

ALIGNMENT

NOTE: Transceiver alignment requires the use of a calibrated receiver, such as a Heathkit Model SB-303 or equivalent, capable of receiving 7.0 MHz, 7.2 MHz, 14.0 MHz, and 14.2 MHz.

VFO ALIGNMENT

- () Turn on the calibrated receiver and allow it to warm up.
- () Be sure the 50 Ω dummy load, headphones, key, and power supply are connected to the Transceiver.
- () Press in the 40M pushbutton.
- () The CRYSTAL TRANSMIT pushbutton should be in its out position.
- () Rotate the TUNING knob fully counterclockwise.
- () Rotate the RECEIVER PRESELECTOR knob fully counterclockwise.
- () Rotate the AF GAIN — OFF control to the twelve o'clock position.
- () Set the Transceiver VFO to 7.1 MHz.

NOTE: In the following steps, you will zero beat the receiver to its crystal calibrator. Then you will zero beat the calibrated receiver against the Transceiver. Zero beat is a point where the two frequencies being combined (beat against each other) are exactly the same frequency. As zero beat is approached, the tone caused by the two combined frequencies will gradually decrease in pitch and volume until it just stops.

The two frequencies to be zero beat first are the crystal calibrator and receiver frequencies. Then the receiver frequency will be used to zero beat the Transceiver frequency. The end result will be a calibrated Transceiver that has a true frequency nearly identical to the dial frequency.

- () Tune the calibrated receiver to 7.0 MHz. Then turn on the crystal calibrator and gradually adjust the receiver frequency until the tone decreases in pitch and volume. It may be necessary to increase the RF and AF gain controls. When the tone just stops, zero beat has been reached.
- () Turn off the crystal calibrator.
- () Tune the Transceiver VFO to 7.0 MHz.
- () Refer to Figure 1-1 (fold-out from Page 24) and tighten both trimmers on the VFO capacitor until they are just snug. Then rotate each trimmer 1/2-turn counterclockwise.
- () Again refer to Figure 1-1 and rotate the top slug in the VFO coil until a zero beat is heard from the calibrated receiver. It may be necessary to turn down the calibrated receiver AF gain control. Use the supplied alignment tool to make the adjustment. Do not rotate the coil slug more than one turn in either direction.
- () Tune the calibrated receiver to 7.2 MHz.
- () Tune the Transceiver to 7.2 MHz.
- () If a zero beat is not heard, rotate the rear trimmer on the VFO capacitor slightly in either direction until a zero beat is reached.
- () Again tune the calibrated receiver and the Transceiver to 7.0 MHz and check the zero beat. Then recheck the 7.2 MHz position for a zero beat. When no further improvement can be made in the zero beats, proceed to the next step.
- () Tune and zero beat the calibrated receiver to 14.0 MHz.
- () Press in the 20M pushbutton on the Transceiver.
- () Tune the Transceiver main tuning to 14.0 MHz.