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## 伪随机码调相引信干扰及硬件实现

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**摘要:** 介绍伪随机码调相引信原理, 在此基础上提出瞄准式欺骗性干扰机方案, 并对各部分电路进行理论论证和硬件实现, 主要包括利用扫频源和Costas环对伪码调相引信信号进行解调, 基于FPGA的伪码序列识别和重构, 干扰波形的调制发射等。分析硬件电路带来的码元宽度误差对干扰效果的影响, 得出成功干扰下所允许的最大误差值。从电路的实验结果来看整个方案是可行的。

**关键词:** 信息处理技术; 伪随机码; 调相引信; 干扰; 调制; 解调

**中图分类号:** TN972

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## The Jamming of Pseudo random Code Phase modulation Fuze and Hardware Implemented Circuit

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**Abstract:** The principle of pseudo random code phase modulation fuze was described simply. A scheme of spot and deception jammer was put forward on the basis of this. The circuit principle of each part and its hardware implemented circuit were presented including mainly the demodulation of pseudo random code phase modulation signal by use of swept oscillator and Costas loop, the recognition and reconstruction of pseudo random code sequence based on FPGA, the modulation and transmission of interfered waveform. The jamming effectiveness was described in the presence of bit width error caused by hardware implemented circuit. The maximum error value allowed was given in the case of successful jamming. According to test results of circuit, the whole scheme is feasible.

**Key Words:** information processing technique; pseudo random code; phase modulation fuze; jamming; modulation;

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