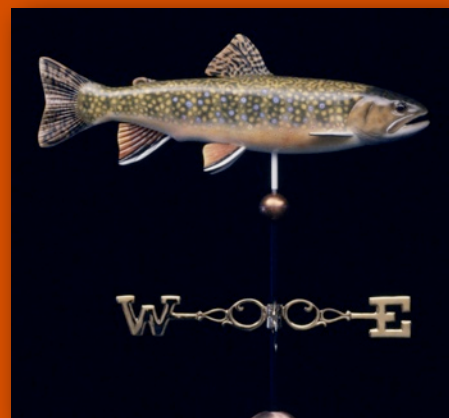


MIKE BUTLER • FISH CARVER

Maker of Fine Fish Models, Trophy Carvings & Weathervanes

Weathervane Installation Manual



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Table of Contents

Introduction	3
Packing List	4
Required Tools and Materials	4
Preferred and Optional Spire Installation Methods	5
Spire Installation Instructions	6
Component Assembly and Vane Mounting Instructions	7



Introduction

Thank you for purchasing one of my fine fish weathervanes.

Please read through the instructions and familiarize yourself with the diagrams and images before starting the installation. With proper planning and execution an installation should take a couple of hours and provide a lifetime of maintenance free service.

Installing a weathervane is broken into two parts. The spire/Mast installation, and assembling the display components and mounting the vane. While both parts are equally important, a good weathervane installation begins with a good spire installation. Take some time to review the different methods and how they might apply to your installation. It can make a major difference for both the vane's function and aesthetics. Most of the time spent installing the vane will take place installing the spire. Assembling the components and mounting the vane takes just a few minutes and an eye for detail.

Some Miscellaneous But *Important* Notes

While every possible effort is made crafting the vane to withstand the elements, the fins are vulnerable to accidental harm. It is best to leave the vane resting on the packaging materials in its shipping container until needed when performing the installation. Resting the vane on its side on a hard surface without padded support could damage or break a fin, disfigure the brass spindle tube or mar the finish. I also recommend when carrying or handling the vane to support the fish with two hands from the underside as much as practical and to avoid holding the carving by a fin. If holding the vane by the spindle tube, hold it directly below the fish's belly while the vane remains upright and horizontal.

While it is not necessary it is helpful to have a second set of hands during the installation - particularly when installing the spire and mounting the vane.

It is not recommended installing the spire, components or vane during windy and or wet conditions.

Please do not install the vane without the ball bearing. The spindle tube can be seriously damaged without the use of a bearing, and the vane will not function properly.

If you have any questions about an installation or comments about the manual, please contact me at 207 949-1609 or email me at mail@mikebutlerfishcarver.com.

Weathervane Packing List

- 1 Fish Vane
- 1 Powder Coated Stainless Steel Spire/Mast (sized per project)
- 2 Copper Globes (sized per project)
- 1 Set of Cardinal Points (2 pieces N-S, W-E - size and style specified per project)
- 1 Stainless Steel Ball Bearing (1/2")
- 1 Grease Packet
- 1 Brass Support Collar (to support the large globe)

Required Tools and Materials List

Tools

- Drill driver (heavy duty)
- 3/4" or 7/8" drill bit depending on Spire/Mast diameter (12" bit or longer)
- Bubble level
- Phillips head screw driver #2
- Allen Wrench 2.5 mm (*M. Butler Design* style cardinal points)
- Caulking gun
- Measuring tape
- Marking pencil
- Saw (for cutting 2" X 4")
- C-clamps (for holding the stabilizing beam and collar)
- Hand compass (for orienting the cardinal points)
- Hacksaw with 18-24 T.P.I. blade for cutting stainless steel (if the Spire must be shortened for an *Optional Spire Installation*)

