DBS1

Audio Quality Measurements

1 DBS1 Dante two channel breakout box

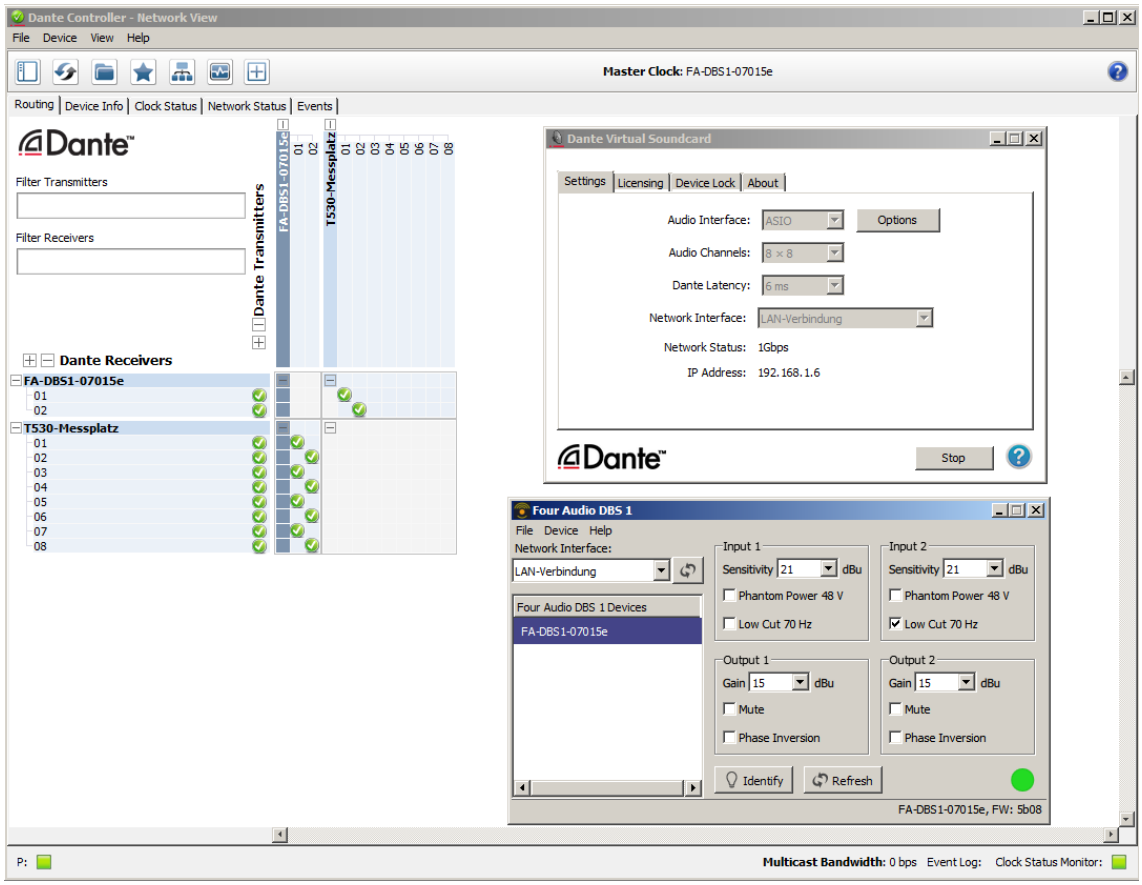

Fig. 1.1 **Dante network setup. Dante Controller and Dante Virtual Soundcard for data stream between APx555 and DBS1**

1.1 Preamp low Gain + ADC

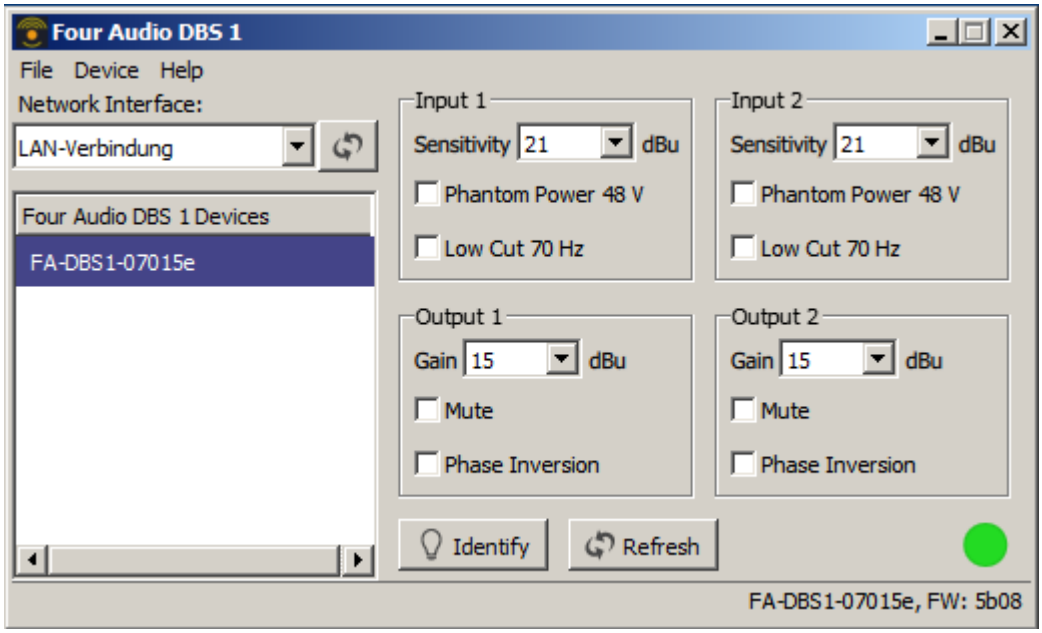

Fig. 1.2 **DBS1 input setup. Input Sensitivity: +21 dBu**

1.1.1 Frequency Response

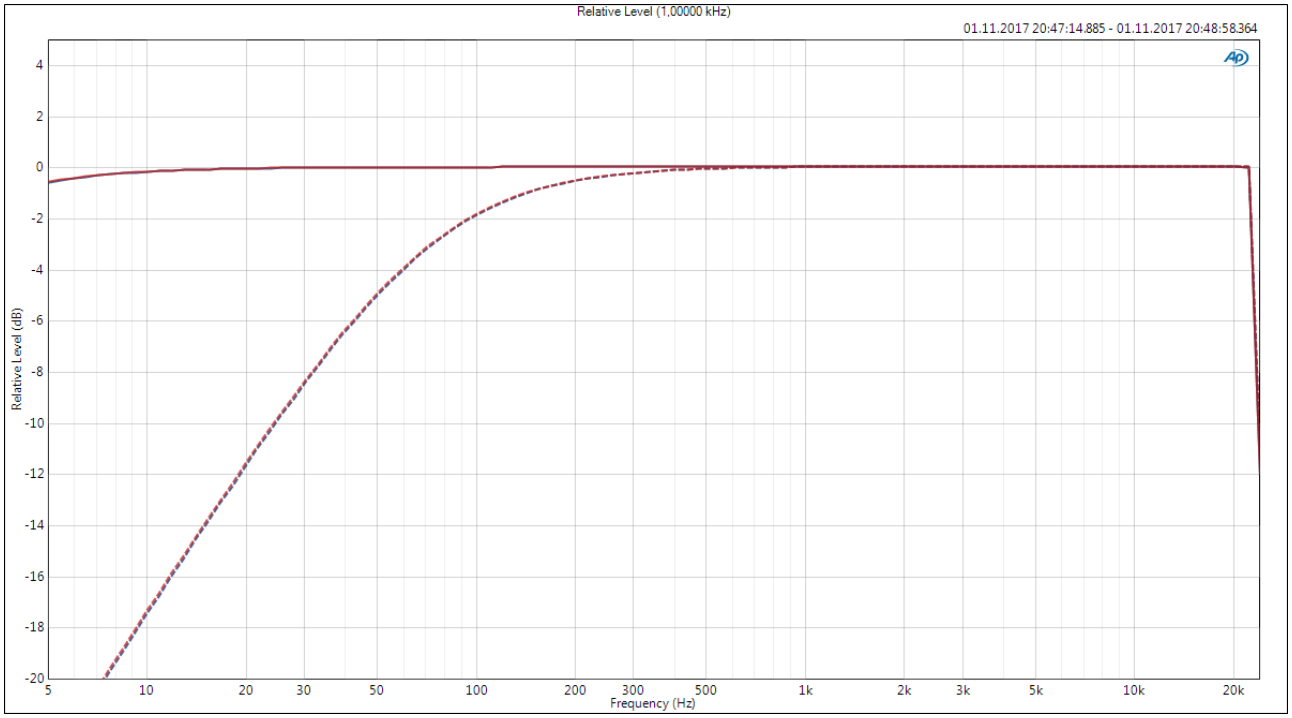

Fig. 1.3 **Preamp @ +21 dBu sens. + AD-Converter:**
Frequency Response relative to 1 kHz. Exciter level 0 dBu = -21 dBfs.
Dotted lines with 70 Hz (6 dB/Oct) highpass filter.

