

Sub10 PRO

Active subwoofer with onboard DSP
& network connectivity



Measurement Report → English

This report contains separate measurement graphs for the Sub8 PRO operating in Stereo, LFE, and WIDE modes.

Descriptive commentary is provided for the Stereo graphs.

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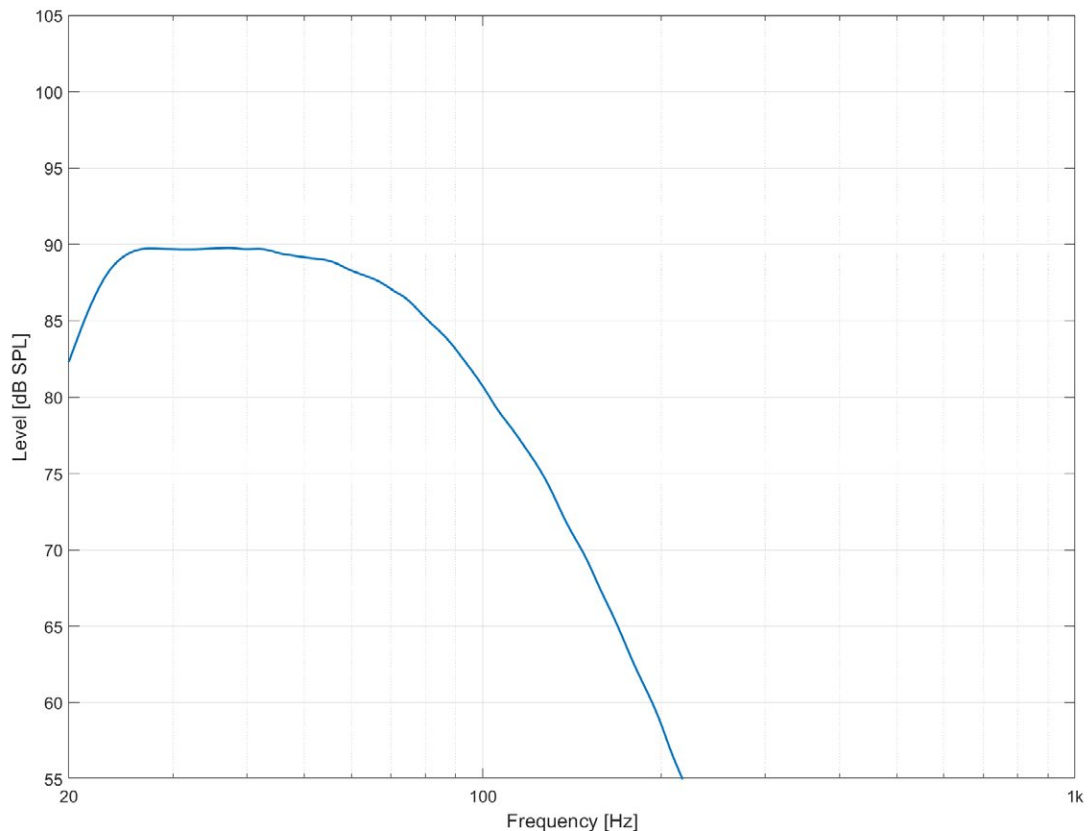
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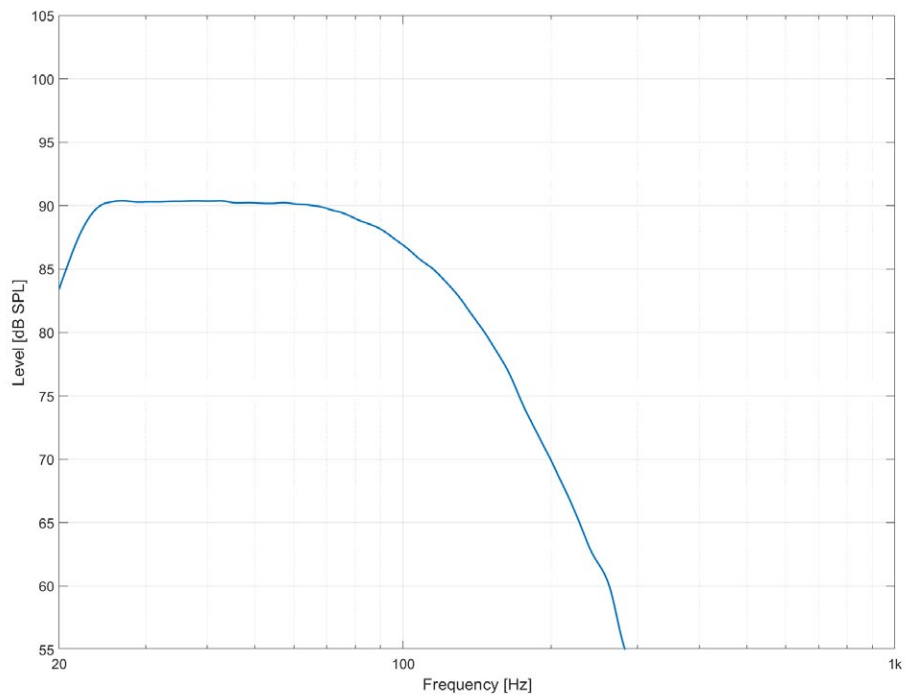