Materials

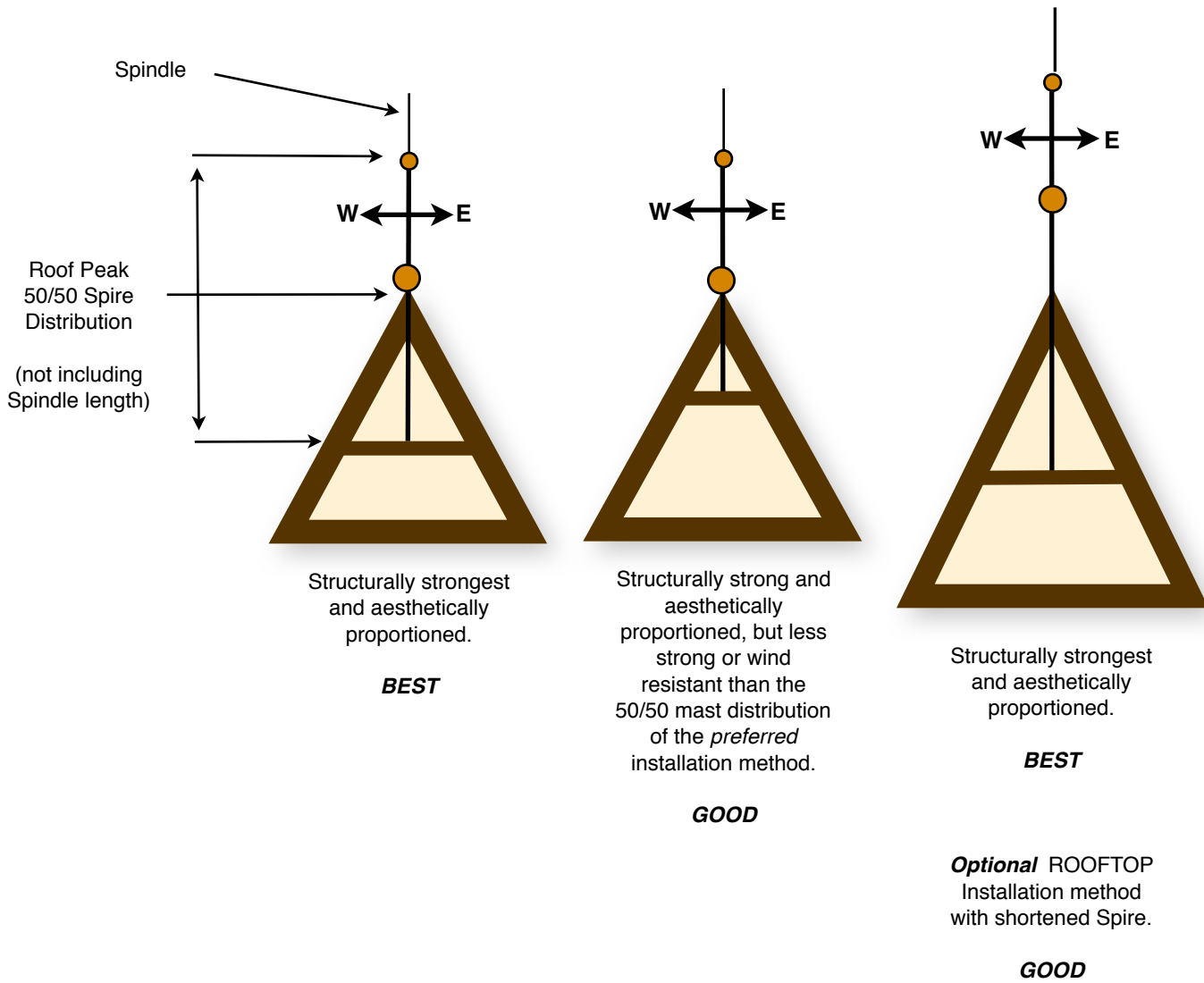
- 2 1/2" coarse thread phillips head screws
- Enough 2" X 4" or project related wood to complete the stabilizing beam and collar (Basic installation)
- Exterior waterproof silicone caulking
- *LOCTITE* fastener adhesive

