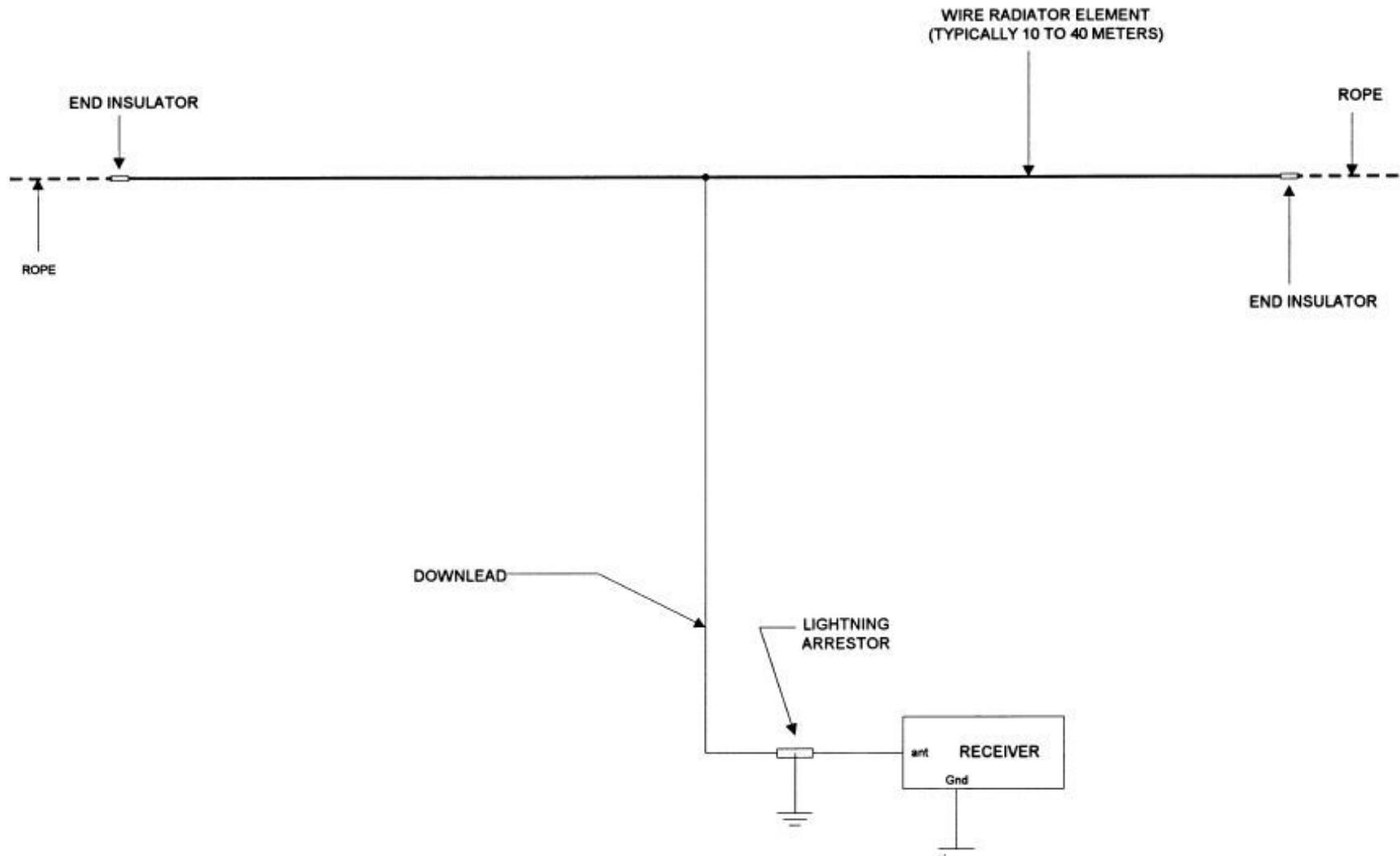


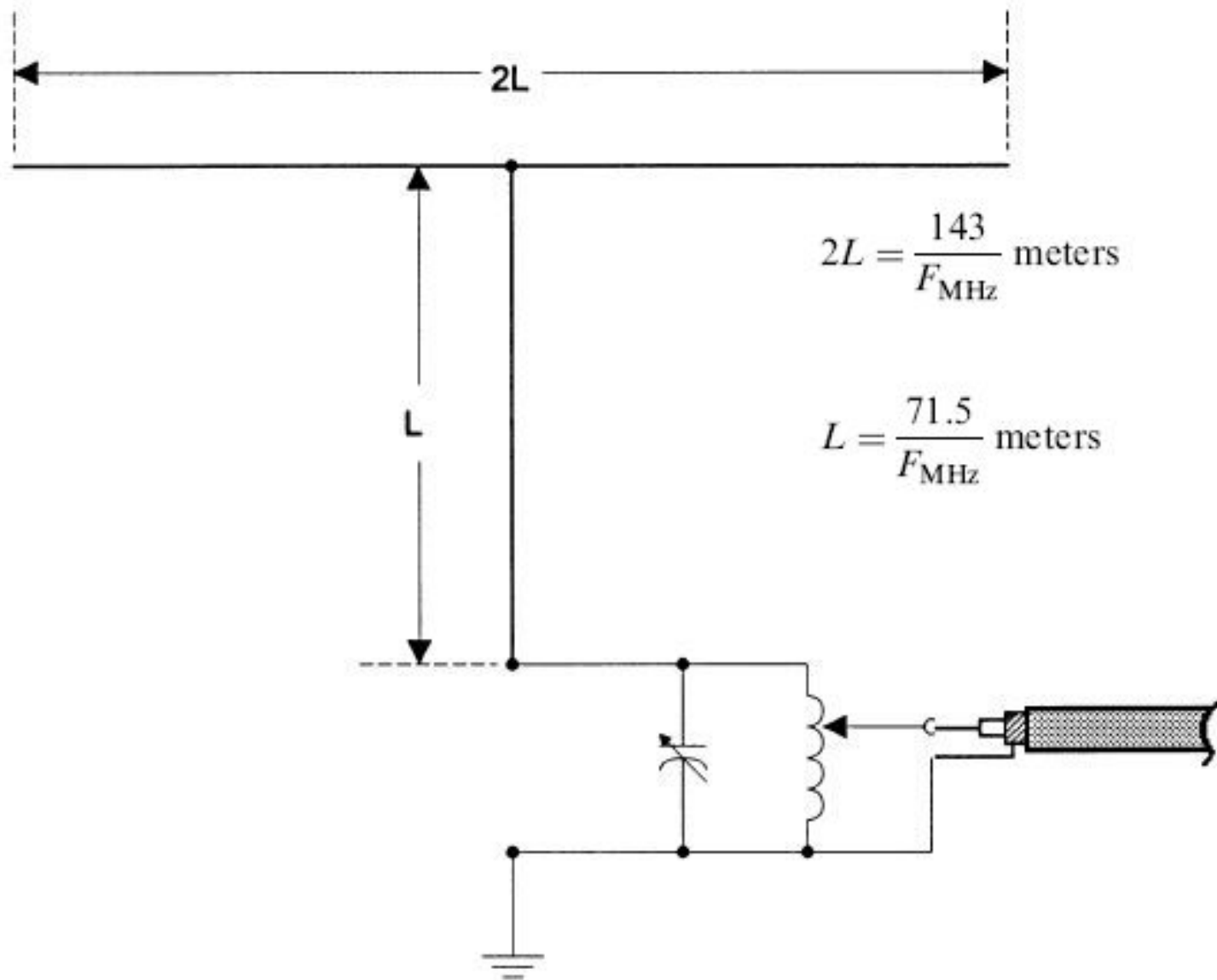
Wire Antennas for Ham Radio

Julian Rosu, YO3DAC / VA3IUL, <http://www.qsl.net/va3iul>

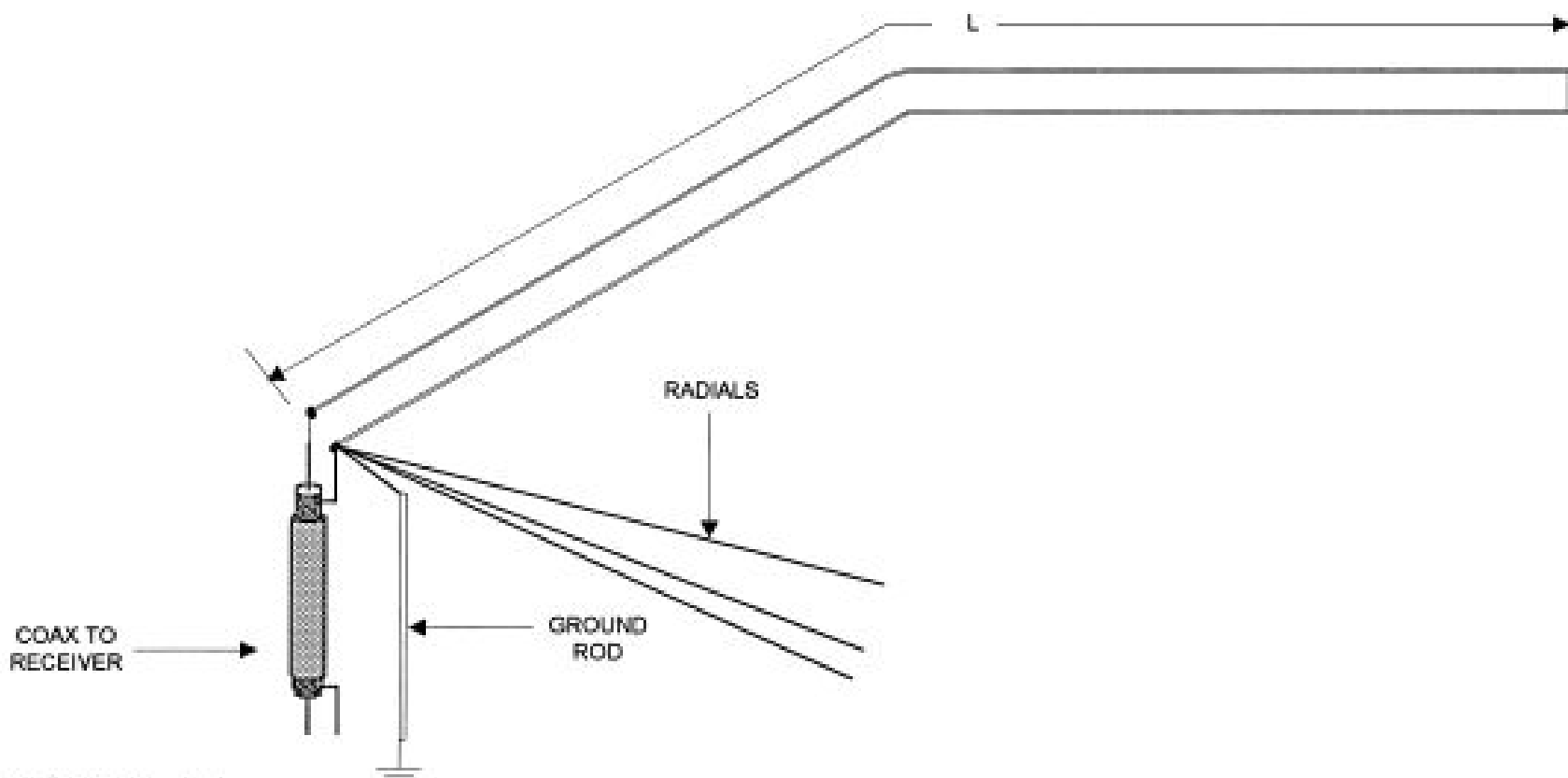
Tee Antenna



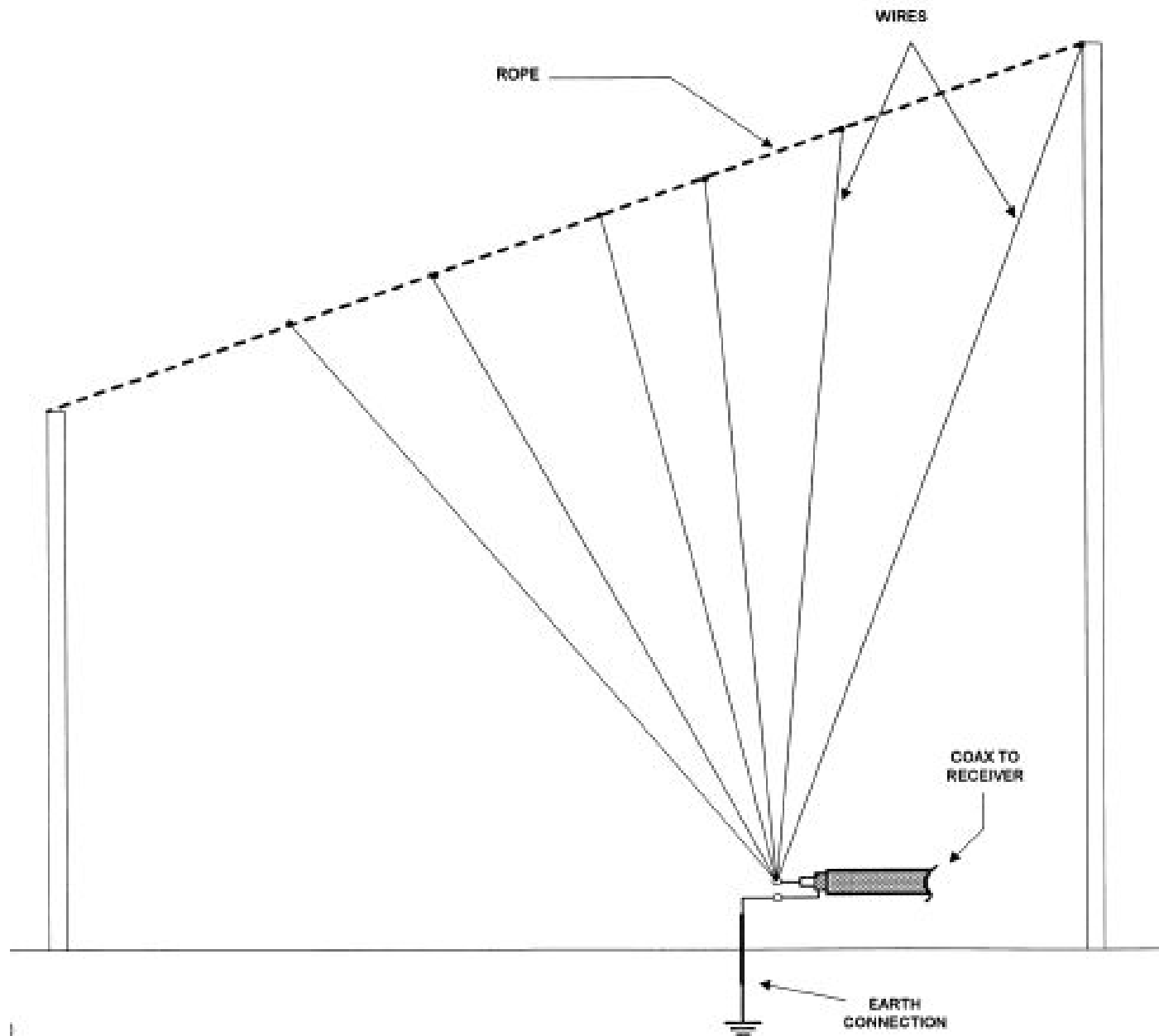
Half-Lambda Tee Antenna



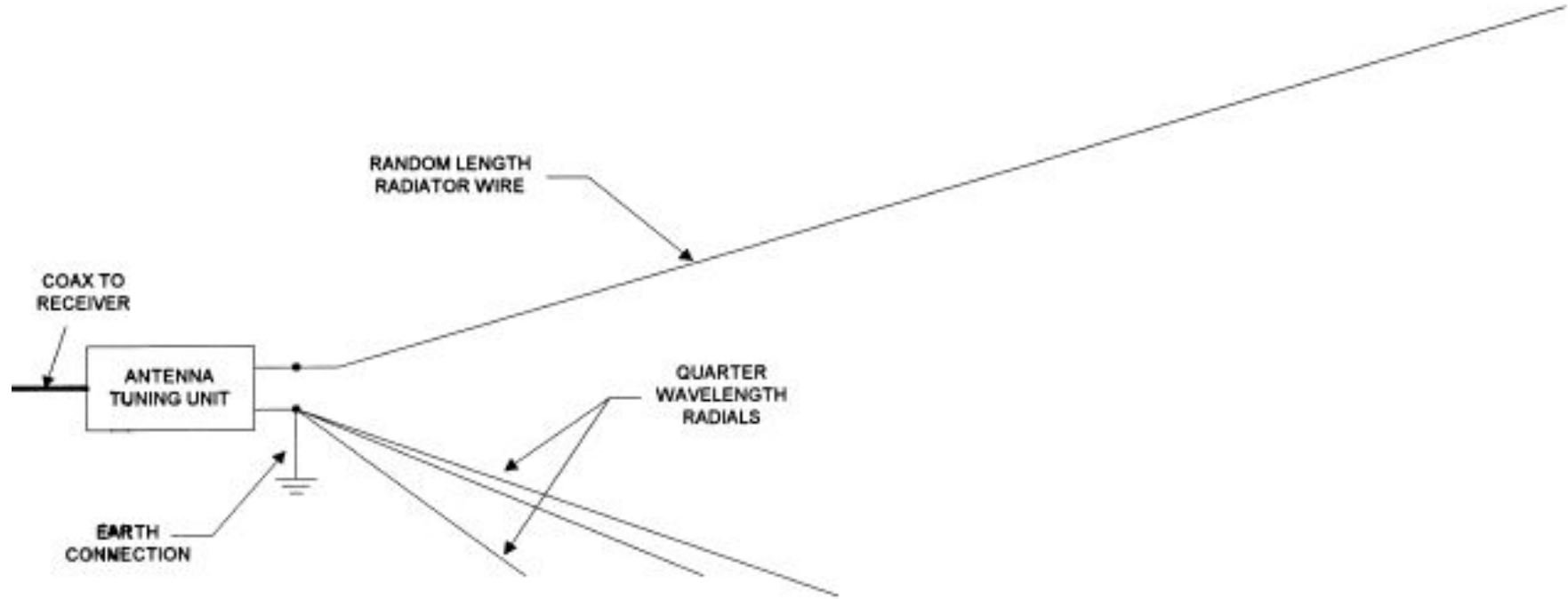
Twin-Led Marconi Antenna



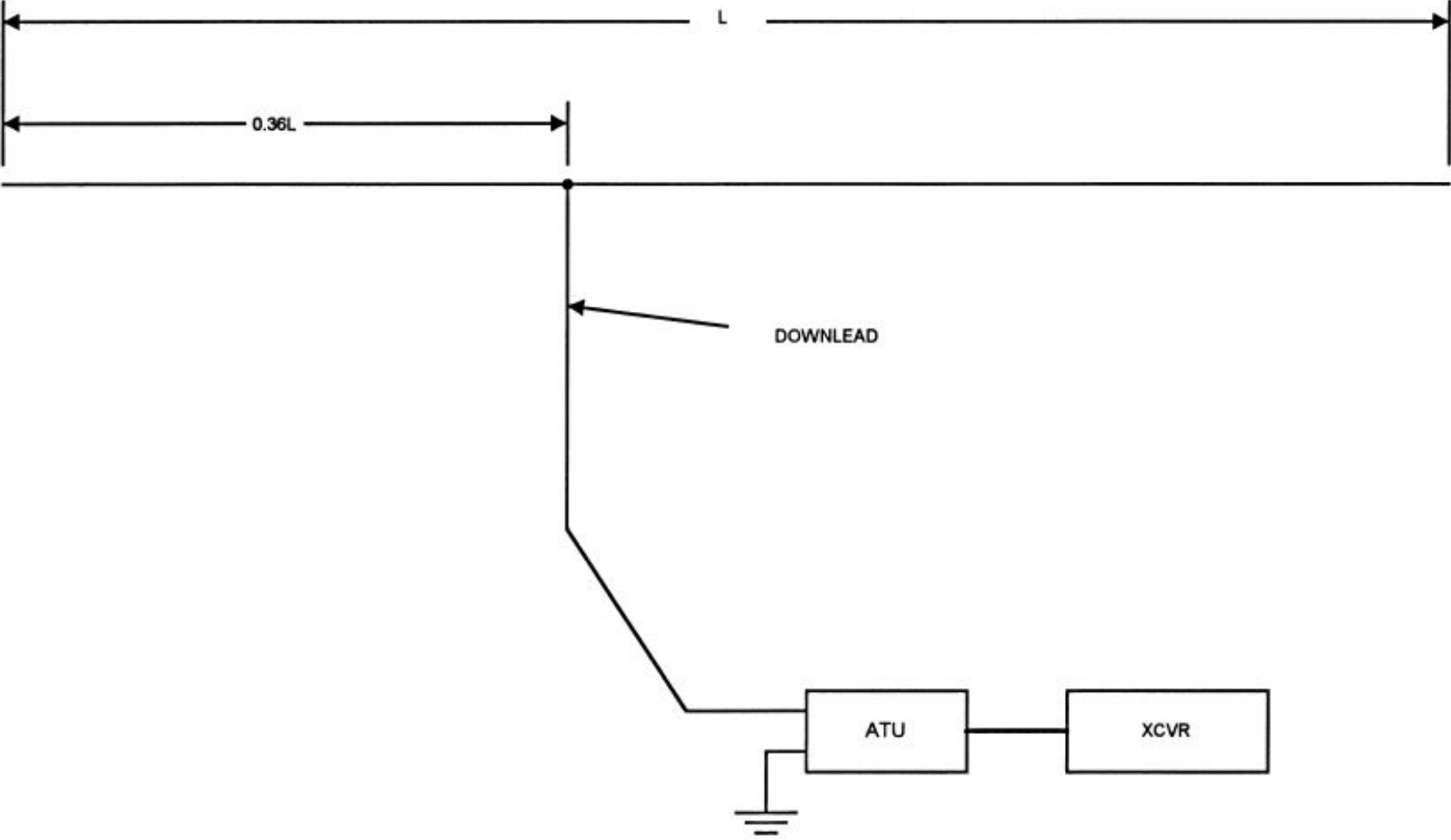
Swallow-Tail Antenna



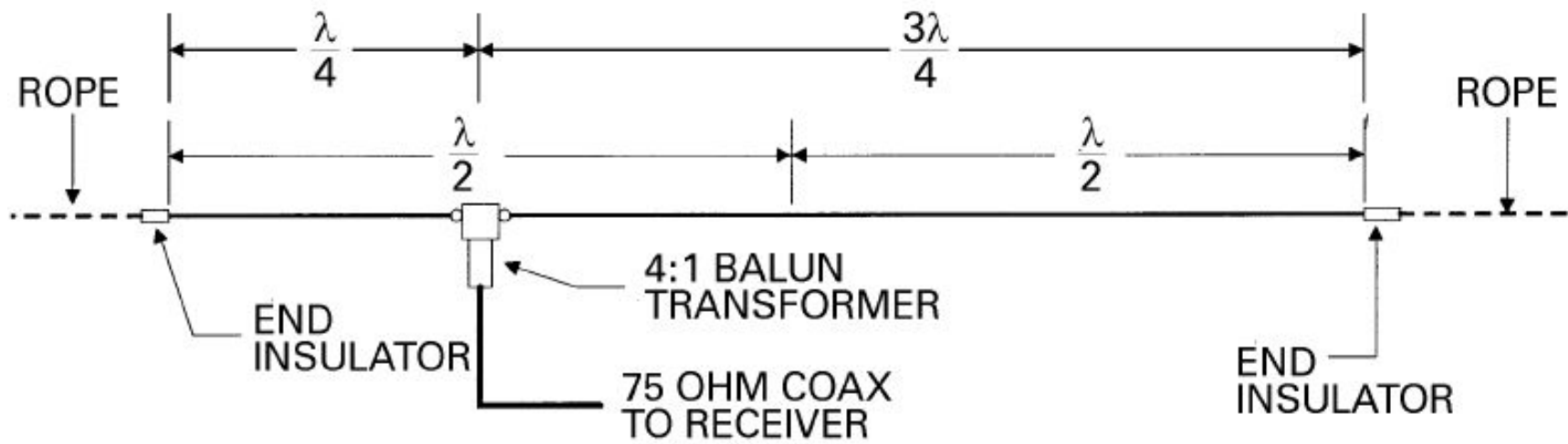
Random Length Radiator Wire Antenna



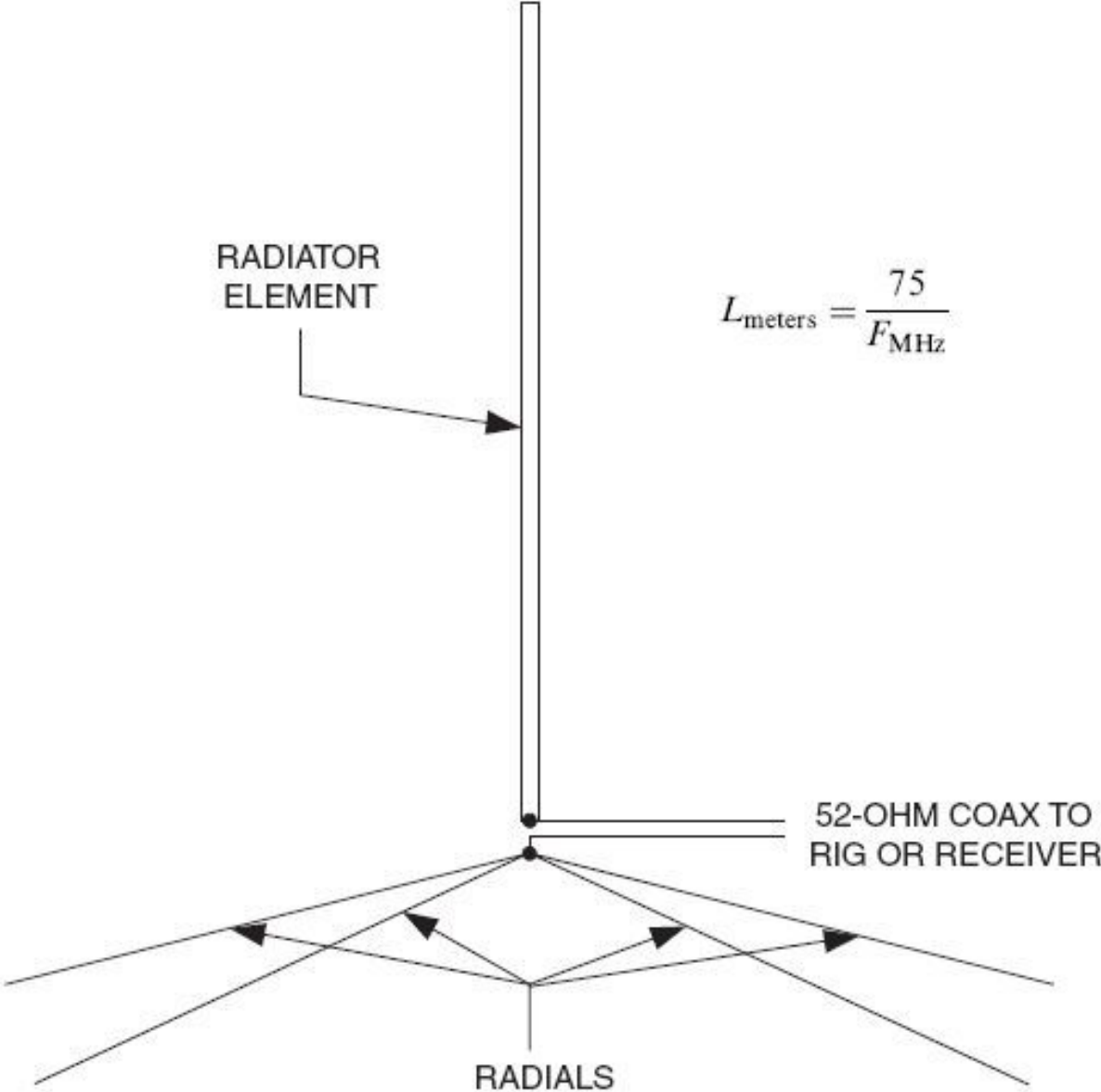
Windom Antenna



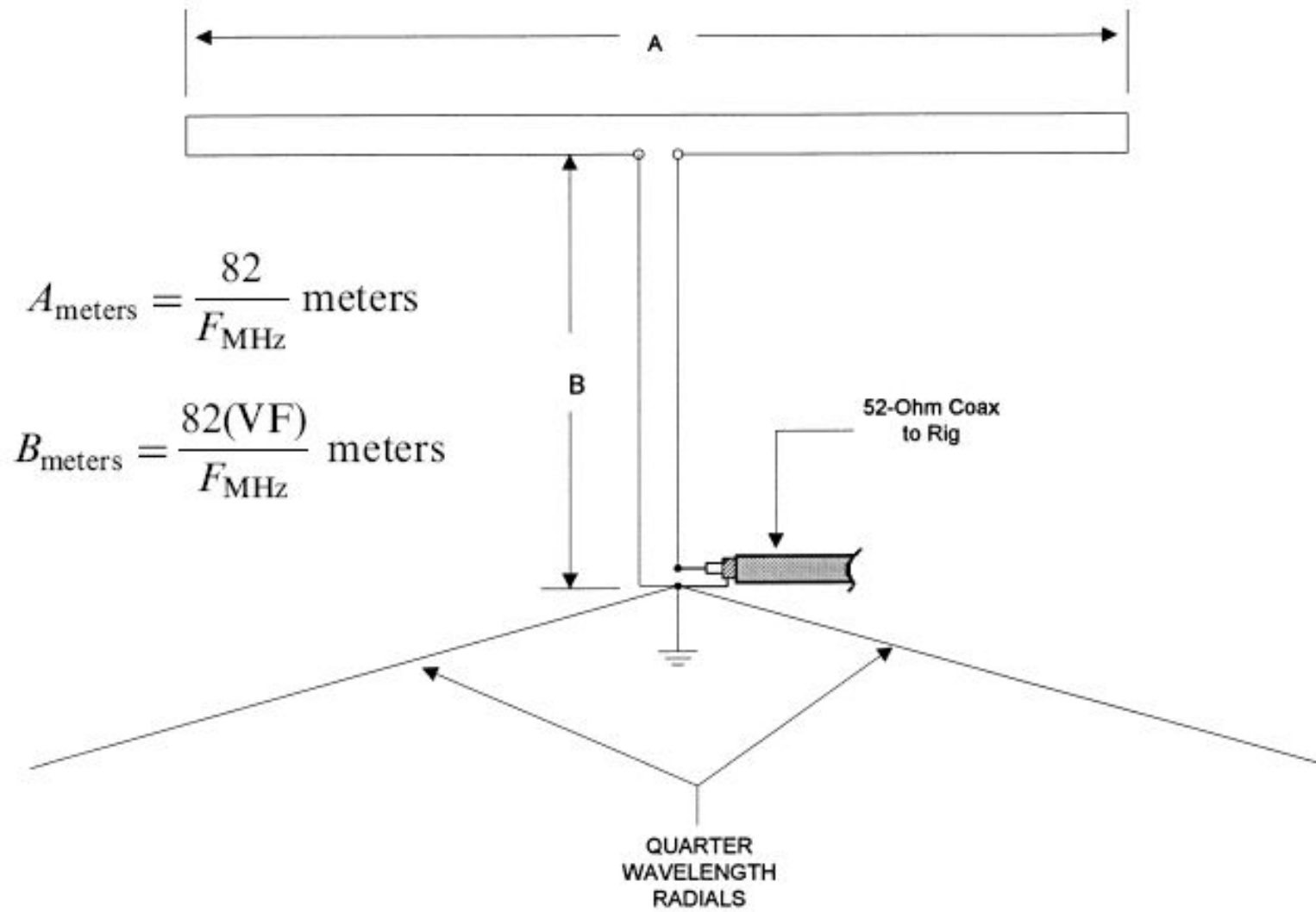
Windom Antenna - Feed with coax cable



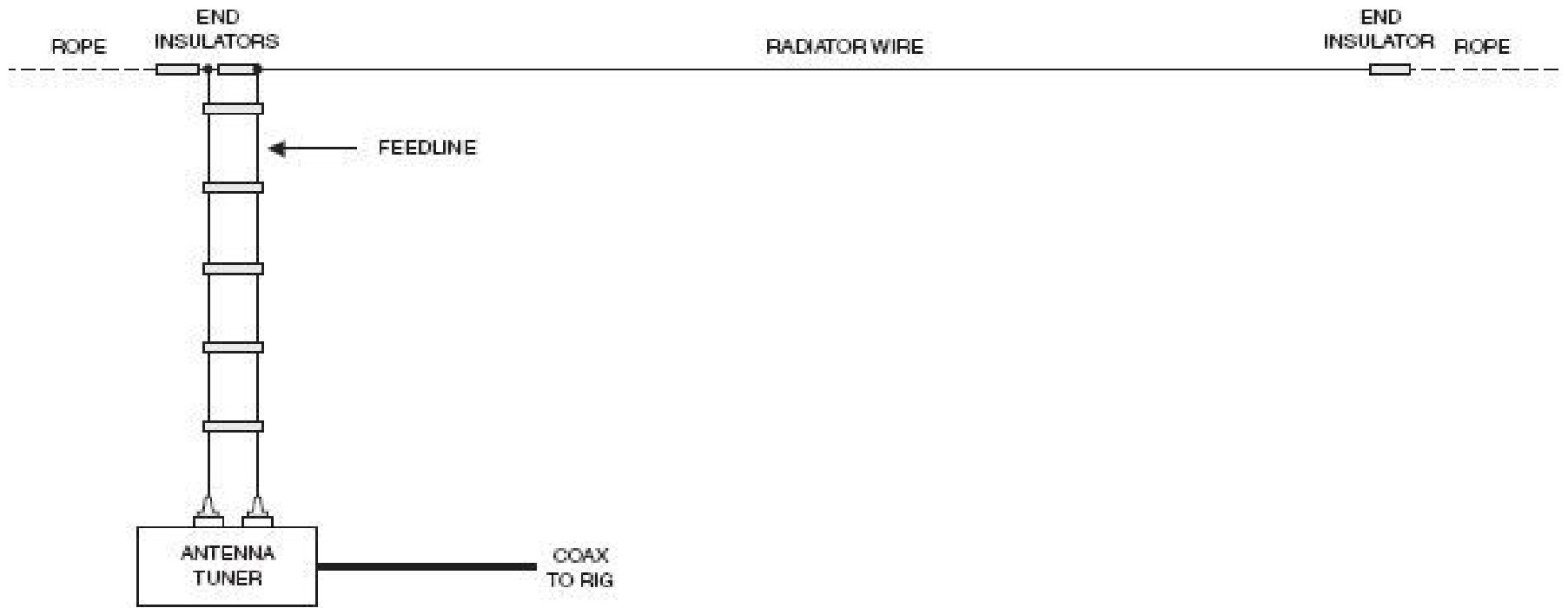
Quarter Wavelength Vertical Antenna



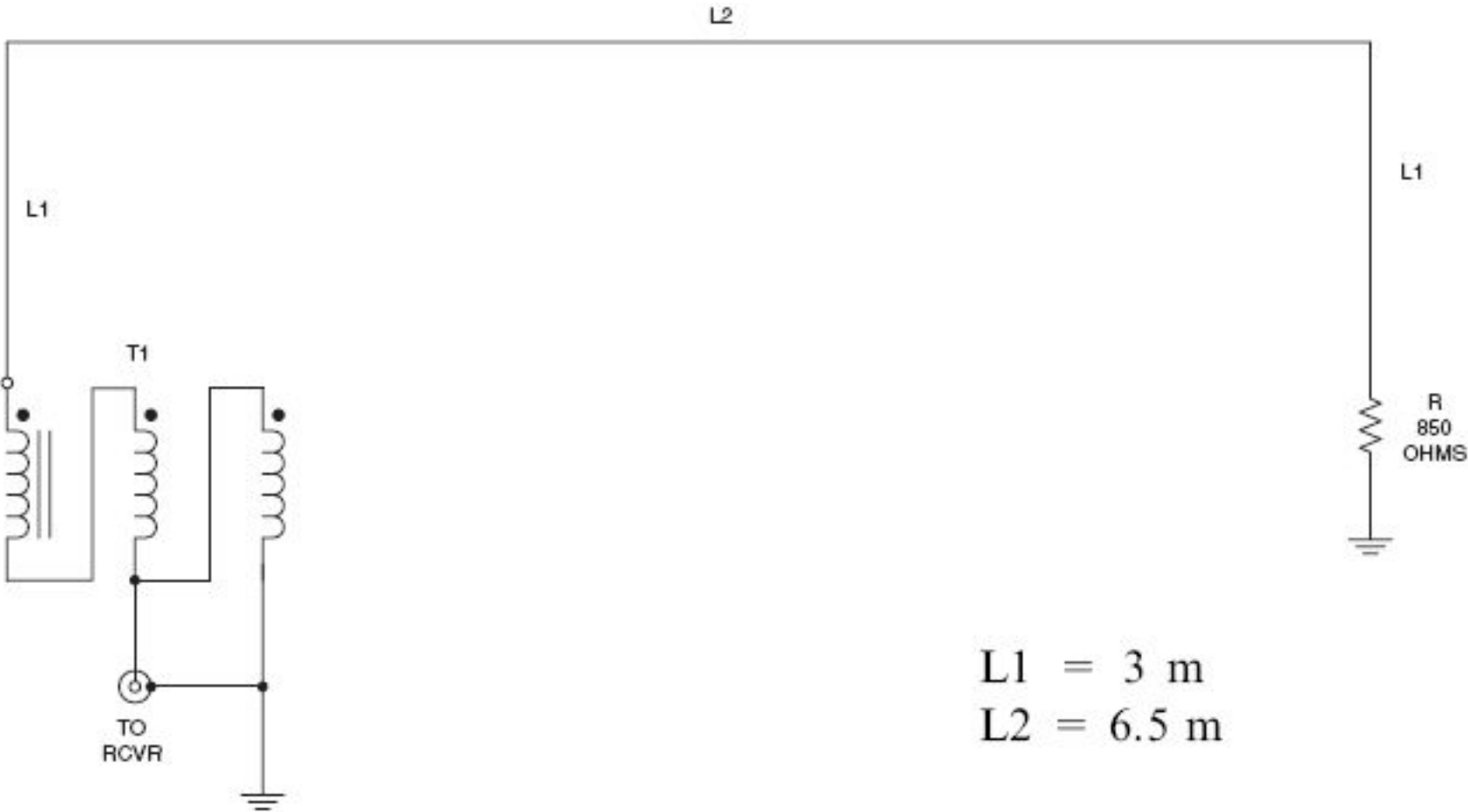
