

FM SPECTRUM  
EMISSION STUDY  
KHXS-FM  
102.7 MHz  
MERKEL, TX  
OCT.2002

N32:24:39  
W100:06:26

STUDY CONDUCTED BY:

ENLOE ELECTRONICS  
3905 101st St  
LUBBOCK, TX 79423  
(806) 748-1296

## I. Qualifications & Procedures

1. The licensee of the station contracted Bill Enloe; Enloe Electronics to conduct tests to determine the station is in compliance with Rule 73.317 of the FCC Rules and Regulations.

### Qualifications

2. Bill Enloe has been active in the Radio and Television Broadcasting for 40 years. He holds a FCC General Radiotelephone Operator License and also is certified by the Society of Broadcast Engineers as a Professional Broadcast Engineer.

Bill Enloe is experienced in making the measurements and interpreting the data for this study.

### Equipment Description

3. The following test equipment was used for meeting the requirements of 73.317 of the FCC Rules:

Tektronix 2712 Spectrum Analyzer with no video filtering and 300 Hz Bandwidth resolution and peak hold time of 10 minutes.  
Photographic camera for evidence of the waveform measurements.

### Test Procedures

4. Procedures: Equipment was powered in a mobile van by an inverter at a location approximately 1 Kilometer from the stations antenna. Measurements and data were gathered at this point. The specific location is entered in the report.

(a) Stations field strength is measured on the Spectrum Analyzer at location and entered in report. This station is an operating station and measurements were made per 73.317(c)(d). Station is operating at no less than 90% rated power.

(b) Second Harmonic Radiation is measured with the Spectrum Analyzer and is calculated as it is referenced to the carrier in decibels and entered in the report.

(c) Third Harmonic Radiation is measured with the Spectrum Analyzer and is calculated as it is referenced to the carrier in decibels and entered in the report Procedures.

(d) Spurious radiation from the station is checked on all frequencies from the station frequency up to 1000MHz with the Spectrum Analyzer. Any spurious radiation, if found, is detailed in the report.

- (e) Photographs of the Station signal as observed on the Spectrum Analyzer are shown as Exhibit 1 and Exhibit 2 of this report. The Stations compliance with 73.317(b) (c) are noted in the report and shown in the exhibits.

Exhibit 1. Stations main carrier is shown in the center of the screen and is adjusted for 0db reference. Bandwidth was set for 300Hz: Frequency deviation is +/-50KHz/Div: and Signal Strength is calibrated at 10db/Div: The photograph was made after a minimum of 10 minutes of observation time.

Exhibit 2. Stations main carrier is shown in the center of the screen and is adjusted for 0db reference. Bandwidth was set for 300Hz: Frequency deviation is +/-200KHz/Div: Signal Strength is calibrated at 10db/Div. The photograph was made after a minimum of 10 minutes of observation time.

### Discrepancies

5. Any measurements taken which are not within the limits as prescribed by 73.317 of the FCC Rules and Regulations will be outlined in Exhibit 5 and its attachment will be noted on the **Report of Measurements & Data** of this report. The licensee will also be notified of their failure to comply in writing.

**II. Report of Measurements & Data**

**STATION:** KHXS-FM

**CITY & STATE:** MERKEL, TX

**FREQUENCY:** 102.7 MHz

**DAYTIME POWER:** 100 KW

**DISCRIPTION OF LOCATION  
WHERE MEASUREMENTS  
WERE TAKEN:** 1.7 Km at Bearing 237 Degrees

**(a) CARRIER FIELD STRENGTH  
IN dbm** -16 dbm 0db (reference)

**(b) SECOND HARMONIC FIELD  
STRENGTH IN dbm and -DB** >-90 dbm >-80 db

**(c) THIRD HARMONIC FIELD  
STRENGTH IN dbm and -db** >-90 dbm >-80 db

**Any spurious emission  
through 1000 MHz is noted:** ☒ NO ☐ Yes (explain in exhibit 3)

**Does station meet 73.317(b)  
120KHz -240KHz @ -25db:** ☒ YES ☐ No (explain in exhibit 3)

**Does station meet 73.317(c)  
240KHz- 600KHz @ -35db:** ☒ YES ☐ No (explain in exhibit 3)

**Does station meet 73.317(d)  
>60kHZ @ -80db:** ☒ YES ☐ No (explain in exhibit 3)

**Date of Measurements:** Oct.8,2002

**Time of Measurements:** 11:30AM

We certify that all measurements taken in this report are accurate and that the procedures as outlined in this report were followed in making these measurements. Any discrepancies are noted in exhibit 3 and the licensee has been notified of these discrepancies.

