

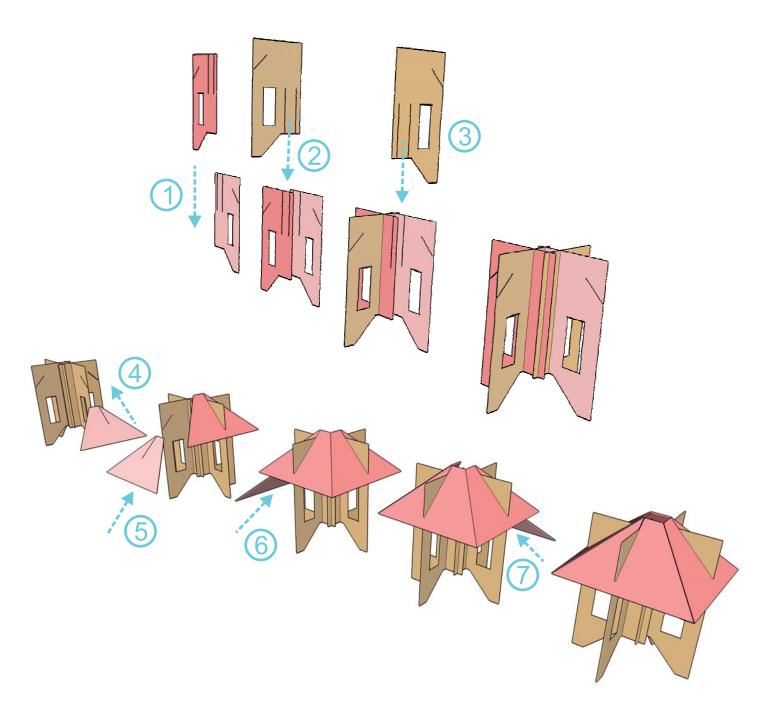
Instructions and Guidelines

Optional Cupola

File **cupola.dxf** 1) align 2 side parts with top slots, 2) insert side part with bottom slots 3), insert other side part with bottom slots, 4-7) insert roof parts.

Fit 1-1/2" square tube mast in central hollow before welding all together.

The cupola is designed for 12 ga material. To use different material thickness adjust interlocking slot width accordingly.



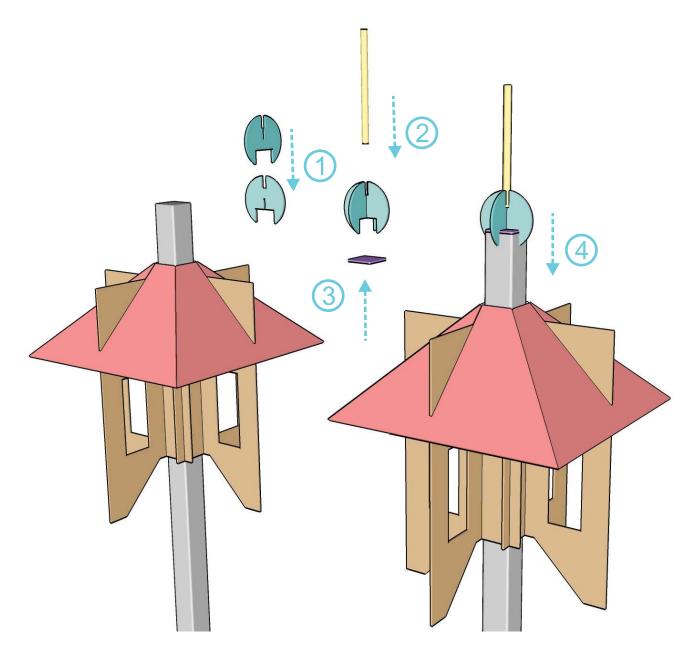
Globe Mast to Inner Bearing Mount

File **globe_simple_1.dxf** 1) fit 2 interlocking parts together, 2) insert inner bearing shaft, 3) insert **square cap.dxf**, 4) installs on 1-1/2" square mast.

