Transmitter and Combiner Measurements for
K271BA
K277DC
K262CB
Rifle, CO
January 12, 2019

Spurious emission and occupied bandwidth measurements were made on the combined signals of K271BA, K277DC and K262CB on January 12, 2019 for proof of performance purposes.

Equipment used was an Anritsu MS2721B spectrum analyzer, fed by a sample slug in a Bird 43 wattmeter inserted on the output of the combiner.

For the measurements, all three transmitters were operating at 100% licensed ERP into the antenna system. Co-located translator K252DZ was also in operation at full licensed power.

On-channel occupied bandwidth and spurious emissions out to the 10th harmonic for all three translators were within the limits specified in 47 CFR 73.317(b)(c)(d).

Measurements were performed by Bill Frost, Datavix LLC.

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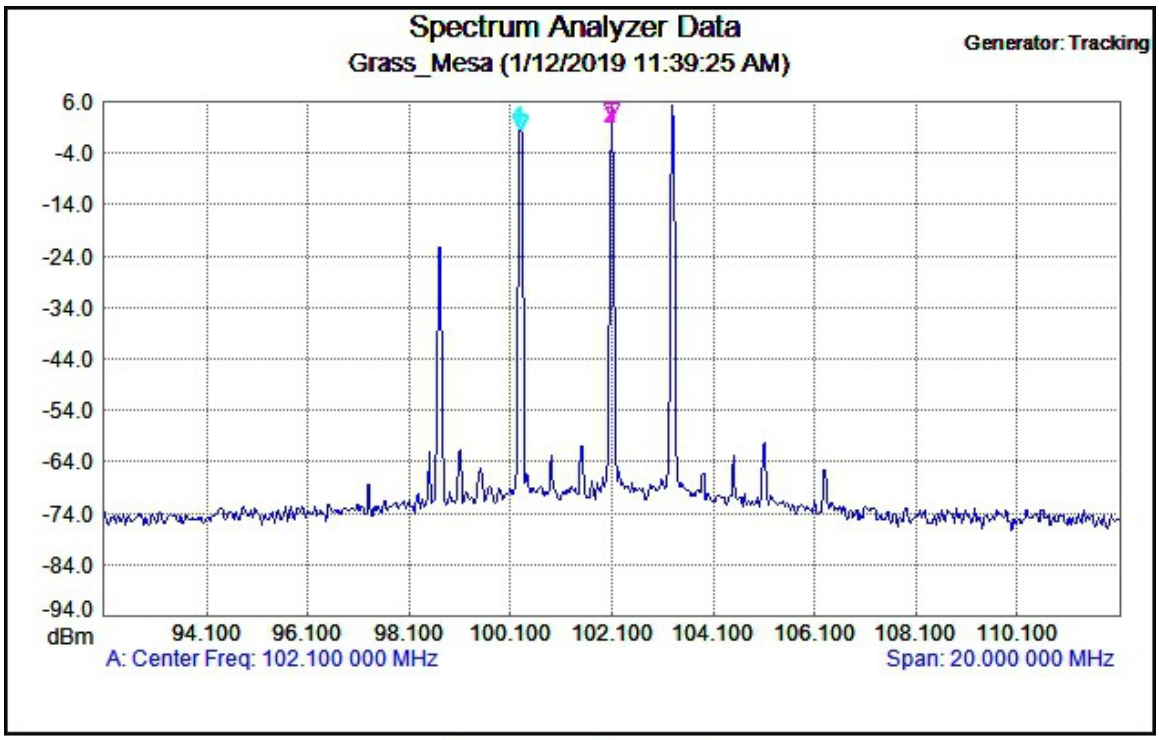

Measurement Parameters

Trace A data:Trace Average	5	Stop Frequency	112.100 000 MHz
Trace Mode	Average	Frequency Span	20.000 000 MHz
Preamp	OFF	Reference Level	6.000 dBm
Min Sweep Time	0.001 S	Scale	10.0 dB/div
Reference Level Offset	0 dB	Serial Number	1010072
Input Attenuation	30.0 dB	Base Ver.	V5.71
RBW	30.0 kHz	App Ver.	V5.73
VBW	10.0 kHz	Model	MS2721B
Detection	Sample	Options	20
Center Frequency	102.100 000 MHz	Date	1/12/2019 11:39:25 AM
Start Frequency	92.100 000 MHz	Device Name	Datavix