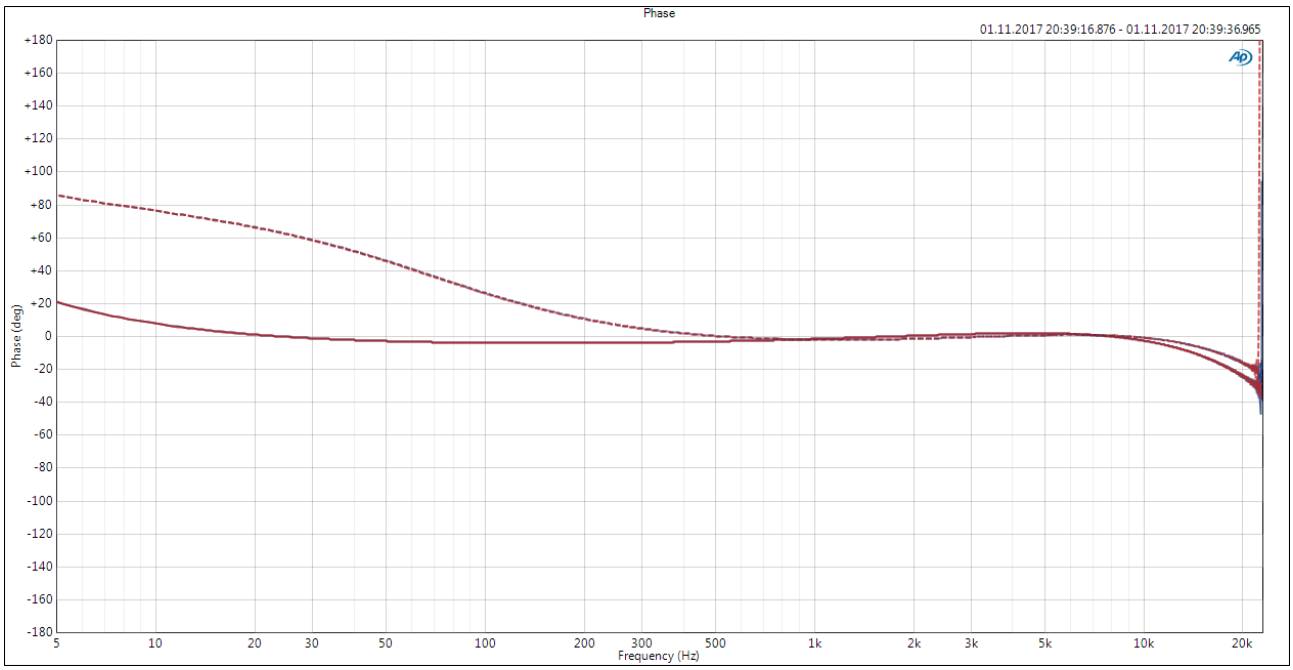

Fig. 1.4 **Preamp @ +21 dBu sens. + AD-Converter:**
Phase Response relative to 1 kHz.
Dotted lines with 70 Hz (6 dB/Oct) highpass filter.

1.1.2 Signal to Noise

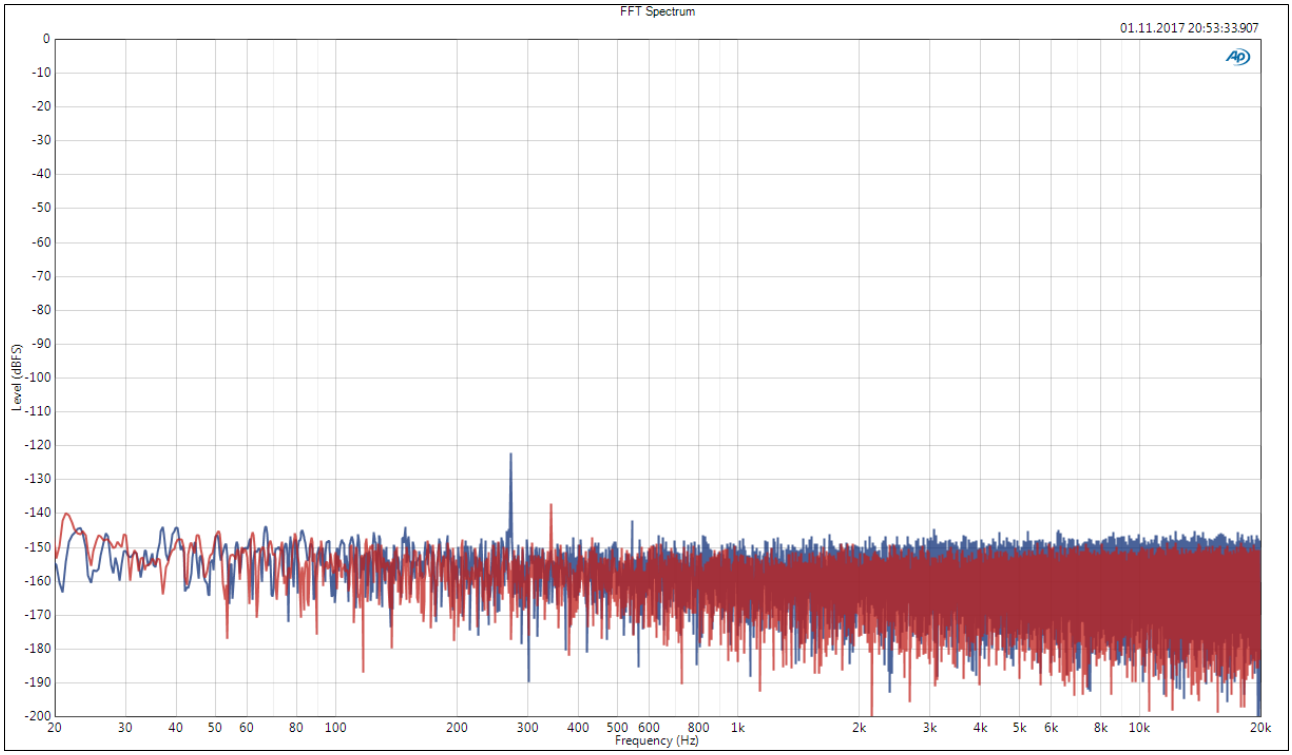

Fig. 1.5 **Preamp @ +21 dBu sens. + AD-Converter:**
Noise spectrum 128K FFT, 48 kHz sample rate.
Ch1: -111(-114) dBfs(A)
Ch2: -115(-117) dBfs(A)

1.1.3 THD level sweep

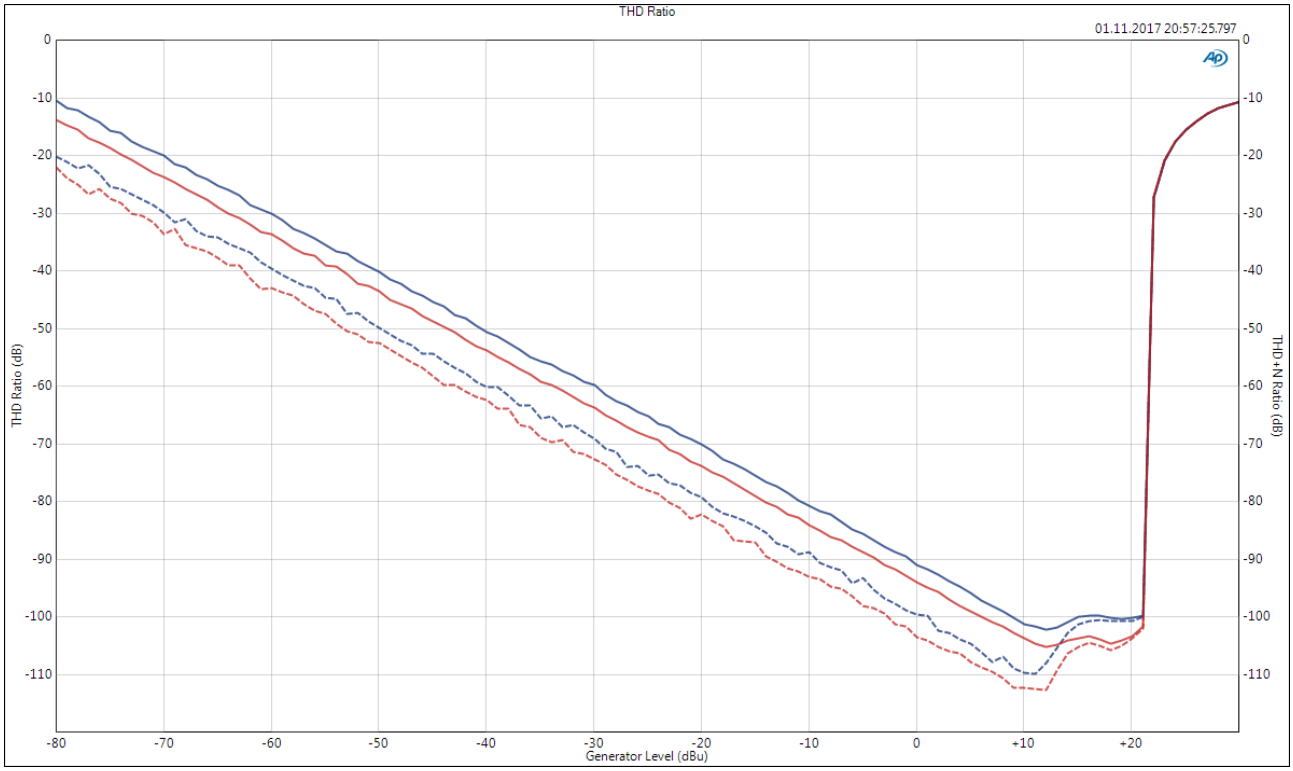

Fig. 1.6 **Preamp @ +21 dBu sens. + AD-Converter:**
THD(dotted lines) and THD+N (Ch1,Ch2) at 1 kHz depending from the input level.