Inner bearing design size is 3/8" OD. Must fit outer bearing. To use a different diameter bearing adjust globe bearing notch size.

Inner bearing length depends on chosen outer bearing length and compass options.

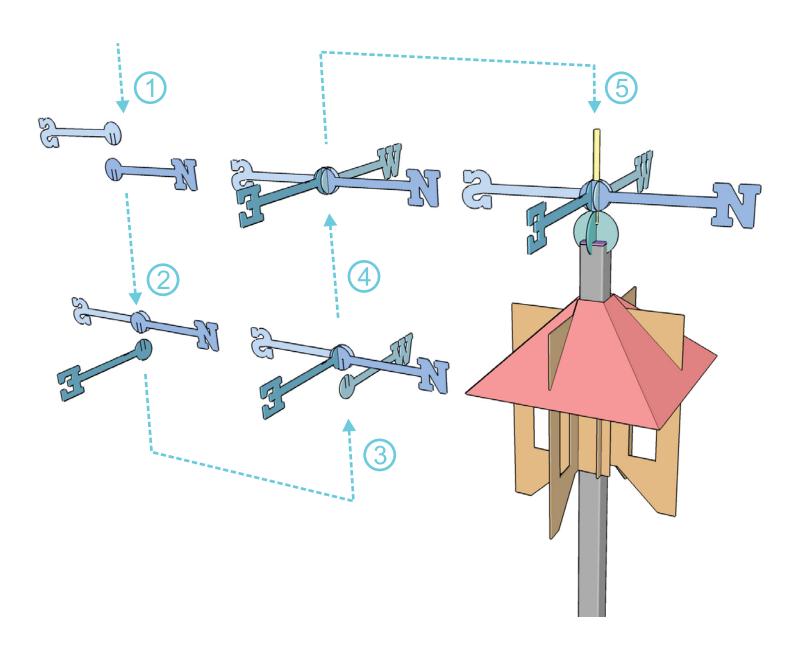
The globe and cap are designed for 10 ga material, adjust globe interlocking slot width to use different material thickness.



Optional Compass

File **compass1.dxf** or **compass2.dxf** or **compass3.dxf** 1) get N and S parts with bottom slots, 2) insert into E part with top slots, 3) insert W part with top slots, 4) fit 3/8" diameter bearing shaft before welding, 5) install over inner bearing shaft, align, install set screw to set alignment.

Compass parts are designed for 12 ga material, adjust interlocking slot size to use different thickness material.



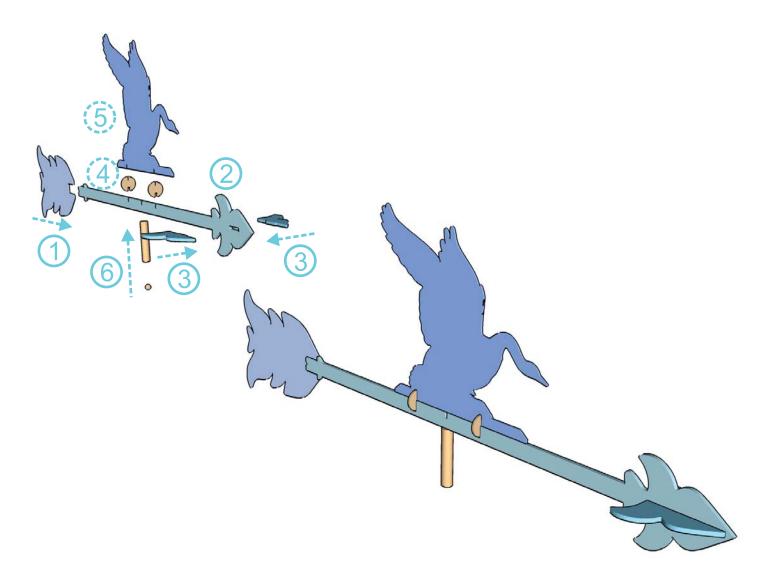
Vane, Shaft, Bearing and Optional Ornament

- 1) Vane (rudder) is 14 ga material, 2) Shaft and 3) Fins are 7 ga material. Tack weld vane and fins to shaft.
- 5) Ornament is optional, can be either 12, 14 or 16 ga material, use 4) **clip_12ga.dxf** or **clip_14ga** or **clip_16ga** respectively, clip is designed to be made from 12 ga material.

