KEGH-FM2 Spurious Emissions Report

Salt Lake City, Utah

On the afternoon of September 6th 2006 equipment performance measurements were made for broadcast booster station KEGH-FM2 permit file number: BNPFTB-20060411ABQ

This Engineering evaluation report and RF proof of performance measurements were prepared in support of the operation of the specified transmitting system herein as to comply with 47 C.F.R. Section 73.317 (b) through 73.317 (d).

KEGH-FM2 (100.7 MHz) is one of 5 stations sharing a master antenna system at the Ensign Peak Communications site located in Salt Lake City, Utah. The outputs of the stations are combined using a constant impedance balanced bandpass filter combining system Model RCCC-29A – 0.8 designed and fabricated by Jampro antenna Systems of Sacramento, CA

Measurements were made while all stations broadcast programming material. All stations were operating into the combined antenna system at the full permitted power during measurements.

In the case of the KEGH-FM2 transmission system, the measurement equipment was feed by a directional coupler at the combined output. Measurements were made on the station's carrier frequency for reference purposes and to look at occupied bandwidth for any spurious emissions. The calibration of the IFR AN940 Serial Number 1009 spectrum analyzer was used to make all measurements. The assigned carrier frequency level was recorded. All other harmonic intermodulation product or spurious emission levels were referenced to this initial carrier frequency reference level. The radio spectrum from 50 MHz up to the stations 10th carrier frequency harmonic was tuned to look for any unusual emissions.

The intermodulation products measured in this report were calculated as the common 2 X A – B = intermodulation product. As in the case herein the carrier frequency of the station under test was multiplied times 2 and then the carrier frequency of the each of the combined individual stations was subtracted one at a time from the 2X sum to find the common intermodulation product.

No unusual spurious emissions, carrier frequency harmonics or intermodulation products were noted on the main transmission system for station KEGH-FM2.

With regards to the KEGH-FM2 transmission system, I believe that the station is in compliance with the requirements of Section 73.317. This report was prepared by me and is based on measurements made by myself. I believe them to be true and accurate to the best of my knowledge.

Respectfully submitted,

Scot W. Mathews

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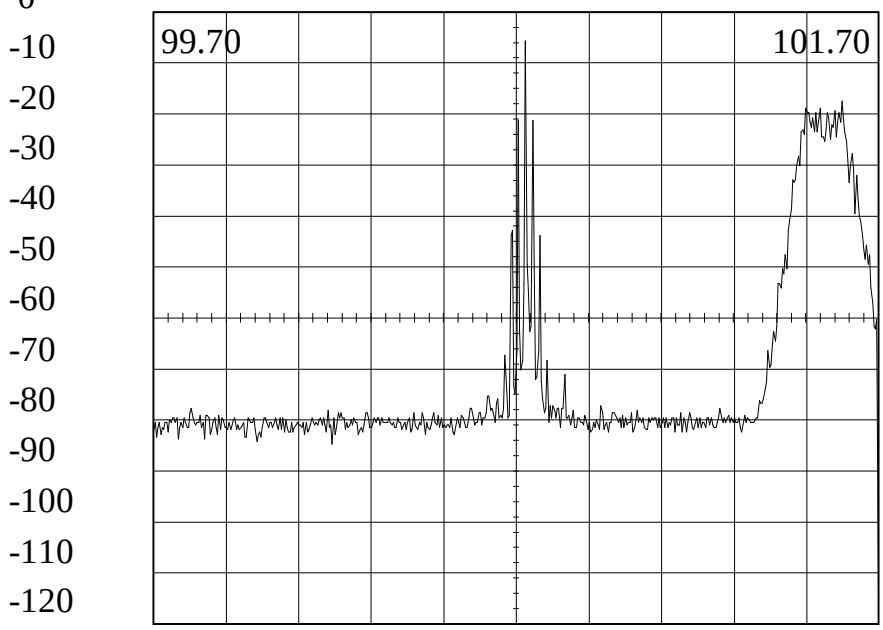
Director of Engineering

Simmons Media Group

AN940 Serial # 1009

200.0 kHz/Div | 100.70 MHz | 1 kHz Res | 100.7 Main w/o Mod | 09/07/2006 02:55:37



