

EXCELSIOR AUDIO DESIGN & SERVICES

2130 Shadwell Court
Gastonia, NC 28056

704.675.5435
www.excelsior-audio.com

4471 Posterity Court
Gastonia, NC 28056

Audio & Acoustical Consulting, Design, and Measurement

Loudspeaker Measurement Report

19 March 2019

Loudspeaker Information	
Manufacturer	ACK Audio
Model	Blackthorn 1
Rated Sensitivity	84 dB (ref. 2.83 V, 1 m)
Frequency Limits (-10 dB)	43 Hz to 20kHz
Frequency Limits (-6 dB)	51 Hz to 19.1 kHz
Frequency Limits (-3 dB)	60 Hz to 18.7 kHz
Rated Impedance	8 Ω
Minimum Impedance	7.4 Ω (167 Hz)
Maximum Input Voltage	29 dBV (28.2 V) equivalent to 100 W at 8 ohms
Maximum SPL (measured, 1 m)	102.7 continuous; 115.8 peak (IEC 60268 noise)

Measurement Information	
Measurement Date	15 March 2019
Temperature	18.9 °C
Humidity	54 % RH
Environment	Trihedral, simulated free-field & outdoors
Measurement Distance	5.0 m



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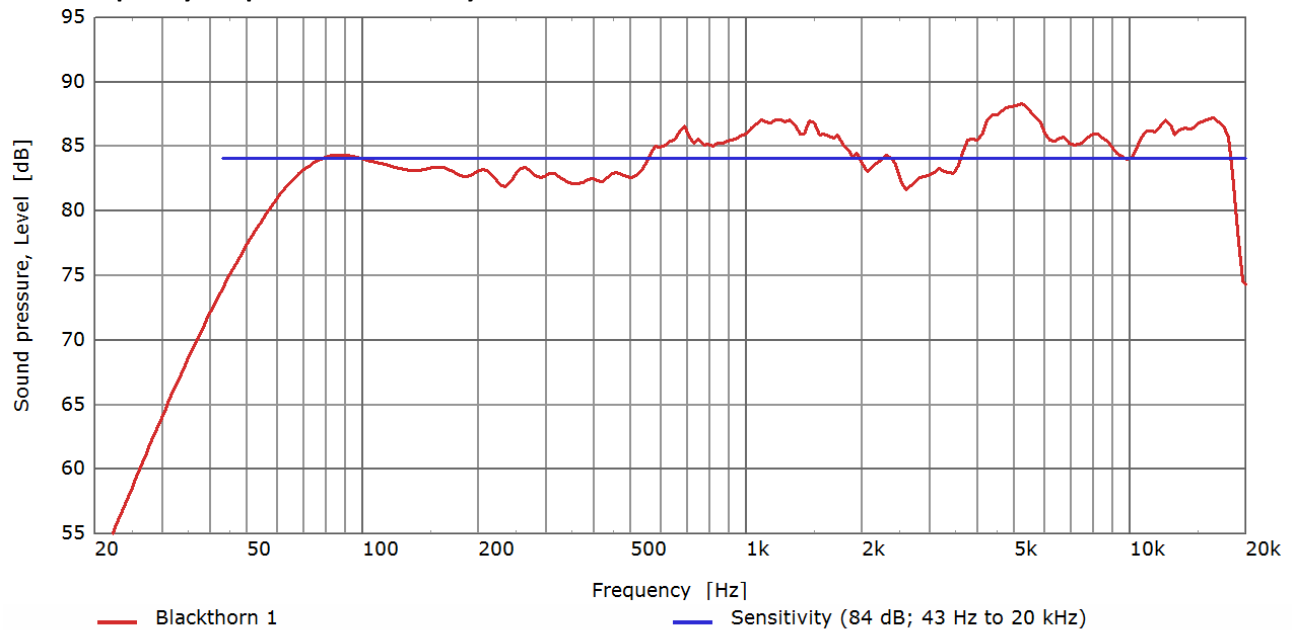
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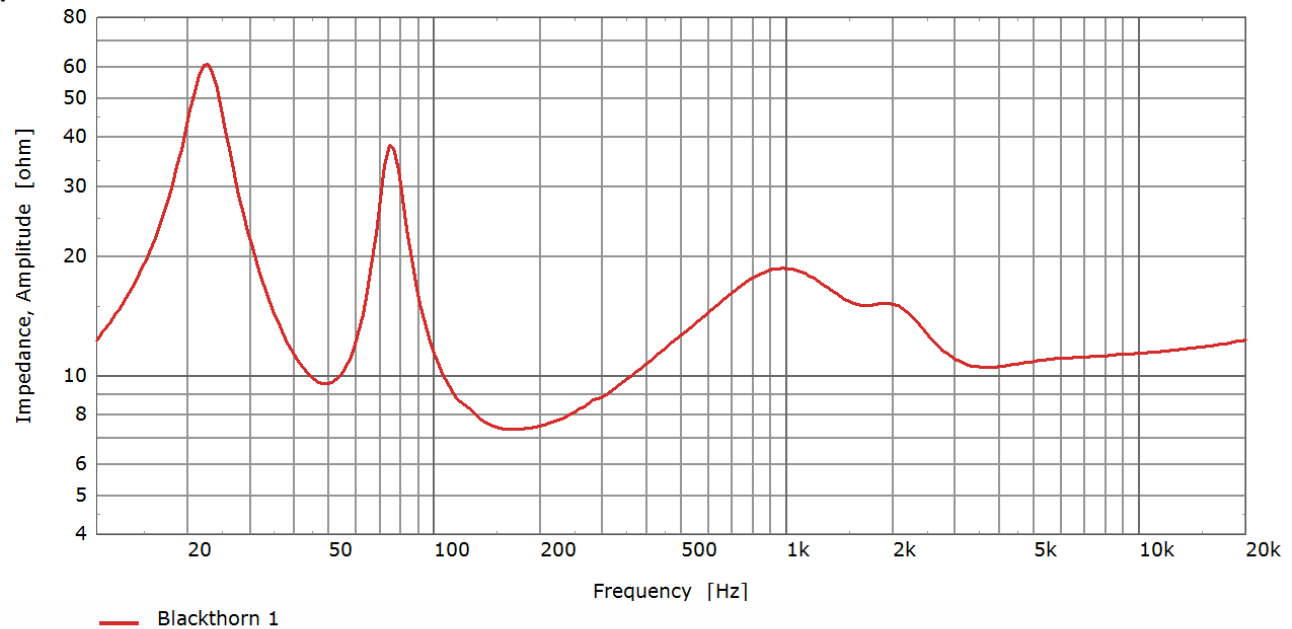
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On-Axis Frequency Response & Sensitivity