1.1.4 THD frequency sweep

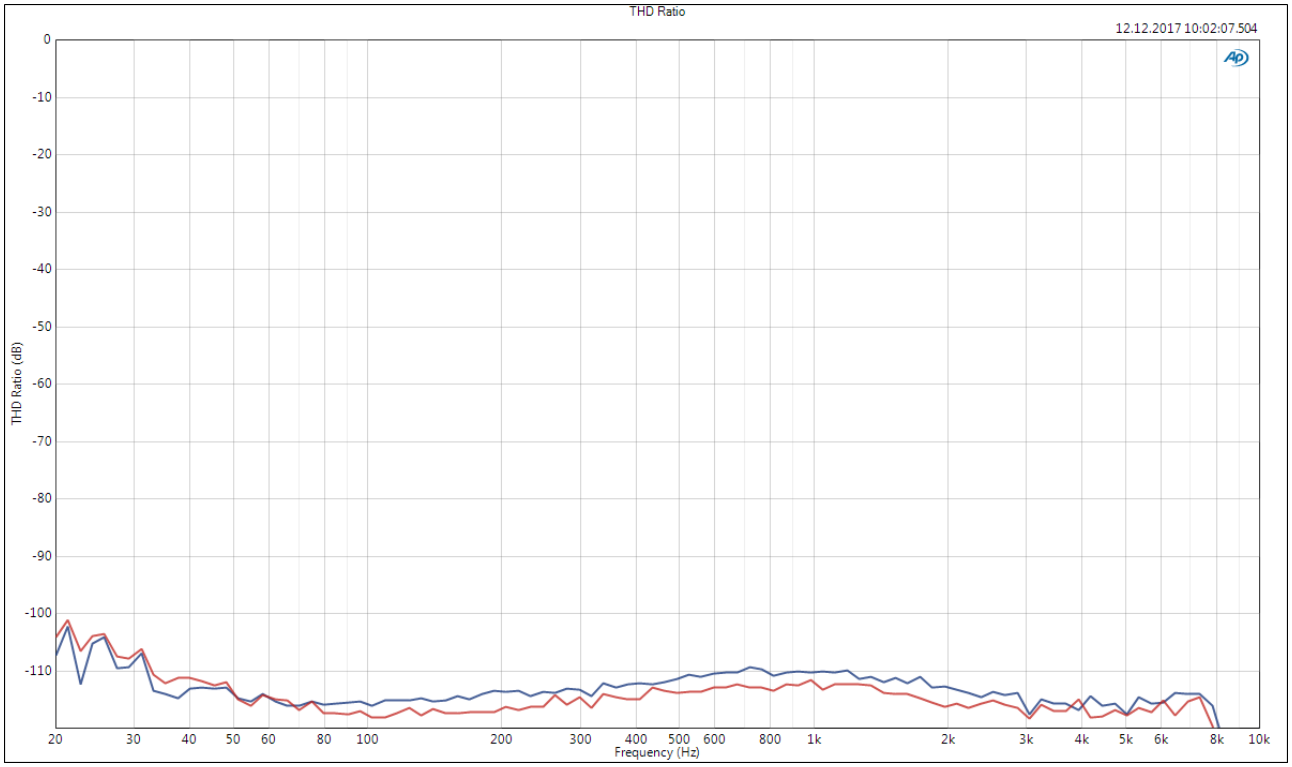

Fig. 1.7 **Preamp @ +21 dBu sens. + AD-Converter:**
THD (Ch1,Ch2) at +10 dBu input level depending from the frequency

1.1.5 THD spectrum @ 1 kHz

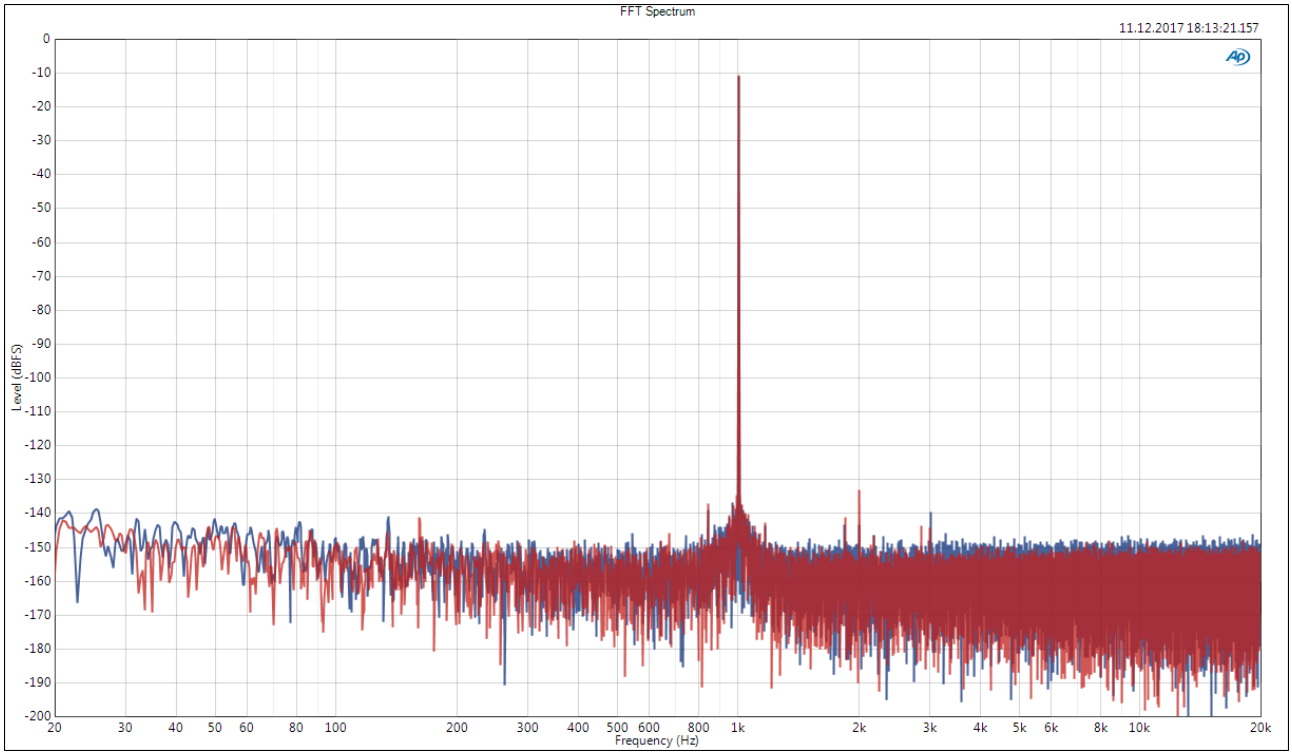

Fig. 1.8 **Preamp @ +21 dBu sens. + AD-Converter:**
Distortion and noise spectrum (Ch1,Ch2) at +10 dBu (= -11 dBfs) input level

1.1.6 DIM level sweep

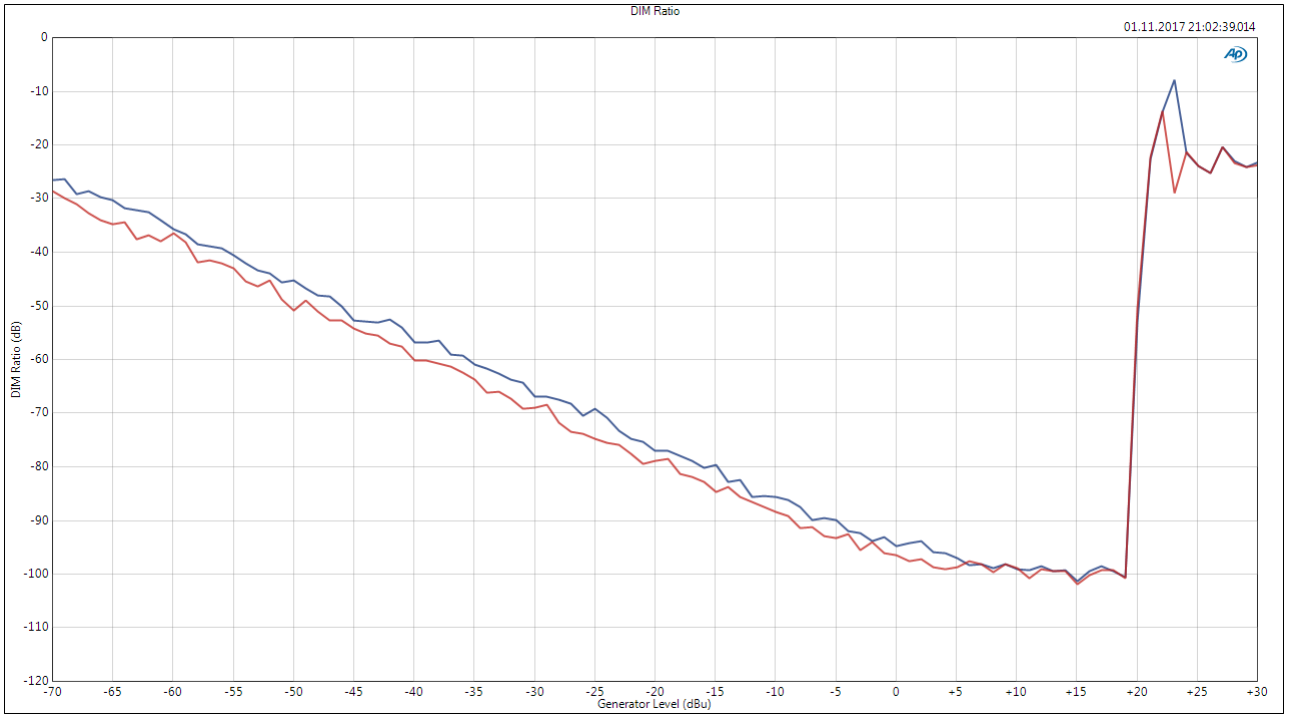

Fig. 1.9 Preamp @ +21 dBu sens. + AD-Converter:
Dynamic Intermodulation Distortion (DIM) (Ch1,Ch2) depending from the input level