30 dB Attn Gen --- dBm 100 mSecs

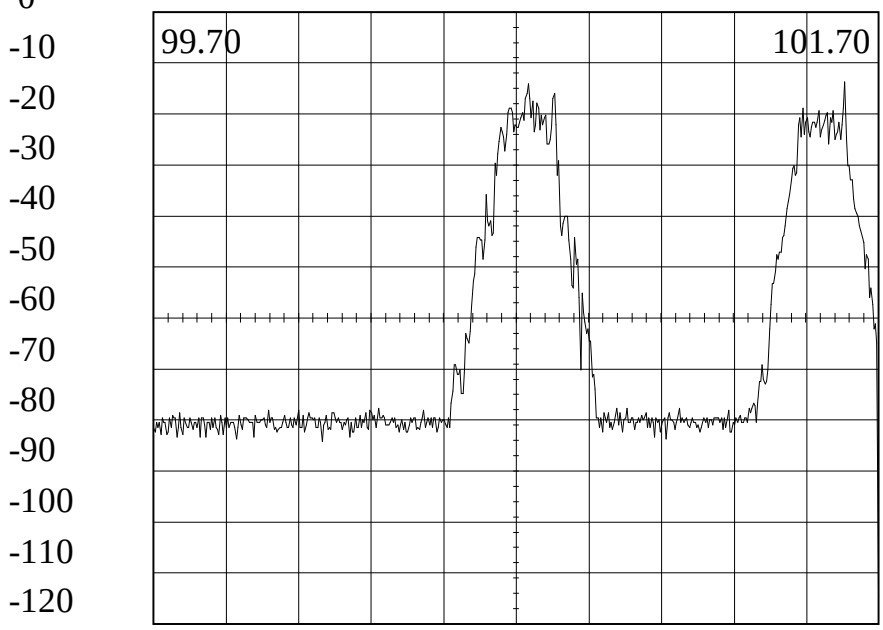
0 dB IF Gain Video Filter: 10 kHz

Peak Freq: 100.7261 Peak Level: -3.76

Simmons Media Group

AN940 Serial # 1009

200.0 kHz/Div | 100.70 MHz | 1 kHz Res | 100.7 Main w/ Mod | 09/07/2006 02:57:29



30 dB Attn | Gen --- dBm | 100 mSecs

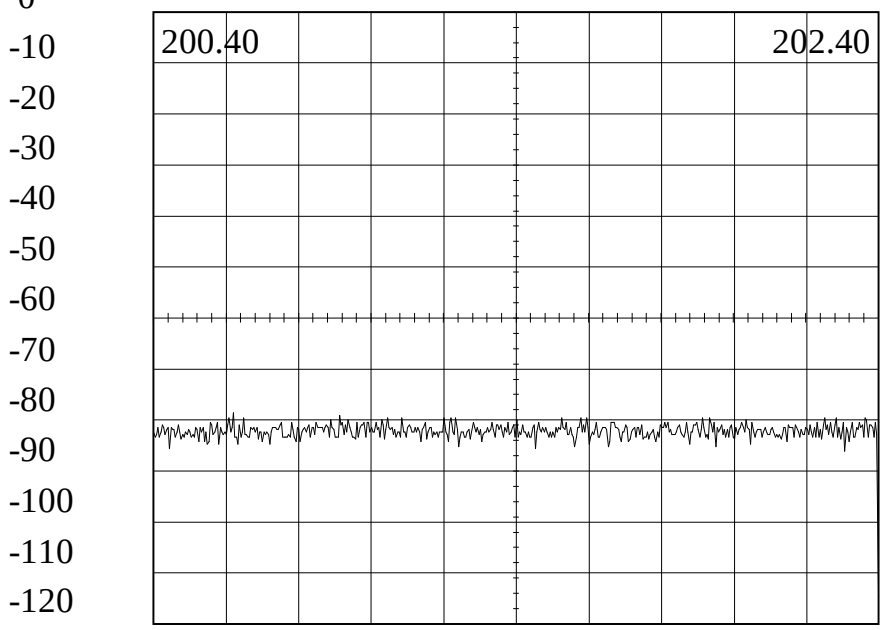
0 dB IF Gain | Video Filter: 10 kHz

Peak Freq: 101.6078 | Peak Level: -9.1

Simmons Media Group

AN940 Serial # 1009

200.0 kHz/Div | 201.40 MHz | 1 kHz Res | 100.7 2nd Order | 09/07/2006 02:58:52



30 dB Attn | Gen --- dBm | 100 mSecs

