

Corona Blade Balancing Tutorial by Toshi Morita

There have been a lot of posts lately asking about blade balancing, and I need to balance a new pair of blades anyway, so here's a quick tutorial.

The tools needed are:

A KSJ-528 blade balancer tool

Digital scale with at least 0.1 grams of resolution (0.01 is even better)

Electrical tape

Scissors and/or wire cutters

Fine point Sharpie (pen that can write on plastic)



The stock KSJ-528 is really difficult to read because it has a blunt plastic pointer.

I've glued a needle onto mine so it's easier to read.



First, if you have the posts installed on the KSJ-528, you need to remove them.



Now put each blade on the blade balancer and balance it.

Make sure the leading edge of the blade is parallel with the edge of the tray, then mark the leading edge with the marker.

The first picture shows it balanced.

The second picture shows the mark. It's very hard to see but there's a black mark at the leading edge of the blade.





Now hold the blades together and make sure the ends are matched.

See if the center of gravity marks line up.

In this case, the CoG markers are within about 1mm so it's close enough.

If the marks had not matched, I would have put tape at the root of the blade which had the center of gravity closer to the tip.

I prefer to put bring the CG inwards on the blade which has the CG outward because putting the tape near the blade root will not disturb the airfoil as much as putting it at the tip (where it's traveling at high speed).



The next step is to match the weights of the blades.

First we measure the blades to determine the weights.

One blade weighs 39.0 grams; the other weighs 38.9 grams.





I cut about one inch of electrical tape, and put it on the light blade.

I put it on the underside of the blade, on the leading edge, and centered across the center of gravity mark.

I know to put about one inch because roughly 1 inch of electrical tape = 0.1 gram in my experience.



I recheck the weight of the blade to see if it's 39.0 grams...

and yes, it's perfect.

If it was still too light, I would have removed the tape and put a longer piece on. If it was now too heavy, I would have removed the tape and cut a piece off and put it back on...but hopefully that's obvious.

All done!

Toshi

