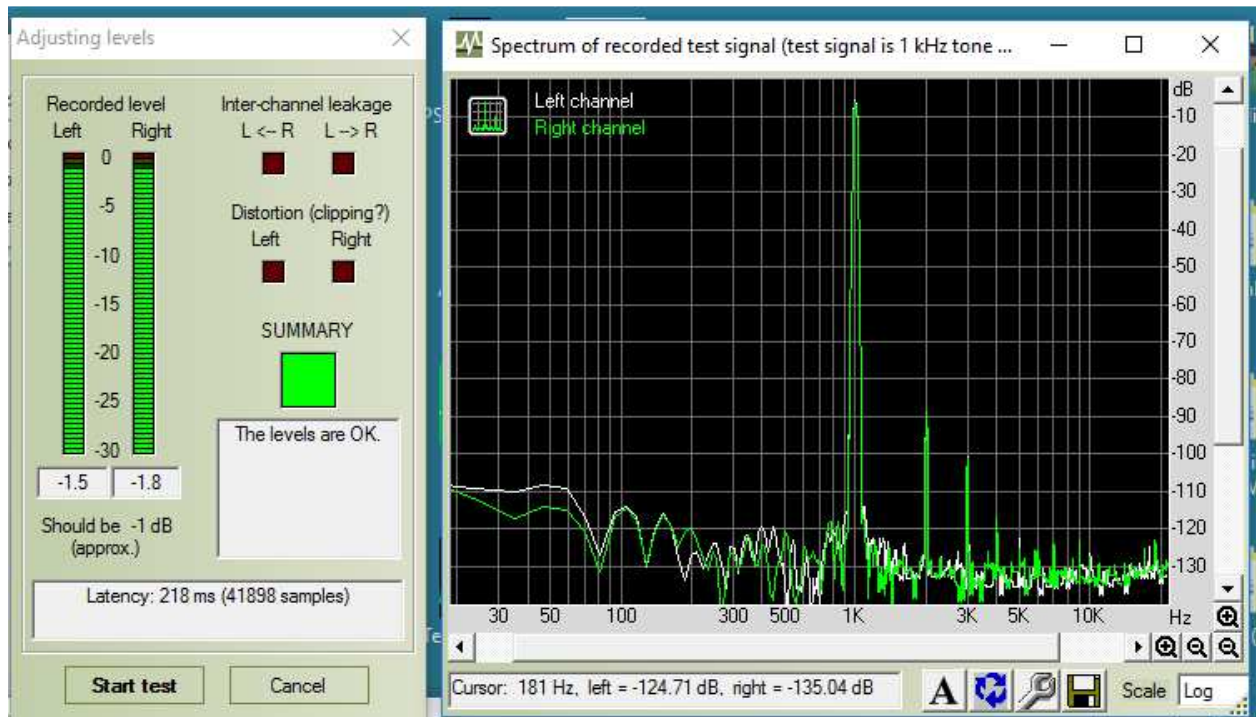


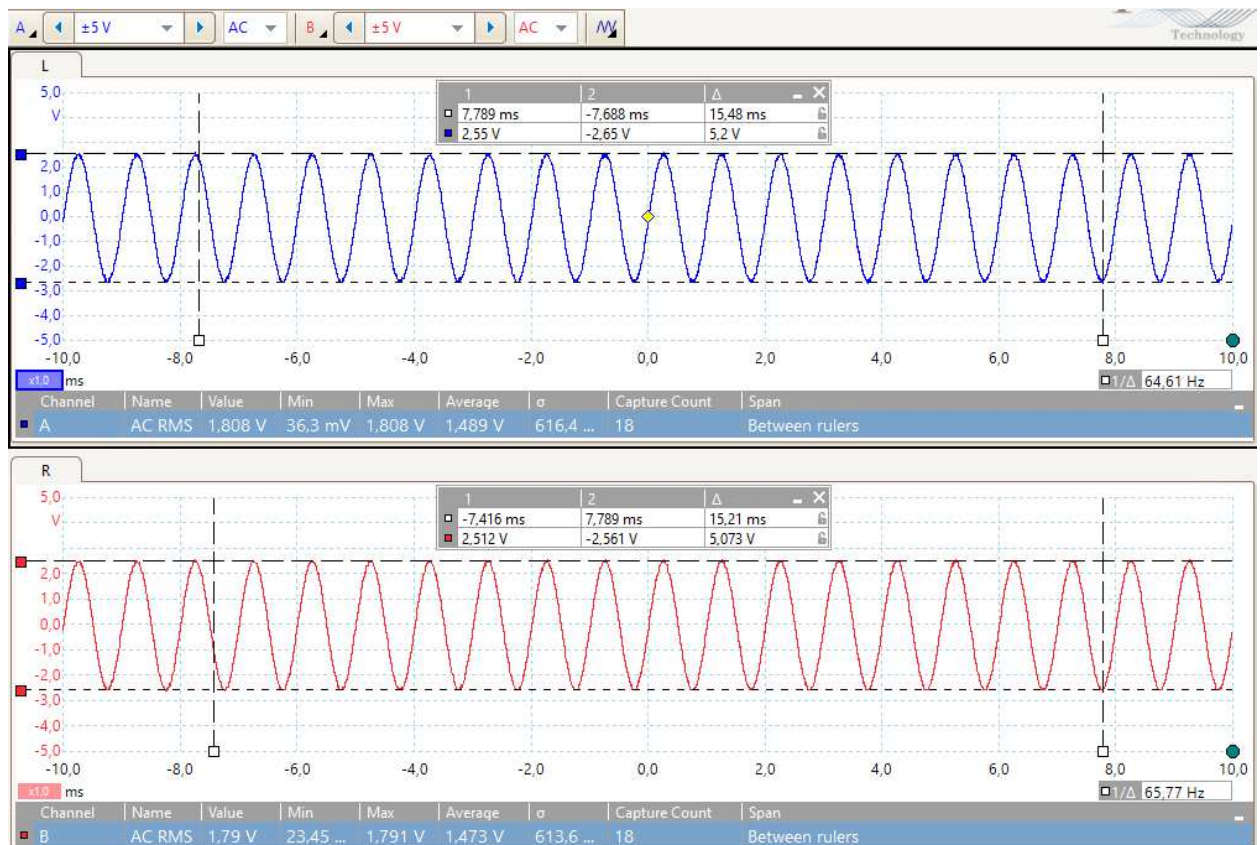
1) Makiväljund

Signaalinivoo, millega RMAA "rahule jääb":



Vasak kanal on helikaardiväljundis, parem kanal on UA-120 signaalselektorijärgses makiväljundis.

