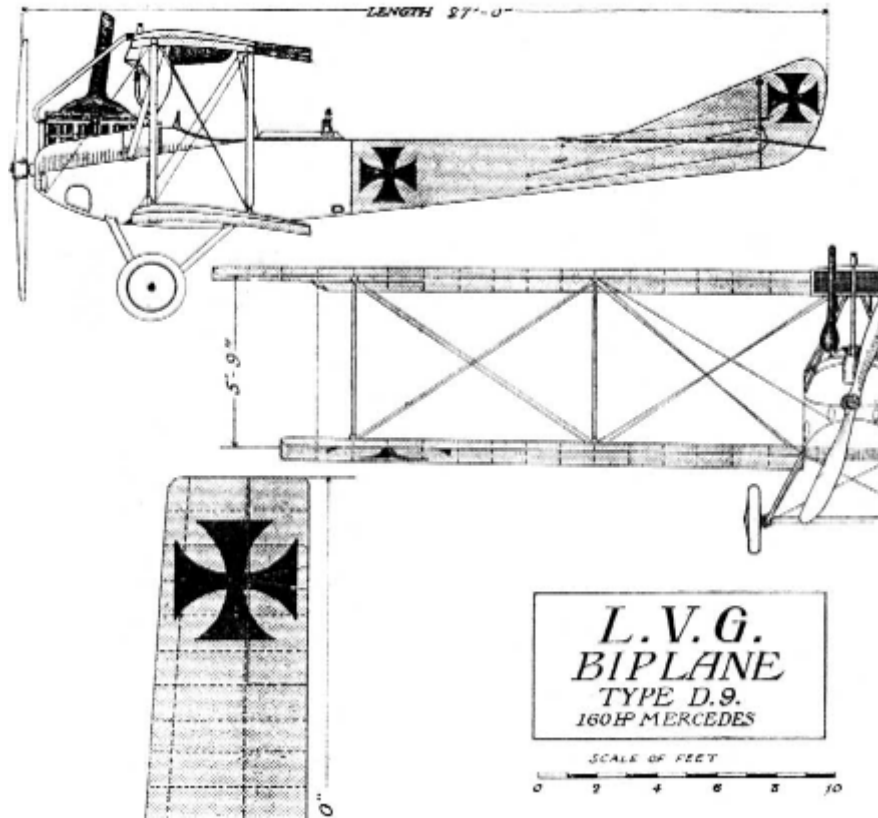


# Simple Scaling for Red Baron in Anim8or

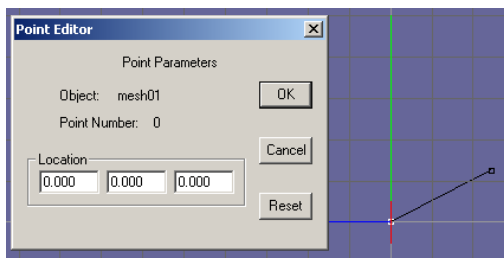
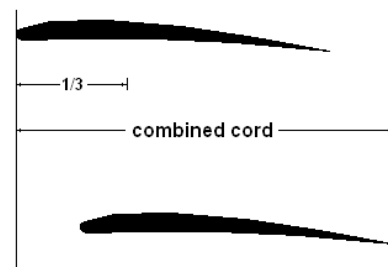
By Gerald 'Uhlan' Todd

Building a model in Anim8or to scale is simple, but it can be somewhat tedious. Obviously the first requirement is a set of scale drawings that actually include a scale.



Decent drawings with a good scale are hard to come by sometimes – especially online. Scanned images often have the scale distorted. Plans that don't show a linear scale but instead say something like "1 inch equals 1 foot" are great until you realize you have no clue what 1" is on these plans! Some plans will have dimensions shown for various parts. If they have something that's an even measurement, like "6 foot" you can make your own linear scale from that and you're on your way!

Before you can begin you have to decide where to measure from. I usually measure from the 0,0,0 or center-point, at least for the fuselage. That means you have to note the center-point on your plans. In the finished model, the center-point will be where the model pivots within the game. The X axis (horizontal) in a single engine aeroplane should usually run right through the center of the prop hub. The Y axis (vertical) should typically be 1/3 of the combined wing cord back from the leading edge of the forward most wing. The Z axis should be in the center of the wingspan. Some planes will call for different ways of determining their center-point. Multiple engines, twin booms, high/low engines, etc, all will challenge you to figure what point the model should pivot about in the game.