1. Frequency Response (Stereo Mode)

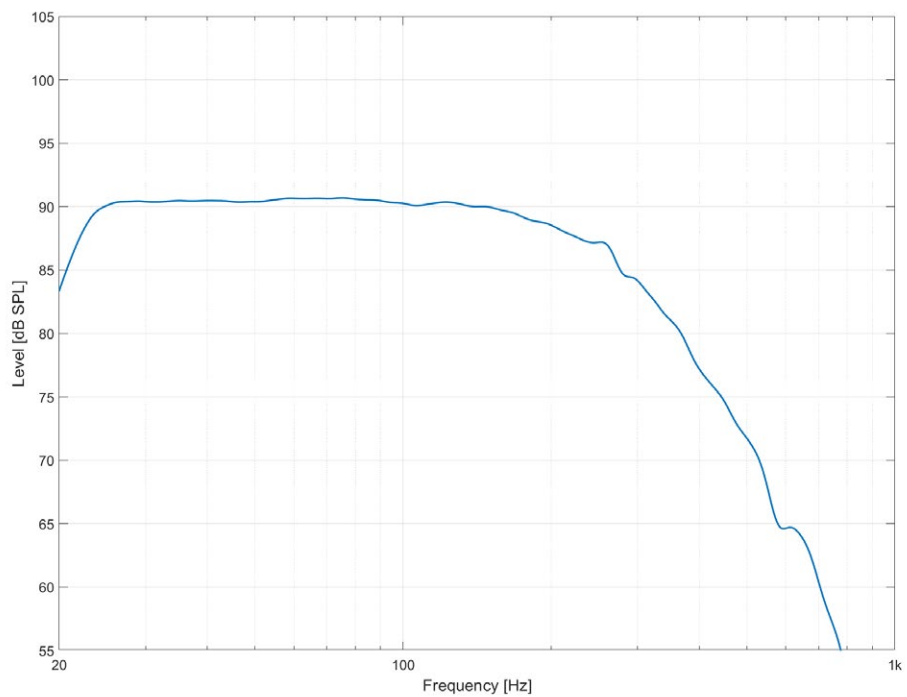
The on-axis frequency response shows a broad operating bandwidth extending from the low-20 Hz region to approximately 200 Hz. The response remains particularly smooth between approximately 28 Hz and 60 Hz, where output is highly consistent and free from significant irregularities.

Below 28 Hz, the response rolls off gradually while maintaining output well into the sub-bass region. Above approximately 60 Hz, the response decreases progressively as intended for crossovers with studio monitors, without pronounced peaks or dips.