Signaalinivooks, millega RMAA juba rahule jääb (antud juhul -1,5...-1,8dB), näib olevat 1,8V (RMS) ehk 2,55V amplituudväärtuses:



Arvuti mikseriväljundis oli tasemeks 96%.

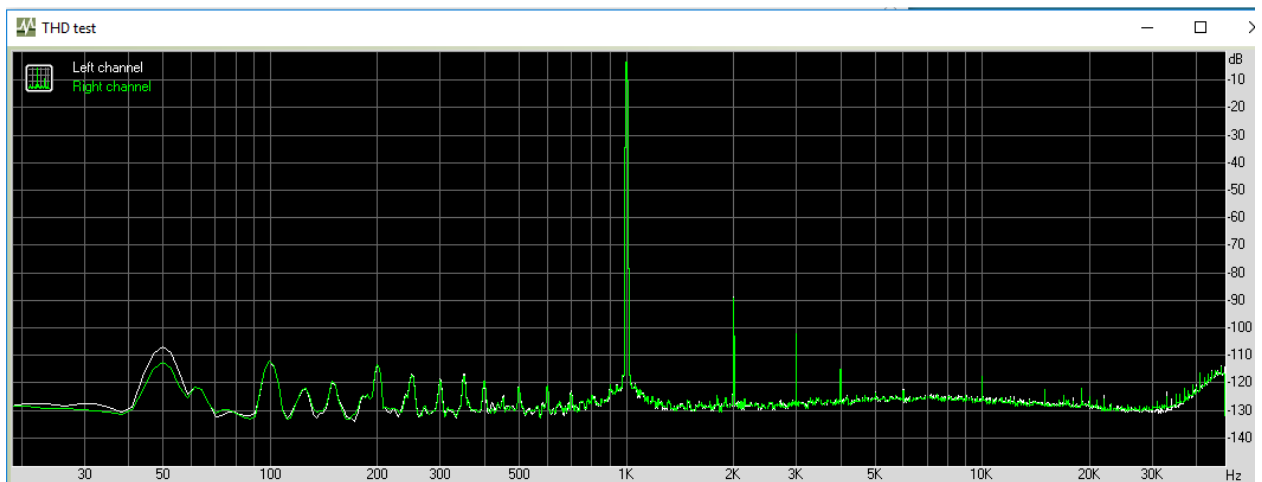
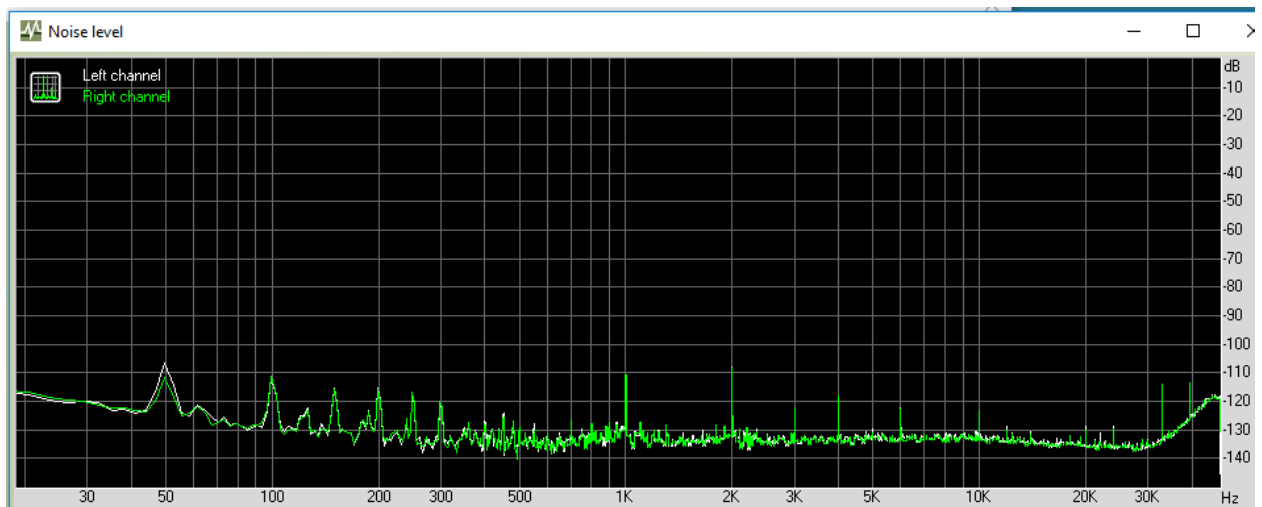
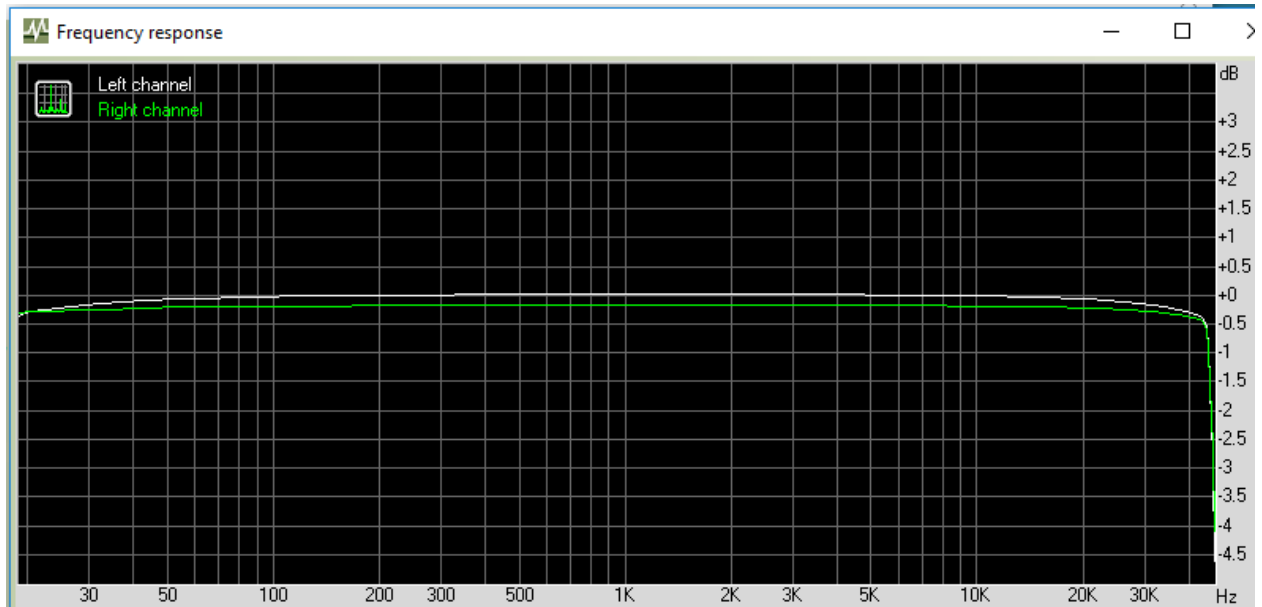
97% mikseriväljundis annab -0,5...-0,8dB (RMAA indikaatoril) ja 1,9V RMS.

