

# Using Sine Waves to Cancel out Tinnitus Frequencies

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The purpose of this project is to help people with tinnitus. The experimenter created a computer program that uses generated sine waves and phase to cancel out tinnitus frequencies. First the experimenter made the program in a graphical programming software. The experimenter inserted a sine wave generator and added sliders that changed the frequency of the sine wave. Then the experimenter then added a knob and made the knob changed the phase. Next he made an identical sine oscillator and put it at a random frequency. He then used the sliders to change the frequency of the first sine wave and was able to put the first oscillator's pitch identical to the second oscillators. The experimenter then changed the phase of the first sine wave so that it canceled out the second sine wave. The program was able to output frequencies and change the phase. The program was played with and it relieved the users and masked the frequency.