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Title:	Design of a chip based lock-in amplifier for low frequency measurements
Authors:	Abhishikta
Keywords:	chip based amplifier frequency measurements
Issue Date:	Apr-2022
Publisher:	IISER Mohali
Abstract:	When measuring weak signals, lock-in amplifiers (LIAs) are often employed to enhance noise-to-signal ratios. Constructing and testing an appropriately constructed LIA provides a wonderful chance for us to gain knowledge about the theory, construction, and applications of LIA. We can get an understanding of time-dependent behaviour and a variety of components, ranging from resistors (R) and capacitors (C) to packed microchips such as de-modulators and phase shifters. We present the design and performance characteristics of a two-channel (V_x , V_y) balanced modulator/demodulator based LIA (AD630). The LIA has resistor-capacitor (RC) high-pass and low-pass filters, as well as different op-amp circuits and a phase shifter.
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