

TPO Calculation Summary

Main Antenna Operation

Call letters: WXKE(FM)
City of License: Churubusco, IN
Frequency: CH242B1 (96.3 MHz)
File No:
Facility ID: 22287
Applicant: Adams Radio of Fort Wayne, LLC

Operating Effective Radiated Power (ERP): 8.400 kW

Antenna Make: Electronics Research Inc. (ERI)

Antenna Model: LPX-4E

No of Elements: Four (4)

Antenna COR AGL: 151 meters AGL

Antenna COR AMSL: 401 meters AMSL

Power Gain: 2.1332

$\text{Log}[\text{power gain}] * 10 = \text{Antenna Gain: } 3.290 \text{ dB}$

Calculated Antenna Input Power: 3.938 kW

System Loss Info:

<u>Description</u>	<u>Component Make/Model</u>	<u>Length</u>	<u>Loss</u>
Main Feedline (Tower)	HJ7-50A, HELIAX *(1-5/8" air) (0.2 dB/100')	495'	-0.990 dB
Main Feedline (Ground)	HJ7-50A, HELIAX *(1-5/8" air) (0.2 dB/100')	20'	-0.040 dB

TOTAL SYSTEM GAIN/LOSS: 2.260 dB

$1 / [10^{(2.260/10)}] = \text{CALCULATED TRANSMITTER POWER OUTPUT: } 4.992 \text{ kW}$

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