EZ CD Audio Converter 12.4 | 99.7% allow aliasing	[Ideal Response]

Sample Rate Conversion Results

Overall Balanced Quality 99.55 %	Overall Balanced Quality 100.00 %

Bit depth, whilst a SRC might accept 64 bit floating point, internally it might process at a much lower bit depth, this test checks different bit depths:

✔ 16 bit ✔ 24 bit ✔ 32 bit ✔ 32 bit float ✔ 64 bit float	✔ 16 bit ✔ 24 bit ✔ 32 bit ✔ 32 bit float ✔ 64 bit float

SRC routines can introduce a delay at the start:

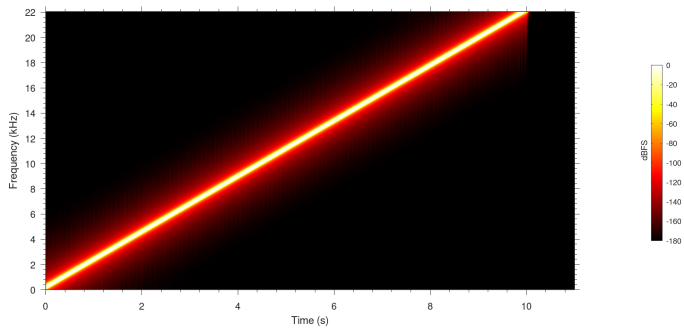
Calculated delay 0 samples Quality Score 100%	Calculated delay 0 samples Quality Score 100%

Spectrogram of a sweep 1 to 22 kHz

A sine sweep from 1 to 22 kHz the ideal plot is a single strong red line. Issues with aliasing effects or filter cutoff would show as extra lines. Noise would appear as dots across the plot (instead of a black background). [96 kHz source resampled to 44 kHz]

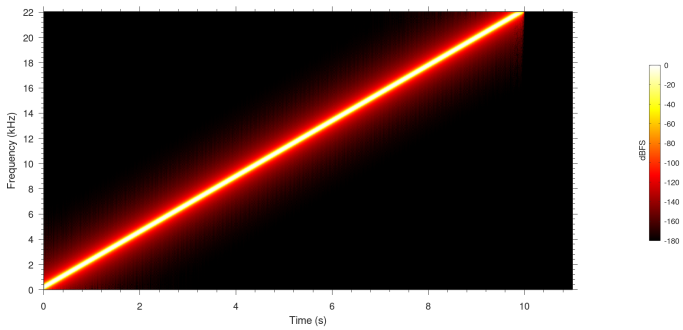
Quality Score 99.69%

(click image to view full size)



Quality Score 100%

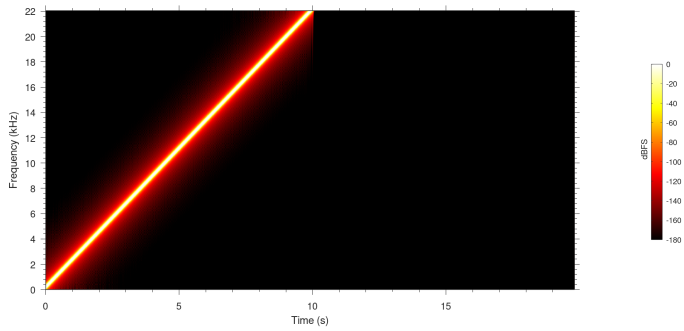
(click image to view full size)



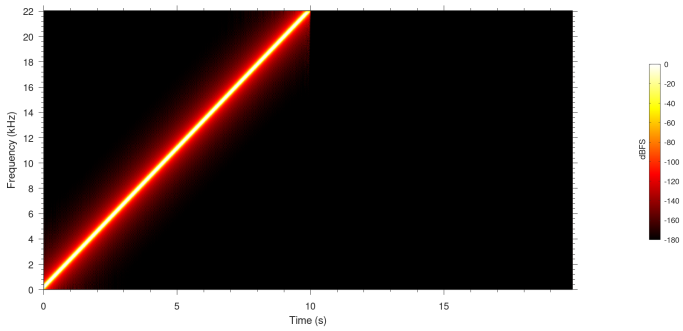
Spectrogram of a sweep 1 to 22 kHz (extended)

The source signal included a sine sweep all the way up to 44 kHz, however when downsampled to 44 kHz the highest frequency which can be represented is 22 kHz. This plot would show if the sine above 22 kHz is filtering down into the plot, there should be nothing plotted after 10 seconds. [96 kHz source resampled to 44 kHz]