1.2 Preamp high Gain + ADC

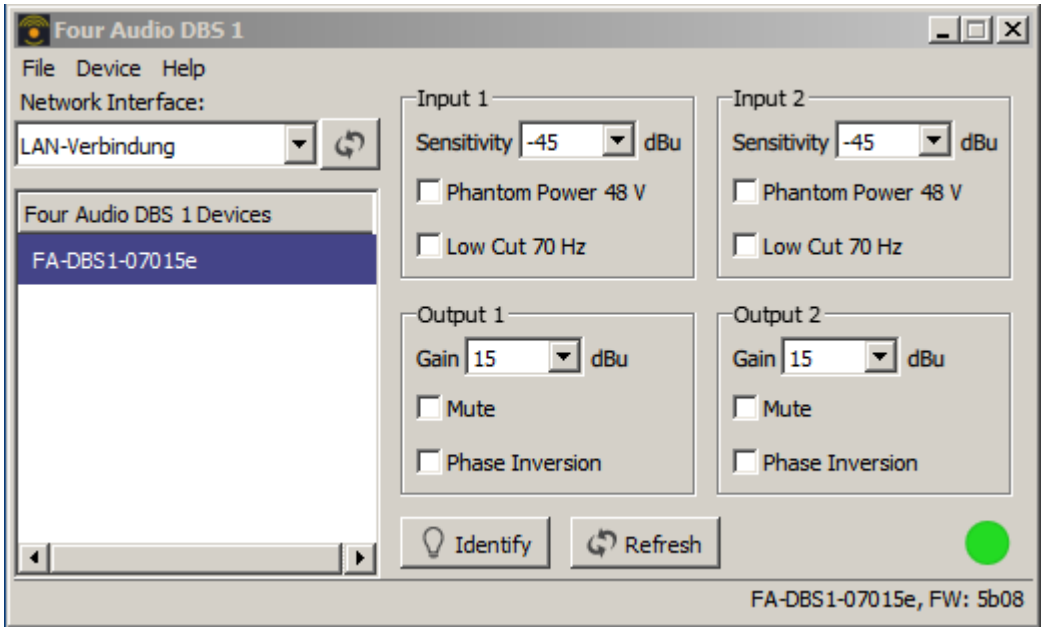

Fig. 1.10 DBS1 input setup. Input Sensitivity: -45 dBu

1.2.1 Frequency Response

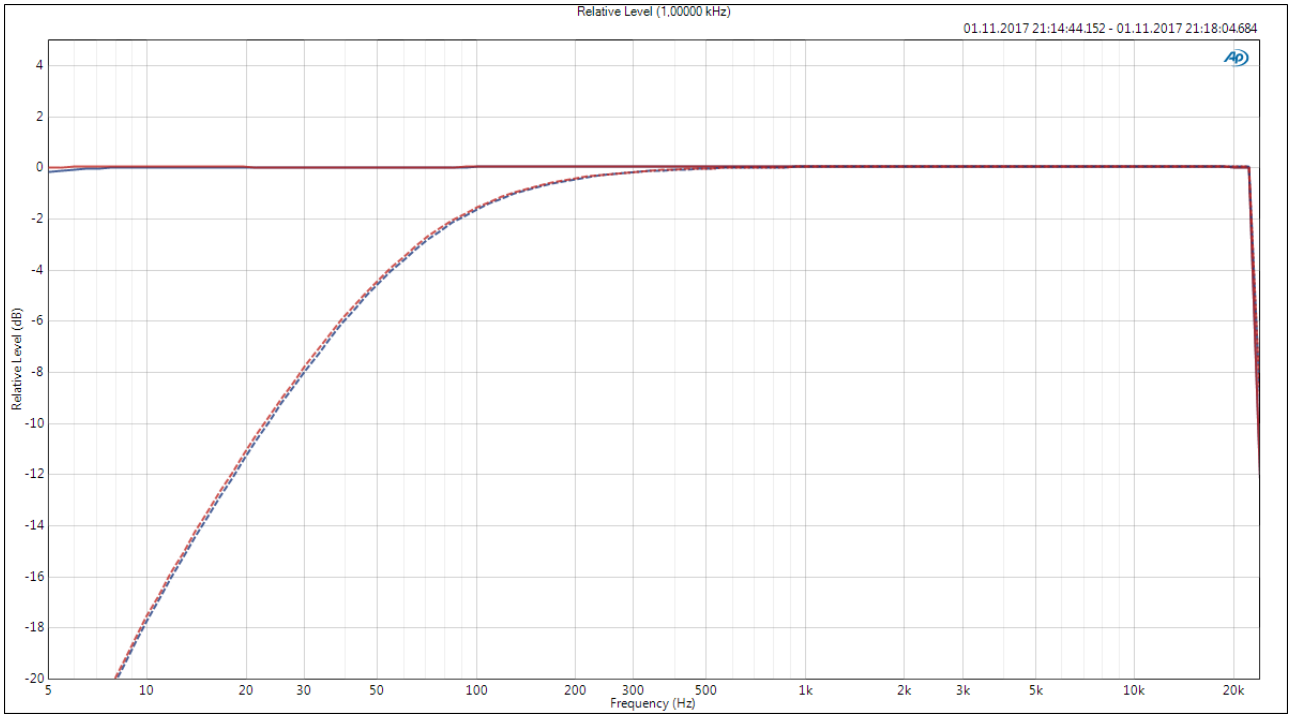

Fig. 1.11 **Preamp @ -45 dBu sens. + AD-Converter:**
Frequency Response relative to 1 kHz. Exciter level -60 dBu = -15 dBfs.
Dotted lines with 70 Hz (6 dB/Oct) highpass filter.

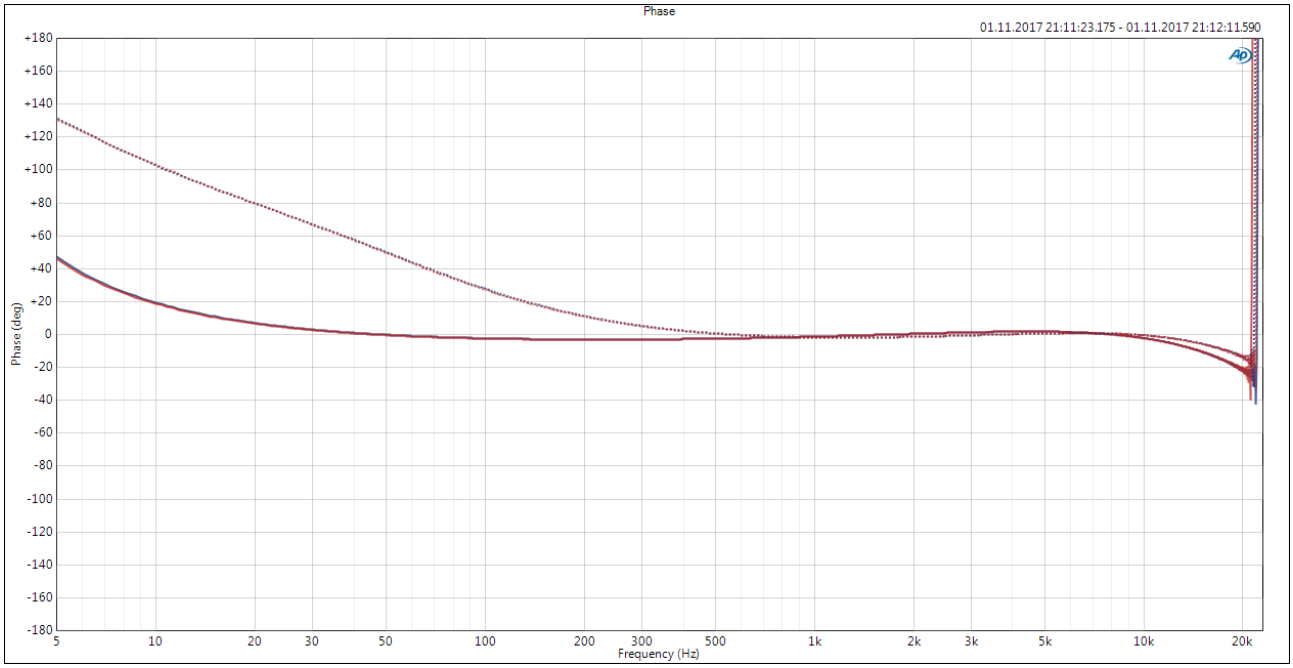

Fig. 1.12 **Preamp @ -45 dBu sens. + AD-Converter:**
Phase Response relative to 1 kHz.
Dotted lines with 70 Hz (6 dB/Oct) highpass filter.

