

HF antenna & feeder lengths in metres

Band	MHz		Quarterwave				Halfwave			Fullwave			
	CW	SSB	¼ wave	Less 5%	¼ x 0.66	¼ x 0.82	½ wave	Less 5%	½ x 0.66	Full	Less 5%	Plus 10%	F x 0.66
160m	1.825		41.07	39.01	27.38	33.68	82.13	78.03	54.76	164.27	156.06	180.70	109.51
		1.850	40.51	38.49	27.01	33.22	81.02	76.97	54.02	162.05	153.95	178.25	108.03
80m	3.520		21.29	20.23	14.19	17.46	42.58	40.45	28.39	85.17	80.91	93.69	56.78
		3.800	19.72	18.74	13.15	16.17	39.45	37.47	26.30	78.89	74.95	86.78	52.60
40m	7.025		10.67	10.14	7.11	8.75	21.34	20.27	14.23	42.68	40.54	46.94	28.45
		7.100	10.56	10.03	7.04	8.66	21.11	20.06	14.07	42.22	40.11	46.45	28.15
30m	10.120		7.41	7.04	4.94	6.07	14.81	14.07	9.87	29.62	28.14	32.59	19.75
20m	14.020		5.35	5.08	3.56	4.38	10.69	10.16	7.13	21.38	20.31	23.52	14.26
		14.250	5.26	5.00	3.51	4.31	10.52	9.99	7.01	21.04	19.99	23.14	14.03
17m	18.075		4.15	3.94	2.76	3.40	8.29	7.88	5.53	16.59	15.76	18.24	11.06
		18.120	4.14	3.93	2.76	3.39	8.27	7.86	5.51	16.54	15.72	18.20	11.03
15m	21.020		3.57	3.39	2.38	2.92	7.13	6.77	4.75	14.26	13.55	15.69	9.51
		21.250	3.53	3.35	2.35	2.89	7.05	6.70	4.70	14.11	13.40	15.52	9.41
12m	24.910		3.01	2.86	2.01	2.47	6.02	5.72	4.01	12.04	11.43	13.24	8.02
		24.950	3.00	2.85	2.00	2.46	6.01	5.71	4.01	12.02	11.41	13.22	8.01
10m	28.020		2.67	2.54	1.78	2.19	5.35	5.08	3.57	10.70	10.16	11.77	7.13
		28.400	2.64	2.51	1.76	2.16	5.28	5.01	3.52	10.56	10.03	11.61	7.04
6m	50.100		1.50	1.42	1.00	1.23	2.99	2.84	1.99	5.98	5.68	6.58	3.99
		52.050	1.44	1.37	0.96	1.18	2.88	2.74	1.92	5.76	5.47	6.34	3.84

Where a full wave in metres = frequency in Hz divided by the speed of light (299,792,458 m/s)

Reduce dipoles by ~5% for end effects. Add 5-10% to fullwave loops. Trim all antennas to resonance in situ.

Cut typical 50R coax 1/3 shorter due to velocity factor, 40% shorter for RG59 75R coax.