

Rob Sherwood NC0B's IC-7610 Stew Perry Contest Report

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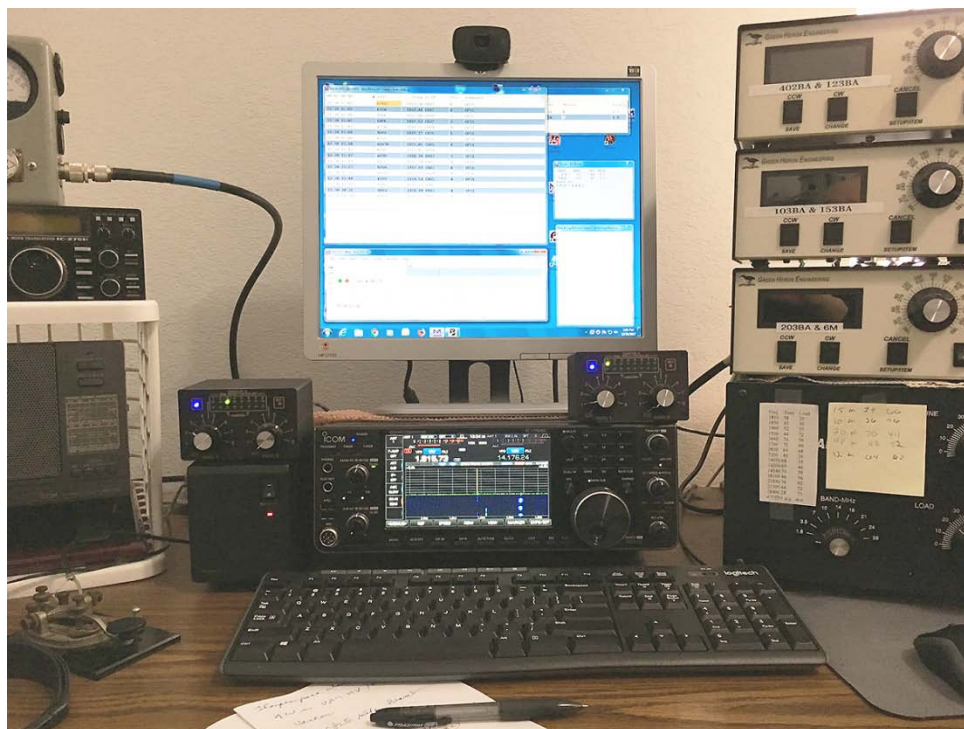


Figure 1: The IC-7610 operating position

The 160m Stew Perry (W1BB) CW contest went very well from the plains of Colorado. While my score was about 3% below 2009, it was 2X or more above most of the last 8 years of the Stew Perry contest.

The IC-7610 behaved flawlessly, and is an absolutely significant upgrade over the IC-7300 for CW operators. The QSK is excellent, the APF (audio peak filter) was left on almost the entire contest. I ran it on wide, soft and +4 dB gain. Most of my operating was with the 250 Hz filter except for Saturday morning at 500 Hz from 8:00 AM to 8:45 AM with a modest number of signals on the band.

With the RF “tail” problem of the 7300 fixed on the 7610, I had no qualms running the 7610 with the Alpha 99. In the long run the 7610 will be paired with the PIN diode T/R switched QSK Alpha 89.

I really appreciated the option attenuator granularity of 3 dB per step to accurately set band noise below AGC threshold. This feature, plus noise reduction run on setting 3, resulted in virtually no contest fatigue due to noise.

The larger screen set to emphasize the bandscope and waterfall made picking out weak stations easy, plus tuning them in right on frequency using the center line was a snap.

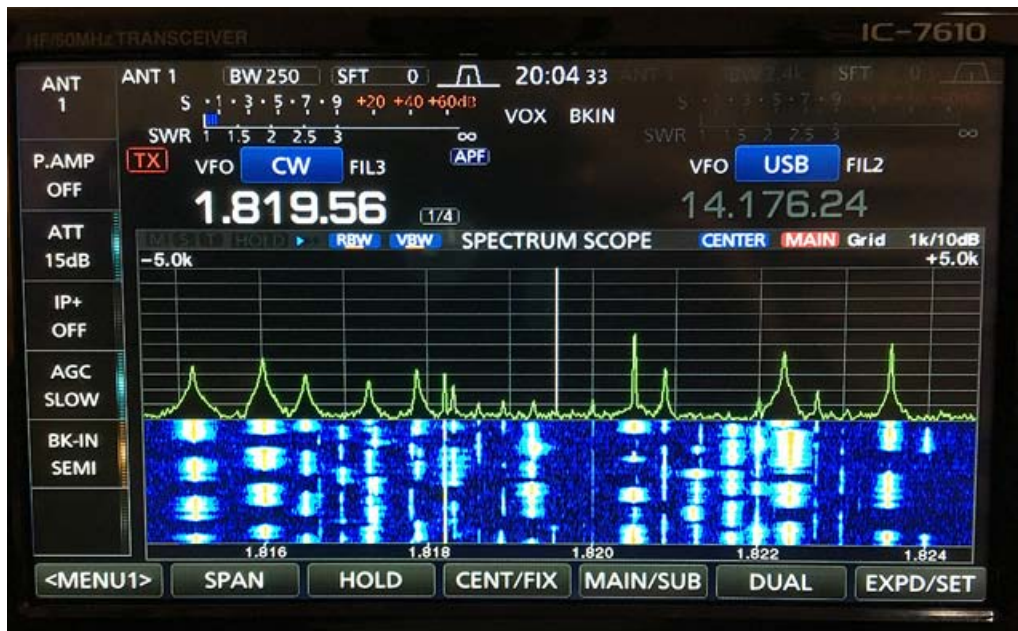


Figure 2: Typical contest traffic screenshot

Even though the 1 dB compression point of a legacy receiver is usually above the ADC clipping (OVF) point of a direct-sampling SDR receiver, there was never a signal even close to flashing the OVF annunciator. AA0RS is 31 miles away, running full sized quarter wave towers and legal limit, is 10 dB below OVF if I wasn't running attenuation. At night I always ran 9 to 18 dB attenuation for AGC reasons, making worrying about overload a kind of joke.

With the relatively new direct-sampling architecture, operators need to be more careful how they handle total receiver gain than with legacy radios. If an operator chooses to run a preamp at night on 160 – 40 or possibly 30 meters, then it is more likely the OVF light will flash. Using a preamp when one should be running attenuation is absolutely counterproductive.

Looking at all the direct-sampling transceivers/receivers on my website, the ADC overload vs. receiver noise floor show only modest variation from between 122 dB to 130 dB. If you remove the anomalous Flex 6700 from that list, all the direct-sampling radios measure between 122 dB and 125 dB. It remains to be seen what operators in Europe will observe in respect to the OVF flickering, assuming the radio is being operated properly.

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