William H Enloe 10/8/2002

# Photographs of Spectrum Analyzer from conducted tests. Exhibits 1 & 2

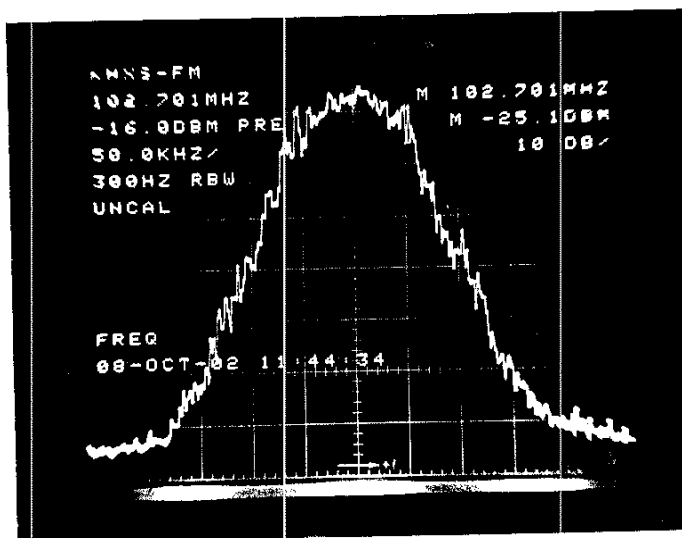


Exhibit 1. Bandwidth 300Hz; Frequency +/- 50KHz/Div; Signal Strength 10db/Div

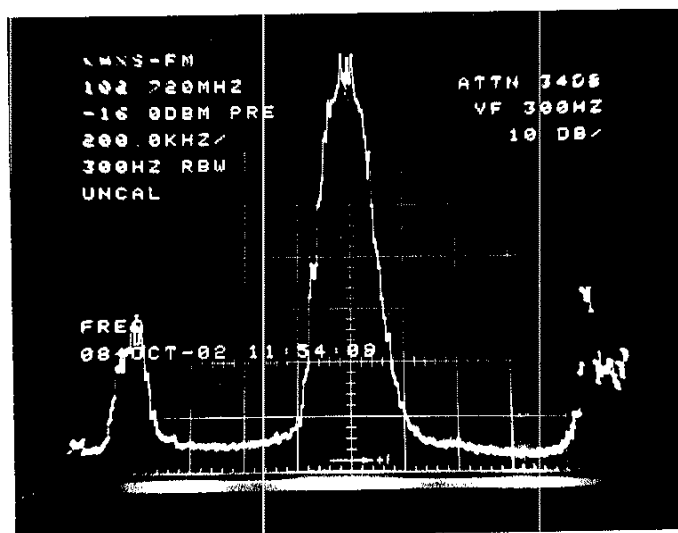


Exhibit 2. Bandwidth 300Hz; Frequency +/- 200KHz/Div; Signal Strength 10db/Div

# Photographs of Spectrum Analyzer from conducted tests. Exhibits 3 & 4

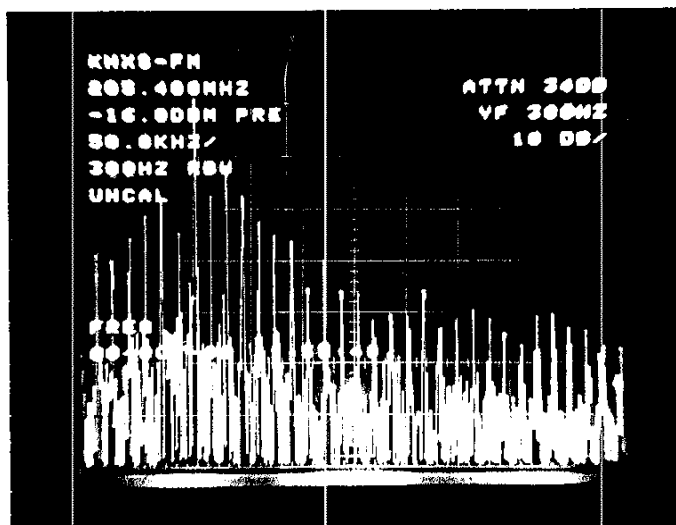


Exhibit 3. Bandwidth 300Hz; Frequency +/- 200KHz/Div; Signal Strength 10db/Div

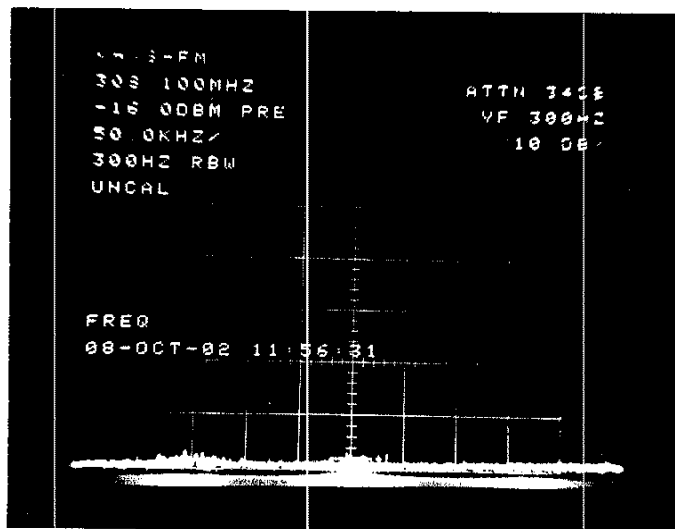


Exhibit 4. Bandwidth 300Hz; Frequency +/- 200KHz/Div; Signal Strength 10db/Div

FM SPECTRUM  
EMISSION STUDY  
KBCY-FM  
99.7 MHz  
TYE, TX  
OCT.2002

N32:24:39  
W100:06:26

STUDY CONDUCTED BY:

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LUBBOCK, TX 79423  
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## II. Report of Measurements & Data

STATION: KBCY-FM

CITY & STATE: TYE, TEXAS

FREQUENCY: 99.7 MHz

