

## RME-Fireface 800



### Features

- External Firewire interface
- 8 balanced line inputs
- 8 balanced line outputs
- 4 mic inputs with phantom power
- 192kHz sample rate
- 2x ADAT port
- SPDIF in/out optical and coaxial
- All channels can be run simultaneously
- requires main power

### Technical specification from the manufacturer

<http://www.rme-audio.com>

- Input AD: 8 x 1/4" TRS, 4 x XLR Mic, 1/4" TRS Line, all servo-balanced. 1 x 1/4" TS unbalanced
- Output DA: 8 x 1/4" TRS, servo-balanced, DC-coupled signal path. 1 x 1/4" TRS unbalanced
- Input Digital: 2 x ADAT optical or SPDIF optical, SPDIF coaxial (AES/EBU compatible)
- Output Digital: 2 x ADAT optical or SPDIF optical, SPDIF coaxial (AES/EBU compatible)
- MIDI: 1 x MIDI I/O via 5-pin DIN jacks, for 16 channels low jitter hi-speed MIDI
  
- Dynamic range AD: 109 dB RMS unweighted, 112 dBA
- THD AD: < -110 dB (< 0.00032 %)
- THD+N AD: < -104 dB (< 0.00063 %)
- Crosstalk AD: > 110 dB
  
- Dynamic range DA: 116 dB RMS unweighted, 119 dBA (unmuted)
- THD DA: < -103 dB (< 0.0007 %)



## Digital Signal Processing Audio Measurements Custom Designed Tools

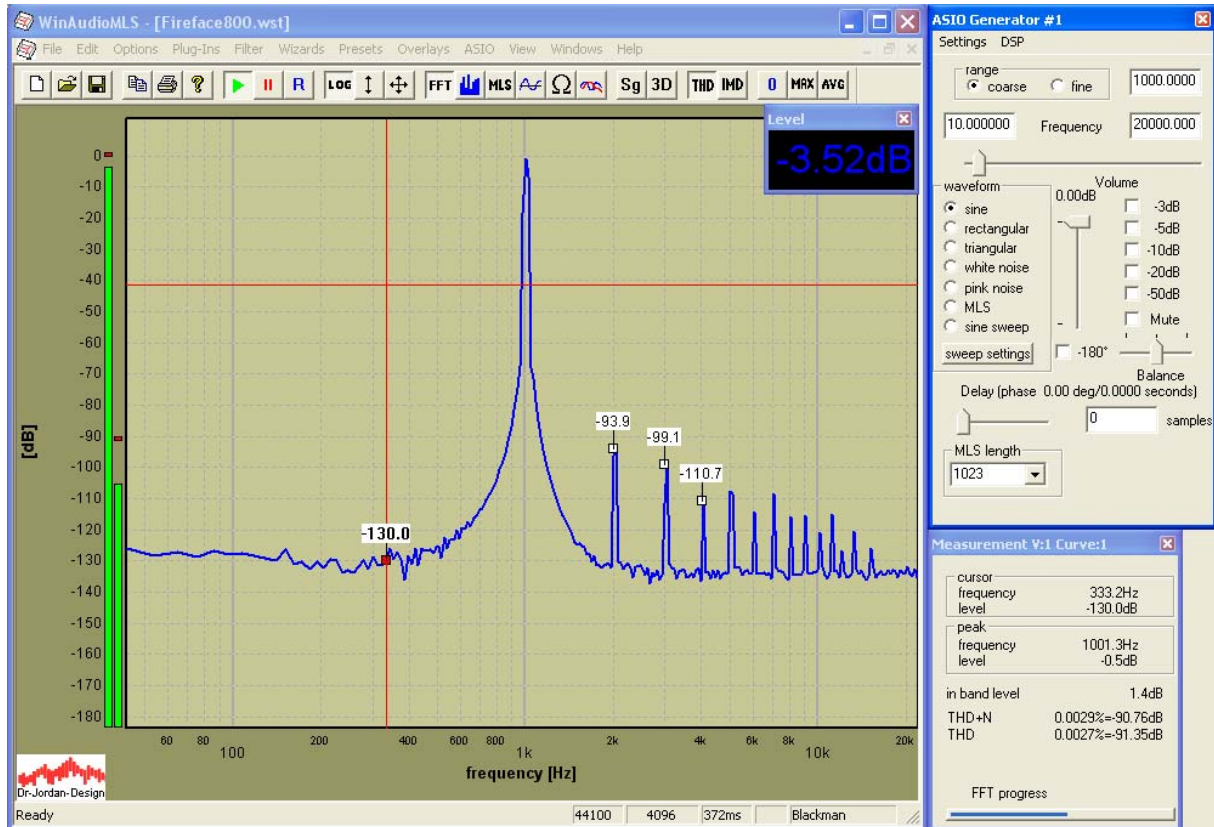
- THD+N DA: < -100 dB (< 0.001 %)
- Crosstalk DA: > 110 dB
  
