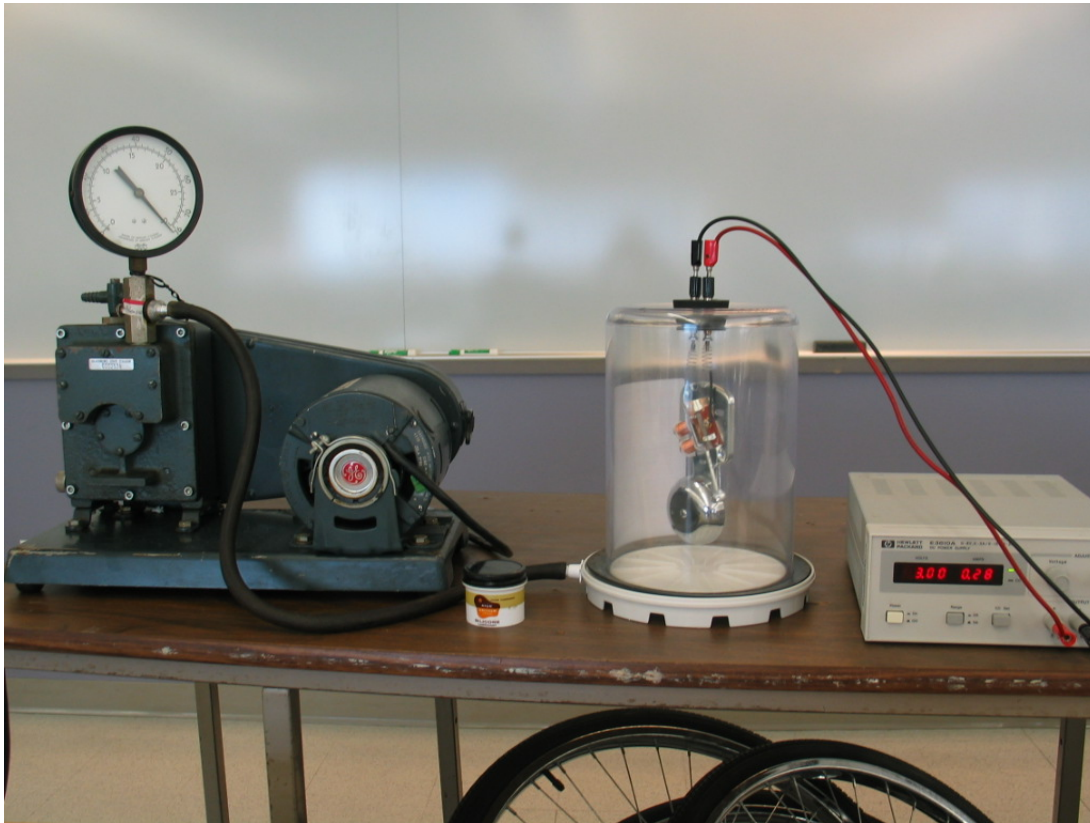


No Air, No Sound!



Purpose: To demonstrate that sound is transmitted by air.

Location: room 146, shelf O2 (DC power supply, C3); vacuum pump on cart in room 136

Hook up the power supply (cables on side of cabinet A) and the vacuum pump. Set the voltage to about 3 V and hear the buzzer ring. Close the release valve and turn the vacuum pump on. When the bell jar is evacuated as much as possible, turn the pump off and listen again. Except for some faint structure-borne noise, the buzzer is nearly silent, even though the bell is still being rung. Slowly release the vacuum using the valve at the base of the gage, and the sound returns to its original volume. being rung. Slowly release the vacuum using the valve at the base of the gage, and the sound returns to its original volume. (An alternative is to place a cell phone in a bell jar and ring it.)