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(54) Title (EN): NOTCH ANTENNAS AND WIRELESS COMMUNICATORS INCORPORATING SAME

(54) Title (FR): ANTENNES A FENTE ET DISPOSITIFS DE COMMUNICATIONS HERTZIENNES LES CONTENANT

(57) Abstract:

(EN): Small, low cost, notch antennas are provided that can be internally incorporated into the existing structure of wireless communicators, and that are functional in a variety of orientations of the wireless communicator. The notch antenna is preferably formed in the ground plane conductor of a printed circuit board (PCB) that has RF circuitry thereon for receiving and transmitting RF signals. The notch preferably has a configuration that results in electromagnetic waves having a substantially omnidirectional radiation pattern being radiated from the notch when RF signals are applied to the notch. Integrating the antenna function into the same printed circuit board (PCB) on which the transmitter and/or receiver functions are also located eliminates the need for an additional antenna component. However, if necessary, a notch antenna surface component is also provided.

(FR): L'invention concerne de petites antennes à fente, de faible coût, qui peuvent être incorporées à l'intérieur de la structure existante de dispositifs de communications hertziennes et qui fonctionnent dans une variété d'orientations prises par le dispositif de communications hertziennes. L'antenne à fente est formée, de préférence, dans le conducteur plan de masse d'une carte de circuit imprimé comportant des circuits RF destinés à recevoir et à émettre des signaux RF. La fente possède, de préférence, une configuration conférant aux ondes électromagnétiques un diagramme de rayonnement sensiblement omnidirectionnel partant de l'encoche lorsque des signaux RF sont appliqués à cette encoche. L'intégration de la fonction d'antenne sur la carte de circuit imprimé, sur laquelle sont aussi disposées les fonctions d'émission et/ou de réception, élimine le besoin d'un composant d'antenne supplémentaire. Cependant, si nécessaire, on monte en surface un composant d'antenne à fente.

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