3	2.7	0.9	-7.6	-7.2	-4.8	-12.8	
Senn HD 650 Cr2	-10	-8.3	-6.4	-5	-3.9	-3.7	-2.7	-1.7	-1.4	-1.4	-1.6	-1.7	-1.8	-1.7	-1.8	-1.4	-1	0	1.3	2.7	4.3	7.1	9.3	6.9	5.1	0.8	-0.5	-6.3	-9.5	-11	-12.2	
Senn-Drop HD 6XX IF	-9.3	-7.5	-6	-4.4	-3	-2.4	-1.3	0.2	0.6	0.9	0.9	0.5	0.2	-0.1	0.3	-0.2	0	0	1.7	2.7	3.7	6.3	10.1	7.5	2.7	-2.6	-5	-3.2	-4.8	-10.9	-8	
Senn HD 800 Or	-3.6	-2.6	-1.8	-1.2	-1	-1.5	-0.4	0.2	0.3	0.5	0.5	0.4	0.4	0.3	0.2	0.2	0.3	0	-0.4	-0.3	1.8	4.9	6.9	8.5	10.2	10.2	5.8	-1.5	-0.2	-7.2	-9.1	
Senn HD 800S Or	-4.1	-3.3	-2.6	-2	-1.8	-2	-1.1	-0.5	-0.3	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.1	0	0	-0.5	0.1	2.9	6.1	6.7	7.8	8	8	4.2	-3	1.4	-3	-11.6	
Senn HE1 Orpheus 2 Or	1.1	1.9	2	1	2.8	0.9	1	0.3	-0.7	-1.3	-1.8	-1.8	-1.4	-1.5	-1.5	-1	-1	0	0	-0.8	3.4	5.6	6.7	3.9	2.9	4.7	2	2.7	-4.5	-6.7	-10.2	
Sony MDR-7506 Or	-0.2	1.4	3.4	4.8	5.5	5.2	3.8	3.4	3.8	2.6	-0.1	0	1.3	1.1	0.8	0.6	0	0	0.7	3.2	6.5	11.1	12.6	10.8	13.2	12.8	5.7	2.4	-7.2	-13.3	-19.3	
Sony WH-1000XM3 Or	9.9	10.1	10.1	9.8	9.3	9	9.1	9	8.5	6.7	4.4	2.6	1.7	1.9	2.9	2.7	2.4	0	-2	0.4	3.2	6.3	7.5	6.1	4.7	4.2	5.4	0.1	-4.1	-11.7	-18.3	
Sony WH-1000XM4 Cr2	8.6	9.1	9.1	8.7	8.4	7.7	7.5	8	7.7	5.8	4.1	2.4	0.9	-0.8	0.7	2	0.8	0	1.1	2.7	1.4	5.2	7.4	9	9.8	3.7	6.9	-2.1	0.7	-11.5	-10.8	
Superlux HD 681 Or	-13.5	-10.5	-7.5	-5.1	-3.6	-3.6	-3.8	-4.2	-4.5	-4.8	-5.1	-4.8	-4.5	-4.3	-3.8	-3	-1.2	0	0.6	1.5	5.3	8.2	7.7	2.6	10.4	4.4	5.6	-1.9	-4.1	-8.4	-14.8	
Verum One Or	-4.4	-4.2	-3.7	-3.9	-3.6	-3.4	-3.3	-3.3	-3.3	-3.2	-3	-3.1	-3.2	-3.2	-2.3	-0.8	-1.4	0	-1.3	-0.8	0.5	4.5	6.9	3.4	4.4	0.1	-1.7	-7.2	-4.2	-11.3	-21	
ZMF Aeolus Cr	-3.3	-2.5	-2	-0.6	-1.7	-0.7	-0.7	-0.8	-0.8	-0.9	-0.8	-0.6	-0.3	-0.2	-0.5	-0.8	-0.1	0	-2	-1.8	1.4	4.6	3.5	-8	-3	-3	-1.9	-2	-9	-16.7	-21	
ZMF Aeolus p-suede Cr2	-8.1	-7.2	-6.5	-5.9	-5.7	-5.8	-5.4	-5.1	-4.9	-5.1	-5.1	-5	-5.2	-4.9	-4.3	-3.8	-1.4	0	-1.2	-4.5	-2.4	2.2	2.7	-1	3.1	-0.8	-2.8	-7.3	-7.7	-15.1	-22.6	
ZMF Atticus Eikn-sue Cr2	-1.7	-1.1	-0.6	-0.3	-0.5	0.9	2	3	3.5	3.4	2.5	1.2	-0.3	-1	-0.5	0.1	0.9	0	-1.2	-1.1	1.1	3.6	3.6	1.2	5.5	1.6	-0.3	-5.5	-3.6	-14.3	-16	
ZMF Auteur Teak Cr	-5.2	-3.9	-2.8	-2	-1.6	-1.8	-2	-2.7	-2.6	-3.2	-2.9	-3.4	-3.3	-3.1	-2.8	-2.7	-1.5	0	-0.2	-0.9	1.6	7.1	7.8	1.9	3.3	-3.2	2.7	1.8	-5.3	-1.2	-5.2	
ZMF Auteur p-lamb Cr2	-3.9	-2.9	-1.9	-1.2	-1	-0.8	-0.9	-0.9	-1	-1.3	-2	-1.6	-1.6	-1.5	-1	-0.6	-0.2	0	0.9	2.2	3.2	6.6	7.8	6.1	8.6	1.1	3.6	-4.3	-11.5	-6.1	-13.6	
ZMF Eikon lambskin Cr2	0.3	0.6	0.1	0.7	-0.9	1.3	2.3	2.8	2.1	1.1	0.4	0	-0.2	-0.2	-0.9	-0.1	0.4	0	-0.4	-4.6	-3	2.7	2.4	6.8	7.8	-1.3	-4.6	-2.6	-8.1	-8.6	-14.1	
ZMF Vérité p-lamb Cr2	-5.8	-4.5	-3.6	-2.9	-2.5	-2.2	-1.5	-1.4	-1.4	-1.5	-1.4	-1.2	-0.9	-0.4	-0.3	-0.8	0	0	-0.9	1.1	3.8	6	-3	2.5	6.9	4.9	-7.1	-3.3	-6.5	-15	-5.4	
ZMF Vérité Cl a-lamb Cr2	-0.9	0	0.5	0.9	0.4	1.1	2.2	2.9	2.5	0.5	-1	-0.9	-0.4	-0.1	-0.2	-0.6	0	0	-0.9	-0.9	1.2	5.3	-2.6	4	7.2	2.2	-1.2	-8.2	-10.4	-11.8	-13	
Source abbreviations:																																
H&M = Hammershøi & Møller, B&K = Brüel & Kjær, Or = Oratory1990, IF = InnerFidelity, Rt = Rtings, Cr = Crinacle's 1st meas. rig, Cr2 = Crinacle's 2nd meas. rig,																																
Rslv = Resolve Reviews, HdFi = Head-Fi																																