1.2.2 Signal to Noise

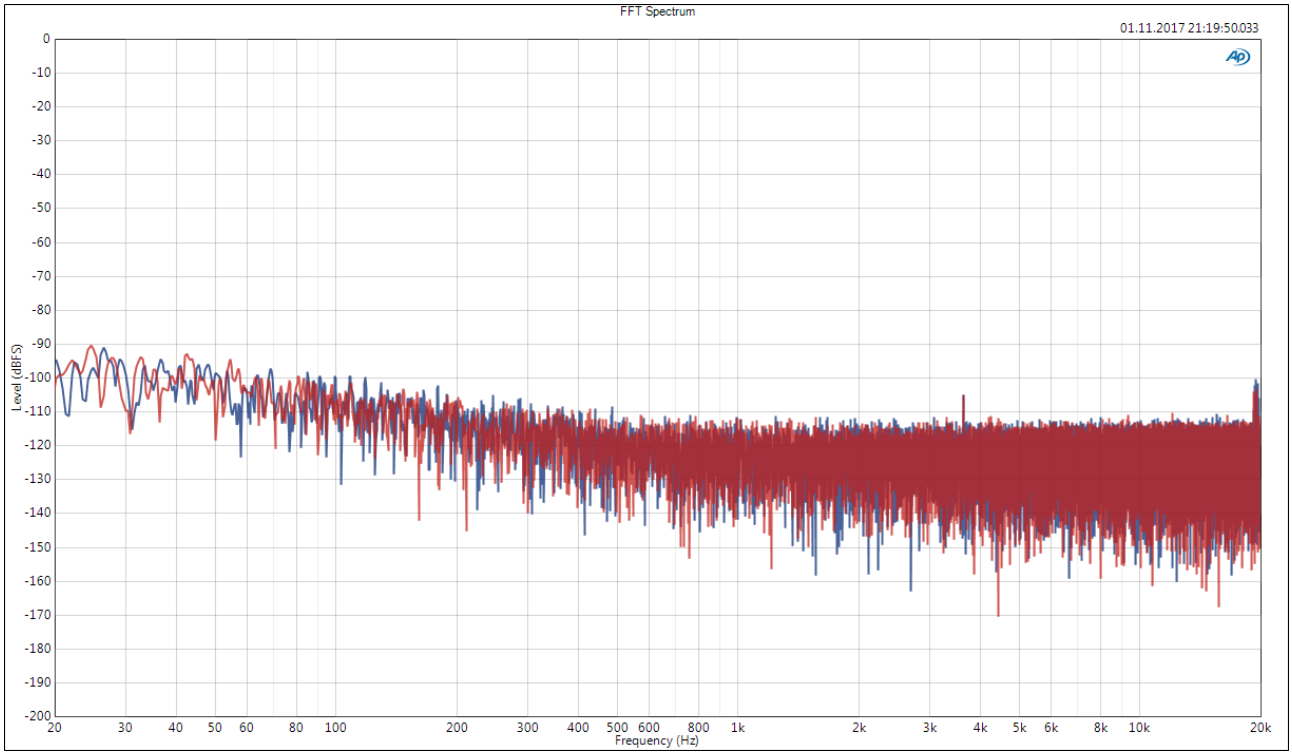

Fig. 1.13 **Preamp @ -45 dBu sens. + AD-Converter:**
Noise spectrum 128K FFT, 48 kHz sample rate.
Ch1: -76(-79) dBfs(A)
Ch2: -76(-79) dBfs(A)

1.2.3 THD level sweep

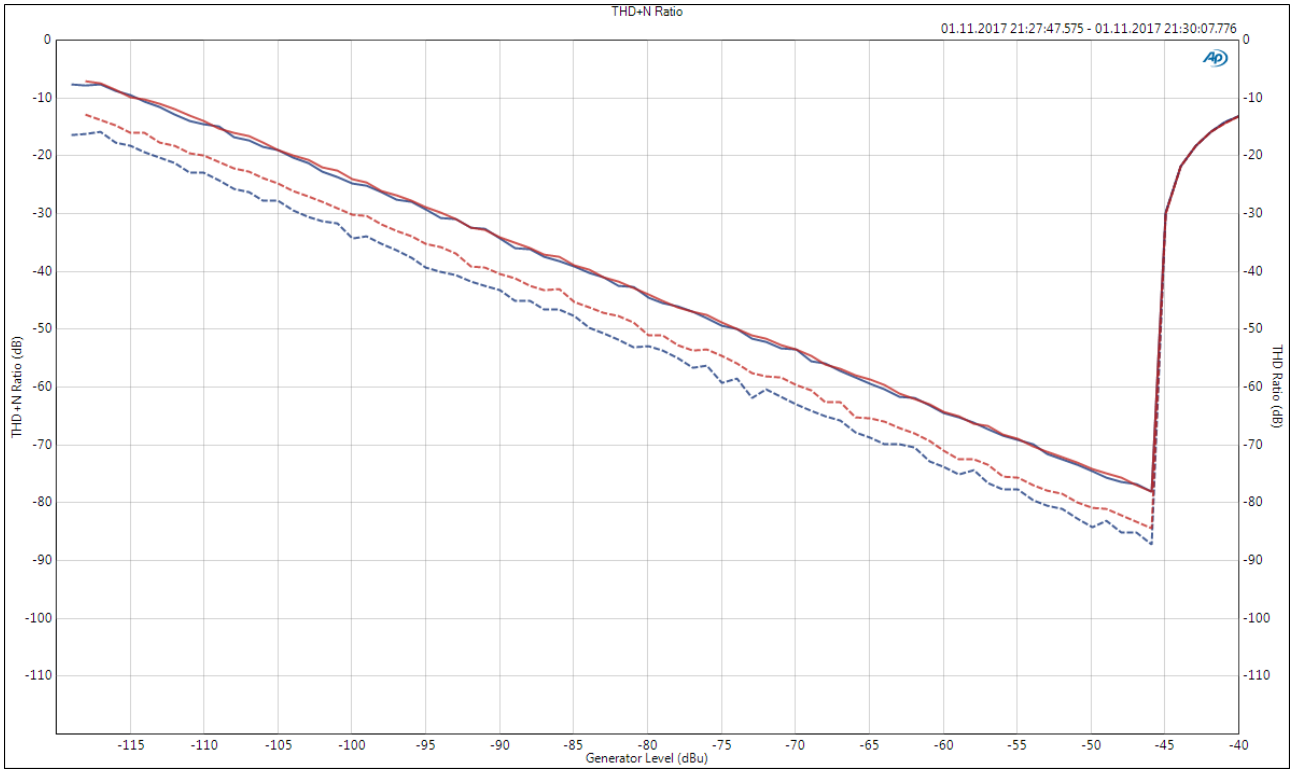

Fig. 1.14 **Preamp @ -45 dBu sens. + AD-Converter:**
THD(dotted lines) and THD+N (Ch1,Ch2) at 1 kHz depending from the input level.

1.2.4 THD frequency sweep

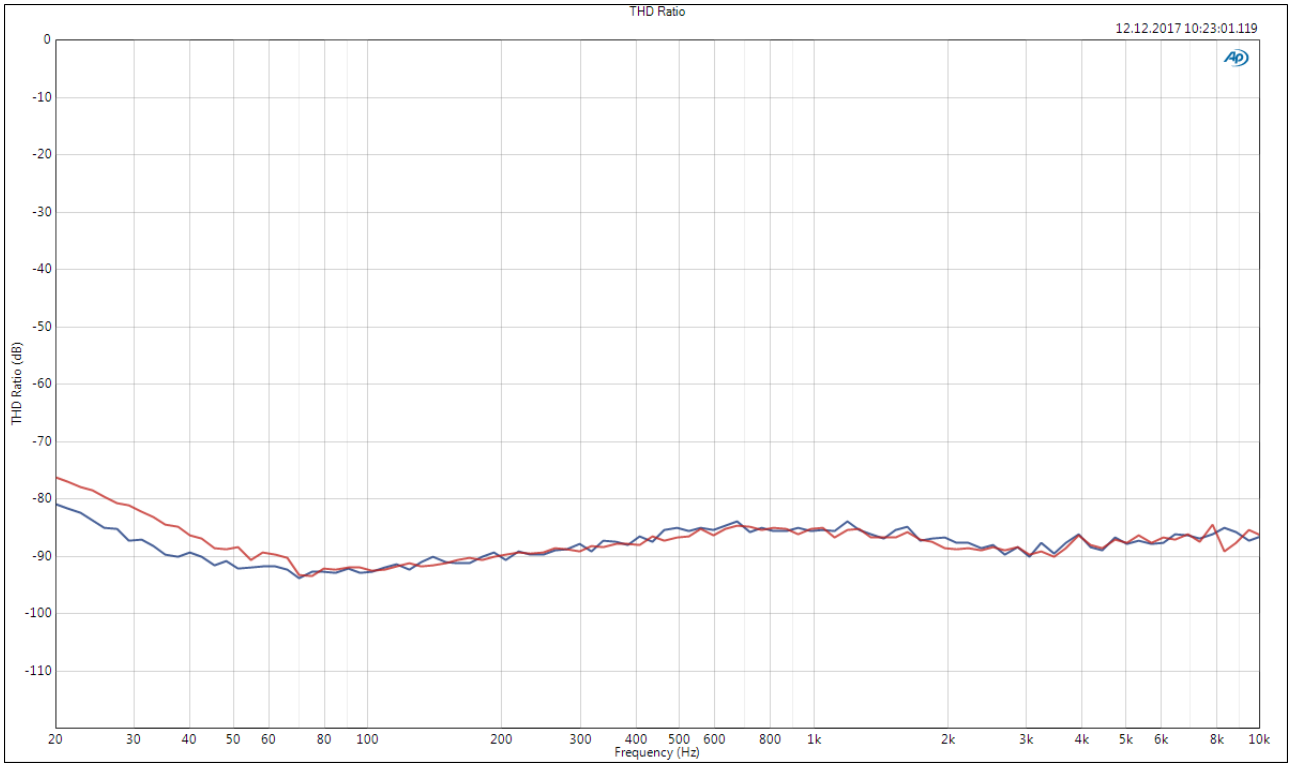

Fig. 1.15 **Preamp @ -45 dBu sens. + AD-Converter:**
THD (Ch1,Ch2) at -48 dBu input level depending from the frequency

