UNAVCO Equipment Group Antenna Testing Procedures

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GPS Campaigns - Equipment - Antenna Testing Procedures

This section covers the basic functional tests UNAVCO performs on antennas returning from the field and prior to the antennas' deployment to the field.

1. The antenna is looked over for obvious damage.

2. The antenna is put on a fixture and rotated over a granite surface plate and the ground plane run-out is measured using a dial-indicator. (Note: This applies only to the removable ground plane antennas and the older style SST non-removable ground plane L1,L2 antennas.) A run-out of .060 maximum is accepted by UNAVCO. If we find a ground-plane out of specification, we then re-work or replace the ground plane as needed.

3. For "ChokeRing" antennas, run-out (warp) is not checked as these antennas are machined from billet aluminum stock and tend not to warp unless subjected to severe physical damage which is caught upon visual inspection.

4. All the antennas (Trimble & TurboRouge ChokeRings or SSI/SSE and SST) are connected to their appropriate receivers and SNR's (signal to noise ratios) are verified to be correct. This insures the LNA's are functioning correctly.

5. The N-type connectors are visually inspected to ensure center conductor pin and striped threads on the connector body are un-damaged. This is also inherently tested when the antenna is connected to the receiver via an antenna cable for the prior test.

6. If there is a request for a SST style antenna, then the desiccant is checked and replaced, if necessary.

7. The final check ensures that the tri-brach antenna adapter will mate and seat fully into the threads of the antenna base.

8. The antenna is now ready for field deployment.

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