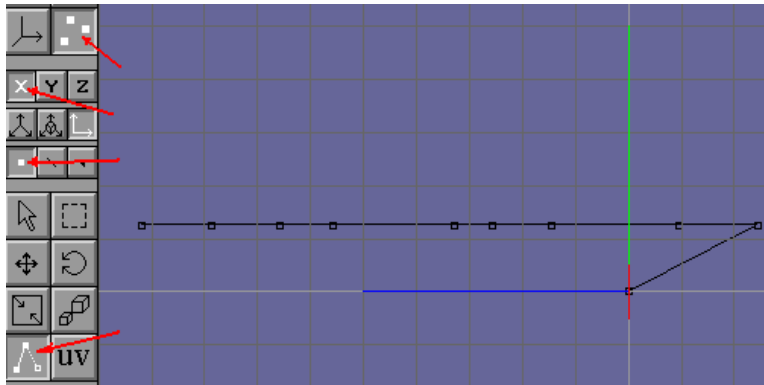
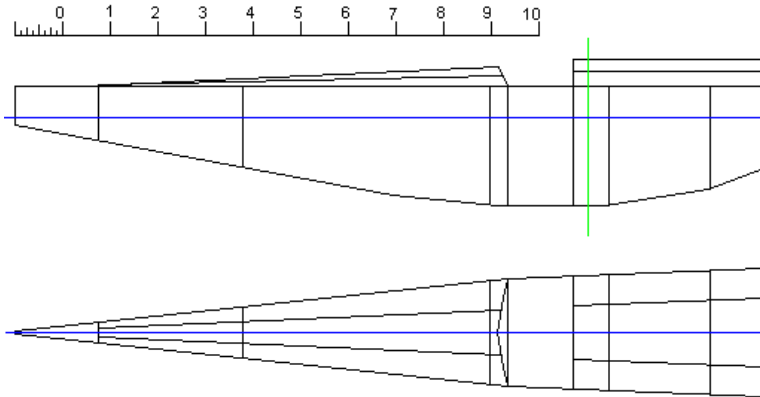


With the center-point determined you begin by drawing in the side view, a line from Anim8or's 0,0,0 point to somewhere on the screen. The location of the first point will always be 0,0,0 regardless of where on the screen you started – but you want it to actually be at the Anim8or's 0,0,0 point.

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So, with the basic fuselage simplified as shown, (*right*) we see there are 9 *stations* or frames needed and there's an edge, or *chine* running the length of the fuselage that's parallel to the X axis. The second point of the line created above will be the forward most point of that chine. Limiting drawing to the X axis, and starting at that second point, set 8 more points along a line to the left, (*below*). Don't worry about position – that's next.



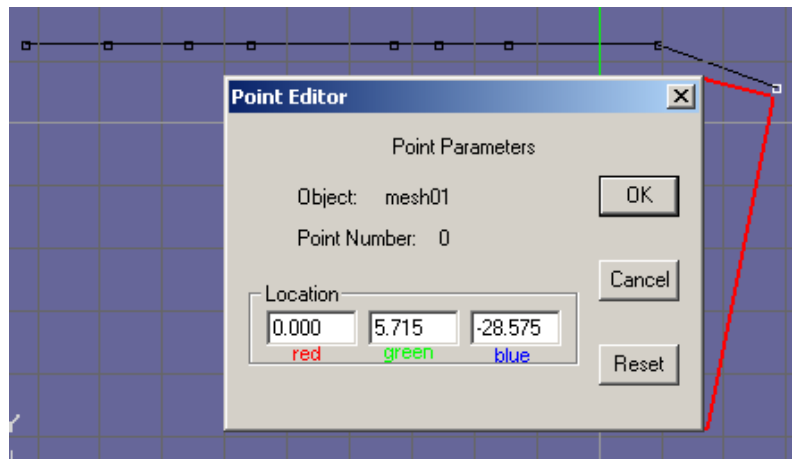
We no longer need the point at 0,0,0, so it may be deleted. Now the right-most point is point 0, then 1, 2, to 8 as you go left.

Double-click on point 0 and you will get the Point Editor dialog box which will show you this is "point number 0" and where you can alter it's X, Y, & Z coordinates.

Measuring our plan from the 0,0,0 point, point 0 is 3-3/4 feet

right of center and 5/8ths of a foot above center. 3-3/4 is 3.75 and 5/8 is .625 ( $1/8^{\text{th}} = .125$ ). We have to

convert these measurements to Red Baron's scale which is 7.62. Simply Multiply the measurement by 7.62 and that's it! Point 0 is therefore at blue: -28.575 and green: 5.715 (note that green coordinates below center, blue coordinates right of center, and red coordinates left of center are negative). The coordinate in each box corresponds to the colored vector arrows in Anim8or – red, green, and blue. We'll deal with the red coordinates later, for now leave them at 0.

