

**FIELD SERVICE**

EQUIPMENT TYPE

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AMATEUR SERVICE INFORMATION LETTER

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EQUIPMENT: 75S-1, 32S-1, KWM-2

SUBJECT: VFO Oscillator Drift

In cases where the variable frequency oscillator in the 75S-1 Receiver or the KWM-2 Transceiver has drifted and there is no end-point spread it can be calibrated by loosening the set screws on the dial hub and slipping the dial mechanism on the oscillator shaft until zero beat occurs at center of window. Make certain there is no end-point spread; zero beat should occur at 0 and 200 before making this adjustment.

If there is end-point spread and zero beat does not coincide at 0 and 200 on dial make the following adjustments:

1. With OFF-STBY-OPR-CAL Switch in CAL tune in calibrator for zero beat at 200 on dial (any band).
2. With ZERO SET knob set hairline to 200.
3. Tune in calibrator at zero on dial. Note difference in kc between hairline and zero. (Example 1.5 kc.)
4. Without moving hairline, move dial to other side of zero at twice noted error. (Example minus 3 kc.)
5. Adjust L302 for zero beat.
6. Move hairline to new zero.
7. Check zero beat at 200 on dial. If zero beat does not occur at exactly 200 repeat steps 2 through 5.
8. If after adjusting the end points, the hairline is not vertical in the window, loosen the set screws on the dial hub and move dial with respect to the oscillator shaft so that zero beat occurs with the end points (0 and 200) set at center.

The foregoing procedure applies to the 75S-1 and the KWM-2. Dial calibration of the 32S-1 can be similarly performed if a receiver with a 100 kc calibrator is used to listen to the transmitter, with the following provisos:

1. If a 75S-1 is being used with the 32S-1, the "Sync. Procedure" described in Paragraph 2.1.i. of the 32S-1 Instruction Book should be followed to determine the positioning of the 32S-1 end points.
2. If an Amateur Coverage receiver such as the 75A-4 is being used, allowance should be made for the fact that the 32S-1, in TUNE position, transmits a signal approximately 1.35 kc higher than the calibrated dial reading. Thus, when the transmitter is zero beat with the receiver calibration oscillator, the transmitter dial hairline should be set 1.35 kc to the low side of the center of the window and the dial should be set for end point position under the hair line.
3. If a General Coverage receiver such as a 5LJ-4 is being used, the receiver should be tuned to end point frequencies of 2.5 and 2.7 megacycles, and a short length of wire from the receiver antenna terminal should be used to pick up radiation from the VFO of the 32S-1. The VFO would then be calibrated and the dial adjusted according to the fundamental frequency of the VFO, with no regard to band selection on the 32S-1.