

RCCD CLUB PROJECT 2011

11-21-10

Work Table Preparation

The following is a suggested way to create a work surface to aid in the construction and assembly of the Ugly Stick project airplane. A clean flat work surface is definitely recommended. The flatter the work surface the "truer" the plane will turn out. A work surface that you can draw work lines on and will accept straight or "T" pins to hold the parts in place is also recommended.

A partial sheet of dry wall would work well if placed on and supported by an existing work table. It is relatively inexpensive to buy. The full 4'x8'x1/2" sheet can be cut to size to fit on your work table. The cut size that works well is 84"x25". If your existing work table is smaller, make sure the cut size that you use is big enough, so at least the full wing span of 64 1/2" will fit on the top with no over hang.

After the drywall (if you elect to use it) is cut to the size needed and laid flat on your work table, work lines need to be drawn on the top work surface. Now, there are many ways to accomplish this. You can start by making a mark at the center of each end of the work top. Insert a straight pin in each mark on both ends of the work top. You then stretch and tie off a thin string or thread from pin to pin. Along this string, carefully draw a series of dots or very short lines at intervals that span no longer than your longest good straight edge. Next connect the dots with your longest straight edge creating a long center line on your work top. Now, if you have an accurate straight edge that can span the length of the work top surface, simply draw the full length center line on the work top surface.

Once the full length center line is drawn on the work top surface, two work lines need to be drawn 90 degrees to the full length center line. One work line at the center of the long center line and the second work line approx.

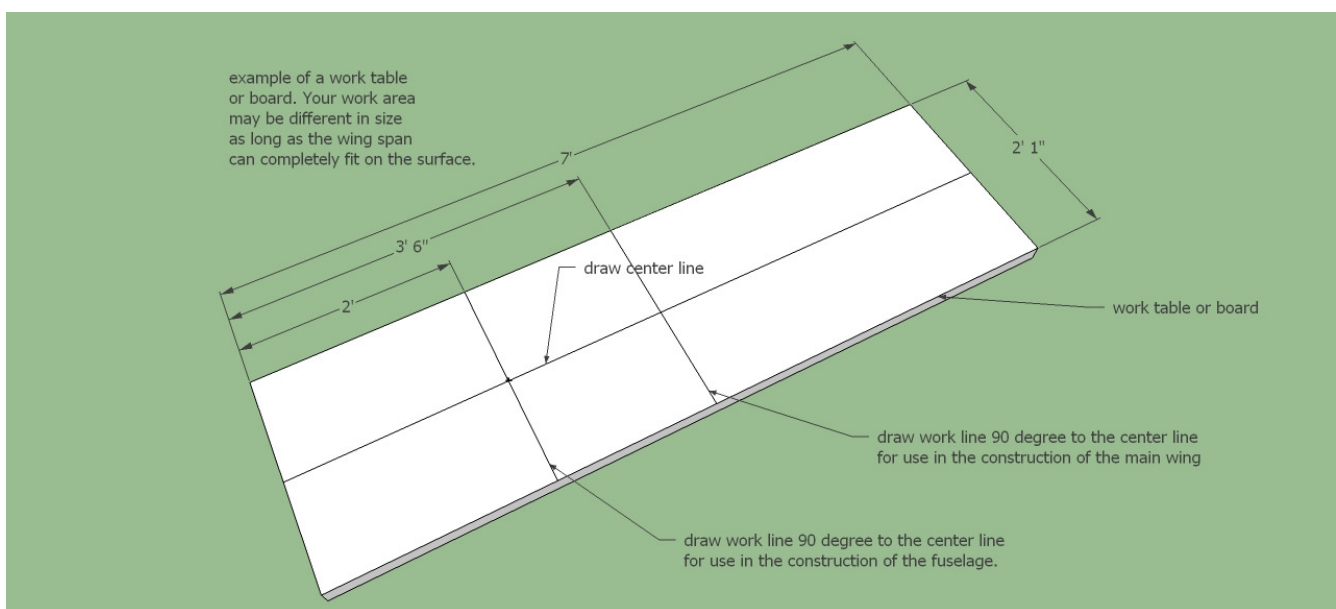
24 " from one edge of your top. Again, you can accomplish drawing these lines in many ways. If you can remember back to your high school days when you took your plane geometry class, and were not fooling around with the girls in the class, you used the method of drawing bisecting arcs and connecting the bisecting points with a straight line creating a 90 degree angle between the newly drawn work line and the full length center line. (See the next page) You could also use the Pythagorean theorem. (See the next page) Or, you could simply use drafting triangles or a carpenter square method of creating the work lines.

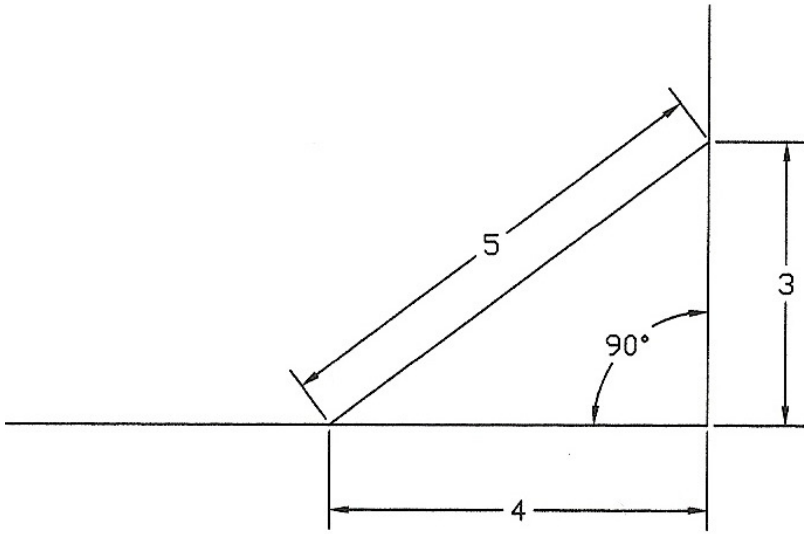
Accuracy counts.

The end result is, the flatter the work surface, and the better the two work lines and long center line are to being straight and 90 degrees, the better your plane will turn out. The work surface and these work lines will control the alignment of the component parts during assembly.

See the sketch below showing the work top surface and the lay out of the full length center line and the two work lines.

When the lay out of the lines is complete, cover the build area of the work top surface with wax paper before building on it.





pythagorean theorem

