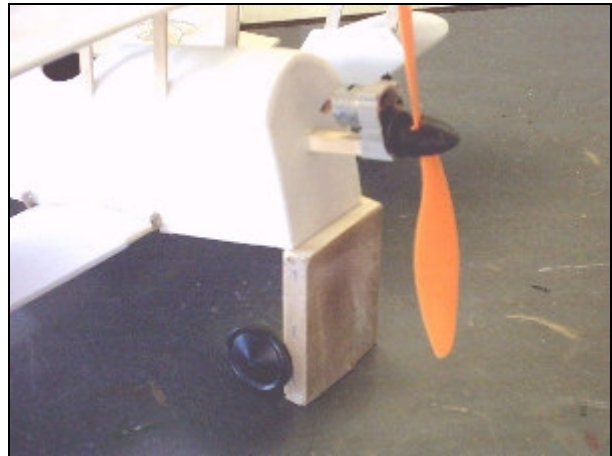


Foamflyer's RC Airplanes Make Strong Lightweight Landing Gear

This page shows, in 10 steps, how to make a wire landing gear that is strong and light in weight. The steps begin with the design of the landing gear. The example shown is a landing gear made of two pieces of wire that are soldered together for a small biplane.

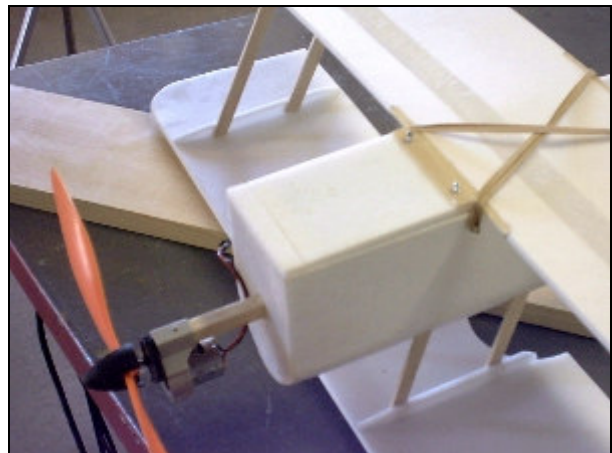
1

Determine the landing gear length required based on the wheel diameter to be used and the prop size. Ensure the landing gear will be long enough so the prop clears the ground by at least 1" when the plane is level. The photo shows the fuselage of a biplane sitting on a sanding block to get the approximate height, and a wheel nearby for comparison. Use the TLAR (That Looks About Right) method.



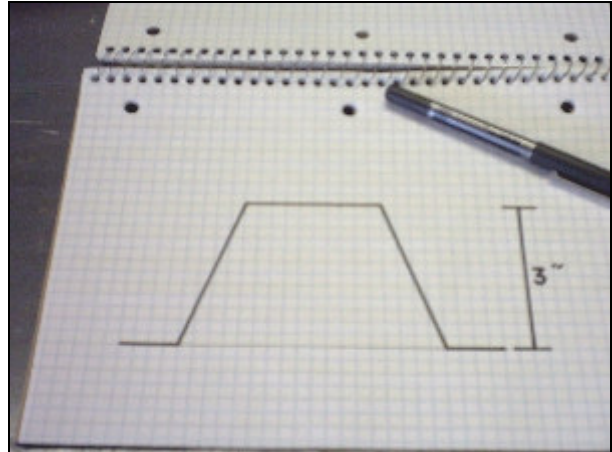
2

Determine the width of the base of the wire needed. Here the landing gear wire will be attached to the bottom hatch of the biplane, so the wire should be designed to fit nicely to the hatch and not stick out beyond the sides of the fuselage.



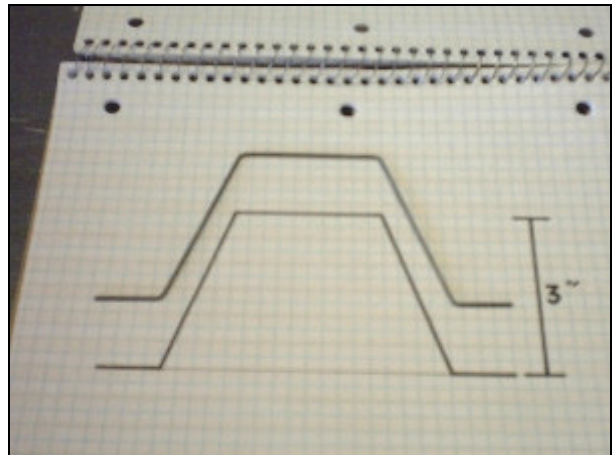
3

Draw on paper the shape of the first landing gear wire needed. Make sure you leave enough wire for the wheels to attach.



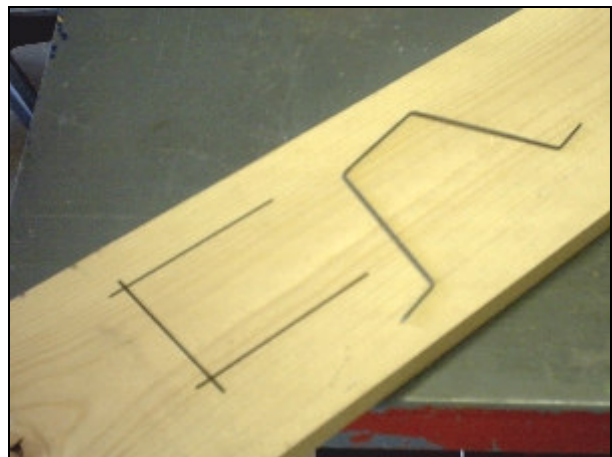
4

Bend a piece of music wire to the shape that matches the drawing. For a light plane such as this biplane, only 1/16" diameter wire is being used. Make sure the wire is straight after bending, so that the wheels will be parallel.