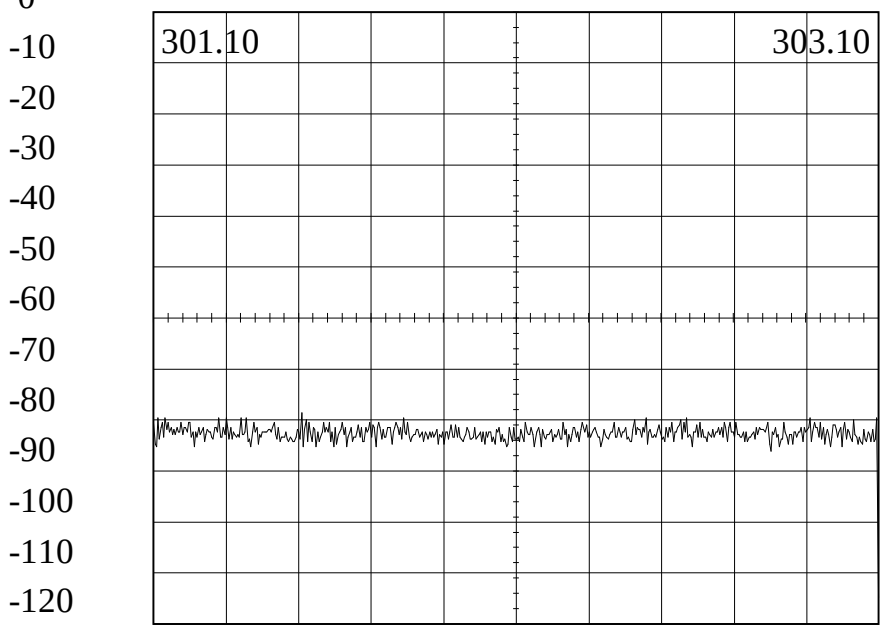
0 dB IF Gain | Video Filter: 10 kHz

Peak Freq: 200.6204 | Peak Level: -52.39

Simmons Media Group

AN940 Serial # 1009

200.0 kHz/Div | 302.10 MHz | 1 kHz Res | 100.7 3rd Order | 09/07/2006 02:59:49



30 dB Attn | Gen --- dBm | 100 mSecs

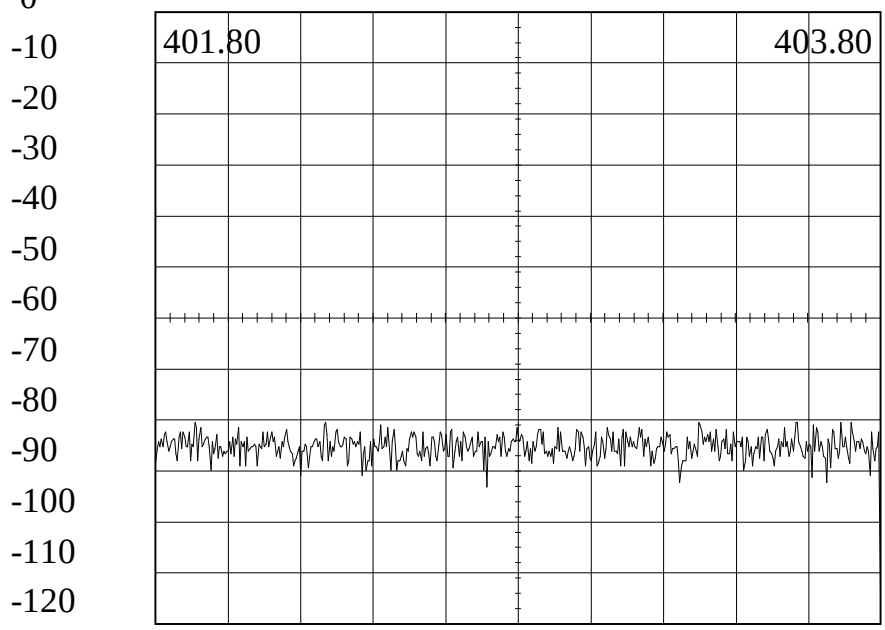
0 dB IF Gain | Video Filter: 10 kHz

Peak Freq: 301.5088 | Peak Level: -52.39

Simmons Media Group

AN940 Serial # 1009

200.0 kHz/Div | 402.80 MHz | 1 kHz Res | 100.7 4th Order | 09/07/2006 03:00:48



30 dB Attn Gen --- dBm 100 mSecs

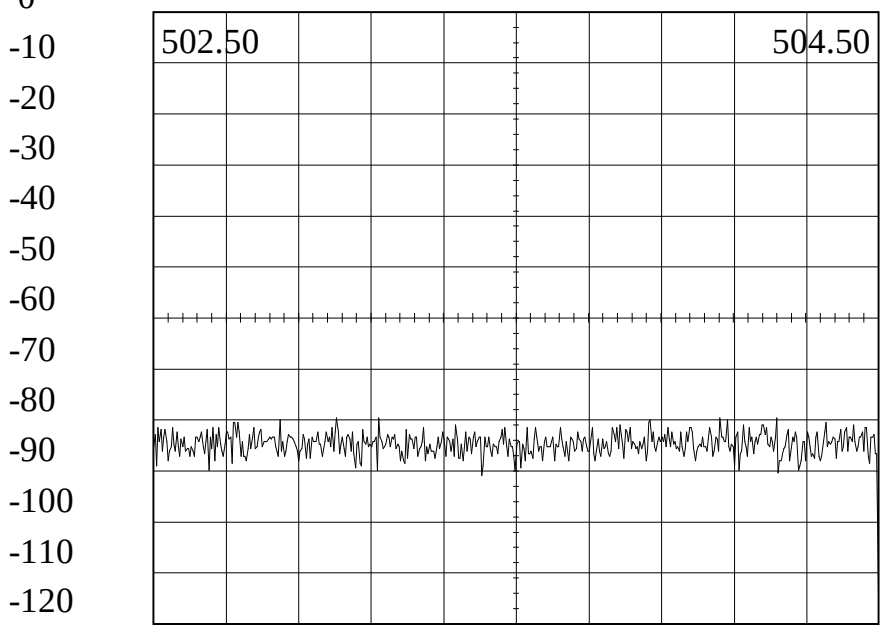
0 dB IF Gain Video Filter: 10 kHz

