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BROADBAND MAGNETIC FIELD METER

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Abstract. The effects of interaction between electromagnetic fields and biological tissues depend on the frequency range of the exposure fields. When measuring electromagnetic fields with regard to human exposure, a common approach is to use an isotropic broadband electric field probe or a long term survey system for frequencies greater than 100 kHz. On the other hand, the low-frequency magnetic fields, such as those produced by high-voltage power lines and video display units, typically require two field meters, one working in the frequency bandwidth from 20 Hz to 2 kHz and the other working from 2 kHz to a few hundred kHz. This is the reason why the authors developed a single-axis field meter which covers alone the wide frequency range from 40 Hz to 150 kHz.

Keywords: magnetic fields, biological effects, broadband magnetic field meter.