

# E-Slide FM System Calculations

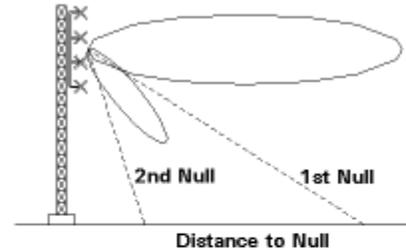
Prepared For: David Hodges - Positive Alternative Radio - Blacksburg, VA

## Transmitter:

Station Frequency: 100.1 MHz  
 Transmitter Power Output (TPO): .046 kW  
 Recommended Options: An 815D5 - 5 kW Solid-State Transmitter

## Antenna:

Type of Antenna ..... 1 Bay - End Fed - Full Wave  
 Effective Radiated Power (ERP) ..... 0.019 kW  
 Length of Antenna ..... 0.5 ft (0.2m)  
 Elevation of Top Bay Center (AGL) ..... 256.3 ft (78.1m)  
 Elevation of Bottom Bay Center (AGL) ..... 255.8 ft (78m)  
 Center of radiation (AGL) ..... 256 ft (78.0m)  
 Antenna Power Gain (H & V) ..... 0.4611  
 Antenna Field Gain (H & V) ..... .679  
 Antenna Input Power ..... 0.04 kW  
 Field Intensity (1kW @ 12 mile) ..... 93.436 mV/m  
 1st Null (no beam tilt) ..... 90 Degrees 0 Miles  
 2nd Null (no beam tilt) ..... 0 Degrees 0 Miles



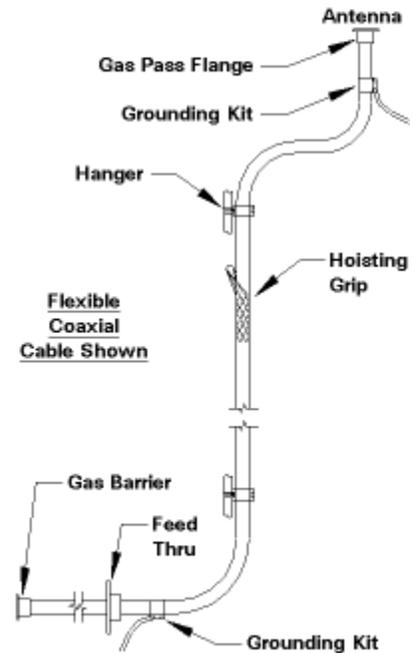
*Null Fill, Beam Tilt, Pattern Studies, and Optimization are available. Null Fill and Beam Tilt will reduce power gain. Seek the advice of your consultant to help you determine if any of these are required.*

## Transmission Line:

Type of Line ..... Cablewave HCA158-50, 1-5/8" Air Coax  
 Average Power Rating ..... 19.6 kW  
 Total Length of Line ..... 281 ft (85.7 m)  
 Length of Line on Tower ..... 256 feet  
 Distance to Transmitter ..... 25 feet  
 Line Loss at 100.1 MHz..... 00.1886111 db/100 feet  
 Other Losses ..... 0 db  
 Power Loss in Line ..... 0.005 kW  
 Line Efficiency ..... 88.5 %

## Hangers:

Distance Between Hangers ..... 3 ft  
 Number of Hangers ..... 86  
 Number of Hanger Adapters ..... 86  
 Number of Hoist Grips ..... 1  
 Number of Grounding Straps ..... 3



## 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 - Dave Hultsman, Regional Sales Manager

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