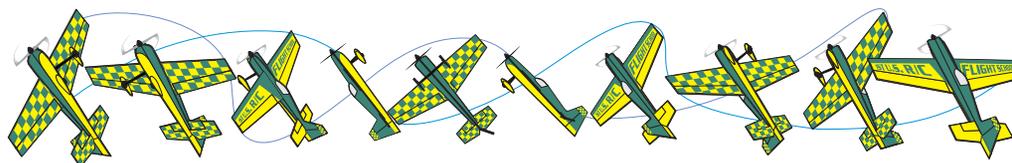# Section 3D

Introduction

Contrasting 3D and Precision Aerobatic Flying Styles

3D Flying Introduction

> Note: The majority of the 3D techniques presented in this section work equally well with both electric-powered park flyers and larger glow and gas powered 3D models.

Before you begin to setup your airplane and attempt 3D flight, you need to understand that "3D" and precision "aerobatics" are entirely different styles of flying, involving vastly different and contrasting flying techniques and radio setups.

3D flying can be best described as taking advantage of present day radio capabilities and excesses of power to perform amazing stunts that seem to defy the laws of aerodynamics and gravity. In other words, 3D flying is about making an airplane do things that one wouldn't normally think an airplane would be capable of. Such as, flipping end over end and flying on the propeller thrust like a helicopter rather than on the wing like during aerobatics. The 4 things that most separate 3D flying from aerobatics are the following:

1. A proficient "aerobatic" pilot performs his or her maneuvers through a series of commands and the airplane predictably responds to the inputs and intentions of the pilot. For example, an aerobatic pilot is able to repeat the same maneuver 10 times with the same results by repeating the same control inputs. The role of hand-eye-coordination during aerobatics is primarily to detect the final touches to perform the maneuvers nearly perfect.

3D. Because no two attempts ever work out the same, 3D flying is done almost entirely reacting to the airplane. Therefore, very fast reflexes (as well as fast servos) are vitally important to 3D flying success. In fact, pilots often need to remind themselves to keep their fingers moving and to cease being smooth when switching from aerobatic flying to 3D.

2. With a good understanding of the proper procedure, most aerobatic maneuvers can be learned fairly quickly, with some measure of success experienced within the first few attempts.

3D. The majority of 3D maneuvers require many hours of practice (and programming) before the first successful attempt is realized.

KPTR: Don't confuse 3D control setups and flying techniques with the techniques used to fly aerobatics!