

Ultrasound Array and Electrode Array for Hall Effect Imaging

Published date: Feb. 1, 2012

Technology description

Summary

Recent developments in ultrasound probe design and ultrasound detector array technology have provided means for optimal ultrasound signal detection and 2D/3D image reconstruction in Hall Effect Imaging (HEI). The new developments include an electrode array, and an ultrasound array configured and controlled to provide rapid image acquisition with high contrast and definition. The electrode array contains split electrodes that control the direction of the electrical currents responsible for 2D/3D image generation. The ultrasound array contains shielded ultrasound sensors which overcome the problem of electromagnetically induced ultrasonic noise that interferes with data acquisition. In this design each element of the ultrasound array is connected to a commercially-available preamplifier which can be coupled to a separate channel of data acquisition circuitry, or digitizer that allows for digital data acquisition.

Institution

[NIH - National Institutes of Health](#)

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