

Engineering Statement

The following engineering statement and attached exhibits have been prepared for Infinity Broadcasting East Inc., licensee of FM stations WXRT-FM and WBBM-FM at Chicago, Infinity Holdings Corporation of Orlando, licensee of FM station WCKG(FM) at Elmwood Park, Illinois, Infinity Broadcasting Corp. of Illinois, licensee of WJMK(FM) at Chicago, Illinois, and Infinity Broadcasting Corporation of Chicago, licensee of WUSN(FM) at Chicago, Illinois, and contain test and measurement data for the Belmont auxiliary site. Measurements were taken at this site in order to demonstrate that spurious and mixing products at the site are in compliance with the provisions of the Commission's Rules.

The data contained in this report was acquired through the use of a Tektronix 2712 Spectrum Analyzer. RF samples from each transmitter were acquired at the output of the power amplifier. The spectrum analysis measurements were performed with all transmitters at the site operational. All of the stations utilize a combiner system and feed a single antenna, with the exception of WXRT(FM) which has its own antenna and does not use the combiner system.

Prior to examining the mixing products from each of the transmitters, the harmonics of the carrier frequencies of each of the stations were examined. In each case, the harmonics of the carrier frequencies were suppressed from the

carrier level by a level of 80 dB or greater. As a result, harmonic suppression from each of the transmitters is in compliance with FCC rules.

The primary mixing products examined were the 2A-B, 2B-A, and A+B products. For each of these products, a photograph of the spectrum analyzer displayed, with the product attenuation relative to the A frequency carrier listed in a table for each of the transmitters at the site. Other products are possible, however, a scan of the frequency ranges where such products may occur indicated that any minor mixing products were suppressed from each of the carrier frequencies by at least 80 dB. It is therefore respectfully submitted that the auxiliary facilities for WBBM-FM, WCKG(FM), WJMK(FM), WUSN(FM), and WXRT(FM) are in compliance with the applicable provisions of the Commission's Rules as pertains to spurious emissions.

The preceding statement and attached exhibits have been prepared by me, or under my direction, and are true and accurate to the best of my belief and knowledge.

3-31-2005
Date


Jeremy D. Ruck, Consulting Engineer

Summary of Mixing Products Measured at Output of WBBM-FM

WBBM-FM Frequency (A Frequency): 96.3 MHz

WBBM-FM Reference Level: +16.8 dBm (Plot #1)

2A-B Mixing Product					
B Station	B Frequency	Product Frequency	Product Level	Product Suppression	Plot Number
WCKG	105.9 MHz	86.7 MHz	-83.2 dBm	100.0 dB	2
WJMK	104.3 MHz	88.3 MHz	-80.5 dBm	97.3 dB	3
WUSN	99.5 MHz	93.1 MHz	-88.8 dBm	105.6 dB	4
WXRT	93.1 MHz	99.5 MHz	-70.8 dBm	87.6 dB	5

2B-A Mixing Product					
B Station	B Frequency	Product Frequency	Product Level	Product Suppression	Plot Number
WCKG	105.9 MHz	115.5 MHz	-96.5 dBm	113.3 dB	6
WJMK	104.3 MHz	112.3 MHz	-86.8 dBm	103.6 dB	7
WUSN	99.5 MHz	102.7 MHz	-94.8 dBm	111.6 dB	8
WXRT	93.1 MHz	89.9 MHz	-88.1 dBm	104.9 dB	9

A+B Mixing Product					
B Station	B Frequency	Product Frequency	Product Level	Product Suppression	Plot Number
WCKG	105.9 MHz	202.2 MHz	-101.5 dBm	118.3 dB	10
WJMK	104.3 MHz	200.6 MHz	-95.2 dBm	112.0 dB	11
WUSN	99.5 MHz	195.8 MHz	-98.5 dBm	115.3 dB	12
WXRT	93.1 MHz	189.4 MHz	-98.8 dBm	115.6 dB	13

Summary of Mixing Products Measured at Output of WCKG

WCKG Frequency (A Frequency): 105.9 MHz

WCKG Reference Level: +17.7 dBm (Plot #14)

2A-B Mixing Product					
B Station	B Frequency	Product Frequency	Product Level	Product Suppression	Plot Number
WBBM	96.3 MHz	115.5 MHz	-85.2 dBm	102.9 dB	15
WJMK	104.3 MHz	107.5 MHz	-80.2 dBm	97.9 dB	16
WUSN	99.5 MHz	112.3 MHz	-80.8 dBm	98.5 dB	17
WXRT	93.1 MHz	118.7 MHz	-75.1 dBm	92.8 dB	18

2B-A Mixing Product					
B Station	B Frequency	Product Frequency	Product Level	Product Suppression	Plot Number
WBBM	96.3 MHz	86.7 MHz	-95.6 dBm	113.3 dB	19
WJMK	104.3 MHz	102.7 MHz	-97.8 dBm	115.5 dB	20
WUSN	99.5 MHz	93.1 MHz	-79.2 dBm	96.9 dB	21
WXRT	93.1 MHz	80.3 MHz	-99.2 dBm	116.9 dB	22

A+B Mixing Product					
B Station	B Frequency	Product Frequency	Product Level	Product Suppression	Plot Number
WBBM	96.3 MHz	202.2 MHz	-103.8 dBm	121.5 dB	23
WJMK	104.3 MHz	210.2 MHz	-89.5 dBm	107.2 dB	24
WUSN	99.5 MHz	205.4 MHz	-89.5 dBm	107.2 dB	25
WXRT	93.1 MHz	199.0 MHz	-95.9 dBm	113.6 dB	26