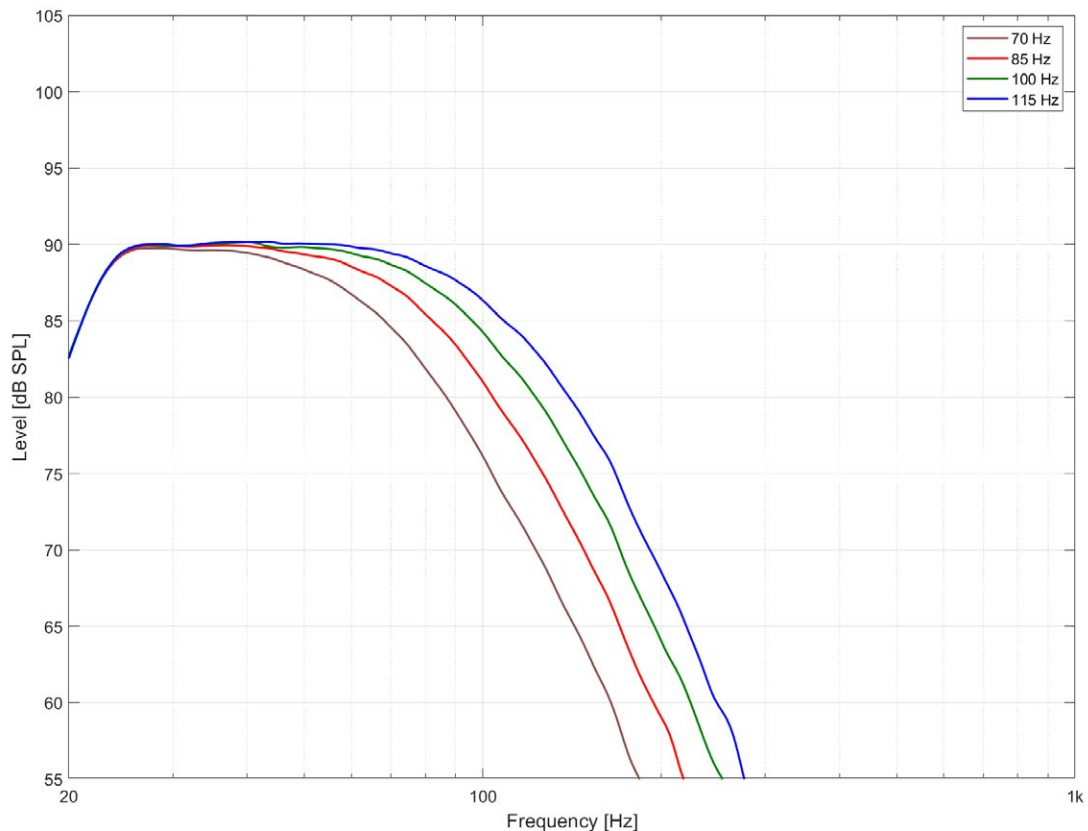
The overall response is smooth and free from significant resonances, indicating good control of the driver, enclosure, bass reflex port, and acoustic alignment. The result is a well-behaved response across the subwoofer's intended operating range.



1. a) Frequency Response (LFE Mode)



1. b) Frequency Response (Wide Mode)

