Perspectives

The Radio Range Knob

We are well into the low portion of the sun spot cycle with relatively poorer ionospheric propagation. This will extend perhaps for a long time into the future. The common knowledge is that the most important part of the station is an efficient antenna system. That will help, as will the choice of operating band and operating times. So what else is different at the bottom of this cycle? This cycle we have a few more choices on the ‘radio range knob’ or ‘link margin knob’ on our radio systems — we can choose to operate using the new radio-link efficient operating modes. With the WSJT-X modes like JT9, JT65, and FT8, we can see many decibels deeper into the darker ionosphere than ever before. But how does that compare to the decades-old era of spectacular peak sun spot cycles?

The QEX readership have a long institutional memory. Many of you may remember operating during those spectacular sun spot cycle peaks of the past, well before the current digital era. How do your recent digital-era experiences compare with those dramatic cycles of decades ago? Let us know in a Technical Note; our more-recent ham readers may like to know!

In This Issue

We feature a range of topics in this issue of QEX.

Phil Salas, AD5X, builds a highly linear two-tone test generator for transceiver IMD testing.

Jim Koehler, VE5FP, automates a simple toaster oven for reflow soldering.

Braddon Van Slyke, AC0ZJ, makes a base-band quadrature modulator that operates over multiple bands.

Jan M. M. Simons, PA0SIM, use noise cancelling and noise reduction techniques to extract signals from noise.

Keep the full-length QEX articles flowing in, or share a Technical Note of several hundred words in length plus a figure or two. Let us know that your submission is intended as a Note. QEX is edited by Kazimierz “Kai” Siwiak, KE4PT, (ksiwiak@arrl.org) and is published bimonthly. QEX is for the free exchange of ideas among communications experimenters. The content is driven by you, the reader and prospective author. The subscription rate (6 issues per year) in the United States is $29. First Class delivery in the US is available at an annual rate of $40. For international subscribers, including those in Canada and Mexico, QEX can be delivered by airmail for $35 annually. Subscribe today at www.arrl.org/qex.

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Very best regards,

Kazimierz “Kai” Siwiak, KE4PT