- Input/Output level for 0 dBFS @ Hi Gain: +19 dBu
- Input/Output level for 0 dBFS @ +4 dBu: +13 dBu
- Input/Output level for 0 dBFS @ -10 dBV: +2 dBV
- Sample rate internally: 32, 44.1, 48, 64, 88.2 kHz, 96 kHz, 128, 176.4, 192 kHz
- Sample rate externally: 28 kHz - 200 kHz
  
- Frequency response AD/DA, -0.1 dB: 5 Hz - 21,5 kHz (sf 48 kHz)
- Frequency response AD/DA, -0.5 dB: < 5 Hz - 43.5 kHz (sf 96 kHz)
- Frequency response AD/DA, -1 dB: < 5 Hz - 70 kHz (sf 192 kHz)

### **Setup**

- WinAudioMLS PRO EX
- Sweep/tracking plug-in
- ASIO 24bit/192kHz plug-in
- 64bit FFT plug-in
- Input and output of channel 1 connected with a balanced cable

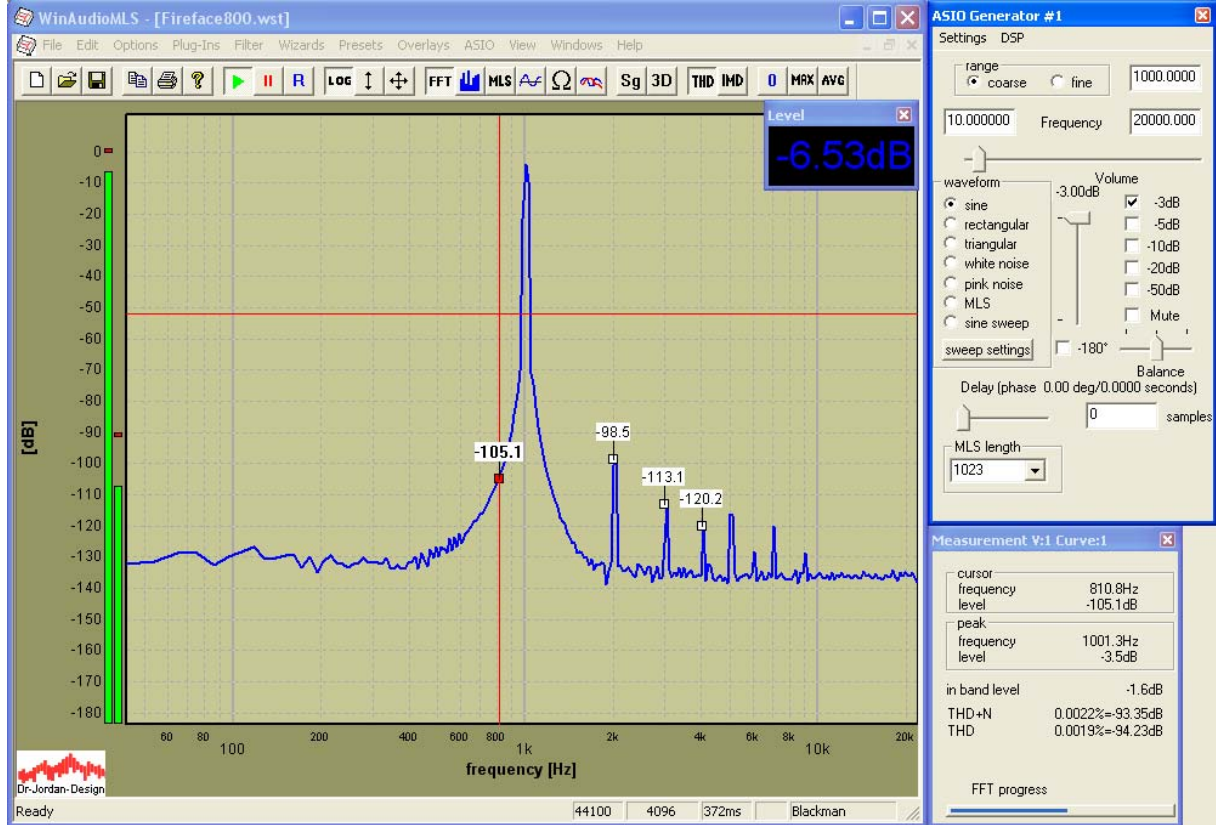
## Distortion analysis at 0dB output level