All stations operating

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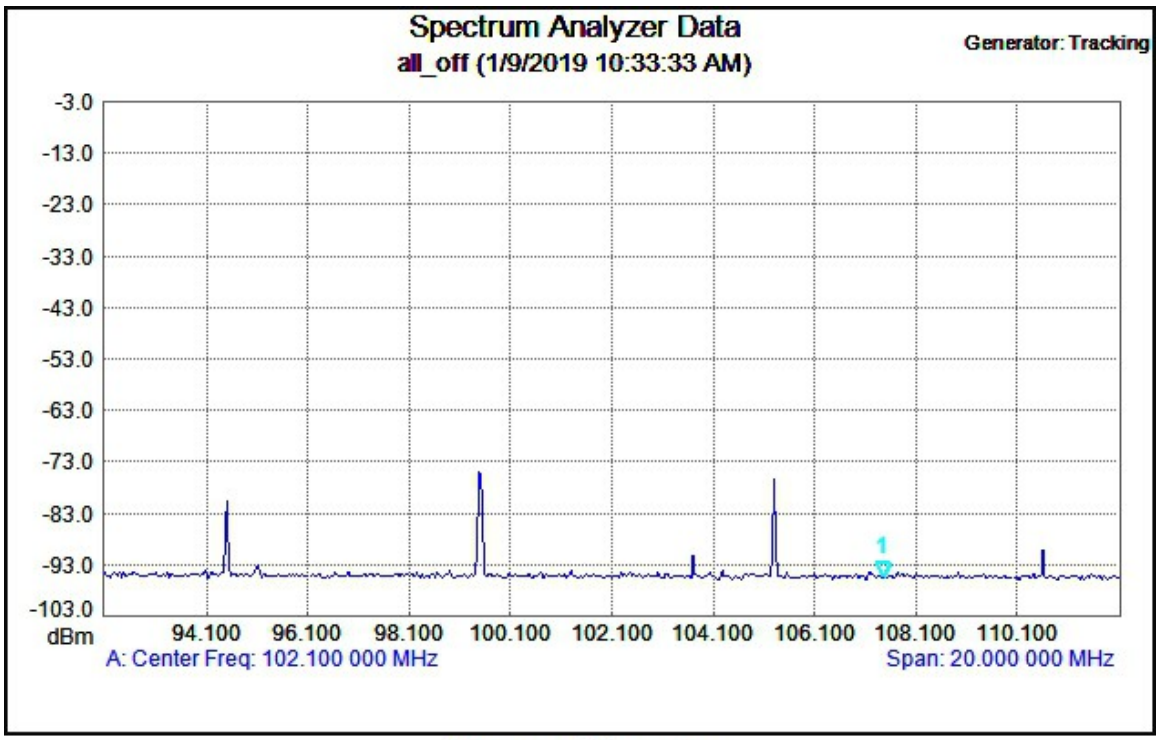

Measurement Parameters

		Stop Frequency	112.100 000 MHz
Trace Mode	Max Hold	Frequency Span	20.000 000 MHz
Preamp	OFF	Reference Level	-3.000 dBm
Min Sweep Time	0.001 S	Scale	10.0 dB/div
Reference Level Offset	0 dB	Serial Number	1010072
Input Attenuation	20.0 dB	Base Ver.	V5.71
RBW	3.0 kHz	App Ver.	V5.73
VBW	30.0 Hz	Model	MS2721B
Detection	Sample	Options	20
Center Frequency	102.100 000 MHz	Date	1/9/2019 10:33:33 AM
Start Frequency	92.100 000 MHz	Device Name	Datavix

