

How to Make a Simple and Inexpensive Tow Plane Release

Materials:

- Length of 2-56 size pushrod wire (about 6-8 inches)
- Length of 1/16" music wire
- Length of 1/8" O.D. nylon tubing (about 2 inches)
- Plywood plate (at least 1/2" thick at point where hook installs)
- Thin CA and Gorilla Glue
- Course sandpaper
- Servo (heavy duty servo with metal gears recommended)
- EZ connector for 1/16" size wire

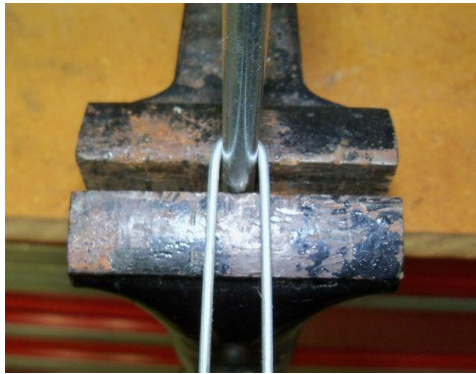
Tools:

- Small vise, 1/4 x 20 bolt, Hammer, Pliers, Wire cutters
- 1/16" 5/64" 1/8" drill bits

Directions:

Anchor the 1/4 x 20 bolt in the vise.

Bend the 2-56 pushrod wire around the bolt to make a "U" shape.



Use the pliers to squeeze the wire tight around the bolt.

Remove the bolt from the vise and insert the U-shaped music wire.



Allow the U to stick up out of the vise about 1/2 of an inch.

Use the hammer to bend the "U" over making a 90 degree bend.



Remove the wire from the vise and bend as needed for symmetry.



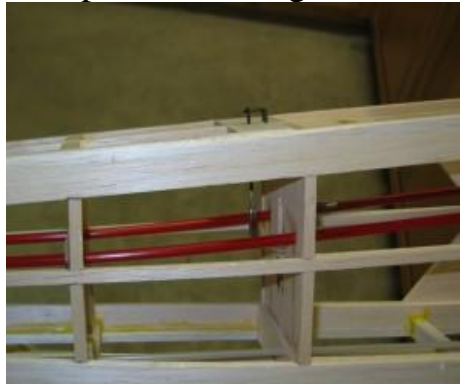
Cut the “legs” of the U to 1-1/4” and scuff them with the sandpaper. Install the plywood plate in the top of the fuselage just aft of the wing.



Mark the centerline of the fuselage on the plywood plate.
Drill two 5/64” holes straddling the centerline to insert the U.
Install the U (but do not glue it in yet) allowing it to stick up 1/4”.



The U should have the open side facing toward the front of the plane.



Drill a 1/16" hole down through the hardwood just inside the U.
The 1/16" music wire will extend upward through this hole.



Remove the U and enlarge the 1/16" hole to 1/8" diameter.
Insert the nylon tubing into this hole and glue it using thin CA.
Once CA cures, cut the nylon tubing flush with the outside surface.
Reinstall the U, this time gluing it in with the Gorilla Glue.
Use an EZ connector to attach the 1/16" music wire to the drive servo.

Adjust the servo linkage and/or travel so that the 1/16" music wire pushrod extends upward just slightly above the U to capture the towline and retracts fully down below the surface so as to release the towline. For larger tow planes, this same technique can be used with 4-40 wire for the U.