1.2.5 THD spectrum @ 1 kHz

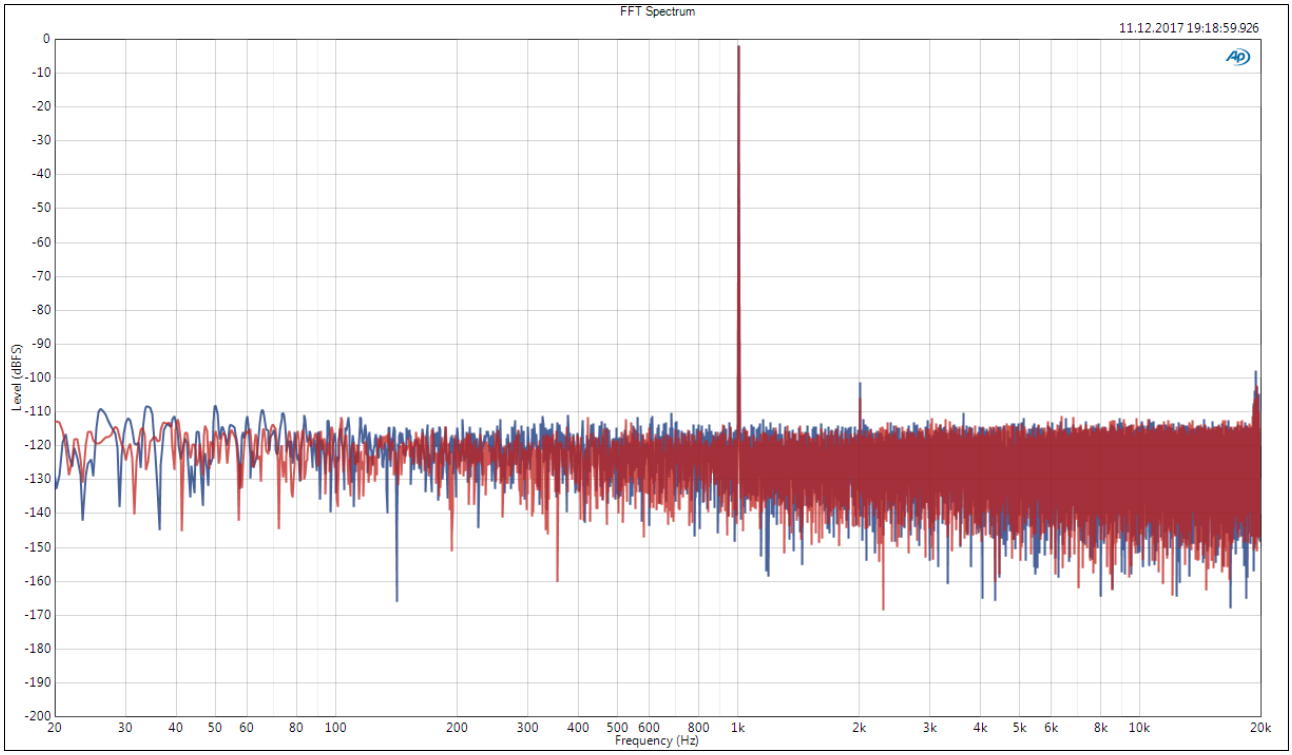

Fig. 1.16 **Preamp @ -45 dBu sens. + AD-Converter:**
Distortion and noise spectrum (Ch1,Ch2) at -48 dBu (= -3 dBfs) input level

1.2.6 DIM level sweep

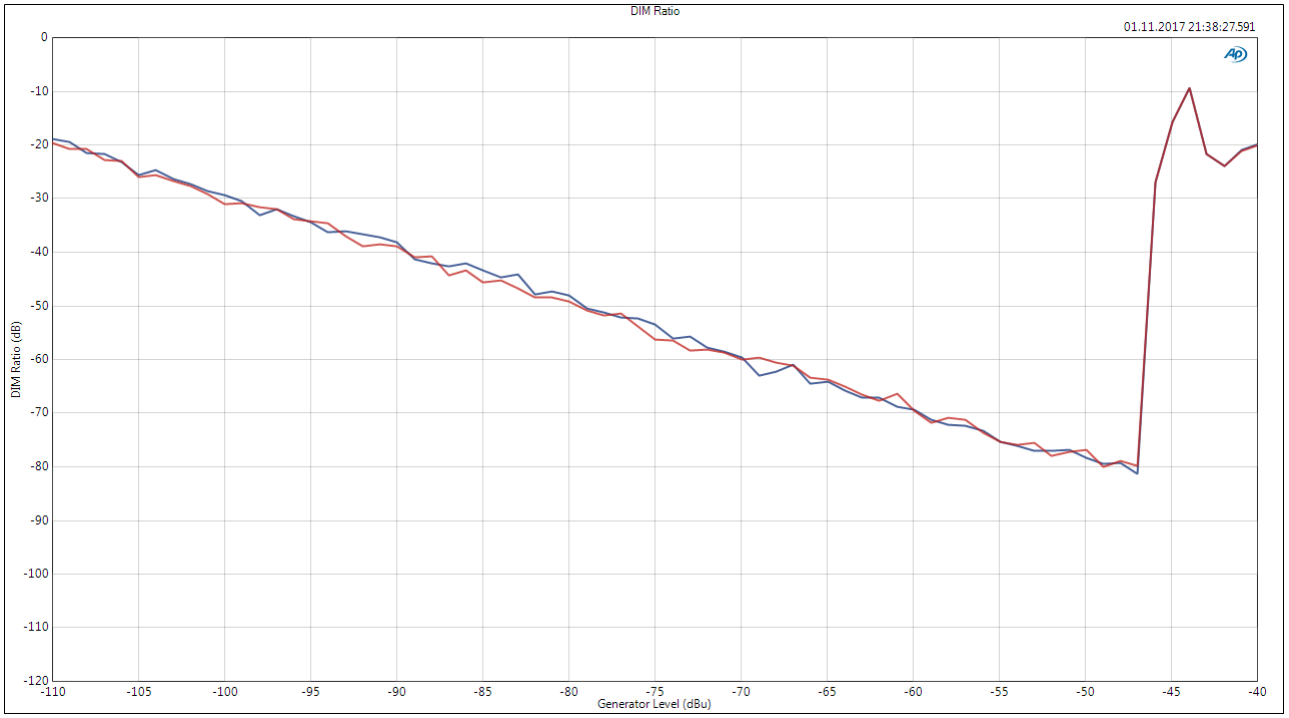

Fig. 1.17 Preamp @ -45 dBu sens. + AD-Converter:
Dynamic Intermodulation Distortion (DIM) (Ch1,Ch2) depending from the input level