Folded Marconi Tee Antenna



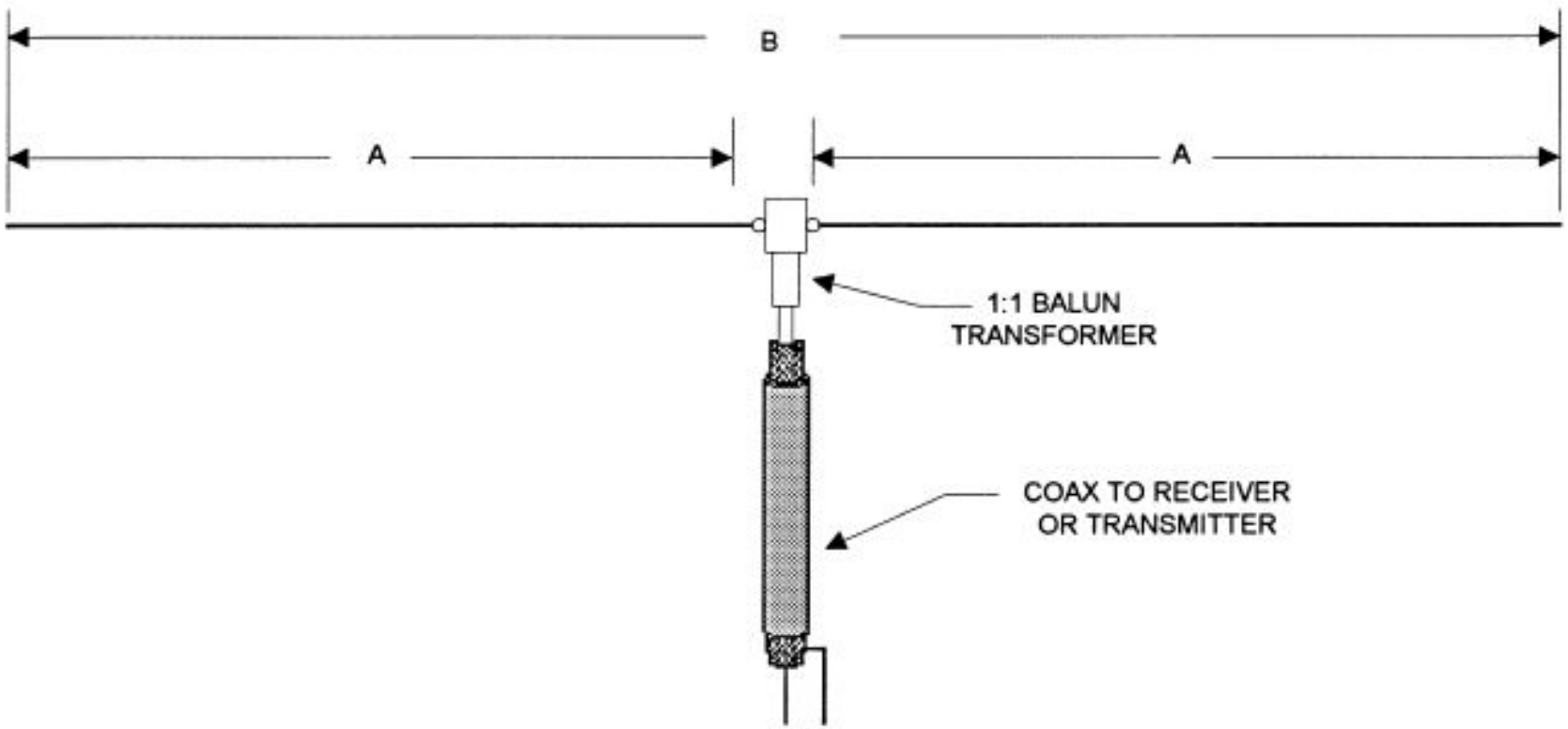
Zeppelin Antenna



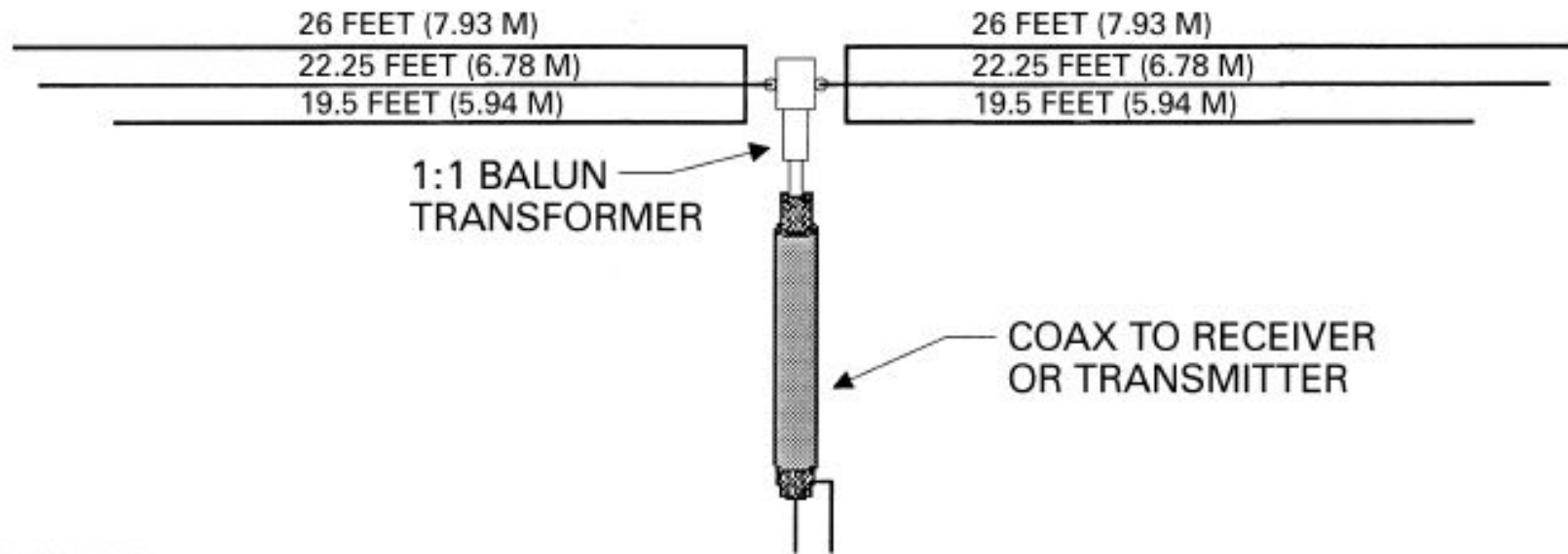
EWE Antenna



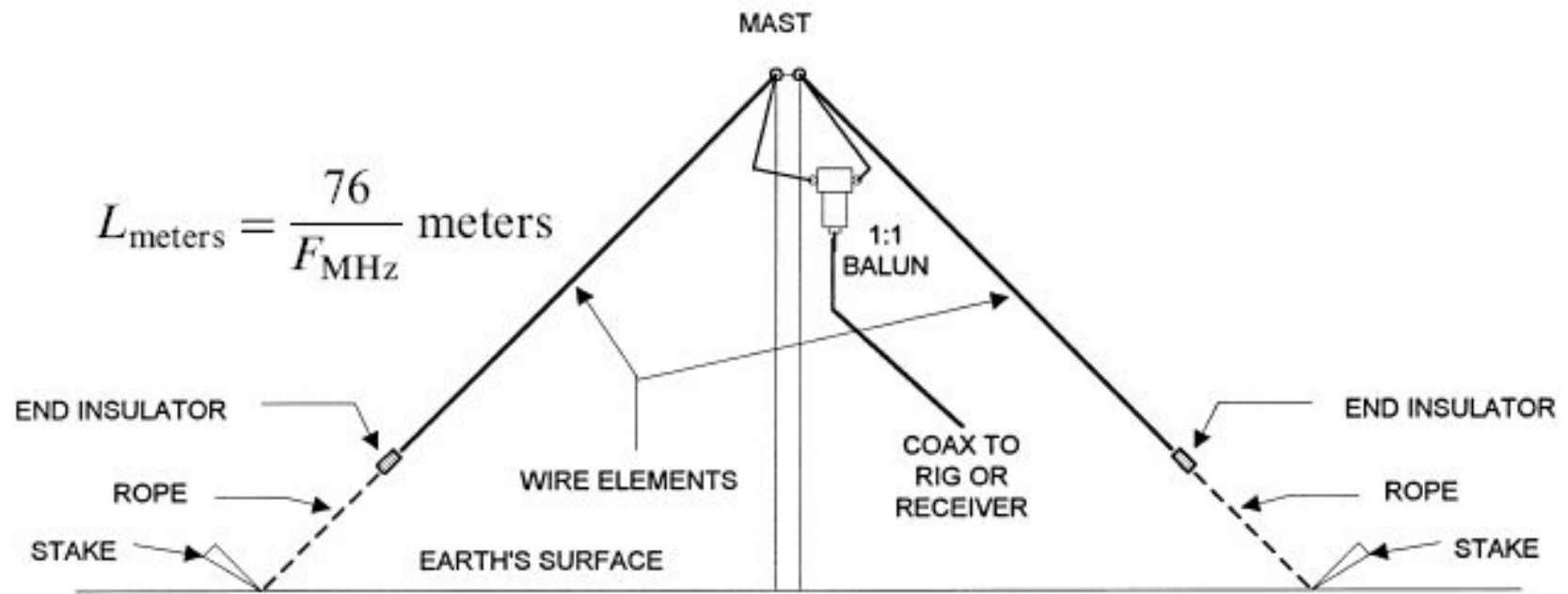
Dipole Antenna - Balun



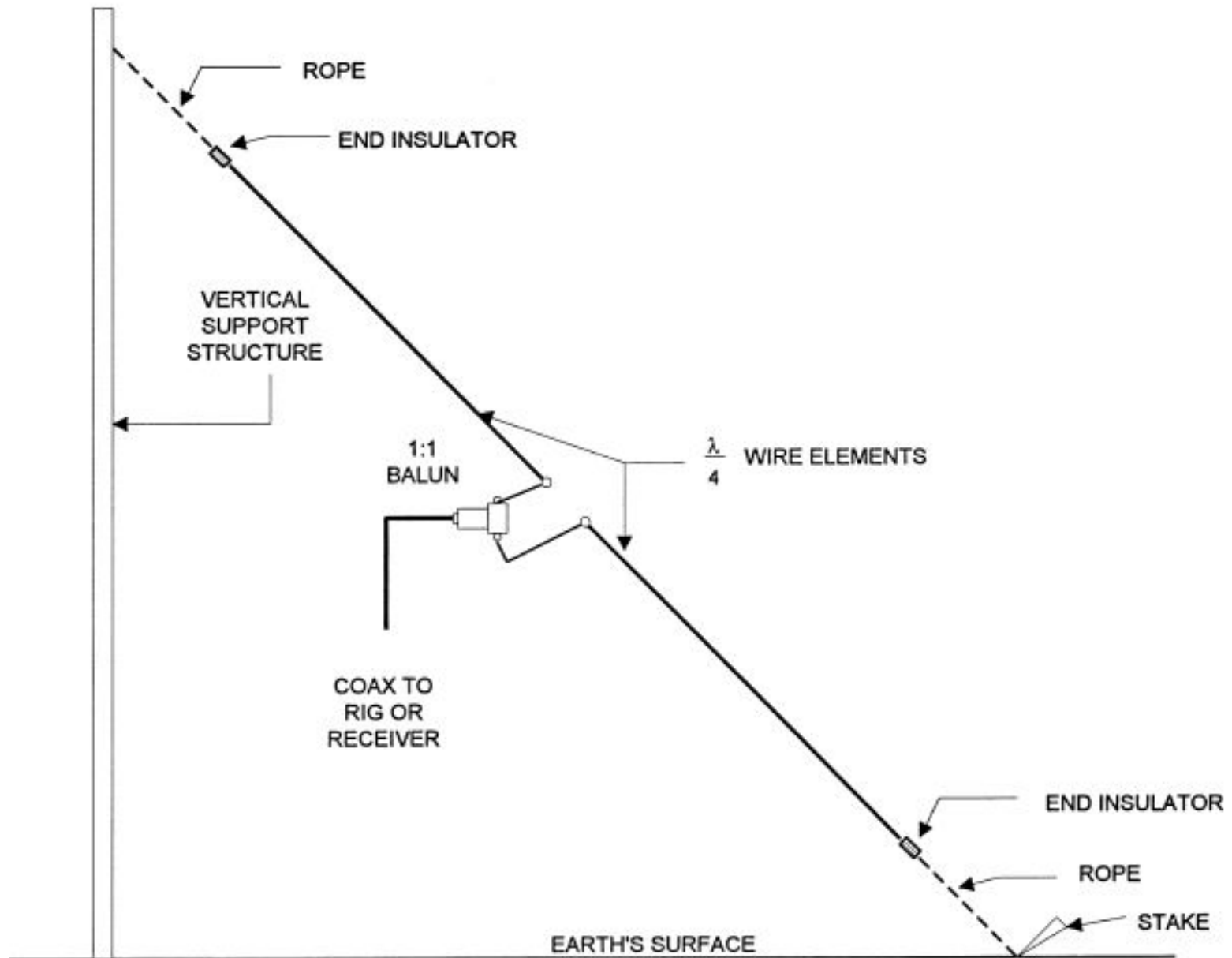
Multiband Dipole Antenna



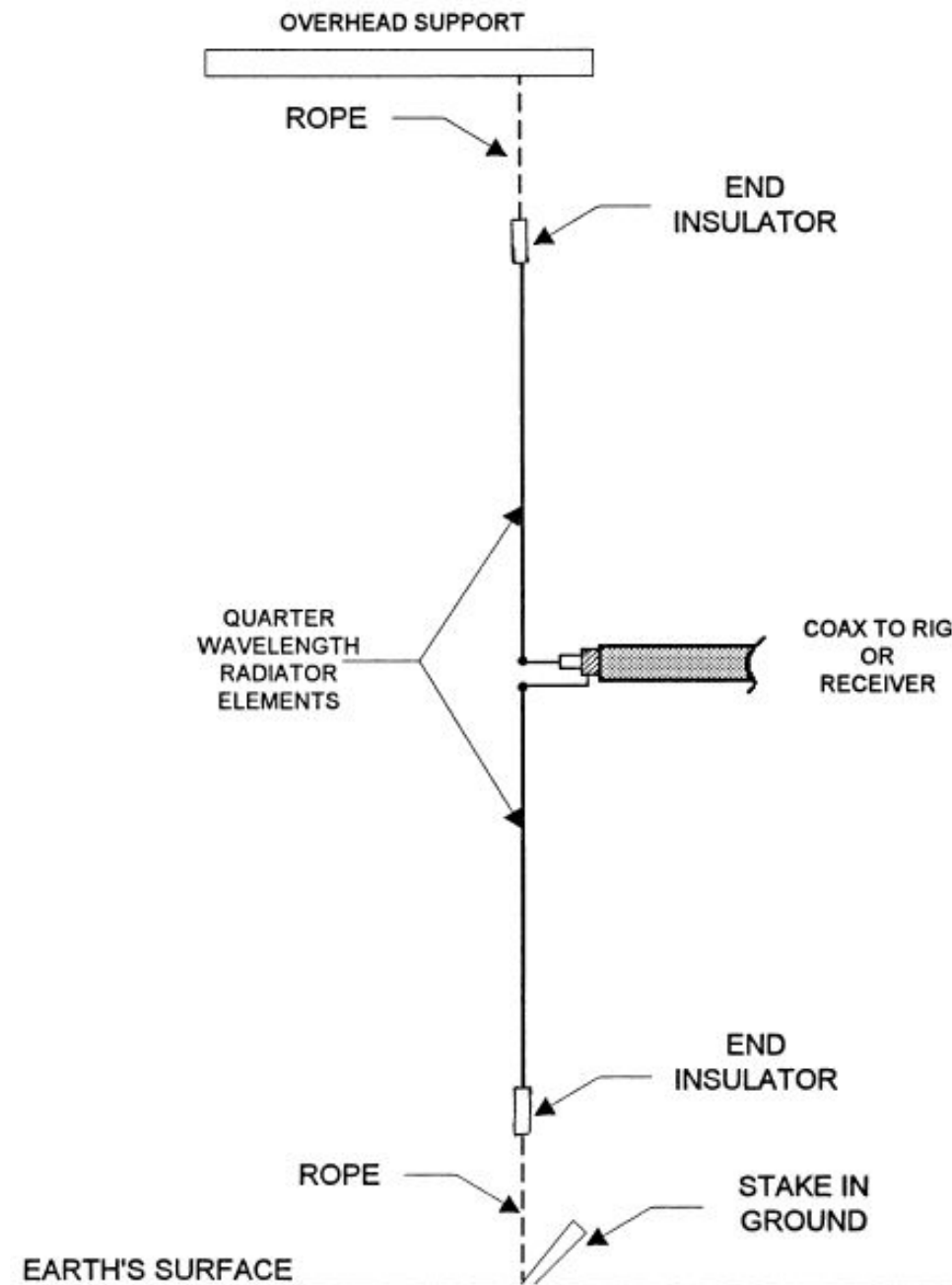
Inverted-Vee Antenna



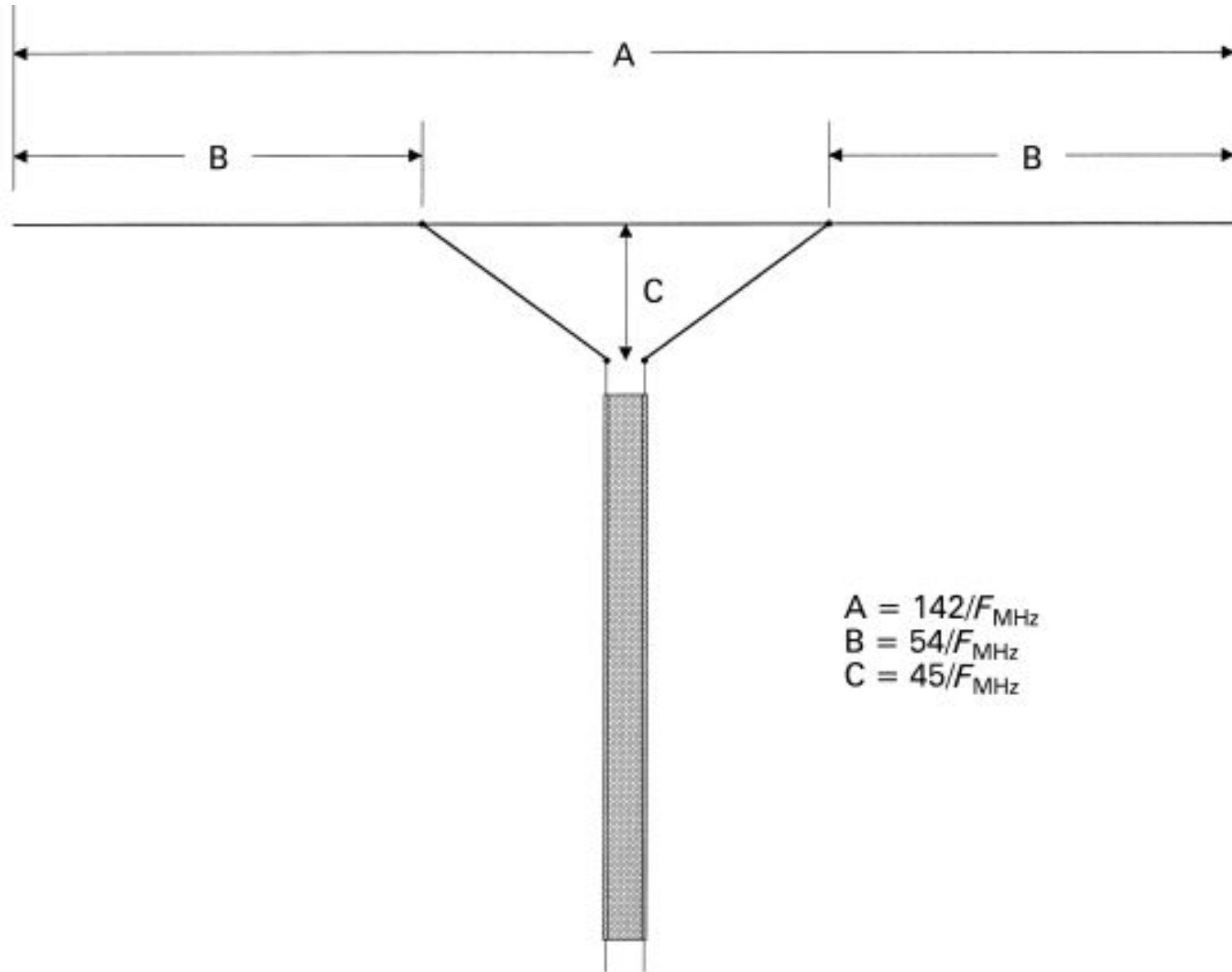
Sloping Dipole Antenna



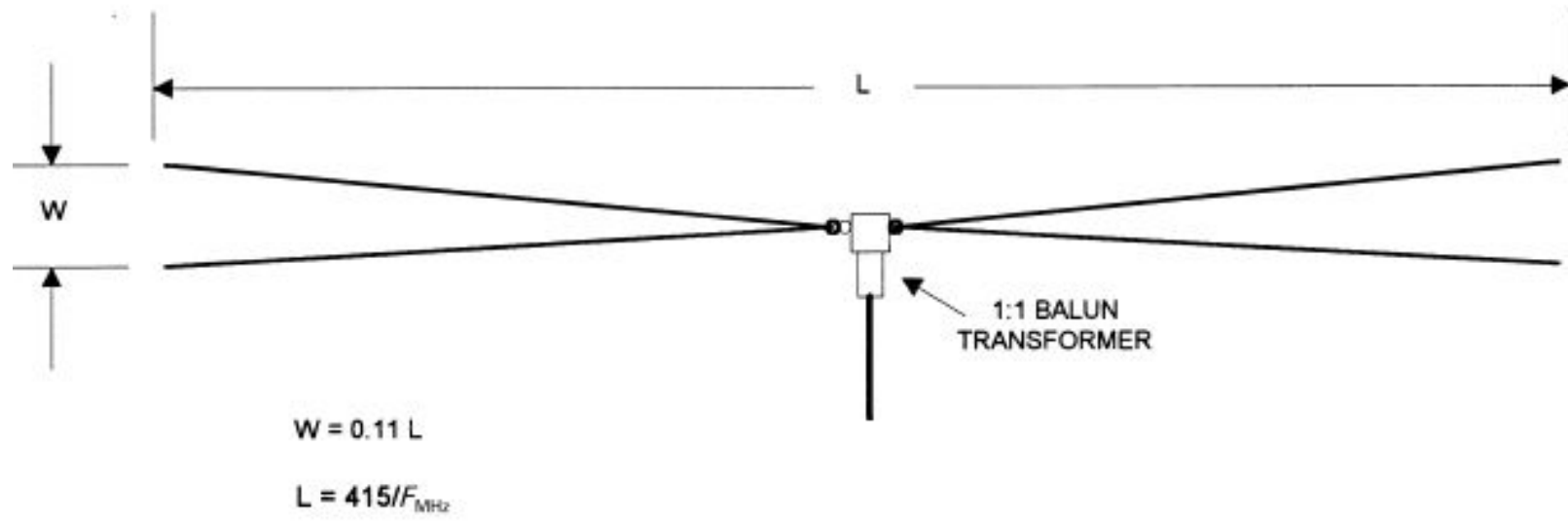
Vertical Dipole



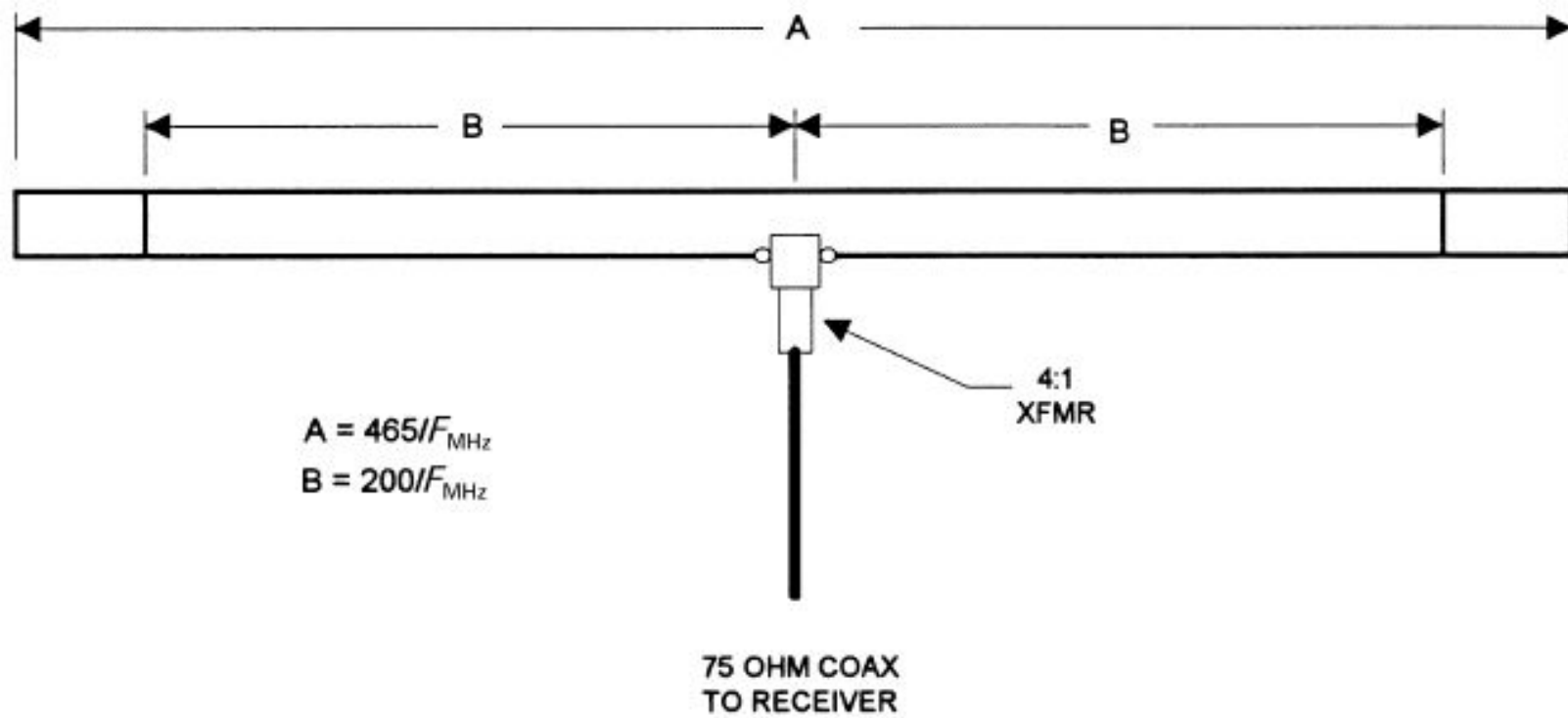
Delta Fed Dipole Antenna



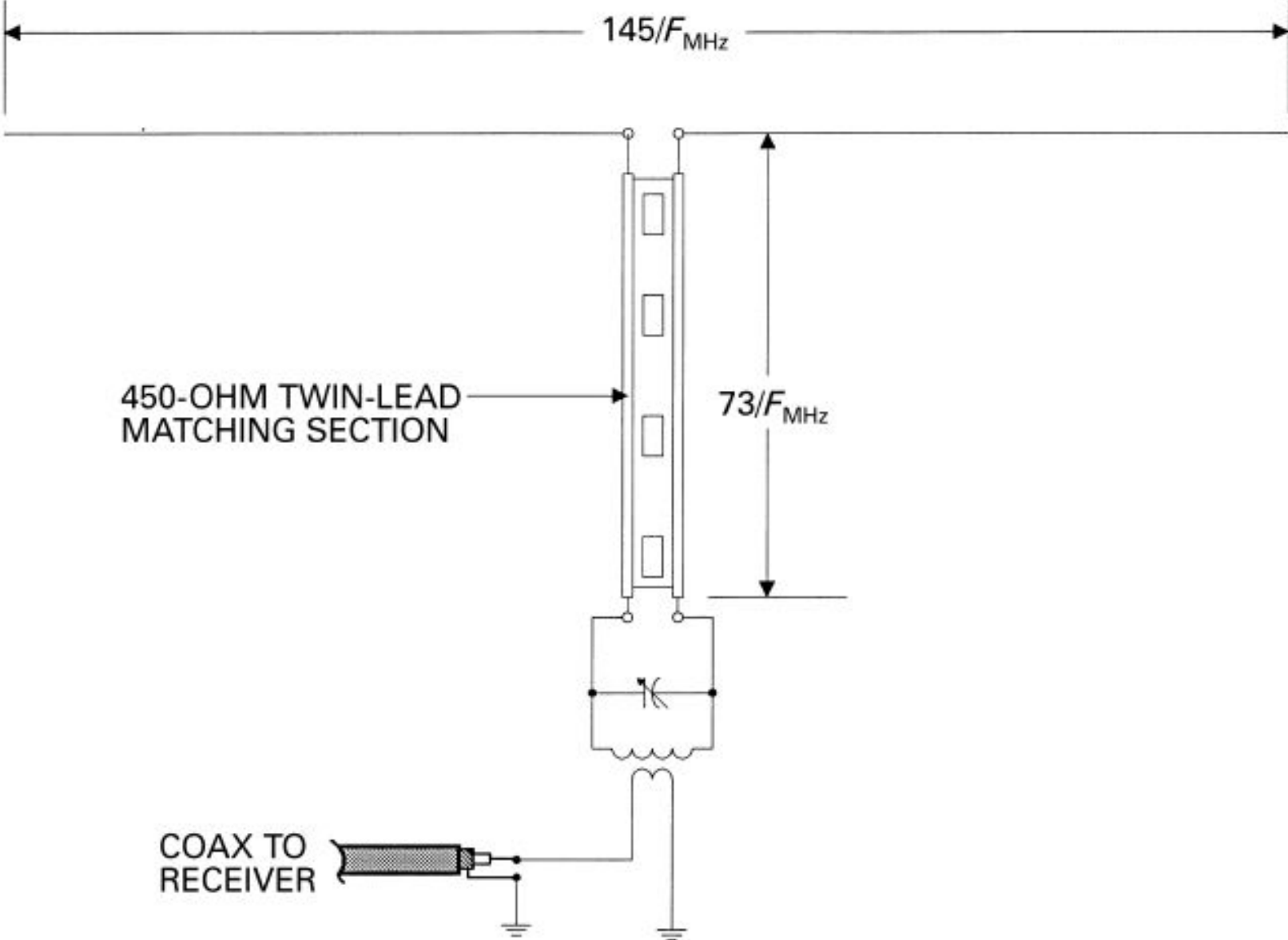
Bow-Tie Dipole Antenna



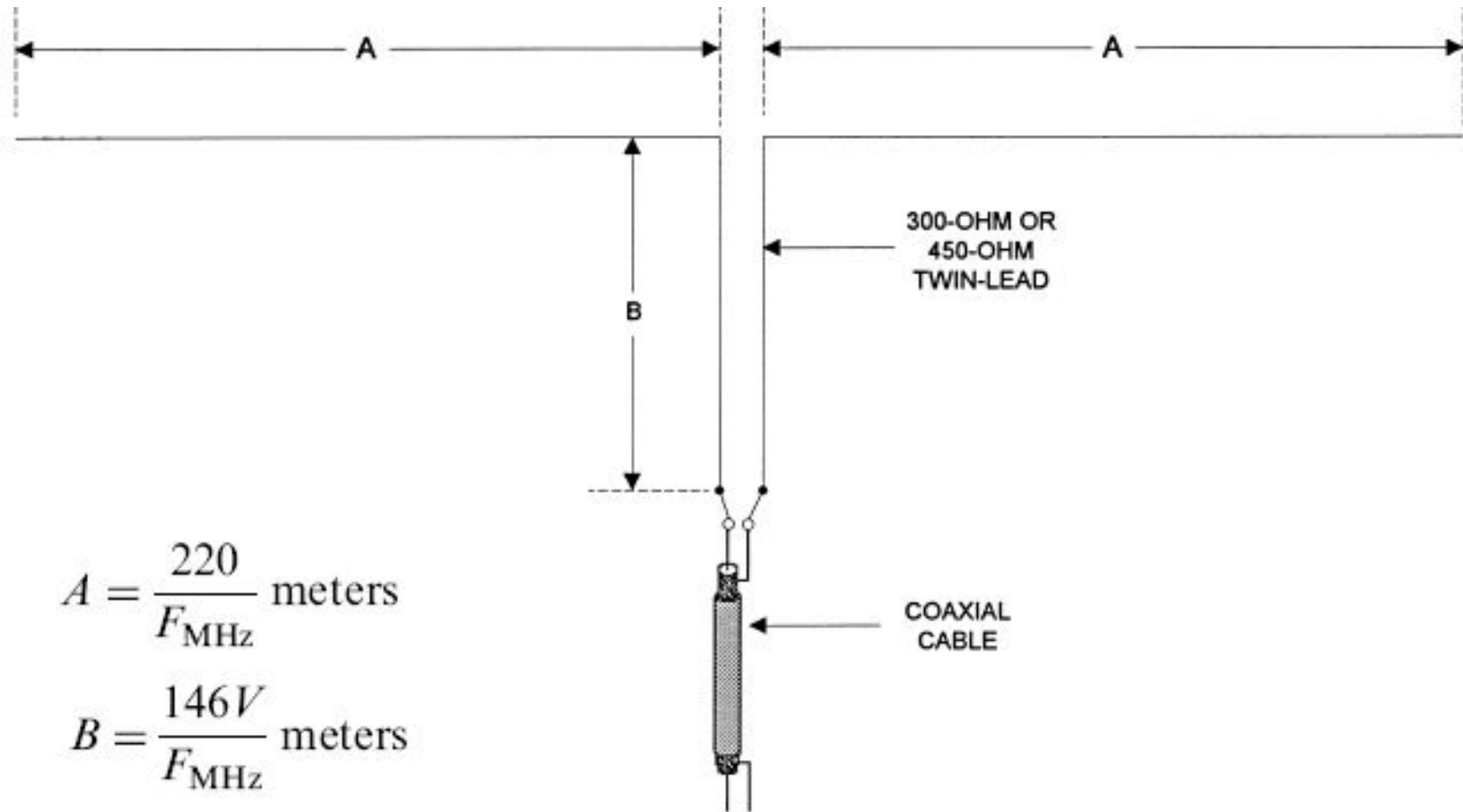
Bow-Tie Dipole Antenna



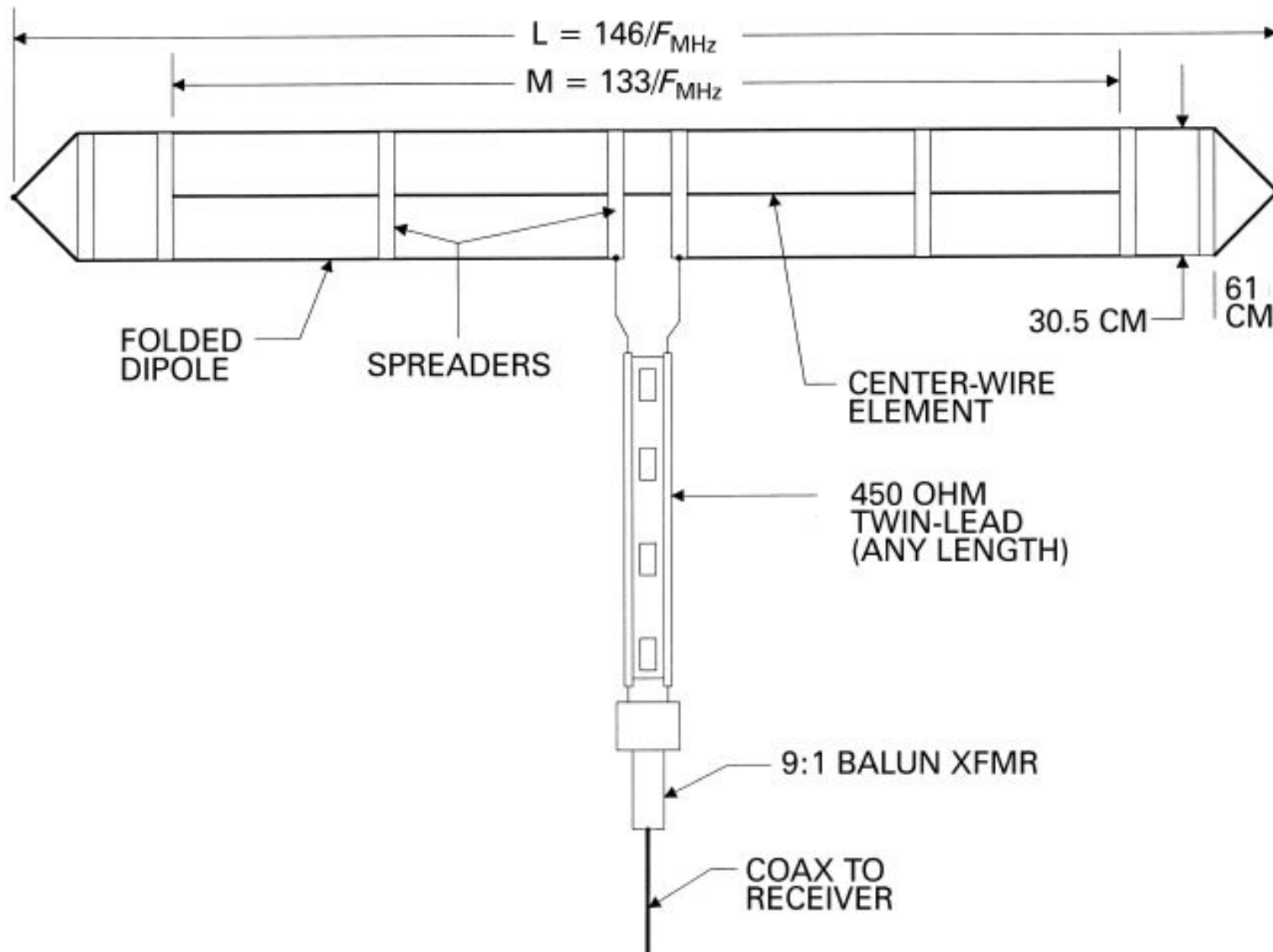
Multiband Tuned Doublet Antenna



