

# Noise Power Ratio (NPR) Test Report for Flex-6600M

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The following are the results obtained from a receiver NPR test which the author conducted on a Flex-6600M, kindly loaned by Allan Buckshon VE7SZ and Gordon Hamilton VE7ON. Only SCU0 was tested. HW Version: 2.3.9.112; SW Version 2.3.9.43. (See Ref. 1 for description of NPR testing.)

1. **NPR (Noise power ratio)**, tested in SSB mode (2.4 kHz) at 0 dB RF gain. Receiver A tuned to notch center in all cases. Noise loading set just below onset of ADC clipping (-1 dBFS). NPR read off spectrum scope (noise level outside notch minus noise level at bottom of notch.)

Table 2: V1.3.8 NPR test data.

USB/LSB	Bandstop kHz	Bandpass kHz	MDS dBm	Noise loading dBm	NPR dB	Calc. NPR (ADC) <sup>b</sup>
L	1940 <sup>d</sup>	60-2044	-101	+5	64 <sup>a</sup>	80.5
L	3886 <sup>d</sup>	60-4100	-106	+3	74	77.4
L	4650 <sup>c</sup>	60-5600	-109	-3	70	76.1
U	5340 <sup>c</sup>	60-5600	-109	-3	72	76.1
L	7600 <sup>c</sup>	12-8160	-109	-3	70	74.4
U	11700 <sup>c</sup>	316-12360	-110	-2	72	72.7
U	16400 <sup>c</sup>	316-17300	-112	-2	70	71.4

## Notes on NPR test:

- a. Note NPR degradation as compared to average WIDE values. This may indicate some passive IMD (PIM) in 160m preselector. Normally, NPR should *increase* with the preselector in-line.
- b. The calculated NPR value for the ADC is the theoretical value for the ADI AD9467 ADC, normalized to the noise bandwidth (bandpass filter BW) used in each test case. (Ref. 2).
- c. WIDE only (no preselector at these test frequencies).
- d. 7-pole preselector filter.

## References:

1. [http://www.ab4oj.com/test/docs/npr\\_test.pdf](http://www.ab4oj.com/test/docs/npr_test.pdf)
2. [http://www.ab4oj.com/test/docs/16bit\\_npr.pdf](http://www.ab4oj.com/test/docs/16bit_npr.pdf)

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