Dual-wideband square slot antenna with a U-shaped printed tuning stub for personal wireless communication systems
DUAL-WIDEBAND SQUARE SLOT ANTENNA WITH A U-SHAPED PRINTED TUNING STUB FOR PERSONAL WIRELESS COMMUNICATION SYSTEMS

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Abstract:
A square slot antenna fed by two orthogonal feedlines is designed for dual polarized applications. The presented antenna has not only dual operating bands, but also very wide bandwidth. The bandwidth is 18% in the first band and 82% in the second one. It can serve most of wireless communication applications that operate at 0.9, 1.8, 1.9 and 2.4 GHz and require wide band characteristics. The antenna can also produce circular polarization with wideband characteristics. Arrays of this antenna are also designed and presented.

Citation: (See works that cites this article)

References:
A printed rectangular slot antenna with a U-shaped tuning stub is backed with reflector for improvement in the impedance bandwidth and unidirectional radiation patterns [10]. In this paper, we propose a novel structure that is driven by wide-slot antenna and merged by a cross-slot for improvement in gain and impedance bandwidth. The antenna structure is a split square-ring slot in the ground plane of dielectric substrate with a cross-slot in the center of the square ring. This structure is fed by a single microstrip line with a U-shaped tuning stub. The U-shaped tuning stub is employed for wideband performance. The impedance matching of the proposed antenna is unfavorable when the LT is less than 13 mm. 

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