Peak Freq: 401.9082 Peak Level: -53.65

Simmons Media Group

AN940 Serial # 1009

200.0 kHz/Div | 503.50 MHz | 1 kHz Res | 100.7 5th Order | 09/07/2006 03:01:26



30 dB Attn | Gen --- dBm | 100 mSecs

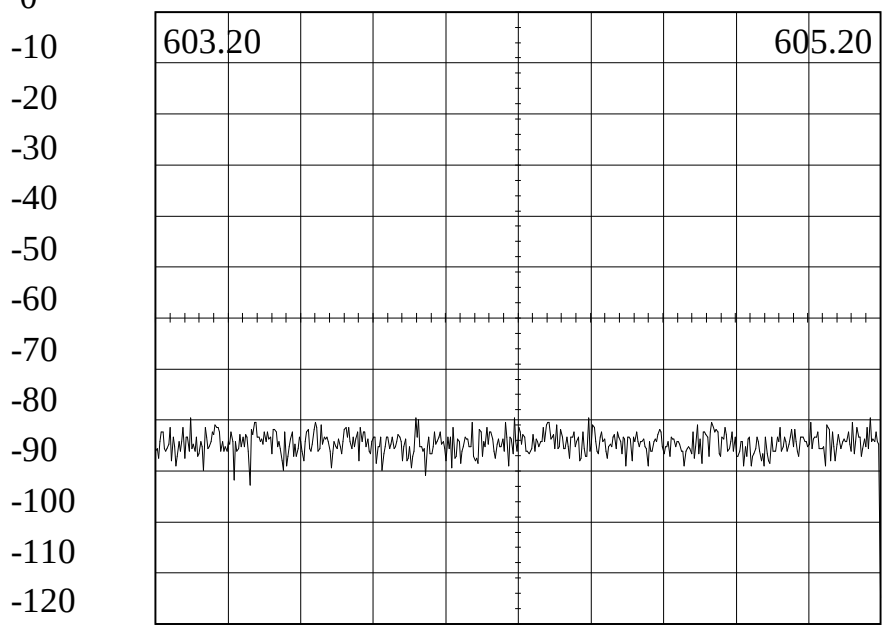
0 dB IF Gain | Video Filter: 10 kHz

Peak Freq: 503.005 | Peak Level: -53.02

Simmons Media Group

AN940 Serial # 1009

200.0 kHz/Div | 604.20 MHz | 1 kHz Res | 100.7 6th Order | 09/07/2006 03:02:39



30 dB Attn Gen --- dBm 100 mSecs

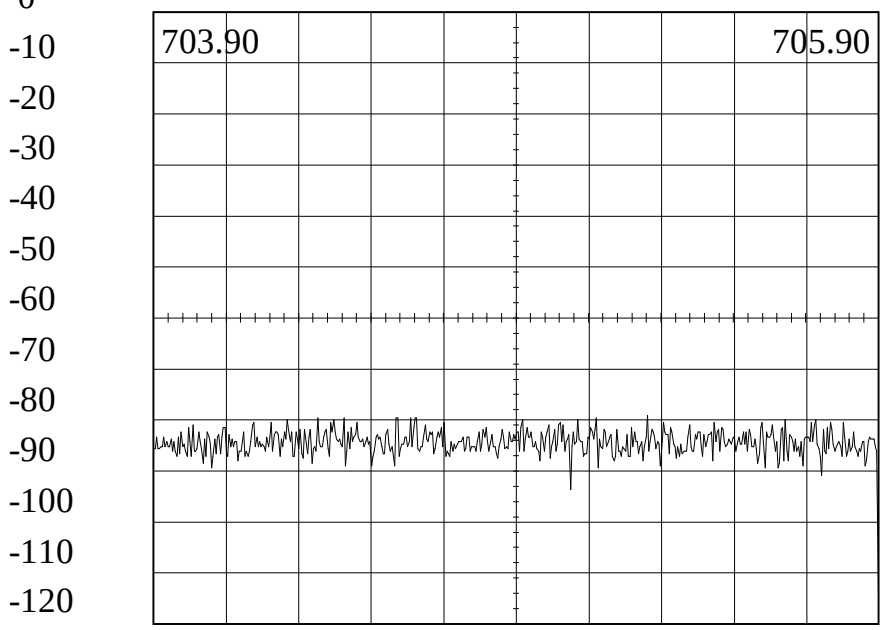
0 dB IF Gain Video Filter: 10 kHz

Peak Freq: 603.2962 Peak Level: -53.02

