EZ BALANCER 'LITE'

Parts List

2ea. Aluminum Angle Base Frames.
1ea. 1/2"x1" Aluminum Cross Angle.
2ea. Aluminum Uprights.
2ea. Aluminum Cradles.
2ea. Bronze Bushings.
4ea. Rubber Cradle Guards.
2ea. 1/4-20 Cradle Bolts.
2ea. 1/4-20 Cradle Hex Nuts.
2ea. 1/4-20 Cradle Nylon Insert Stop Nuts.
6ea. 10-32 Bolts.
6ea. 10-32 Nuts. 6ea. Lock Washers.
2ea. #10 Large Flat Washers.

Tools:

Pliers, 7/16" wrench or socket and a Phillips headed screwdriver

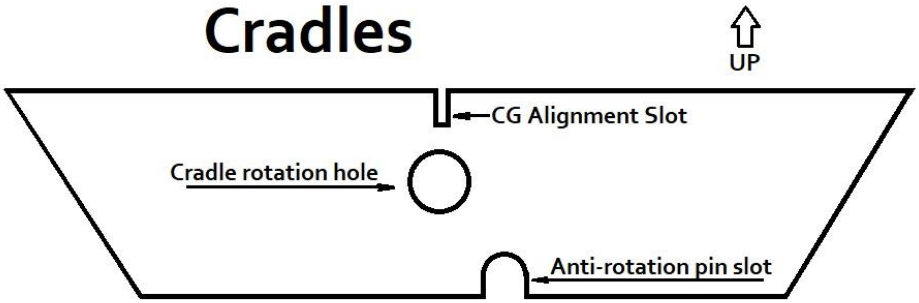
Please note: The hardware and accessories listed may not be the same as shown. We are always improving the product.

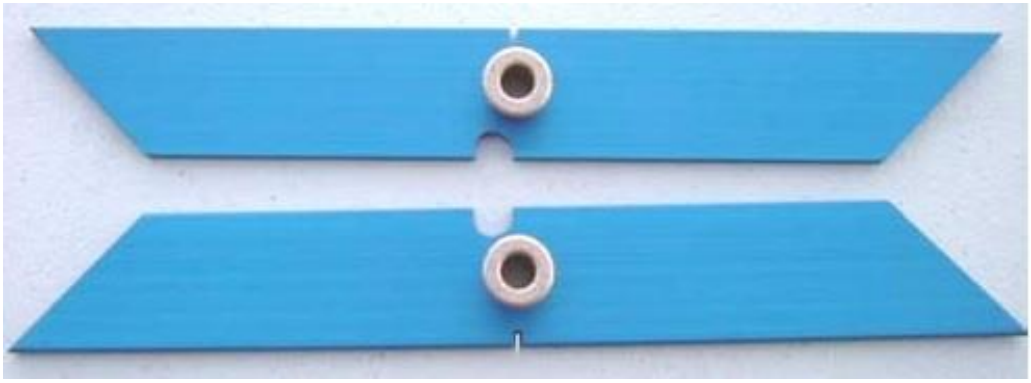
NOTE: THE EZ BALANCER 'LITE' IS LIMITED TO 20LBS. MAX.

EZ BALANCER

***WWW.EZBALANCER.COM* by Black Hills Manufacturing**

Step 1 ASSEMBLY OF UPRIGHTS & CRADLES





The cradles should look like this once assembled.

There are 3 parts to the Cradle:

