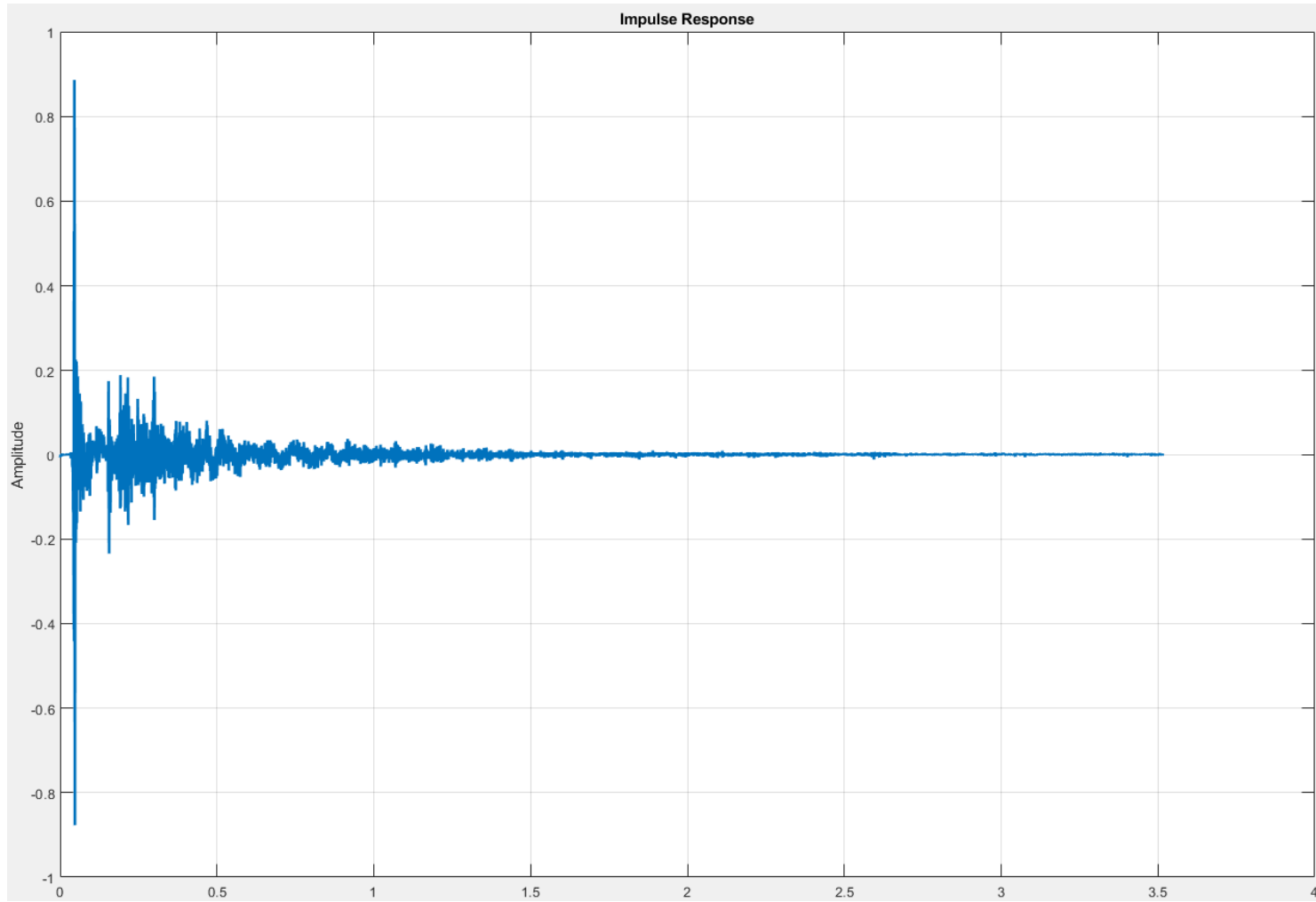


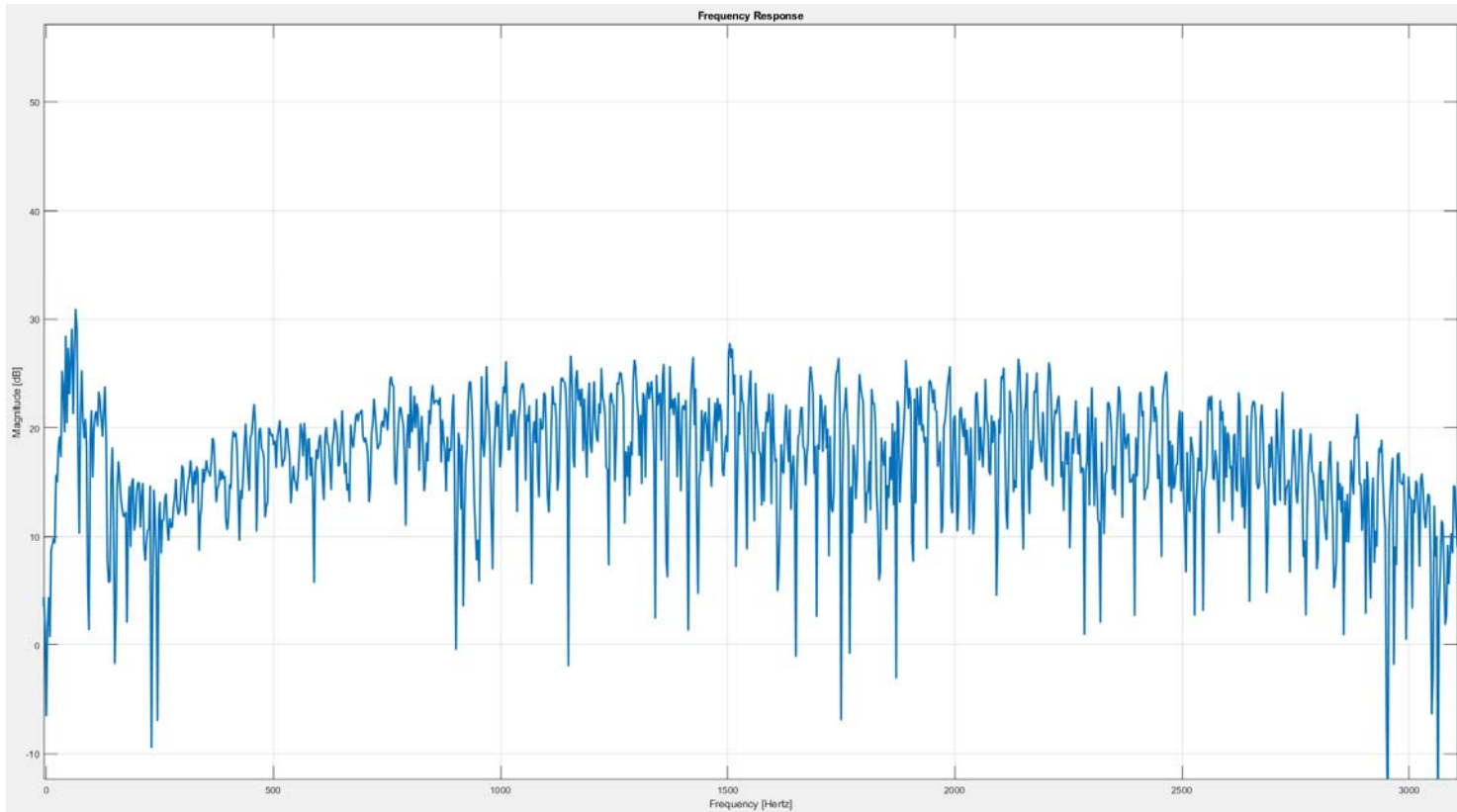
## CA3 - Enclosure

Sunday, January 30, 2022 3:24 PM

Enclosure impulse response (~3.5 seconds):



