

AGC OFF has vastly different audio distortion signal levels for the IC-7300 and IC-7610.

Here is the answer to the question whether the OVF is ON when the AGC is OFF, and the audio becomes distorted on the 7610. The answer is NO.

An in-passband signal (AGC OFF), and an out-of-passband signal, on the 7610 overloads (triggers OVF) just above -10 dBm, while the audio harmonic distortion occurs with a signal level of -90 dBm. -90 dBm is just under S3 on the 7610.

S9 is 50 uV or -73 dBm, preamp OFF. S9+60 dB is -13 dBm. An in-passband signal of +20 dBm does not overload the radio with AGC ON. That is the maximum signal my HP 8642A puts out, and I would not want to test it at any higher level. +20 dBm is 100 milliwatts.

On the 7300, the result is the same. No OVF at -35 dBm when the audio begins to distort.

With AGC OFF on the 7300, and the audio gain knob one step above OFF, the audio is so loud it hurts my ears with the test signal of -35 dBm. Literally my ears are still complaining from being subjected to the very loud tone. -33 dBm is S9+40 dB.

For those who choose to run these two Icom transceivers with AGC OFF, how the receiver reacts is vastly different. With the 7300, as the signal gets stronger and stronger, the detected audio gets louder and louder to the point of potential hearing damage before clipping occurs. Clipping occurs just below S9+40 dB. On the other hand, the 7610 audio distorts just below S3, limiting maximum acoustic loudness level.

The 7610 and 7300 are different architectures, and since I never run AGC OFF, to protect my ears, I would never have noticed the difference. There is no question the person who posted the original observation is 100% correct as to the difference.

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