

# L-band Horn Antenna Radiation Enhancement for GPR Applications by Loading a Wire Medium

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**ABSTRACT** An L-band horn antenna with modified radiation pattern is customized for ground penetrating radar (GPR) applications. The conventional horn antenna is loaded by a metallic wire medium to enhance the antenna radiation pattern, directivity and gain with reduction of the side-lobes level. These properties are strongly desirable for GPR applications.

**KEYWORDS** Artificial dielectric, landmine detection, ground penetrating radar, horn antenna design, wire medium structure.

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