

How to upgrade or swap a GPS antenna

This document will explain how to swap a Trimble zephyr antenna for a Trimble choke ring antenna.

Tools

7/32 wrench

3/16 hex wrench

Adjustable wrench

Level

T25 torx security screw driver

LMR 400 Crimper (If terminating the cable)

Pipe wrench

Materials

TNC female to N male adapter (If not terminating the antenna cable)

N male LMR400 terminal (If terminating antenna cable)

Choke ring antenna

SCIGN Radome tall

T25 hardware (8 1" and 12 ½")

SCIGN Mount (site specific)

Threaded adapter(s) (site specific, SCIGN mount is 1 ¼" diameter NPT)

JB weld

Procedure

1. Use a T25 security torx bit to remove Radome from the antenna mount.
Some older station with white zephyr antennas will not have a Radome.
2. Use 7/32 wrench to unscrew the square sided bolt in between the two plates.



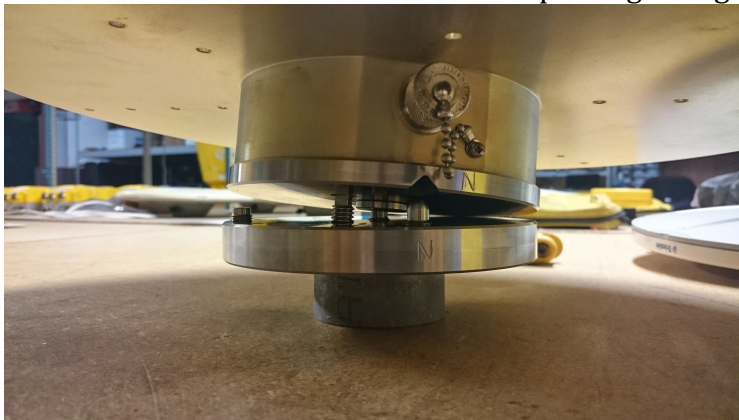
3. Now that the antenna is free, use an adjustable wrench to remove top SCIGN plate from the antenna.



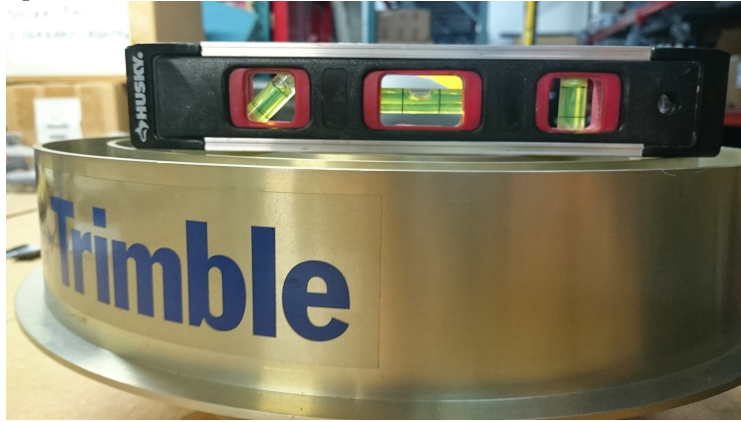
4. Screw the top plate onto the choke ring, and match up the security pin with corresponding slot in choke ring.



5. Reattach the antenna and top plate to the bottom plat by using the 7/32 wrench. Make sure both bottom and top N engravings match up.



6. Check level in two positions. Level positions should be oriented 90 degrees apart.

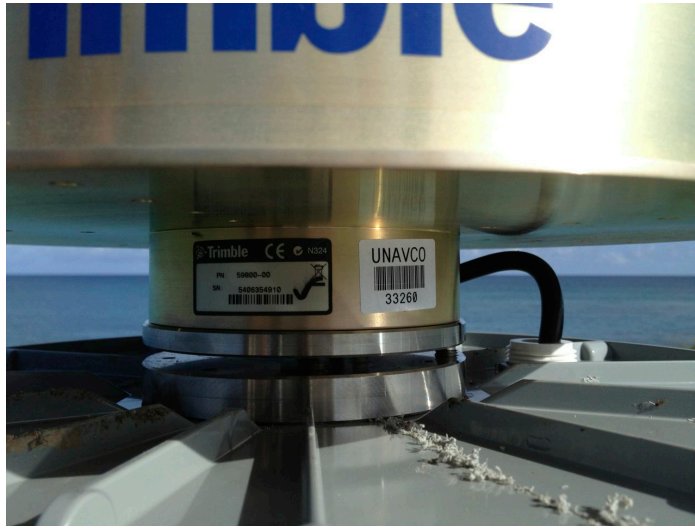


7. If not leveled, then use 3/16 hex wrench to level.
8. Note there is a locknut that needs to be loosened before adjusting leveling each screw. These are found in the same threaded hole as the leveling screws, but closer to the end of the threaded hole. Make sure to tighten locknut after leveling.



9. Place TNC Female to N male adapter on end of LMR400 GPS cable, or crimp a N type connector if tools are available.

10. Screw gps cable into choke ring antenna. GPS cable attaches on north side of GPS antenna with an N male connector.



11. Mount the Radome using the security screws. Mount the grey base plate using 8 1 inch T25 security screws and then fix the grey Radome with 12 ½ inch T25 security screws. When finished use either a zip tie or hose clamp to secure GPS cable to mast.

