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A Mini Radar System for Low Altitude Targets Detection

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Abstract : This paper deals with a mini radar system aimed at detecting small targets at the low latitude. The radar operates at Ku-band in the frequency modulated continuous wave (FMCW) mode with two receiving channels. The radar system has the characteristics of compactness, mobility, and low power consumption. This paper focuses on the implementation of the radar system, and the Block least mean square (Block LMS) algorithm is applied to minimize the fortuitous distortion. It is validated from a series of experiments that the track of the unmanned aerial vehicle (UAV) can be easily distinguished with the radar system.

Keywords : unmanned aerial vehicle (UAV), interference, Block Least Mean Square (Block LMS) Algorithm, Frequency Modulated Continuous Wave (FMCW)
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