Since the RF carrier is suppressed in SSB operation, the frequency of the sideband signal is measured. If a 1000 Hz modulating signal is applied the frequency of the upper sideband signal should equal the assigned carrier signal plus 1000 Hz. The lower sideband signal should equal the assigned carrier signal minus 1000 Hz. A stable single frequency tone should be used for modulation during this check, such as that furnished by the CB ServiceMaster.

Most SSB transceivers are equipped with a speech clarifier adjustment which is a fine frequency adjustment of the oscillator for clearest reception of SSB signals. Operation of the speech clarifier (sometimes called voice lock) circuit is checked during this test. Although the circuit is typically used only while receiving, it also adjusts the transmitter frequency, and its operation is most readily checked while measuring transmitter frequency.

NOTICE

FCC regulations require that all checks, adjustments and repairs which affect transmitter power and frequency be performed by or under the immediate supervision of persons holding a valid First or Second Class Radiotelephone License.

1. Perform the SSB TRANSMITTER RF POWER CHECK and leave equipment connected and controls set as at the conclusion of that check.
2. Select the desired channel on the transceiver or transmitter being checked.
3. If the transceiver is equipped with a speech clarifier (or voice lock) adjustment, it should be preset to the center of its adjustment range.
4. Select the upper sideband (USB) mode of operation on the transceiver or transmitter being checked.
5. Set AUDIO SOURCE switch (9) to the 1 kHz position.
6. This step need not be performed each time the check is performed. It can be performed one time and recorded for use in the future.
   a. Temporarily disconnect the frequency counter from the FREQUENCY COUNTER jack (25).
   b. Temporarily connect a shielded audio cable from the AUDIO OUTPUT jacks (21) to the frequency counter input.
   c. Set SPEAKER switch (11) to OFF.
   d. Set AUDIO GAIN control (10) to maximum.
   e. Measure the frequency of the 1 kHz test signal, which should be 1000±100 Hz. Accuracy to the nearest 100 Hz is satisfactory.
   f. Remove the temporary connections from the AUDIO OUTPUT jack (21) and reconnect the frequency counter to the FREQUENCY COUNTER jack (25).
7. Set SPEAKER switch (11) to ON.
8. Hold the microphone of the transceiver or transmitter being checked face down over the speaker (12) of the CB ServiceMaster.
9. Key the transmitter with the push-to-talk switch on the microphone.
10. Adjust AUDIO GAIN control (10) for one half of maximum RF power as measured on RF meter (13), except that RF power output should be at least 1 watt.
11. Read the frequency directly from the frequency counter. It should display the assigned channel frequency plus the modulating frequency (approximately 1 kHz). Refer to the TABLE OF CB FREQUENCIES at the end of this procedure.
12. Select the lower sideband (LSB) mode of operation on the transceiver or transmitter being checked.
13. Key the transmitter and read the frequency from the display on the frequency counter. It should display the assigned channel frequency minus the modulating frequency (approximately 1 kHz). Refer to the TABLE OF CB FREQUENCIES at the end of this procedure.
14. Check the USB and LSB frequencies for each channel.
15. If the transceiver is equipped with a speech clarifier (or voice lock) adjustment, it should adjust the frequency displayed on the frequency counter. The range of adjustment should not exceed about ±1000 Hz from the assigned channel frequency.

    To determine the adjustment range of the speech clarifier,
    a. Obtain the upper sideband frequency reading as outlined in steps 1 through 11 above.
    b. Set the speech clarifier adjustment at the maximum counterclockwise position and note the frequency reading observed on the frequency counter.
    c. Set the speech clarifier adjustment at the maximum clockwise position and again note the frequency counter reading.
    d. The difference in readings obtained in steps b and c is the total adjustment range of the speech clarifier. If the adjustment range is properly centered, the frequency change above and below the USB frequency listed in the TABLE OF CB FREQUENCIES should be approximately equal.

NOTES