Simmons Media Group

AN940 Serial # 1009

200.0 kHz/Div | 704.90 MHz | 1 kHz Res | 100.7 7th Order | 09/07/2006 03:04:26



30 dB Attn Gen --- dBm 100 mSecs

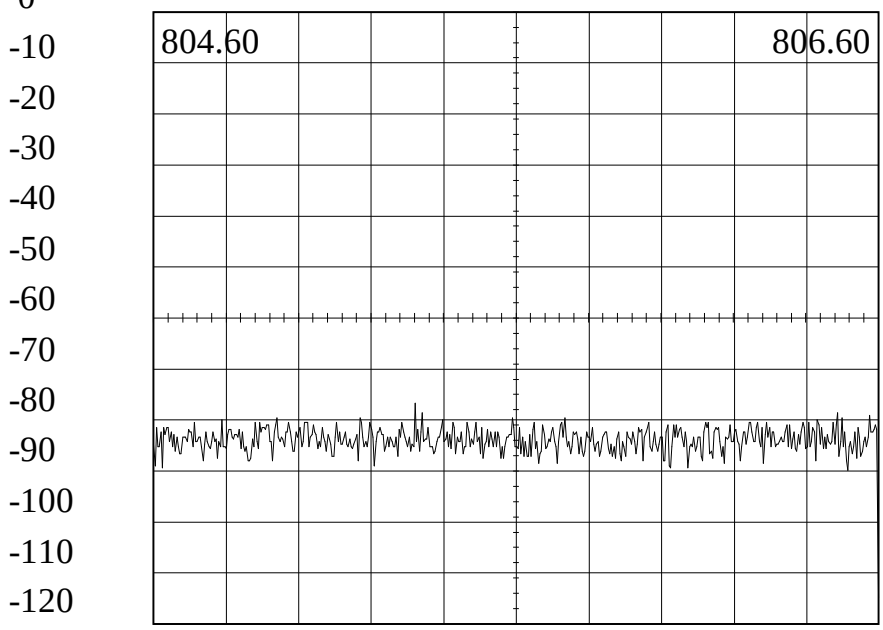
0 dB IF Gain Video Filter: 10 kHz

Peak Freq: 705.2627 Peak Level: -52.71

Simmons Media Group

AN940 Serial # 1009

200.0 kHz/Div | 805.60 MHz | 1 kHz Res | 100.7 8th Order | 09/07/2006 03:05:17



30 dB Attn Gen --- dBm 100 mSecs

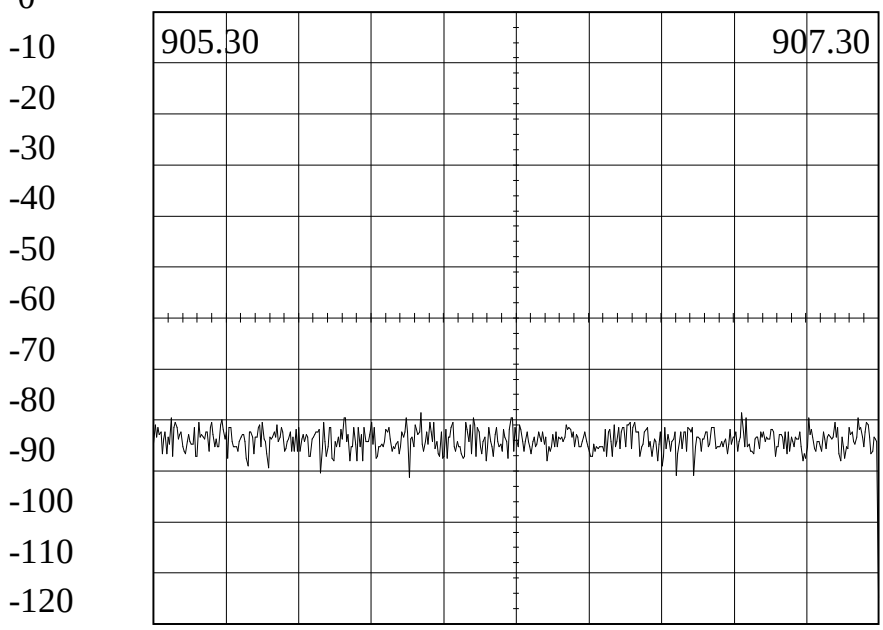
0 dB IF Gain Video Filter: 10 kHz

Peak Freq: 805.3214 Peak Level: -51.14

Simmons Media Group

AN940 Serial # 1009