Sample rate 44.1kHz



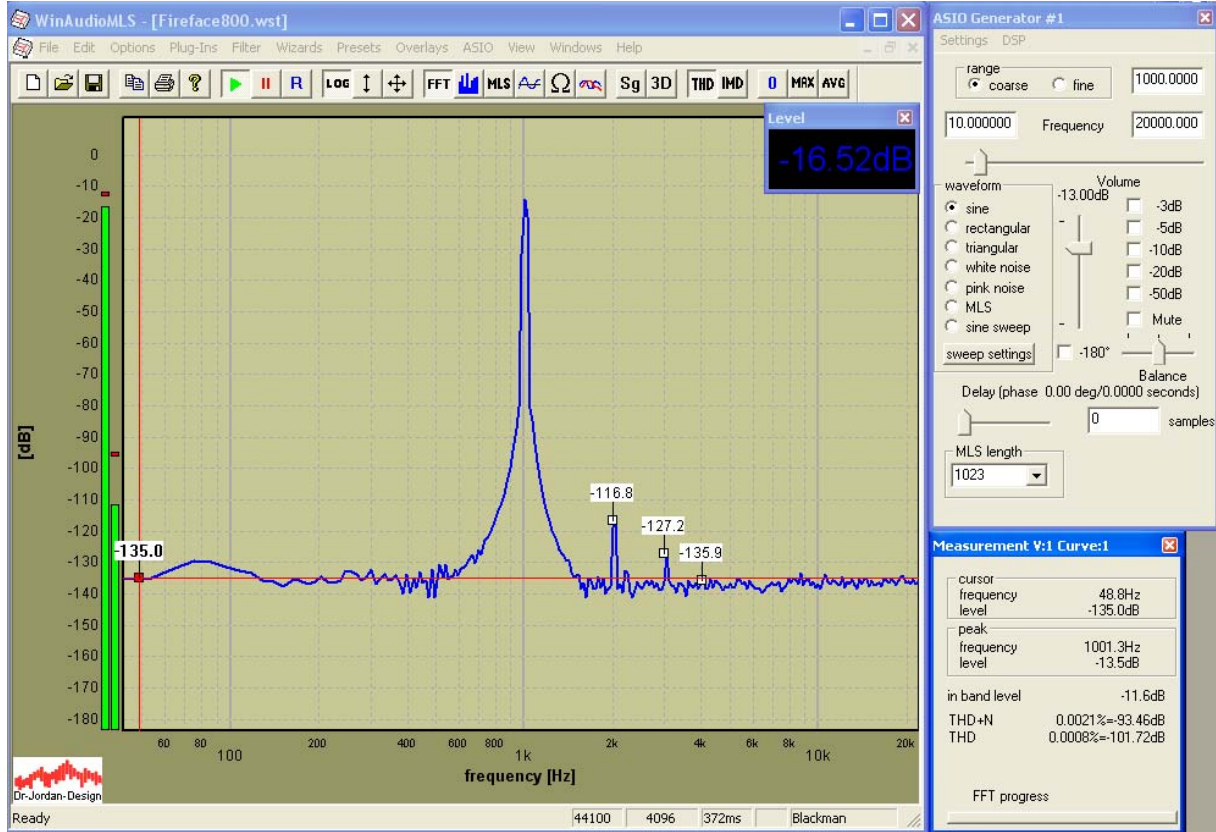
## Distortion analysis at $-3\text{dB}$ output level