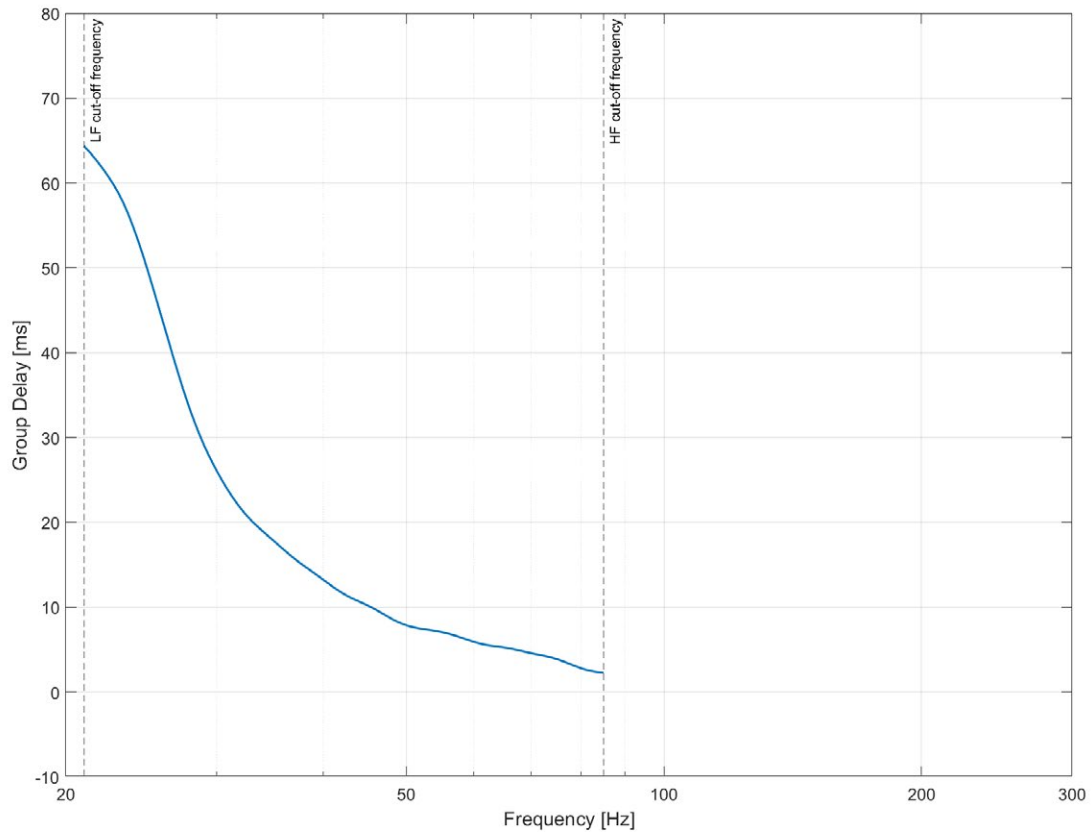


2. Crossover Frequencies (Stereo Mode)

This graph shows the frequency response for the available low-pass crossover settings of 70 Hz, 85 Hz, 100 Hz, and 115 Hz. Below approximately 50 Hz, the response remains essentially unchanged, indicating that the crossover adjustment primarily affects the upper operating range of the subwoofer.

As the crossover frequency increases, the upper range extends accordingly while maintaining a smooth and consistent response shape. No significant peaks, dips, or resonances are visible throughout the adjustment range.

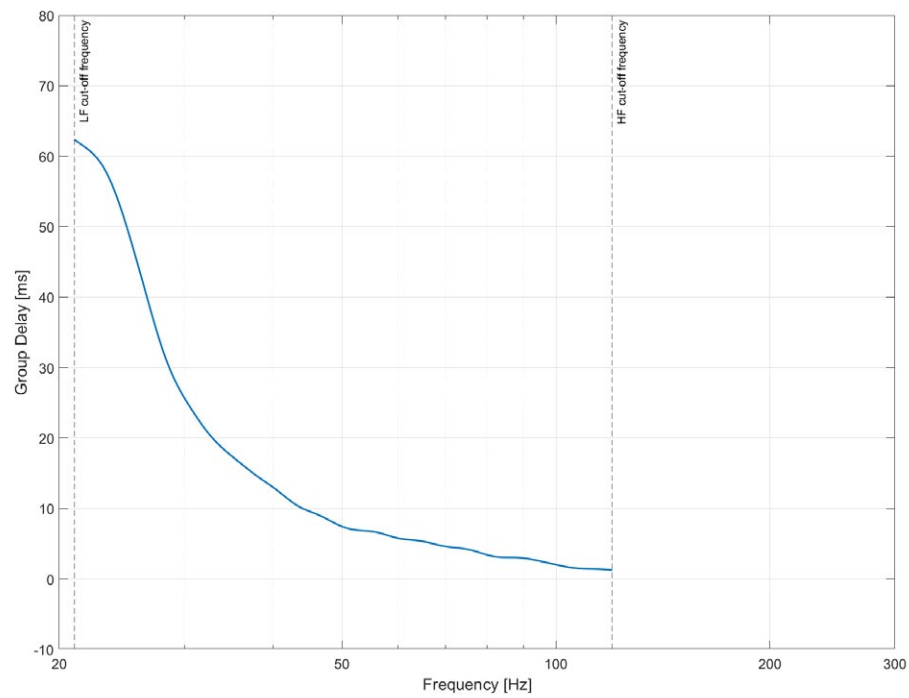
The measured behavior indicates a well-controlled crossover implementation that preserves the overall response characteristics of the subwoofer while providing a useful range of integration options for different sized monitor systems.



