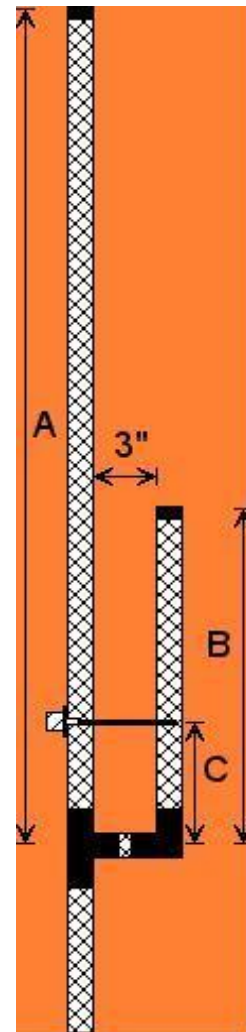


## Single band copper pipe "J" Antenna dimensions

Typical, "J" = 3dBd gain w/0-3 degree & 9-15 radiation angles.

Freq. MHz.	Starting point Coax taps "C"		Matching element "B"		Main element "A"		
	.05 wave	.25 wave	.5 wave	.75 wave	1.0 wave		
1.900	24.63	123.2	246.3	369.5	492.6	feet-10ths	
3.800	12.32	61.6	123.2	184.7	246.3	feet-10ths	
7.200	6.50	32.5	65.0	97.5	130.0	feet-10ths	
14.200	3.30	16.5	33.0	49.4	65.9	feet-10ths	
18.145	2.58	12.9	25.8	38.7	51.6	feet-10ths	
21.300	2.20	11.0	22.0	33.0	43.9	feet-10ths	
28.500	1.64	8.2	16.4	24.6	32.8	feet-10ths	
52.500	10.70	53.5	107.0	160.5	213.9	Inches-10ths	
146.565	3.83	19.2	38.3	57.5	76.6	Inches-10ths	
223.000	2.52	12.6	25.2	37.8	50.4	Inches-10ths	
435.000	1.29	6.46	12.91	19.37	25.82	Inches-10ths	
445.000	1.26	6.31	12.62	18.93	25.24	Inches-10ths	
902.000	0.62	3.11	6.23	9.34	12.45	Inches-10ths	
2401.000	0.23	1.17	2.34	3.51	4.68	Inches-10ths	
5668.000	0.10	0.50	0.99	1.49	1.98	Inches-10ths	



**NOTE:** The gray shaded box can be changed by the user to any frequency with no impact to the data algorithm.

Coax: Best performance coax length is odd wave length multiples.

Coax Tap: SO239 connector body soldered to main element with brass brazing rod soldered to matching element.  
Adjust Dimension "C" for best VSWR.

Spacing: The 3" dimension is for the copper pipe T & elbow pieces.

**NOTE:** The HF dimensions are impractical for copper pipe J but in the days before UHV/UHF/SHF this antenna was called a Zepp antenna. If you want to make a ZEPP out of wire then also multiple the dimensions by 0.97 wire velocity factor to get closer to the actual.