Sample rate 44.1kHz



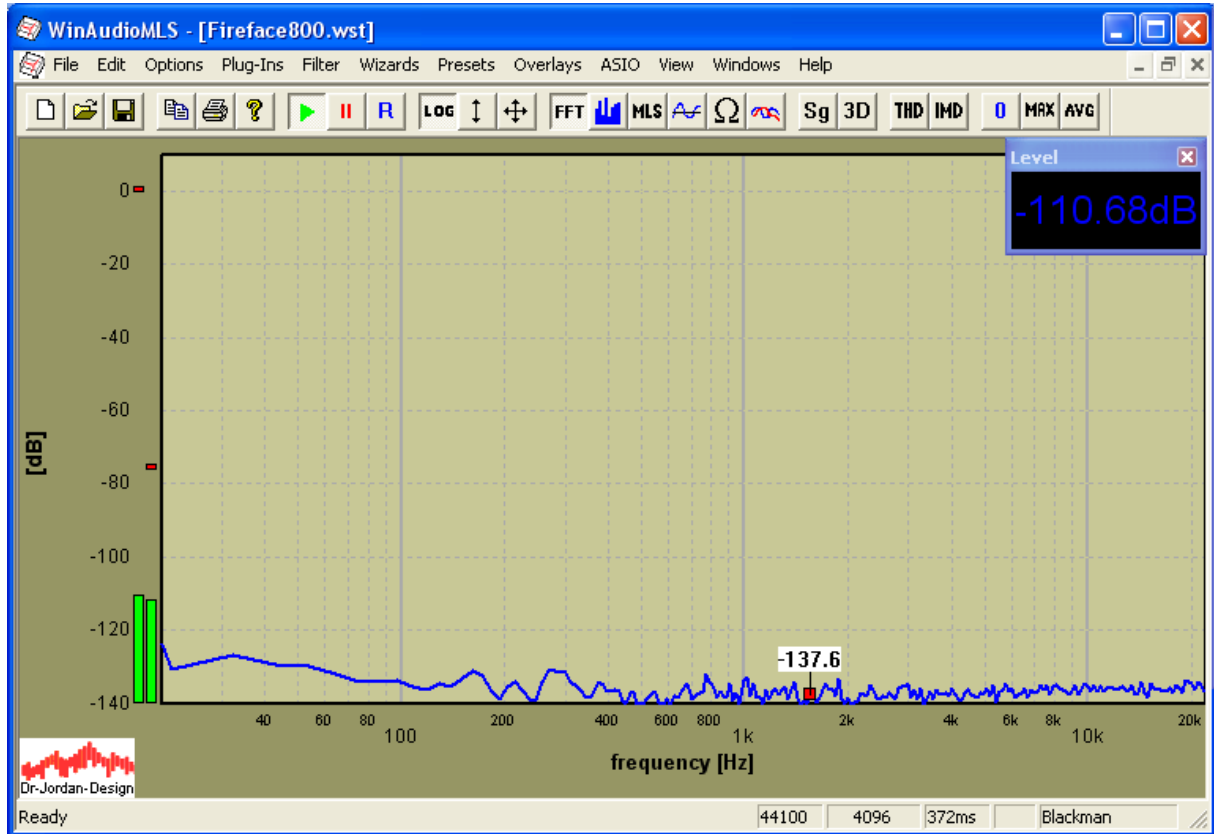
**Distortion analysis at -13dB output level**

Sample rate 44.1kHz



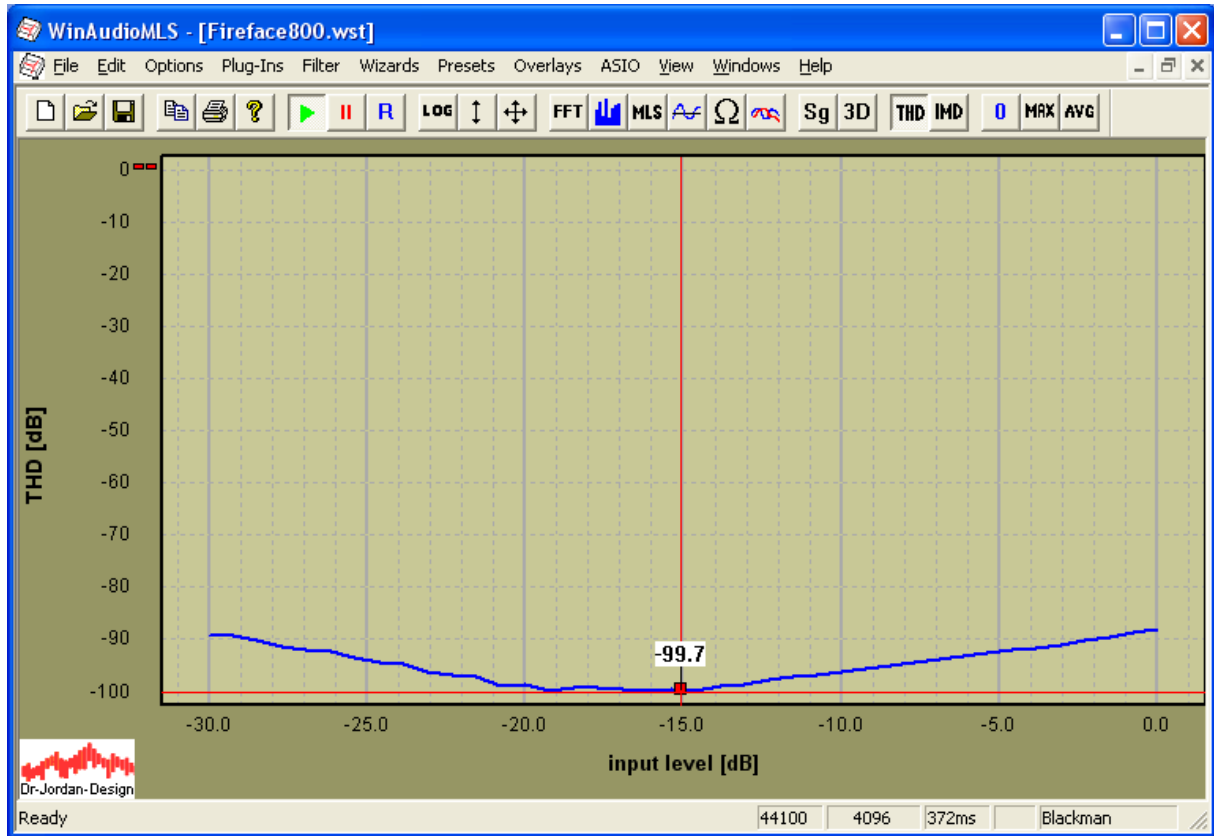
### ***Spectral analysis at output muted***

