

Spectrum measurements to detect unwanted intermodulation products were made on the combined FM antenna system located on Snow King Mountain. These measurements were made using an Anritsu spectrum analyzer on September 21, 2014, with both stations (KXJN 249A Moose Wilson Road and KJXN 286C2 Wilson) operating at full power via the combined antenna.

(Note that these measurements were made at the time the combined antenna system was installed. Licensing of KJXN was accomplished shortly thereafter, but licensing of KXJN was purposefully delayed in order to allow time for a cochannel LPFM station in the area to move to a new frequency.)

Sweeps of the entire FM band were performed both with the two subject stations OFF and with the two subject stations operating through the combiner system. As can be seen on the following spectrum analyzer plot, no spurious emissions were observed from the combined operation of KXJN and KJXN.

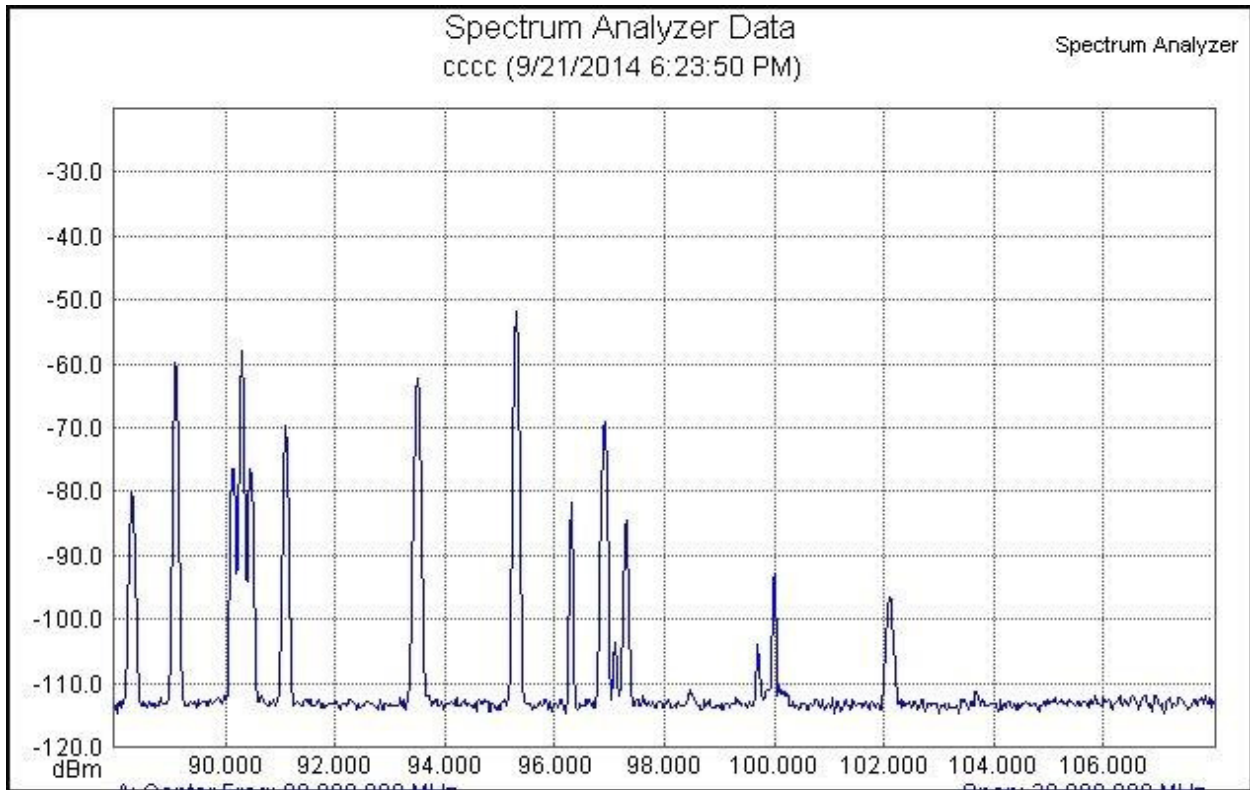
It is noted that the signal of FM translator K242BU (96.3 MHz) appears to drop by about 25 dB between the “before” and “after” measurements. We cannot account for that drop, but it appears to be unrelated to the operation of KXJN and KJXN.

Therefore, it is believed that operation of KXJN and KJXN is compliant in that there are no undesired harmonic or mix products.

