

## ***Comparing the IC-7700 and IC-7800***

***by George Bethea, K5JZ***

Since we are openly discussing opinions... here is mine. It is my personal opinion and this is not to be taken as an attack on anyone or any company or radio. It is my opinion... the opinion of a 40 year Ham and an experienced DX'er/Contester. BTW, my opinion (on the 7800) has been mirrored by comments from K3LR (on the IC-7800 Yahoo group)... who owns and operates one of the finest Contest Stations in North America.

I have used and compared the K3, the 5K and just about every other HF rig on the market today... or any that have been available within the past 10-15 years. My club(s) just finished a joint effort in the CQ 160 meter SSB contest this past weekend, using an Icom 7700. Our location had terrible line noise... that was at least 40-50 DB over S9 on our ¼ wave vertical transmit antenna (suspended by a helium balloon and under a field of copper radials). When we used our Hi-Z 4-Square vertical low noise receive antenna system... aiming in the direction of the noise source, we had an S7 to S9 offending signal. We were able to limit this noise to about S2 to S3 using the NB and NR in the 7700 and bested our last year's score by about 30,000 points. The DSP filtering in conjunction with the NB and NR, helped us to work WAS in two nights and pull our 17-19 or so DX contacts out of the trashy noise floor and horrible band conditions of Friday night (and it was only slightly better Saturday night).

The K3 is a fine rig... the company is as solid with their customer support as can be... and the performance of their equipment is very impressive. I own both an Icom 7800 and a 7600 (primary six meter rig) and I find that the 7800 is without equal. There is not another radio that I would replace it with today... there just isn't. While the 7600 is a solid rig... and its basic primary receive performance is fairly close to the 7800 (an amazing feat considering the price difference)... but due to ergonomics and discrete front panel controls as well as the inclusion of TWO IDENTICAL RECEIVERS and the level of their performance, the 7800 is again without equal... IMHO.

Having used the 7700 in the CQ 160 meter SSB contest this past weekend, I can attest that the receiver in the 7700 is identical in performance to the 7800... the DSP chip may be a later, slightly faster variant but receive performance is no better or worse because of it... maybe on the bench it would be but certainly not on the air.

Our group sorely missed a second receiver and I feel that our score would have been even better had we used a 7800 instead. These comments on a second receiver being missed came from every seasoned operator that we had. Many of them use Yaesu rigs at their home stations. The filtering and the DSP NR and NB worked very well indeed and the transmitter was rock solid... we received many fantastic audio reports and yes... we were using compression and Heil headsets but we adjusted the transmitter correctly and are happy with our transmitter performance results.

If you think that test results obtained by the major testing entities reflect ABSOLUTE real world performance under horrible conditions, then may I suggest that you go and read some of the current threads on the Yahoo groups' Yaesu\_FT-5000 reflector and see the current discussion on an **Inrad** roofing filter mod for the 5K... this is said to improve performance under conditions such as we experienced during this past weekend's contest. While nothing can remove a signal that falls into any rig's passband, the DSP-based filtering in the high end Icom rigs is BRICK WALL in performance. Twin Passband Tuning, DSP NB/NR, Auto Notch and the 70 dB-deep Manual Notch filters really reduce QRM under the worst of conditions. We worked signals that were just above the noise floor, and the receiver filtering allowed us to bring barely discernible SSB signals out of the mud and crud and blossom them into Q5 signal reports and POINTS!

There are many fine radios on the market today... and I have close friends that own most if not all of them. I have friends that are quite happy with all of them. YOU have to decide what is best for YOU. I offer a real world opinion of what I consider to be "best" for me and I offer real-world data to back my opinion up. YMMV.

I have also been in the same pileups with local friends using other rigs mentioned here and I have been able to work stations that these other stations cannot hear or hear well enough to make a Q. In some cases, I do have better antennas... but in other cases ( WARC and low bands for instance,) we are using similar antennas and again I am hearing things at times that the others either do not hear or do not hear well enough to make the QSO. An example is the recent DXpedition to Somalia by Darko 6O3A. I am number one on the leader board for North America. I worked him on 7 of the 8 band slots that he was available on (was not home when he was on 15 SSB the first day). I worked him on local Sunrise openings on 10, 12, 15 and 17 meters. These openings were very weak and very short in duration. The 7800 pulled him out of the European QRM which was present on his calling frequency and the second identical receiver allowed me to find those small openings in the huge European pileups, where I could plant my weaker North American signal where Darko could find it amongst the howling European hoards. I also credit Darko and his outstanding operating talent for at least 50% of my QSO's. I can reference any number of low band instances where this has played out and I have transmitted my received signal to my friends on our local DX repeater, as many of them could not believe that I could actually copy the DX station in question... so these findings have been heard by others on many occasions. Again, this is JUST my opinion and YMMV.

73,

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