All stations off, including co-located translator K252DZ

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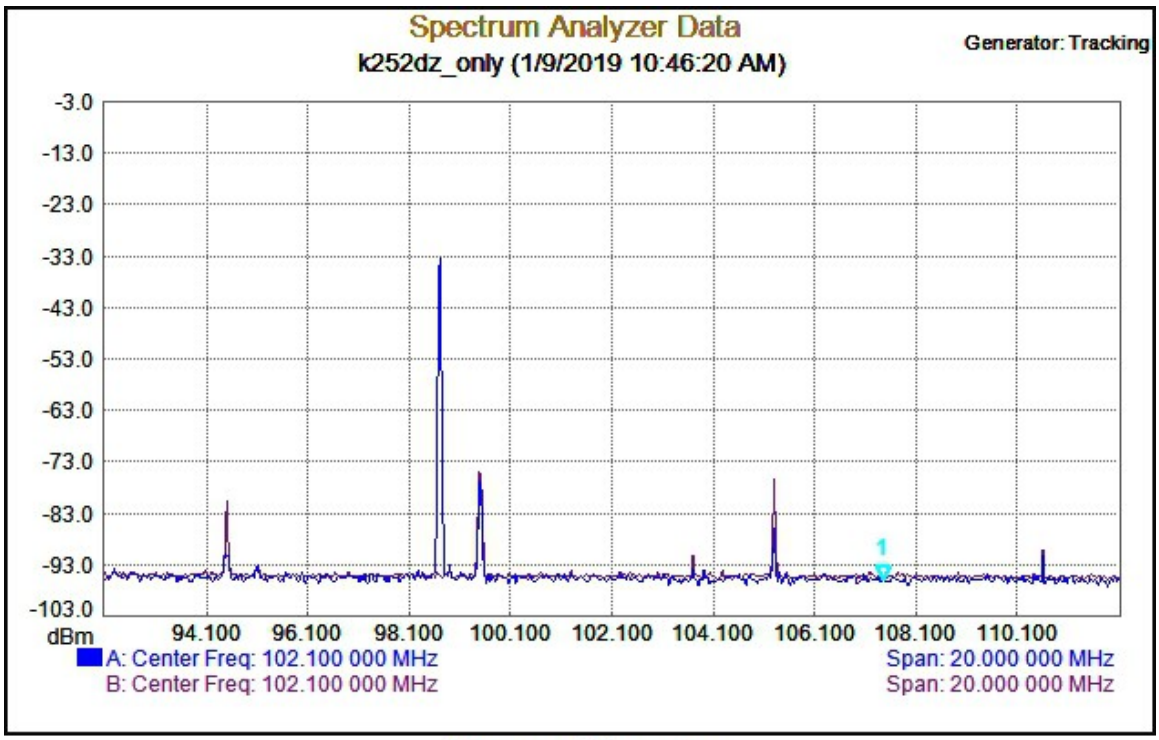

Measurement Parameters

		Stop Frequency	112.100 000 MHz
Trace Mode	Normal	Frequency Span	20.000 000 MHz
Preamp	OFF	Reference Level	-3.000 dBm
Min Sweep Time	0.001 S	Scale	10.0 dB/div
Reference Level Offset	0 dB	Serial Number	1010072
Input Attenuation	20.0 dB	Base Ver.	V5.71
RBW	3.0 kHz	App Ver.	V5.73
VBW	30.0 Hz	Model	MS2721B
Detection	Sample	Options	20
Center Frequency	102.100 000 MHz	Date	1/9/2019 10:46:20 AM
Start Frequency	92.100 000 MHz	Device Name	Datavix

