

## Installation instructions

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Provided by Mike Willis, Ohio State University

- Find flat surface (use chisel if necessary to flatten surface around rods)
- Place drill jig
- Level drill jig as close to the rock surface as possible
- Measure depth to surface of rock in each drill tube
- Place drill bit in shallowest hole and mark with tape the desired depth  
(be sure you have at least 2.5 inch of the rod sticking out of the rock, but that threads go well into rock!)
- Stand on drill jig and keep it steady
- Drill the holes (don't push on the drill in hard rock)
- Wipe dust off, before taking off drill jig and use tube to blow all dust out of holes.
- Check depth of hole with steel pin and check with bolt to see if required depth is reached, drill deeper if necessary
- Fill hole with epoxy (not too much) such as Hilti HIT-HY-150
- Place protective cap over threads and hammer rod in until at least 0.5 inch of treads are into hole. Do not hammer quite to refusal – bolt will bend.
- On each bolt place washer and then nut. Crank nut hard to the surface.
- Place a nut on each bolt and then a washer.
- Place monument on bolts then level it using top mount level.
- Place washer and nut on top of each bolt and tighten watching that monument is level.
- Tighten bottom nut up tightly to ensure monument is solid. Watch the level.
- Smear epoxy on threads to prevent nuts from loosening over time.



1-m mast (DC-1M-F)



3 nuts, 3 washers per bolt.



Mast drill jig



Low profile forced centering GPS mast 16.8" version  
Installed with 0.5" x 12" expansion bolts

All components available from:

Tech2000/Eddie Wheeler  
Ph: 512-869-2450  
Fax: 512-868-9046  
220 Reef Lane, Georgetown, Texas 78628