Simplex in the Park (W9WRP)

Simplex in the Park was a fun event attended by quite a few people. I brought some test gear intending to check HT power output for anyone who wanted theirs checked. My plan was to document the power on each HT setting and also check the SWR of HT antennas folks were using and give the owner a sheet with the information. Things got a little hectic and quite a few discussions took place, so I could not write down the details. Maybe next time we have a similar event I can be a little more organized. I did manage to measure several HT antennas and power levels and check some mobile rigs and adjust antennas for good SWR. Success!

The test equipment I brought to the event included: MFJ-269 Antenna Analyzer, MFJ-260 Dummy Load, SureCom SW-102 VSWR & Power Meter, and NanoVNA F. I also had my TinySA along, but didn't use it for anything at this event. Maybe next time I can show how it works with HT transmissions.

Power levels for the HTs measured were running about 90% of the power specifications for the units. I think that is about typical. Some were a little higher and some were a little lower. SWR readings for the HT antennas were mostly around 2:1 which again I find to be about normal. The SWR readings varied quite a bit depending on how close the antenna were to bodies when transmitting. No real surprises. Joe, KJ7PUL,had the 2m antenna with the best SWR of 1.2:1 and I believe it was a stock antenna for his unit.

Some wondered just what you can do with a NanoVNA. The NanoVNA is a pretty inexpensive Vector Network Analyzer. I mainly use my Nano for measuring VSWR, Return Loss, and displaying Smith Charts. It is not a lab-accurate piece of equipment, but gives me a pretty good idea of the measurements I make.

My unit is the NanoVNA-F 4.3" display, with hardware Version 3.1 and firmware Version 1.0.2 by BH5HNU. I have found you need to be.careful

Ham Radio Trivia

5. What is Dr. Owen K. Garriott (W5LFL) famous for?

Simplex in the Park (continued)

when purchasing a Nano. There are many fakes out there for sale and the fakes can be faulty. It takes a little research to make sure you get a unit you will be happy with.

The NanoVNA measures and graphs Return Loss, SWR, Phase Information, Delay Information, Smith Charts, Impedance, and can display in Polar, Linear, Real, Imaginary coordinates/values. Additionally it can measure Reactance, Resistance, and Q-Factor. So you can see it is quite a capable unit. And the accuracy is sufficient for my needs. I do not use it to its full capability by any means. Oh, and it does has a storage capability for S1P and S2P files which can be exported to a PC/Mac for further analysis.

Below is a picture of the Nano displaying an SWR curve for a GMRS HT antenna. Cursor 1 is at 469.583 MHz and the SWR is 1.152. A second picture is of a Smith Chart for the same antenna.

Let me know if you have questions.

73, Bill (W9WRP)