Vanes and Shafts are numbered in pairs. Do not mix unmatched match vane and shaft parts or else might not balance.

Center notch on shaft is the designed balance point. 6) Weld outer bearing in line with center notch, or if you add or change things then find actual final balance point of assembled components. Make top of outer bearing water tight.

Use a single 3/8" ball for ball bearing. Choice of bearing component size and material is optional, Using different components may require design adjustment(s).



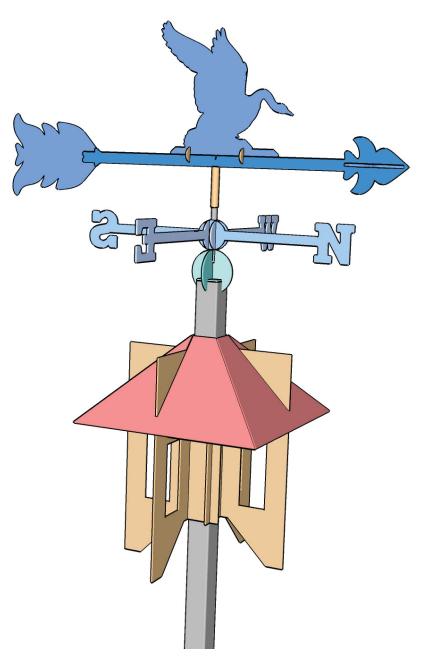
Operation

The outer bearing should be at least 2 inches long and fit inner bearing with minimal clearance.

Use marine grease to lubricate. File bearing surfaces flat and smooth (do not put a point on top of the inner bearing).

The vane assembly just sits on inner bearing, a hold down device is not necessary, wind will not lift the vane assembly.

The mast (or the inner bearing) should be as close to plumb (true vertical) as possible for best possible operation. The better balanced the shaft is, the less perfect plumbness is required.



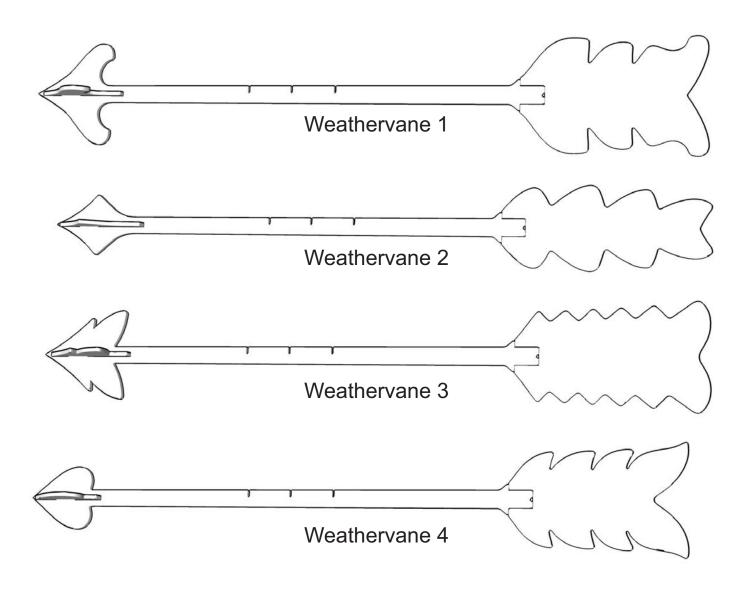
Shaft and Vane Designs

There are 8 weathervane designs, each is a pair of files weathervaneX_shaft.dxf and weathervaneX vane.dxf, where X is a number 1 to 8.

The vane (rear) portion is designed for 14 ga material.

The shaft (front) portion is designed for 7 ga material.

Each shaft has two horizontal fins to be welded on the shaft tip in the alignment slot.