1.3 DAC + analogue output stage

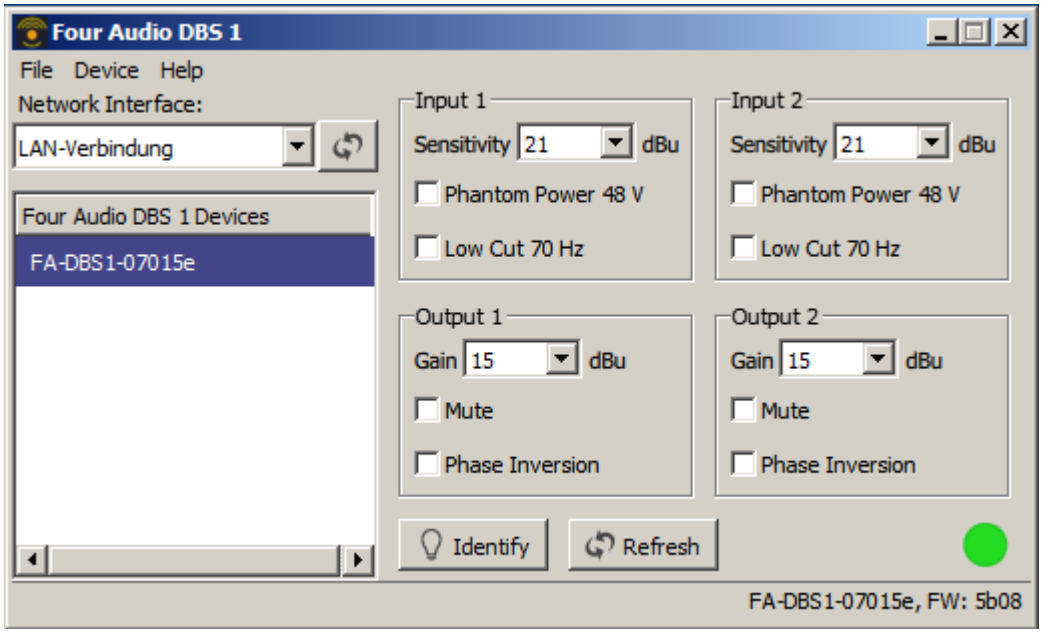

Fig. 1.18 DBS1 output setup. Max. output: +15 dBu

1.3.1 Frequency Response

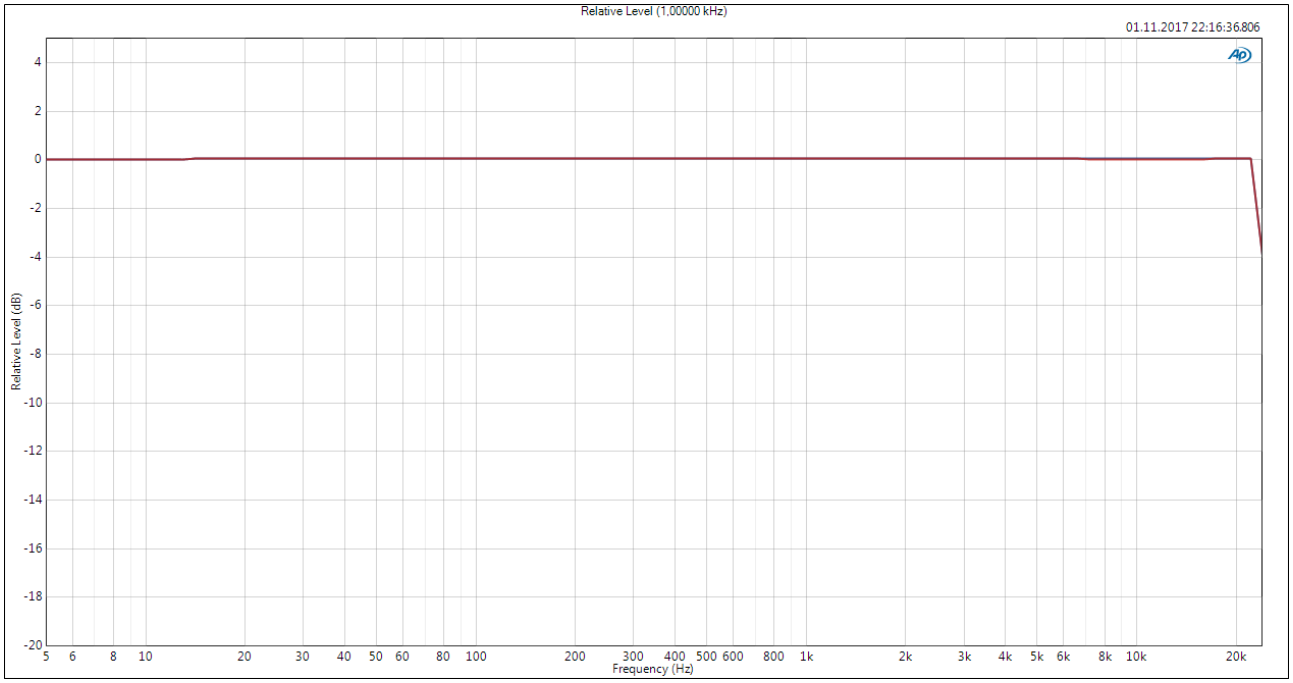

Fig. 1.19 DA-Converter + output stage at +15 dBu max. output level:
Frequency Response relative to 1 kHz. Exciter level -20 dBfs = -5 dBu.

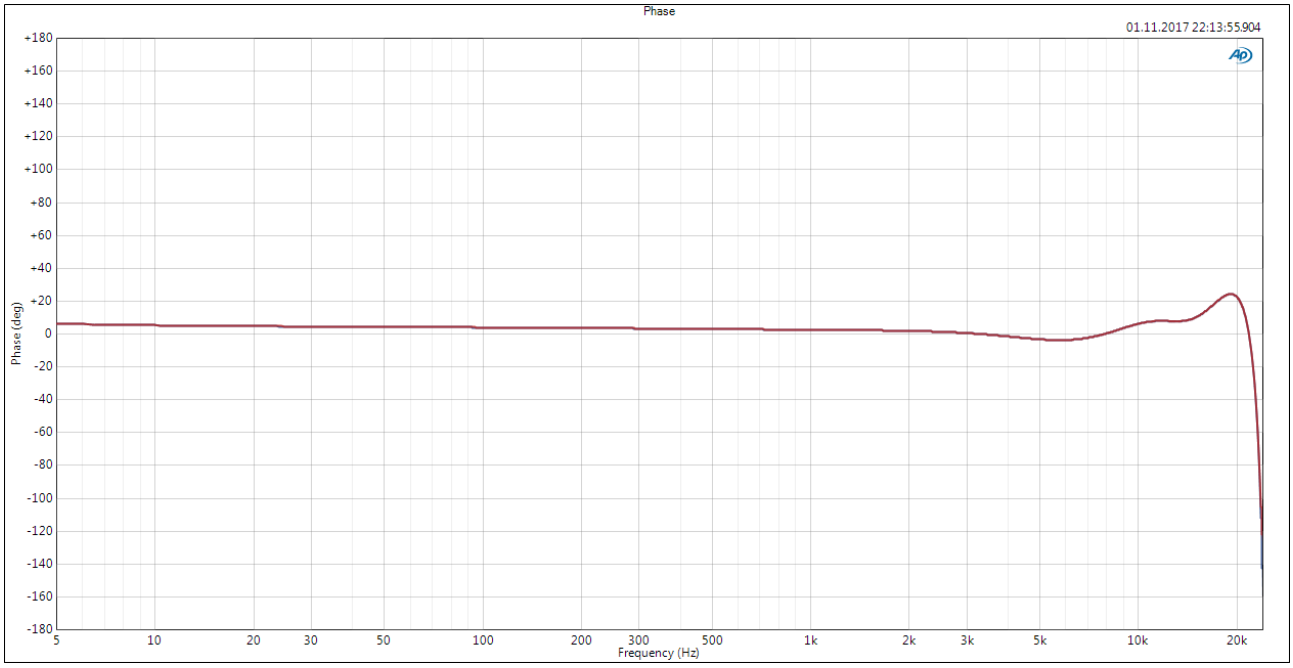

Fig. 1.20 DA-Converter + output stage at +15 dBu max. output level:
Phase Response relative to 1 kHz.

1.3.2 Signal to Noise

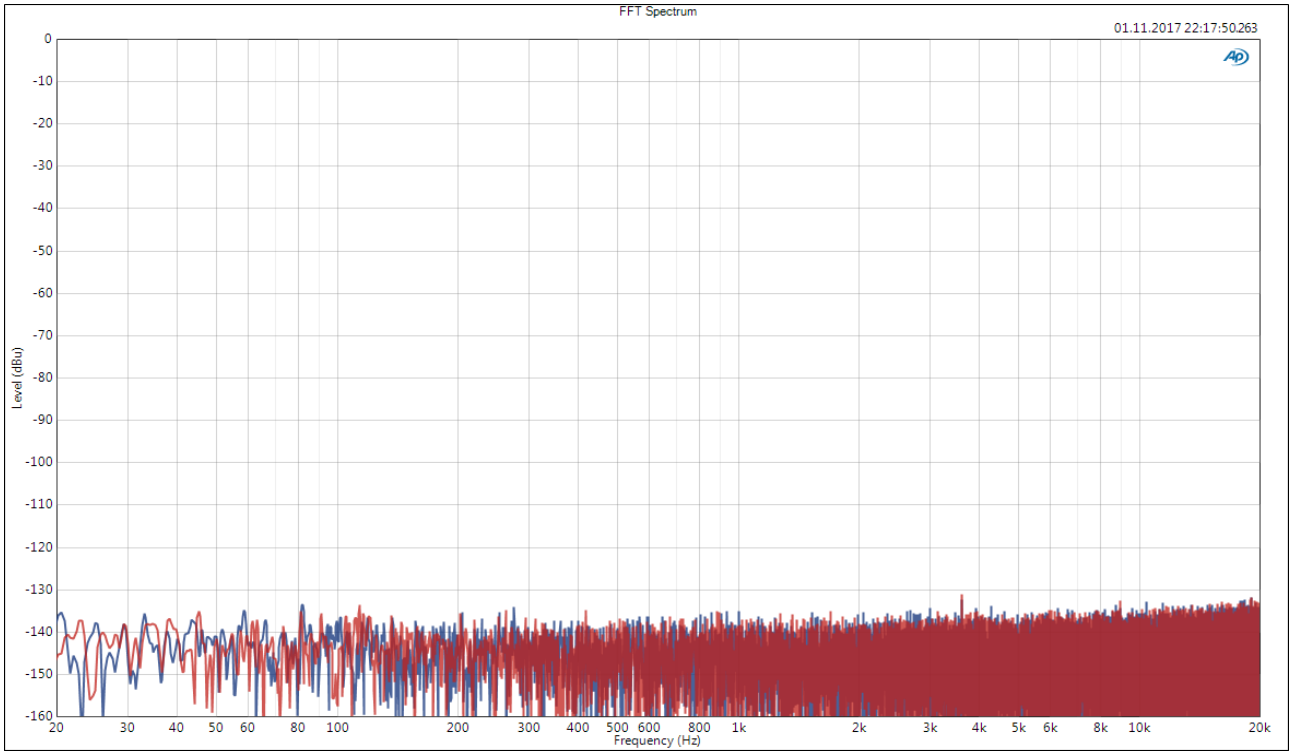

Fig. 1.21 **DA-Converter + output stage at +15 dBu max. output level:**
Noise spectrum 128K FFT, 48 kHz sample rate.
Ch1: -99(-102) dBfs(A) S/N = 114(117)dB(A)
Ch2: -99(-102) dBfs(A) S/N = 114(117)dB(A)