Combined translators off, K252DZ only on air

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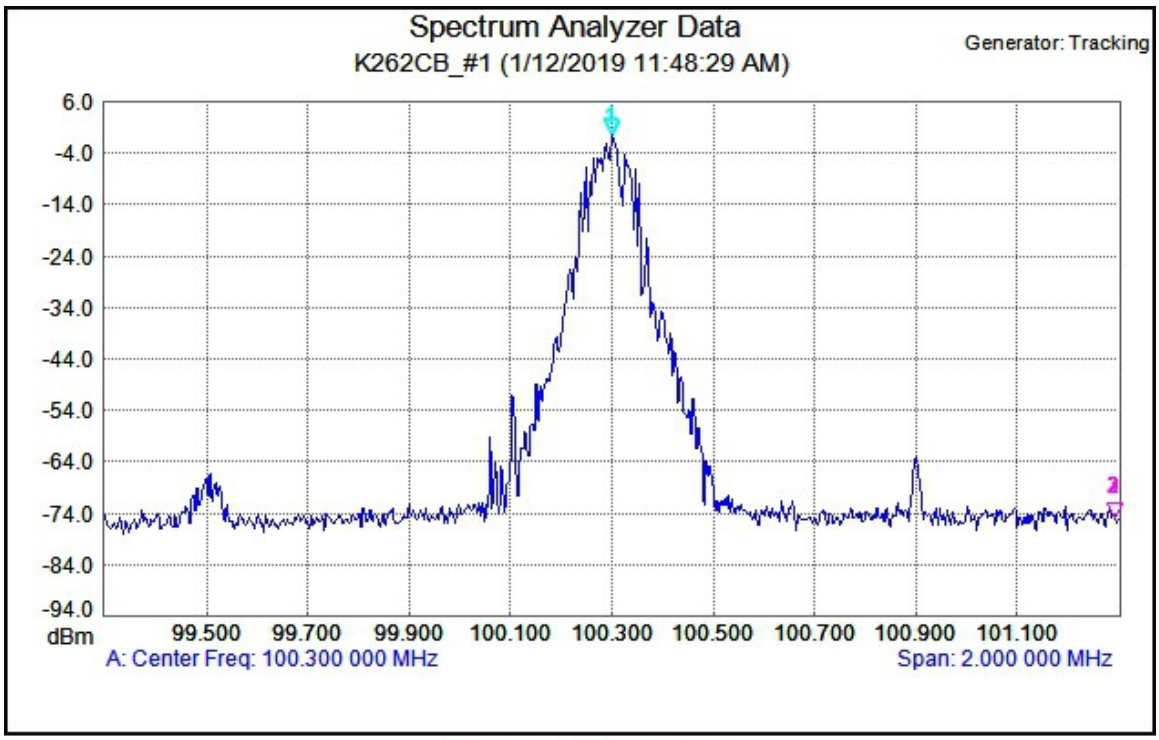

Measurement Parameters

Trace A data:Trace Average	5	Stop Frequency	101.300 000 MHz
Trace Mode	Average	Frequency Span	2.000 000 MHz
Preamp	OFF	Reference Level	6.000 dBm
Min Sweep Time	0.001 S	Scale	10.0 dB/div
Reference Level Offset	0 dB	Serial Number	1010072
Input Attenuation	30.0 dB	Base Ver.	V5.71
RBW	10.0 kHz	App Ver.	V5.73
VBW	3.0 kHz	Model	MS2721B
Detection	Sample	Options	20
Center Frequency	100.300 000 MHz	Date	1/12/2019 11:48:29 AM
Start Frequency	99.300 000 MHz	Device Name	Datavix

K262CB on-channel

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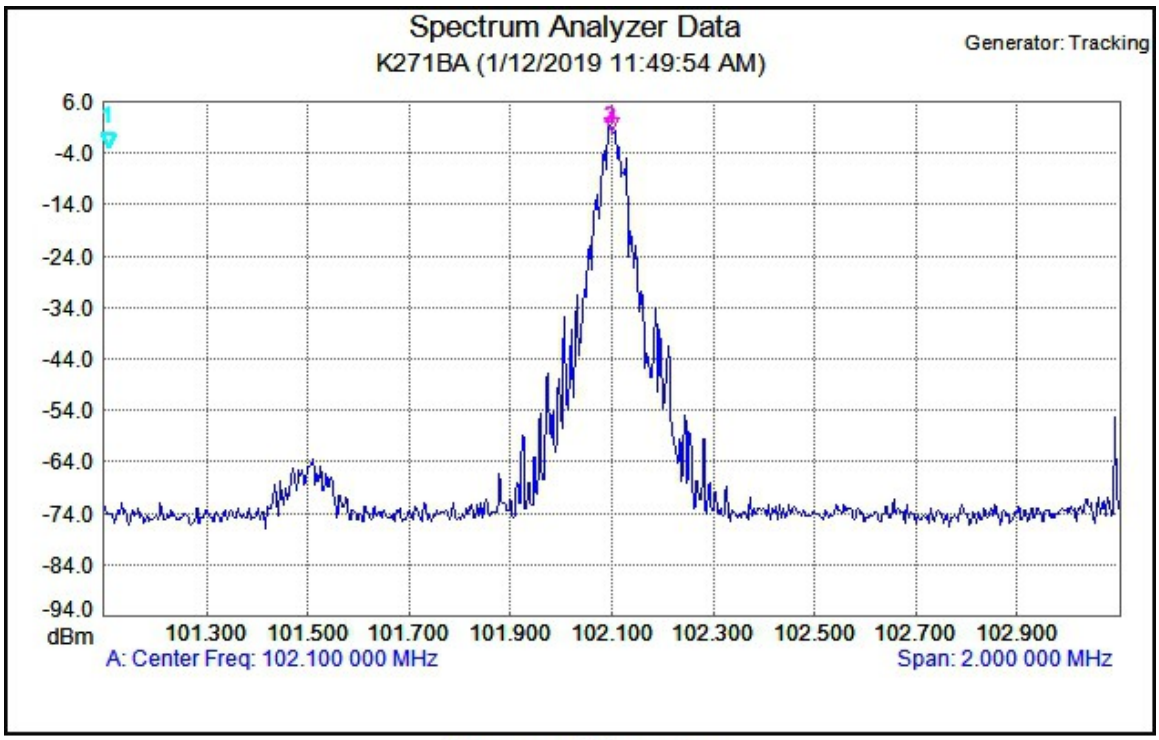

