

ELECTROSTATIC BOBBLE HEAD**MODEL N - 153****UNPACKING:**

There are only three parts to this device; the 4-inch dome, the heavy cast iron base, and the slender plastic support rod.

ASSEMBLY

Place one end of the mounting rod in the socket in the dome and one in the socket on the base.

OPERATION

When the Van de Graaff is operating, the dome will rise to a very high negative voltage, perhaps 300 kV, and the surrounding air will be ionized and it too will become negatively charged, but not nearly to as high a voltage as the generator dome.

The strong field of the generator will drive the charge on the small ball around to its far side, away from the generator. There will be some attraction of the ball by induction and some repulsion, as it also carries in total, a negative charge, essentially resulting in no movement of the small ball.

If you use the N-148 Discharge Wand to drain the negative charge from the backside of the small dome, it will be more strongly attracted to the Van de Graaff dome. When it gets close enough, there will be an arc discharge, the small ball will become highly negative and will be strongly repelled. The slender rod will act as a spring, the ball will reverse direction and start back toward the dome, but, being negatively charged, it won't go far.

If you hold the discharge wand near the end of the arc of the small ball, you can drain enough of its charge so that it will return close enough to the generator dome to get another arc discharge. With a little practice on where to hold the wand, there will be a simple oscillation.

Be prepared to move the base of the Bobble head away from the generator so as to avoid a collision. And as you would expect, the Bobble head will not perform when the generator voltage is low because of high humidity.

**STORAGE**

Whenever the Bobble head is not in use, **always** remove the rod from both sockets. If stored in the fully assembled position, the rod will acquire a permanent and undesirable set or bend. It must be straight for best performance.