



Procedure and Observations

1. Attach the flexible PVDF film to the amplifier/speaker using the connecting leads. Before you do any of the tests, select someone in the group to keep a record of what you do and of what happens as a result.
2. Flick the film with your finger and observe the response. See if changing the way you flick changes the response you get.
3. Scratch the film and observe the response. Note how the speed and hardness of your scratching affect what you hear.
4. Blow on the film and observe the response. Determine whether the film reacts differently depending on how hard you blow or how close or far away you are.
5. Talk to the film and observe the response. Note how close you have to get to the film to hear a response.
6. Repeat these same four tests—flicking, scratching, blowing, and talking—with the rigid film. Note any differences you observe between this film and the flexible one.
7. Now make a microphone using PVDF (see diagrams). Stretch the substrate over the support and secure it so it will stay tight, or blow up and tie the balloon. Attach the flexible film to the substrate with double-stick tape or glue. Make sure the PVDF film is flat against the substrate.
8. Perform the same four tests as before—flicking, scratching, blowing, and talking—on this microphone system, recording observations on your chart. Note any differences in the responses compared with the tests you made without using a substrate.
9. Replace the flexible film with the rigid one and, again, perform the same four tests on this microphone system, noting any differences between the responses you get now and the responses you got with your earlier tests.