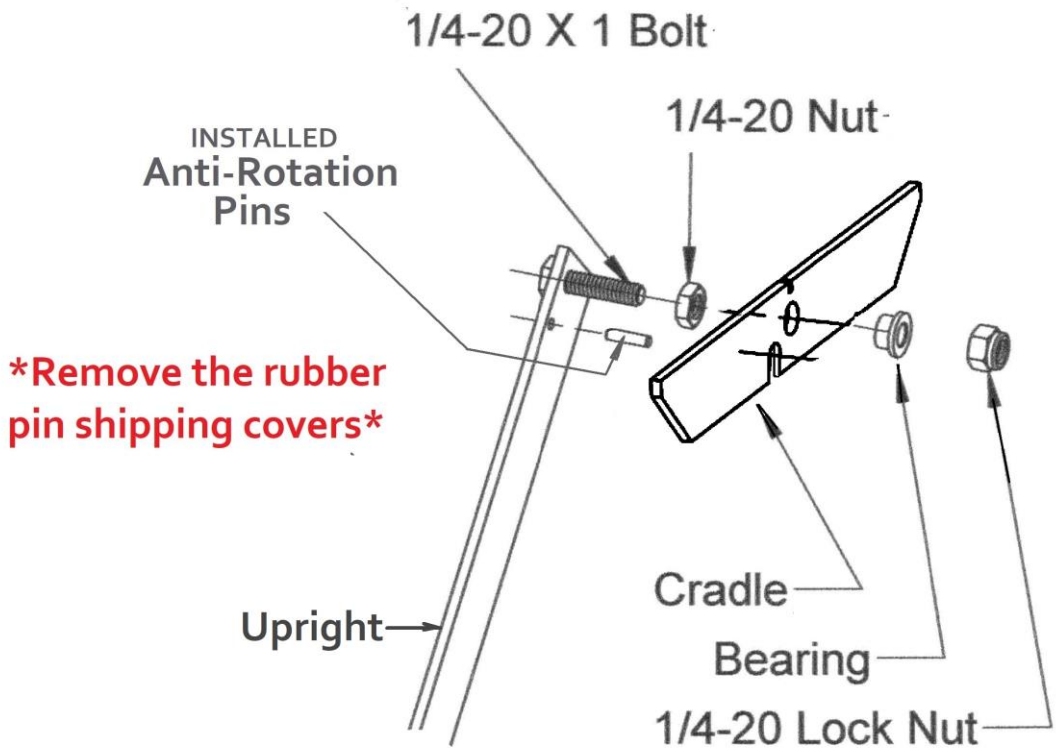
1) The small vertical slot is the CG alignment slot.

2) The center (larger) hole where the bronze bearing is inserted and the Cradle rotates on. It will slide over the 1/4”-20 bolt that passes through the Upright.

3) The larger indent on the bottom of the Cradle is part of the travel limiters. It fits over the anti-rotation pin on the Uprights. It is offset to the rear of the center hole.

The Anti-rotation Pins have been installed into the Uprights at the factory. When assembled to the Base Frames, the anti-rotation pins will face **outward** from the balancer as shown in the following pictures.

******VERY IMPORTANT...Remove the RED anti-rotation pin shipment covers before installing the cradles! They are only used to protect the parts during shipping. If these rubber guards are not removed, they will interfere with the free cradle rotation and your model will not balance correctly******



Insert the 1/4-20 bolt through the Upright with the threaded portion sticking out on the same side of the Upright as the anti-rotation pin.

1) Thread on the 1/4-20 hex nut and tighten.

2) Insert the bearing into the large hole in the Cradle.

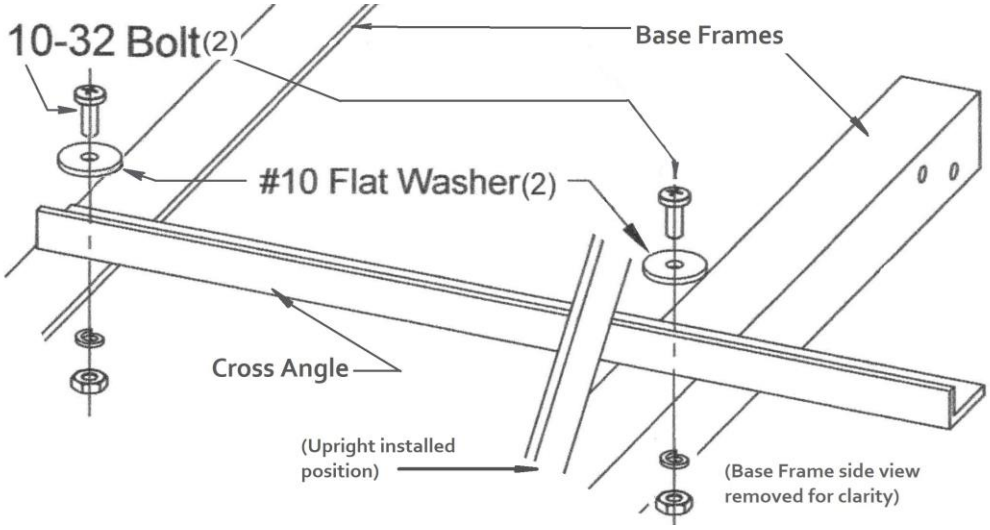
3) Slide the assembled Cradle (with bearing installed) onto the 1/4-20 bolt with the CG "Notch" of the Cradle "UP". The Cradle slides over the anti-rotation pin and the anti-rotation slot straddles the anti-rotation pin.

