

# Listen to neurons in your own backyard with the SpikerBox

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Amateurs have a new tool for conducting simple neuroscience experiments in their own garage: the SpikerBox.

As reported in the Mar. 21 issue of the open access journal [PLoS ONE](#), the SpikerBox lets users amplify and listen to neurons' [electrical activity](#) – like those in a cockroach leg or cricket torso – and is appropriate for use in middle or high school educational programs, or by amateurs.

The work was a project from Backyard Brains, a start-up company focused on developing neuroscience educational resources. In the paper, the authors, Timothy Marzullo and Gregory Gage, describe a sample experiment using a cockroach leg stuck with two needles and monitoring the electrical signals. They also provide instructions for using the SpikerBox to answer specific experimental questions, like how [neurons](#) carry information about touch, how the brain tells muscles to move, and how drugs affect neurons, and an online portal provides further instructional materials. These are just a few examples of the many ways this tool can be used.

"Our mission is to lower the barrier-to-entry for students interested in learning about the brain. We hope our manuscript finds its way into the hands of high school teachers around the world", says Dr. Marzullo.

**More information:** Marzullo TC, Gage GJ (2012) The SpikerBox: A Low Cost, Open-Source BioAmplifier for Increasing Public Participation in Neuroscience Inquiry. *PLoS ONE* 7(3): e30837.

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