

# TUMBLEBEE Directions/Suggestions

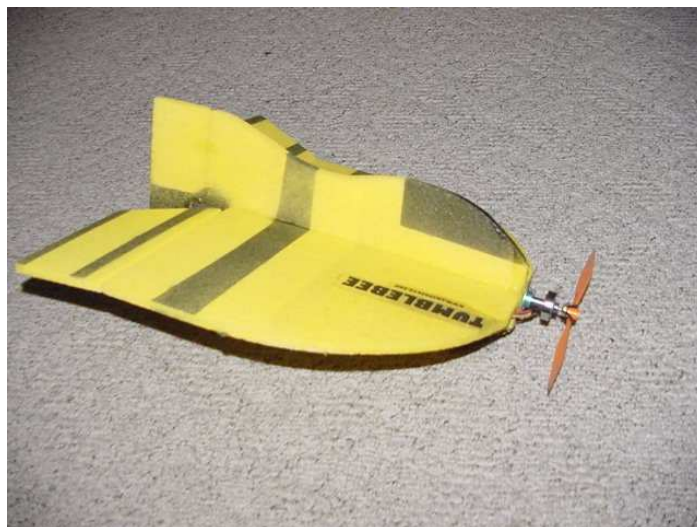
Thank You for purchasing the TUMBLEBEE

I hope you enjoy the Nimble Flight and 3D Characteristics of this New Lazertoys Design

First make sure you have all the parts out of the bag.

## This is what you will need to complete your TUMBLEBEE:

- |                          |  |
|--------------------------|--|
| <b>Wing</b>              | • 24 gram 2712-12 Blue Wonder Motor w/firewall mount |
| <b>Body</b>              | • 10 or 15 amp speed control                         |
| <b>Elevons (2)</b>       | • JST connector for the ESC                          |
| <b>Rudder</b>            | • Prop saver (recommended)                           |
| <b>Carbon rod</b>        | • 8X6 or 7X6 prop                                    |
| <b>6 Hinges</b>          | • 500 - 900 mah 3 cell lipo                          |
| <b>1 Motor mount</b>     | • 3 - 5 or 9 gram servos                             |
| <b>3 control rods</b>    | • Hot glue gun and Sticks                            |
| <b>3 control horns</b>   | • Sharp Hobby Knife                                  |
| <b>and some Stickers</b> | • Needle Nose pliers                                 |



Before gluing the body and wing together first cut a V groove (not a slot) about 1/8" deep in the wing about 6 inches in front of the wings trailing edge for the carbon fiber rod . Take the rod and try it out in the groove it should fit flush but don't cut through the wing. Then, fill the groove with hot glue and place the rod in the groove and press it on well.

**TIP:** I use a smooth backside of an aluminum yardstick (no numbers of markings). and press the area over the rod using the yard stick, let the hot glue cool then flex the yard stick and it should pop off the glue. Try this on some scrap first and make sure the metal your using woll release from the glue. If not just glue it in.

## HINGES.

Install the hinges about 1.5" in on each end of the control surface, use a drop of hot glue placed on the foam and then press the hinge on the glue, it will hold very well.

## SERVOS

The SG50 servos should be mounted about 1" in front of the trailing edge for the elevons and 3" from the trailing edge for the rudder.

## CONTROL HORNS

When gluing the Control horns in, mark where you want the control horn , then cut a slot in the foam and place a drop of hot glue on the foam. Then, push the control horn in. If you try to place the glue on the control horn it will soften and become to soft to place in the slot

## CG

The center of gravity is 3 1/2 to 4 1/2 inches from the front most part of the wing and body where the motor mount will be glued on.. At 3 1/2" it will fly more stable for wind and learning to fly the TUMBLEBEE. At 4 1/2" it will be easy to hover and do crazy fast turns and spins.

# CONTROLS

You must use elevon (or V-tail) mixing on the horizontal control surfaces and I would mix a little rudder in till you get the hang of the TUMBLEBEE. More to come...