Sample rate 44.1kHz



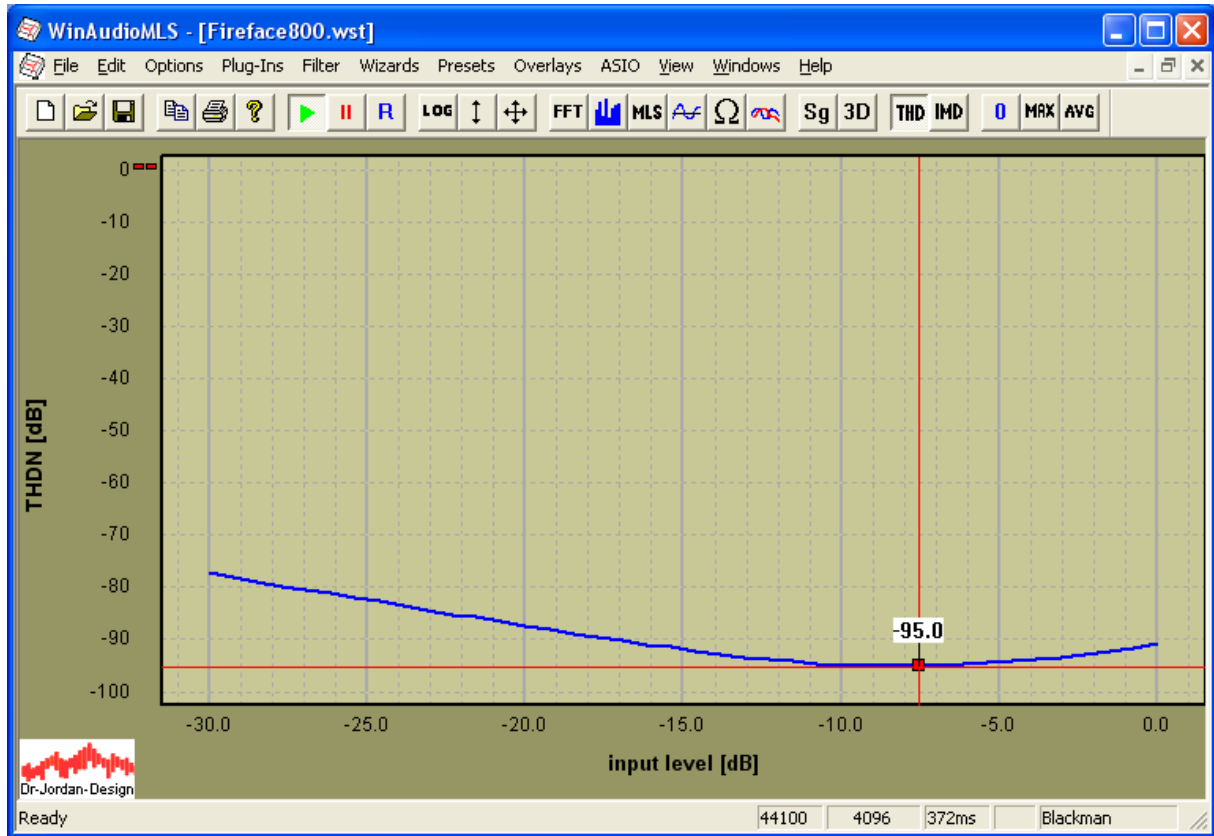
Usable dynamic is 107dB unweighted. With A weighting we reach 109.9dB

