

# BROADCAST WORKS!

*Building Great Radio Stations*

July 30, 2002

KCXY / KAMD Radio  
PO Box 956  
Camden, AR 71711

## **RE: Engineer's Qualifications for FM Equipment Performance Measurements**

This letter is to certify that Dave Allen, a senior field engineer for Broadcast Works of Tyler, TX, is qualified to perform FM spurious measurements.

Mr. Allen has over twenty five years of radio broadcast engineering experience and has earned an Associates Degree in Electronics. He has performed numerous transmitter and antenna installations with the associated spurious emissions measurements. Mr. Allen is familiar with the test equipment and methodology of the FM test requested.

Please direct any questions to:

Mr. Steve Comer  
Vice President  
Broadcast Works Inc.

www.bw

EXHIBIT #B1  
APPL. FOR STATION LICENSE  
CHARLES R. SHINN  
KAMD-FM RADIO STATION  
CH 246C2 - 50.0 KW  
CAMDEN, ARKANSAS  
July 2002

**KAMD and KCXY spurious measurements Broadcast Works 7/16/02 DA**  
(Revised 8-12-02)

<u>Subject Frequency (Mhz)</u>			<u>Notch Attenuation (dB)</u>	<u>Unmodulated Carrier Level (dB)</u>
C1	KCXY	95.3	44.8	(+41.1)
C2	KAMD	97.1	42.0	(+39.3)

Frequency Combination (Mhz)	Calculated Spur (Mhz)	Measured Signal Level (dB)	Main Carrier (Mhz)	dB down (Carrier level + Measured Spur)
95.3 / 97.1	93.5	-45.0	95.3	86.1
" "	98.9	-45.0	95.3	86.1
95.3 / 97.1	93.5	-45.0	97.1	84.3
" "	98.9	-44.0	97.1	83.3

The signals were sampled at the output of the antenna combiner system at its nominal RF output. The measurements were made using a Techtronix 2712 Spectrum Analyzer, Ser #B010972 calibrated 7/30/01. Each fundamental frequency was attenuated using Microwave Filter Company model 6367 two cavity notch filters tuned to each fundamental. Measured intermodulation products of the shared antenna system were at least 80 dB below the unmodulated carries of the two stations.

Based on these measurements it is believed the operation of KCXY and KAMD is in compliance with 73.317 of the Commission's rules.

EXHIBIT #B2  
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## FM ANNUAL MAINTENANCE AND CALIBRATION (SEC 73.317)

Technician: DRA

Date: 7/22/2002

Time: 11:30P

Call Letters: KAMD

Location: Camden, AR

Frequency: 97.1

### RF Bandwidth Measurement

Equipment Used: Techtronix 2712

Serial Number: B010972

Date of Calibration: 7/30/2001

Method: 2 F1-F2, 2 F2-F1, Spurious

Transmitter Make: CCA

Model: FM12000G

Serial Number: 181038

#### Results:

120 kHz-240 kHz 87.0 dB

240 kHz-600 kHz 87.0 dB

Above 600 kHz 82.8 dB

Active Subcarriers: Frequency 1) NA

Injection 1) %

Frequency 2)

Injection 2) %

#### Sec. 73.317 FM Transmission System Requirements

- (a) FM broadcast stations employing transmitters authorized after January 1, 1960, must maintain the bandwidth occupied by their emissions in accordance with the specification detailed below. FM broadcast stations employing transmitters installed or type accepted before January 1, 1960, must achieve the highest degree of compliance with these specifications practicable with their existing equipment. In either case, should harmful interference to other authorized stations occur, the licensee shall correct the problem promptly or cease operation.
- (b) Any emission appearing on a frequency removed from the carrier by between 120 kHz and 240 kHz inclusive must be attenuated at least 25 dB below the level of the unmodulated carrier. Compliance with this requirement will be deemed to show the occupied bandwidth to be 240 kHz or less.
- (c) Any emission appearing on a frequency removed from the carrier by more than 240 kHz and up to and including 600 kHz must be attenuated at least 35 dB below the level of the unmodulated carrier.
- (d) Any emission appearing on a frequency removed from the carrier by more than 600 kHz must be attenuated at least  $43 + 10 \log(P)$  (Power, in watts) dB below the level of the unmodulated carrier, or 80 dB, whichever is the lesser attenuation.

EXHIBIT #B3  
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