Ilmselt on RMAA jaoks 0dB 2V RMS?

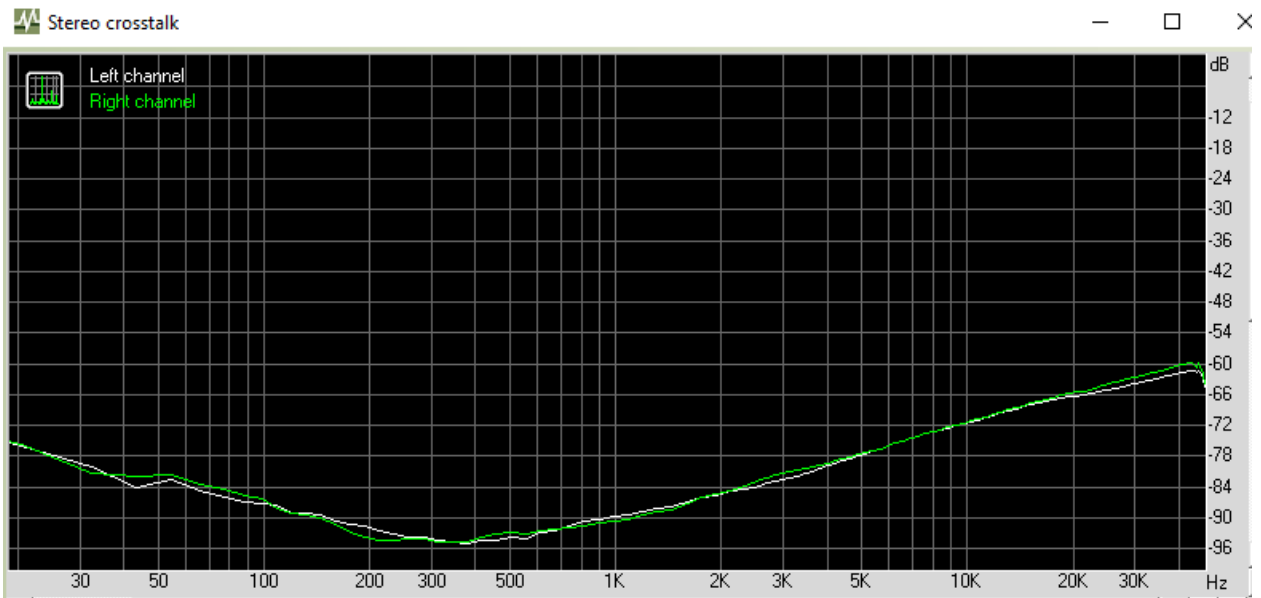
Kui nii on, siis 1V sisendnivooga võimendi mõõtmisel RMAA-ga ei tohiks (kui ei ole kindel, et võimendi julma klippimist ja ületüürimist kannatab) volüümpotet liiga julgelt pruukida.

Mõõtetulemused (sisuliselt selektorkivid ja trükirajad nendeni):

Test results	
Device:	UA-120 tape 1 out
Sampling mode:	24-bit, 96 kHz
Frequency response (multitone), dB	+0.01, -0.12
Noise level, dBA	-102.0
Dynamic range, dBA	99.4
Total harmonic distortion (THD), %	0.0053
Intermodulation distortion + noise, %	0.0077
Stereo crosstalk, dB	-90.2
Intermodulation distortion + noise (swept freqs), %	0.0093
Frequency response (swept sine), dB	+0.0, -0.0
Total harmonic distortion (swept freqs), dB	-69.83, -84.90
THD (swept freq), %	+0.0, -0.0



Et teise harmoonilise -90dB tase on juba selektorkividest tingitud? Asendada releedega?