Measurement Parameters

Trace A data:Trace Average	5	Stop Frequency	103.100 000 MHz
Trace Mode	Average	Frequency Span	2.000 000 MHz
Preamp	OFF	Reference Level	6.000 dBm
Min Sweep Time	0.001 S	Scale	10.0 dB/div
Reference Level Offset	0 dB	Serial Number	1010072
Input Attenuation	30.0 dB	Base Ver.	V5.71
RBW	10.0 kHz	App Ver.	V5.73
VBW	3.0 kHz	Model	MS2721B
Detection	Sample	Options	20
Center Frequency	102.100 000 MHz	Date	1/12/2019 11:49:54 AM
Start Frequency	101.100 000 MHz	Device Name	Datavix

K271BA on-channel

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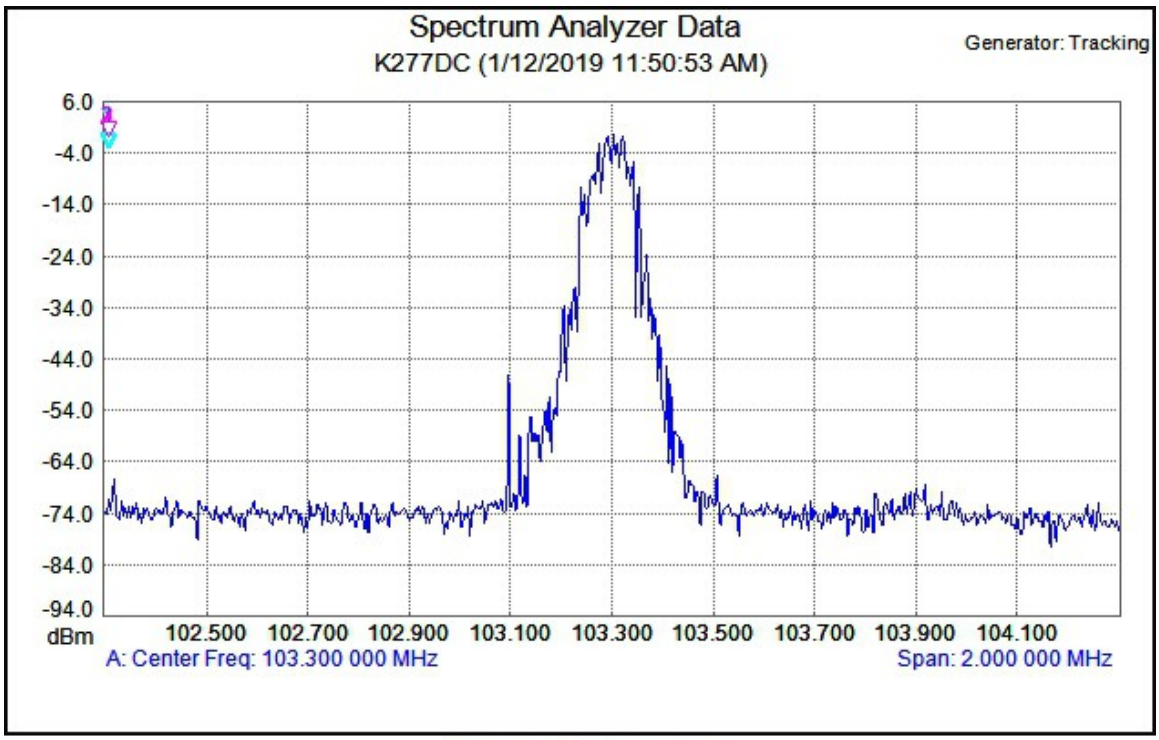

