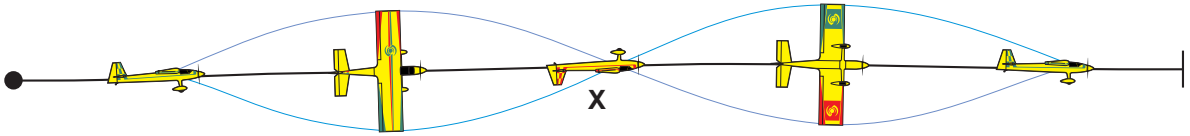
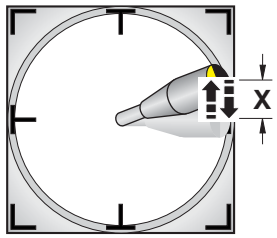
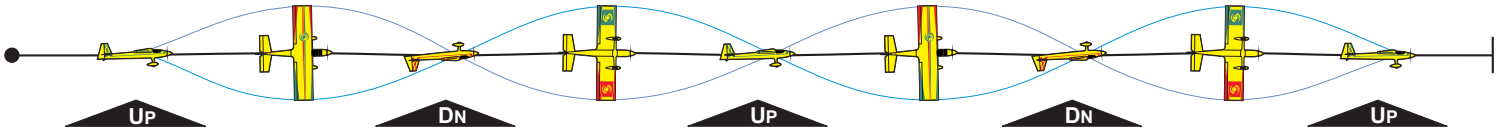
Refined Aileron Roll



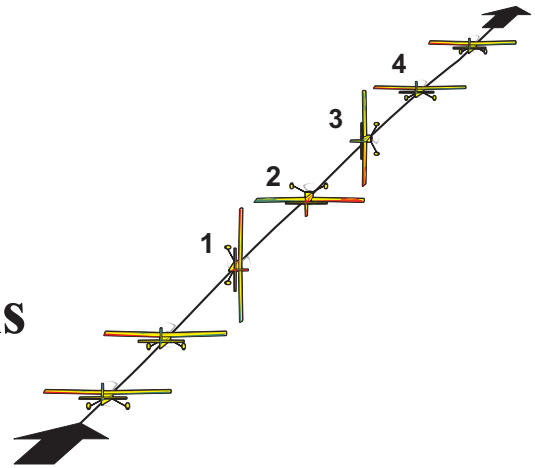


Consecutive Rolls



4-Point Roll

The Process of Building Better Rolls



Refined Horizontal (level) Rolls

In this section: C-20 illustrates the control input sequence required to perform a horizontal roll. The primary refinement added to the basic roll is a bump of down (forward) elevator when the airplane is rolling through inverted to keep the roll level.

ATTENTION: To be effective at refinements, a flyer must be able to routinely perform all the basic maneuvers well first (see *Sport Aerobatics*). Otherwise, if a pilot enters a roll with the airplane already off heading or starting to lose altitude, and then attempts to return the roll back to straight and level with the refinement, the input required will need to be at least twice the usual size — and then it really can't be called a refinement any more, but is instead a recovery input!

C-21 illustrates how to build or affirm an *axial* start to your rolls utilizing the crawl-walk-run method to consistently arrive at good overall rolls in the fewest attempts. Ultimately, the quality of the roll's entry has the greatest impact on how comfortable and therefore successful you'll be throughout the rest of your roll.

C-22 explains the type of input one can anticipate using during the inverted portion of a roll to keep it level. Considering how quickly things happen during a roll—too quickly to merely react—those who do best apply a pre-determined bump of down elevator through inverted to keep the roll level.

C-23 & 24 illustrate the entire refined roll building process; starting with warmup rolls entered from low anxiety climbs to make judging when to input the bump of down elevator easier, to shallowing the entry and arriving at competition caliber horizontal rolls shortly thereafter.

C-25 & 26 illustrate the process of building consecutive rolls. This is to say, continuing your routine single roll sequence through a second consecutive time.

C-27 & 28 illustrate building a down elevator *push* into the 2nd (inverted) point of a 4-point hesitation roll.

Side note: It is amazing how many instructors will address point rolls by plunging straight into talking about "top rudder", until the student (and often the instructor) is so far ahead of himself that it is all he can do just to complete the maneuver. It is no wonder then why most flyers struggle with point rolls their entire lives. On the other hand, you will have set the stage for comfortably introducing the rudder by first learning to keep the airplane level during the inverted portion of a point roll—thus achieving "8's" and "9's" consistently, leading up to adding rudder for the perfect "10" attempts.

 KPTR: Prioritizing a good start to a roll will increase your comfort handling any new refinement through the rest of your roll.