Preferred and Optional Spire/Mast Installation Methods

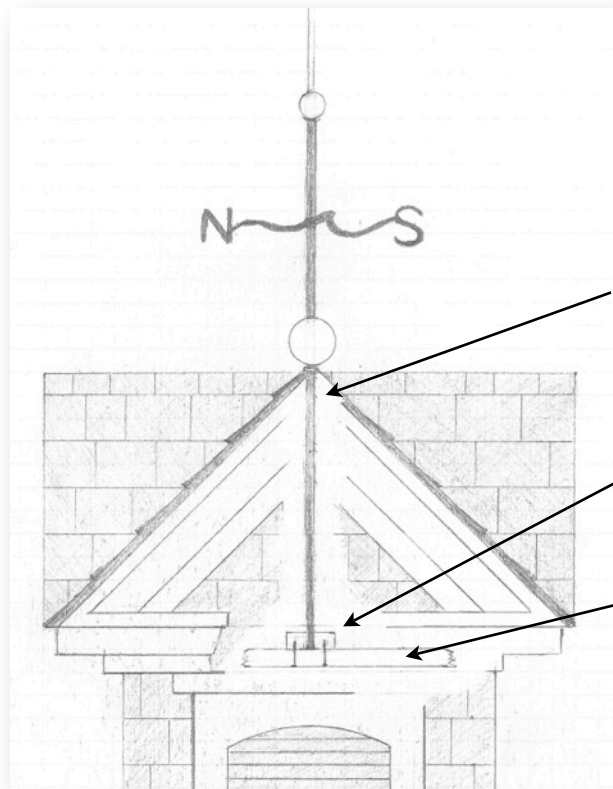
Preferred CUPOLA
Installation method with
50/50 Spire distribution

Optional CUPOLA
Installation method
with shortened Spire

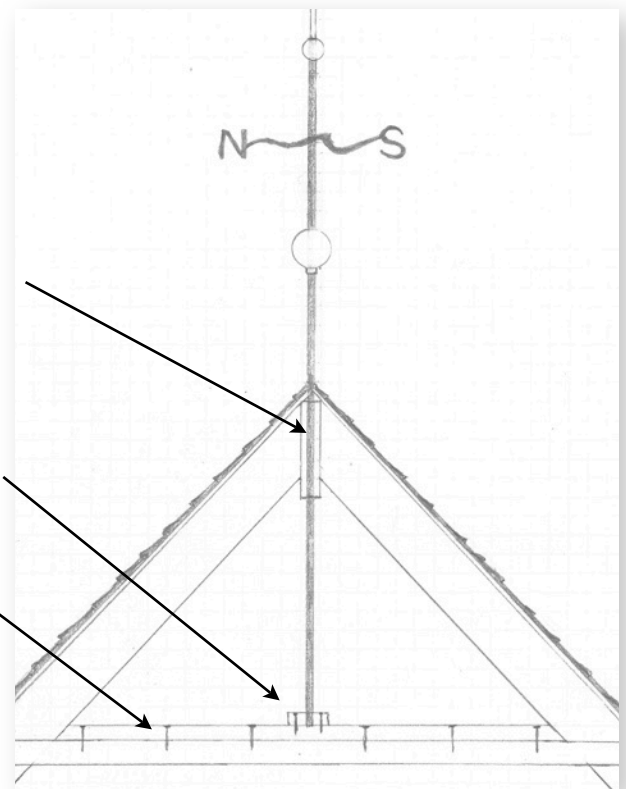
Preferred ROOFTOP
Installation method with
50/50 Spire distribution



Spire/Mast Installation Instructions



Cupola Installation



Rooftop Installation

- Drill a hole (per Spire diameter - 3/4" or 7/8") from the top-down centered through the Ridge Beam or Joined-Rafters (Pyramid/Pagoda Hip roof style).
- Create a 2" X 4" support beam (a T-beam is more rigid and unlikely to sag over time). For greatest wind resistant strength (fulcrum effect) and aesthetic appeal, the support beam's distance to the roof's outside peak should be established so that half of the spire is exposed above the roof line, *not including the spindle* (see above diagrams).
- Level and secure the support beam with screws to the roof rafters (rooftop installation) or other appropriate structural support (cupola installation). **Note:** If it is impractical or impossible to install the entire length of spire in an installation, cut a section from the bottom to shorten its length (Maximum cut 16% of spire length). To help clarify refer back to *Preferred and Optional Spire Installation Methods*.
- Create a stabilizing collar for the spire. Cut a 2" X 4" X 4" block and bore the same size diameter hole as the spire through the center.
- Mount the collar on the support beam - seat the spire in the collar with a bead of the silicone sealant, plumb the spire with a bubble level, and secure the collar with a C-clamp. Shim the roof hole firmly (from the top) if there is any loose play and re-check the spire for plumb. **Note: If the spire is out-of-plumb, the weathervane will not function properly.**
- Anchor the stabilizing collar with screws to the support beam.
- Flash the roof hole, or use a good bead of silicone sealant around the spire where it enters the roof's exterior.