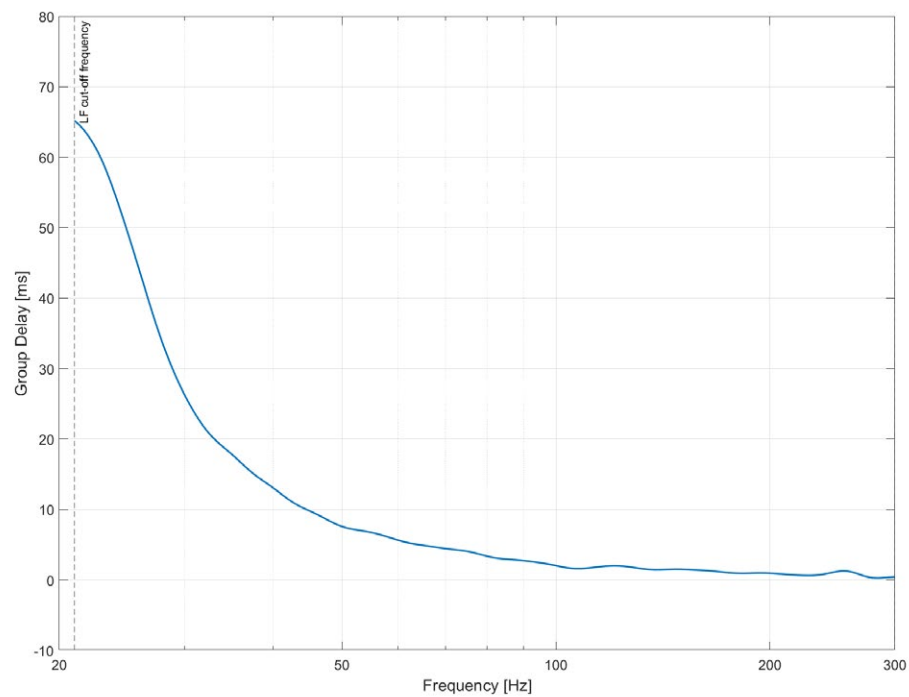
3. Group Delay (Stereo Mode)

Group delay shows the time required for different frequencies to propagate through the subwoofer system. As expected, delay increases towards the lowest frequencies, reaching its maximum value close to the low-frequency cutoff.

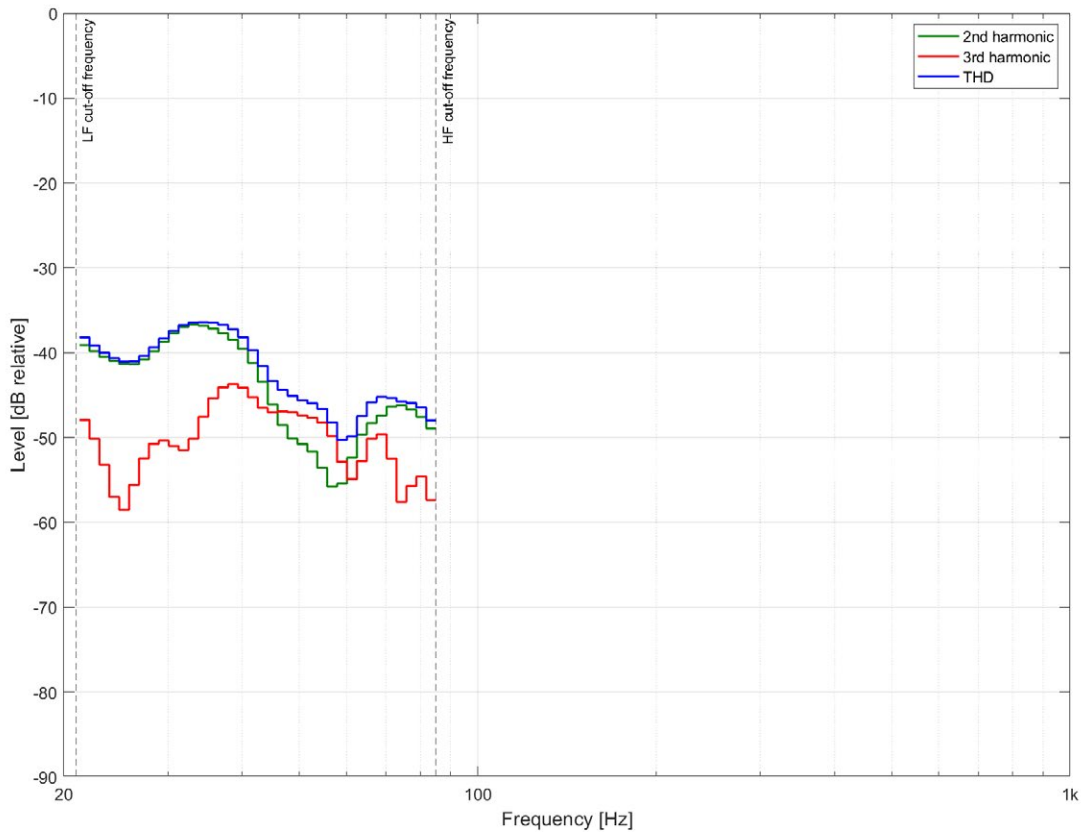
Within the primary operating range of the subwoofer, group delay decreases progressively from approximately 15 ms at 30 Hz to below 5 ms above 70 Hz. This behaviour mirrors the well-tuned bass reflex design and indicates that delays across the operating range are unproblematic.



