

Using the HP 400FL for Sun Noise Measurements

Doug Millar K6JEY

This presentation falls into two parts:
The first is the actual content of the talk on Sun Noise Measurements
The second is on use of the DVD format to record the talk

The Presentation

Using a standard AC voltmeter for DB measurements can be challenging if one is measuring small changes in value. The standard scale is logarithmic rather than linear. However HP also made a voltmeter in which the DB scales are linear and the volt scale is logarithmic. This meter allows us to do sun noise measurement with the audio output from the rig.

There are two limitations to the measurement. The radio must have an AVC off setting and measurements must be kept out of the compression level of the amplifiers in the radio. If these conditions can be met, the meter allows easy use in the field. The meter can be run on two batteries at 35v each, run off a 12v with a 110vac inverter, or used straight from 110vac.

In the DVD I show how I use the 400FL with my 10ghz radio and two foot dish to measure sun noise and verify that my rig is actually working.

Concerning the use of the DVD-

Using a DVD format allows one to video activities in a home lab or out in the field and bring them to club meetings and conferences in a way that has not been available and seems more interesting than Power Point presentations. After some experimenting, we found the great benefit of having a videographer that also could do editing. In this case, it is Rich KG6JKJ. It is worth noting that all of what we did was in two separate takes. Rich has a great eye for composing a shot, shooting the video and did a great job on editing and adding titles and music. The second is that we used a Sony ECM MS907 with an extension cable. The quality of the microphone is excellent, it comes with a stand adaptor and windscreen and is about \$70. The extension cord allows the interviewer to be at an appropriate distance from the camera and to work with groups. I have a wide variety of Shure and Electro-voice microphones available from my collection, but this is the one we use consistently.

This presentation will be done via a DVD. The presentation will be available on the SBMS website: <http://www.ham-radio.com/sbms/>.