

## CURING DC-TO-DC-CONVERTER SPURS IN THE DRAKE TR-7 TRANSCEIVER

CI Is your TR-7 transmitting and receiving spurious signals 23 and 46 kHz above its tuned frequency? Checking this is easy. With a 50-ohm dummy load attached to your TR-7's antenna jack and the transceiver in a narrow CW mode, turn on the TR-7's 25kHz Calibrator and tune in the 1800-kHz marker. Now, tune for a signal at approximately 1802 kHz (1825 - 23). If you find an 1802-kHz signal, turn off the calibrator to see if the signal disappears at the same time. Spurs of the type discussed in this hint disappear when the calibrator is turned off.

In my case, the spurs registered S5 on the TR-7's S meter, while the 25-kHz markers came in at 15 dB over S9. This "multi-channel" response degraded my TR-7's ability to receive weak signals. On trans-

mit, other hams heard me at several unexpected places on the band-at reduced strength, but still quite readable.

Replacing C2108, a dc-to-dc-converter decoupling capacitor on the transceiver's internal power-supply circuit board (Fig 2-23 in *the TR-7 Maintenance Manual*), reduced the spurs to S2. This is acceptable, but adding another pi filter section in cascade with RFC2101/C2108 (Fig 2) pushed the spurs into the noise.

There's plenty of room on the back of the power-supply board to "kludge in" the new parts. The added filter inductor (L 1 in Fig 2) is a junk-box 1/2-inch-OD ferrite toroid filled with no. 24 enameled copper wire.-Mike *Agsten, WA8TXT, 405 W Rd, Sandusky, OH 44870*

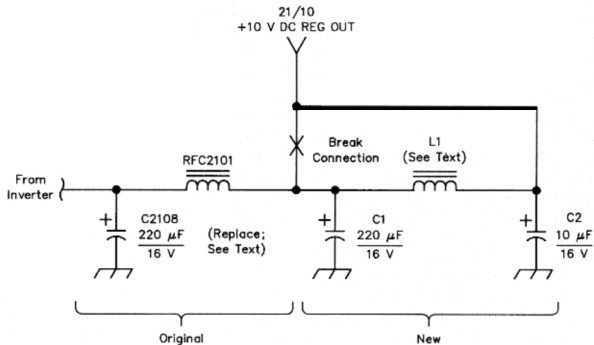


Fig 2-Mike Agsten reduced dc-to-dc-converter-related TR-7 spurs by replacing the rig's C2108 and adding three filter components (C1, C2 and L1) as shown here. L1 consists of no. 24 enameled wire wound to fill a junk-box 1/2-inch-OD ferrite toroid.

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