DAYTIME POWER: 100 KW

DISCRIPTION OF LOCATION  
WHERE MEASUREMENTS  
WERE TAKEN: 1.7Km at Bearing 237 Degrees

(a) CARRIER FIELD STRENGTH  
IN dbm -14.1 dbm 0db (reference)

(b) SECOND HARMONIC FIELD  
STRENGTH IN dbm and -DB >-91 dbm >-80 db

(c) THIRD HARMONIC FIELD  
STRENGTH IN dbm and -db >-91 dbm >-80 db

Any spurious emission  
through 1000 MHz is noted: ☒ NO ☐ Yes *(explain in exhibit 3)*

Does station meet 73.317(b)  
120KHz -240KHz @ -25db: ☒ YES ☐ No *(explain in exhibit 3)*

Does station meet 73.317(c)  
240KHz- 600KHz @ -35db: ☒ YES ☐ No *(explain in exhibit 3)*

Does station meet 73.317(d)  
>60kHZ @ -80db: ☒ YES ☐ No *(explain in exhibit 3)*

Date of Measurements: Oct 8, 2002

Time of Measurements: 11:00A

We certify that all measurements  
taken in this report are accurate and  
that the procedures as outlined in this  
report were followed in making these  
measurements. Any discrepancies  
are noted in exhibit 3 and the  
licensee has been notified of these  
discrepancies.