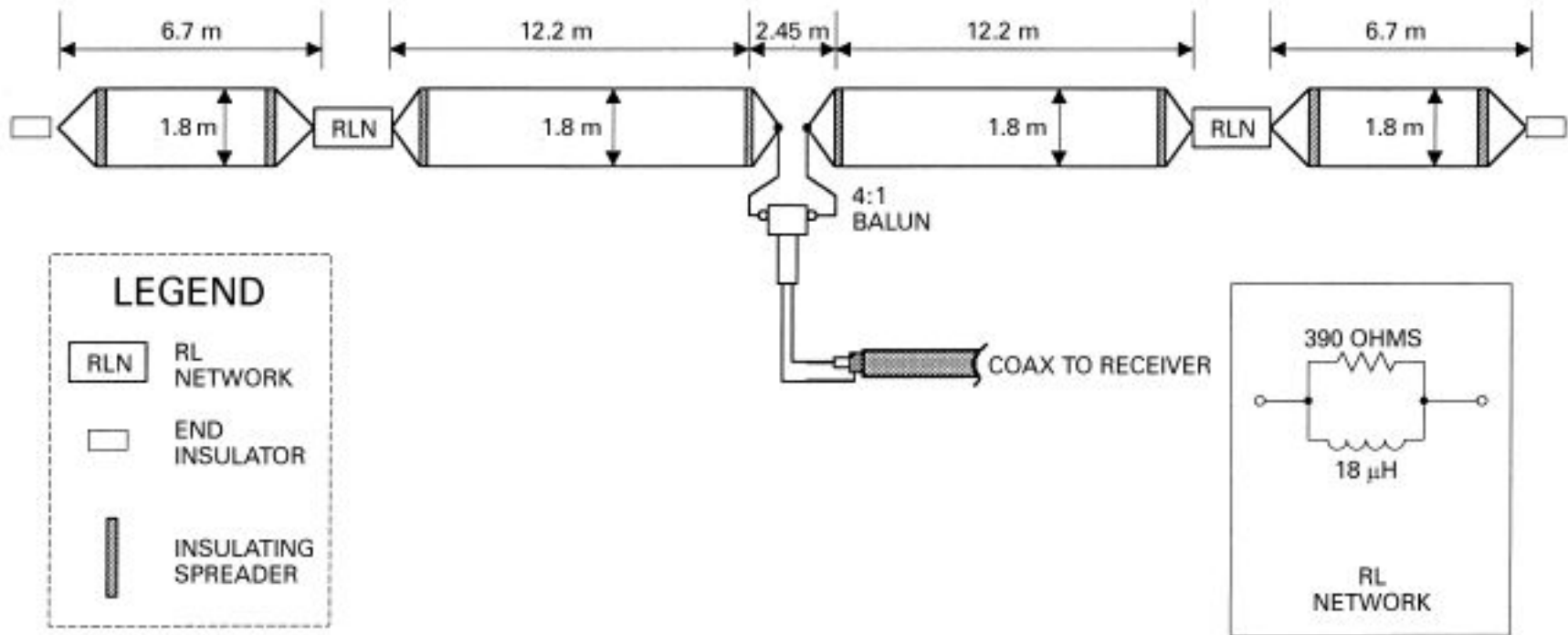
G5RV Antenna



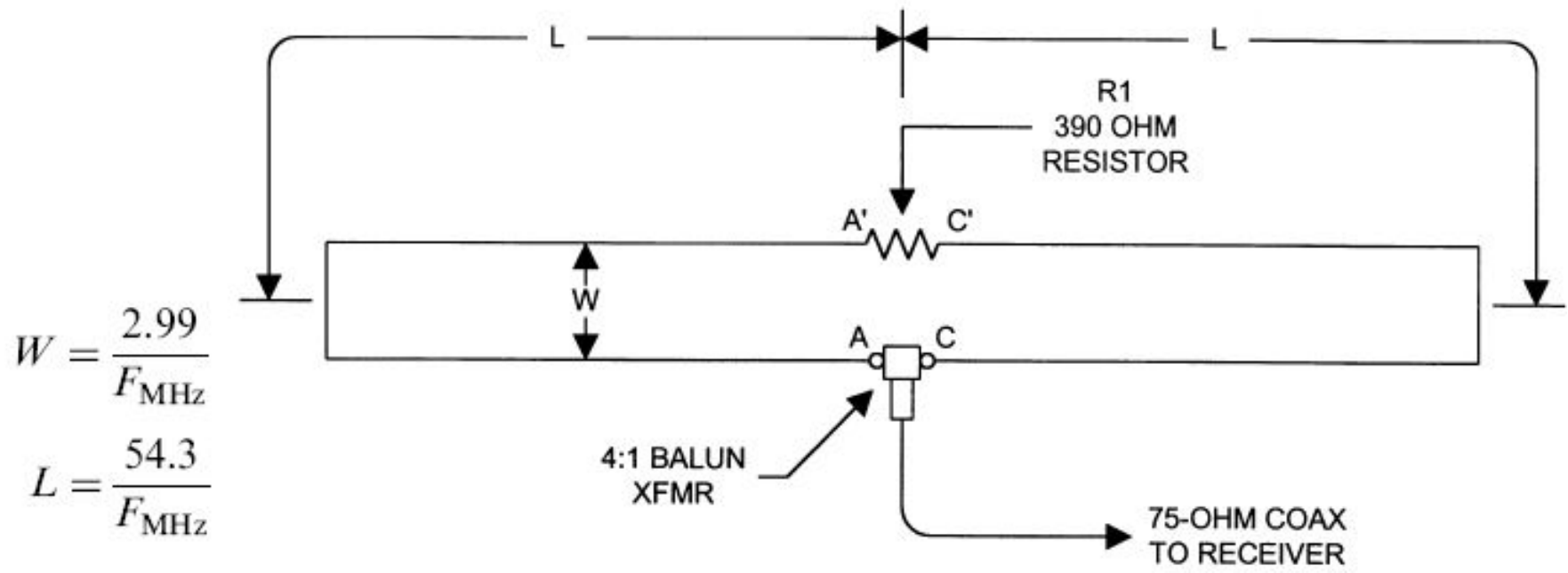
Wideband Dipole Antenna



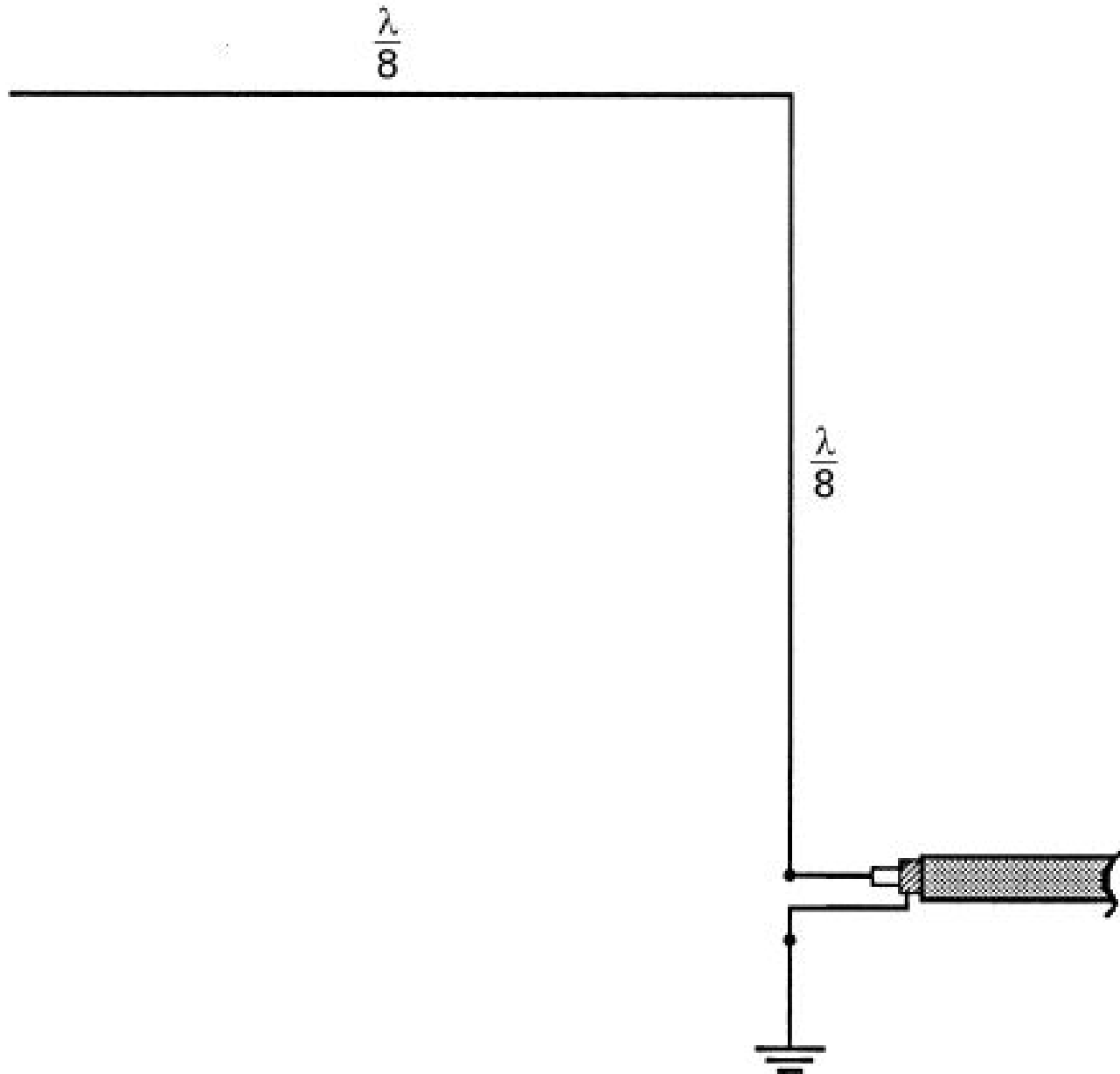
Wideband Dipole for Receiving



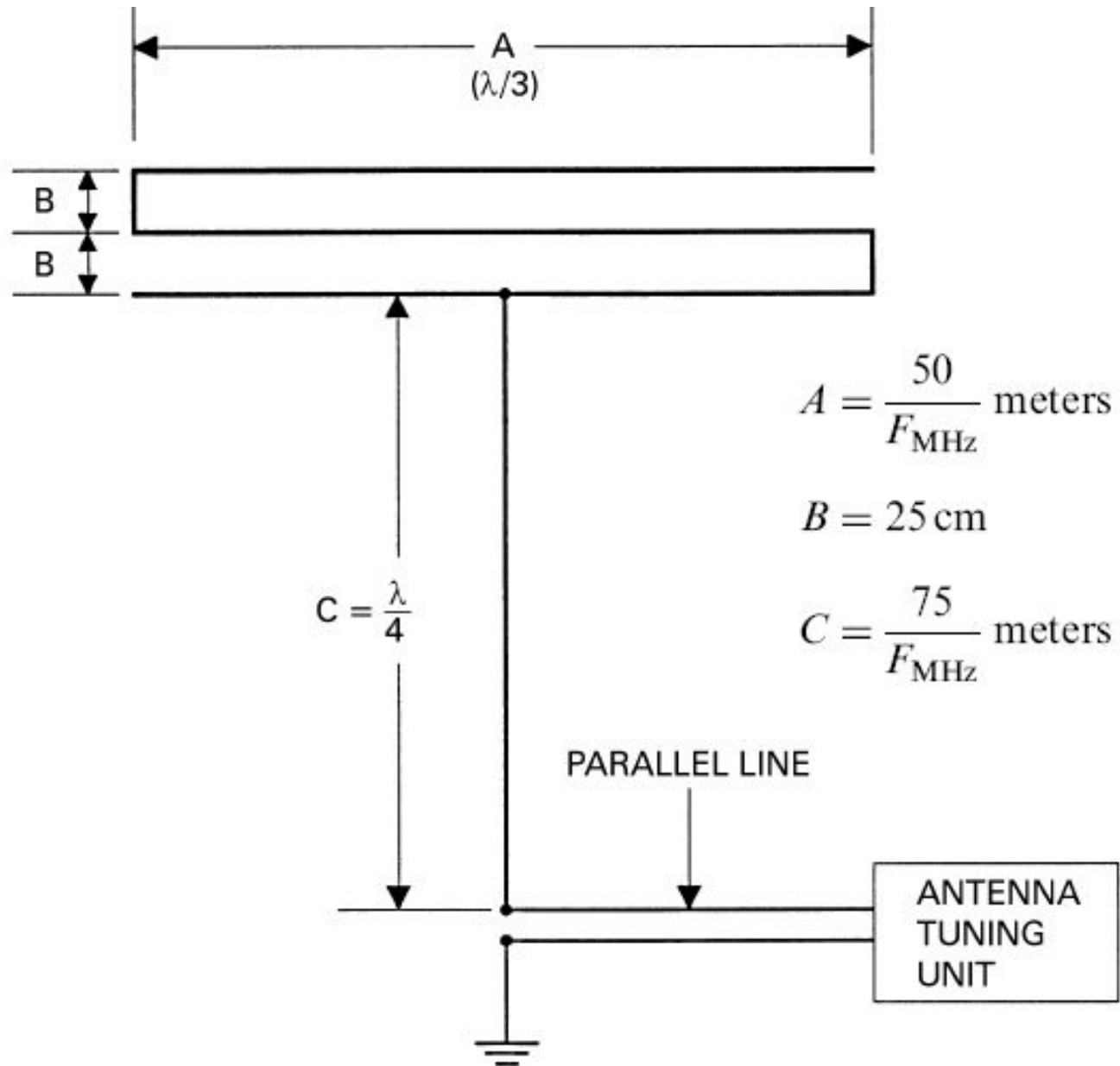
Tilted Folded Dipole Antenna



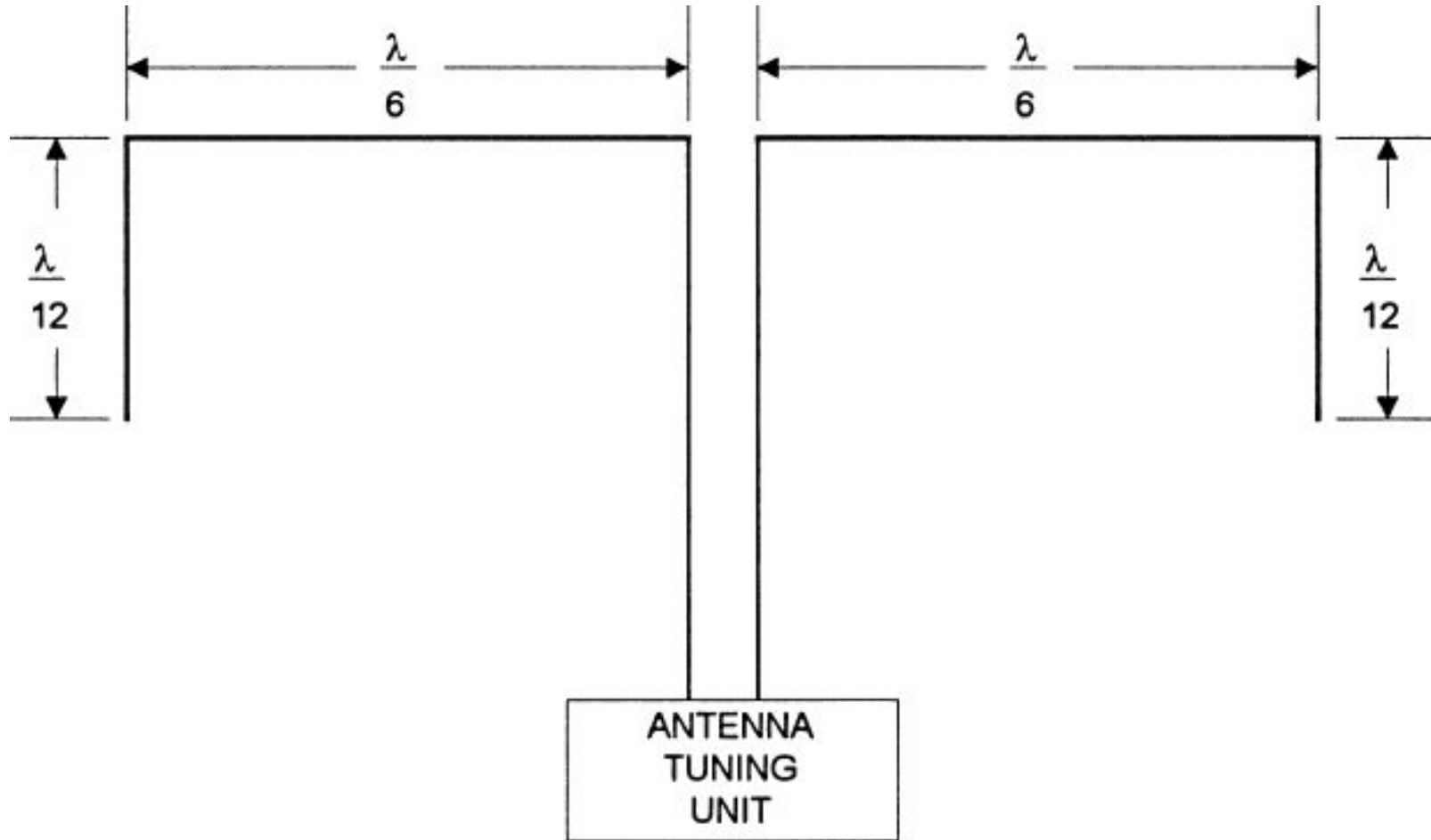
Right Angle Marconi Antenna



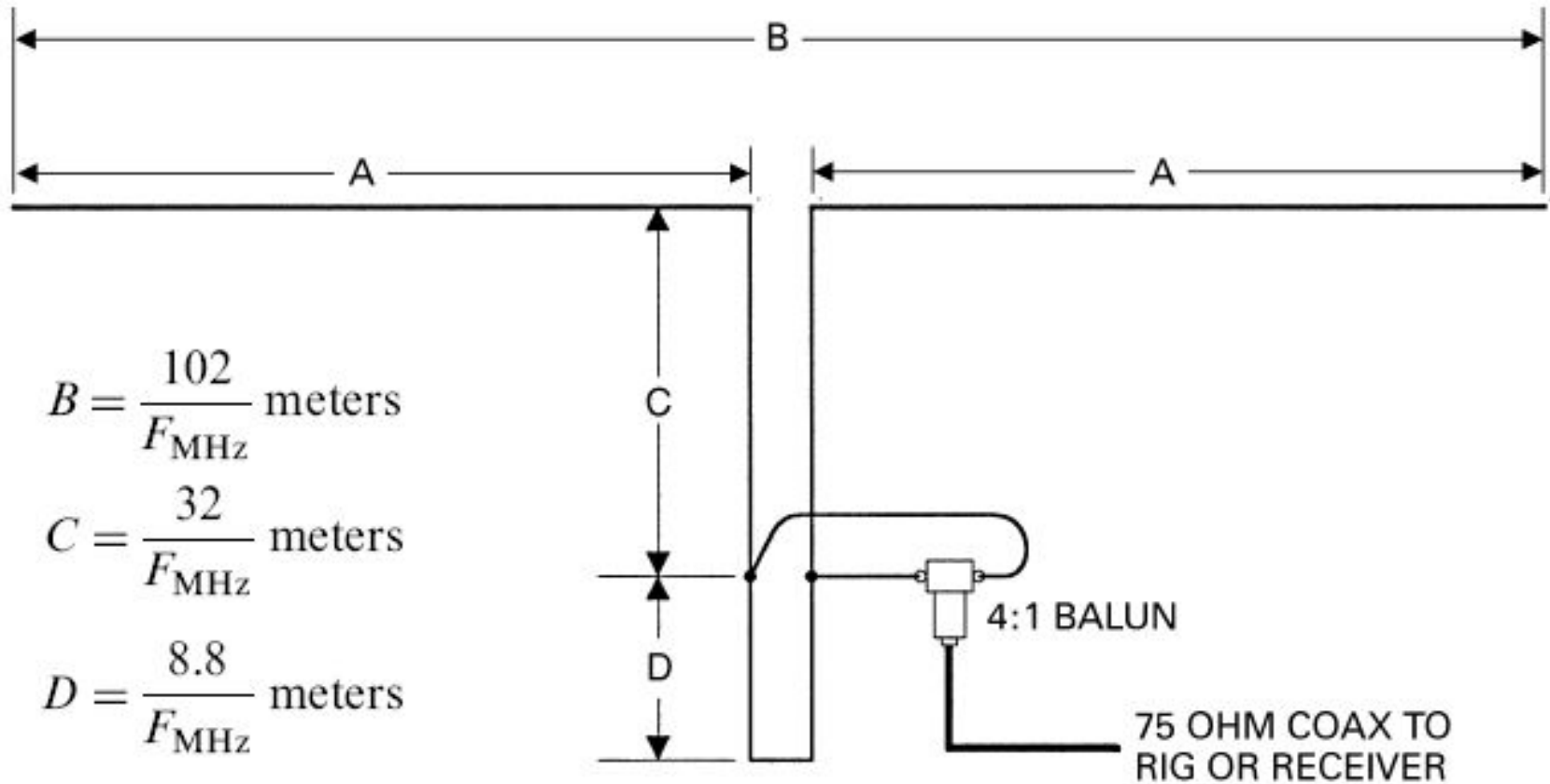
Linearly Loaded Tee Antenna



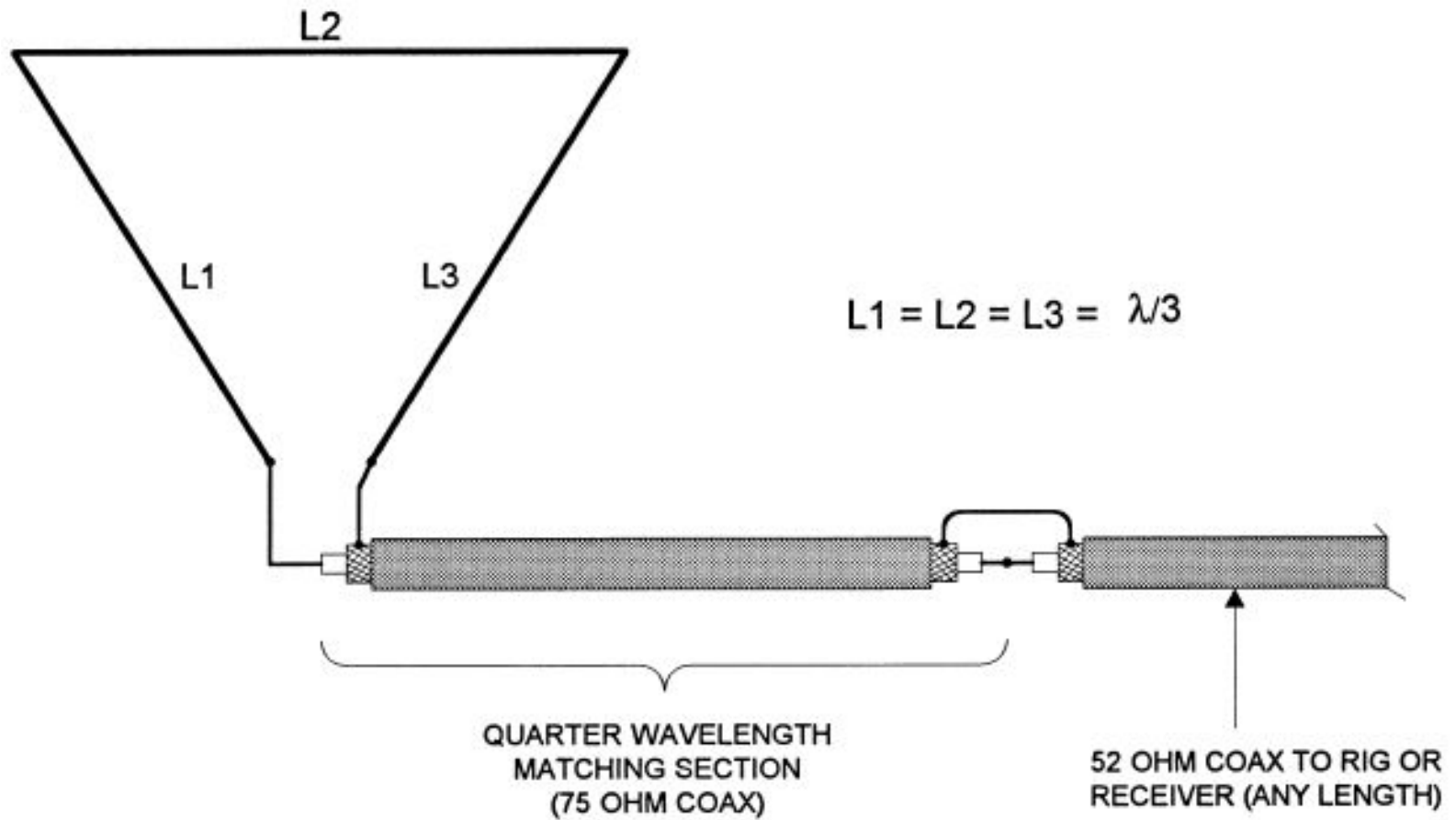
Reduced Size Dipole Antenna



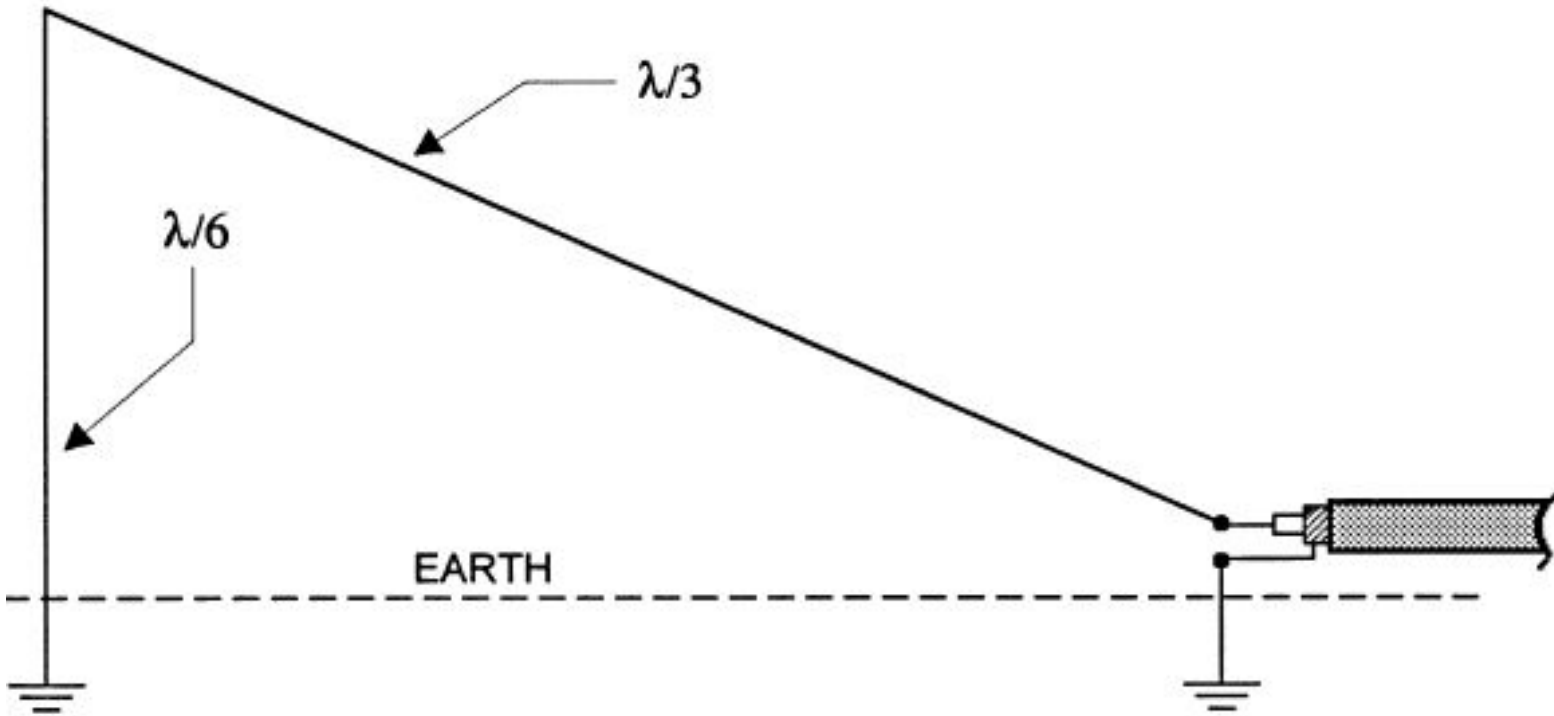
Doublet Dipole Antenna



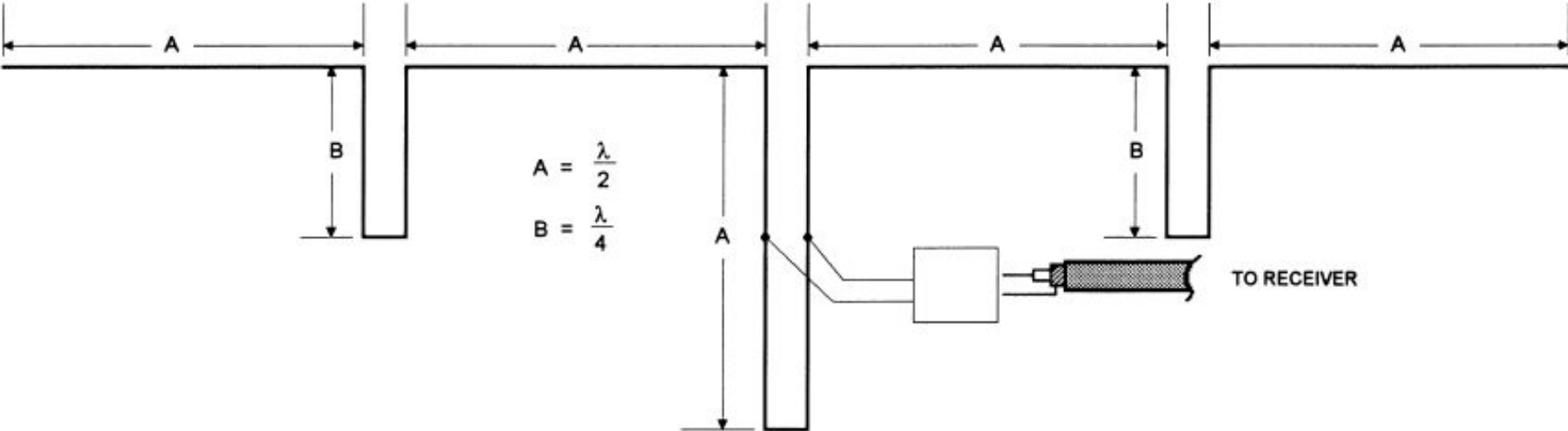
Delta Loop Antenna



Half Delta Loop Antenna

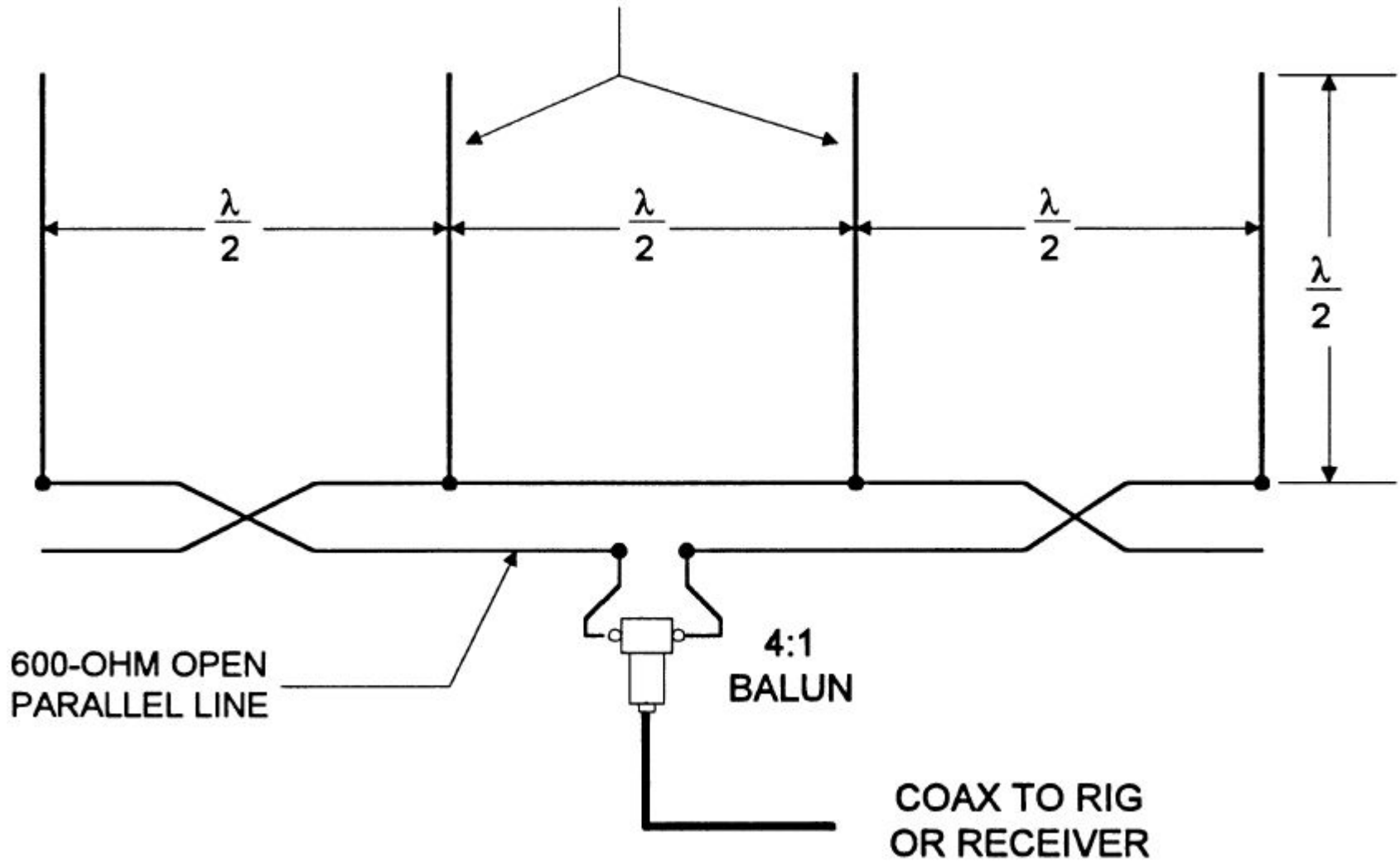


Collinear Franklin Antenna

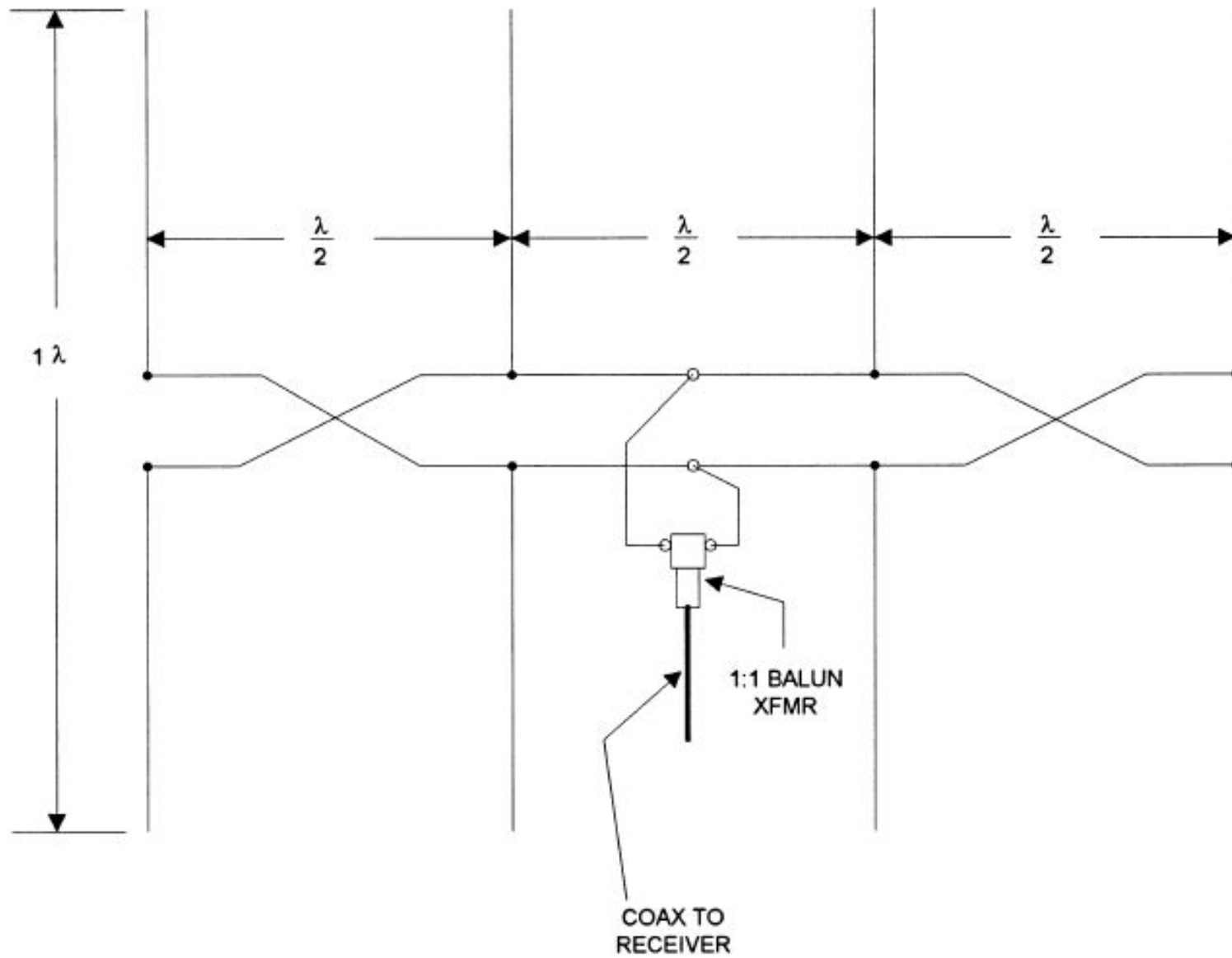


