

ABSTRACT OF THE DISCLOSURE

An orthogonal RF (radio frequency) coil for use in an MRI (Magnetic Resonance Imaging) apparatus includes two resonator coil loops arranged to have sensitivity directions orthogonal to each other, each of the resonator coil loops having two power supply points; and power supply circuits for supplying power so as to provide a 90° RF phase difference between the two power supply points of one of the resonator coil loops and the two power supply points of the other resonator coil loop, and a 180° RF phase difference between the two power supply points of each of the resonator coil loops at a frequency establishing a differential mode. The RF phase difference between the two power supply points of each resonator coil loop is forcibly inverted at the frequency establishing the differential mode. This cancels in-phase resonance currents of the differential mode, to enhance the orthogonality of RF magnetic fields.

