

# TPO Calculation Summary

## Main Antenna Operation

**Call letters:** W231BR  
**City of License:** Manchester, NH  
**Frequency:** CH231D - 94.1 MHz  
**File No:** Special Temporary Authority (STA) Proposal  
**Facility ID:** 140894  
**Applicant:** Saga Communications of New England, LLC

**Operating Effective Radiated Power (ERP):** 0.170 kW

**Antenna Make:** Scala

**Antenna Model:** CLFM(H) -1-Bay DA

**No of Elements:** one

**Antenna COR AGL:** 18 meters AGL

**Antenna COR AMSL:** 411 meters AMSL

**Power Gain:** 2.755

$\text{Log}[\text{power gain}] * 10 = \text{Antenna Gain:}$  7.000 dB

**Calculated Antenna Input Power:** 0.034 kW

### System Loss Info:

<u>Description</u>	<u>Component Make/Model</u>	<u>Length</u>	<u>Loss</u>
1/2 Inch End Connector(s)	Generic (3@0.02 dB each)		-0.020 dB
Antenna Jumper Cables	RG8 (3 sections of 15 feet) (1.897 dB/100 ft)	45 ft	
1/2 Inch End Connector(s)	Generic (3@0.02 dB each)		
Power Divider	PDL3-333/50 Power Divide (3-way)		
1/2 Inch End Coupler	Generic (1@0.02 dB each)		
Main Antenna Feedline	Andrew 1/2" LDF4-50A (Foam) (0.641 dB/100 ft)	92 ft	-0.590 dB
1/2 Inch End Coupler	Generic (1@0.02 dB each)		-0.020 dB
Transmitter Jumper Cable	RG8 (1.897 dB/100 ft)	6 ft	-0.114 dB
7/8 Inch End Connector	Generic (1@0.02 dB each)		-0.020 dB

**TOTAL SYSTEM GAIN/LOSS:** 6.236 dB

$1 / [10^{(6.236/10)}] = \text{CALCULATED TRANSMITTER POWER OUTPUT:}$  0.040 kW

**Munn-Reese, Inc.**

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