

Abstract Submitted
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A programmable ramp generator for laser cooling and trapping¹

JOHN HUCKANS², Bloomsburg University of Pennsylvania — Arduino is an open-source electronic prototyping platform allowing users to quickly create interactive electronics instrumentation. Teensy 3.6 is a similar but more capable platform based on a 180 MHz Cortex-M4F microcontroller with a built-in 12-bit DA converter whose IDE based on C/C++ is almost identical to the Arduino environment. Using Processor software to create a GUI, we have designed and built the hardware and software of an instrument which is ubiquitous in laser-cooling and trapping experiments. Our instrument, called RampBox controls the amplitude and frequency sweeps of a typical AOM RF driver. We present the design, development, and performance of the RampBox.

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²There was a computer glitch and I thought that this went through on Friday 11/5 which was the deadline. We would be very grateful if you would allow this submission to go through. We are happy with it being a poster.

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