

E-Slide FM System Calculations

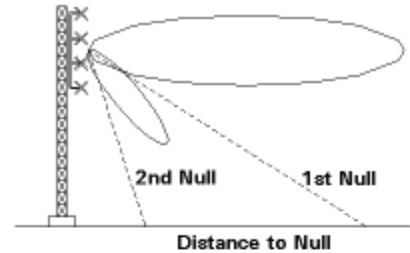
Prepared For: Chris Sarris - WBEB - Bala,

Transmitter:

Station Frequency: 101.1 MHz
Transmitter Power Output (TPO): 16.115 kW
Recommended Options: 1) 816R-2C, or 2) 816HD Transmitter

Antenna:

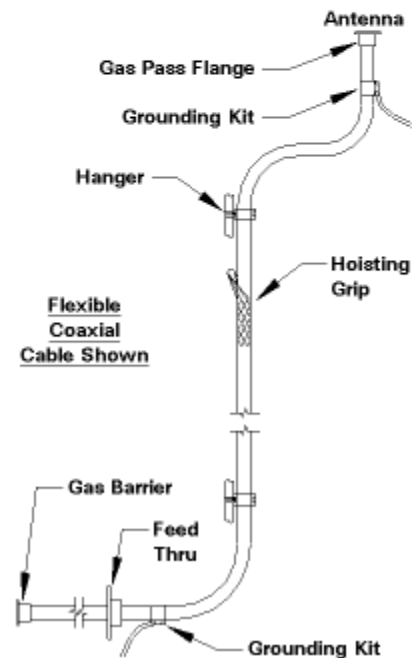
Type of Antenna 2 Bay - End Fed - Full Wave
Effective Radiated Power (ERP) 12 kW
Length of Antenna 9.7 ft (3m)
Elevation of Top Bay Center (AGL) 922.9 ft (281.4m)
Elevation of Bottom Bay Center (AGL) 913.1 ft (278.4m)
Center of radiation (AGL) 918 ft (279.9m)
Antenna Power Gain (H & V) 0.951
Antenna Field Gain (H & V)9752
Antenna Input Power 12.62 kW
Field Intensity (1kW @ 12 mile) 134.187 mV/m
1st Null (no beam tilt) 30 Degrees 0.3 Miles
2nd Null (no beam tilt) 90 Degrees 0 Miles



Null Fill, Beam Tilt, Pattern Studies, and Optimization are available. Null Fill and Beam Tilt will reduce power gain. Seek the advice of your consultant to help you determine if any of these are required.

Transmission Line:

Type of Line ERI STD650B-1, 6-1/8" Rigid Line
Average Power Rating 172.7 kW
Total Length of Line 1097 ft (334.5 m)
Length of Line on Tower 913 feet
Distance to Transmitter 184 feet
Line Loss at 101.1 MHz..... 00.04930808 db/100 feet
Other Losses5223 db
Power Loss in Line 3.497 kW
Line Efficiency 78.3 %



Hangers:

Distance Between Hangers 10 ft
Number of Hangers 92
Number of Hanger Adapters 92
Number of Hoist Grips 4
Number of Grounding Straps 6

Notice

Please confirm all data with your station or group Technical Consultant. Suggestions provided only to aid you and your Consultant in preparing appropriate FCC forms and to plan for equipment needs.

Provided by Continental Electronics - Bret Brewer, Regional Sales Manager

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