3. a) Group Delay (LFE Mode)



3. b) Group Delay (WIDE Mode)

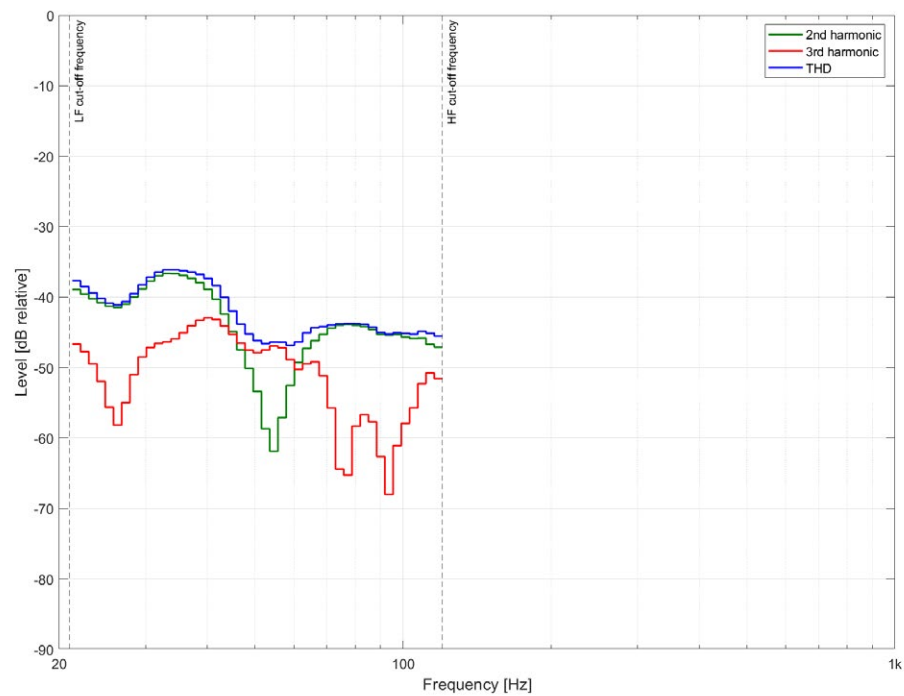


4. Distortions (Stereo Mode)

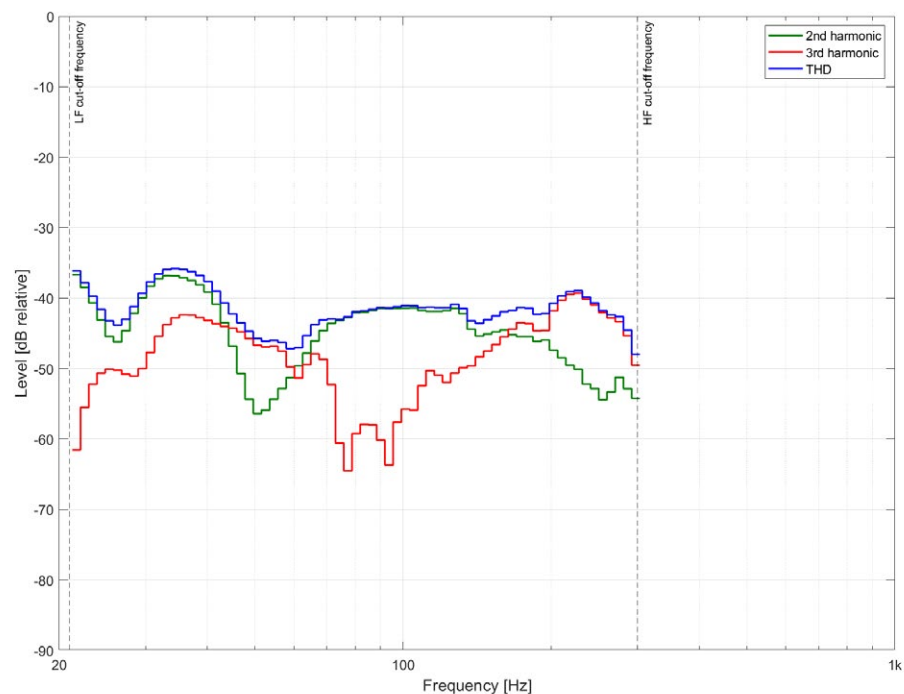
Distortion is sound output produced by the subwoofer that is not present at the input signal. The graph shows the 2nd harmonic, 3rd harmonic, and total harmonic distortion (THD) measured at 95 dB SPL, half space at 1 meter distance. As all harmonic components contribute to THD, the THD curve is, by definition, the highest curve on the graph.