Ted Tucker
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Spectrum Analyzer Plot

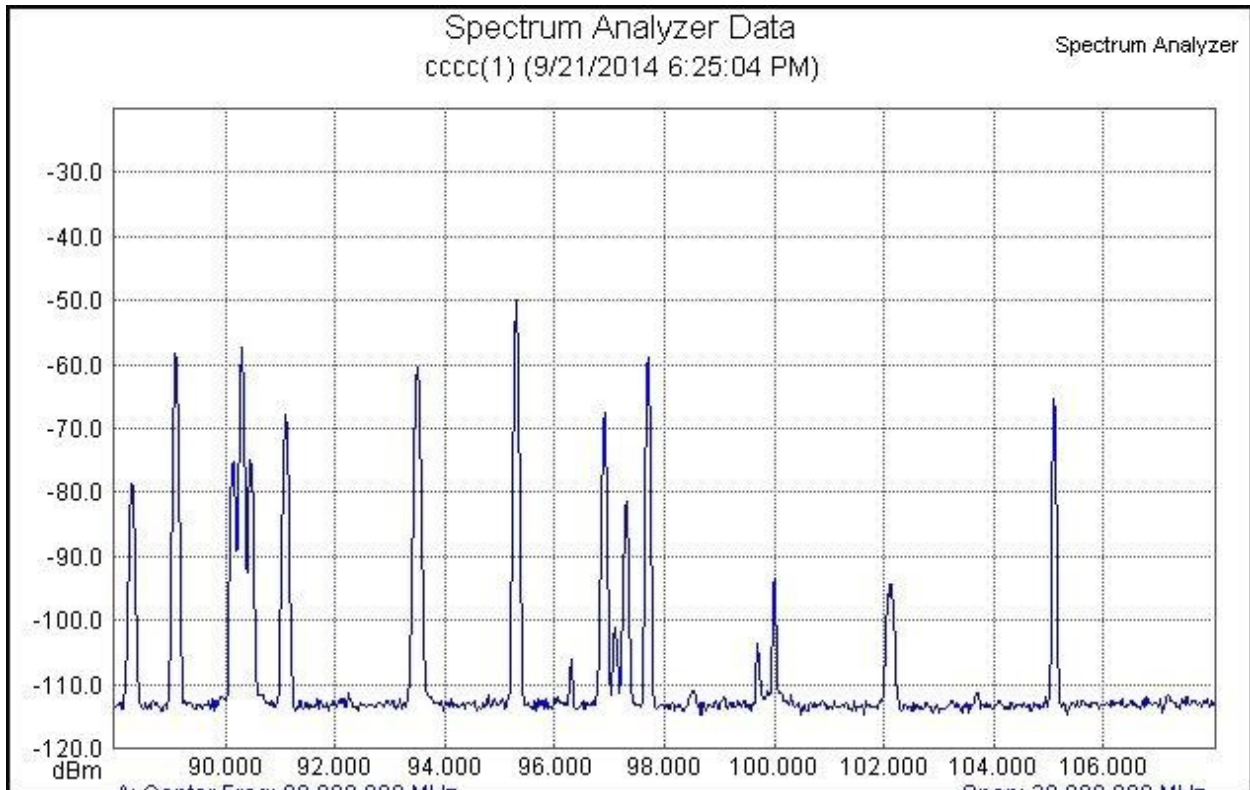
KXJN & KJXN Off



Measurement Parameters			
Trace Mode	Average	Start Frequency	88.000 000 MHz
Trace Average	5	Stop Frequency	108.000 000 MHz
Trace Mode	Average	Frequency Span	20.000 000 MHz
Preamplifier	OFF	Reference Level	-10.000 dBm
Min Sweep Time	5E-05 S	Scale	10.0 dB/div
Reference Level Offset	10.001 dB	Serial Number	601038
Input Attenuation	0.0 dB	Base Ver.	V1.78
RBW	30.0 kHz	App Ver.	V1.79
VBW	3.0 MHz	Date	9/21/2014 6:23:50 PM
Detection	RMS	Device Name	
Center Frequency	98.000 000 MHz		

Spectrum Analyzer Plot

KXJN & KJXN Operating



Measurement Parameters

Trace Mode	Average	Start Frequency	88.000 000 MHz
Trace Average	5	Stop Frequency	108.000 000 MHz
Trace Mode	Average	Frequency Span	20.000 000 MHz
Preamp	OFF	Reference Level	-10.000 dBm
Min Sweep Time	5E-05 S	Scale	10.0 dB/div
Reference Level Offset	10.001 dB	Serial Number	601038
Input Attenuation	0.0 dB	Base Ver.	V1.78
RBW	30.0 kHz	App Ver.	V1.79
VBW	3.0 MHz	Date	9/21/2014 6:25:04 PM
Detection	RMS	Device Name	
Center Frequency	98.000 000 MHz		