

Lesson 10

Building Pop Filters

This lesson will explain the function and purpose of pop filters for microphones when recording the human voice, and learn how to build own pop filter using materials found most homes.

What is a pop filter, and why should you care?

What is a pop filter, and why should you care? Think about how **soundwaves** travel: soundwaves are series of air molecules bumping into each other. When we speak, we push vibrations of air molecules out of our mouths. Some words that we speak cause that air to “pop” out. There are a few special consonant sounds that are known as **plosives**. Plosives include words that start with the letters P, B, T, and K (there are others, but this is a good start). Let’s start with the letter **P**. Say the phrase, “Peter Piper Picked a Peck of Pickled Peppers,” with your hand in front of your mouth. You should feel small puffs of air for each word in that sentence. These puffs of air can cause a popping sound in your recording, especially if your mouth is close to the microphone.

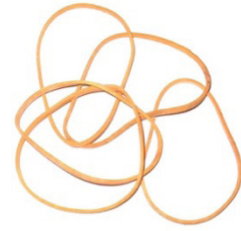
A pop filter eliminates those pops by blocking the puffs of air from coming into contact with the microphone. There are many pop filter models available for purchase, but the good news is, you don’t really need to buy one. You can make it yourself! Use the **Step-By-Step Pop Filter DIY Project** handout to learn how to build a pop filter out of three simple items: a wire coat hanger, nylon stockings or socks, and rubber bands. It’s easy to make and it will make your podcasts sound even better!

Step-By-Step Pop Filter DIY Project

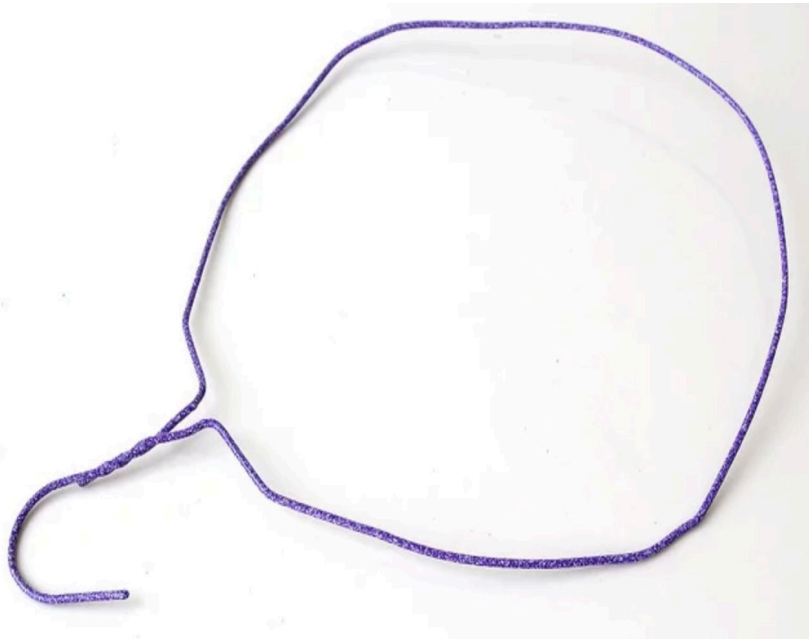
Step 1: Gather your materials.

All you need for this project is a wire coat hanger, nylon stockings or socks (color doesn’t matter), and rubber bands. You can ask your parents or a trusted adult to provide you with these materials. If they don’t have them readily available, just ask your teacher.

Building Pop Filters

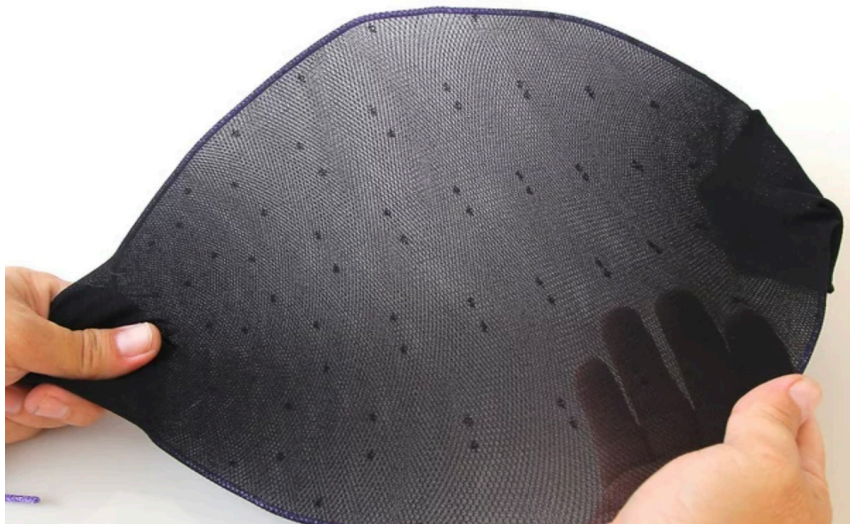


Step 2: Make the "frame".



Step 3: Cover the frame.

Pull the nylon stocking or sock OVER the hanger so that the entire circle is covered.



Building Pop Filters

Step 4: Reshape the filter

Shape the stocking-covered-circle to the desired size. It should be about three to four times larger than the microphone head itself.

Step 5: Secure the covering.

Use the rubber bands to secure the end of the stocking or sock where the circle and the top of the hanger meet. This will help secure the stocking or sock over the wire hanger.

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Step 6: Attach and adjust.

Bend the hook part of the hanger around the microphone stand and work the hanger until it is about 1 to 2" in front of the microphone and that it shields the entire microphone.



That's it! You are now ready to use your very own pop filter with your microphone. Happy recording!