200.0 kHz/Div | 906.30 MHz | 1 kHz Res | 100.7 9th Order | 09/07/2006 03:06:40



30 dB Attn | Gen --- dBm | 100 mSecs

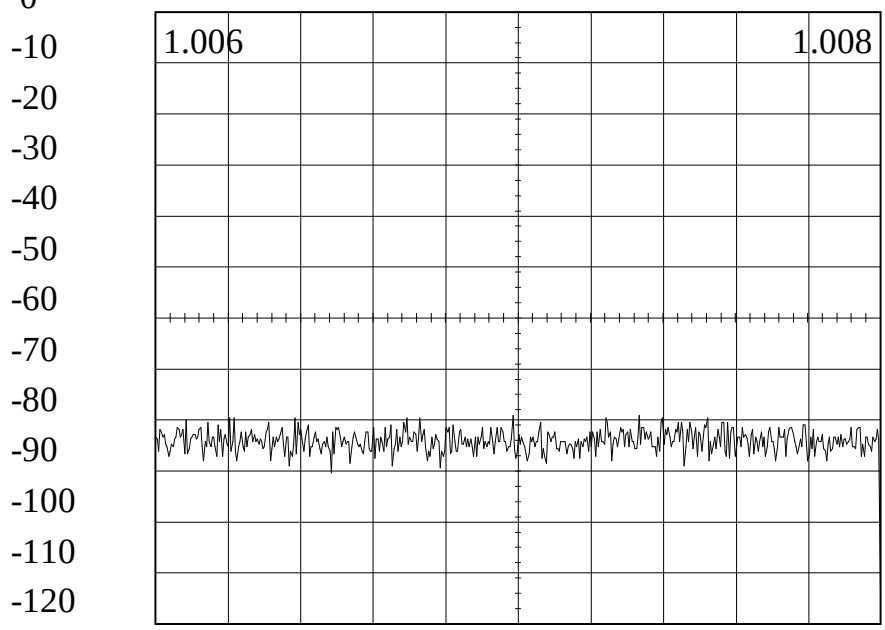
0 dB IF Gain | Video Filter: 10 kHz

Peak Freq: 906.0375 | Peak Level: -52.39

Simmons Media Group

AN940 Serial # 1009

200.0 kHz/Div | 1.007 GHz | 1 kHz Res | 100.7 10th Order | 09/07/2006 03:08:23



30 dB Attn Gen --- dBm 100 mSecs

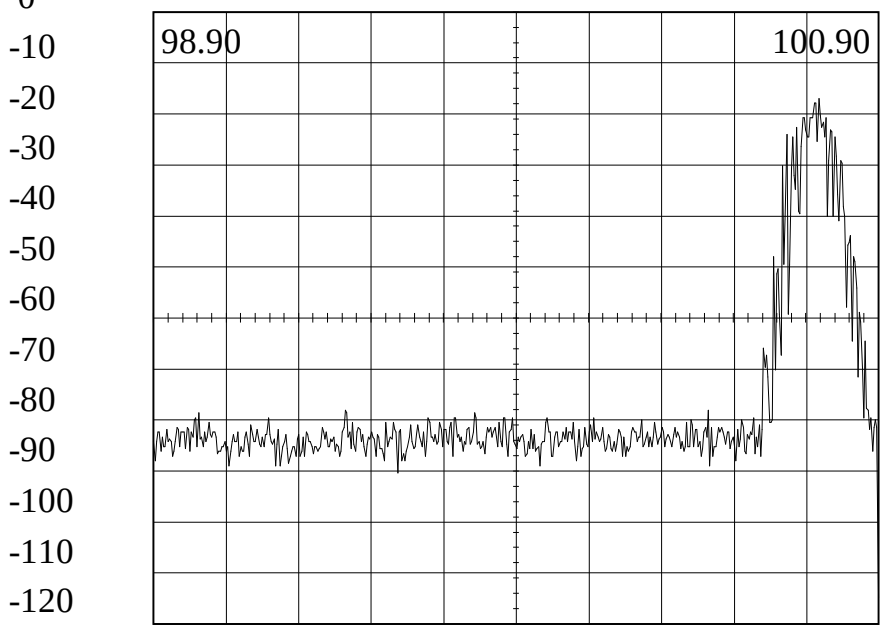
0 dB IF Gain Video Filter: 10 kHz

Peak Freq: 1006.986 Peak Level: -52.71

Simmons Media Group

AN940 Serial # 1009

200.0 kHz/Div | 99.90 MHz | 1 kHz Res | IM Prod. with 101.5 | 09/07/2006 03:10:10