Four Element Broadside Antenna

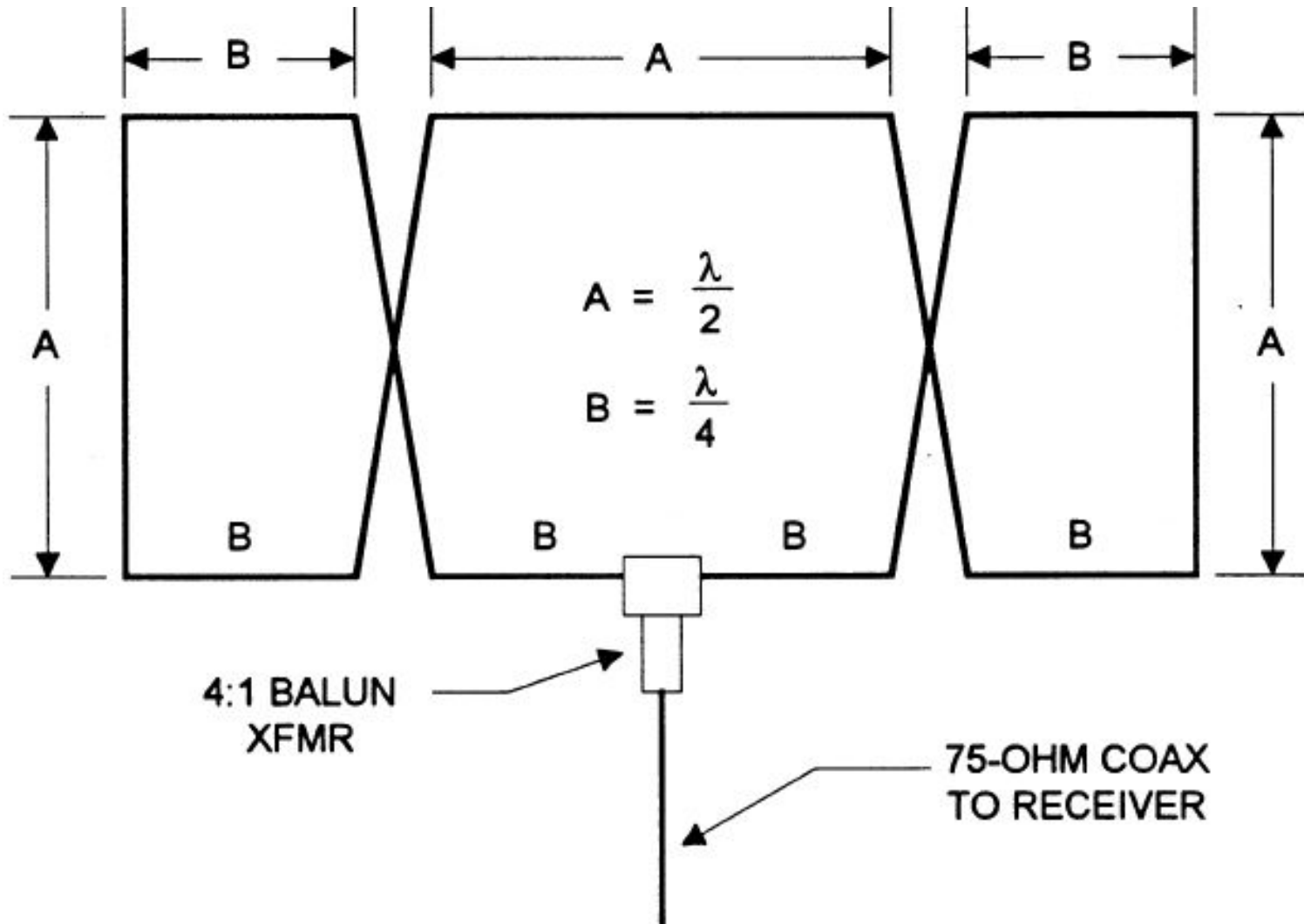
HALF-WAVELENGTH
VERTICAL ELEMENTS (4)



The Lazy-H Array Antenna

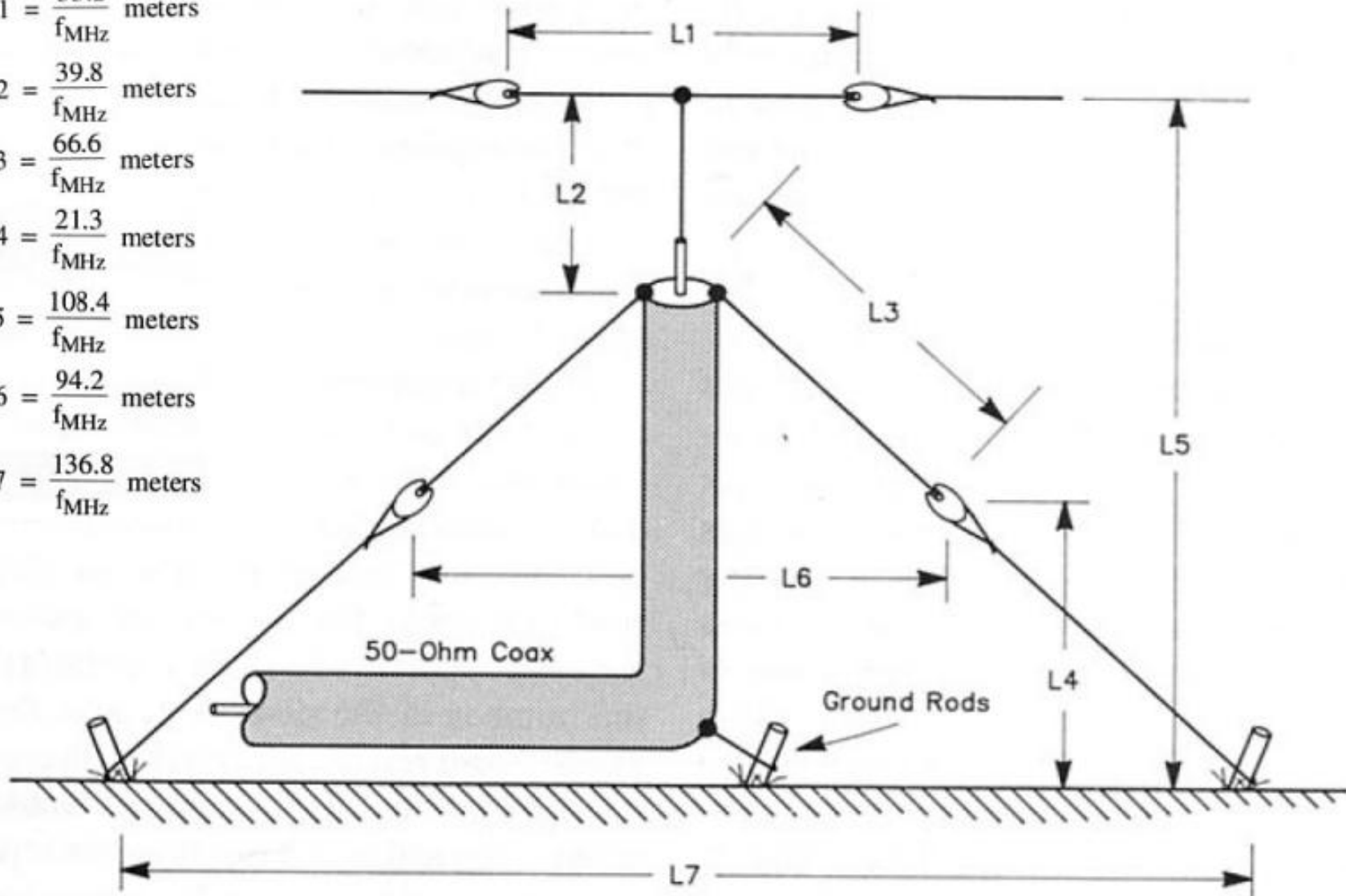


Sterba Curtain Array Antenna

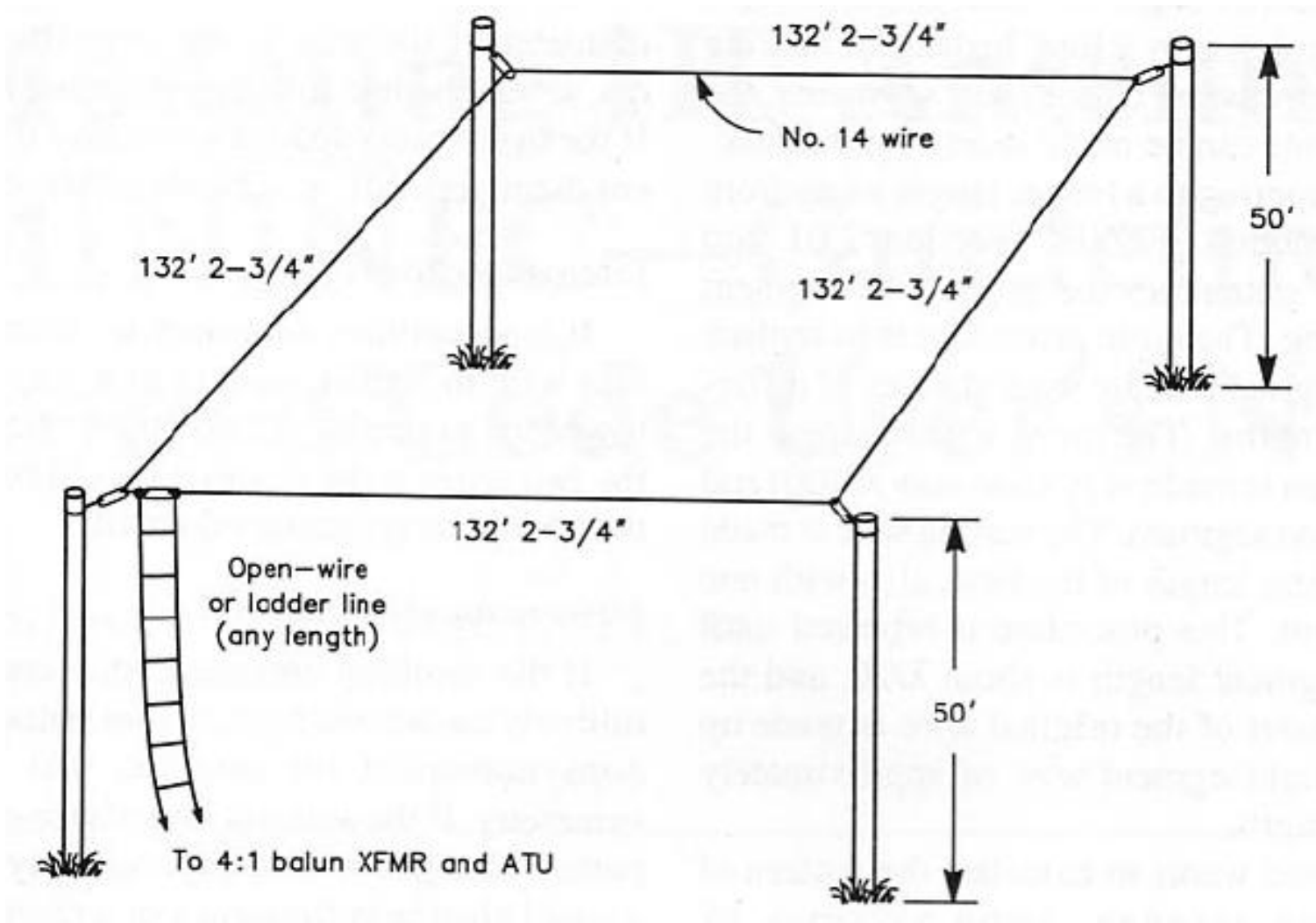


T-L DX Antenna

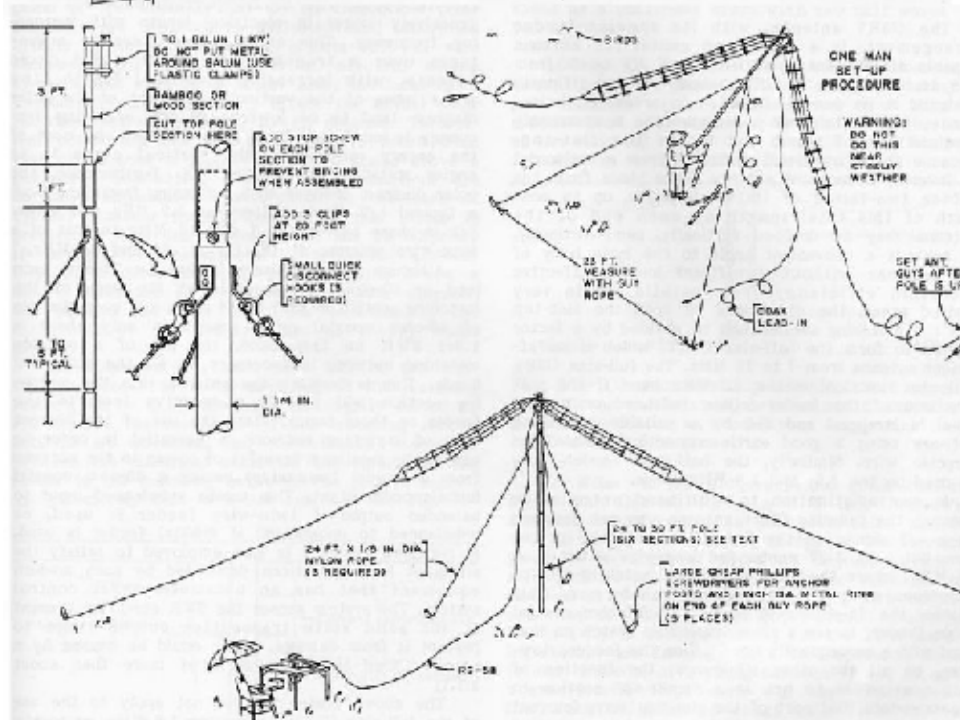
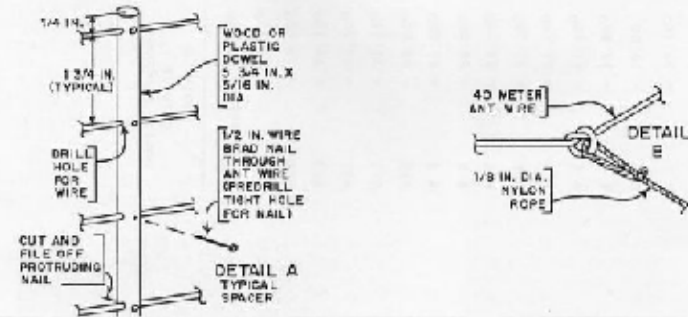
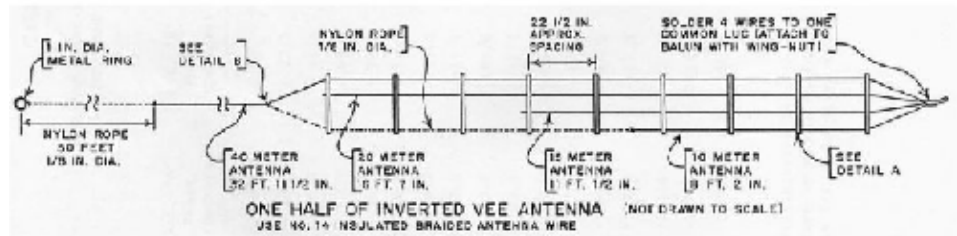
$$L1 = \frac{53.2}{f_{\text{MHz}}} \text{ meters}$$
$$L2 = \frac{39.8}{f_{\text{MHz}}} \text{ meters}$$
$$L3 = \frac{66.6}{f_{\text{MHz}}} \text{ meters}$$
$$L4 = \frac{21.3}{f_{\text{MHz}}} \text{ meters}$$
$$L5 = \frac{108.4}{f_{\text{MHz}}} \text{ meters}$$
$$L6 = \frac{94.2}{f_{\text{MHz}}} \text{ meters}$$
$$L7 = \frac{136.8}{f_{\text{MHz}}} \text{ meters}$$



