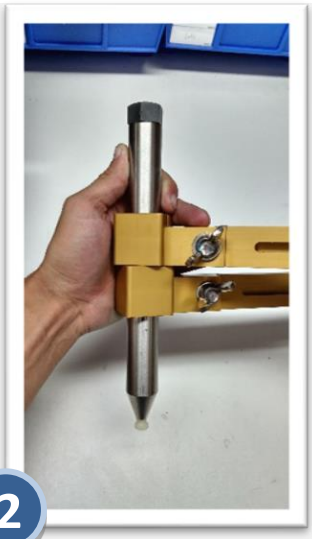
QUICK SETUP GUIDE

Fixed-height Spike Mount

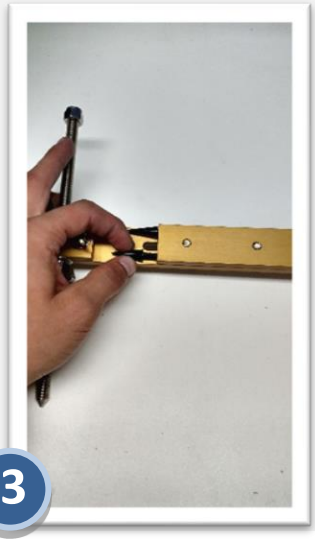
1

The EarthScope Fixed-height Spike Mount can be used for short to medium length GPS deployments. The Spike Mount offers a mobile monument solution for remote campaign deployments. Each kit is fitted in a briefcase size enclosure with a few spare components, a bi-directional level and protective caps fitted into custom foam. Two horizontal arms pivot on the fixed-height stainless steel center post (shown on left) and are levelled with the two threaded stainless steel rods (right). The GPS antenna mounts to the 5/8” thread on the center post.



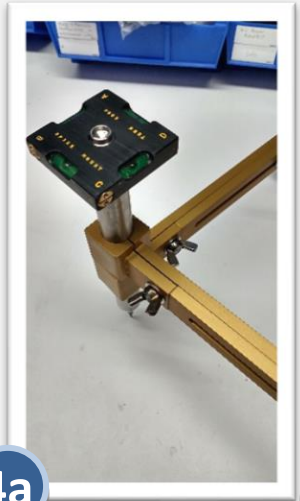
2

To open the arms, loosen the two wing bolts highlighted in the photo above. Try to arrange the arms at an approximately 90° angle to one another for maximum stability. Please retain the protective plastic caps on the top and bottom of the center post for use in transport.

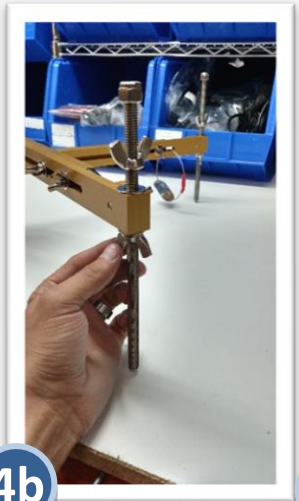


3

Inside one of the horizontal arms, you will find the precision points to be used on the central rod. These are threaded into the arms and should come out fairly easily. Please take care with the points as bending or dulling will change the antenna height.



4a



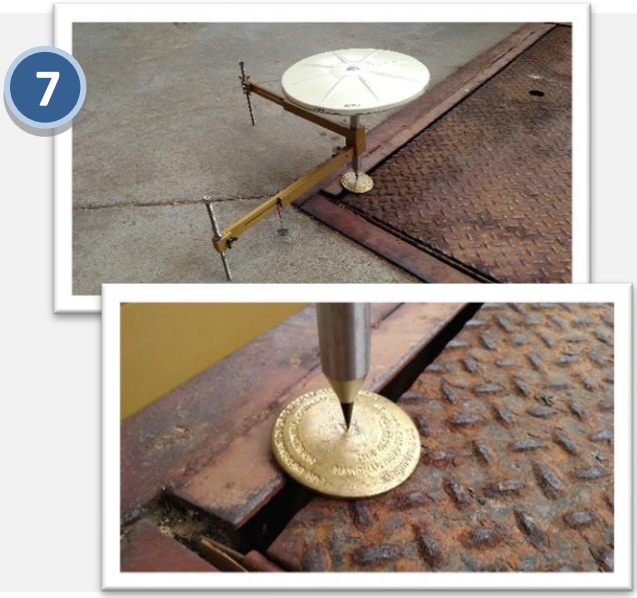
4b

4c

When your center post with point is installed over the correct location, securely thread on the bi-directional level (4a). Use the bottom wing nut on the leveling rods (4b) to adjust the angle of the horizontal arms. When the bubble of the bi-directional level is centered in the glass, set the leveling rod by tightening down the top wing nut (4c).

5

Remove the bi-directional level from the center post and install your antenna before connecting the antenna cable. Your setup should resemble the configuration above. At this point you may wish to carefully pile rocks around the mount to stabilize in high winds. Take care not to obstruct the skyview or knock the mount out of position/level.



A metal tag will be attached to one of the horizontal arms. Stamped on the tag is the antenna height, or the distance from the tip of the center rod point to the base of the antenna in millimeters. These values will be around 250 mm but will vary slightly and are measured annually. The antenna height value must be recorded and is an important component of data processing.

If you have the luxury of collecting data near a registered benchmark, pin, or rock bolt with dimple, install your base station and level mount over this location. Place the fine point of the center post in the dimple of the marker as shown above. A Spike Mount system can be used for GPS deployments of days or weeks.

Components List
1 black case with custom foam
2 anodized, expandable horizontal arms
1 stainless steel center rod
1 plastic antenna mount thread protection 5/8" nut
1 plastic point thread protective screw
2 center rod points
1 antenna height calibration tag
2 stainless steel leveling rods with wingnuts and washers
1 bi-directional level
1 spare stainless steel leveling rod
1 spare wing bolts
1 spare wing nut
1 spare washer
1 spare nylon locking nut

As previously mentioned, the kit includes a few spare items for use if components become lost or damaged. You will find a spare threaded, stainless steel leveling rod and a small plastic bag with two sizes of wing bolts, an extra wing nut, nylon lock nut and washer.

If you have problems or questions, call EarthScope at 303-381-7500 or Crary Lab x4239 and ask for your field engineer!