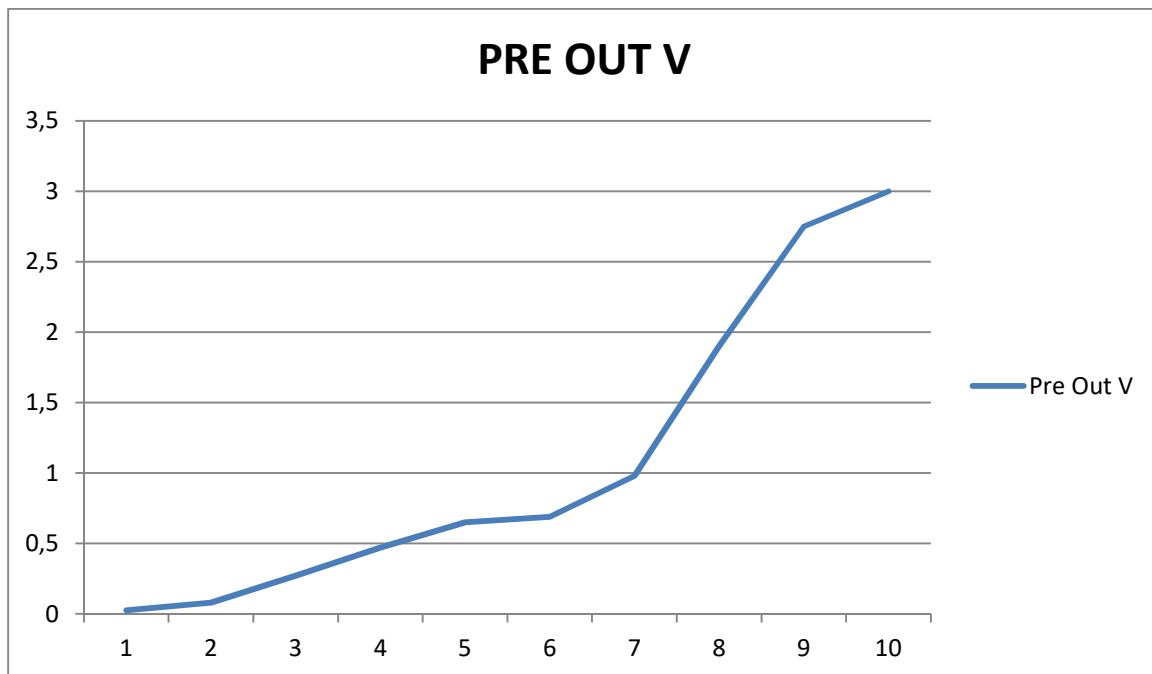


2) Ise juurde lisatud PRE OUT väljund, võetud nivooregulaatori liugurilt läbi 168 oomise takisti.

a) Kalibreerime nivooregulaatoripote skaala ära (sisendiks endiselt **1,8V** RMS) – “full channel” seades ehk koos tämbri võimendiga (tämbri võimendi väljundis on pote, millega selle signaal on nivoolt direct-moodi signaali amplituudiga võrdseks keeratud):

Skaalaväärtus	1 (20:00)	2 (21:00)	3 (22:00)	4 (23:00)	5 (00:00)	6 (13:00)	7 (14:00)	8 (15:00)	9 (16:00)	10 (17:00)
RAA nivoonäit dB	-37	-28	-17,5	-12,6	-10	-9,2	-6,2	-0,5	clip	
Väljundping V (RMS)	0,025	0,08	0,27	0,47	0,65	0,69	0,98	1,9	2,75	3
Arvutatud võimendus dB										
KLapivõimendi väljund V (RMS)	0,19	0,55	1,61	2,88	3,9	4,2	5,9	8,2 klipib selgelt		
Klapiväljundi võimendus dB										

PRE OUT graafik (väljundpinge vs skaala-asend)