(click image to view full size)



(click image to view full size)



Aliasing

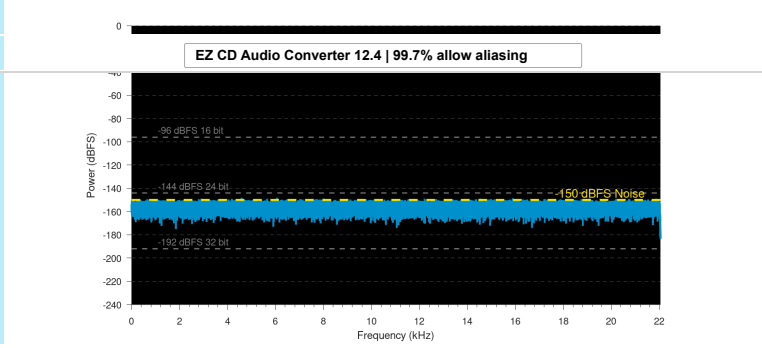
A 23 kHz sine at -4 dBFS with a white noise floor of -150 dBFS over 30 seconds. The ideal plot is a continuous line touching the -150dB line, many SRC routines engage a gradual filter at 20 kHz which would be visible on this plot. [96 kHz source resampled to 44 kHz]

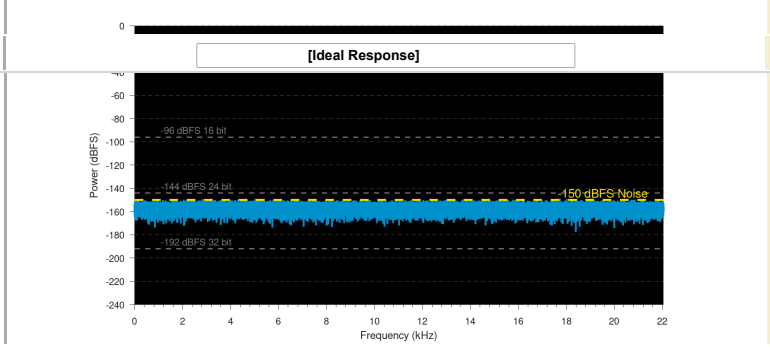
Quality Score 100%

(click image to view full size)

Quality Score 100%

(click image to view full size)



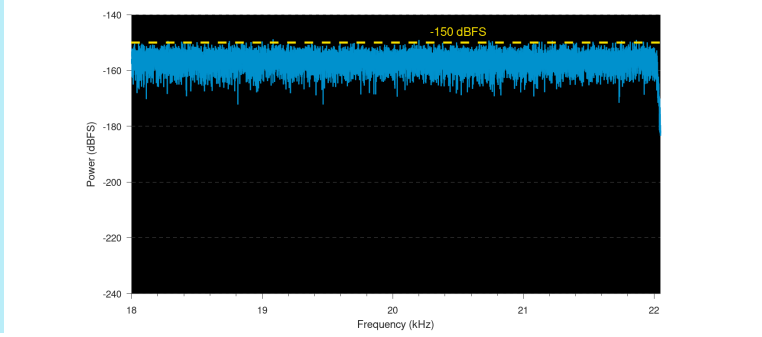


Nyquist Filter

Zoomed on nyquist frequency (22.050 kHz), the bandwidth of the SRC is displayed. A SRC with 100% bandwidth, that is full freqency preservation would be a straight line of noise. [96 kHz source resampled to 44 kHz]

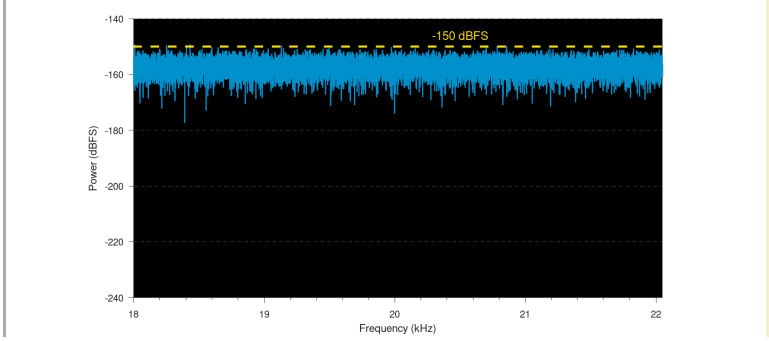
Quality Score 99.81%

(click image to view full size)