William H. Eaker 10/8/2002

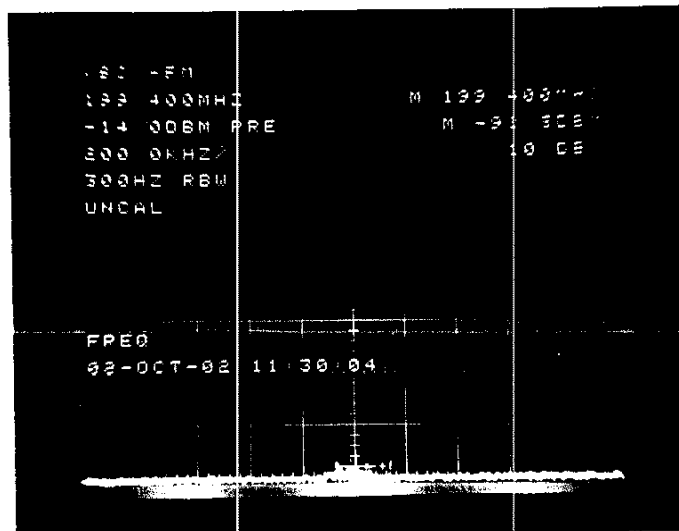


Exhibit 3. Bandwidth 300Hz; Frequency +/- 200KHz/Div; Signal Strength 10db/Div

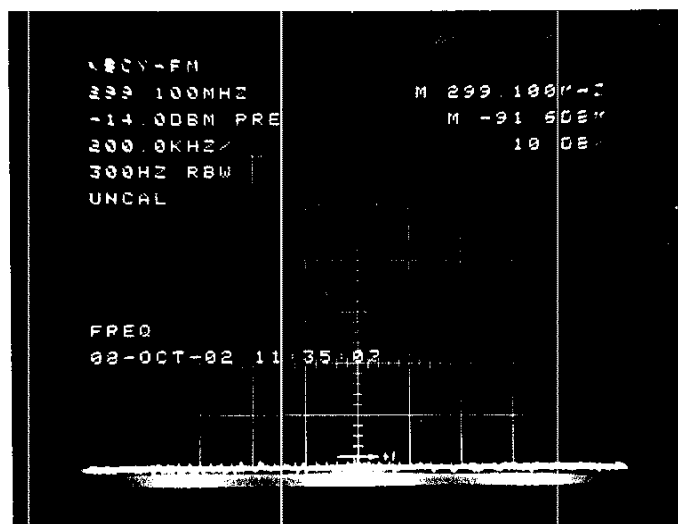


Exhibit 4. Bandwidth 300Hz; Frequency +/- 200KHz/Div; Signal Strength 10db/Div

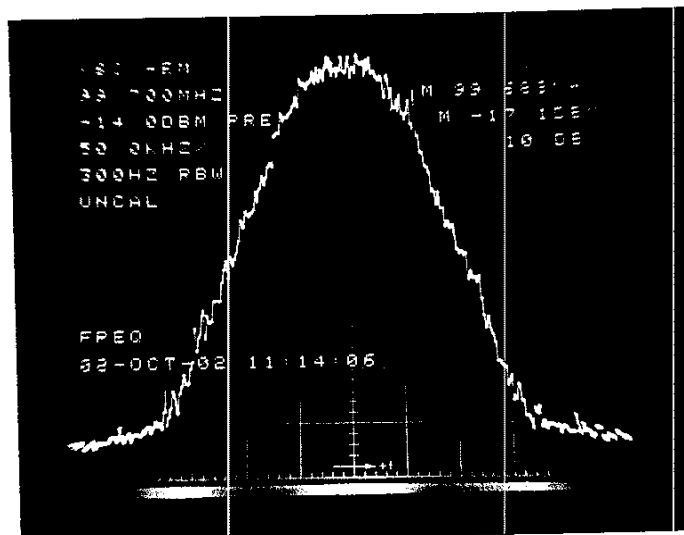


Exhibit 1. Bandwidth 300Hz; Frequency +/- 50KHz/Div; Signal Strength 10db/Div

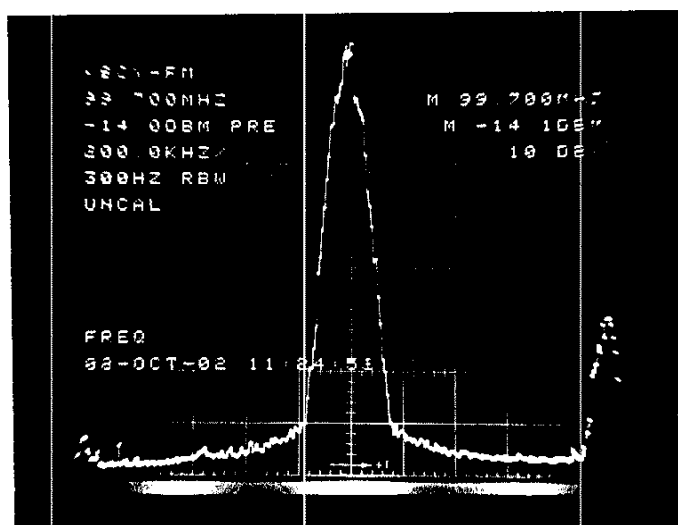


Exhibit 2. Bandwidth 300Hz; Frequency +/- 200KHz/Div; Signal Strength 10db/Div