Measurement Parameters

Trace A data:Trace Average	5	Stop Frequency	104.300 000 MHz
Trace Mode	Average	Frequency Span	2.000 000 MHz
Preamp	OFF	Reference Level	6.000 dBm
Min Sweep Time	0.001 S	Scale	10.0 dB/div
Reference Level Offset	0 dB	Serial Number	1010072
Input Attenuation	30.0 dB	Base Ver.	V5.71
RBW	10.0 kHz	App Ver.	V5.73
VBW	3.0 kHz	Model	MS2721B
Detection	Sample	Options	20
Center Frequency	103.300 000 MHz	Date	1/12/2019 11:50:53 AM
Start Frequency	102.300 000 MHz	Device Name	Datavix

K277DC on-channel

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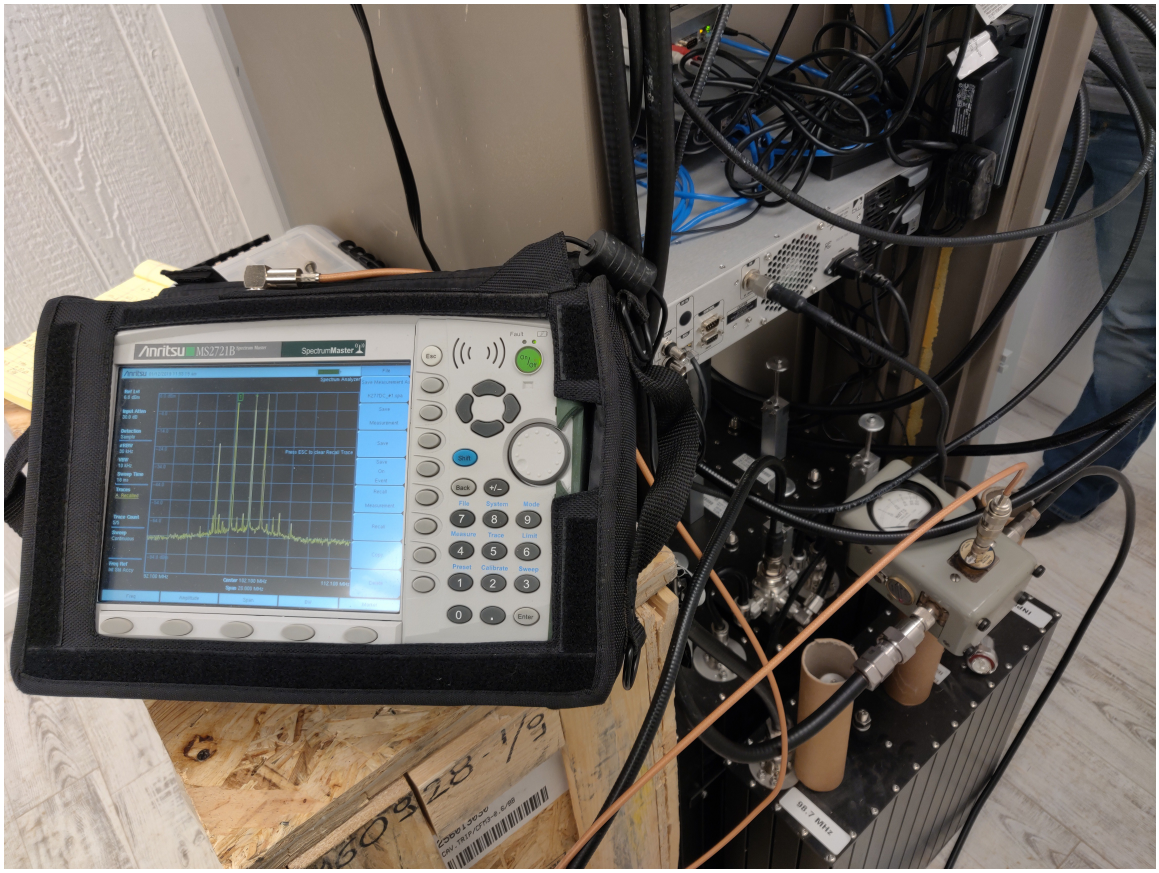

Test equipment setup

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