The measured distortion remains low throughout the operating range, with 2nd harmonic distortion being the dominant component. Higher-order distortions remain at significantly lower levels across the measured frequency range.

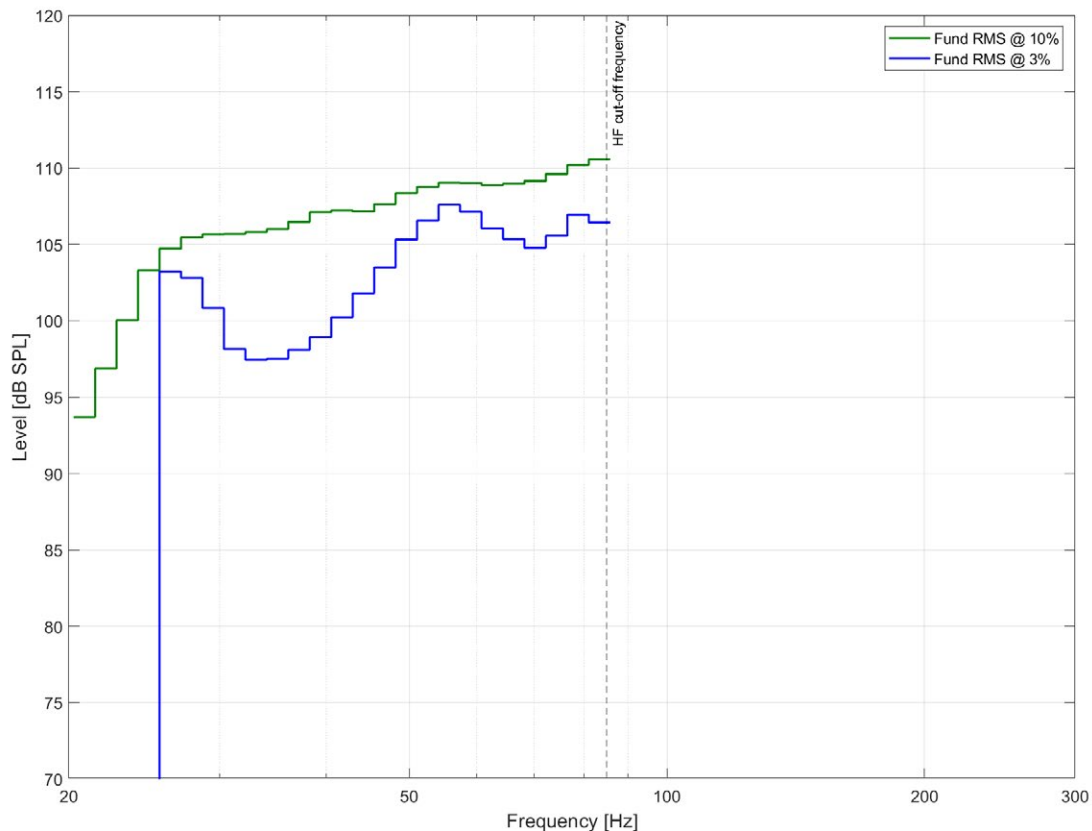
No pronounced distortion peaks are visible within the passband, indicating good control of driver excursion and system non-linearities. The result is a clean distortion profile throughout the intended operating range of the subwoofer.



