

## CALIBRATION OF DX-100 VFO

This is an outline of an alternate method to calibrate the VFO in your DX-100 Transmitter. Due to the fact that different owners have various kinds of calibrating equipment available, it may be easier to follow this method than that outlined in the construction manual.

Follow the detailed instructions for calibration in the DX-100 construction manual to locate the air trimmer and the slug for the proper half of the VFO. As you undoubtedly know it is divided into two sections, one operating on a fundamental of 160 for 160 and 80 meters the other on a fundamental of 40 meters for the other higher frequencies.

As an example we are going to describe the calibration of the VFO on 40 meters.

Set the VFO dial at the low end of 40 meters. This should be right on 7 megacycles. Then set your frequency standard or your receiver for this same frequency setting. Adjust the air trimmer for a null at this point. Then tune to the high end of the band and set your frequency standard for the band limit. Do not attempt to make any adjustments at the high end, but merely locate where the null falls. As an example, let us say it is short of the end of the band and to obtain proper calibration it will be necessary to spread the band out further. To do this you turn the slug out two or three turns. Do not pay any attention to the sound and do not try to calibrate it at the high end. Again move your VFO to the low edge of the band and set your frequency standard. The VFO will be off frequency due to the fact that you moved the slug. Tune the air trimmer condenser for a null or zero beat. Again tune to the high end of the band and locate the zero beat frequency. It should be farther up the scale but if it is still short of the high end of the band, again turn the slug out two or three turns. Return to the low end of the band and set the VFO for 7 megacycles and your frequency standard as before. It will be necessary to again tune the air trimmer for a null and then again check the position at the high end of the band. Several attempts may be necessary to spread the band out to reach the upper calibration.

If the null point is higher than the end of the band, naturally it would be best to turn the slug in while making your calibrations. Just keep in mind that the slug tune coil is used only to widen or narrow the band. That each time it is necessary to return to the low end and set the air trimmer for null. By following this very simple procedure you will be able to calibrate your VFO very accurately.

There are two 40 meter calibrations on the VFO dial. Disregard the one marked in kilocycles on the 160 and 80 meter section. Calibrate and use only the 40 meter half of the dial that is calibrated in megacycles. This is on the half of the dial with all the other higher frequency calibrations.

To widen out the 40 meter band in addition to the amount that you can widen it out with the slug tune coil, it is necessary to change the 43 mmf capacitor to a 47 mmf capacitor. This mica is placed across the 4.7 temperature compensating capacitor in the VFO 40 meter section.