

Abstract Submitted  
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**Stand alone experimental setup for measurements of magnetoresistance tensor by dc reversal technique**<sup>1</sup> ALEXEY SUSLOV, NHMFL-FSU, Tallahassee, Florida 32310, USA — Several years ago Keithley Instruments, Inc. created a combination of a Current Source and a Nanovoltmeter (Model 6221 and Model 2182A, respectively) for low level transport measurements. That nanovoltmeter/ current source combination was designed for measurements of *one* voltage only. Proposed are the setups assembled from several nanovoltmeter/current source pairs which allow to measure simultaneous *several* voltages associated with the same current. The setups utilize specific wiring and a unique triggering sequence. Several milliseconds delays incorporated into triggering sequence secure stable triggering and proper data flow. The delays might be assured by selection of specific time parameters in the current sources and nanovoltmeters. The setups allow utilizing the built-in functions of the devices. Tested setups consisted of up to four pairs, allowing measurements of up to four voltages.<sup>2</sup> Application of the setups to simultaneous measurements of magnetoresistance tensor components will significantly simplify the experiment, increase precision, and decrease consumption of resources.

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<sup>2</sup>A. V. Suslov, Rev. Sci. Instrum. 81, 075111 (2010).

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