Quality Score 100%

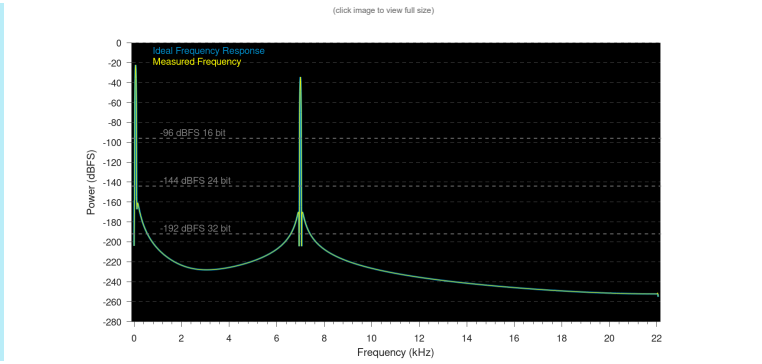
(click image to view full size)



Intermodulation Harmonic Distortion

Two sine waves one at 64.59 Hz, -6 dBFS and the second at 6998 kHz, -18.0412 dBFS, which equals quarter the amplitude of the first sine. This test will highligh aliasing and dynamic range of processing. It will also show it dither has been applied, look for high frequency signals on the plot. [96 kHz source resampled to 44 kHz]

(click image to view full size)



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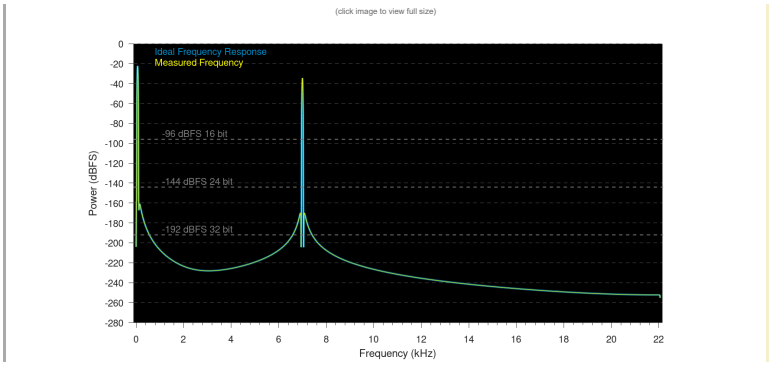
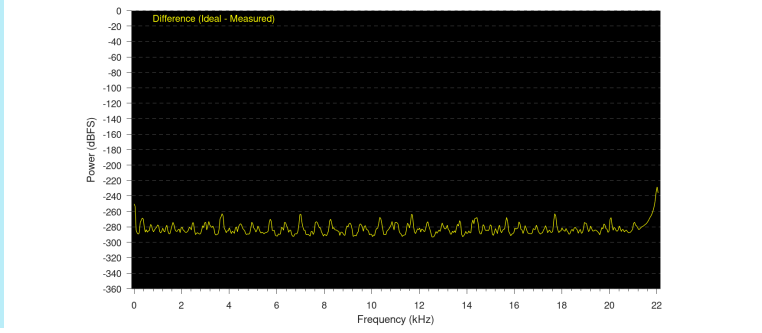


Intermodulation Harmonic Distortion (difference)

The difference between the ideal and measured signals from the Intermodulation Harmonic Distortion test. [96 kHz source resampled to 44 kHz]

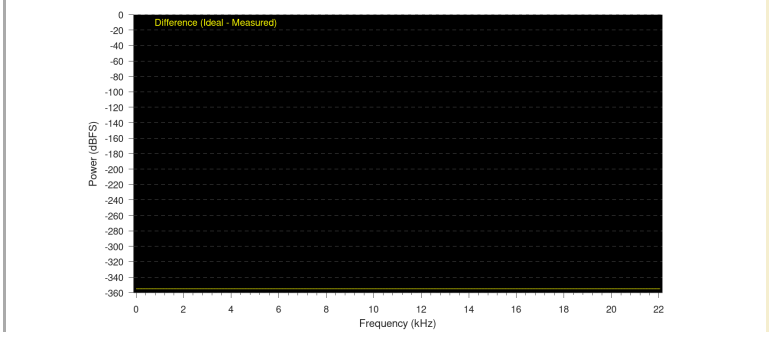
Quality Score 100%

(click image to view full size)



Quality Score 100%

(click image to view full size)