30 dB Attn | Gen --- dBm | 100 mSecs

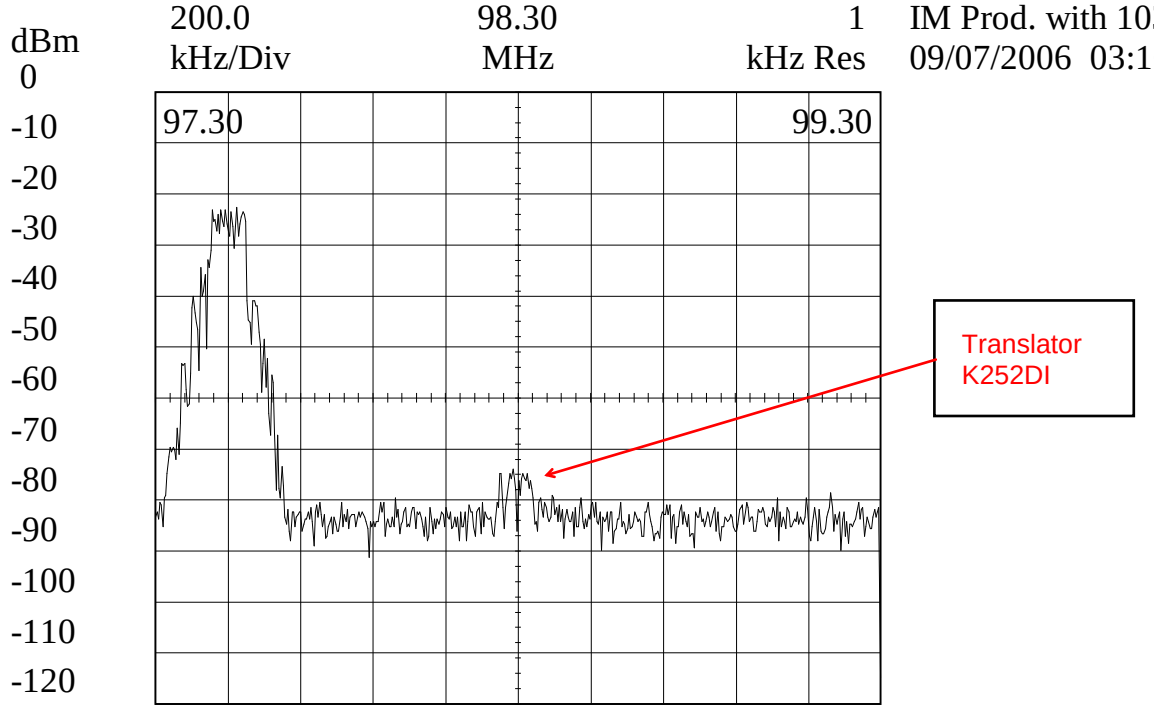
0 dB IF Gain | Video Filter: 10 kHz

Peak Freq: 100.7357 | Peak Level: -11.29

Simmons Media Group

AN940 Serial # 1009

200.0 kHz/Div | 98.30 MHz | 1 kHz Res | IM Prod. with 103.1 | 09/07/2006 03:16:18



30 dB Attn Gen --- dBm 100 mSecs

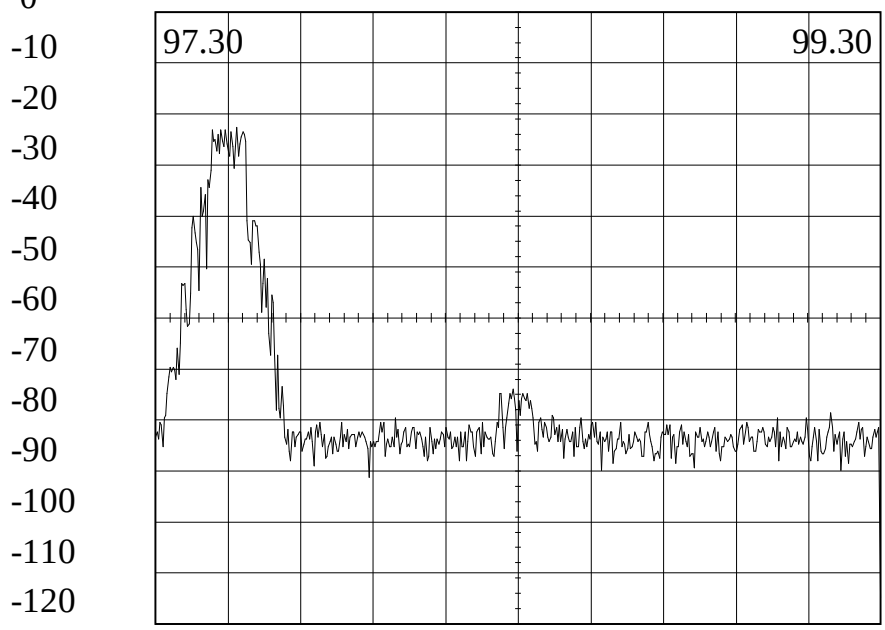
0 dB IF Gain Video Filter: 10 kHz

Peak Freq: 97.5244 Peak Level: -15.06

Simmons Media Group

AN940 Serial # 1009

200.0 kHz/Div | 98.30 MHz | 1 kHz Res | IM Prod. with 103.1 | 09/07/2006 03:16:18



30 dB Attn Gen --- dBm 100 mSecs

0 dB IF Gain Video Filter: 10 kHz

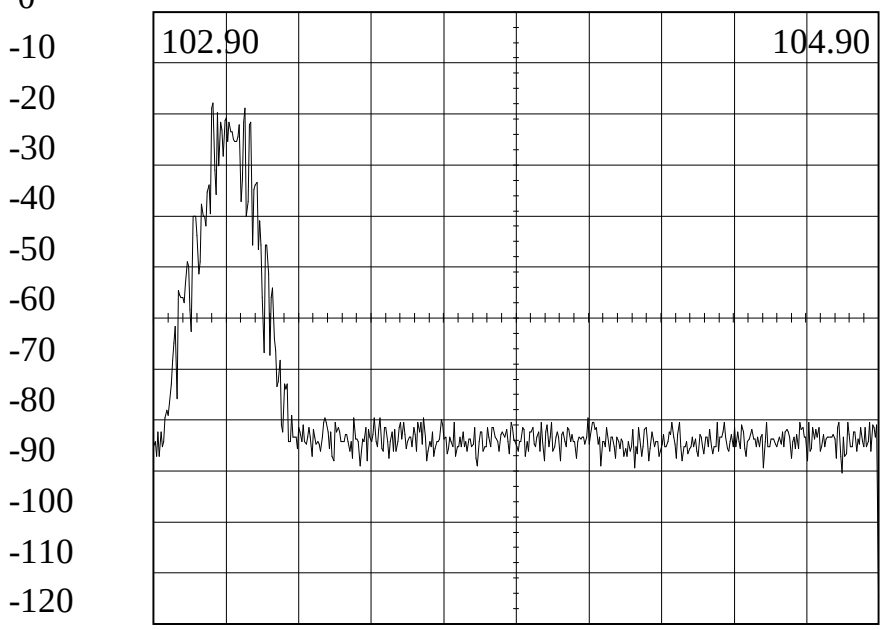
Peak Freq: 97.5244 Peak Level: -15.06

Note: There is a translator on the tower east of this location on frequency 98.3 (FM) that is causing this ingress.

