Northwest Research Engineering, LLC

Conducting a test pass

There are various times when it is convenient to test the operation of the receiver without waiting for a scheduled satellite pass. The following procedure will cause the receiver to search for a signal at the frequency of the next satellite that it was waiting for, and to record whatever is present, whether a signal is found or not. (Usually not.) A use for this capability is to test the overall condition of the receiver system, as it exercises the computer / receiver interface and records no-signal noise and DC offsets.

PROCEDURE:

With the ITS Window showing "ITS30 Countdown to Pass"
click on "CANCEL".

On the top toolbar, click on "Acquisition"
        In the drop-down Window, click on "Setup Unscheduled Events"
                In the Window that appears, click on "Return" (you can change the
                Number of seconds, if you wish.)

On the top toolbar, click on "Acquisition" (again)
        In the drop-down Window, click on "Acquire Unscheduled Event"

The receiver will start searching, and recording, even if no signal is found and locked.

On the top toolbar, click on "QUIT"
        In the Window that appears, click on "Yes"

This will process the data just collected, and restart the pass Countdown.

In the directory "\its10\olddata" you will find the *.mag file from the test pass you just collected.
7 lines down, there will be a set of numbers on the right-hand side of the page. The top line of this group is "noise int.". The first column is UHF and the second is VHF.

With normal attenuation settings (in file receiver_param_30.dat) the UHF noise should be from 10 to 20. The VHF noise should be somewhere around 30 to 60. (Every geographical location is different, depending on how much RF noise is present.)

Do this test for various settings of both the UHF and VHF attenuator (as set with file "receiver_param_30.dat").

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