

J Pole calculator

J-pole antenna dimensions by frequency. Radiator, stub, gap, and feed point measurements.

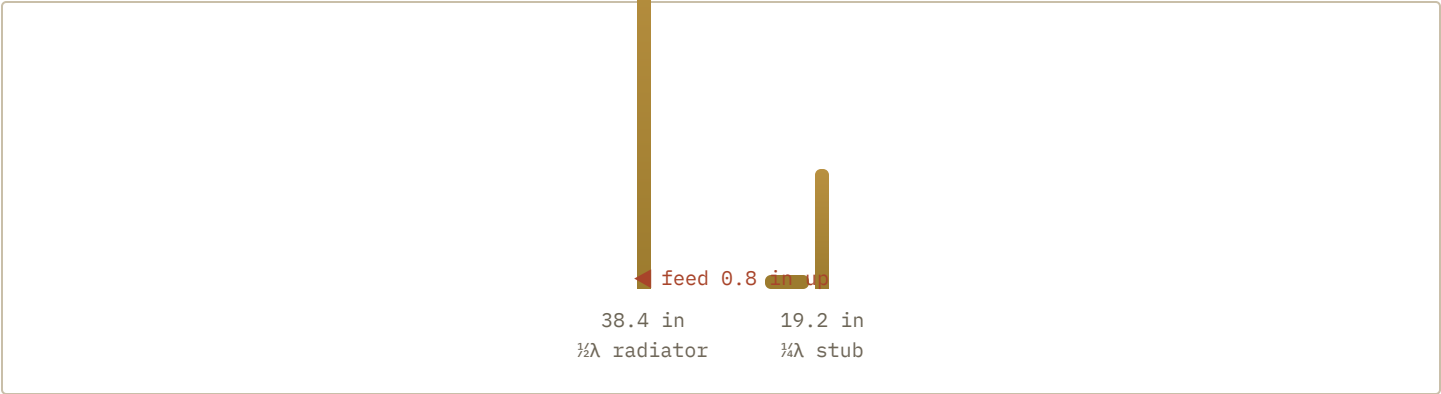
FREQUENCY (MHZ)

146.0

VELOCITY FACTOR

0.95

copper pipe ~0.95, aluminum ~0.96, twin-lead ~0.82



Total length (3/4 wave) 58.0 in / 147.3 cm

Radiator (1/2 wave) 38.4 in / 97.5 cm

Stub (1/4 wave) 19.2 in / 48.8 cm

Gap 10 mm

Feed point from bottom 0.8 in / 2.0 cm

Pipe spacing (center-to-center) 1.5 in / 39 mm

For 2m: use 3/4" copper pipe from a hardware store. Total height is about 58 inches. Solder a tee fitting at the bottom to join the two pipes with 1.5 inch center-to-center spacing. Feed point position is a starting point. Slide the coax connection up or down on the stub to minimize SWR. Most builds land 3-5% up from the bottom. Use a VF of 0.82 for twin-lead (300-ohm ladder line) construction instead of copper pipe.