FIXING THE IC-9700 DRIFT PROBLEM

(Abstract)

The new ICOM IC-9700 is one of the most advance SDR radios. for 144 and 432 MHz and SDR Hybrid in 23cm. The radio combines a plethora of characteristics very well appreciated by Dx and contesters enthusiasts and Weak signal communication like EME.

Unfortunate ICOM commit one of the most terrible mistakes, if previous models already drift during TX and RX periods the IC-9700 is a real TANGO DANCER. This error in the conceptualization of the thermal distribution and a completely useless pseudo external LO synchronization converted this radio in a nice prospect but far a way of giving you what ICOM promise, especially in digital modes and EME.

This presentation will cover a quick review of the mistakes committed by ICOM and will evaluate the most popular “ready to use” solutions in the market to lock the radio LO and cure the drift problem.

In that way I’m evaluating designs from VK1XX, Mini Kits Australia, DF9NP PLL board, Leo Bodnar GPSDO and miniGPS and a chip external TCXO. Stability, phase noise and deployment will be analyzed in each of the available solutions.

73 de Alex, HS0ZOP (HB9DRI)