UNAVCO Equipment Group Receiver Testing Procedure (2009 - current)

410 Beth Bartel March 10, 2009 UNAVCO Equipment Testing Procedures 1853

RECEIVER TESTING PROCEDURE

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SUMMARY

As soon as possible upon being returned from a field project, receivers must be inspected and tested to identify and repair any damage they may have incurred while in the field. Data files are downloaded and sent to the UNAVCO archive group before being erased from internal memory. The receivers are re-tested overnight (24 hours) and returned to UNAVCO standard survey configurations. Two test reports are generated every time a receiver is returned to UNAVCO: the QC Summary, a copy of which is included with the receiver and also saved electronically on the share folder cfc: // under Trimble or Topcon receiver QC report folder; and the Configuration Report, which is filed in the individual receiver's file share folder cfc:// under (UV ID#, system name) in order to retain a history of the receiver's performance. Once a receiver has been tested and pre-manifested as a system, the case box will be sealed and stored in order to guaranty its integrity when it leaves UNAVCO without its having to be re-tested. Any receiver which has been used since the last test must be completely tested again prior to being sent out on a project. Essentially make the receiver ready for the next project as soon after it is returned as possible. Report any receiver that can not be made ready (i.e. needs repair) as soon as the condition is known, to the Project Engineer (Jim) for scheduling purposes.

INSPECTION

1. Download all data files from all receivers that have been returned from a field project and forward these files to the archive before deleted them from the receivers.

2. Inspect the receiver for physical damage. Inspect the body, display, connectors, doors, etc.

    - Trimble 5700 – verify that a 128Mb minimum memory card is in the receiver.

    - Trimble NetRS – test the Power /Ethernet and AC power connection (Dongle) as a unit and also attach a label giving the IP Address 192.168.1.2

    - Topcon GB-1000- attach a label giving the IP Address 192.168.1.2

3. Verify receiver has current firmware, and label firmware version on receiver top. Load new firmware if necessary.

Receiver Model	Firmware required
Trimble 4000	7.19b

Trimble 4700	1.37
Trimble 4800	1.2
Trimble 5700/R7	2.10 and up
Trimble NetRS	1.1-2 or 1.1-3
TOPCON GB-1000	3.02U(Main).3.1p2(Receiver)

TESTING

1. Perform a hard reset:
    - Trimble 4000 – Hold down CLEAR and LOG DATA and turn on POWER.
    - Trimble 4700/4800 – Hold the power button down for one minute continuously till all lights go off.
    - Trimble 5700 - Hold the power button down for 30 seconds continuously until all light go off. The PC card must be in the receiver for the hard reset, which also re-formats the card. Return to UNAVCO standard configuration.
    - Trimble NetRS – Deleted all files, and return to UNAVCO standard configuration, which is 24HR_15S_a: Continuous 1440 minutes session.
    - TOPCON – Deleted all files, RESET NVRAM and return to UNAVCO TopCon Configuration.
2. Run a zero baseline survey – minimum two same model receivers using the same antenna. Collect at least eight to 24 hours of data.
3. Download the files to a PC and run TEQC quality check and print one QC summary, report which stays with receiver, and save an electronic copy on cfc: (share folder).
4. Perform a memory test on Trimble 4000, Ashtech uZ, and Ashtech Z-12 receivers.
5. Examine TEQC tracking plot for problems such as poor tracking. Notify senior technician of suspect results.
6. Complete the QC Summary form – completed an RMA and give to the senior technician of any out-of-range results.

REPAIR

If any repairs seem needed:

1. Physical damage – complete an RMA and give to the to senior equipment technician to replace

damaged parts if receiver performance is compromised.

2. Internal damage/poor performance – completed an RMA and give to the senior equipment technician to arrange repair per specific receiver repair procedures.

3. Repeat the TESTING procedure for each receiver once returned from ‘repair’.

Online URL:
https://kb.unavco.org/article/unavco-equipment-group-receiver-testing-procedure-2009-current-410.html