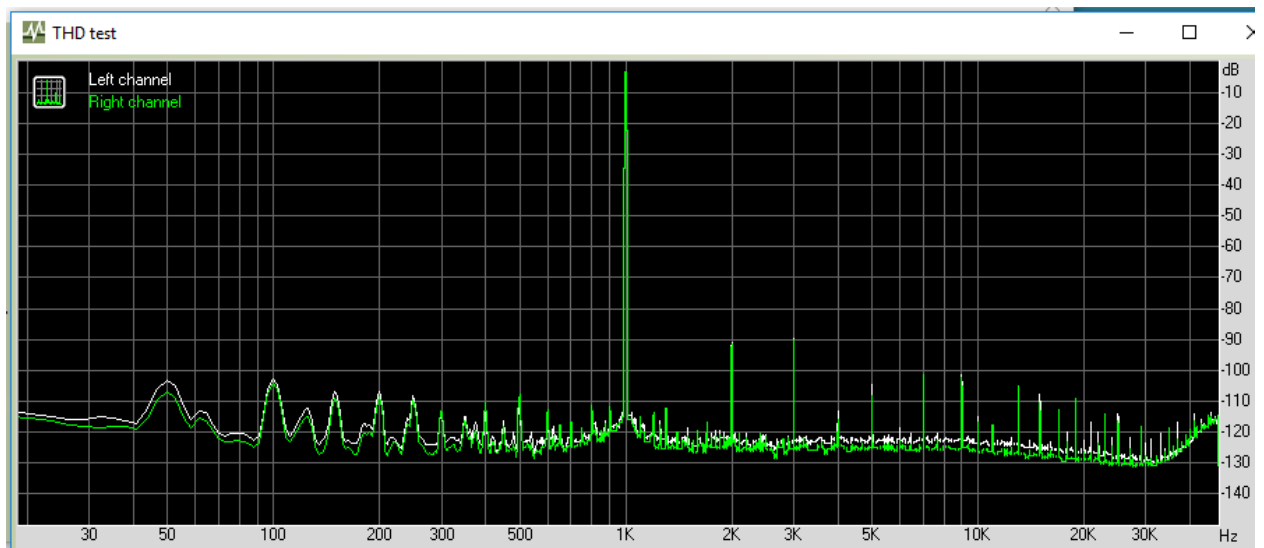
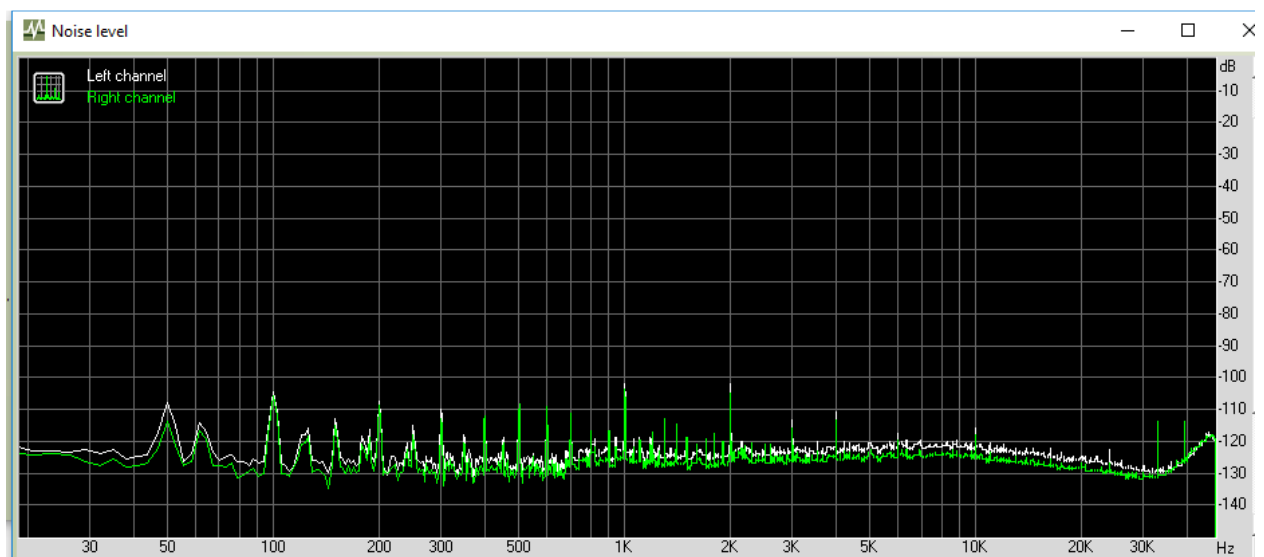
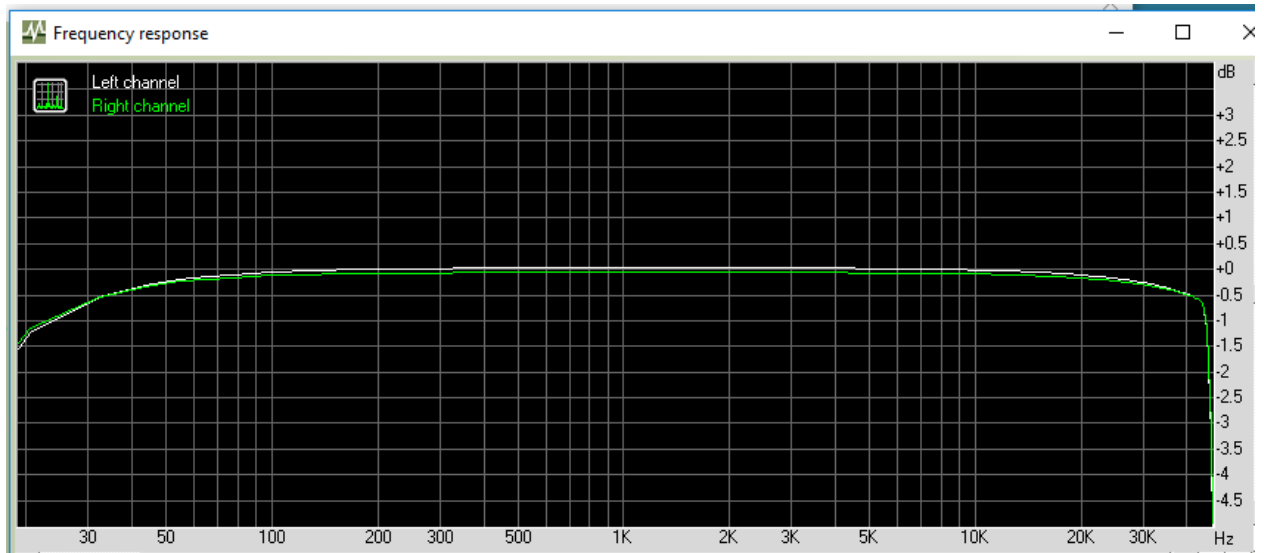


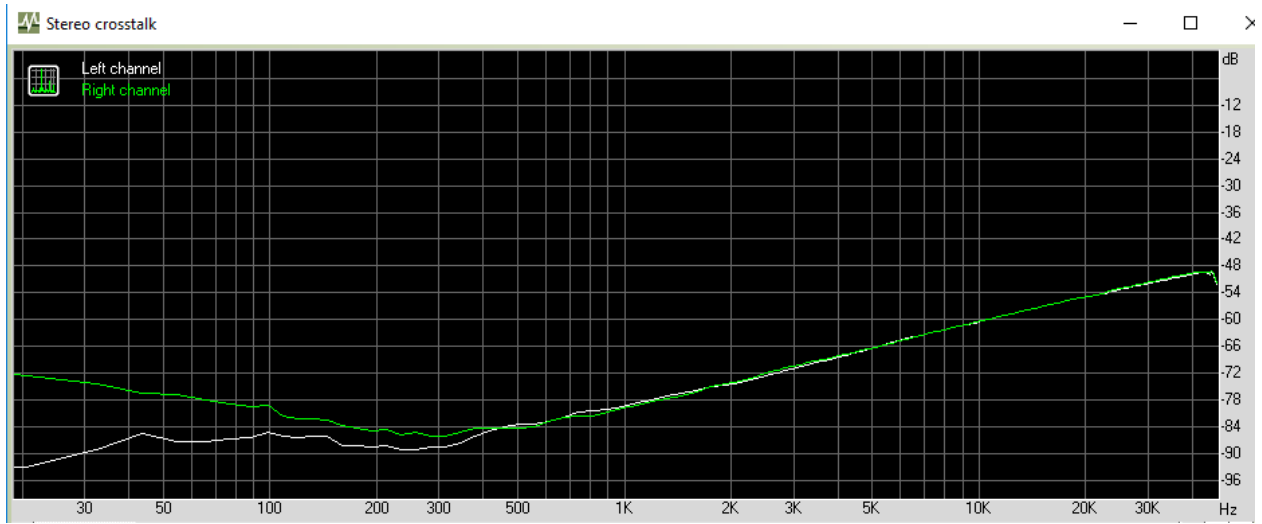
Ehk skaala asendis 15:00 on PRE OUT signaali nivoo sisuliselt võrdne sisendsignaali nivooaga (natuke ületab)

b) Mõõtetulemused "direct"-moodis (RMAA nivooks -2dB):

