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THE EARLY DAYS OF DXING - Third in a Continuing Series
by Gene Martin

"THE TOP BECOMES THE BOTTOM"

Before radio stations broadcast on frequencies, they broadcast on wavelengths as measured in meters. The main dial on my first radio in 1925 was calibrated in meters, 250 at the lower end to 550 at the upper. You can translate 250 into 1200 kc. and 550 into about 545 kc.

Thus, in every city, the station operating at the highest number of meters could claim that it was at the top of the dial. DXers of that era always thought in those terms; the bottom of the dial was equated to the lowest number of meters, and the top to the highest wavelength you could reach. The introduction of kilocycles reversed this concept, for the high wavelengths became low frequencies and the low wavelengths became high frequencies. But even yet in my mind, I cannot help but think of the spectrum from about 700 to 540 as the "upper" portion of the BCB.

The DXers of the 1920's had learned their meters well by the time kilocycles were introduced by the Federal Radio Commission in 1927. WHC was on 535.4 meters, WOR on 422.3 meters, WGN on 305.9 meters, KMOX on 299.8 meters. The meticulous DXer did not round off those numbers, but took pride in remembering them to the tenth part. With the introduction of kilocycles, we had to learn that WHC was on 560, WOR on 710, WGN on 980 and KMOX on 1000. But meters were not to be forgotten; instead, the DXer added the kilocycle number to the active, working memory which our breed develops on all matters concerning stations and the broadcast band.

Before long, the kilocycles-meters table such as Tom White offered in the DXM, May 19, was firmly embedded in the minds of DXers. The translation of meters to kilocycles or vice versa was basic information available instantaneously in the first layer of memory.

Even yet, I can convert one to the other without difficulty, except that the meters-kilocycle memory hardly exists at all from 1500 to 1600 kc. The reason for this is that the BCB did not extend beyond 1500 until about the mid-Thirties.

Radio publications reaching the DXer in the late Twenties and the early Thirties presented their tables of stations by both frequency and wavelength, so the two figures were constantly before the DXer. The oldest publication I still have is a White's Radio Log from January, 1928. To pick one frequency, it shows that 820 kilocycles, or 365.6 meters, was occupied by WCSH, Portland, Me., WEBH, Chicago, and WJJD, Mooseheart, Illinois, a total of three stations, two of them dividing time. (WEBH, long since deceased, was owned by the Edgewater Beach Hotel, indicated in the call letters. WJJD then belonged to the Royal Order of Moose.)

The table of kilocycles and meters introduced by the Federal Radio Commission is slightly different from the findings presented by White in his Monitor article. The FRC table did not carry the meter figure beyond one decimal place. Where White's figures show that 630 is 475.86 meters, the FRC list used 475.9 meters. Actually, of course, the meter figures in the White table are more accurate than the FRC list, but the FRC list of kilocycle-meter equivalents is the one that the old DXer remembers.

The WRTH conversion table of kilohertz to meters also differs from the FRC table and from White's. 630 in WRTH is called 476.2 meters. These slight differences arise because different figures have been used in the beginning for the speed of light. This figure can always be spotted in such conversion tables by checking the meter equivalent of 1000 kilocycles.

The White conversion table shows 1000 to be 299.79 meters, thus the speed of light that entered into his calculations was figured at 299,790,000 kilometers per second. The FRC conversion table was based on a speed of light of 299,800,000 kilometers per second, and, accordingly 1000 kc. was figured at 299.8 meters. The WRTH table converts 1000 into 300.0 meters, a nice rounded-off figure based on a much-rounded-off speed of light.

Over the years, I have found it useful to have memorized the table of kilocycle and meter equivalents. The two figures have applications far outside the BCB. If 700 kc. is 428.3 meters, it is also true that 428.3 kc. is the same as 700 meters. It also follows that 70 meters is 4283 kc. Furthermore, seven meters is 42,830 kc.

The table of kilocycle and meter equivalents for the regular BCB also equipped me to understand the short waves when I first ventured into that DXing region. For example, here was the 25-meter band located just below 12 Mc. I could understand that circumstance at once, inasmuch as 250 meters was 1200 kc. Likewise, the 31-meter band between 9 and 10 Mc. could be connected to 310 meters, which is about 970 kc.

The connection even extends into television frequencies and the FM portion of the spectrum. Channel 3 is 60 to 66 mHz; the numbers remind a DXer of that span of the BCB from 600 to 660. 600 is 499.7 meters, while 660 is 454.3 meters. Now move the decimal two places to the left: 4.99 and 4.54 meters. Once you convert the meters to feet, you are equipped with a precise understanding as to the optimum length of a TV antenna bar designed for Channel 3.

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