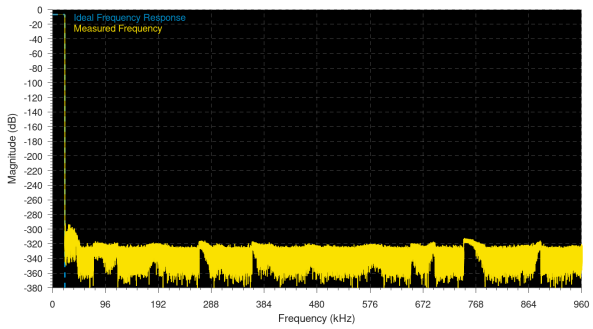


Impulse Frequency

A frequency response displaying leakage beyond the ideal frequency response.
Impulses are at sample positions n so that {n mod 320} is a permutation of {0, 1, 2, . . . , 319}. All fractional differences in sample positions between input and output signal are addressed exactly once. The output signal is upsampled to 14.112 MHz and the impulse responses are added to obtain a high resolution impulse response. [96 kHz source resampled to 44 kHz]

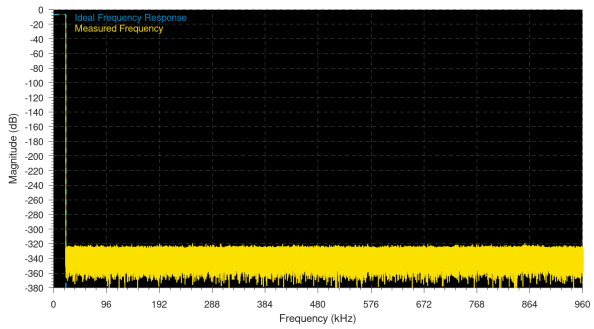
Quality Score 98.1%

(click image to view full size)



Quality Score 100%

(click image to view full size)

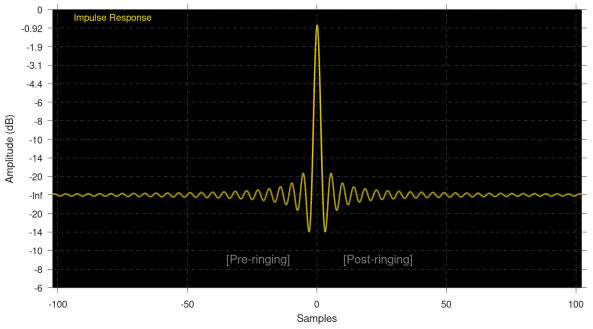


Impulse Response

Displays the phase response, most SRC balance the response with pre and post ringing, personal preference might prefer a minimum phase response where there is no pre-ringing, the quality score is based mainly on reduction of pre-ringing. [96 kHz source resampled to 44 kHz]

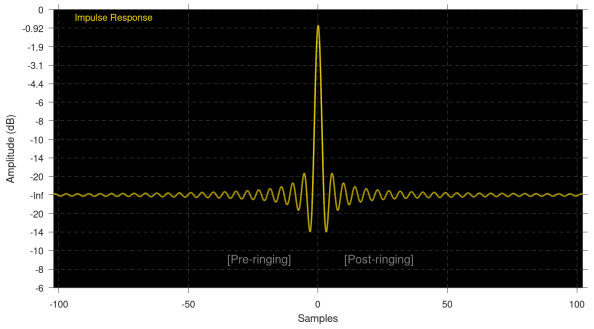
Quality Score 17.77%

(click image to view full size)



Quality Score 17.86%

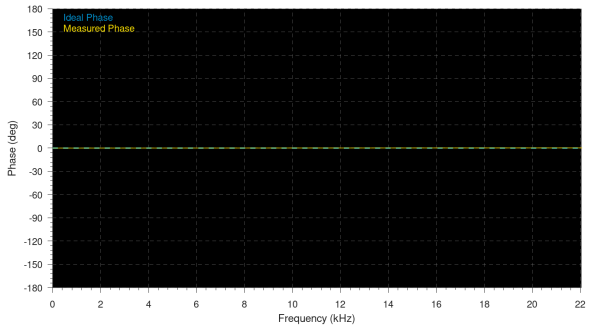
(click image to view full size)