### THD vs. output level



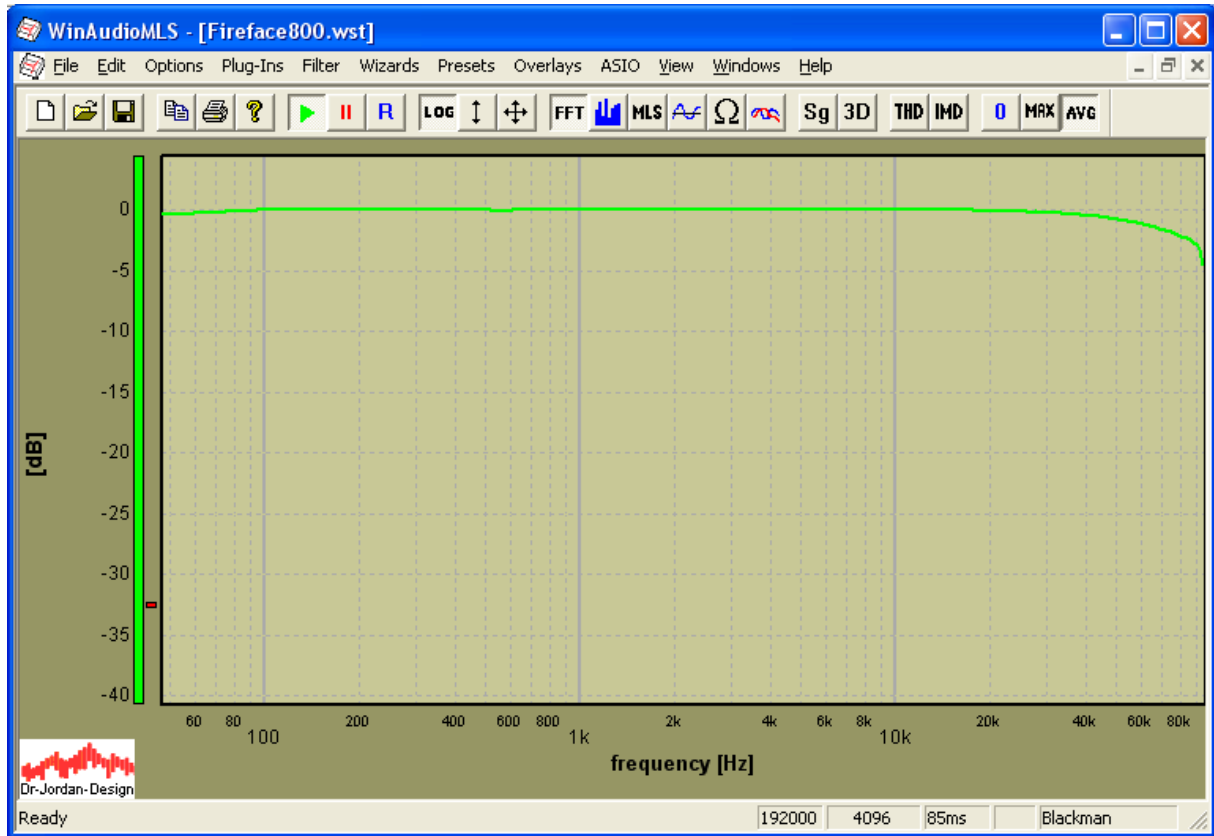


### THD+N vs. output level

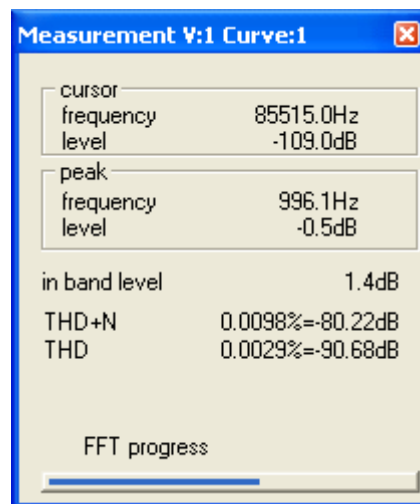
