

117-1-1

AFTER FIFTY YEARS AT THE GAME, ONE DXER
LEARNS A NEW TRICK - - - by Gene Martin

Istanbul and Thule, both heard in the fall of 1975, were the 61st and the 62nd countries on my Country List, so it might be thought that I could be described as an experienced DXer. But this is to confess that it took me nine years of pursuing hard-to-get countries on communication receivers before I discovered the full potentialities of these radios as tools for the reception of weak signals.

Over all these years, I had never discovered the great usefulness of the vernier tuning control on my HQ-180 until one night in October 1975. Of course, I understood how to use it in determining exact frequencies by adding or subtracting kilohertz from adjacent known frequencies, but its best feature had escaped me entirely.

I believe it is worthwhile to put my discovery into words inasmuch as it has never been mentioned, so far as I can recall, during the six years I have been reading the DX Monitor. Probably this discovery will be considered elementary stuff by many experienced DXers who use the same procedure routinely, but it came as an astonishing revelation to me, and perhaps it will be useful information to many IRCA members.

As for that October occasion, I noticed the Mexican daytimer on 820 could be heard under WBAP in the early evening. I nulled WBAP to listen to the Mexican out of idle curiosity, not because I considered the station as any kind of DXing target. Then I happened to start playing with the vernier tuning control and was flabbergasted to find the Mexican arriving very clearly when I had detuned to minus 1 1/2 kc on that control.

I found the same result when the control was shifted over to plus 1 1/2 kc. The Mexican was substantially clear of WBAP when this 50-kilowatt was carefully nulled and the Hammarlund was tuned to either 821.5 or to 818.5. When tuned to exactly 820, the Mexican could be heard all right but not well and it would have been much harder to identify. Clarity for the Mexican signal could be found on the vernier tuning control slightly to the right or left of zero.

All of this came as a major new discovery to me, even exciting. That superb DXing potential had been there all the time, unrecognized and never employed. It was the equivalent of substantially deepening the null on my loop antenna.

What is the vernier tuning control on the HQ-180 may have a different name on other communications receivers. In any event, it is the control which makes it possible to add or subtract three kilohertz to or from the frequency the main tuning dial is set on. On the Hammarlund, plus 3 is at 9 o'clock on this control, minus 3 at 3 o'clock. It is useful to turn on the BFO oscillator initially to make certain you have centered onto the desired signal, but the tuning phenomenon I stumbled upon occurs with the BFO off, with the receiver in normal operating condition.

It has always been my practice to keep the vernier control set straight up on zero. And readers of DXWW know that my favorite DXing habit has been spending a lot of time trailing elusive Latin Americans and the like in the null of some powerful domestic. I have heard a good many of them too, but always with the vernier control fixed on zero, not using it to search for a clearer signal under stations like WHAM, KDKA, WBZ, WCAU, WWWE, and many others.

In fact, I realized that my usual procedure had been making it harder to identify weak signals heard in the null rather than easier. When trying for South Americans in the KDKA null in the middle of the night, for example, I would keep the radio's Select Kcs control (the crystal) set on 1 kc, then would turn on the BFO initially to zero-beat on KDKA. (For the uninitiated, zero-beating means tuning the BFO whistle carefully to the point where it disappears, in the precise center of that station's carrier. Having thus located the center, you turn the BFO off.)

Having satisfied myself that I was on exactly 1020, I would null KDKA and begin listening. And it is on exactly 1020, where anything in the KDKA null (I now realize) will be the most difficult to identify. Instead, the promise of signal clarity is more likely to be attained on 1019 or 1021 which are located with the vernier tuning control.

While I don't know for certain what happens, it seems to me this detuning procedure may weaken the signal you have nulled, more than it weakens the signal you are trying to identify. Or this procedure enhances the higher frequencies of voice and music that lie on the edges of the carrier from the desired station.

As I said, these things have never been mentioned in the IRCA Monitor, and this potential of the vernier tuning control is of major importance to DXing. It is surely a fundamental principle for identifying stations heard in the null of a powerful signal.

In trying out the technique on various frequencies, I found that it gave me, for the first time, a relatively

clear signal from Barranquilla under WJR. It brought in Houston and Seattle under local KIMN at 950. This detuning procedure improved reception of the HJ's under WSM, KOB, and WLS and Costa Rica under KMOX.

It did not seem to help on 1180 when WHAM was nulled but that is a crowded frequency (three or more LAs there plus a KOA image) and I suspect the technique works best on uncomplicated frequencies when you have only one signal under the station you have nulled.

I am sure that precision frequency measurement is and can be a valuable DXing procedure, but I'm going to pass it up. First, there isn't room in this office for all the additional equipment it requires. And secondly, it's going to take me years to explore this DXing potential of the vernier tuning control.

G17-1-1