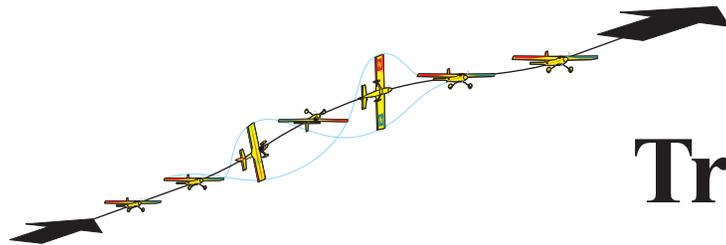
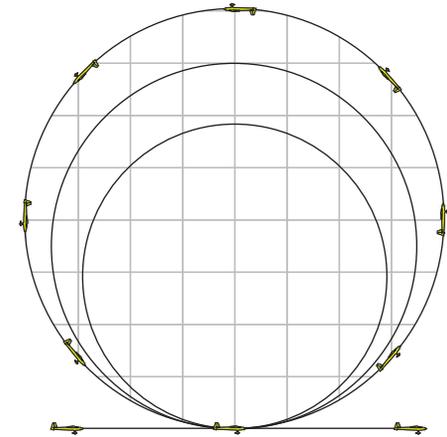


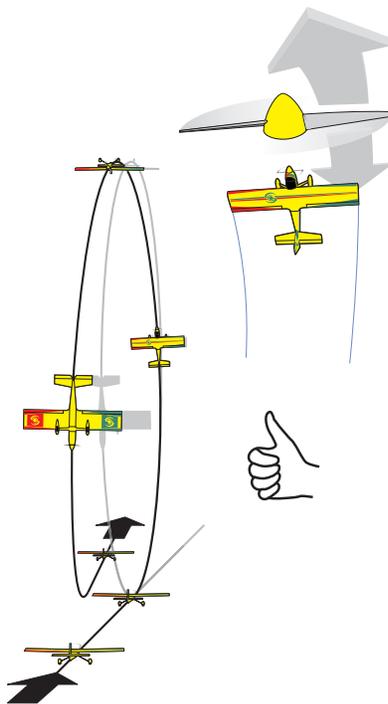
# Setup Flight Tests



**Trimming**



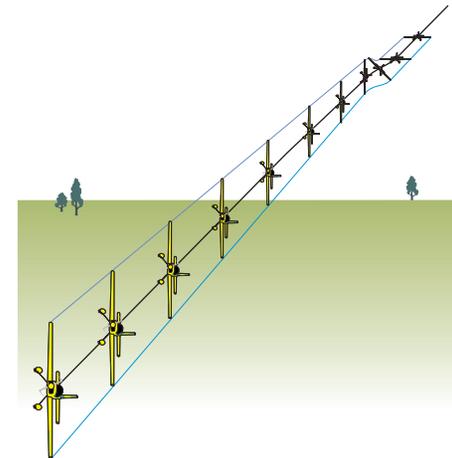
**Travel & Expo  
Evaluations**



**Thrust Checks**

**C.G. Checks**

**Mixing Checks**





## Efficient Flight Tuning (“The Good Guys Make it Look Easy!”)

Despite all the advances in technology, the laws of physics and aerodynamics haven’t changed, and thus the fundamentals of airplane setup continue to ensure a great flying airplane today. This means that except for the customary travel adjustments required to match the plane’s handling to the pilot’s flying style and skill, those who adhere to the fundamental principles of positive wing incidence, neutral C.G., and a couple degrees of right thrust will all but eliminate the need to make further adjustments. Put another way, those who adhere to the fundamental setup principles bypass most of the adjustments and errors encountered by those who believe that the only way to know how to set up an airplane is to wait to react to what it does in the air.

Frankly, those who give the impression that it’s normal to have to make a lot of adjustments to get an airplane to fly well are actually demonstrating a failure to get the basic setup correct in the first place (probably due to a preoccupation with advanced programming and the self fulfilling presumption that they’ll figure it out “on the fly”). Of course, there are a lot of people who consider tinkering with the setup to be half the fun, however, the aim here is to optimize the setup in the least amount of time so that pilots can start working on improving their flying skills. And if you do need to make any adjustments, as long as your fundamental setup was sound to start with, they will likely be very small.

The single most efficient way to fine tune your setup is to put off seeing how well you can fly the airplane for the first flight or two, and instead use that time to determine what your airplane’s characteristics are and what adjustments need to be made. (It’s those who try to fly well right away that introduce so many corrections (variables) that they end up prolonging the process of identifying what changes need to be made.) Hence, the trick during your setup checks is to make as few control inputs as possible and refrain from correcting deviations. Thus, by allowing the deviations to be obvious, determining what adjustments to make will quickly unfold as you reflect on the first attempt(s). This process of initially performing trial runs to identify what the airplane or maneuver requires was referred to as the “mulligan” process by one of 1st U.S. R/C Flight School’s elite students, and the name has stuck ever since.

In short, whether fine tuning the setup or perfecting a maneuver, elite pilots, i.e., the “guys who make it look easy,” use the initial opportunity of each deviation to determine when and why it occurred. From that point, they are able to alter the setup or anticipate the correction(s) to limit the deviation from happening again. The decisive quality is that while most flyers are often too busy attempting to correct deviations to really learn what’s causing them, those who initially utilize the “mulligan” process are able to pinpoint the adjustments needed to make significant strides in just a flight or two!