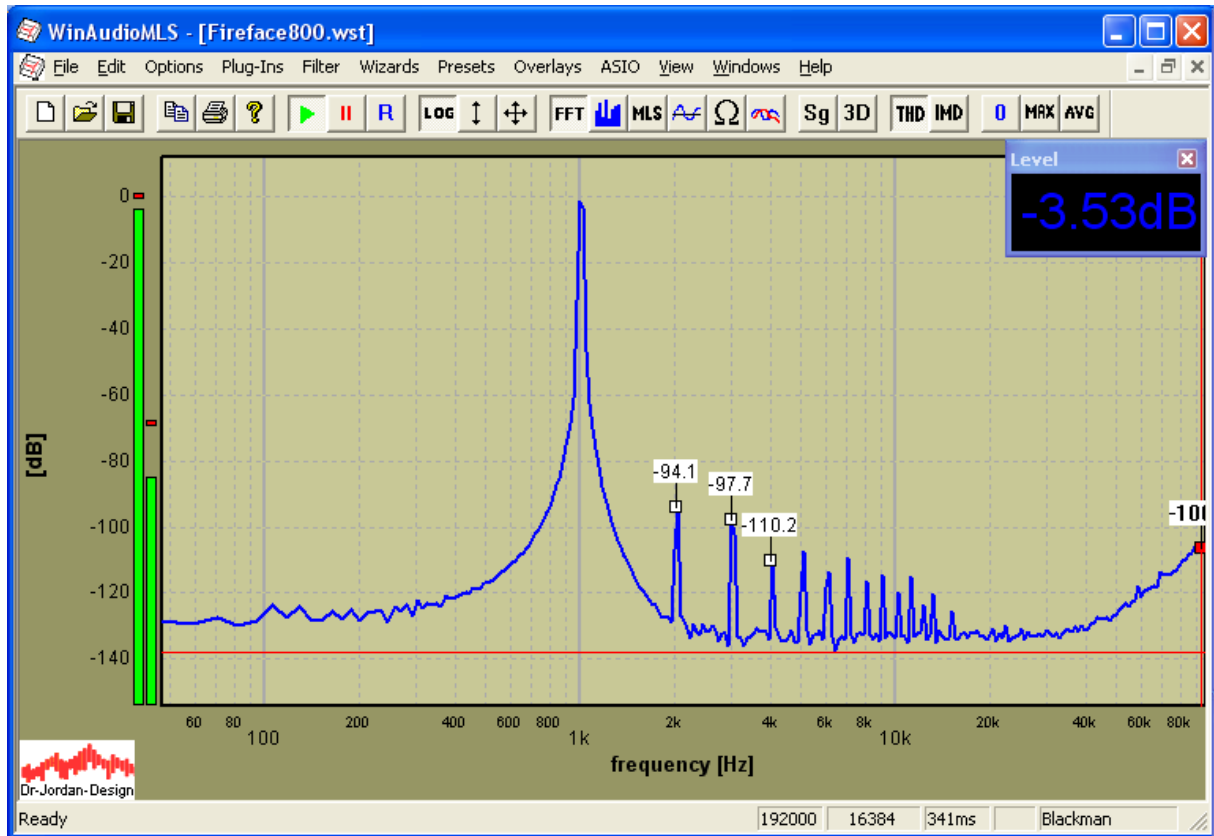




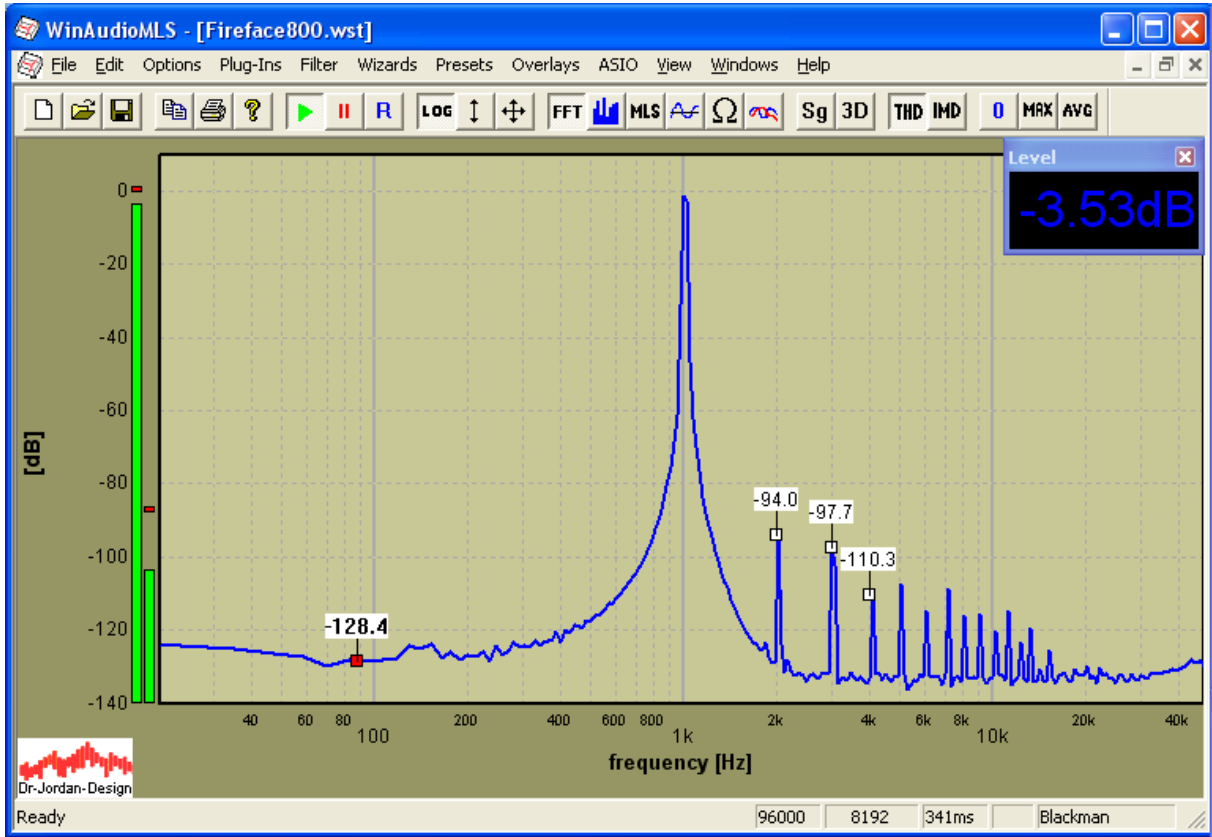
### Frequency Response at 192kHz sample rate