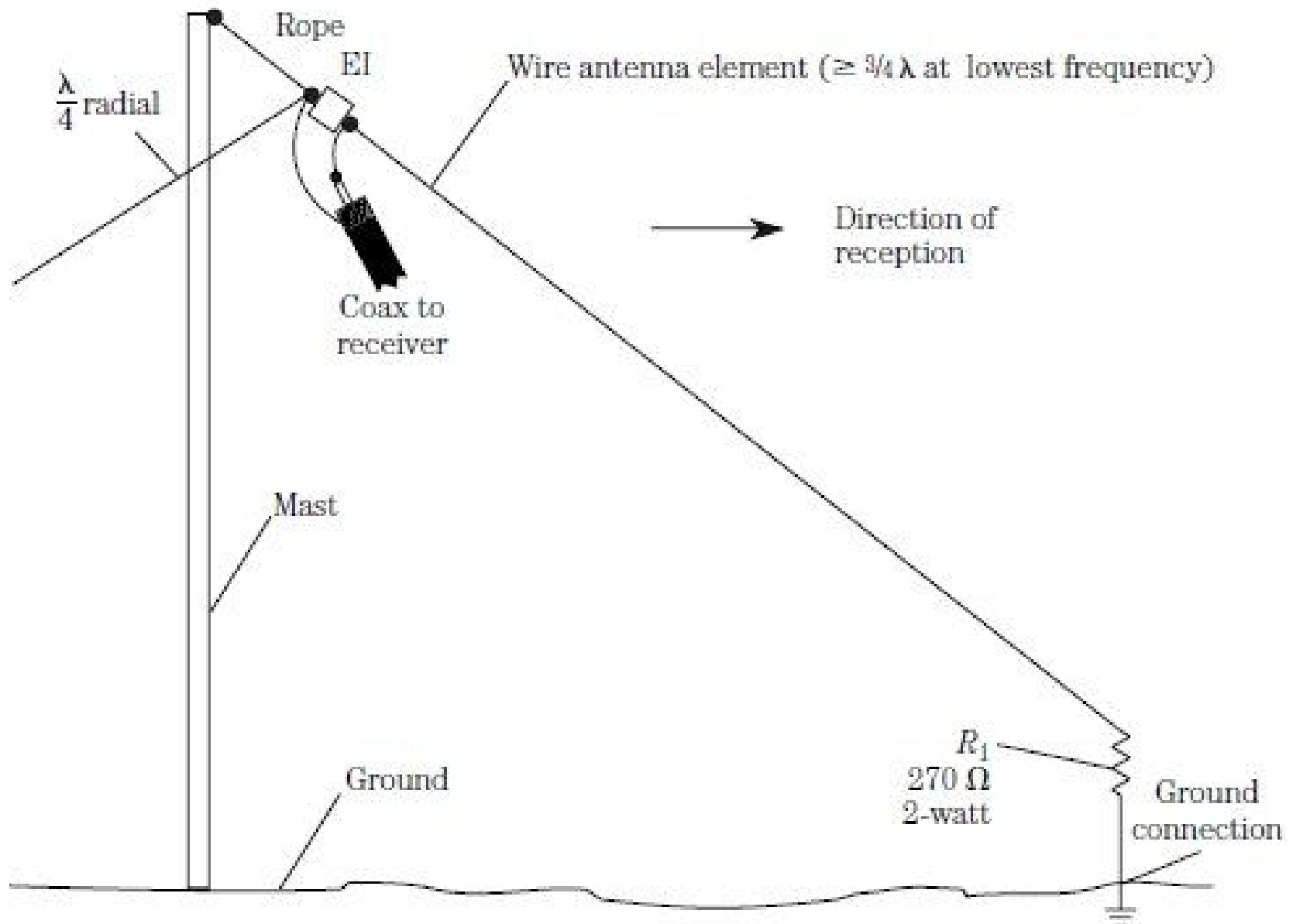
1.9 MHz Full-wave Loop Antenna



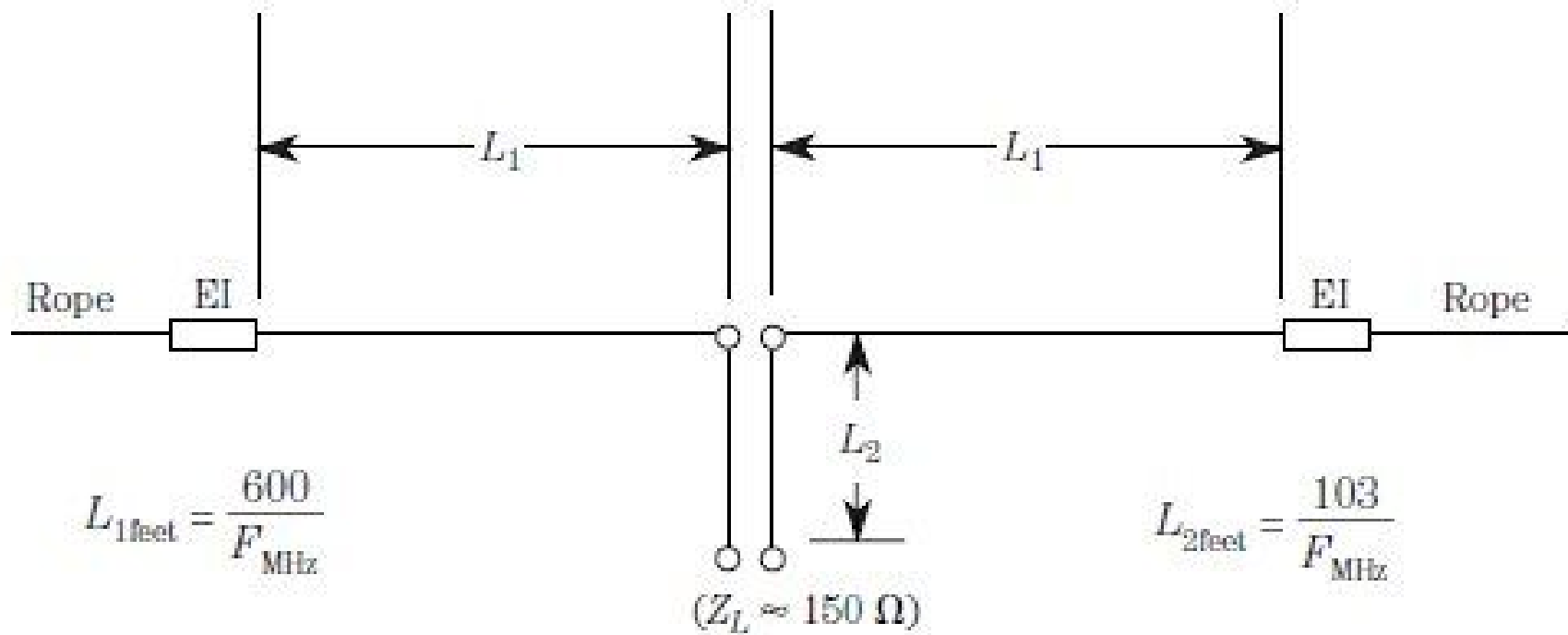
Multi-Band Portable Antenna



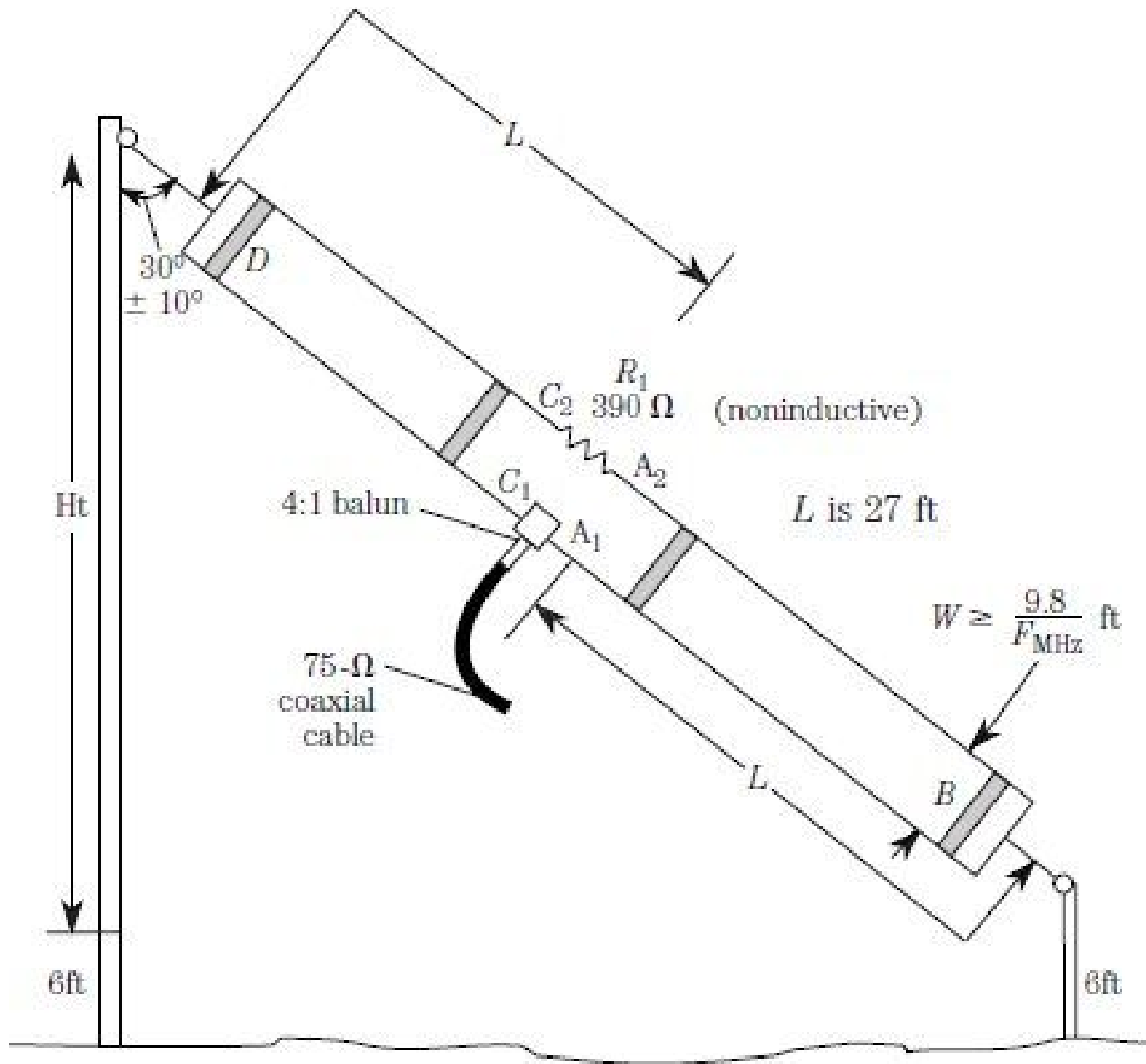
Terminated Sloper Antenna



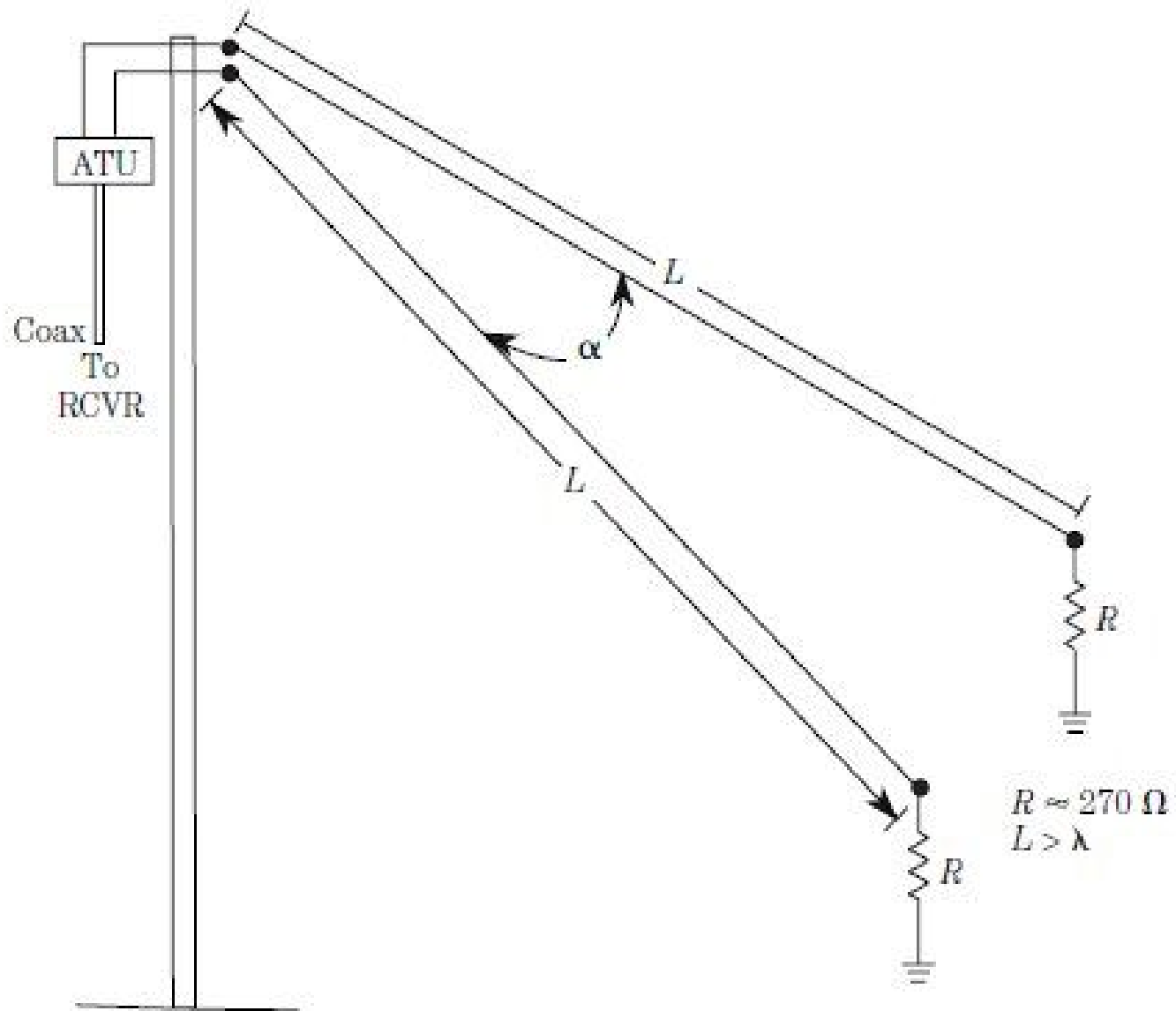
Double Extended Zepp Antenna



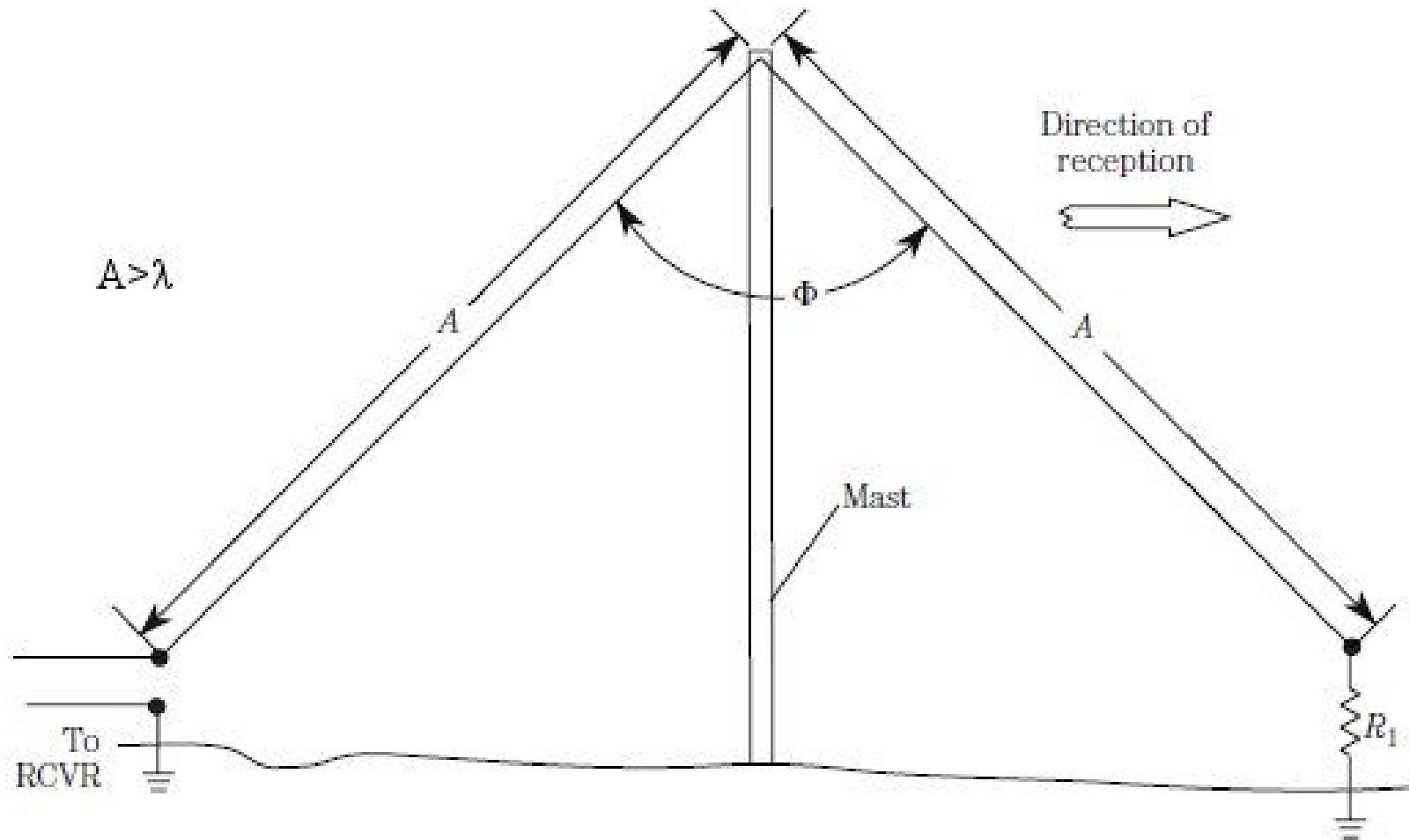
TCFTFD Dipole Antenna



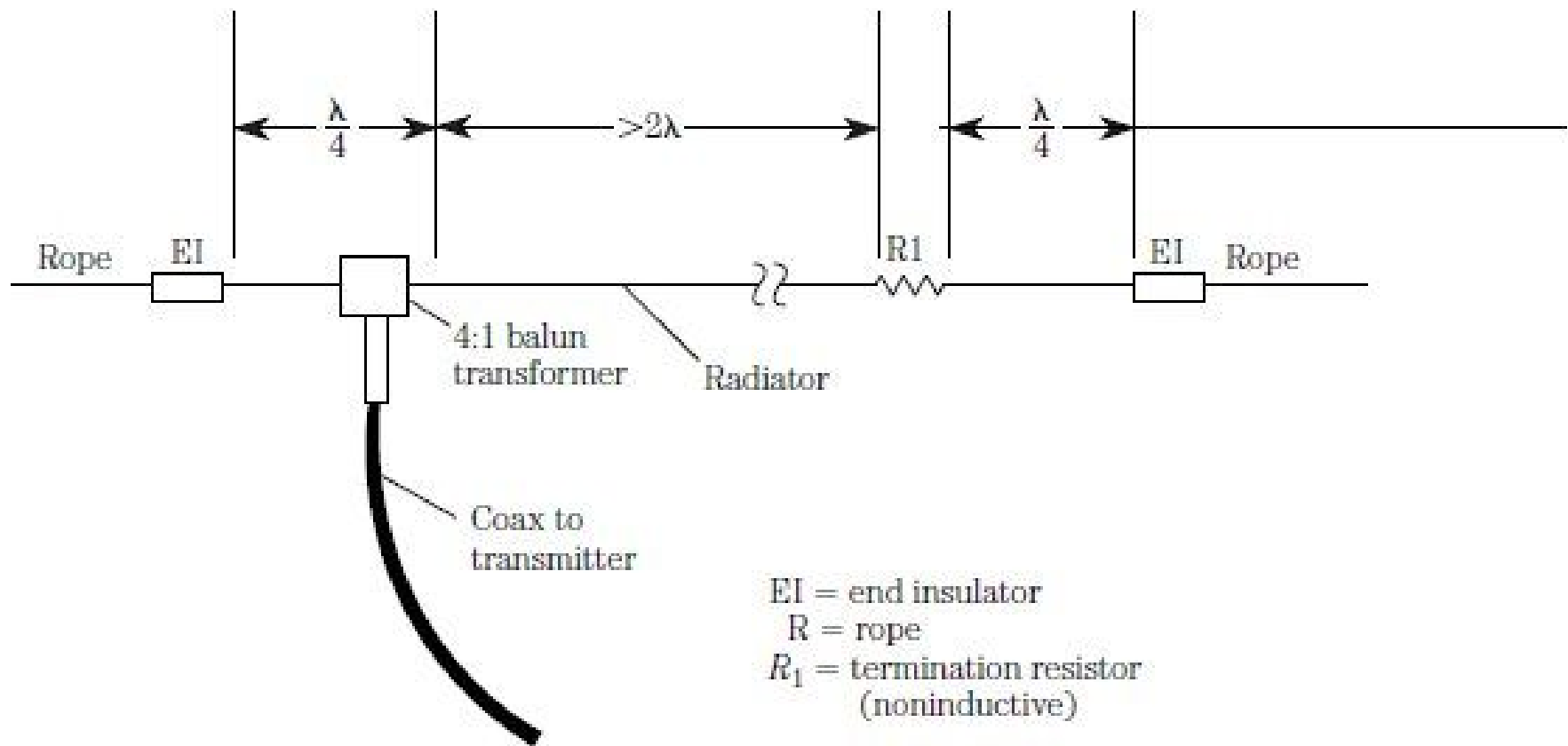
Vee-Sloper Antenna



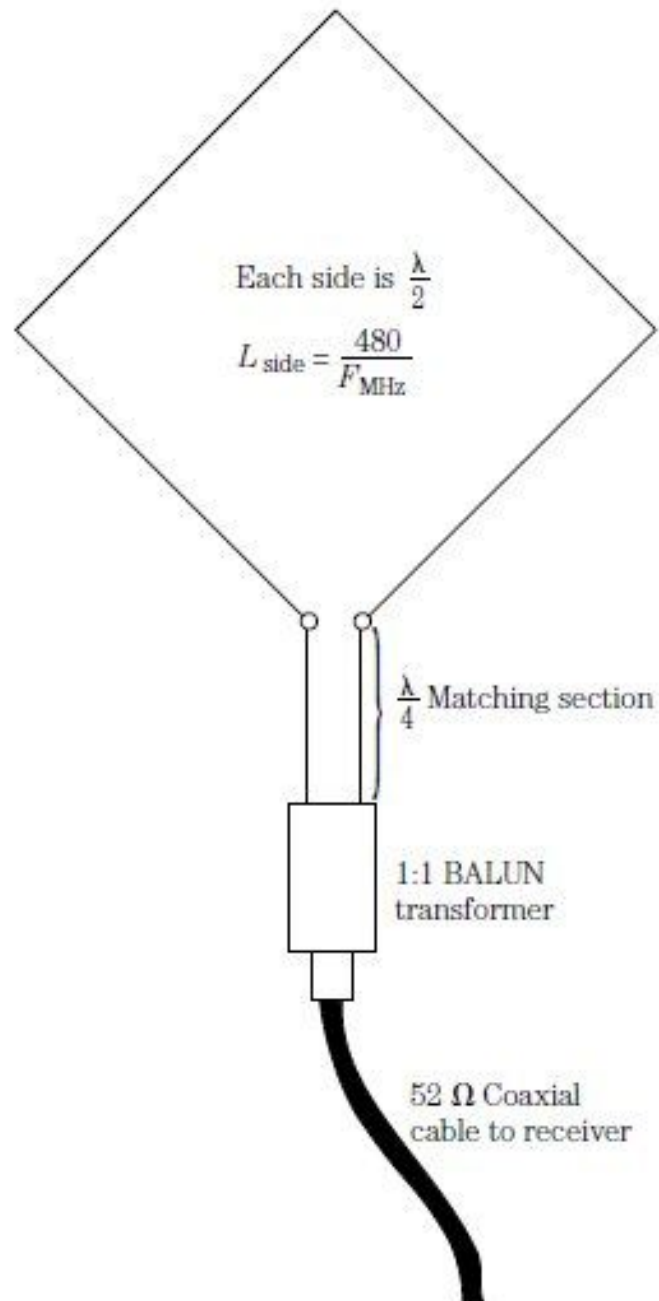
Rhombic Inverted-Vee Antenna



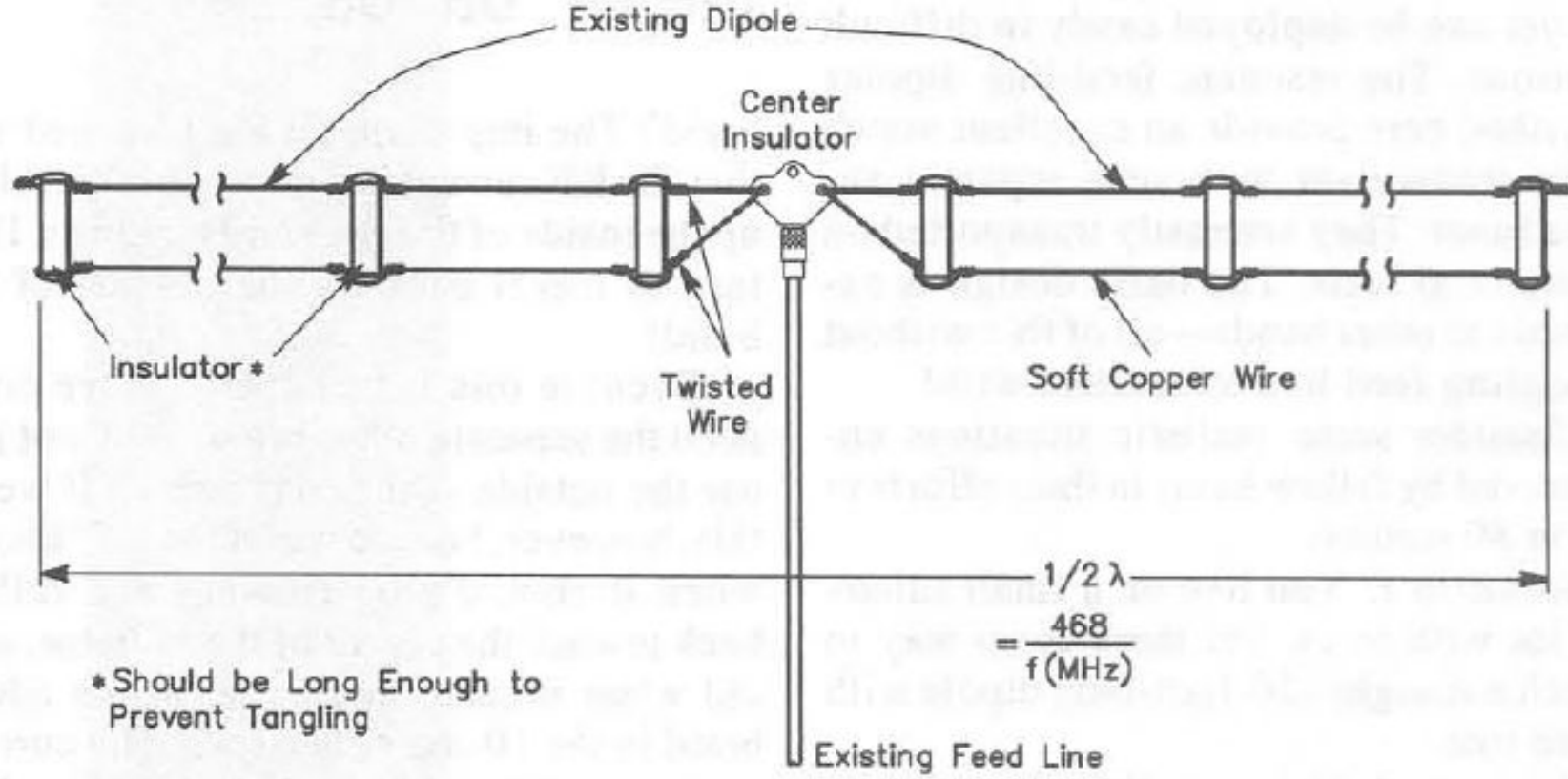
Counterpoise Longwire



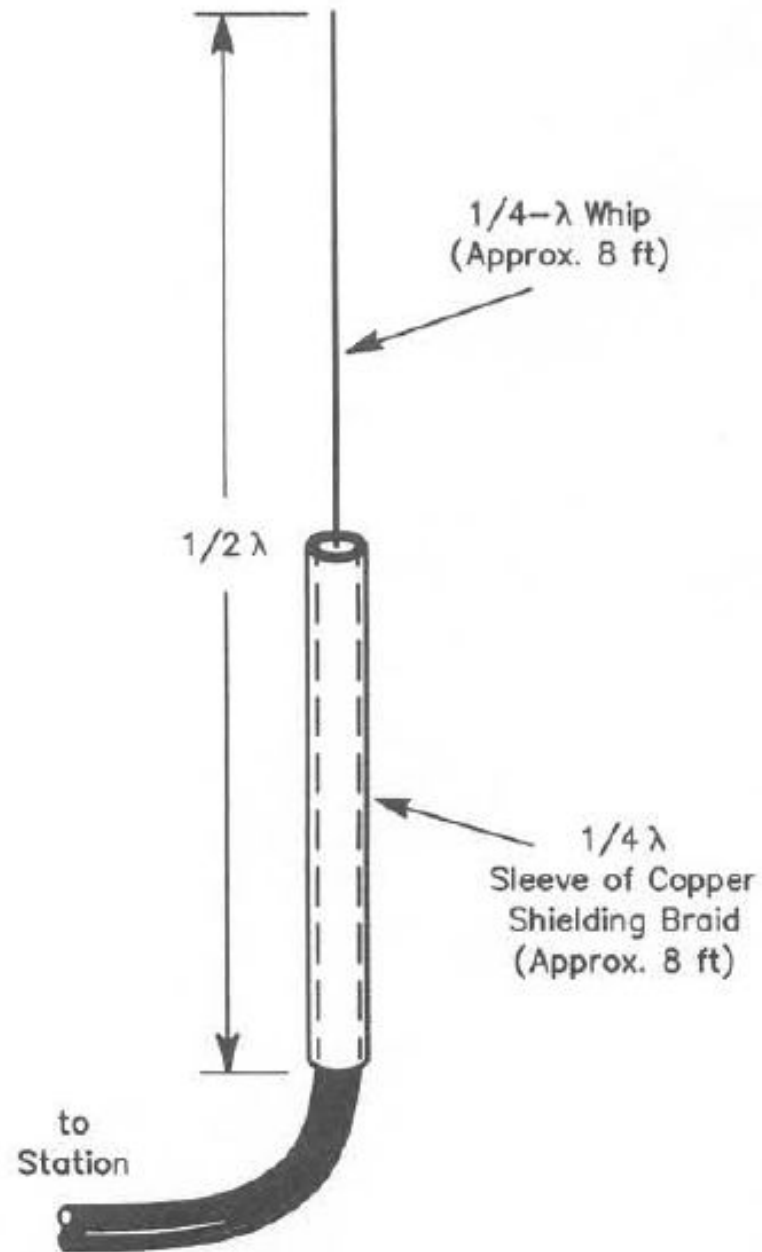
Bisquare Loop Antenna



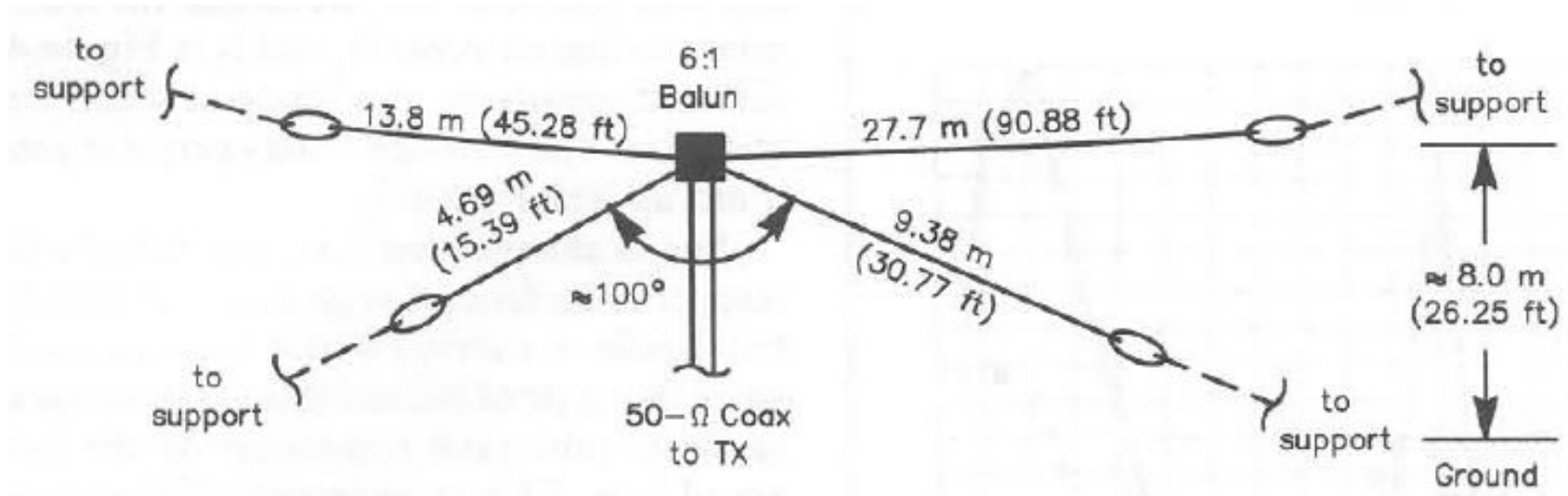
Piggyback Antenna for 10m



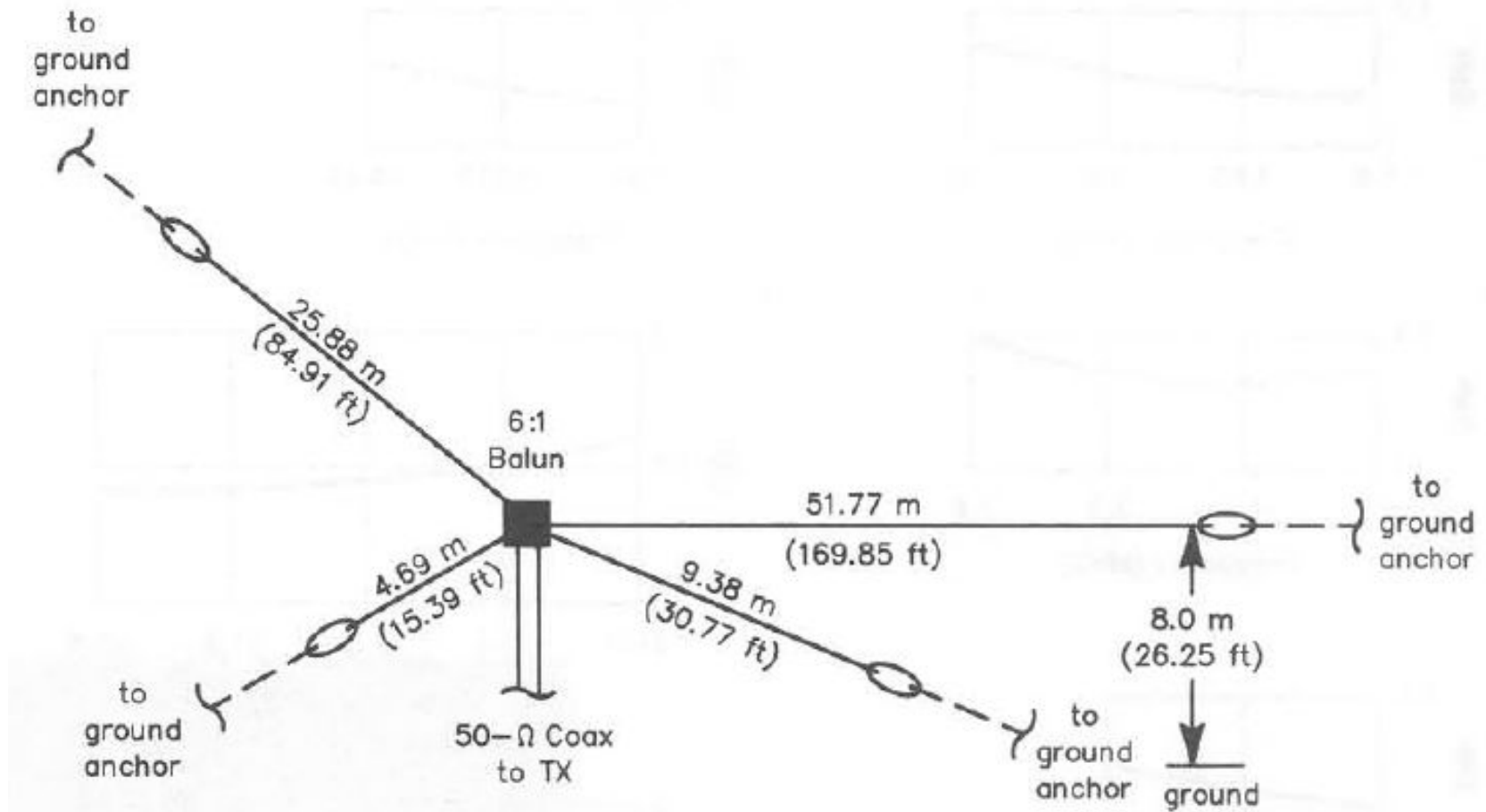
Vertical Sleeve Antenna for 10m



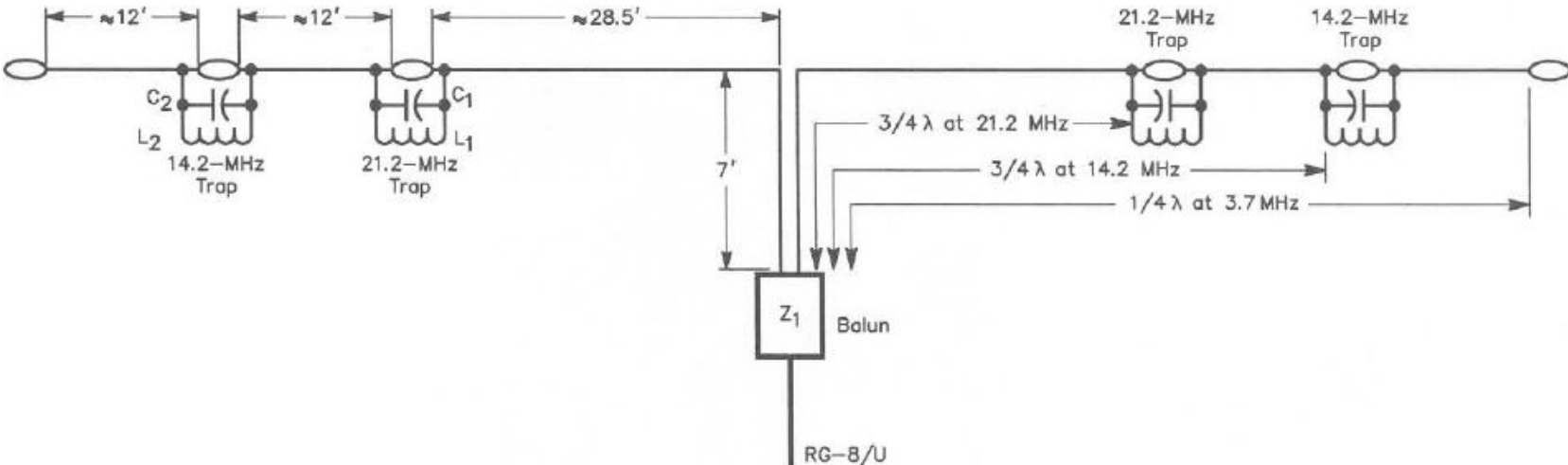
Double Windom Antenna



Double Windom for 9 Bands



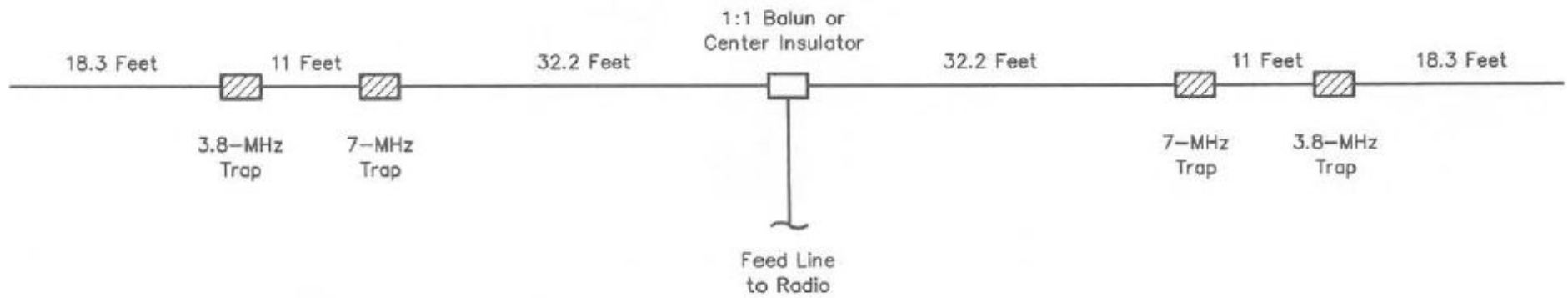
Collinear Trap Antenna



