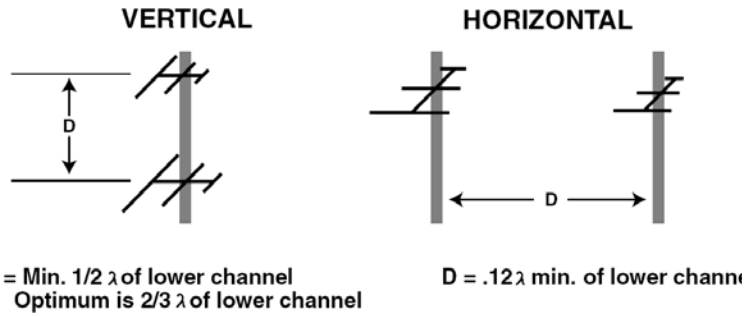
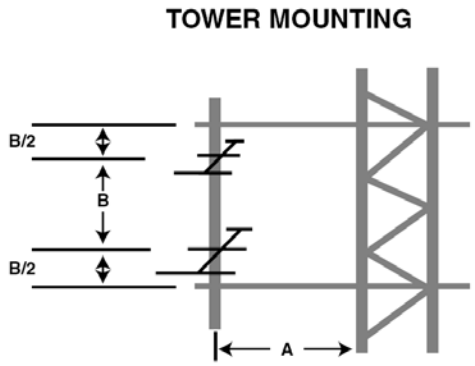
# Antenna Spacing

## Mounting Channelized Antennas on the Same Mast




NOTE: Refer to Antenna Spacing Chart for dimensions

# Antenna Spacing Chart

**Dimension Notes:**

A) The minimum horizontal spacing between the tower structure and the antenna crossbar.

B) The recommended vertical spacing for a gain of 3 dB.

| Channel No. | A | B 2/3 λ | C 1 λ | D 1/2 λ |
|---|---|---|---|---|
| 2 | 113 | 138 | 208 | 104 |
| 3 | 101 | 125 | 188 | 94 |
| 4 | 91 | 115 | 172 | 86 |
| 5 | 78 | 100 | 150 | 75 |
| 6 | 72 | 93 | 139 | 70 |
| FM | 72 | 80 | 120 | 60 |
| 7 | 40 | 44 | 67 | 33 |
| 8 | 39 | 43 | 65 | 32 |
| 9 | 37 | 42 | 62 | 31 |
| 10 | 36 | 40 | 61 | 30 |
| 11 | 35 | 39 | 59 | 29 |
| 12 | 34 | 38 | 57 | 29 |
| 13 | 34 | 37 | 55 | 28 |

Dimensions are in inches

B/2) The minimum vertical spacing between the antenna crossbar and adjacent mechanical structures.

C) The recommended horizontal spacing for a gain of 3 dB.

D) The minimum spacing between antennas of different channels and is the figure given for the antenna with the lowest frequency

**Formulae:**

One Wavelength in space . . . . . .λ (inches) = $\frac{11811}{\text{Freq. in MHz}}$

One Wavelength in 75 Ohm coax (solid) λ (inches) = $\frac{7783}{\text{Freq. in MHz}}$

One Wavelength in 75 Ohm coax (foam) . . . .λ (inches) = $\frac{9565}{\text{Freq. in MHz}}$

Antenna Nulling (finding H) . . . . . .d (λ) = $\frac{1}{2 \sin \phi}$