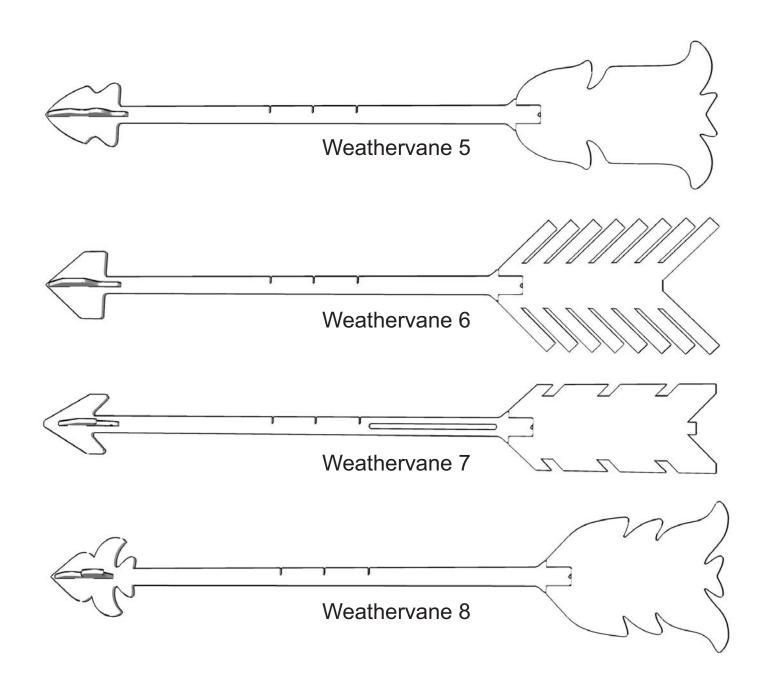
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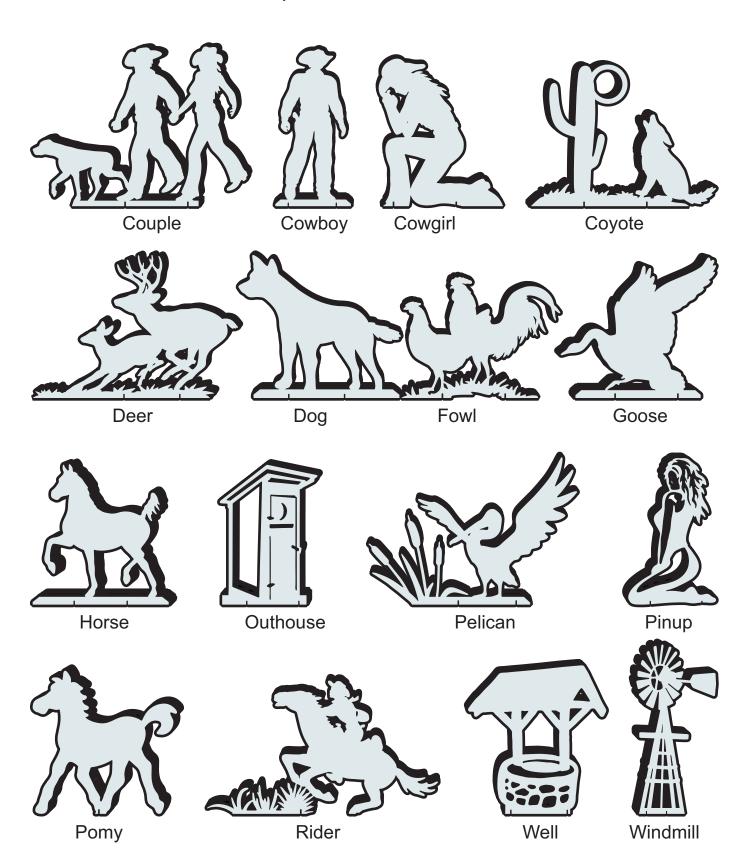
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The shaft (front) portion is designed for 7 ga material.

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Optional Ornaments



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