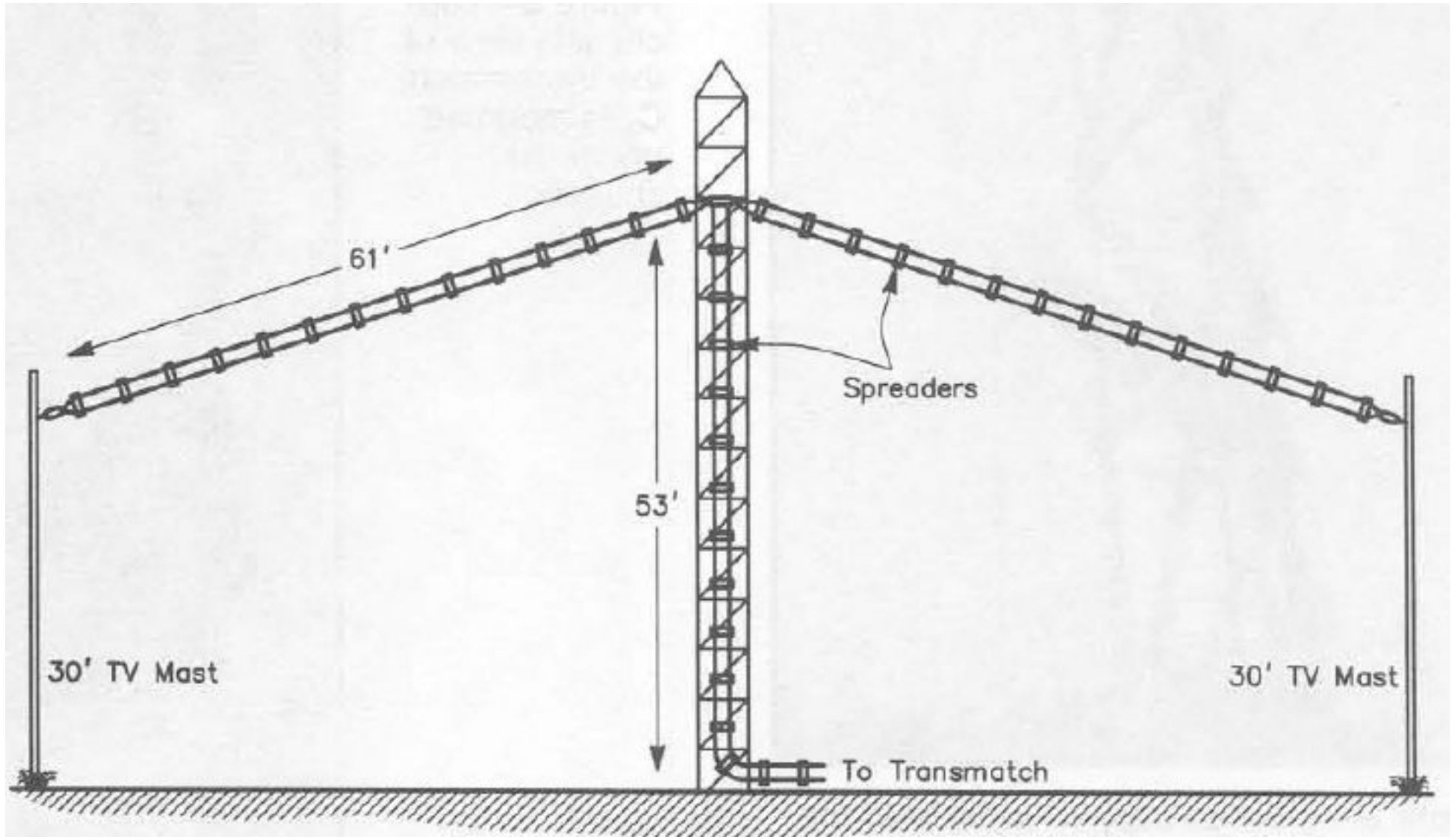
C1, C2—25-pf. 6000-volt disk ceramic. See text.
 L₁—Approx. 2 μH—4³/₄ turns No. 18, 2¹/₄-inches diam., ³/₈ inch long, or 5 turns No. 18, 2-inch diam., 16 tpi. See text.

L₂—Approx. 5 μH.—8 turns No. 18, 2¹/₄-inch dia., ⁵/₈ inch long, or 9 turns No. 18, 2-inch diam. 16 tpi. See text.
 Z₁—1 to 1 balun.

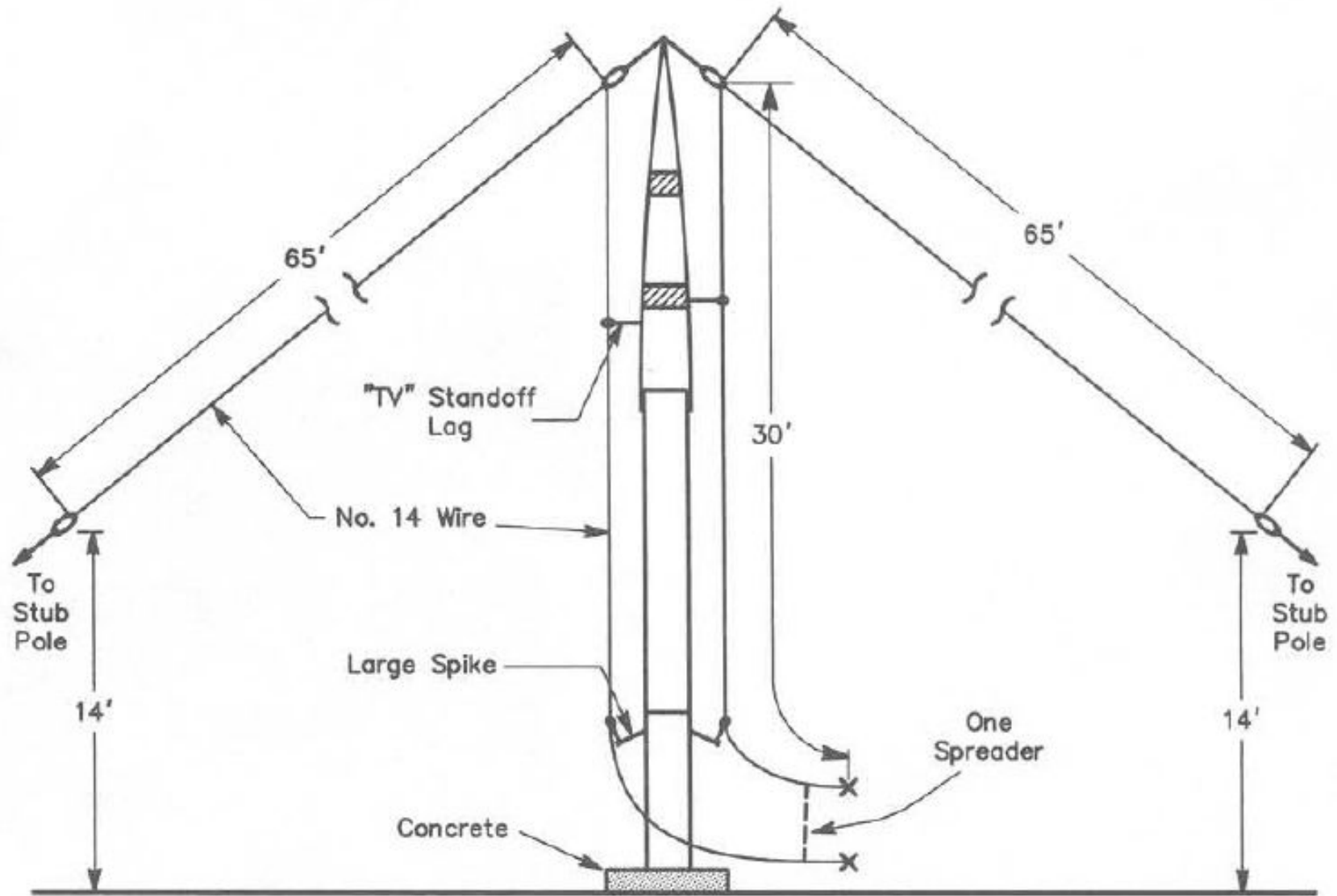
Short Dipole Antenna for 40m - 80m - 160m



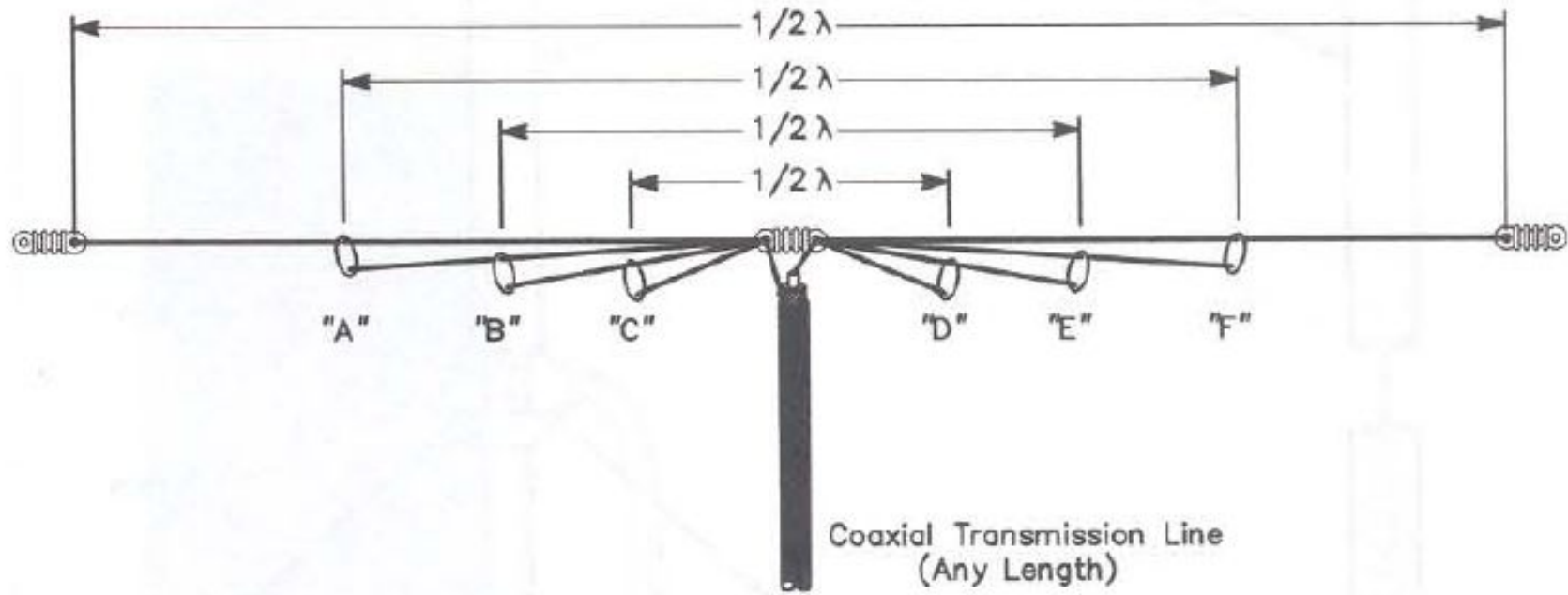
Center Fed-Zepp Antenna for 80m - 40m



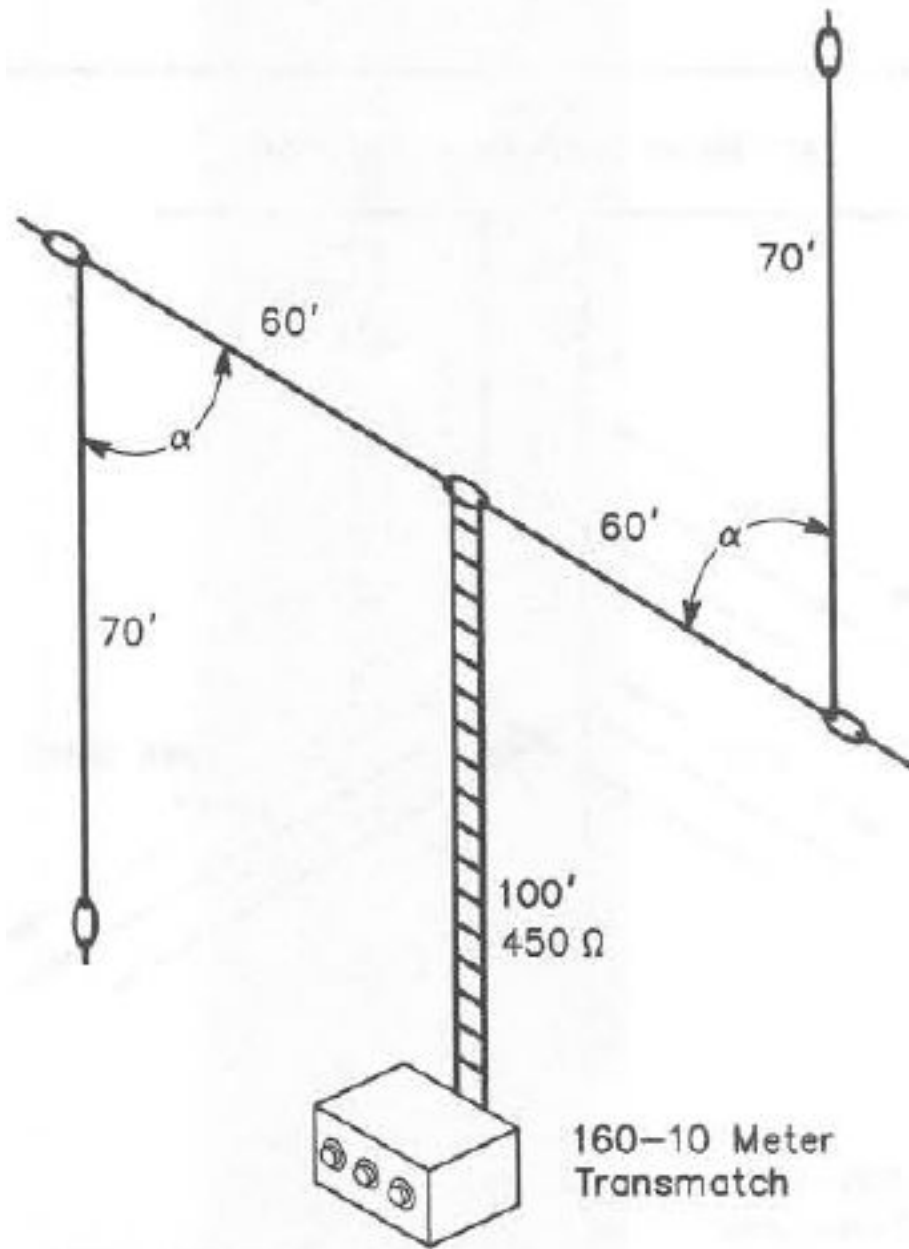
All-Bands Antenna



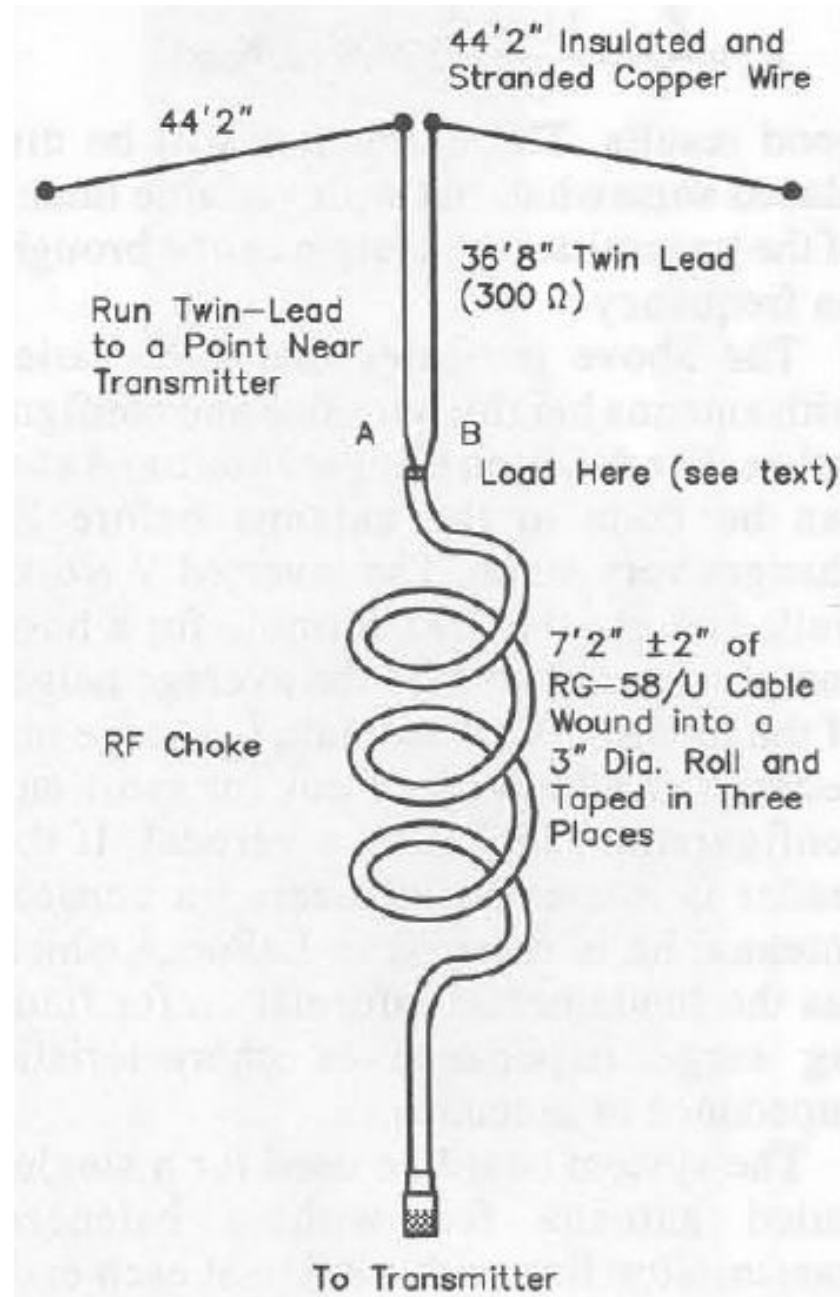
All-Bands Dipole Antenna



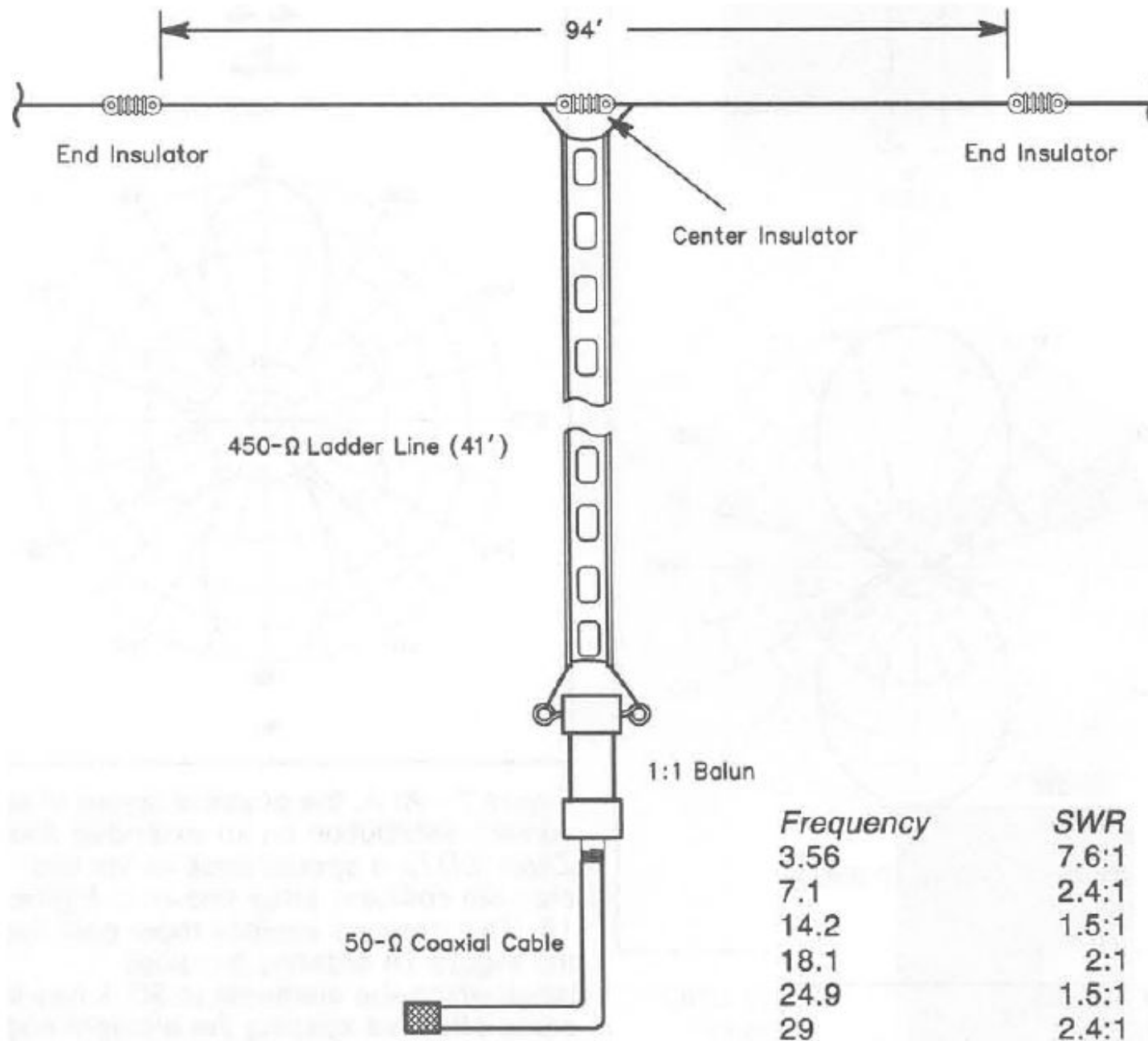
Multiband Z Antenna



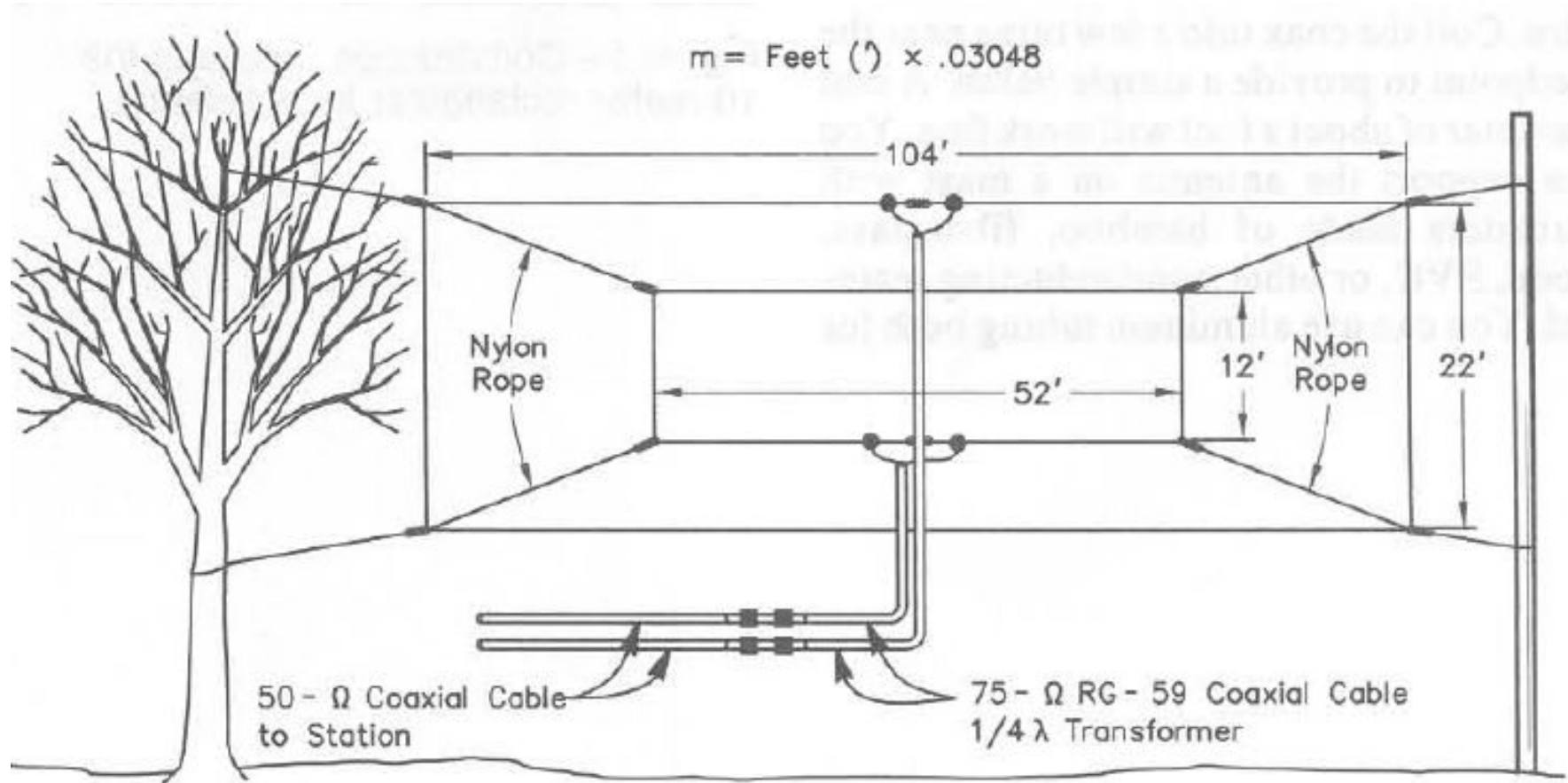
Multiband Dipole Antenna



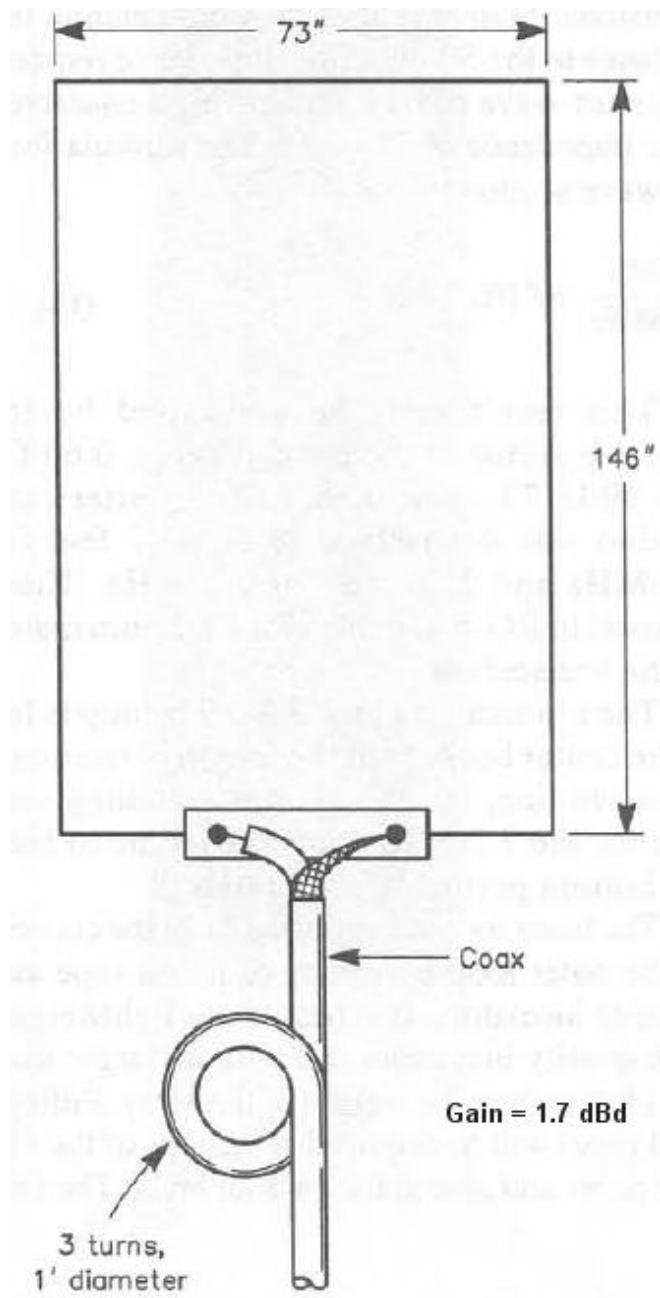
Five-Bands No-Tuner Antenna



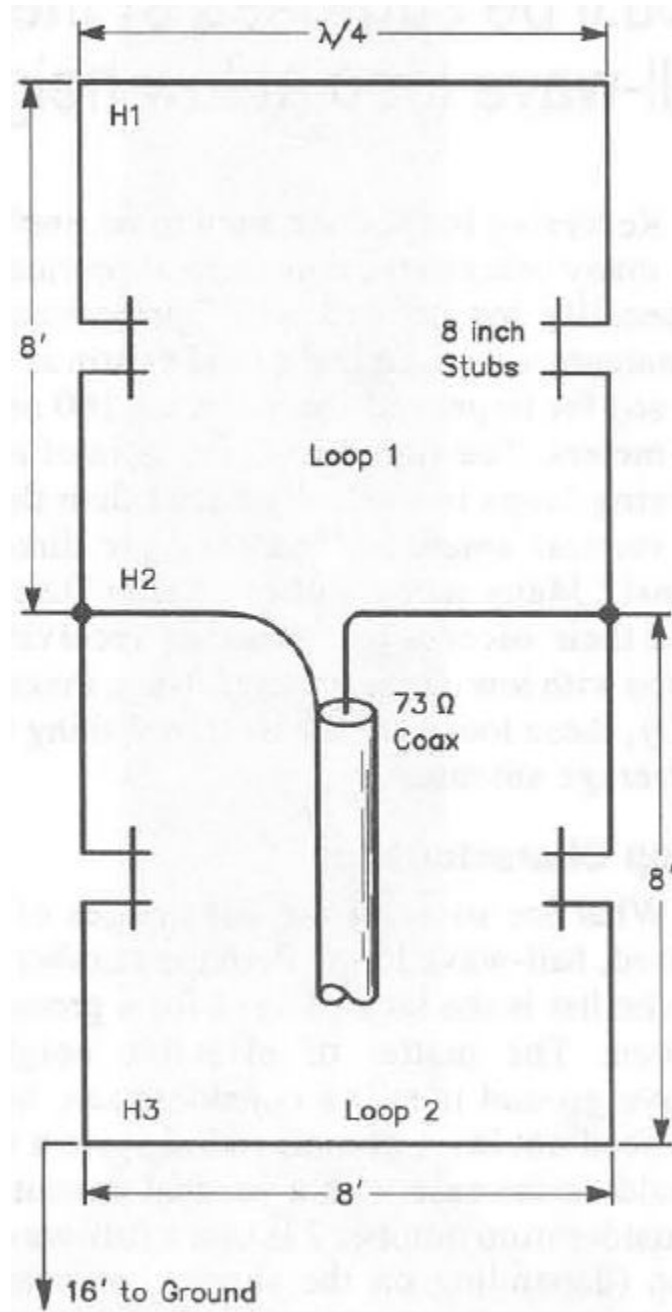
Dual-band Full-wave Loop Antenna for 80m-40m