Component Assembly and Vane Mounting Instructions

- Install the retaining ring for the large globe. For **Cupola Installations** - Place on the roof peak and tighten set screw. For **Rooftop Installations** - Measure from the roof peak to the planned height and tighten set screw.
- Gently slide the large globe onto the spire and rest it on the retaining ring.
- Orient the cardinal points. It helps to practice this first on the ground. Clockwise, N-E-S-W. Make sure the two pieces properly interconnect and that no letters are up-side-down (easy to do with the N-S).
- Gently slide the bottom cardinal points on first (W-E) - about half way between the bottom globe and where the top globe will rest. Take care not to scratch the spire's finish when sliding the cardinal points on. Orient the cardinal points with the compass and tighten the set screw securely by hand. **Note:** take care not to over-tighten set screws. A power screw / driver is NOT recommended.

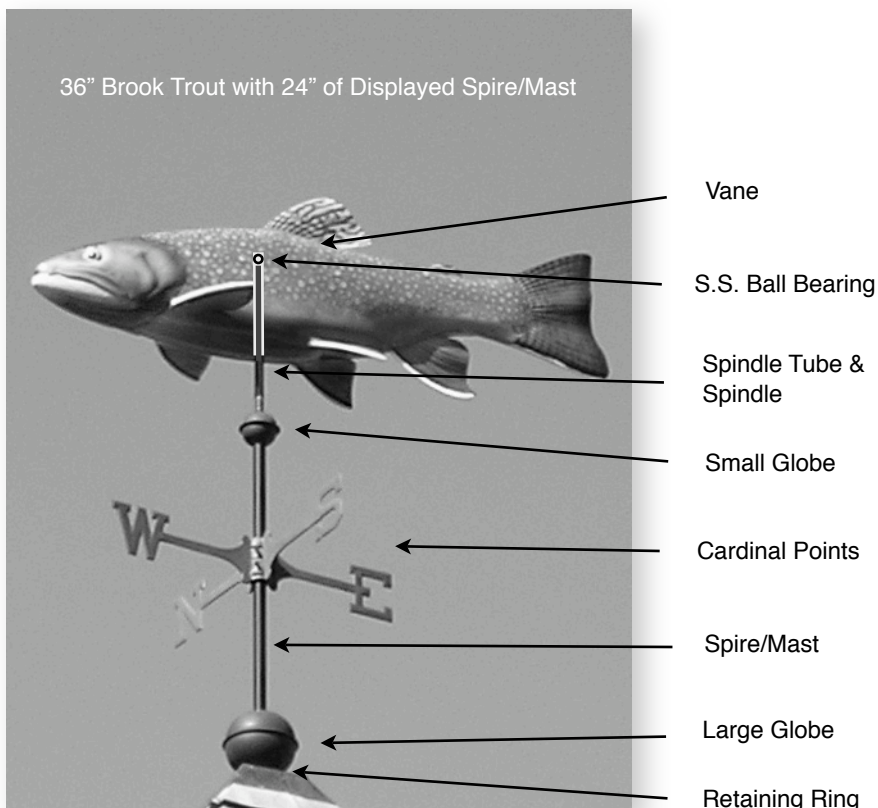
- Gently slide the second cardinal points on and rest them on the bottom cardinal points. Make sure the points are properly oriented (clockwise) North, South, East, West. Tighten set screw.

- Slide the small globe onto the spire with the **smaller hole up**.

- Using a tape-measure, re-adjust / center the spacing of the cardinal points an even distance between the globes with a drop of **LOCTITE** on the screw threads (see photo as a reference).

- Using the provided grease, put a small dollop on the tip of the spindle.

- Here is the tricky part - mounting the vane and bearing. Hold the vane by the spindle tube directly below the belly and with your other hand hold the bearing at the opening of the spindle tube. Gently guide the spindle tube onto and down the spindle until the vane rests on the bearing and turns freely.



- Wipe off any grease that may have got onto the spindle tube, vane or components during the installation.

- Congratulations! You have completed the installation and can now enjoy your fine fish weathervane pointing into the wind and approaching weather.