1.3.3 THD level sweep

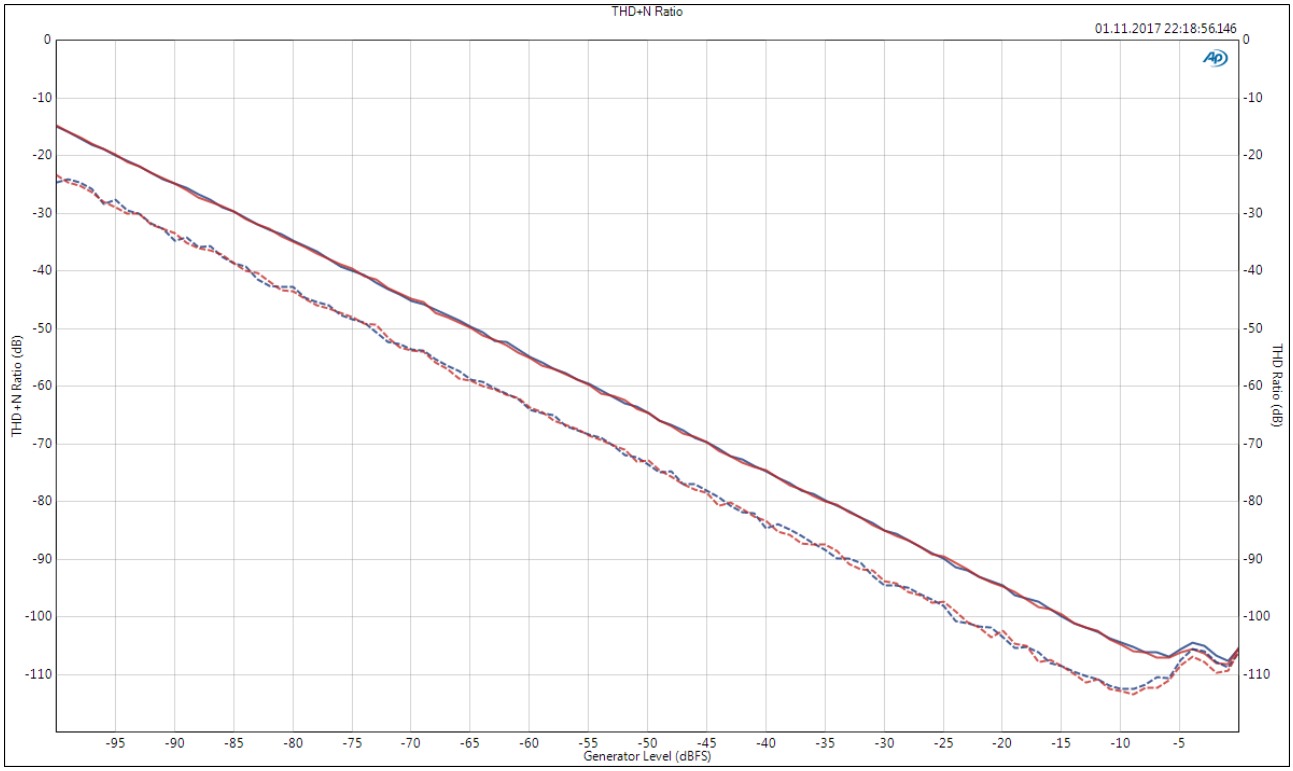

Fig. 1.22 **DA-Converter + output stage at +15 dBu max. output level: (0 dBfs = +15 dBu)**
THD(dotted lines) and THD+N (Ch1,Ch2) at 1 kHz depending from the output level.

1.3.4 THD frequency sweep

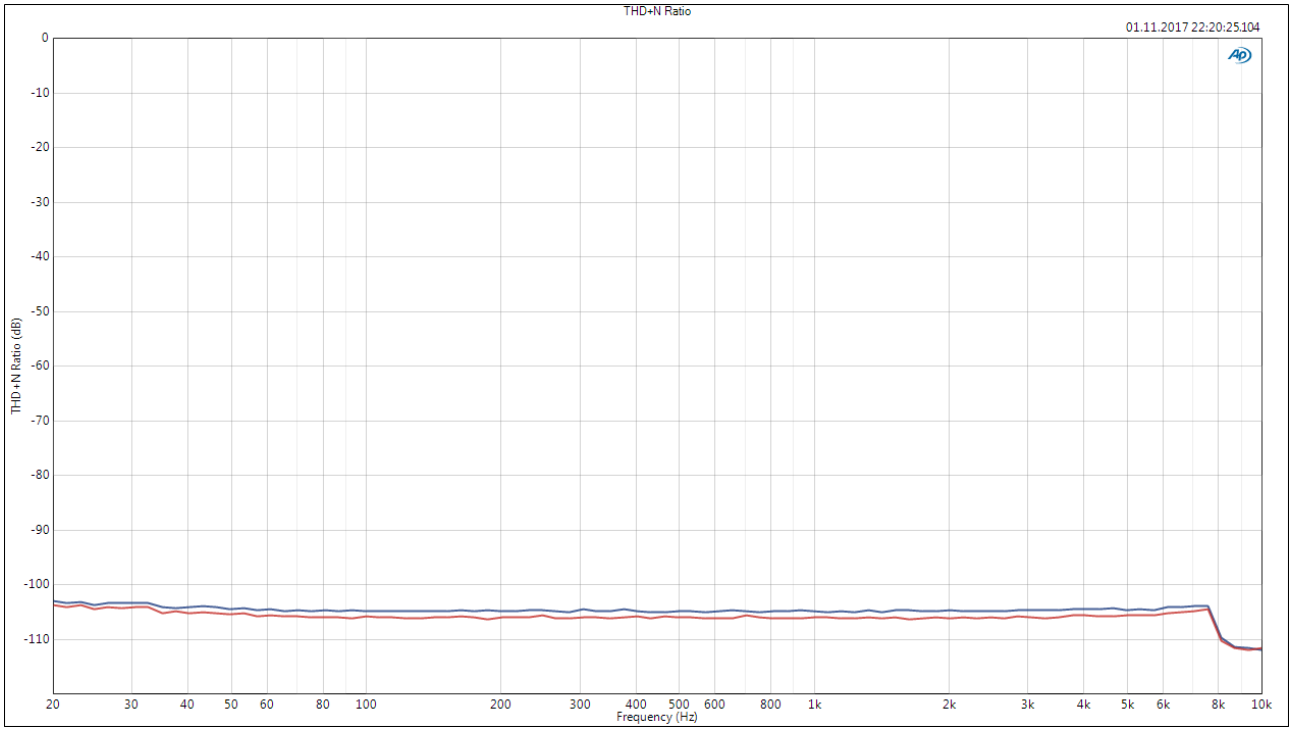

Fig. 1.23 DA-Converter + output stage at +15 dBu max. output level:
THD (Ch1,Ch2) at -3 dBfs (= +12 dBu) output level depending from the frequency

1.3.5 THD spectrum @ 1 kHz

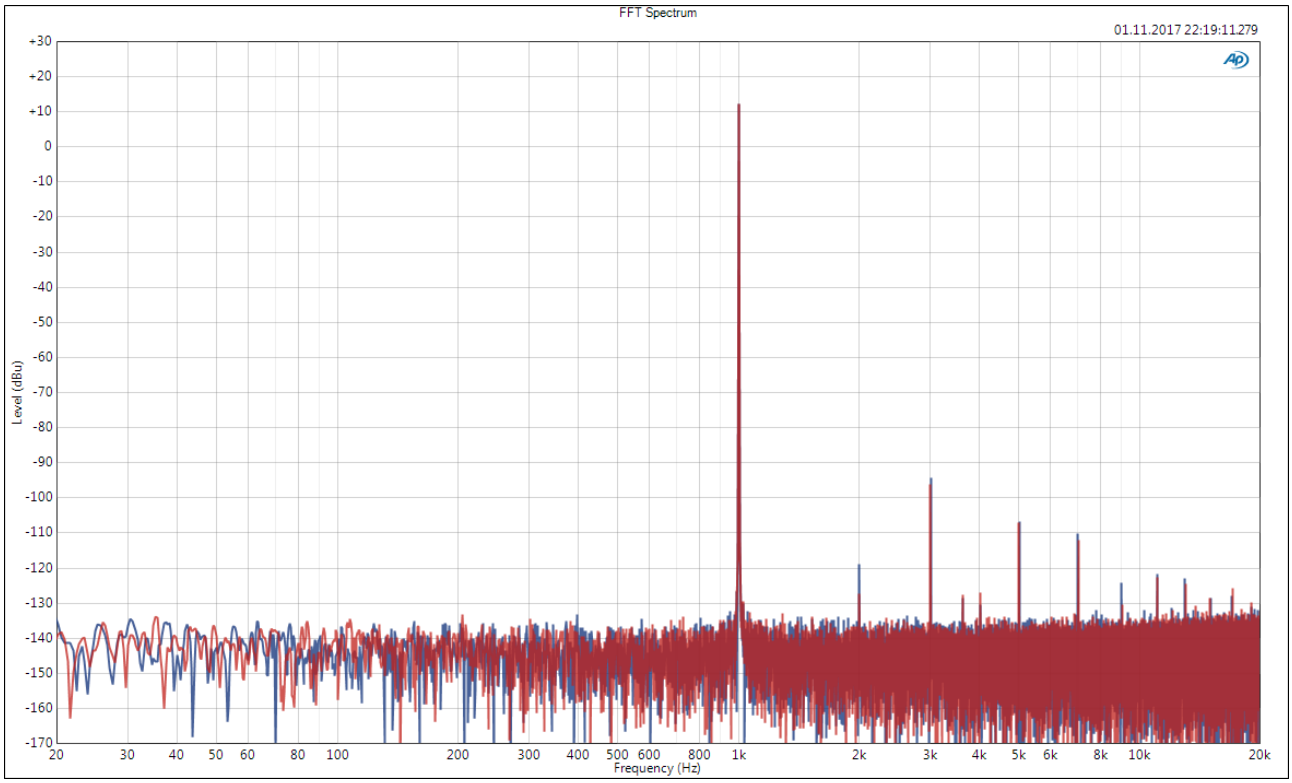

Fig. 1.24 DA-Converter + output stage at +15 dBu max. output level:
Distortion and noise spectrum (Ch1,Ch2) at -3 dBfs (= +12 dBu) output level