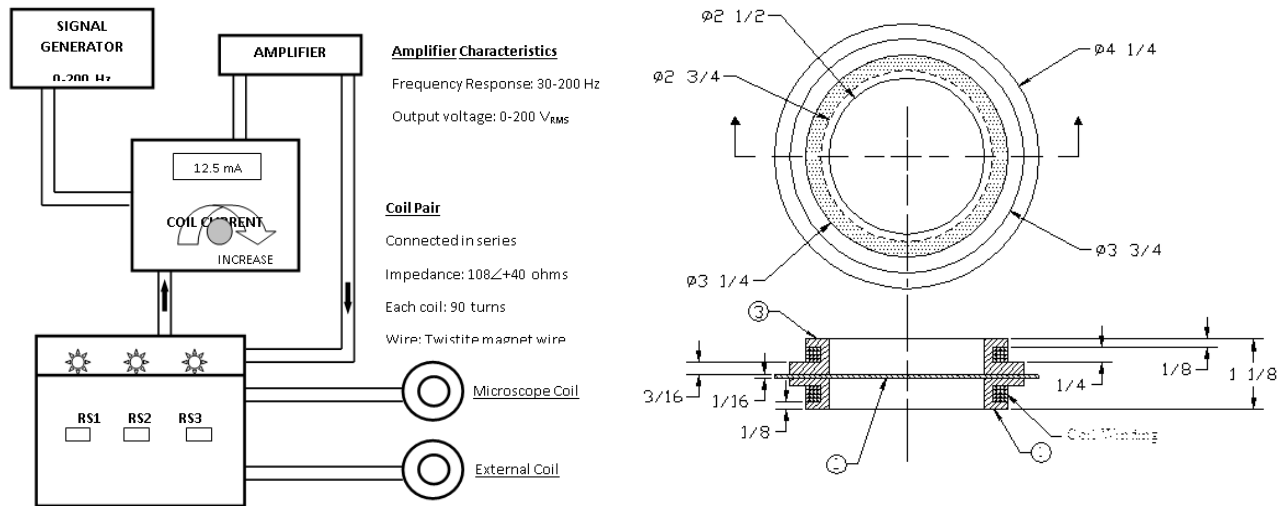


DEVICE FOR DOUBLE BLINDING MAGNETIC FIELD EXPOSURE



Description: Extremely low frequency magnetic field were suspected of causing undesirable health effects. To investigate possible mechanisms, investigators turned to single cell exposure studies. The challenge was that experiments were difficult to replicate and there were economic competing interests, especially from power companies. To remove bias, we came up with a double blinding system that a number of investigators reproduced for their exposure at the cellular level. The Figure on the left shows the overall hardware schematic of the magnetic field exposure system. The figure on the right shows a scale drawings of circular coils showing: a top and side view of coil (θ - diameter; 1- bottom coil; 2- microscope stage plate; 3- top coil; all dimensions in inches). The stage plate and coil form were made from Plexiglas and PVC, respectively. Double blinding was achieved through a custom box (bottom component of figure on the left) Design detail of the box and operation of the device are available in the reference cited below.

Reference: Rao, R.R.; Kisaalita, W.S. A single magnetic field exposure system for sequential investigation of real time and downstream cellular responses. *Bioelectromagnetics* 25:27-32 (2004).