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Review of Standard Rotor Configurations for a Micro Unmanned Aerial System

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Abstract

The use of unmanned aerial systems (UAS) is on the rise with an array of industries finding use for them in a variety of applications. This review hopes to assist potential drone designers in selecting the drone best suited for their application. This paper attempts to first give a better understanding of flight theory and the basics of rotary winged vehicles. Next it builds on that knowledge and applies it to a few important selection parameters, after which it addresses the criteria and links it directly to a few standard configurations of rotorcraft. In the final discussion a few key points are addressed and each standard configuration is discussed in its ideal application.