There is an error in the procedure for adjusting the speech processor in the TS-820 Service Manual.

On page 50 Paragraph 5 under the adjustment of the speech processor, it says:

"adjust the oscillation level to below 451.5 kHz." there is no way that the processor can operate properly at a oscillator frequency of 451.5 kHz or below.

I am sure that this is a typo and should have read 453.5 kHz.

Now that the number is corrected, here is an explanation of what they are doing. At 453.5 kHz, the response of the processor is as close to flat as possible. the reason that they said "below" 453.5 is that as you go slightly below 453.5 kHz say, 453.3 kHz, the response will be peaked toward the high end giving a more high response for DX.

I set mine to as close to 453.5 as possible. If I need to increase the high end, I will do it with EQ. So my recommendation is to set this oscillator to 453.5 kHz with a counter.

Vy 73, Walt N9WB