

基于电位计式位移传感器的无人机电传操纵系统的设计与实现

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摘要：

设计并实现了一种基于电位计位移传感器的电传操纵系统，用于螺旋桨式无人机的舵面控制与定位。系统中运用运算放大器，然后进行AD采集并做sinC3滤波处理。控制算法上采取PIP与抗积分饱和限制。实验结果表明，电位计的负载电阻理论分求。

关键词：无人机；电位计；负载电阻；PIP

The Design and Implementation of UAV-FBW System Based-on Potentiometer As Displace

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Abstract:

This paper presents a fly-by-wire(FBW) system which based on the potentiometer as a kind of displacement sensor, for the propeller surface control and positioning. Using the op amp as emitter follower to enhance precision potentiometer's output signal, and then processing. Using PIP and integral saturation limit as algorithm in the design. The experimental results show that the load resistance; the system response and position accuracy meet the requirements.

Keywords: UAV; potentiometer; load resistance; PIP

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