4. a) Distortions (LFE Mode)



4. b) Distortions (WIDE Mode)

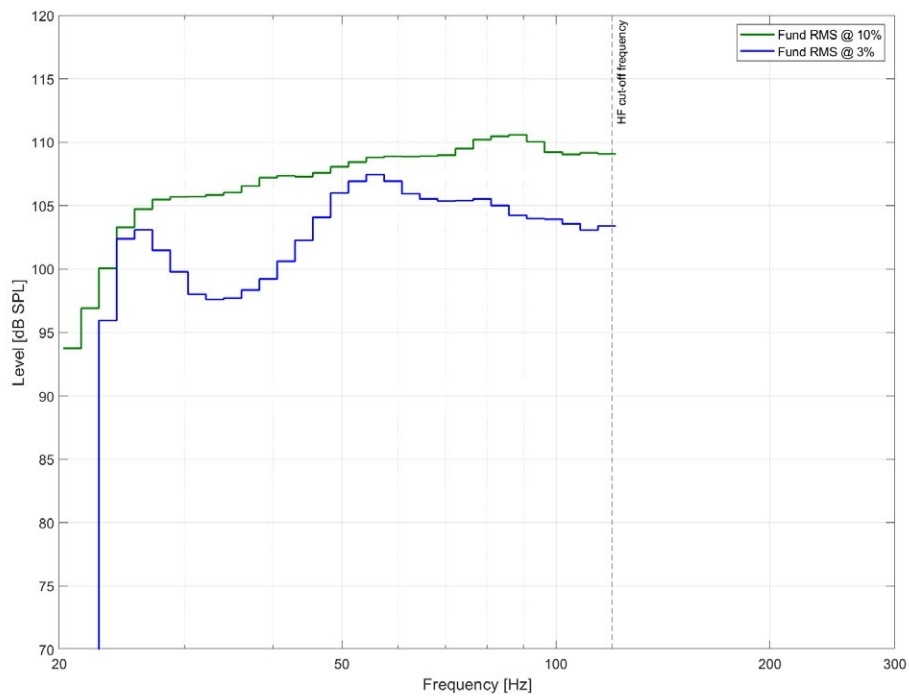


5. SPL (Stereo Mode)

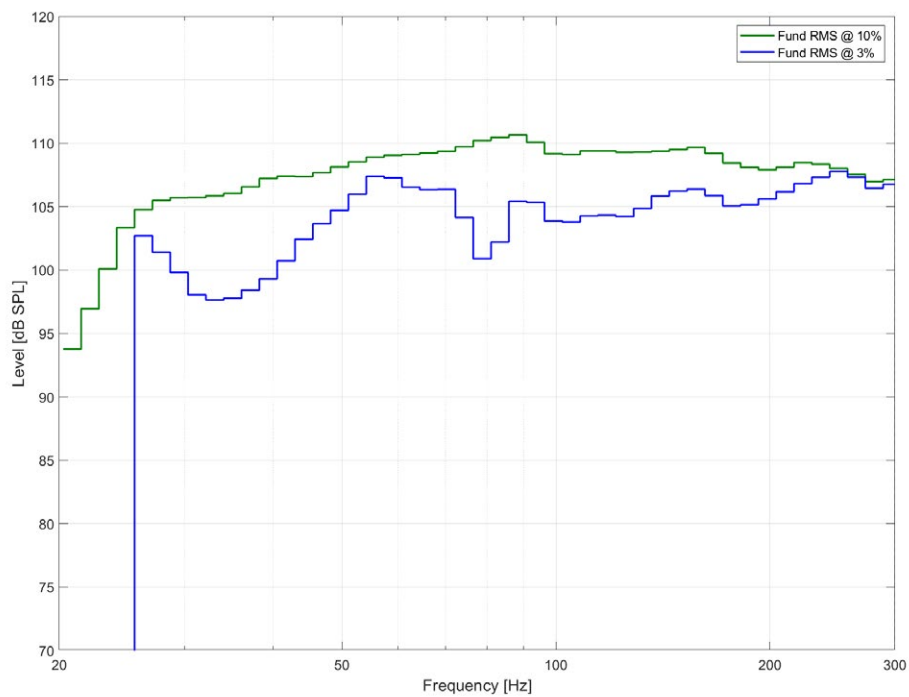
The maximum SPL curve shows how loud the subwoofer can play at each frequency before reaching either 3% or 10% THD. The goal is to achieve the highest possible values across the operating range, particularly at low frequencies where driver excursion requirements are greatest.

The difference between the 3% and 10% THD curves remains relatively small across much of its operating range. This indicates that distortion increases gradually as output level rises rather than abruptly, with no evidence of strong compression effects or localized output limitations.

Output capability remains high throughout most of the operating range, with the expected reduction in maximum SPL occurring only towards the lowest frequencies, where the maximum load of the system appears.



5. a) SPL (LFE Mode)



5. b) SPL (WIDE Mode)

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