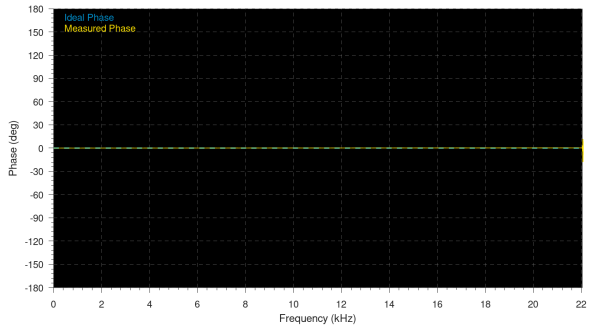
Impulse Phase

The actual phase across the frequency range. [96 kHz source resampled to 44 kHz]

(click image to view full size)



(click image to view full size)

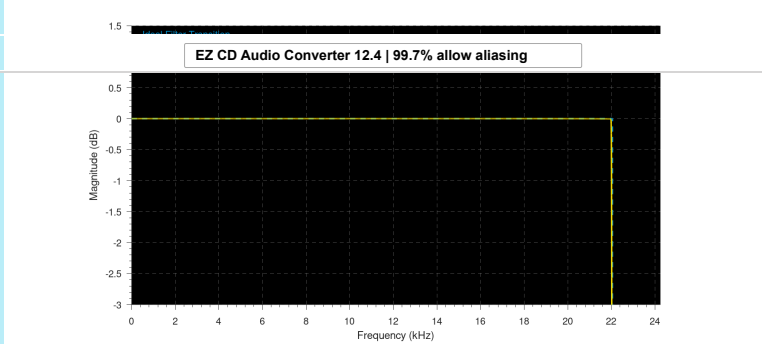


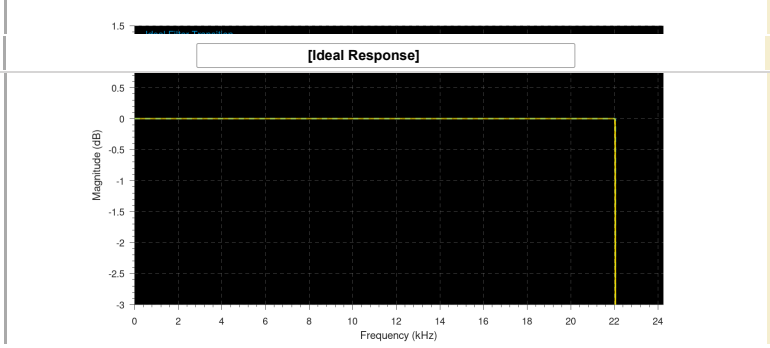
Impulse Passband

Displays the SRC filter used close to the nyquist frequency. [96 kHz source resampled to 44 kHz]

(click image to view full size)

(click image to view full size)

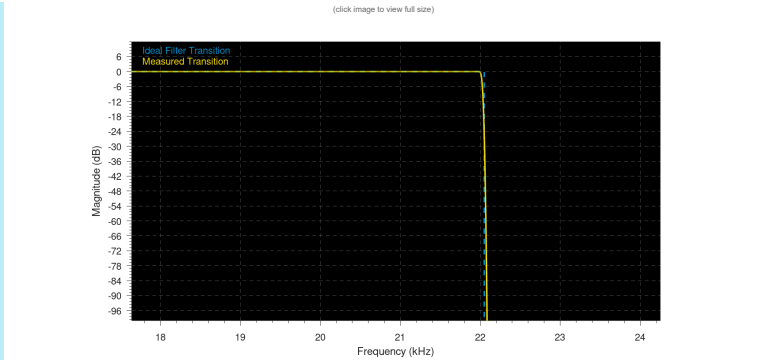




Impulse Transition

A zoomed plot of the nyquist frequency showing the filter response. [96 kHz source resampled to 44 kHz]

(click image to view full size)



