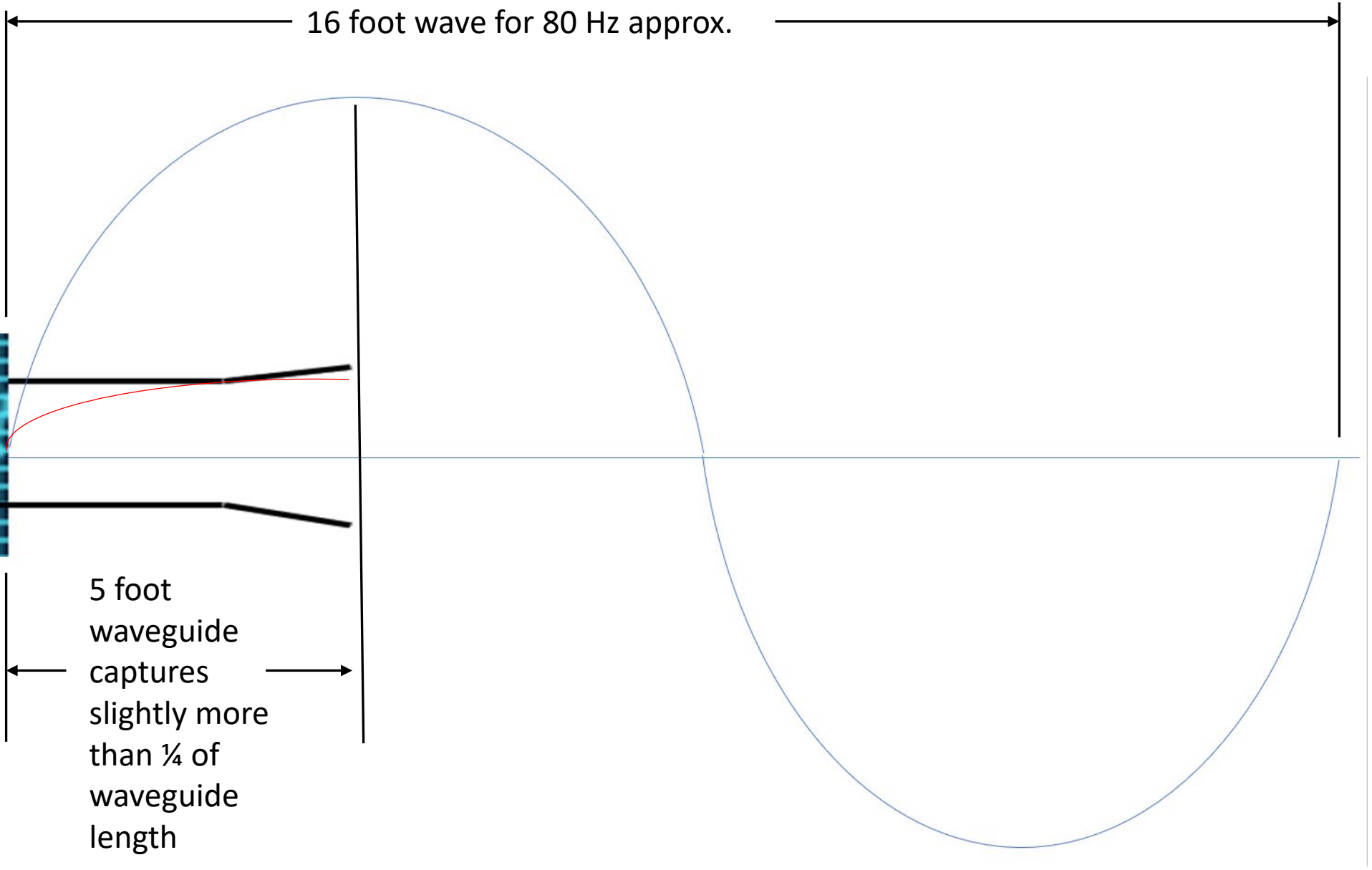
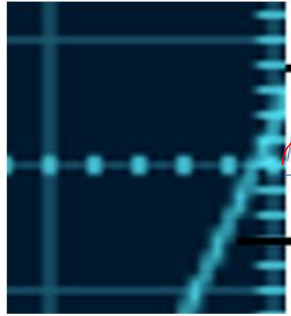
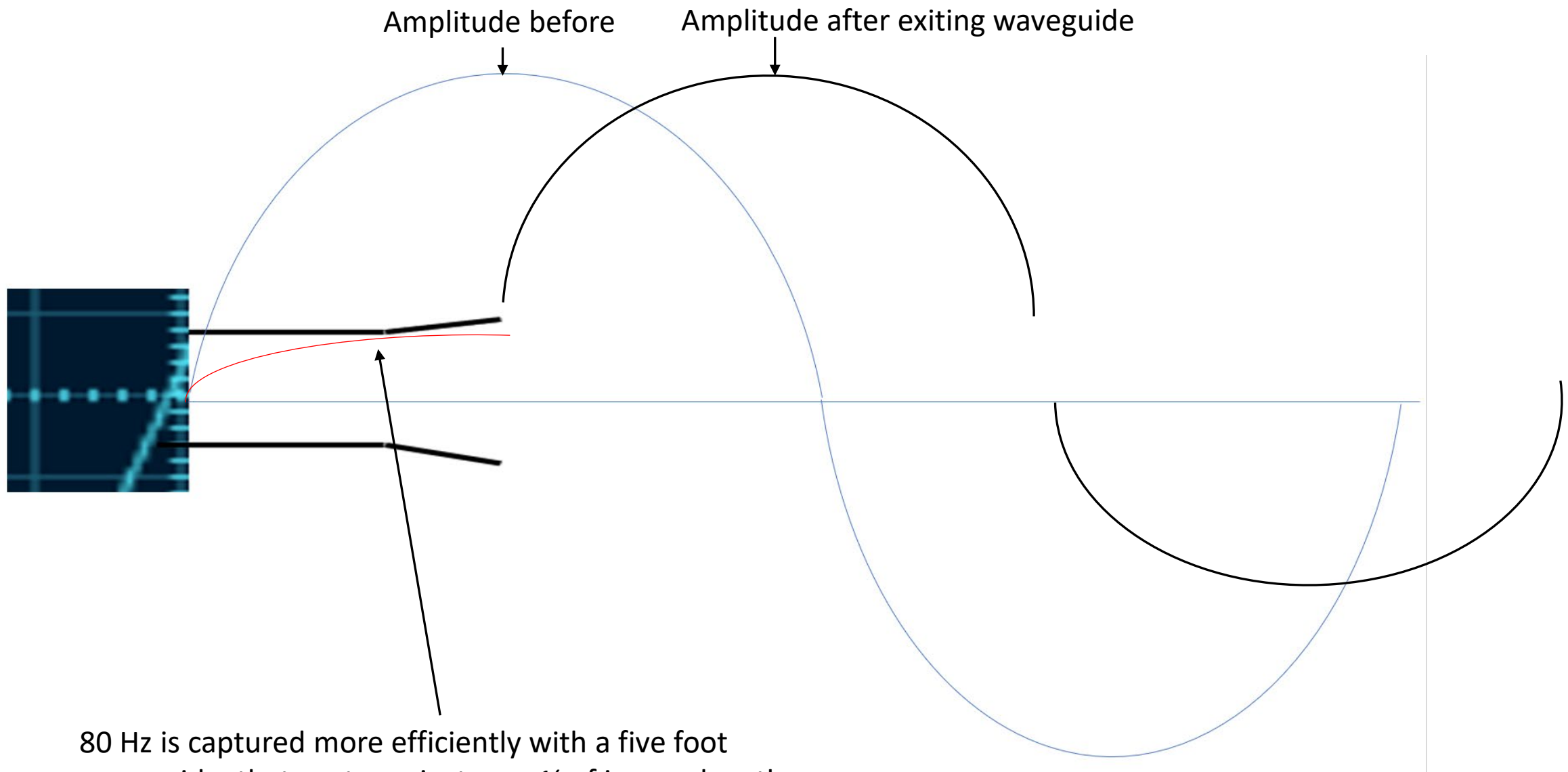


This is not perfect, but generally scale is OK





80 Hz is captured more efficiently with a five foot waveguide, that captures just over $\frac{1}{4}$ of its wavelength, which is approx. 16 feet. Without the waveguide it is difficult to hear 80 Hz in a small speaker.