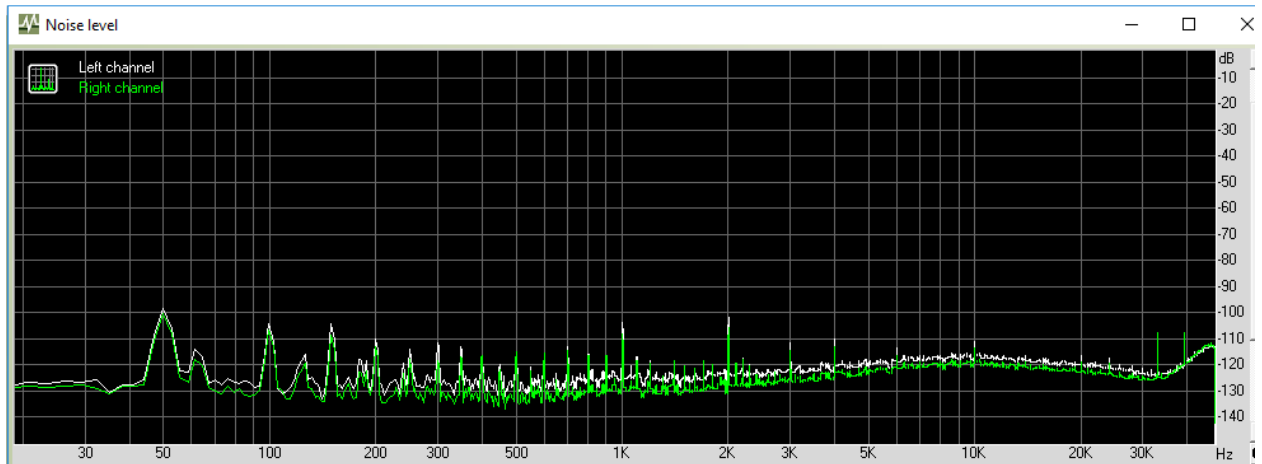
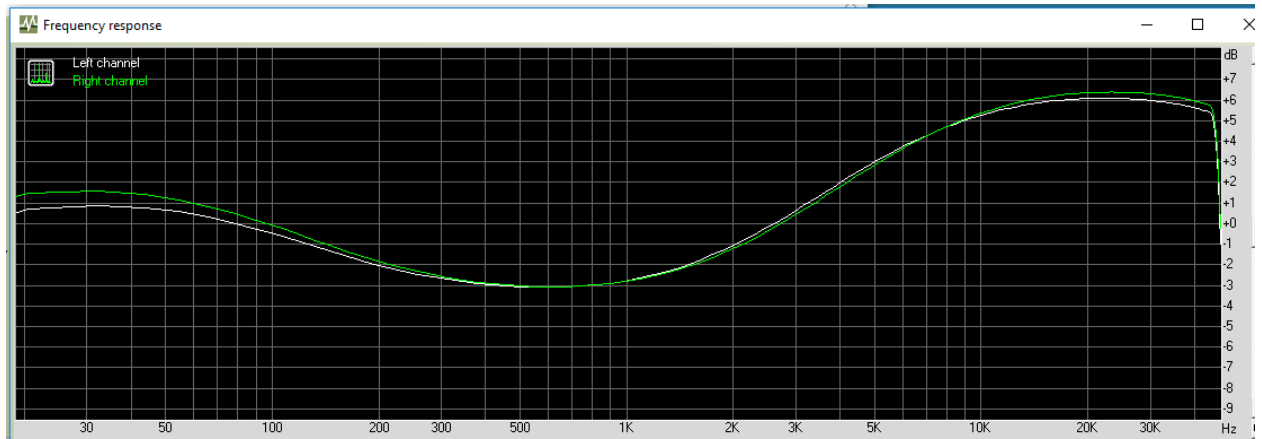
#### Test results

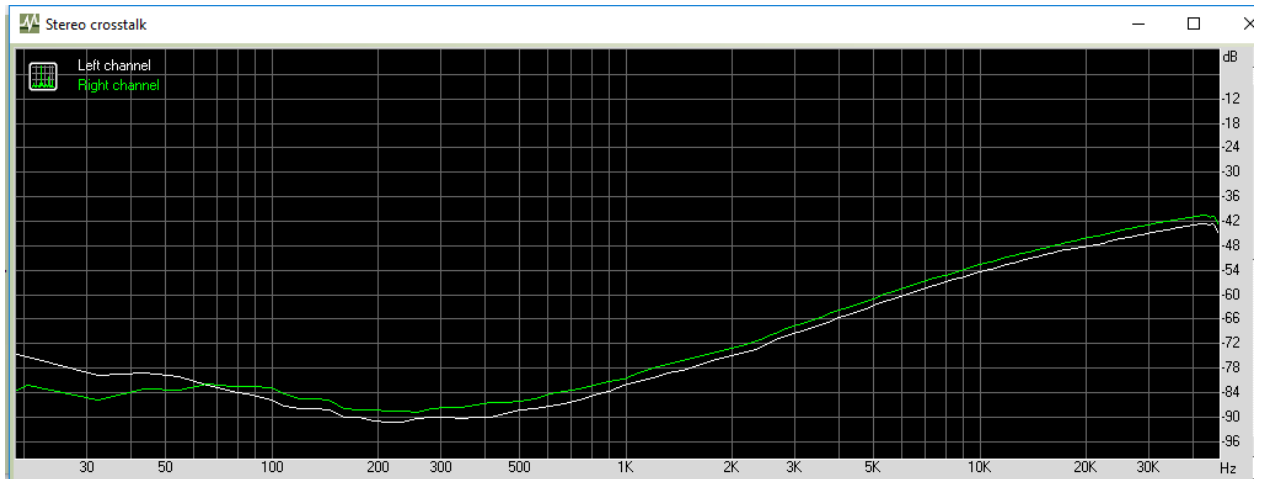
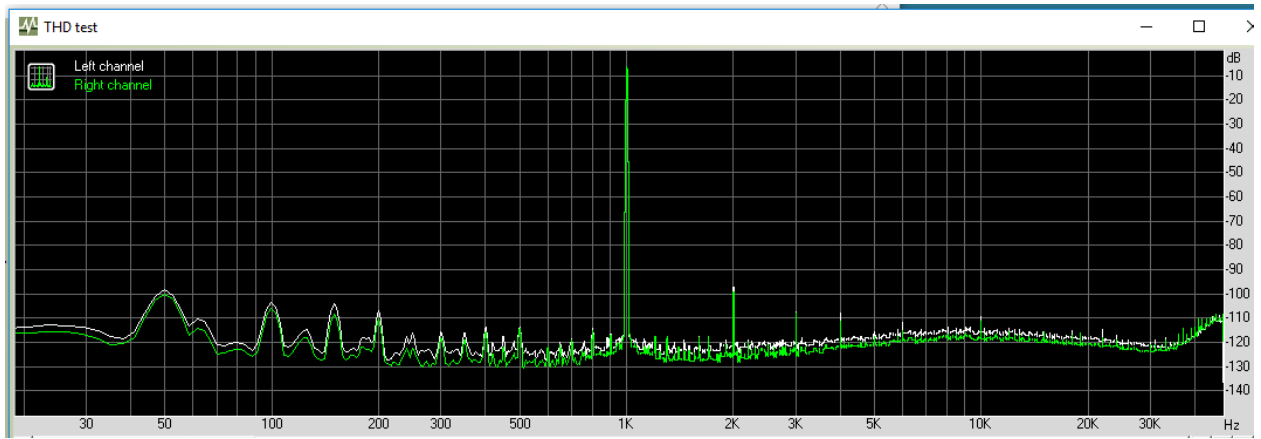
Device:	UA-120 tape 1 out	UA-120 PRE OUT direct
Sampling mode:	24-bit, 96 kHz	24-bit, 96 kHz
Frequency response (multitone), dB	+0.01, -0.12	+0.03, -0.38
Noise level, dBA	-102.0	-91.2
Dynamic range, dBA	99.4	97.7
Total harmonic distortion (THD), %	0.0053	0.0063
Intermodulation distortion + noise, %	0.0077	0.012
Stereo crosstalk, dB	-90.2	-79.6
Intermodulation distortion + noise (swept freqs), %	0.0093	0.258
Frequency response (swept sine), dB	+0.0, -0.0	+0.0, -0.1
Total harmonic distortion (swept freqs), dB	-69.83, -84.90	-55.33, -81.90
THD (swept freq.), %	+0.0, -0.0	+0.0, -0.1



