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## Optimum aerial lengths for DAB & FM

Pure Support - UK - 2019-05-20 - in DAB Specific

### **Optimum aerial lengths for DAB & FM**

DAB and FM (Wavelength(Lambda) = Speed of Light(m/s) / Frequency(Hz))

#### **DAB (170 - 240 MHz)**

Bottom of Band 3:

1 Wavelength =  $3 \times 10^8 / 175 \times 10^6 = 1.71$  meters. 1/4 wave = 43cm and 1/2 wave = 86cm

Top of Band 3:

1 Wavelength =  $3 \times 10^8 / 240 \times 10^6 = 1.25$  meters. 1/4 wave = 31.3cm and 1/2 wave = 62.6cm

#### **FM**

Bottom of Band 2

1 Wavelength =  $3 \times 10^8 / 87.5 \times 10^6 = 3.4$  meters So 1/4 wave = 86cm

Top of Band 2

1 Wavelength =  $3 \times 10^8 / 108 \times 10^6 = 2.8$  meters So 1/4 wave = 69.4cm