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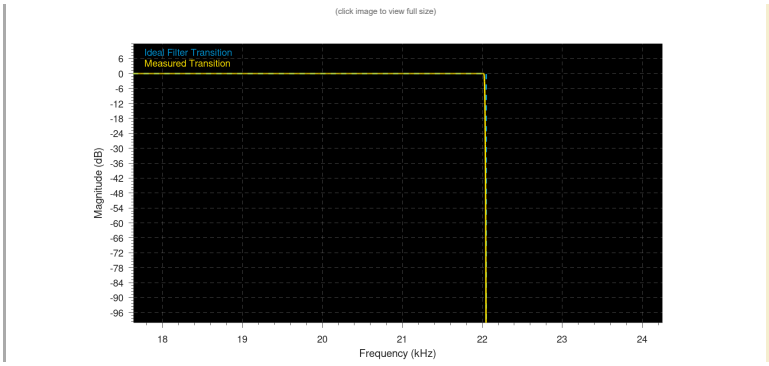
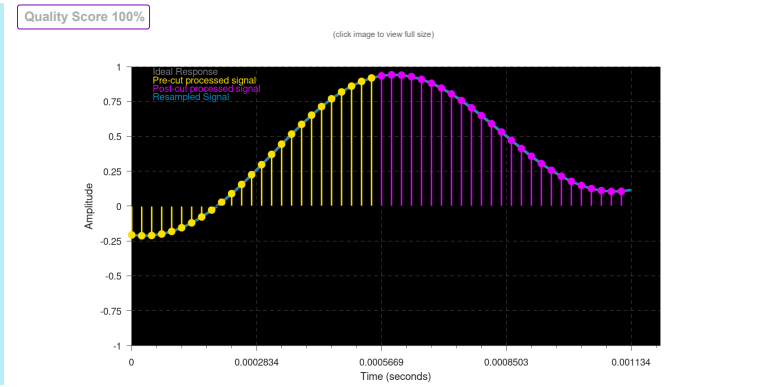


Gapless Sine

A sine wave is split into two, both are resampled independently. This plot is the two signals joined back together. The blue line shows the transition after resampling. Deviation from sine wave shape likely means an audible glitch. Any value over +1 would clip if later not corrected. [96 kHz source resampled to 44 kHz]

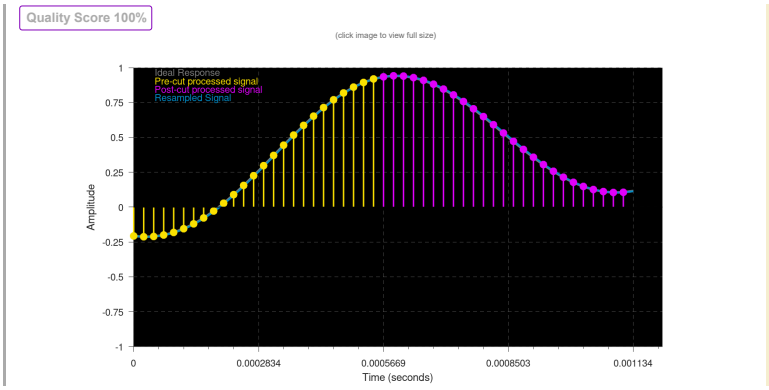
Quality Score 100%

(click image to view full size)



Quality Score 100%

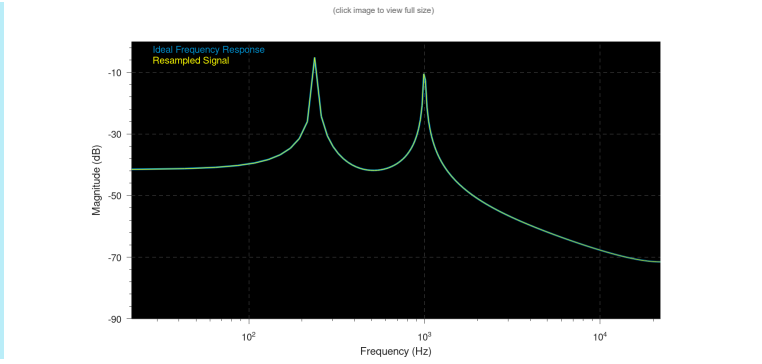
(click image to view full size)



Gapless Sine (frequency plot)

A frequency plot of the gapless sine test. [96 kHz source resampled to 44 kHz]

(click image to view full size)



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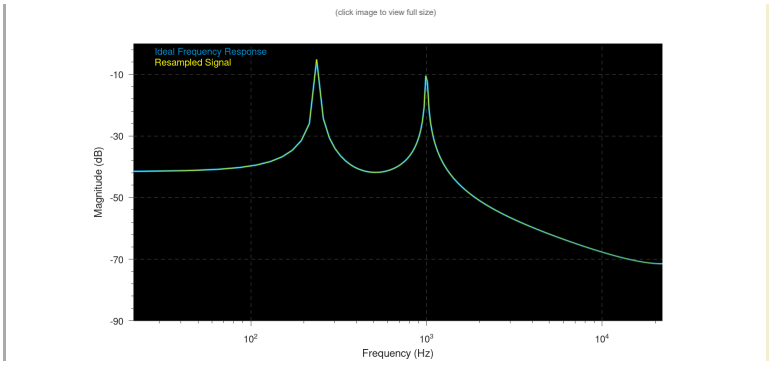

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