***Distortion analysis at 192kHz sample rate and 1kHz sine at full scale output***

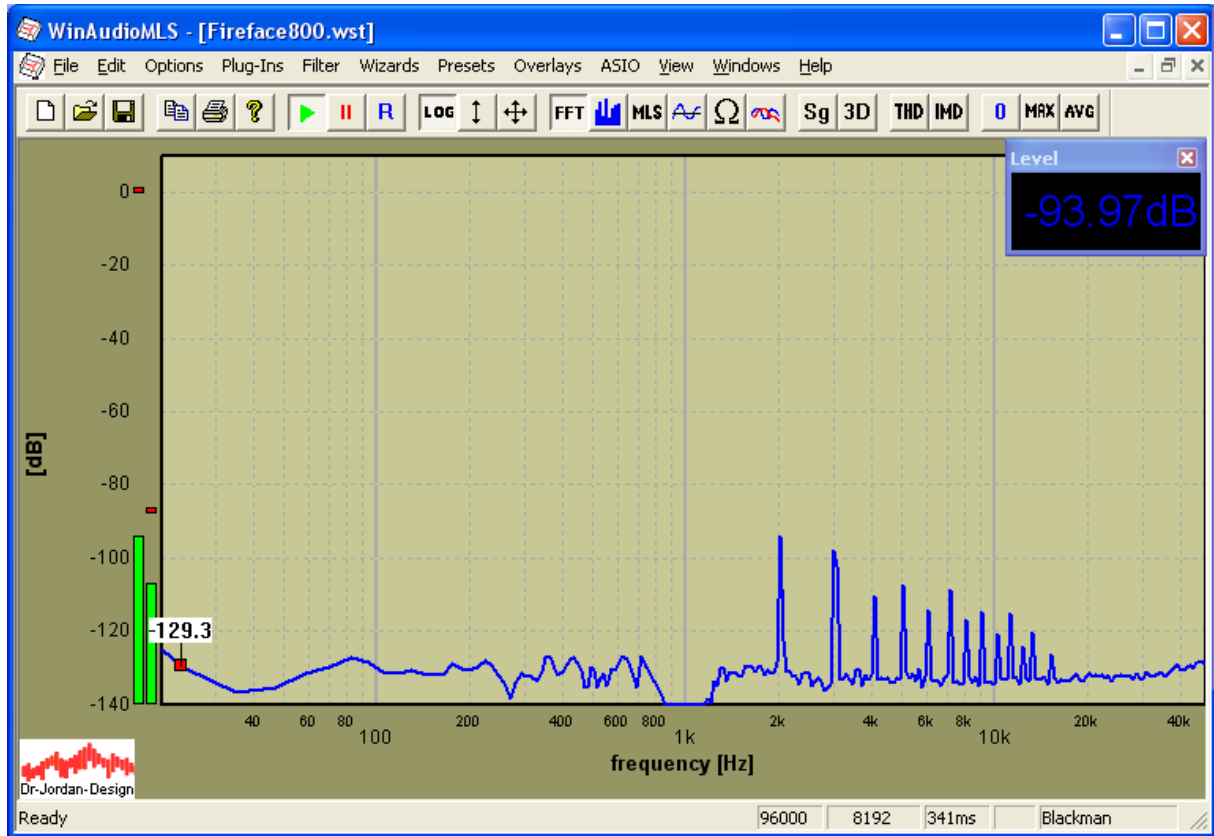


**Distortion analysis at 96kHz sample rate and 1kHz sine at full scale output**



Measurement V:1 Curve:1	
cursor	
frequency	944.9Hz
level	-64.95dB
peak	
frequency	996.1Hz
level	-0.52dB
in band level	1.4dB
THD+N	0.0031%=-90.04dB
THD	0.0029%=-90.64dB
FFT progress	

**Using the digital 1kHz notch filter included in WinAudioMLS**



**Fireface device settings**