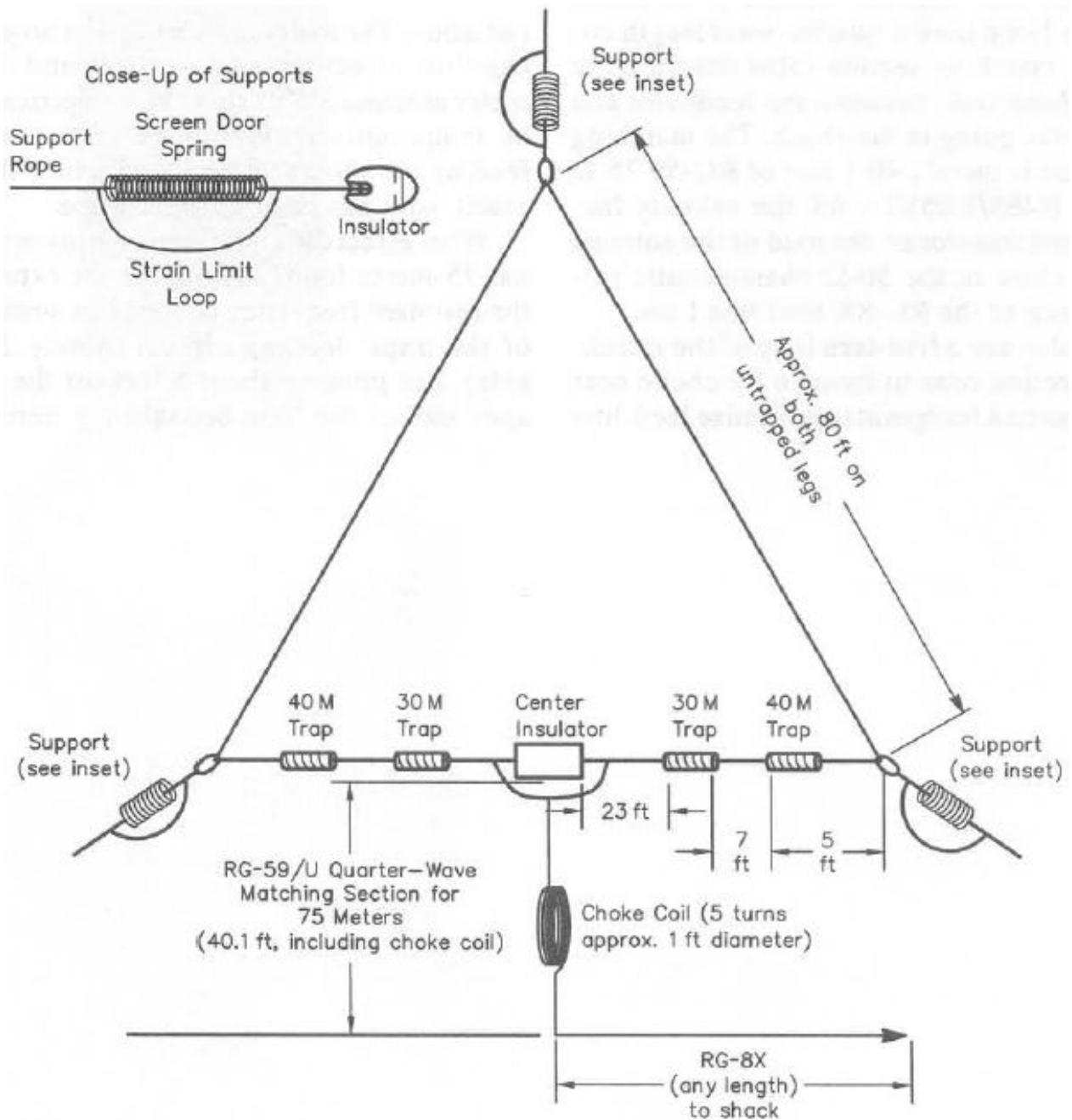
Loop Antenna for 10m



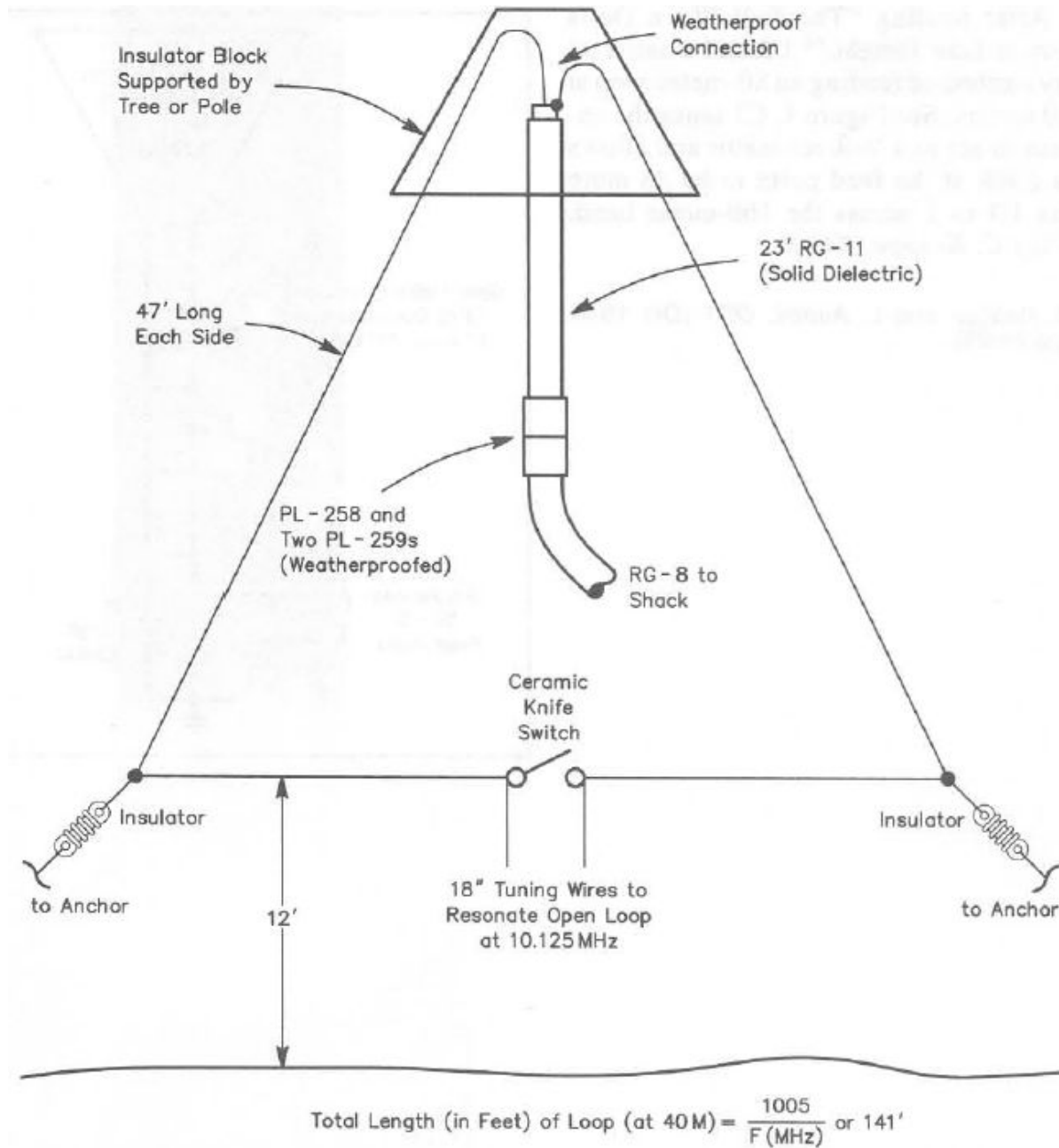
Lazy Quad Antenna for 10m



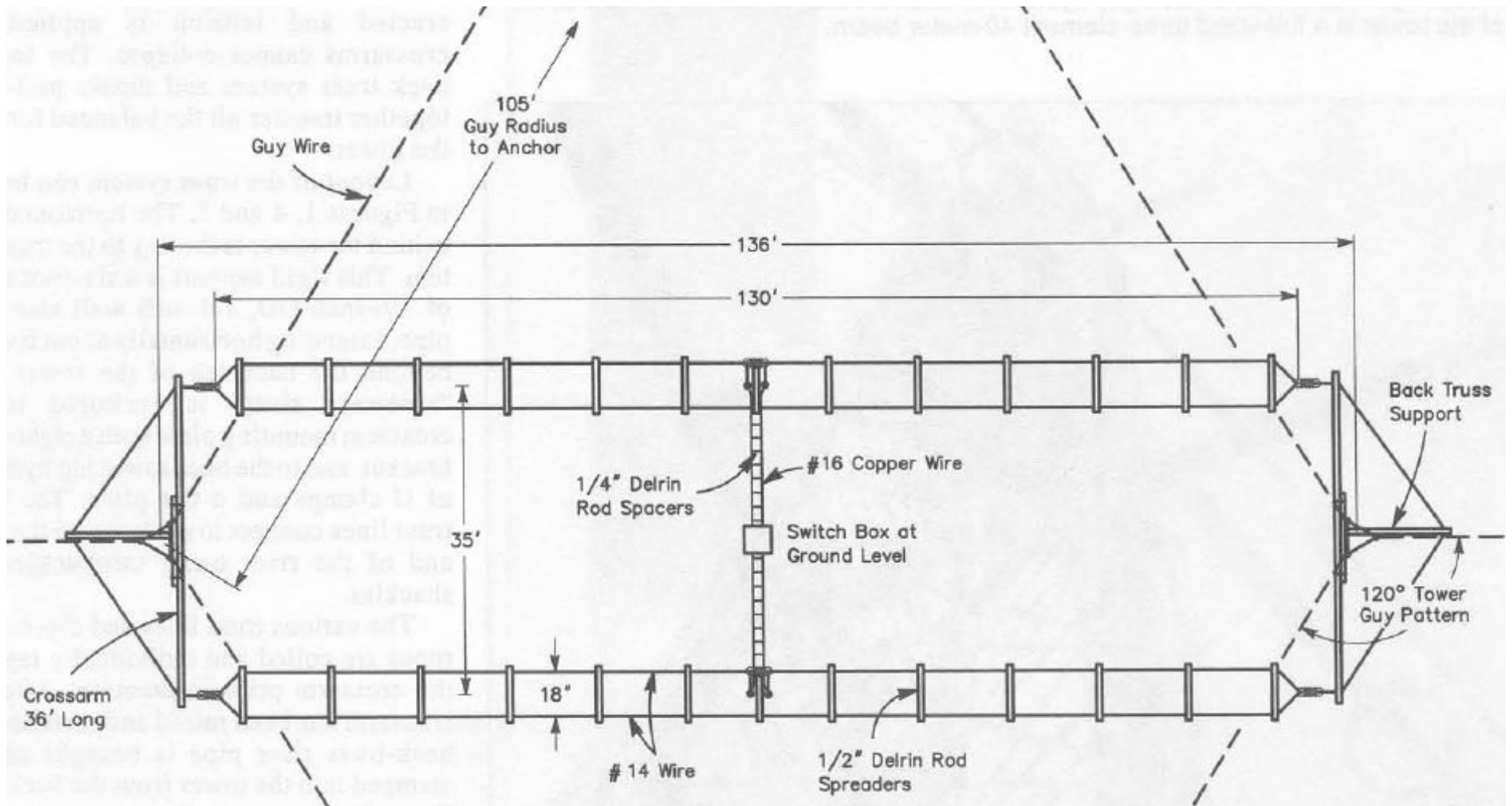
Tri-band Delta Loop Antenna for 80m - 40m - 30m



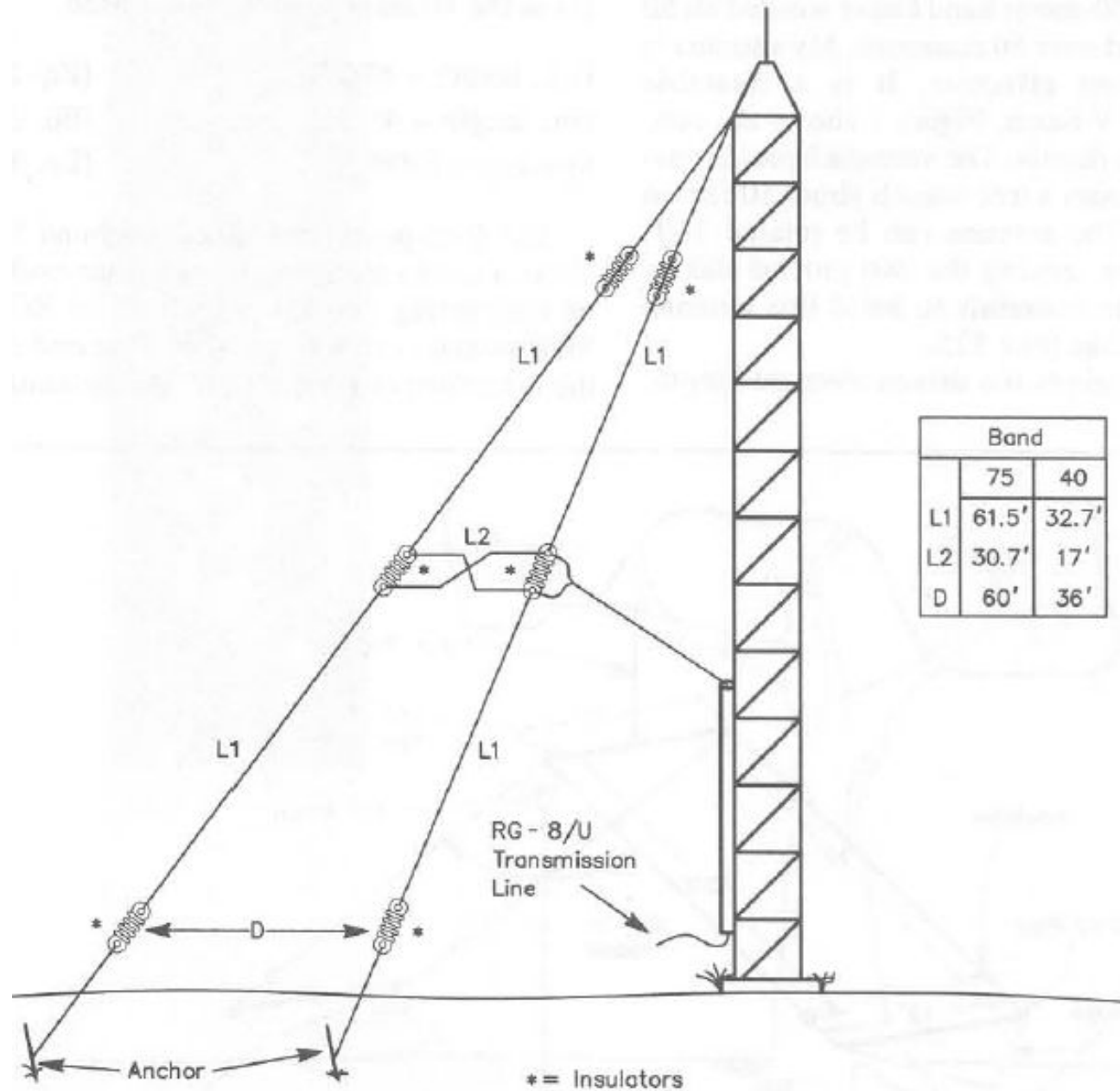
Dual-band Loop Antenna for 30m - 40m



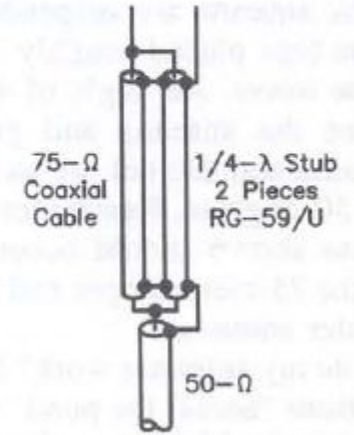
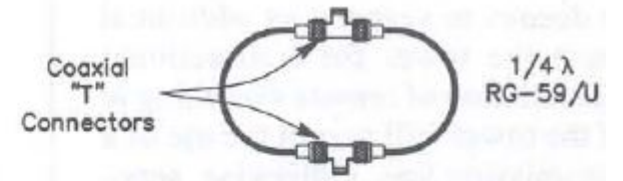
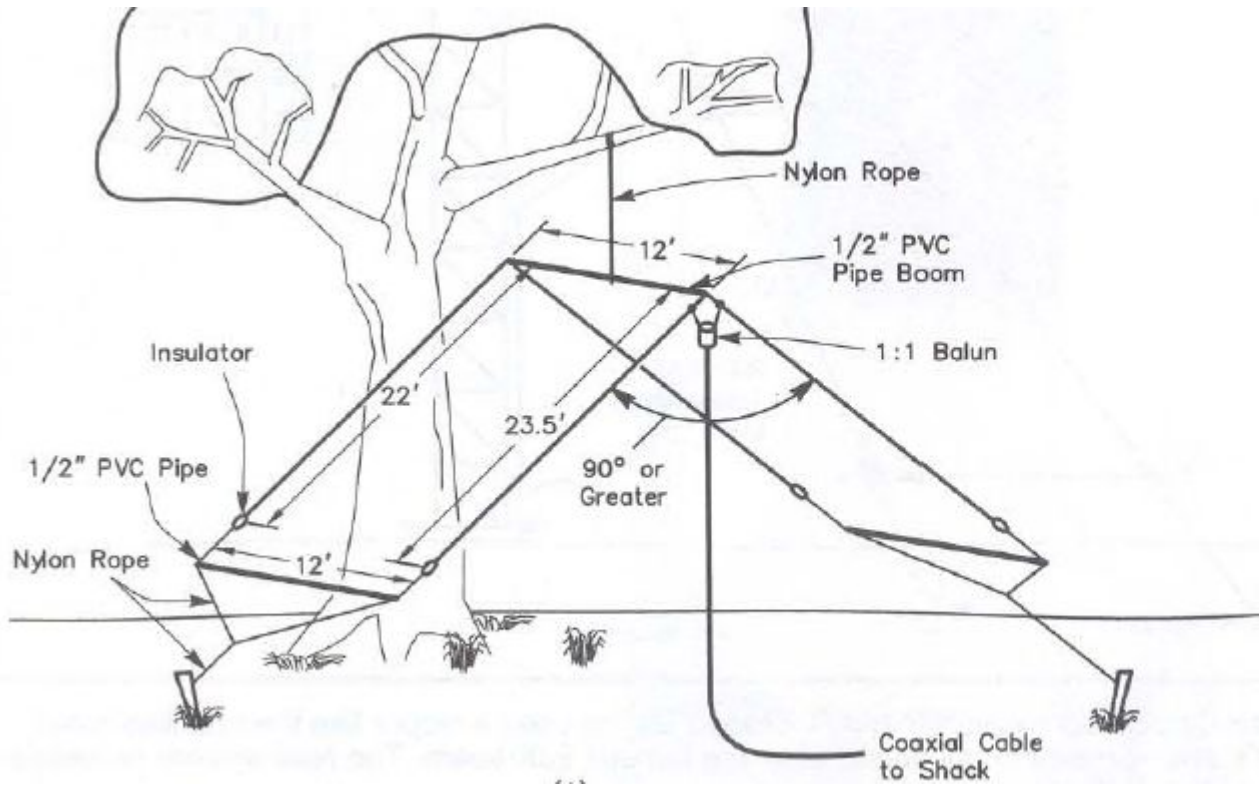
Wire-Beam Antenna for 80m



