

11. Connect a piece of wire to the receiver antenna terminal. It should be long enough to pick up the signal from the variable oscillator.
12. Check the receiver calibration. The preliminary adjustments of the VFO should be correct to within 20 kHz.
13. On Band A, set the dial of the VFO to 50 MHz. Tune the receiver to 12.5 MHz. Adjust the core in T1 for maximum S-meter reading on the receiver. If the receiver beat frequency oscillator is used, tune for zero beat instead of watching the meter.
14. Tune to 52 MHz on the VFO and 13.0 MHz on the receiver, and adjust C5 as in Step 13 above.
15. Repeat Steps 13 and 14 until the dial is correct at both ends.
16. Switch to Band B and set the dial of the VFO to 144 MHz. Tune the receiver to 12.0 MHz and adjust the top core (nearest to the chassis) in T2 for maximum S-meter reading (or zero beat).
17. Tune to 147 on the VFO and 12.25 MHz on the receiver and adjust C11 as in Step 16 above.
18. Repeat Steps 16 and 17 until the dial is correct at both ends.
19. Switch to Band C and set the dial of the VFO to 220 MHz. Tune the receiver to 12.222 MHz and adjust the bottom core in T2 for maximum reading on the S-meter or for zero beat.

Final alignment of the variable oscillator:

21. Switch to Band A. Check the calibration at 50 and 52 MHz with the receiver at 25 and 26 MHz respectively. Readjust T1 and C5 as necessary.
22. Switch to Band B. Check the calibration at 144 and 147 MHz with the receiver at 24 and 24.5 MHz respectively. Readjust the top core in T2 and C11 as necessary.
23. Switch To Band C. Check the calibration at 220 MHz with the receiver at 24.444 MHz. (If only 144 MHz operation is desired, check at 147 MHz with the receiver at 24.5 MHz.) Adjust the bottom core in T2 as necessary.

Temperature Compensation Adjustments:

NOTE

FOR THIS ADJUSTMENT IT IS NECESSARY TO BE ABLE TO MEASURE THE DRIFT IN CYCLES, NOT KILOCYCLES.

To check and correct VFO drift due to changing temperature, turn the VFO on for 10 minutes. Use a clock; do not use guesswork. Measure the frequency against a crystal oscillator. Do not trust receiver calibration as the receiver may also drift, thus giving erratic readings. Without touching the VFO, measure the frequency at the end of one hour and two hours. List the number of cycles change. Be sure to identify the direction of the drift. If the VFO is drifting higher in frequency, adjust the temperature compensation trimmer counter clockwise to decrease the capacity. The temperature compensating trimmers are C10 for 2 meters and C4 for 6 meters. There is no adjustment for 1-1/4 meters. Try two or three turns. Make a new warm up test the next day. It takes several hours to get back to the original temperature. The temperature adjustments are entirely independent on Bands A and B. There is no separate adjustment on Band C. Perfect stability is impossible - do not attempt to obtain it. After the temperature compensation is completed, the capacitor trimmer and possibly the core for that band may need some adjustment to correct the dial. See the alignment procedure, Steps 21 through 23.