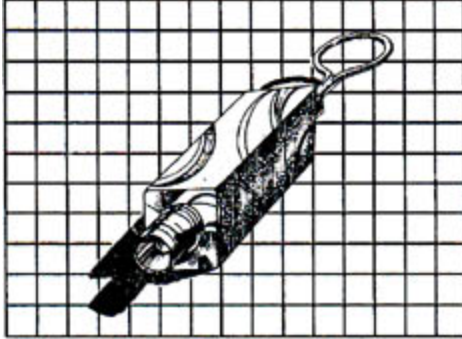


Model F-301 Shielded Loop Sensor



This small shielded loop sensor can be used with a spectrum analyzer or receiver to detect emissions over a wide frequency spectrum.

The sensor is capable of detecting radiation from currents on surface as well as wires and holes in shields.

The loop area is ideal for resolving changes over small distances, making it useful for diagnostic testing of circuitboards, cabling and shielded structures.

The probe has excellent sensitivity and is useful in the "near field". However, since the absolute value of E/H for any given radiation source varies with distance as well as parameters, the output is relative and uncalibrated.

In order to provide a degree of calibration, each sensor is calibrated in a TEM cell over the frequency range of 10 MHz - 400 MHz with a 377 ohm impedance. When exposed to a field of .001 amperes/meter the sensor output is typically .02 millivolts at 10 MHz and increases to .36 millivolts at 400 MHz.

The E field response of the sensor has been reduced by taking into design considerations the following:

- ⚡ Small area
- ⚡ Shielded loop and housing
- ⚡ Balanced loop
- ⚡ Balun output
- ⚡ Feed point symmetry with respect to the break in the loop shield, and narrow slot in shield