Summary of Mixing Products Measured at Output of WJMK

WJMK Frequency (A Frequency): 104.3 MHz

WJMK Reference Level: +15.9 dBm (Plot #27)

2A-B Mixing Product					
B Station	B Frequency	Product Frequency	Product Level	Product Suppression	Plot Number
WBBM	96.3 MHz	112.3 MHz	-87.5 dBm	103.4 dB	28
WCKG	105.9 MHz	102.7 MHz	-90.2 dBm	106.1 dB	29
WUSN	99.5 MHz	109.1 MHz	-90.2 dBm	106.1 dB	30
WXRT	93.1 MHz	115.5 MHz	-71.2 dBm	87.1 dB	31

2B-A Mixing Product					
B Station	B Frequency	Product Frequency	Product Level	Product Suppression	Plot Number
WBBM	96.3 MHz	88.3 MHz	-83.8 dBm	99.7 dB	32
WCKG	105.9 MHz	107.5 MHz	-93.3 dBm	109.2 dB	33
WUSN	99.5 MHz	94.7 MHz	-95.6 dBm	111.5 dB	34
WXRT	93.1 MHz	81.9 MHz	-101.5 dBm	117.4 dB	35

A+B Mixing Product					
B Station	B Frequency	Product Frequency	Product Level	Product Suppression	Plot Number
WBBM	96.3 MHz	200.6 MHz	-104.6 dBm	120.5 dB	36
WCKG	105.9 MHz	210.2 MHz	-100.5 dBm	116.4 dB	37
WUSN	99.5 MHz	203.8 MHz	-103.8 dBm	119.7 dB	38
WXRT	93.1 MHz	197.4 MHz	-89.2 dBm	105.1 dB	39

Summary of Mixing Products Measured at Output of WUSN

WUSN Frequency (A Frequency): 99.5 MHz

WUSN Reference Level: +15.9 dBm (Plot #40)

2A-B Mixing Product					
B Station	B Frequency	Product Frequency	Product Level	Product Suppression	Plot Number
WBBM	96.3 MHz	102.7 MHz	-91.5 dBm	107.4 dB	41
WCKG	105.9 MHz	93.1 MHz	-75.1 dBm	91.0 dB	42
WJMK	104.3 MHz	94.7 MHz	-77.5 dBm	93.4 dB	43
WXRT	93.1 MHz	105.9 MHz	-50.9 dBm	66.8 dB*	44

2B-A Mixing Product					
B Station	B Frequency	Product Frequency	Product Level	Product Suppression	Plot Number
WBBM	96.3 MHz	93.1 MHz	-75.1 dBm	91.0 dB	42
WCKG	105.9 MHz	112.3 MHz	-91.5 dBm	107.4 dB	45
WJMK	104.3 MHz	109.1 MHz	-90.8 dBm	106.7 dB	46
WXRT	93.1 MHz	86.7 MHz	-97.4 dBm	113.3 dB	47

A+B Mixing Product					
B Station	B Frequency	Product Frequency	Product Level	Product Suppression	Plot Number
WBBM	96.3 MHz	195.8 MHz	-103.6 dBm	119.5 dB	48
WCKG	105.9 MHz	205.4 MHz	-91.5 dBm	107.4 dB	49
WJMK	104.3 MHz	203.8 MHz	-91.0 dBm	106.9 dB	50
WXRT	93.1 MHz	192.6 MHz	-81.0 dBm	96.9 dB	51

* Indicated Product Level Due to Leakage of WCKG Through Combiner to WUSN Port. Turning Off the WCKG Transmitter Made No Change in the Measured Level.

Summary of Mixing Products Measured at Output of WXRT

WXRT Frequency (A Frequency): 93.1 MHz

WXRT Reference Level: +18.1 dBm (Plot #52)

2A-B Mixing Product					
B Station	B Frequency	Product Frequency	Product Level	Product Suppression	Plot Number
WBBM	96.3 MHz	89.9 MHz	-99.5 dBm	117.6 dB	53
WCKG	105.9 MHz	80.3 MHz	-97.4 dBm	115.5 dB	54
WJMK	104.3 MHz	81.9 MHz	-86.2 dBm	104.3 dB	55
WUSN	99.5 MHz	86.7 MHz	-87.2 dBm	105.3 dB	56

2B-A Mixing Product					
B Station	B Frequency	Product Frequency	Product Level	Product Suppression	Plot Number
WBBM	96.3 MHz	99.5 MHz	-83.5 dBm	101.6 dB	57
WCKG	105.9 MHz	118.7 MHz	-102.5 dBm	120.6 dB	58
WJMK	104.3 MHz	115.5 MHz	-98.1 dBm	116.2 dB	59
WUSN	99.5 MHz	105.9 MHz	-89.2 dBm	107.3 dB	60

A+B Mixing Product					
B Station	B Frequency	Product Frequency	Product Level	Product Suppression	Plot Number
WBBM	96.3 MHz	189.4 MHz	-104.8 dBm	122.9 dB	61
WCKG	105.9 MHz	199.0 MHz	-95.2 dBm	113.3 dB	62
WJMK	104.3 MHz	197.4 MHz	-98.8 dBm	116.9 dB	63
WUSN	99.5 MHz	192.6 MHz	-95.2 dBm	113.3 dB	64