

## Have You Ever Tried To Design Your Own Airplane ?

If you ever wanted to design your own airplane but didn't know where to start here are some basic parameters as they appeared in Ken Runestrand's RCM November column.

Wing area = chord x span
Aspect ratio – Span to chord ratio: 5 to 1 or 6 to 1
Chord = C
Span = 5 or 6 x C
Aileron area = $\frac{1}{4}$ chord x $\frac{1}{4}$ span.
(Use $\frac{1}{8}$ for strip ailerons)
Fuselage length, (prop washer to elevator hinge line.)
Add these dimensions to get Total
Nose = 1-1.5 chord
Wing = 1 chord
Tail = 2-2.4 chord
Total = 4 to 4.9 chord dimension
CG = 30 – 35% of fuselage length
From CG aft rear edge of elevator = 65-70%
Horizontal stab = 20-22% of wing area
Aspect ration for H. Stab = 3 to 1
Elevator = 20% of stab area.
Fin = $\frac{1}{3}$ stab area
Rudder = $\frac{1}{3}$ to $\frac{1}{2}$ of fin area.

Several factors are missing from this table: Engine size, Wing and Stab incidence, engine thrust, landing gear placement, dihedral, and airfoil.