

MAGNETIC FIELD ANTENNAS 100 Hz - 100 MHz

Our **BBH series** broadband magnetic field antennas are designed to provide maximum sensitivity for receiving magnetic field signals in the VLF through VHF spectrum. These antennas are responsive primarily to the magnetic component of an electromagnetic field with practically no sensitivity to the electric component. The electrical balance with respect to ground and cables renders them almost immune to common mode interference.

BBH antennas are ideally suited for use with automatic noise measuring equipment requiring magnetic field sensors, vehicular surveillance applications, elementary direction finding on ground waves, location of obscure noise sources and for accurate measurement of magnetic field intensity at practically all radian distances from the source. They exhibit remarkably clean reception inside of buildings, at some depth below the earth's surface, in badly cluttered areas, and in environments of locally generated man-made noise.



BBH-500/B

The basis of the antenna is a ferrite rod to which a low noise amplifier is coupled by means of a balanced loop. The far field receiving pattern is that of an elementary dipole with nulls of approximately -20 dB occurring off the ends of the rod. When oriented horizontally, these antennas have an almost hemispherical overhead receiving pattern, allowing excellent skywave reception at all frequencies in their respective operating bands.

Integral active networks ensure the highest possible sensitivity in **BBH** antennas. **BBH** antennas yield much greater accuracy in measuring the tangential field of a source at close range than the typical air core loop because the response of the air core loop becomes adulterated by the incident electric field. All **BBH** antennas, except the **BBH-500**, cover the entire frequency range of operation in a single band. A switch on the **BBH-500** allows the low and high bands to be used either separately or simultaneously depending on performance requirements.

A calibration loop/port is provided for verifying that the antenna is functioning properly.

BBH-500, **1100**, and **3100** antennas are intended primarily for use indoors, including shielded rooms, but can be used equally well out of doors if properly protected. An internal power supply and rechargeable batteries in these antennas permit operation under practically any condition, with a minimum amount of setup time. **BBH** series antennas are ideally suited for TEMPEST and other EMC testing applications requiring broadband H-field measurements.