

Abstract Submitted
for the MAR16 Meeting of
The American Physical Society

Two Undergraduate Projects for Data Acquisition and Control

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Adelphi Univ — We are designing two separate instruments for use in our undergraduate laboratory. In the first project, a Raspberry Pi is used to simultaneously monitor a large number of current and voltage readings and store them in a database. In our second project, we are constructing our own microcontrollers to work as a general-purpose interface based off work carried out in Review of Scientific Instruments **84**, 103101 (2013). It was designed for low cost and simple construction, making it ideal for undergraduate level work. This circuit has room for two interchangeable daughter boards, giving it the capability to work as a general lab interface, lock-in detector, or waveform generator.

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Date submitted: 06 Nov 2015

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