

Ham Radio HF/VHF Antenna Lengths Chart.

Here is a handy chart for determining 1/4 wave verticals, 1/2 wave dipoles, and full wave loop lengths.

All antenna lengths in the information below are in feet and are the results based on the standard formula of $468 / \text{FMHz} = \text{total length in feet}$. Loop antenna lengths are based on using $1005 / \text{FMHz} = \text{total loop length in feet}$. As with any antenna, lengths should be cut longer than formula results and then trim as needed for best swr. The chart covers all ham bands from 160 meters through 2 meters only. Note the lengths for the new 60 meter band frequency to be effective March 5, 2012.

Ham Radio HF/VHF Antenna Lengths Chart in Feet				
Ham Band (Meters)	Frequency (Mhz)	1/4 wave (Feet)	1/2 wave Dipole (Feet)	1 wave Loop (Feet)
160	1.800	130' 0"	260' 0"	558' 4"
	1.850	126' 6"	253' 0"	543' 3"
	1.900	123' 2"	246' 4"	528' 11"
	2.000	117' 0"	234' 0"	502' 6"
80	3.500	66' 10"	133' 9"	287' 2"
	3.750	62' 5"	124' 10"	268' 0"
	3.900	60' 0"	120' 0"	257' 8"
	4.000	58' 6"	117' 0"	251' 3"
60	5.330.5	43' 9"	87' 8"	188' 5"
	5.346.5	43' 7"	87' 5"	188' 0"
	NEW 5.357	---	87' 4"	---
	5.371.5	43' 5"	87' 1"	187' 1"
	5.403.5	43' 3"	86' 6"	186' 0"
40	7.000	33' 5"	66' 10"	143' 7"
	7.150	32' 9"	65' 5"	140' 7"
	7.300	32' 1"	64' 1"	137' 8"
Ham Band (Meters)	Frequency (Mhz)	1/4 wave (Feet)	1/2 wave Dipole (Feet)	1 wave Loop (Feet)
30	10.100	23' 2"	46' 4"	99' 6"
	10.150	23' 1"	46' 1"	99' 0"
20	14.000	16' 9"	33' 5"	71' 9"
	14.150	16' 6"	33' 1"	71' 0"
	14.300	16' 4"	32' 9"	70' 3"
	14.350	16' 4"	32' 7"	70' 0"
17	18.068	12' 11"	25' 11"	55' 7"
	18.168	12' 11"	25' 9"	55' 4"

15	21.000	11' 2"	22' 3"	47' 10"
	21.200	11' 0"	22' 1"	47' 5"
	21.450	10' 11"	21' 10"	46' 10"
12	24.890	9' 5"	18' 10"	40' 5"
	24.990	9' 4"	18' 9"	40' 3"
10	28.000	8' 4"	16' 9"	35' 11"
	28.500	8' 3"	16' 5"	35' 3"
	29.700	7' 11"	15' 9"	33' 10"

Note: For 28.400Mhz use formulas below

Ham Band (Meters)	Frequency (Mhz)	1/4 wave (Feet)	1/2 wave Dipole (Feet)	1 wave Loop (Feet)
6	50.000	4' 8"	9' 4"	21' 1"
	54.000	4' 4"	8' 8"	18' 7"
2	144.000	1' 8"	3' 3"	7' 0"
	148.000	1' 7"	3' 2"	6' 9"

Antenna length is based on the following formulas:

1/2 wave dipole (feet) = 468 / frequency in Mhz. (1/4 wave, use 234 / frequency in Mhz)

Full wave loop (feet) = 1005 / frequency in Mhz

Cut total wire length slightly longer for connecting insulators/pruning as needed for lowest swr.