# Annual KQYX-AM NRSC-2 Bandwidth Compliance, Harmonics and Spurious Emissions Measurements and Observations Report

Measurements Performed by
Eric Morris
on
September 7, 2023

# Test Methodology

NRSC measurements were made with a Spectrum Analyzer as prescribed by FCC rules 73.1590 and 73.44. Measurements were taken with normal broadcast programming. Harmonics were measured with a Spectrum Analyzer and corrected by the calibration factor data supplied with the Scott Antenna. A tunable notch filter was used to attenuate the fundamental. A communications receiver was used to monitor activity of spurious emissions. The receiver continuously tunes AM broadcast through 12 megahertz.

# Equipment Used

Spectrum Analyzer:
Anritzu MS2721A

Antenna:
Chris Scott LP-3 Shielded Loop Antenna

Multi-Band Communication Receiver

# Station

| | |
|---|---|
| Call Sign: | KQYX-AM |
| City of License: | Galena, KS |
| Frequency: | 1450 Khz |
| Antenna Mode: | ND |
| Power: | 940 Watts |
| Date Measured: | 9/7/2023 |
| Location: | Approximately 287m WNW of antenna bearing 297°. |

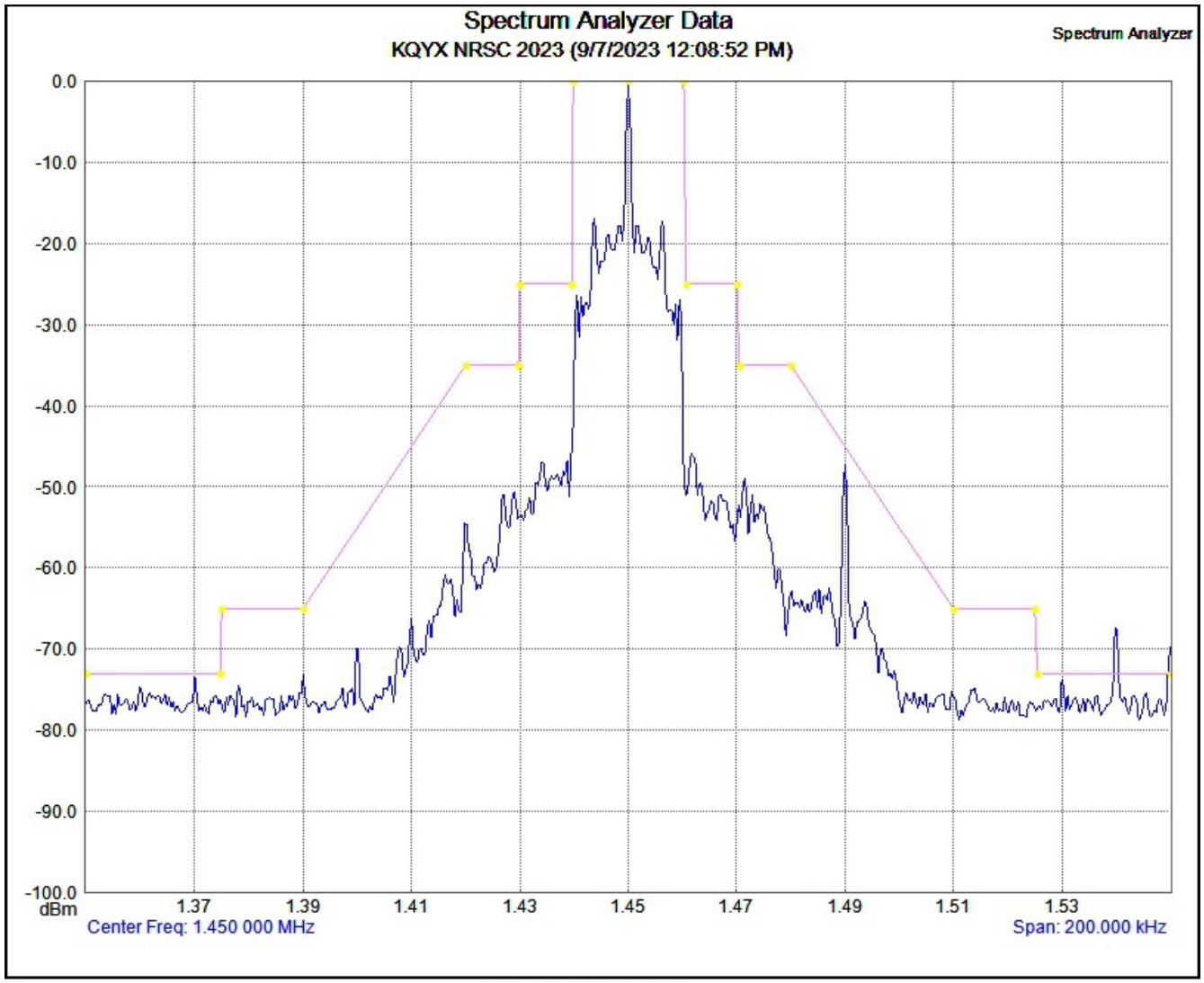
## Harmonic and Spurious Emission Measurements and Observations

Harmonics are required to be 73dB below the carrier level.

| | | |
|---|---|---|
| Second Harmonic: | 2900 Khz | >80dB below the carrier level |
| Third Harmonic: | 4350 Khz | >80dB below the carrier level |

No spurious emissions observed through 12 Mhz on a continuous tune commumications receiver.

## NRSC Measurement




Measurement Parameters

| | | | |
|---|---|---|---|
| Trace Mode | Max Hold | Start Frequency | 1.350 000 MHz |
| Trace Mode | Max Hold | Stop Frequency | 1.550 000 MHz |
| Preamp | ON | Frequency Span | 200.000 000 kHz |
| Min Sweep Time | 5E-05 S | Reference Level | -46.797 dBm |
| Reference Level Offset | -46.797 dB | Scale | 10.0 dB/div |
| Input Attenuation | 10.0 dB | Serial Number | 648140 |
| RBW | 300.0 Hz | Base Ver. | V1.78 |
| VBW | 3.0 MHz | App Ver. | V1.79 |
| Detection | Peak | Date | 9/7/2023 12:08:52 PM |
| Center Frequency | 1.450 000 MHz | Device Name | |

The proceeding Spectrum Analyzer Data shows the full NRSC mask the only excursions above the mask are known carriers on 1540Khz and the side bands of 1560Khz.

**Qualifications of Engineer**

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Eric Morris has served as a broadcast engineer for more than 33 years and holds a General Radiotelephone Operator License from the FCC and has been recognized as a Certified Professional Broadcast Engineer by the Society of Broadcast Engineers.

Eric Morris serves as the Chief Engineer or primary contract engineer for more than 10 radio stations in Arkansas and Oklahoma.

I hereby certify that the information contained in this report is true and accurate to the best of my ability.

Eric Morris 9-7-23

Eric Morris Date