Impedance



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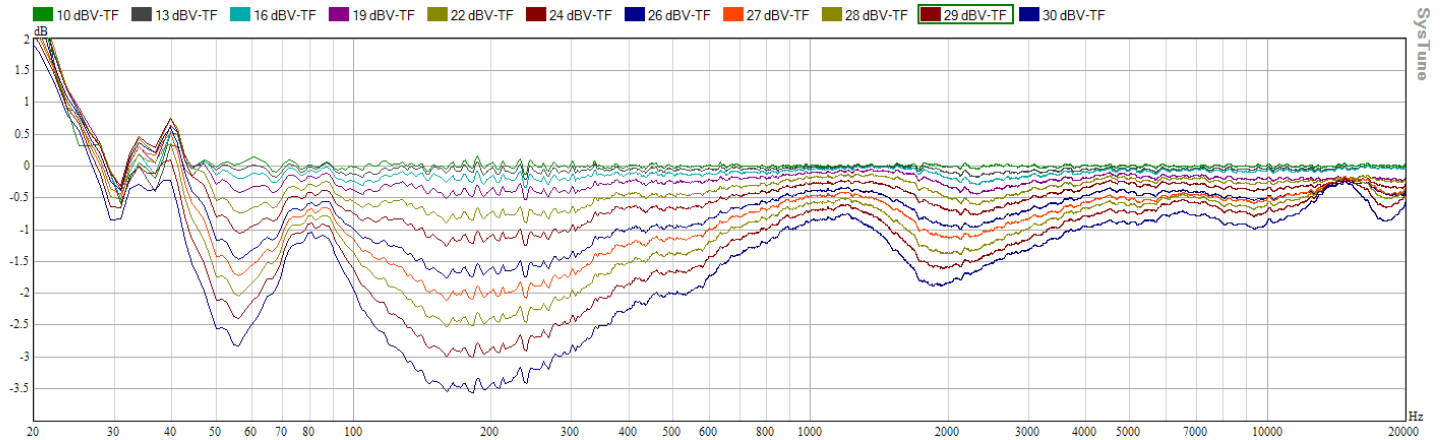
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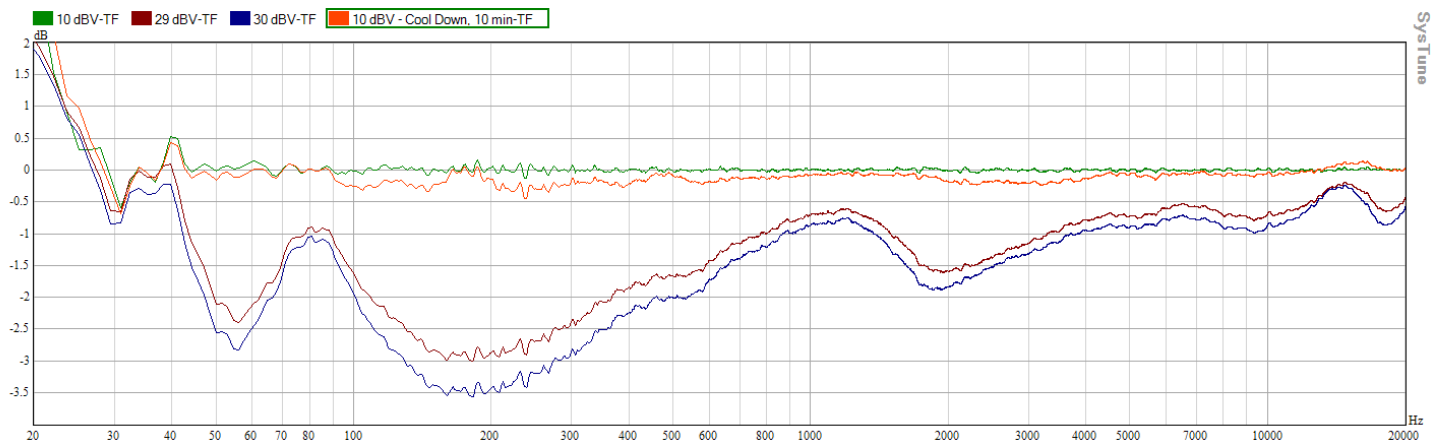
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Maximum Input Voltage Testing, Frequency Response Changes



All measured levels



Orange curve is after a 10 minute cool down period from the conclusion of the test

