

# GETTING CONSISTENT TIME FROM A DT FUSE

By Jim Bethea

As you may know I made a fuse gauge for the guys a few years ago to help ensure that when a fuse is cut, it would burn a given length of time. To this point it has been very reliable, however at the Fiesta last month, Jerry Klingaman and I flew together and found that the fuse was burning very slow. For instance if one cut the fuse for a two minute DT, the DT was actually occurring at about 3 minutes. Some people were blaming/ complaining about it, so I decided to investigate. I thought that the difference could have been due to one of two differences.

Either the fuse was gaining water due to the humidity, or somehow the fuse was wound tighter or looser from batch to batch. I had no way of looking at the way the fuse was wound, so I decided to look at the water component.

I took a skein of fuse from my box ( it was open to the atmosphere) and weighed it, then I put it in the microwave and ran consecutive 30 second heatings, then weighed the fuse after each heating.

Here is the data that I logged:

Original weight	75.7grams
After first heat	73.1 grams -3.43%
After 2nd heat	71.8 grams -1.78%
After 3th heat	71.1 grams -0.98%

total weight loss was 5.22% and that's a lot.

After the last heat, I put the fuse in a vacuum sealed bag and will keep it there until I need to use it. This data indicates to me that the fuse indeed contained water. From now on I will be micro- waving my fuse before a contest, and storing it in a dry, sealed place.