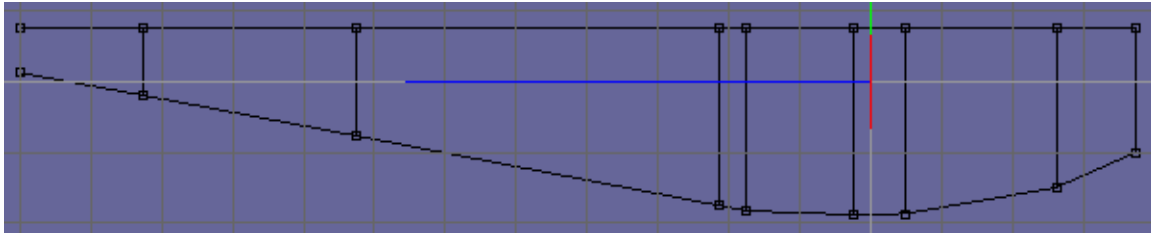


We continue down the line entering the coordinates for each point. Remember, in this case the green coordinate is the same for each point. We draw in new points and lines, measuring and setting each coordinate to scale until one side of the fuse is done. For vertical lines limit movement to the Y axis and you'll only need to alter the green coordinate.

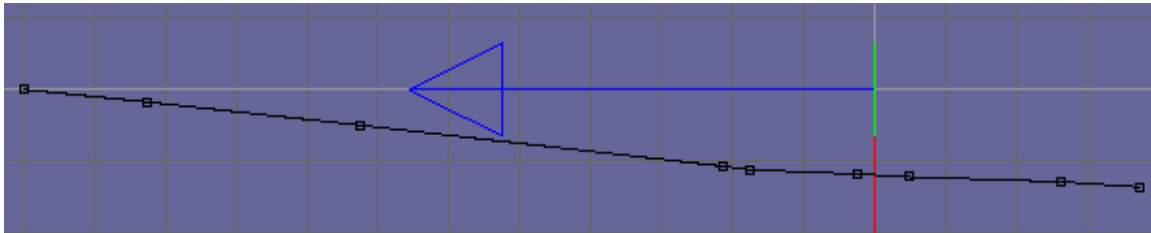
# Simple Scaling for Red Baron in Anim8or

By Gerald 'Uhlen' Todd

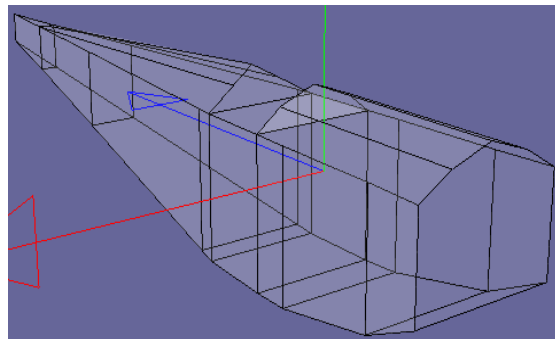
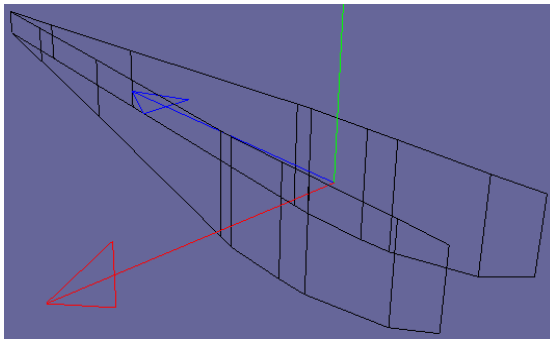
With the basic side done, we can move to the top view and set it's distance from the centerline.



You need only measure each point's distance from the center, multiply it by 7.62 and enter it's *red* coordinate.



If you haven't save your work yet NOW is the time to do it! After you do, select your mesh and *mirror* it in the X axis. Save the file. Select *both* meshes and *Join Solids* to make it a single mesh. You should then select certain points, such as those at the rear where the two point of the left side occupy the same space as the two of the right. *Merge* these points and you'll be left with 2 instead of 4 at this location.



Now you have the base of an accurately scaled fuselage for your Red Baron model.