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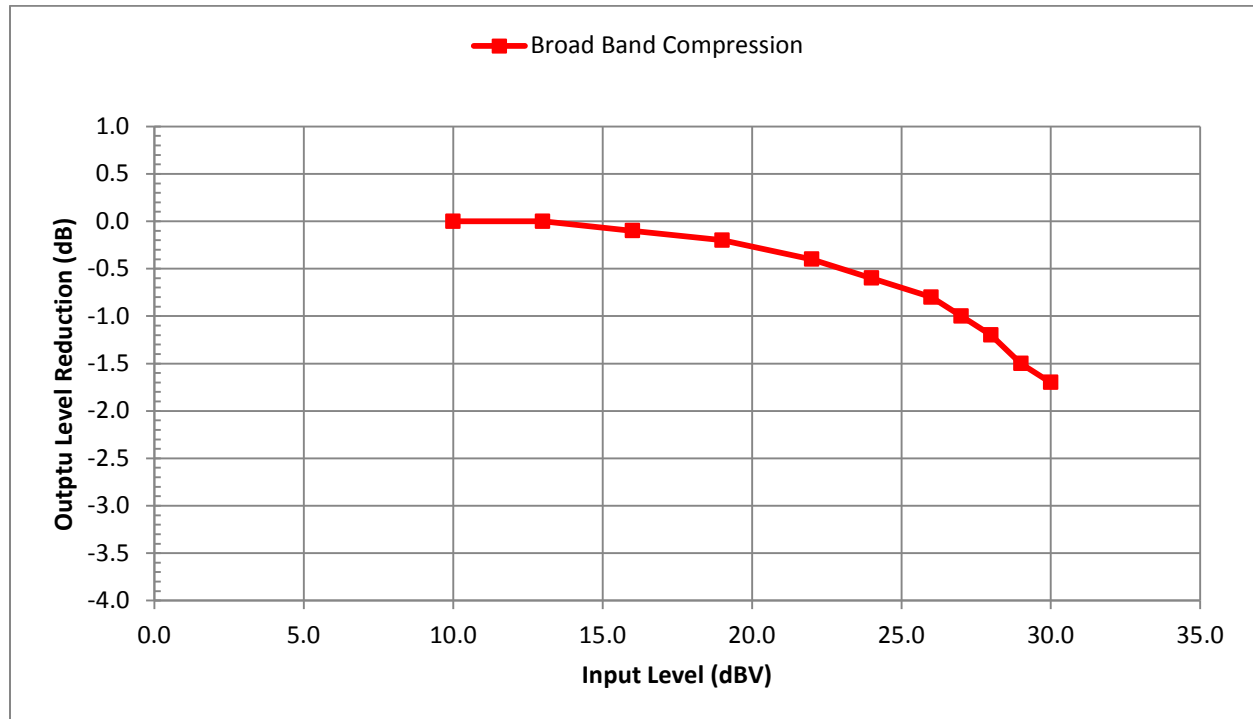
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Maximum Input Voltage Testing, Broad Band SPL Compression



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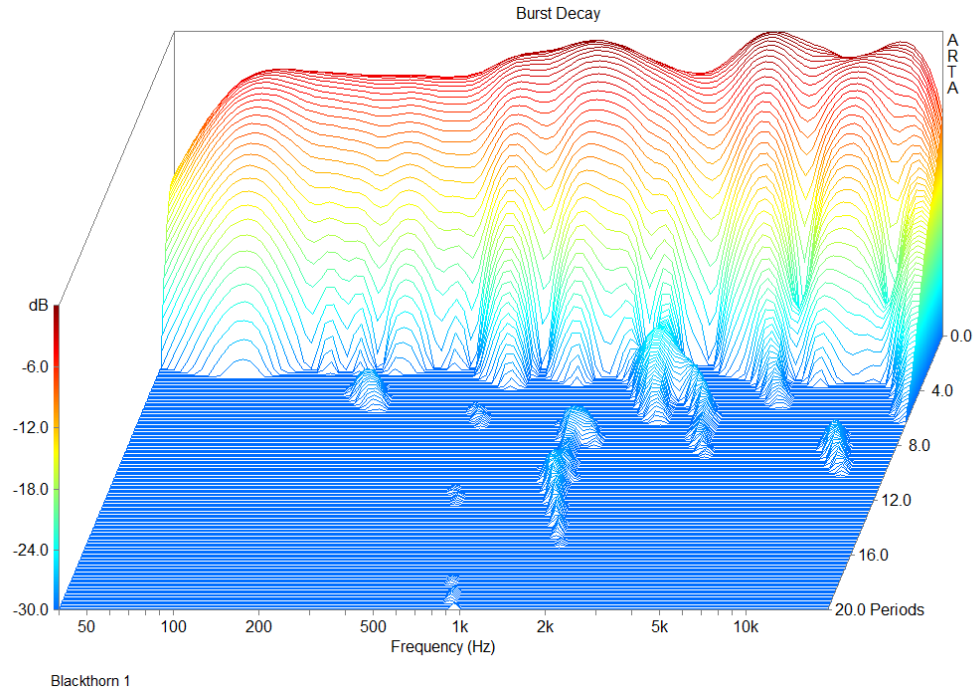
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Burst Decay



Spectral Decay

