

## How to Level the SCIGN Mount

### Tools Needed:

3/16" Allen key (Leveling/Lock Screws)  
3/32" Allen key (Security Screw)  
7/32 crescent wrench (Clamping Screw)  
9/16" socket wrench (Clamping Screw, optional.)  
8" adjustable wrench (Antenna Bolt)  
large pipe wrench (mount base)  
Red Locktite #271

### SCIGN Mount Details: *See Page 3*

Antenna Bolt: *Fig. 6*  
Clamping Bolt, Belleville Washers: *Fig. 7*  
Security Screw: *Fig. 9*  
North alignment notch: *Fig. 1*  
Lock Screws: *Fig. 4*  
Leveling Screws: *Fig. 5*

### Attach mount to monument:

*IMPORTANT -- Tall SCIGN Radome users:*

*The base plate of the Tall SCIGN Radome attaches to the bottom of the antenna mount. It must be placed on the monument before the antenna mount is secured in place. It cannot be placed on the monument once the mount is secured!!!*

Apply a small amount of Red Locktite #271 to the threads of the monument. Place antenna mount on top of the monument and spin it down by hand until it stops. Use a pipe wrench to tighten it down further. With each rotation the mount will be increasingly more difficult to turn. Using the Security Screw and the Antenna Bolt in the top plate as a visual guide, align the mount to True North (+/- 1°) while it can still be rotated with the pipe wrench with a moderate amount of effort.

*Caution: When a moderate amount of force is required to rotate the mount it may become exceedingly difficult or impossible to turn the mount back if you overshoot the North alignment.*

### Attach antenna to top plate:

Remove top plate by unscrewing the Clamping Bolt (*Fig. 7*) using the 9/16" socket wrench.

#### For Ashtech chokerings:

Lift the top plate off. Remove the Clamping Bolt (*Fig. 7*). Be sure that the concave side of each Belleville Washer (*Fig. 7*) is facing each other. Reinsert (but don't screw back in) the Clamping Bolt and remove the top plate assembly. The Antenna Bolt (*Fig. 6*) at the center will drop out as it is not attached to the plate.

Flip the antenna upside down. Holding the Clamping Bolt (*Fig. 7*) in place from the underside, flip the top plate upside down and place it upon of the base of the antenna. Set the Security Screw (*Fig. 9*) into the elongated groove on the base of the antenna. Insert the Antenna Bolt (*Fig. 6*) back into the center of the plate and tighten down using the 8" adjustable wrench.

#### For Trimble and AOA chokerings:

Lift the top plate off and remove the Clamping Bolt and Belleville Washers (*Fig. 7*). The Antenna Bolt (*Fig. 6*) at the center will drop out as it is not attached to the plate.

Remove the Security Screw (*Fig. 9*) from the top plate using the 3/32" Allen key. Replace the Clamping Bolt and Belleville Washers, but be sure that the concave side of each Belleville Washer (*Fig. 7*) is facing each other. Flip the antenna upside down. While holding the 9/16" Clamping Bolt in place from the underside, flip the top plate upside down and place it on the base of the antenna. Apply a small amount of Red Locktite #271 to the threads of the Antenna Bolt, then insert the bolt into the center of the top plate and tighten it down just enough to allow a slight freedom of movement. Align the cable connector found on the side of the antenna's base to the north alignment notch (*Fig. 1*) in the top plate. Tighten down the antenna bolt all the way using the 8" adjustable wrench.

**Mounting and leveling antenna:**

Set the top plate/antenna assembly upon the bottom plate. The center pivot point of the bottom plate should sit in the dimple of the Antenna Bolt and the round-top Leveling Screw (*Fig. 5*) should rest in the notch of the top plate (*Fig. 1*). The Clamping Bolt will need to be screwed back into place using the 7/32" open-end wrench (*insert between the top and bottom plates, see Fig. 2*) as it will otherwise impose a hindrance. Screw it down just enough to get it out of the way. It may need further adjusting during the leveling process.

Remove both Locking Screws (*Fig. 4*) to enable access to the Leveling Screws using the 3/16" Allen key. Place a level on the antenna. While adjusting the Leveling Screws, apply slight pressure on the antenna directly over the three contact points to maintain an accurate level reading. Once the antenna is leveled, tighten down the Clamping Bolt until it is snug using the 7/32" open-end wrench (*insert between top and bottom plates, see Fig. 2*). Note that as the Clamping Bolt is tightened, the Belleville Washers will compress. Replace the lock nuts and tighten until moderately snug. Re-check antenna level. Repeat if necessary.

