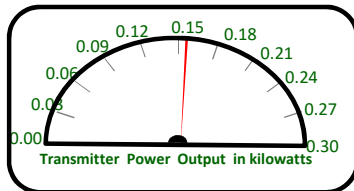
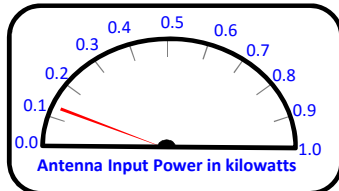


# TPO Calculation Summary

## Main Antenna Operation

**Call letters:** W269CS.C  
**City of License:** Galesburg, MI  
**Frequency:** CH269D (101.7 MHz)  
**File No:** BMPFT-20150304ACE  
**Facility ID:** 145671  
**Applicant:** Spring Arbor University



**Operating Effective Radiated Power (ERP):** 0.080 kW

**Antenna Make:** Nicom USA, Inc.

**Antenna Model:** BKG77/2(0.5λ spaced)

**No of Elements:** Two (2)

**Antenna COR AGL:** 24 meters AGL

**Antenna COR AMSL:** 292 meters AMSL

**Max Input Power:** 1.0 kW

**Power Gain:** 0.7

$\text{Log}[\text{power gain}] * 10 = \text{Antenna Gain: } -1.549 \text{ dB}$

**Calculated Antenna Input Power:** 0.114 kW

**Transmitter Make/Model:** BEXT BK300M

**Transmitter Rated Power:** 0.3 kW

### System Loss Info:

Description	Component Make/Model	Length	Loss
1/2 Inch End Connector(s)	Generic (2@0.02 dB each)		-0.040 dB
Interbay Antenna Leads	RG-213 (Foam) (5 feet x2 leads)	(2.000 dB/100 ft) 10 ft	-0.200 dB
1/2 Inch End Connector(s)	Generic (2@0.02 dB each)		-0.040 dB
Interbay Power Divide	Nicom Series BAC2N		-0.300 dB
1/2 Inch End Connector	Generic (1@0.02 dB each)		-0.020 dB
Main Antenna Feedline	Andrew 1/2" LDF4-50A (Foam)	(0.667 dB/100 ft) 101 ft	-0.674 dB
1/2 Inch End Connector	Generic (1@0.02 dB each)		-0.020 dB
Jumper to Transmitter	Andrew 1/2" LDF4-50A (Foam)	(0.667 dB/100 ft) 3 ft	-0.020 dB
1/2 Inch End Connector	Generic (1@0.02 dB each)		-0.020 dB

**TOTAL SYSTEM GAIN/LOSS:** -2.883 dB

$1 / [10^{(-2.883/10)}] = \text{CALCULATED TRANSMITTER POWER OUTPUT: } 0.155 \text{ kW}$