Simmons Media Group

AN940 Serial # 1009

200.0 kHz/Div | 103.90 MHz | 1 kHz Res | IM Prod. with 97.5 | 09/07/2006 03:19:22



30 dB Attn | Gen --- dBm | 100 mSecs

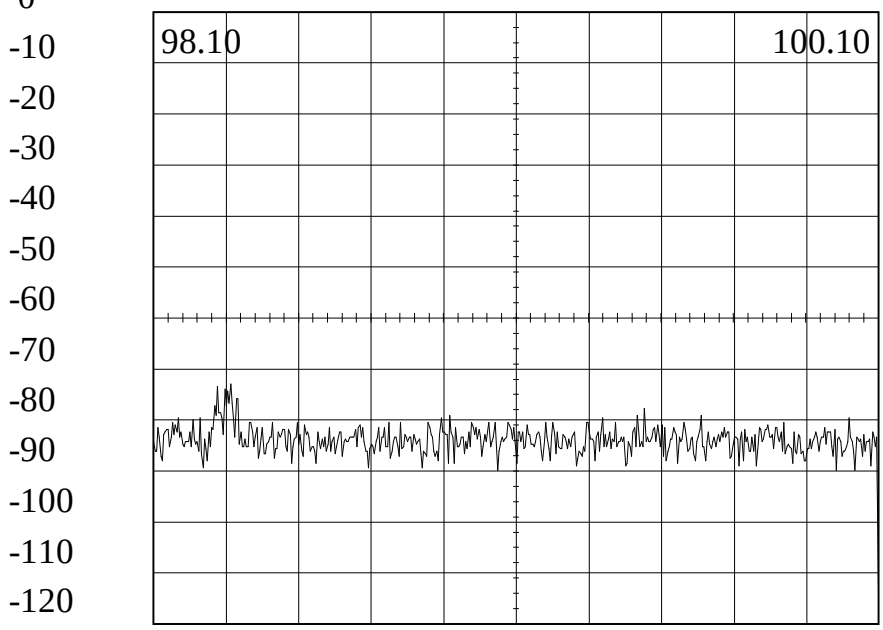
0 dB IF Gain | Video Filter: 10 kHz

Peak Freq: 103.0643 | Peak Level: -11.92

Simmons Media Group

AN940 Serial # 1009

200.0 kHz/Div | 99.10 MHz | 1 kHz Res | IM Prod. with 102.3 | 09/07/2006 03:20:35



30 dB Attn | Gen --- dBm | 100 mSecs

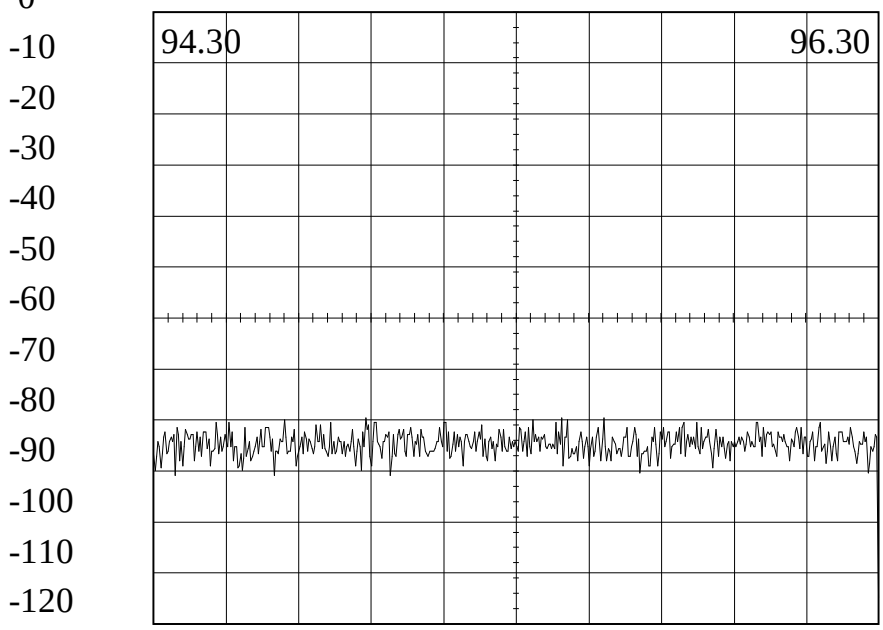
0 dB IF Gain | Video Filter: 10 kHz

Peak Freq: 98.3124 | Peak Level: -48.63

Simmons Media Group

AN940 Serial # 1009

200.0 kHz/Div | 95.30 MHz | 1 kHz Res | IM Prod. with 106.1 | 09/07/2006 03:21:23



30 dB Attn Gen --- dBm 100 mSecs

0 dB IF Gain Video Filter: 10 kHz

Peak Freq: 94.8852 Peak Level: -53.02