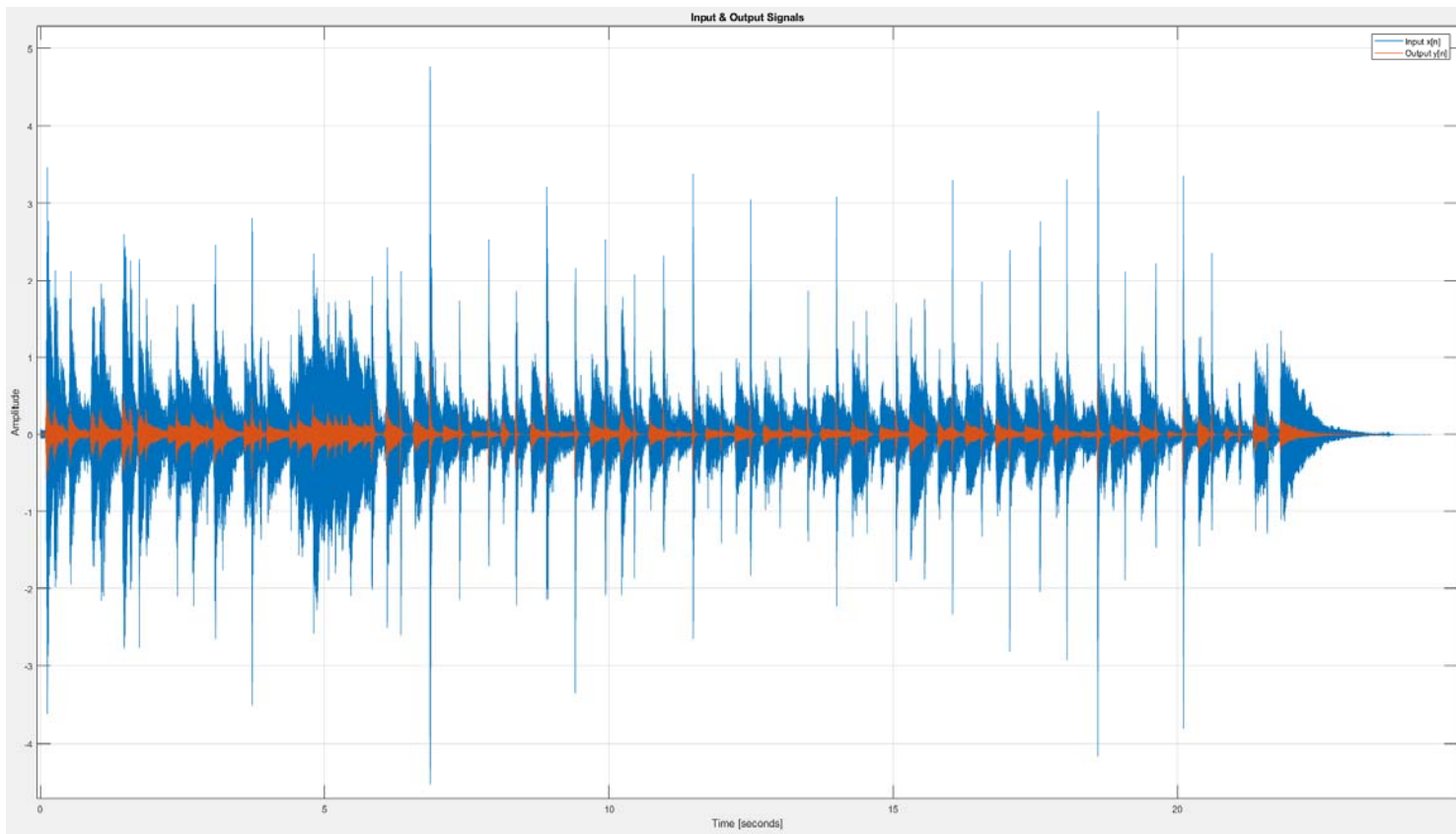
## Enclosure Frequency response:



