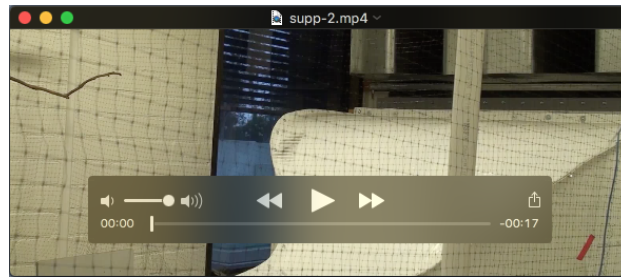


Figure S1. The aeroacoustic wind tunnel. **A)** Air flows out of the centrifugal fan (1) into a duct (2), through a vibration isolation boot (3) and into the diffuser-silencer. The settling chamber (5) contained a 4" honeycomb (hole diameter: 0.2") and then three pressure screens (open area: 64%) each separated by 4". 6: the contraction section, and 7: an optional working section (not used in the present study). Air then enters the open lab, with slightly more than 100" of space until striking a wall, when the optional working section is attached. There is a wall separating the test room from the fan and motor room. **B)** Interior of the diffuser-silencer. Grey areas are filled with recycled cotton batting. Suspended in the middle of the diffuser silencer is an insert that prevents direct transmission of sound from the fan to the test section, which the air (arrows) flows around. **C)** Image of the jet and part of the experimental setup. Note: acoustic cameras are in a different orientation than was used in present study. (1" is 2.54 cm).



Movie 1. Adult Male Allen's Hummingbird (*Selasphorus sasin*) wing trill. Flight is inside the cage used in the experiment.



Movie 2. Acoustic camera video of a male Allen's hummingbird as it visits the feeder at an airspeed of 0 m s^{-1} . Note: heat map auto-scales (range: 20 dB), unlike in videos used to make Figs. 5, 6.



Movie 3. Acoustic camera video of a male Allen's hummingbird as it visits the feeder at an airspeed of 14 m s^{-1} . Heat map auto-scales (range: 20 dB). Note self-noise of feeder.