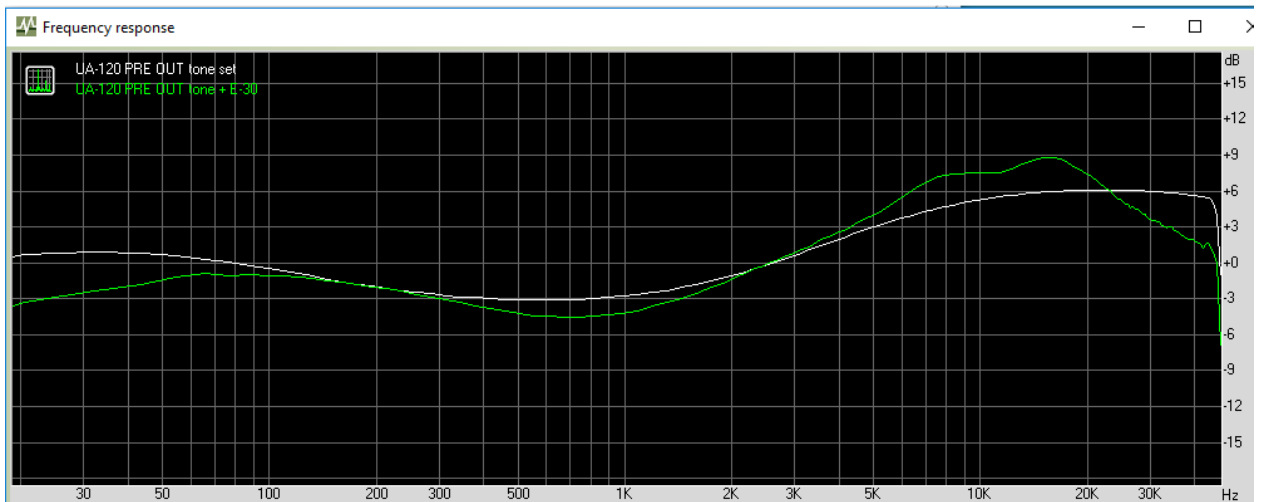


c) Mõõtetulemused “kuulamisrežiimis” ilma täiendava ekvalaiserita (bassid 13:00, kõrged 16:00, RMAA nivooks -7 dB):