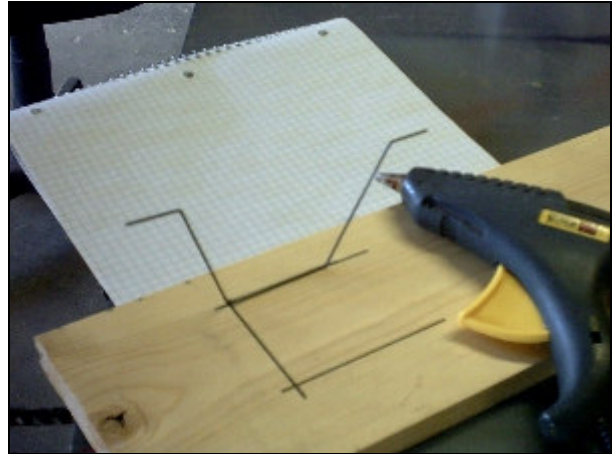
5

On a piece of cardboard or scrap wood, draw two parallel lines which represent the wires attaching to the fuselage. The single line perpendicular to the other two is for reference, to keep the assembly straight.



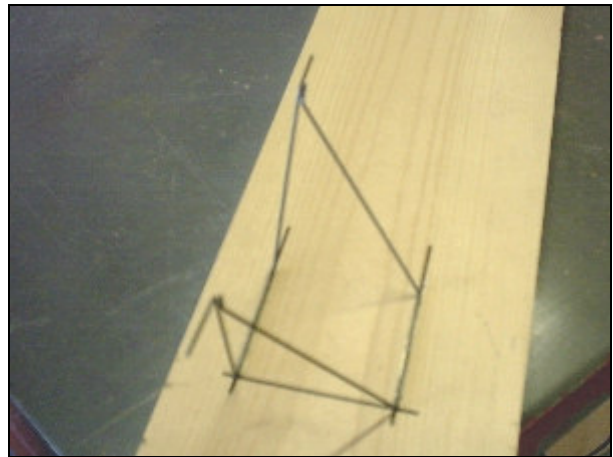
6

Hot glue the first wire that was bent to the board. Hot glue allows the wire to temporarily be held in place while the landing gear is built.



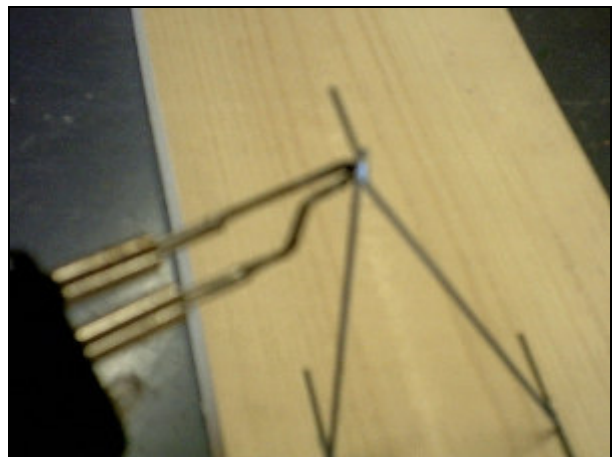
7

Bend the second wire so that it fits well to the first wire and touches the other line on the board. Where the wires meet should be a joint of about 1/4" in length.



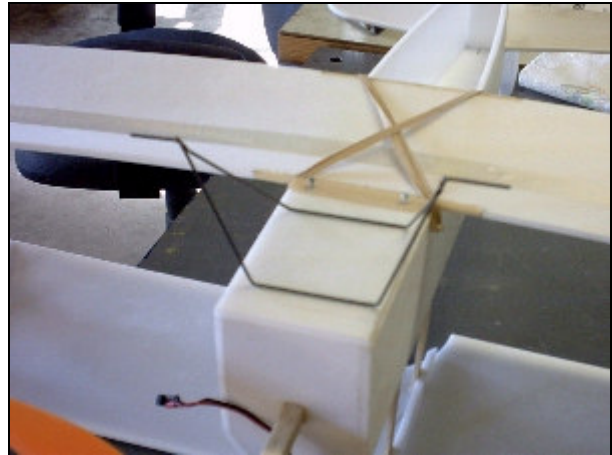
8

Solder the wires together where they meet. Use soldering paste for good adhesion. Also wrap the joint with fine copper wire and re-solder. You can get copper wire out of old speakers or hard drives.



9

Here is the assembled landing gear sitting on the plane. In this case the wire will simply be hot glued to the hatch after the plane is painted. Lastly, cut the excess wire off the axles so they don't stick out too far past the wheels. Be careful to allow enough wire for a wheel collar or whatever might be used to secure the wheel. Also file the ends of the wires smooth.



10

Here is the biplane sitting on it's landing gear. You can see how the second wire strengthens the entire assembly. Optionally you could run a third wire between the wheels for attachment of a small wing like some biplanes had, or you could cover the triangle formed by the wires with a thin flat piece of foam or balsa.