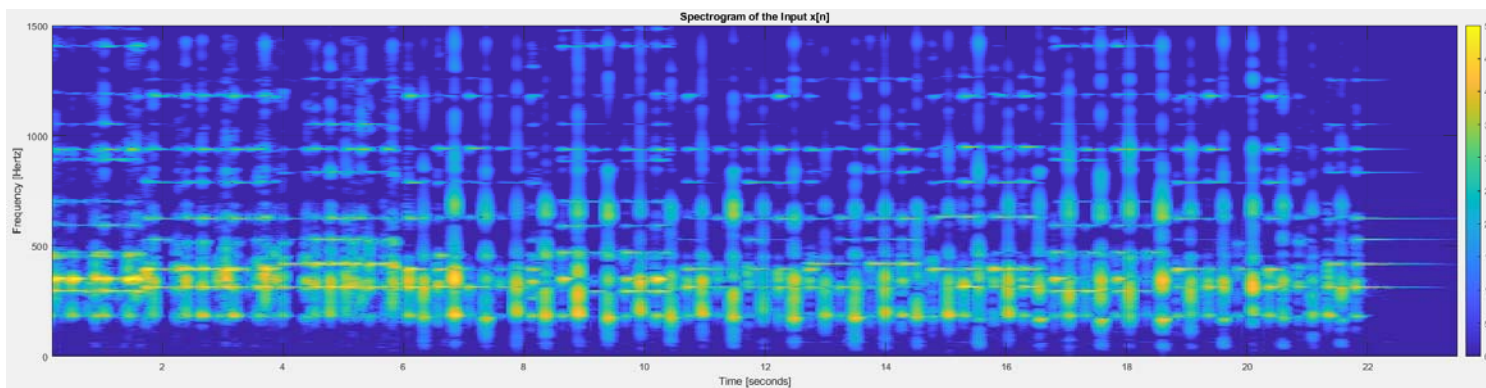
## Enclosure Picture



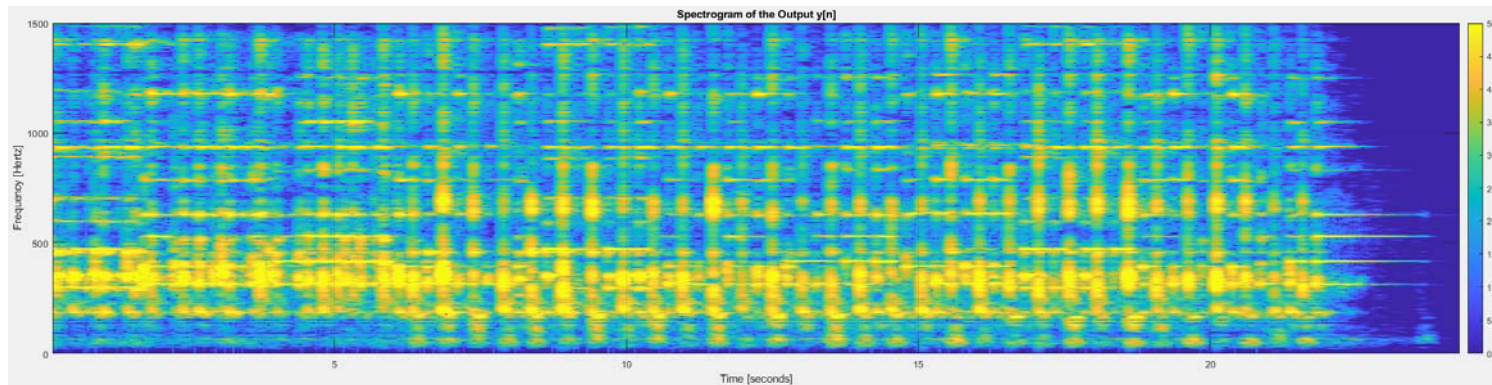
Input dry ukulele (Red) vs. output wet ukulele (Blue)



Spectrogram of input ukulele



## Spectrogram of output ukulele



To record the dry signal, a ukulele was taken into the anechoic chamber and recorded using software on a smartphone. Similarly, an impulse response was recorded by clapping in the chosen enclosure (a gym) with the same software used to record the ukulele. The clips were recorded at 44.1 kHz, which caused the computational complexity to be quite high, taking much more than the previous clips convolved.

The audio signals were then clipped for the desired portions in computer software and saved as a .wav file. These files were then convolved using the procedure from CA1, resulting in a 'wet' output signal, which was also saved as a .wav file. This wet signal sounded much like the ukulele if it were played in the gym, though the additive effect of convolution makes it much louder than it would sound naturally.