

Sherwood Engineering HF Test Results

Model Elecraft K3S on 2 meters Serial # 10020 Test Date: 12/23/2015

Dynamic Range of K3S & internal 2-meter converter

Dynamic Range 20 kHz	89	dB
Dynamic Range 10 kHz	89	dB
Dynamic Range 5 kHz	89	dB
Dynamic Range 2 kHz	88	dB

Blocking above noise floor, 1uV signal @ 100 kHz, AGC On dB

Phase noise (normalized) at 2.5 kHz spacing:	dBc
Phase noise (normalized) at 5 kHz spacing:	dBc
Phase noise (normalized) at 10 kHz spacing:	dBc
Phase noise (normalized) at 20 kHz spacing:	dBc
Phase noise (normalized) at 30 kHz spacing:	dBc
Phase noise (normalized) at 40 kHz spacing:	dBc
Phase noise (normalized) at 50 kHz spacing:	dBc
Phase noise (normalized) at 80 kHz spacing:	dBc
Phase noise (normalized) at 100 kHz spacing:	dBc
Phase noise (normalized) at 200 kHz spacing:	dBc
Phase noise (normalized) at 300 kHz spacing:	dBc
Phase noise (normalized) at 400 kHz spacing:	dBc
Phase noise (normalized) at 500 kHz spacing:	dBc

Noise floor, SSB bandwidth 144.117 MHz -138 dBm

Sensitivity SSB at 144.117 MHz 0.25 uV*

* See notes

Noise floor, 500 Hz, 144.117 MHz -145 dBm

Signal for S9 uV

AGC threshold at 3 dB, uV

Notes:

The noise floor numbers seem fine, and are a few dB better than an IC-9100.

The sensitivity (10 dB S+N/N) is a bit high, but the AGC comes on too soon, no matter where I set the AGC threshold.

I had AGC-T set to 10 and Slope to 15. Even if I set the AGC-T to 20 it didn't help.

The measurements are at the BNC connector in the rear named ANT3.

Turning ON the preamp makes everything worse. Maybe this is normal as the preamp could well be at the 10 or 20 meter IF, whatever the architecture is.

When one turns away from the signal, it almost sounds like Hang AGC.

There are spurious signals on 2 meters, and I had to test the noise floor on 144.117 MHz instead of 144.125 MHz because of birdies. I don't know that this should be a shock with all the conversions, and I didn't spend any time looking for spurious birdies, but I kept running into them when trying to be sure I was really listening to the correct signal. I wasn't a couple of times.