

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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