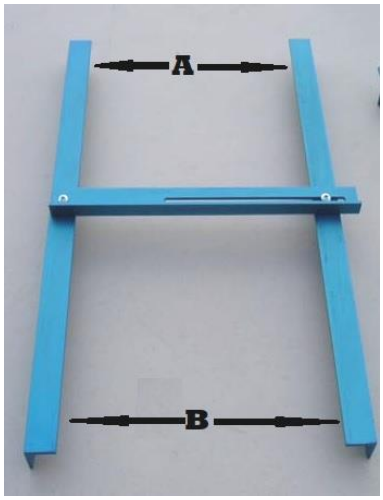
4) Add the nylon insert 1/4-20 Lock Nut and tighten.

   Loosen the Lock Nut just slightly until the cradle moves freely.

5) Repeat this procedure and assemble the other Cradle to the Upright. The opposite Cradle Assembly will be the mirror image of the Cradle you just mounted. The anti-rotation pin will be pointing in the opposite direction and outward.

Step 2 ASSEMBLY OF THE CROSS ANGLE and BASE FRAMES





1) Place a 10-32 bolt with a #10 large flat washer under the head, through the hole provided in the Cross Angle.

2) Place the Cross Angle on one of the Base Frames with the bolt going through the hole provided. (The Cross Angle can be mounted in either direction.)

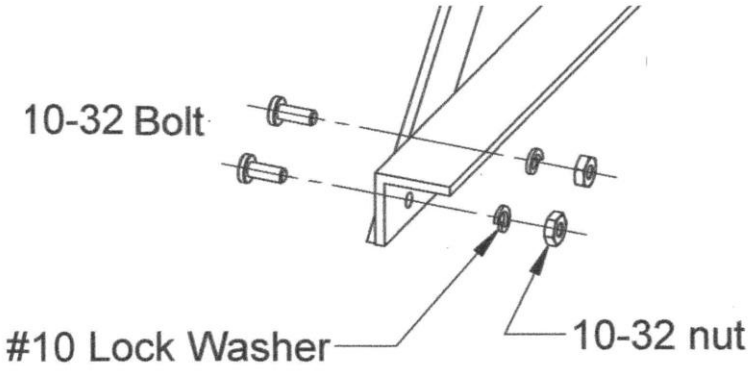
3) Beneath the Base Frame, place a lock washer and a 10-32 hex nut on that bolt.

4) Repeat this at the other end of the Cross Angle with the bolt passing through the width adjustment slot and the other Base Frame.

5) At this point, align the Base Angles so they are parallel and the ends are in alignment to form a perfect rectangle. See the second picture where A=B.

6) Tighten all the nuts to hold the assembly together.

Step 3 ASSEMBLING THE UPRIGHTS TO BASE FRAMES



Note: there is no actual "right" or "left" side of the balancer. They are only called this in this Step to help the customer visualize the correct way to finish the assembly. The balancer will work the same whether it is slid under the model from behind the wing or turned around and slid under the model from the front.

