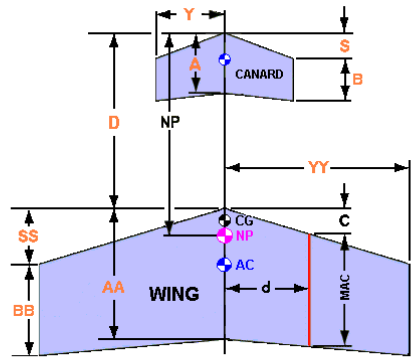


## Canard Center of Gravity Calculator

Aerodynamic Center (AC), Mean Aerodynamic Chord (MAC), Center of Gravity (CG), Neutral Point (NP) and Wing Area

Canard Root Chord (A):	160
Canard Tip Chord (B):	90
Canard Sweep Distance (S):	31
Canard Half Span (Y):	175
Wing Root Chord (AA):	210
Wing Tip Chord (BB):	120
Wing Sweep Distance (SS):	146
Wing Half Span (YY):	400
Distance between both LE's (D):	357
Enter Static Margin, then Click	15 %
Mean Aerodynamic Chord MAC =	169.09
Sweep Distance at MAC (C) =	66.36
From Root Chord to MAC (d) =	181.82
From Canard Root LE to AC =	465.64
From Canard Root LE to NP =	342.74
From Canard Root LE to CG =	317.38
Wing Area =	132000
Canard Area =	43750
Wing Aspect Ratio =	4.85
Foreplane Volume Ratio, Vbar =	0.82

Enter the variables at left using the same units for all entries.  
 For an aircraft to be stable in pitch, its CG must be forward of the Neutral Point NP by a safety factor called the **Static Margin**, which is a percentage of the **MAC** (Mean Aerodynamic Chord).  
 Static Margin should be between 5% and 15% for a good stability.



Low Static Margin gives less static stability but greater elevator authority, whereas a higher Static Margin results in greater static stability but reduces elevator authority.  
 Too much Static Margin makes the aircraft nose-heavy, which may result in elevator stall at take-off and/or landing.  
 Whereas a tail-heavy aircraft will also be unstable and susceptible to stall at low speed, as during the landing approach.  
 Further, for a better longitudinal stability, the canard should have higher lift coefficient and stall at lower geometric AoA than the main wing.

For wings with two different panels click [here](#)

### Calculate Wing Loading

Wing Area :	271 <small>sq. in</small>	17.5 <small>sq. dm</small>
Aircraft Weight :	24.7 <small>ounces</small>	700 <small>grams</small>
Max Lift Coefficient :	Max Cl: 1.0	
WING LOADING :	13.12 <small>oz/sq. ft</small>	40 <small>g/sq. dm</small>
CUBIC LOADING :	oz/cubic ft	