



## CONGRATULATIONS & THANK YOU FOR YOUR PURCHASE!

### **Wind Flag Use – General Guidance**

Wind flags help you determine the wind conditions between you and your target. Without them, precision or consistency is virtually impossible to achieve. Some people use their free eye (one not looking through the scope) to watch what their flags are doing down range. Some people align their flags and view them in their scope while aiming at the target. This can be difficult to do and often requires a custom reticle (dot or cross hair is further up the vertical post instead of at the center) be used to enable seeing all your flags in the scope.

I find it easier to align the flags from my side and line them up toward the target so the last flag is near or under the target and can be viewed in my scope. The more flags in your scope the better.

It is generally accepted that the most critical flag is the flag next to your shooting bench. This is where the wind has the greatest influence on the bullet, all things being equal down range (direction and magnitude). With this in mind, generally flag importance lessens as you move down range towards the target. Theory being that a wind at the target won't have sufficient time to change the path of your bullet so you can generally give the immediate target area less importance.

Typically it is common practice to use 3 or 4 flags out to 100 yards and an additional 2 flags when shooting out to 200 yards. Often it depends on the range (surrounding area – buildings, obstacles etc. – watch for funneling affects) that determines how many flags and where to place them. This coupled with personal preference and experience dictates how many flags you finally use.

When starting out, 3 flags is a good start. Too many and it becomes difficult to read them and it becomes very easy to become confused; something you should try to avoid. As you become comfortable with them, you might consider more flags.

So for general considerations, let's start by placing a flag about 7 - 10 yards from your bench, on the same side where you have a free eye (the side opposite the eye you look through your scope). See your benchrest rulebook for flag height, as there are restrictions on height. Generally they all should be below the line of sight when viewing from the front of your bench top to the underside of the target at 100 or 200 yards. The next flag would be at about 30 yards followed by one at 50, and one at 75 yards. You want to position their heights ideally staggered so they get taller as you move down the range. Ideally, each flag should be one flag height above the next as you move down range. If you're shooting out to two hundred, have another one at 100 and another at 135 yards (approximately). Watch for areas on your range where wind drafts can funnel across the range or down or up a hill. It may make sense to position a flag in these areas to monitor what is happening.

The flag vanes give you an idea of which direction the wind is coming from. The ball or propeller points into the wind and the flag tail gives you magnitude. High winds generally mean the tails will be horizontal. No wind and they are straight up and down. Our propellers are the most sensitive I have seen in witnessed including all flags at the 2005 World's benchrest competition in Ohio. When tails were vertical, our propellers would still pick up a wind.

When shooting, you can wait for a calm and shoot or you can wait for a consistent condition. Remember the flag direction, propeller motion and tail position. Try to shoot your group with all flags in the same position each time you pull the trigger. They maybe doing different things when compared to each other, but they should be doing the same thing for each shot. Once you get familiar with how the wind magnitude and direction moves your bullet, you will be able to compensate for the wind drift. In practice, shoot aiming at the same point while conditions change and watch where the bullet hits!

If the bullet is being pushed left, you should hold off to the right into the wind and vice versa. Updrafts and down drafts caused by berms can cause your bullets to move up or down.

Recommended reading: [The Ultimate Rifle Accuracy](#) by Glenn Newick



## Wind Flag Care

It is recommended that the wind flags be stored in a sturdy wooden box or plastic Tupperware container. If they get dirty, wash them with a mild soap and warm water.

### Hardwood Balls

Hardwood balls should be given a light automotive waxing at the end of each season to preserve their finish. When assembling, screw by hand all the way. Do not over tighten.

### Poles

Poles are constructed from stainless steel and are typically maintenance free. A few drops of oil on the threaded connections of the thumbscrews is recommended. The stainless spindle (flag axle) should be kept free of burrs. If they become rough due to handling, a slight polishing with 400 – 600 grit sandpaper should clean them up.

### Spikes

The spikes are mild steel, which can rust. A light coating of oil will help prevent rusting. They are painted a bright fluorescent color for easy location. Occasionally the spike tip may have to be repointed due to damage from rocks. This process will ease insertion into the ground. Grinding the point works well.

### Spike Knocker

The solid steel knocker with a hole and used to drive the spike down into the ground with a hammer may require occasional grinding of the head. **CAUTION** Over time and repeated use, the head of the knocker may deform due to impact from the hammer. It may start mushrooming or deforming. If this happens, use the proper personal protective equipment and grind off the flaring or mushrooming of the corners so they are lightly chamfered. If you don't, a piece of steel could break free on impact from a hammer and injury may result.

### Balancing

The flags are furnished balanced. It is recommended to check flag balance periodically by the following method.

Place a pole on a tabletop with the spindle overhanging the table by a few inches. Place the flag on the pole and it should level itself on the spindle so the vane is horizontal. Keep an eye on the tail to make sure it's not on the floor and positioned straight down from the vane end. If the vane is tilted, simply loosen the setscrew in the black delrin housing and slide the aluminum shaft inside the housing.

If the vane is low or below horizontal, pull the aluminum shaft out on the ball side until the vane levels. Only small adjustments are generally necessary 1/8" or so. Tighten the setscrew once you have a level flag. Position the flag and pole in the vertical and make sure it hasn't twisted in the black delrin housing. If it has, loosen the setscrew and reposition taking care not to slide the aluminum shaft in or out.

If the vane is above horizontal, loosen the setscrew and push the ball side of the aluminum shaft towards the black delrin housing. Remember, only slight adjustments are required. Tighten the setscrew and check the flag position when the flag is positioned vertically. Adjust as required if necessary.

### Tails

There are some very nice "wind sail" material tails on the market. They are fairly expensive, but you may find them easier to read wind magnitude. They have a slight curved surface and tend to stay straight and lift up like a stiff lever. It's really personal preference and budget!