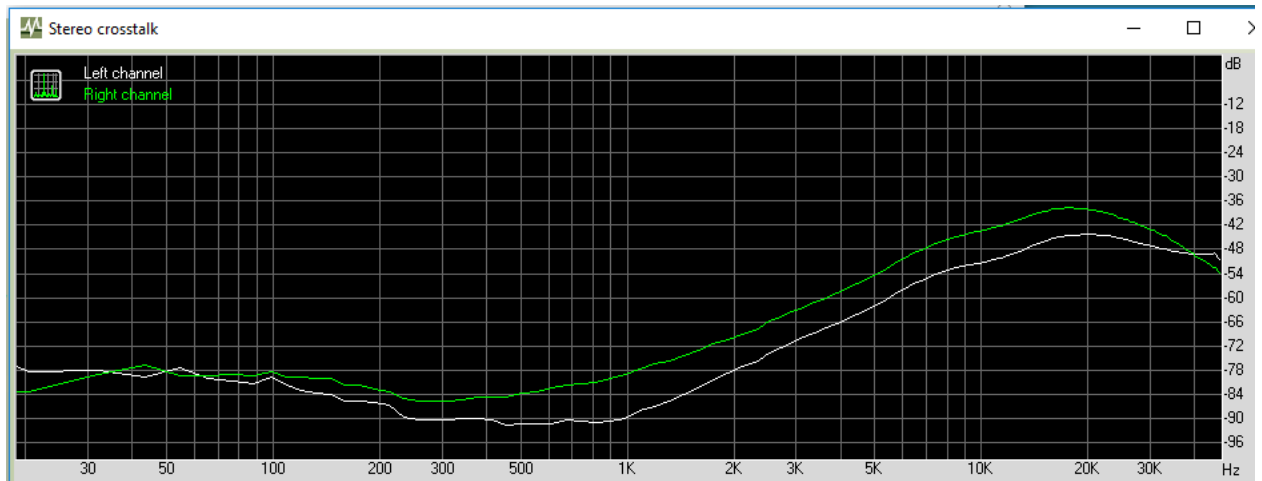
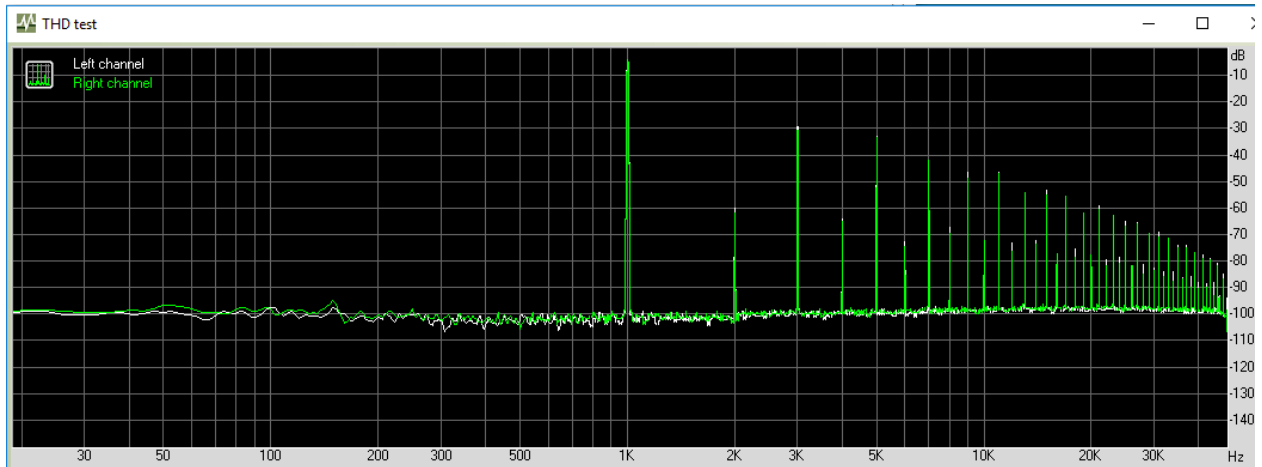
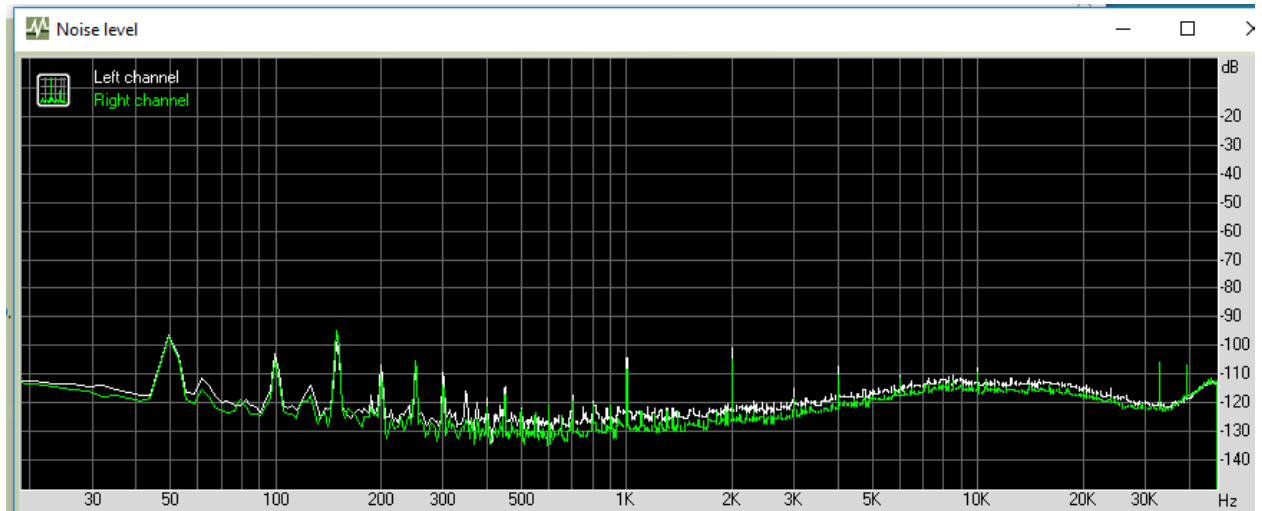




- d) Mõõdetulemused "kuulamisrežiimis" koos Onkyo E-30 ekvalaiseriga:
- UA-120 bassid 13:00, kõrged 16:00,
  - E-30 seatud: +2, +3, +3, +2, 0, +3, +4, +7, +8;
  - RMAA nivooks -8 dB







Mingil põhjusel teeb E-30 lisamine ahelasse heli meeldivamaks, kuid THD muutub “hirmus karvaseks”, mida tema enda mõõtetulemused küll ei näidanud.

Kokkuvõtte siis selline:

Test results

Device:	UA-120 tape 1 out	UA-120 PRE OUT direct	UA-120 PRE OUT tone set	UA-120 PRE OUT tone + E-30
Sampling mode:	24-bit, 96 kHz	24-bit, 96 kHz	24-bit, 96 kHz	24-bit, 96 kHz
Frequency response (multitone), dB	+0.01, -0.12	+0.03, -0.38	+6.12, -3.07	+8.79, -4.54
Noise level, dBA	-102.0	-91.2	-88.6	-86.4
Dynamic range, dBA	99.4	97.7	97.1	86.5
Total harmonic distortion (THD), %	0.0053	0.0063	0.0034	6.233
Intermodulation distortion + noise, %	0.0077	0.012	1.156	24.230
Stereo crosstalk, dB	-90.2	-79.6	-81.3	-84.4
Intermodulation distortion + noise (swept freqs), %	0.0093	0.258	11.129	35.329
Frequency response (swept sine), dB	+0.0, -0.0	+0.0, -0.1	+6.2, -2.5	+8.8, -3.5
Total harmonic distortion (swept freqs), dB	-69.83, -84.90	-55.33, -81.90	-51.12, -79.19	-10.23, -17.53
THD (swept freq.), %				