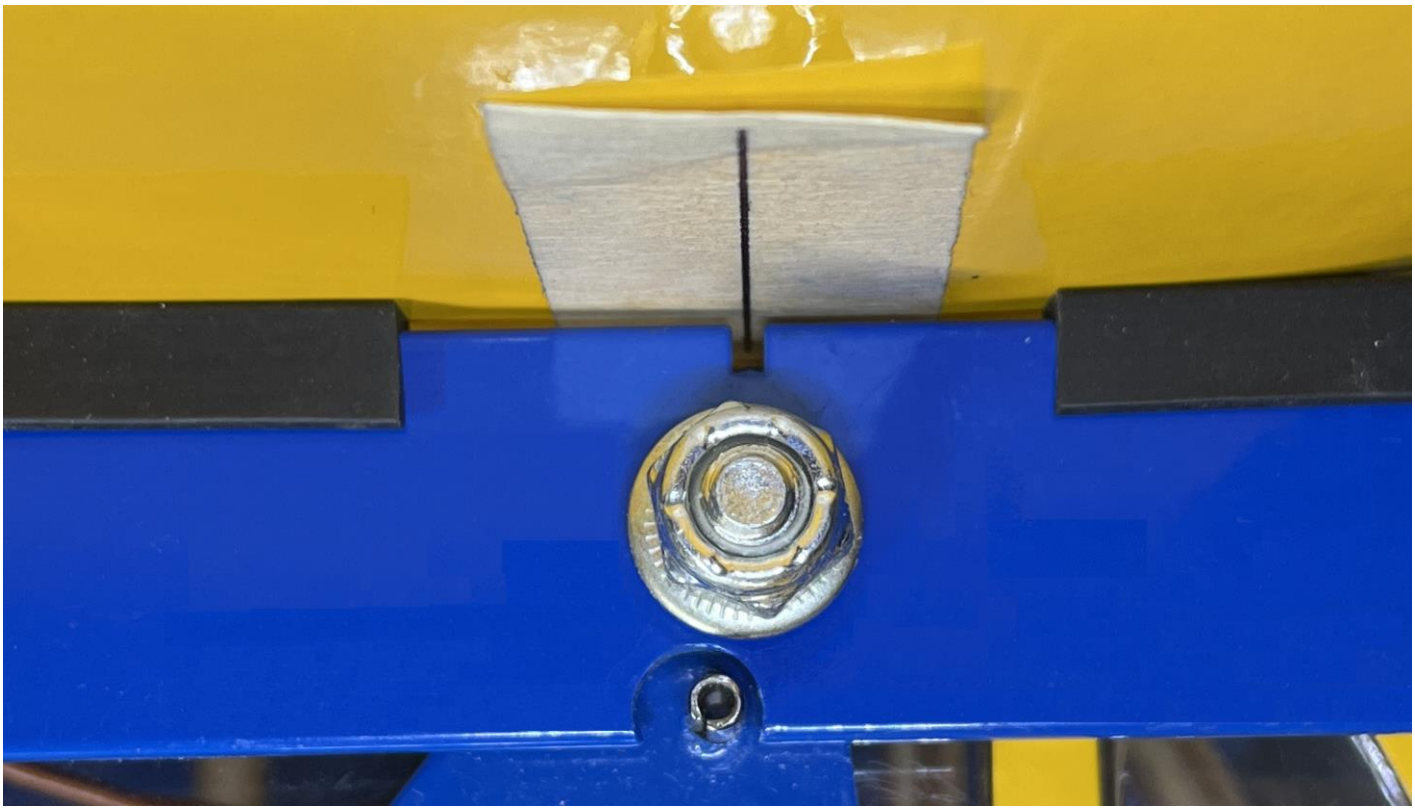
1) Install the "right-hand" Upright Assembly to the outside of the "right" side of the Base Frame using 2ea. 10-32 bolts, 2ea. lock washers, and 2ea. 10-32 hex nuts.

> Make certain that the Upright assembly has the cradle on the outside of the balancer. This will give you the maximum width between the cradles.

2) Repeat this procedure for the "left" side again making certain that the Upright Assembly has the Cradle to the outside.

At this point, all that is left is to install the Cradle Rubber Guards and set the CG. Some customers use silicone or epoxy to install the Guards. Align the outside edge of the rubber Guard with the outside edge of the Cradle. This should leave a gap between the Cradle Guards so you can easily see the C.G. notch in the center of the Cradles. See the picture on the following page.

Step 4 BALANCING THE MODEL ON THE C/G



Try to balance the model with weight that already exists such as the batteries, smoke pumps, etc. If you absolutely need more weight, then of course, go ahead and add it.

1) Mark the manufacturers recommended CG on the wing with a piece of fine-line tape or a piece of masking tape that's been detacked by sticking it on your pants and removing it to remove some of the "stickiness". That helps to reduce the effort to remove the tape once you're done and protects the surface of the model.

2) Place the model on the balancer and align these marks with the notches on the cradles. Make certain that the model swings freely. Don't worry, the limiters will not allow it to swing far enough to fall off. At this point you are virtually hands-free.

3) Level the model so it looks as if it is flying.

a) If it stays in that position when released and you cannot easily tip it by just touching the nose or tail, you are done and the model is balanced.

b) If not, move the battery pack (or add weight) to the high side until the model remains in the level position. Keep putting the model into the level position and releasing it after adjusting the weight. If you add enough weight to make the model start to swing back from the nose down or nose up position, it will be too much weight and will cause the model to swing to the other extreme. You're looking for a place where the model is static and level.

Step 5 STORAGE

To store the EZ Balancer, slightly loosen the nuts on the Cross Frame Member, then, using a Pantograph type of movement, push the Base Frame Members towards each other until they are touching. You can now hang the unit on the wall or slide it under a cabinet for storage when not in use.