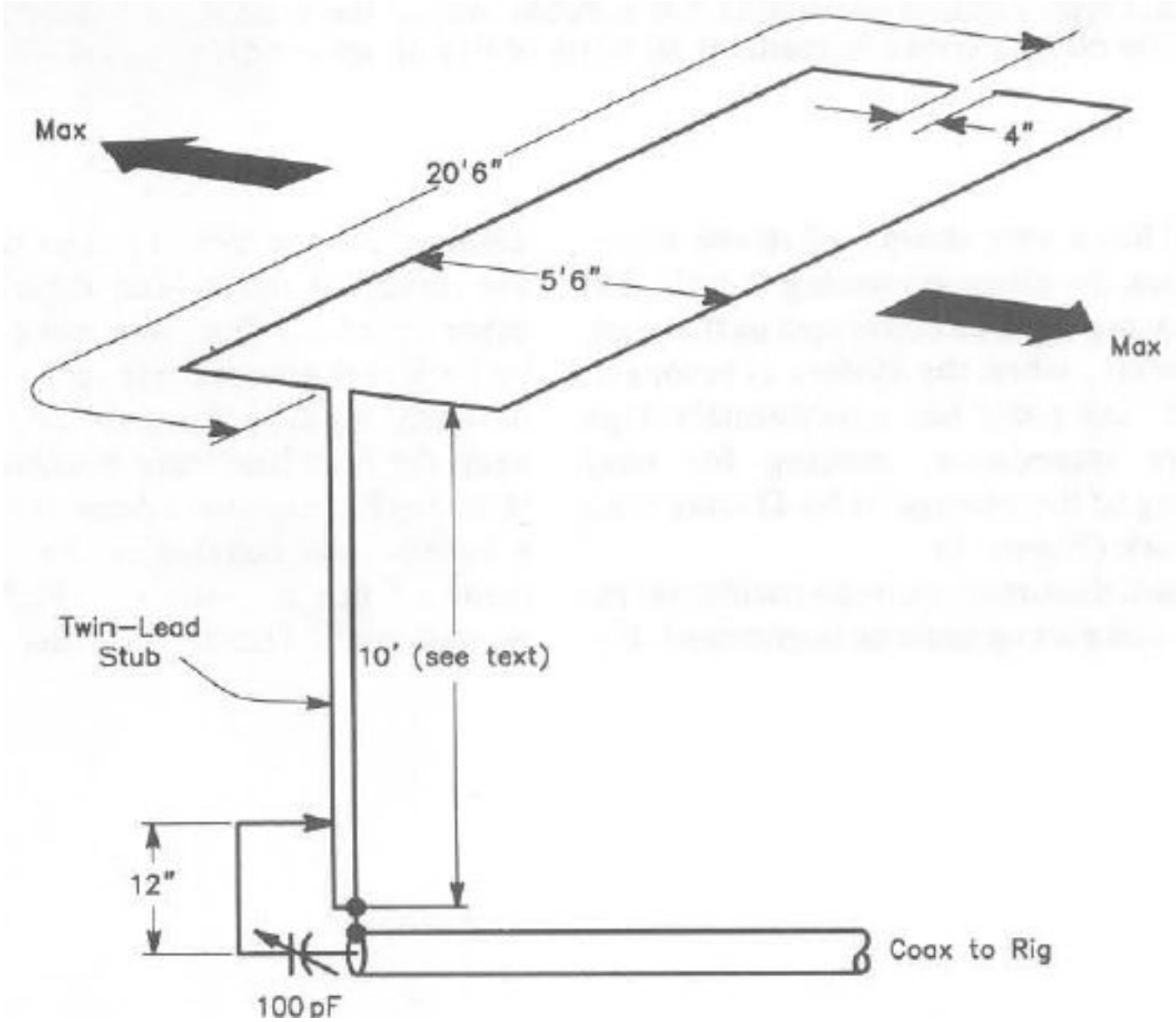
Dual-Band Sloper Antenna



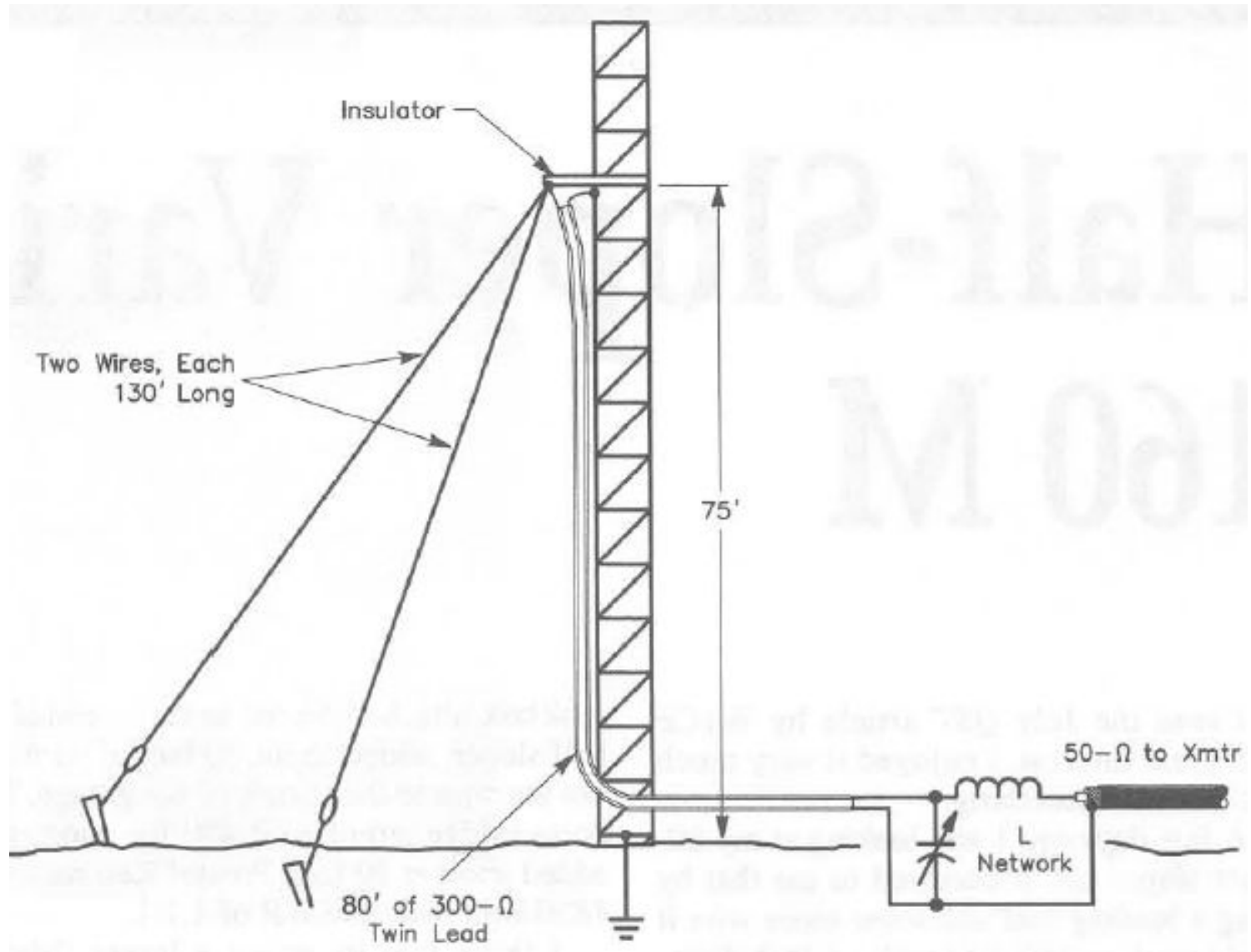
Inverted-V Beam Antenna for 30m



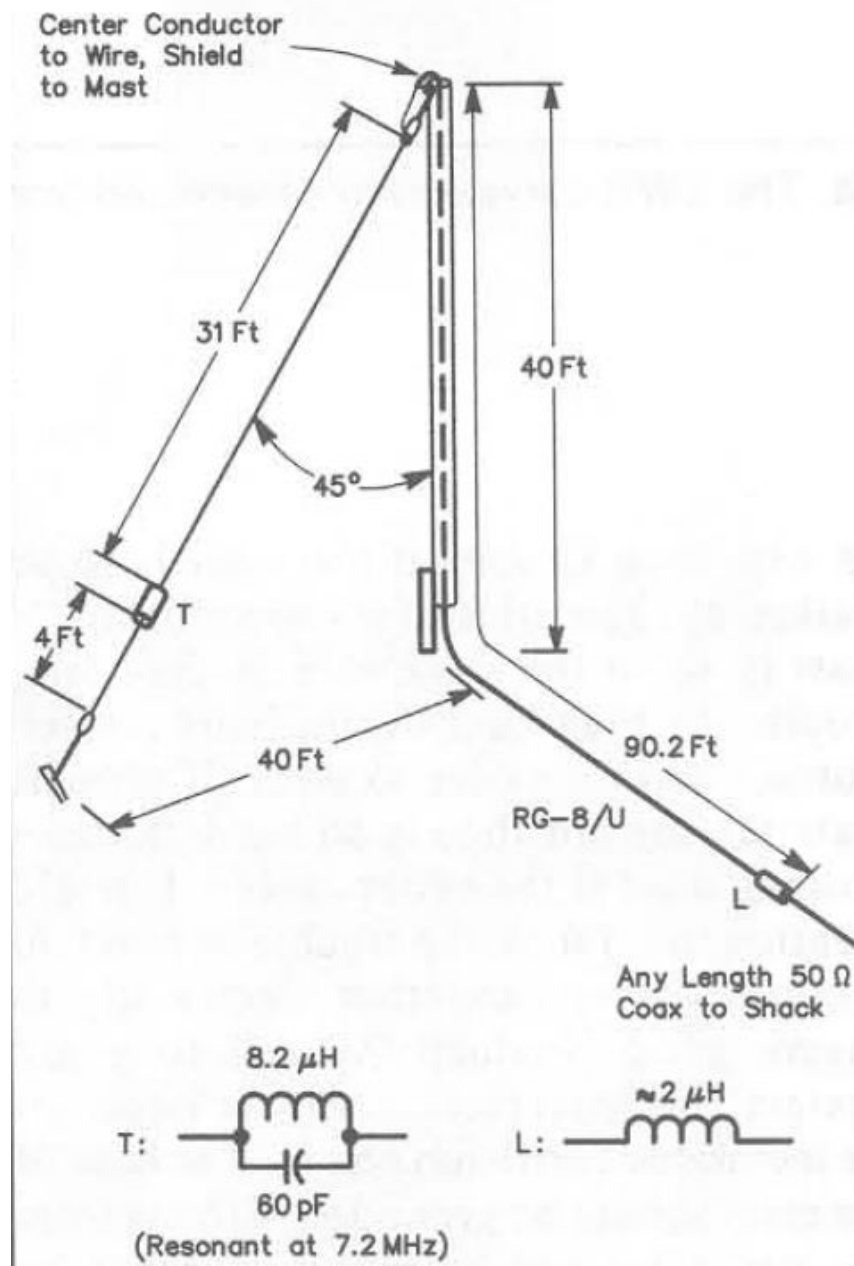
ZL-Special Beam Antenna for 15m



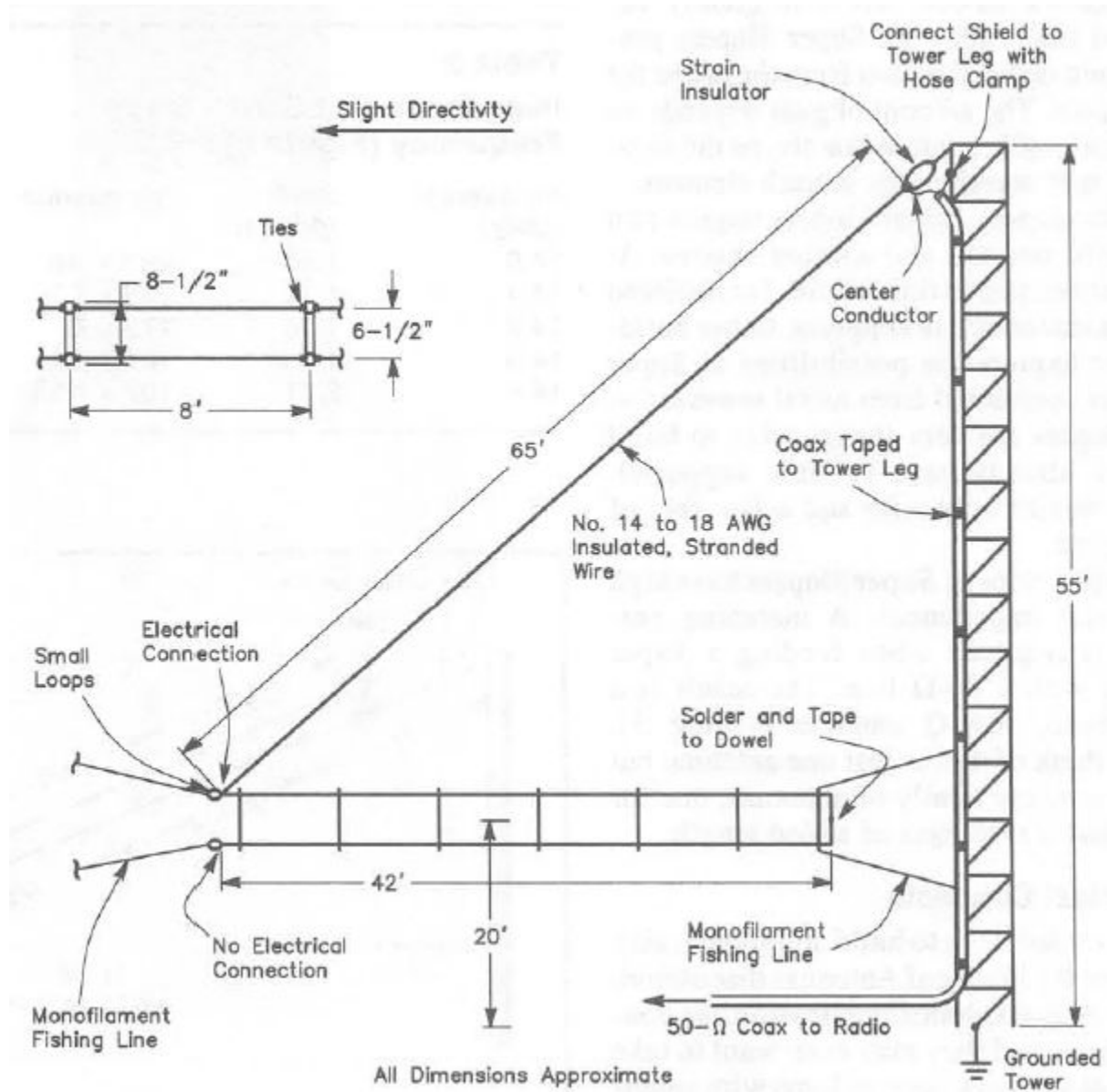
Half-Sloper Antenna for 160m



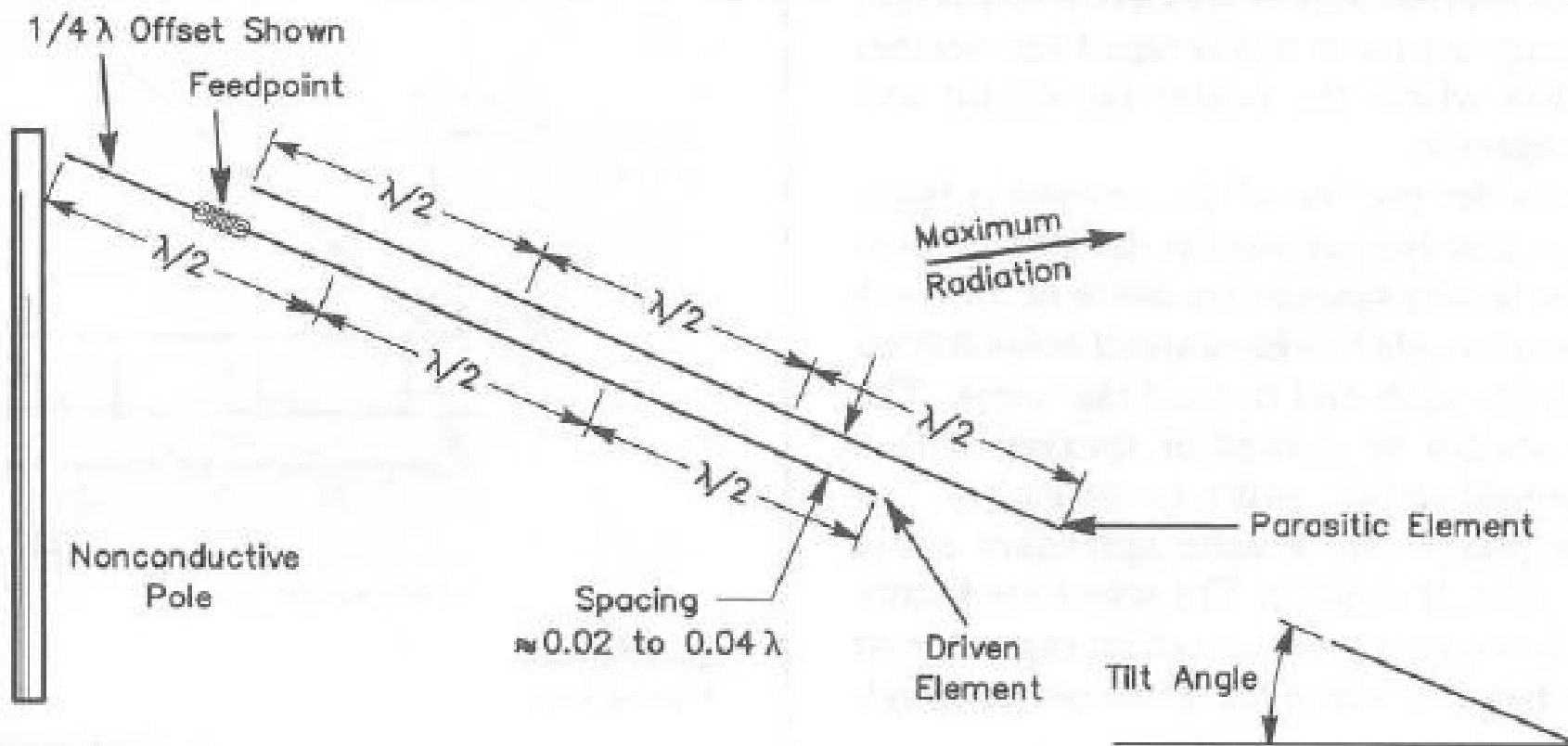
Two-Bands Half Sloper for 80m - 40m



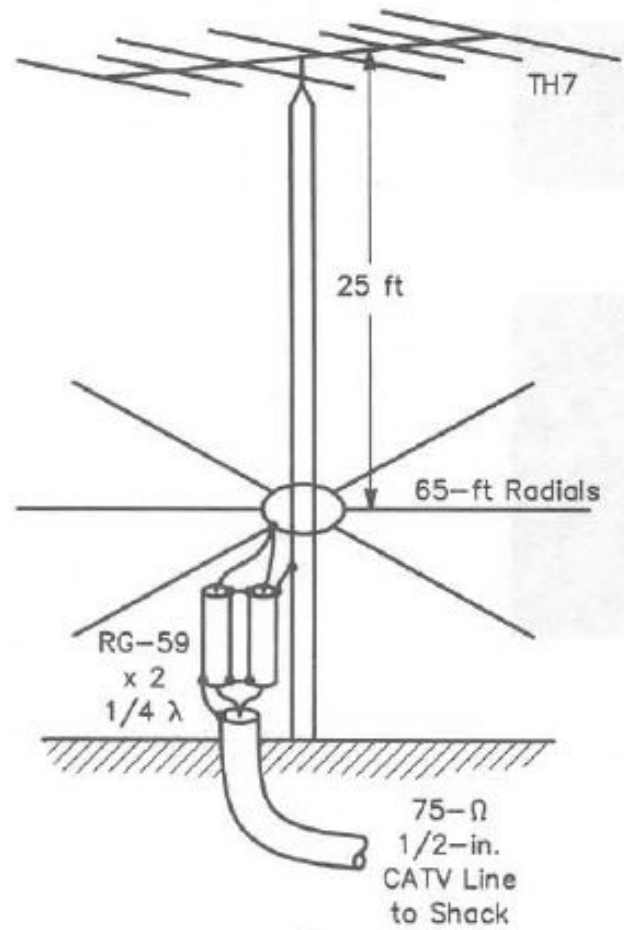
Linear Loaded Sloper Antenna for 160m



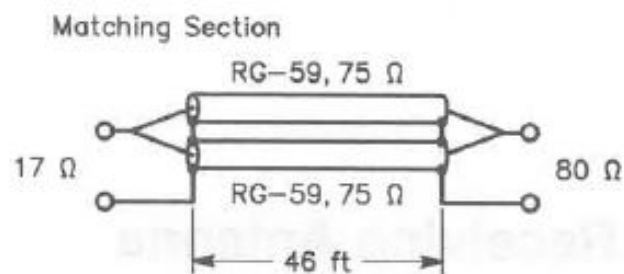
Super-Sloper Antenna



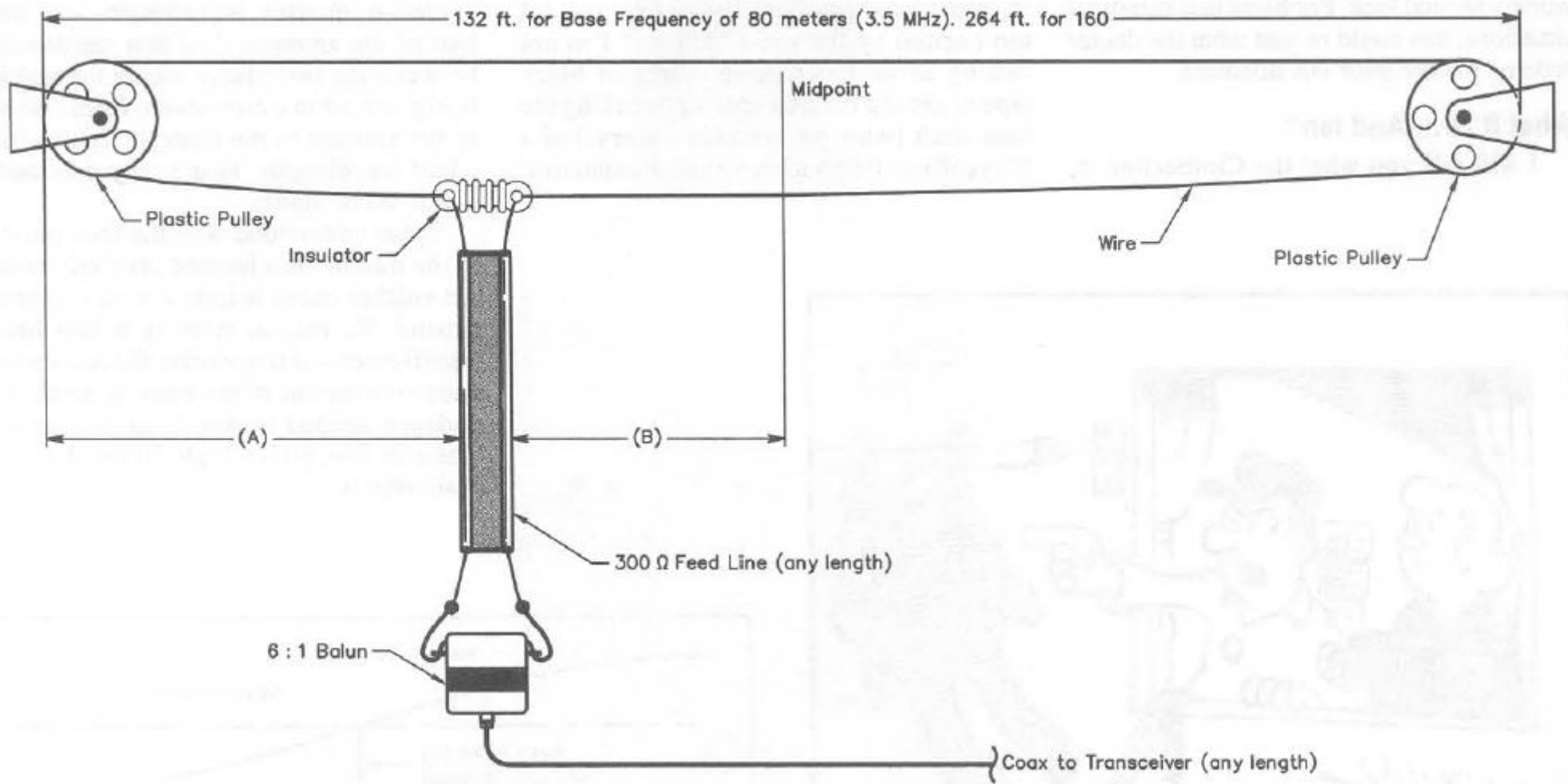
Tower Pole as a Vertical Antenna for 80m



(A)



Clothesline Antenna



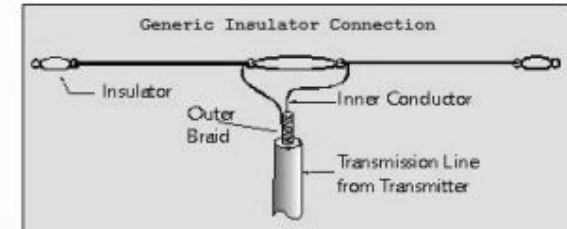
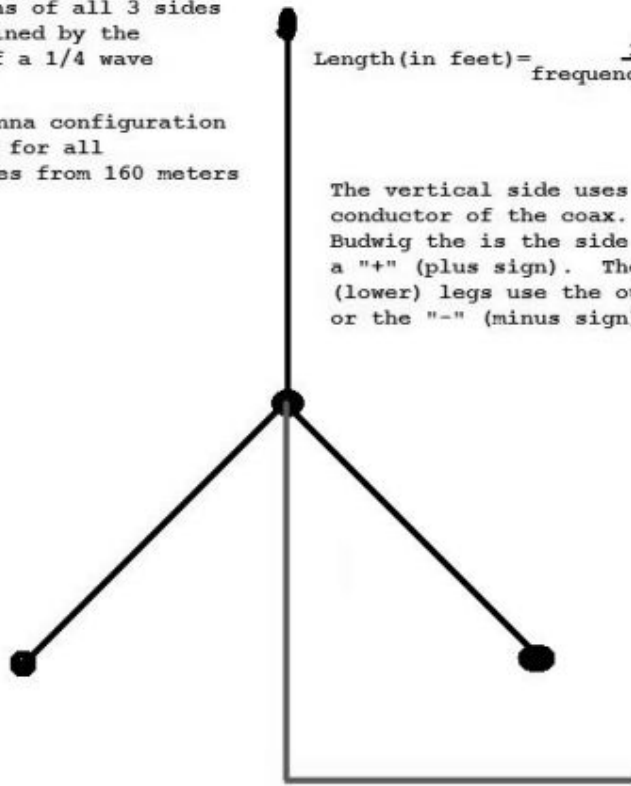
Wire Ground-Plane Antenna

The lengths of all 3 sides is determined by the formula of a 1/4 wave antenna

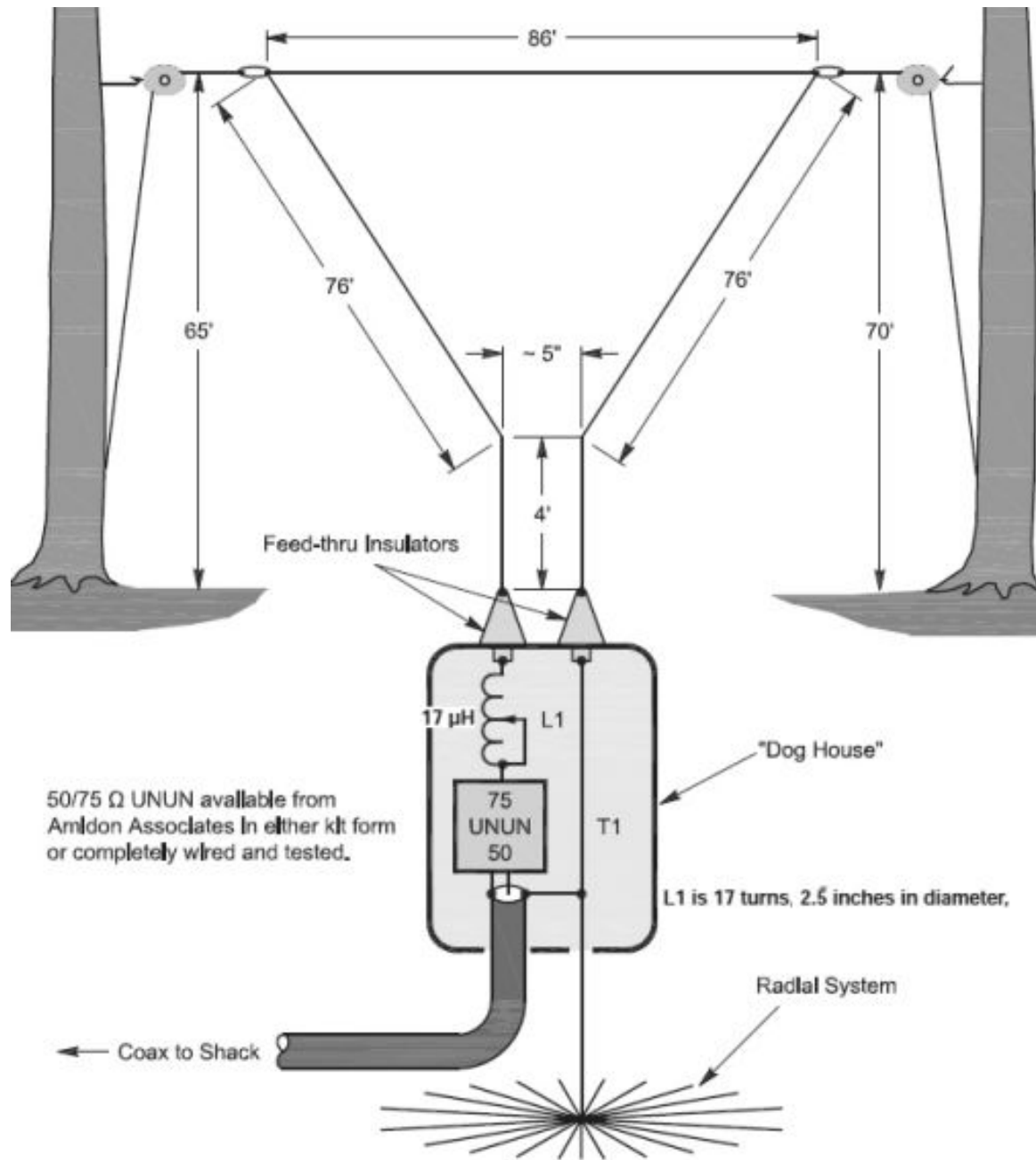
This antenna configuration will work for all frequencies from 160 meters to VHF.

$$\text{Length (in feet)} = \frac{234}{\text{frequency in MHz}}$$

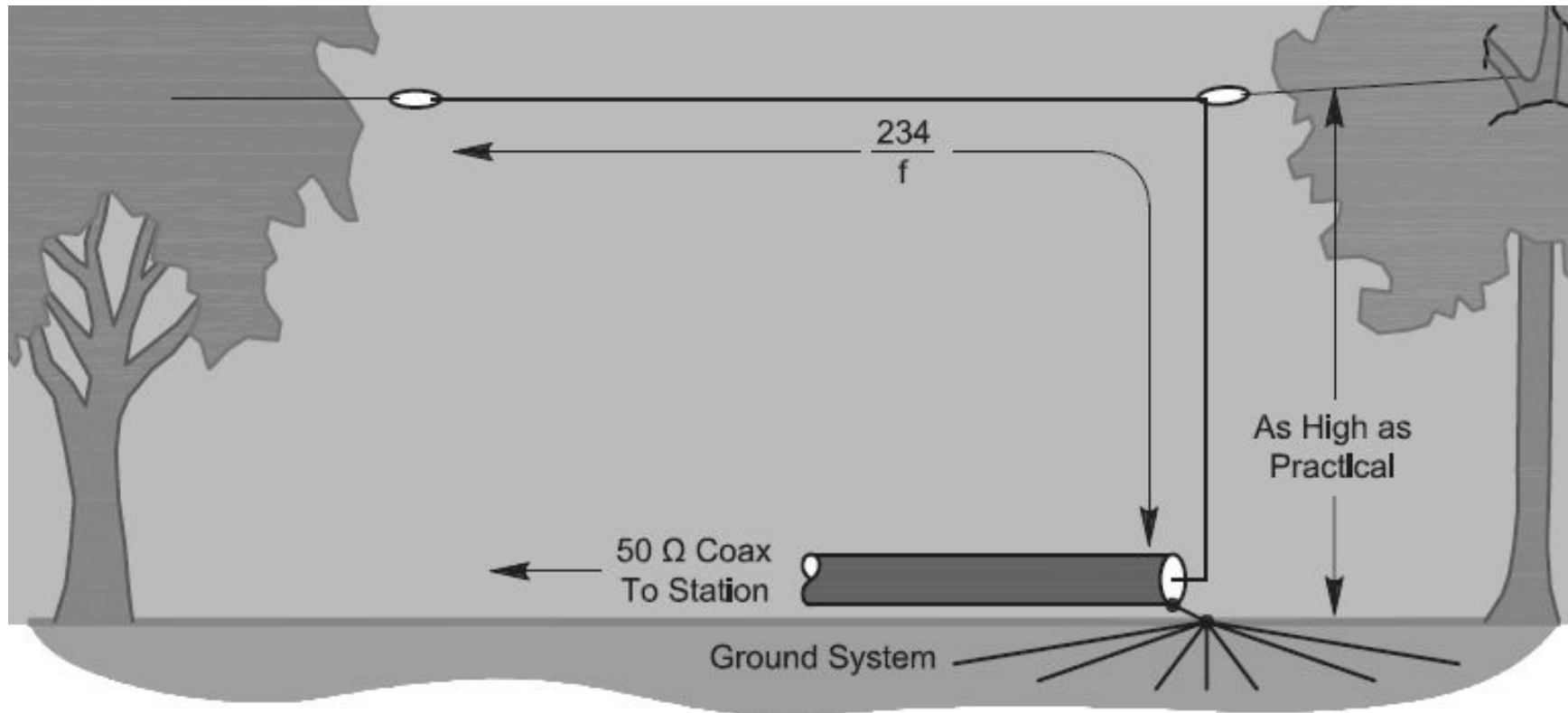
The vertical side uses the inner conductor of the coax. On the Budwig the is the side the shows a "+" (plus sign). The outer (lower) legs use the outer braid or the "-" (minus sign).



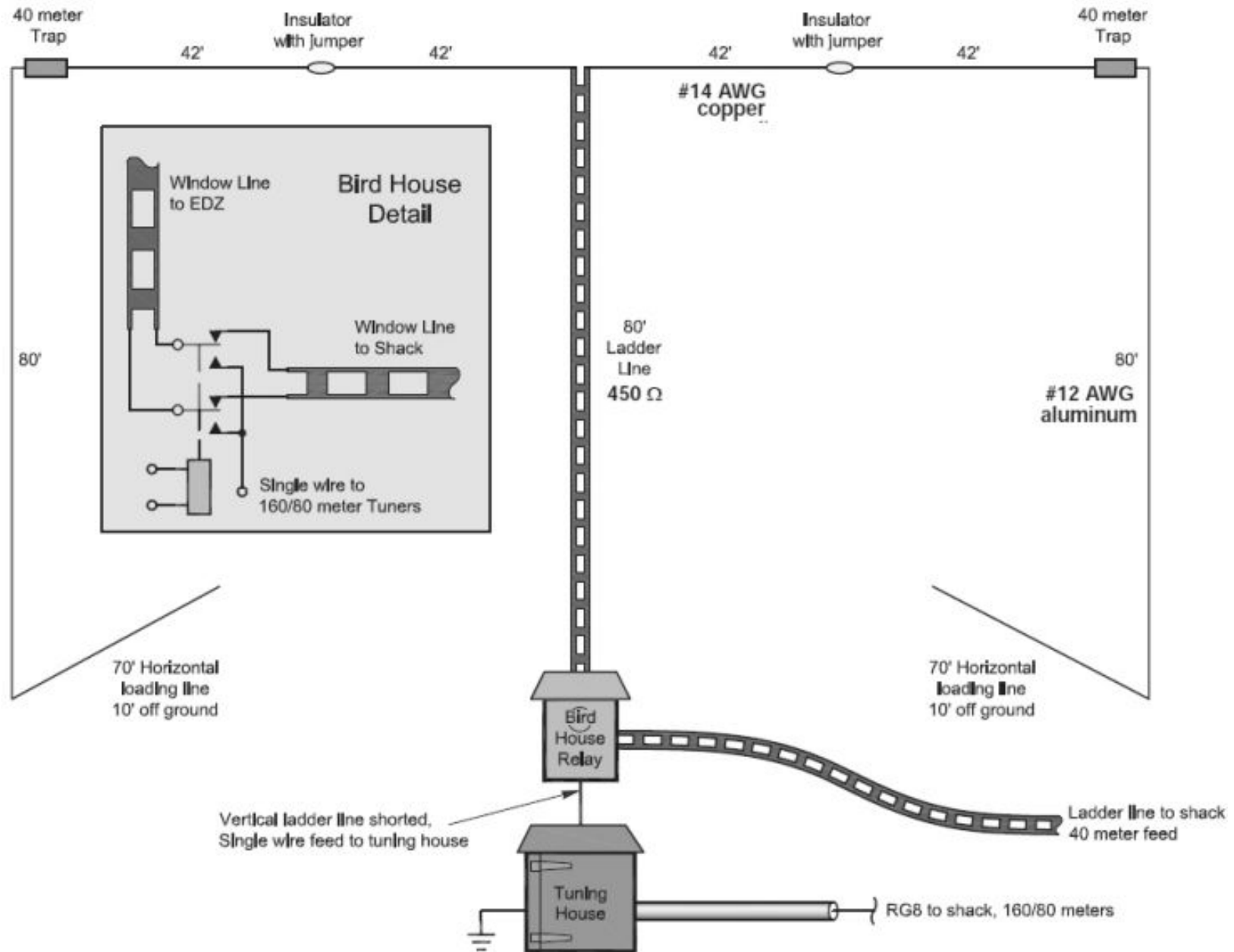
Inverted Delta Loop for 160m



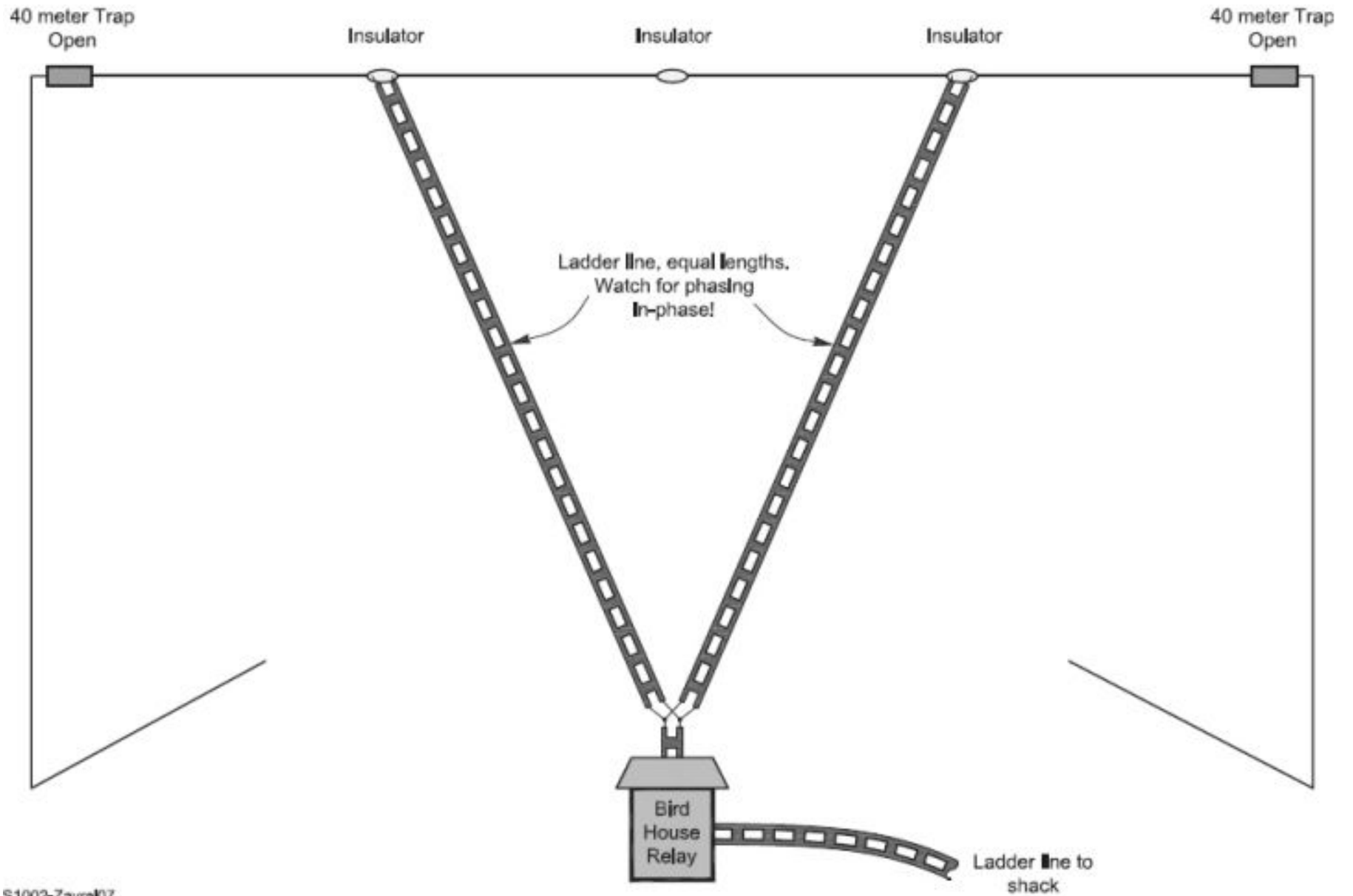
Inverted-L Antenna for 160m



Curtain Zepp Antenna for 160m, 80m, 40m

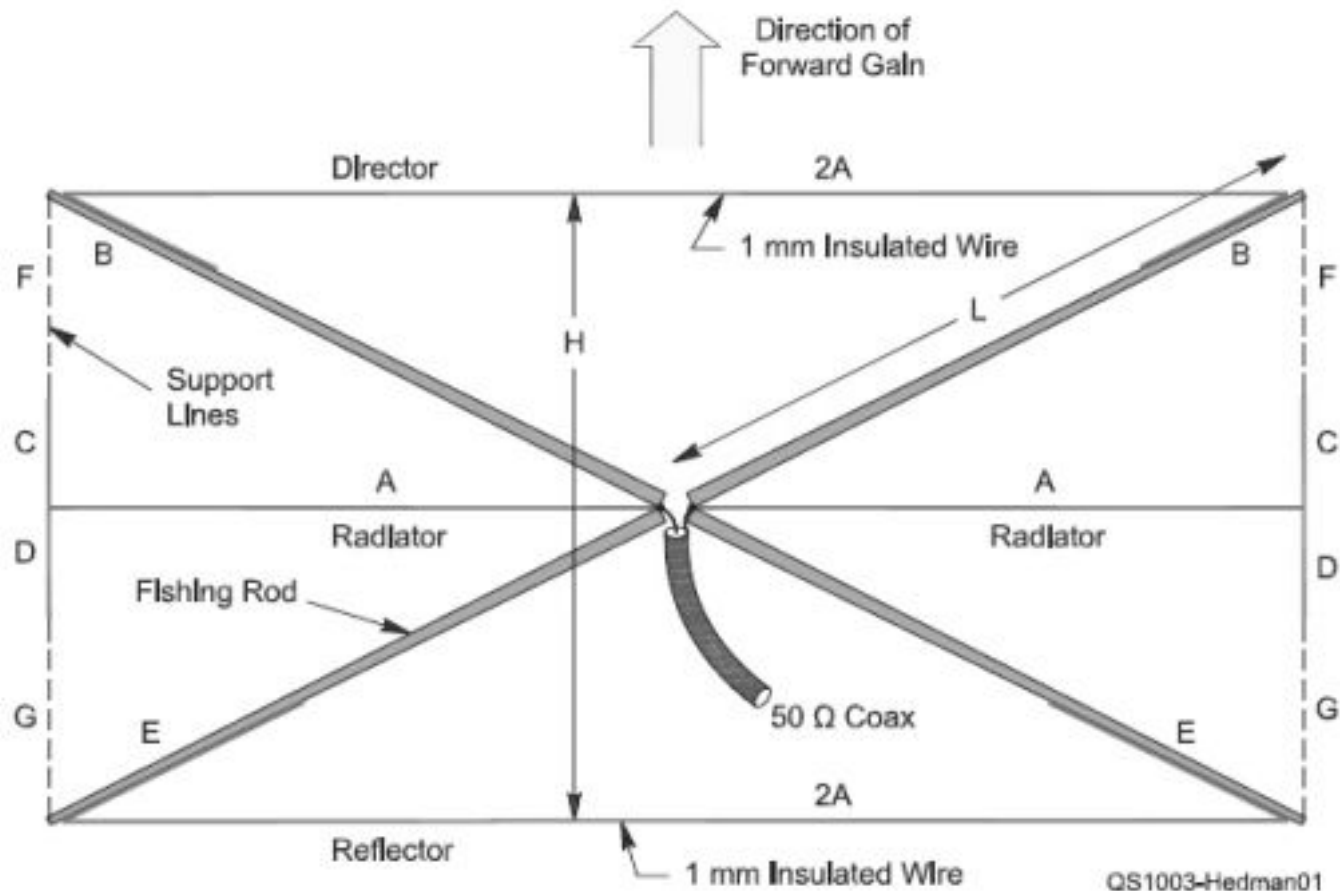


Curtain Zepp Antenna for 40m, 30m, 20m



S1002-Zavre07

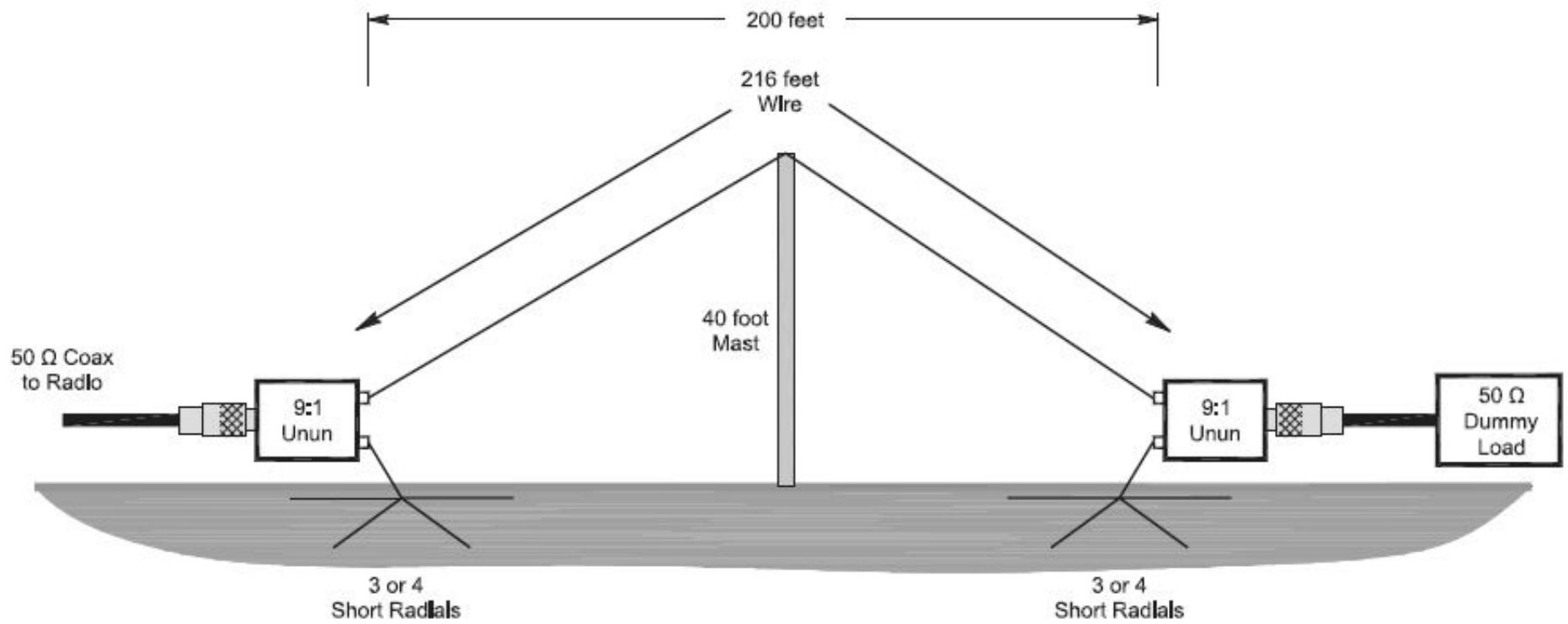
Mini-Horse Yagi Antenna



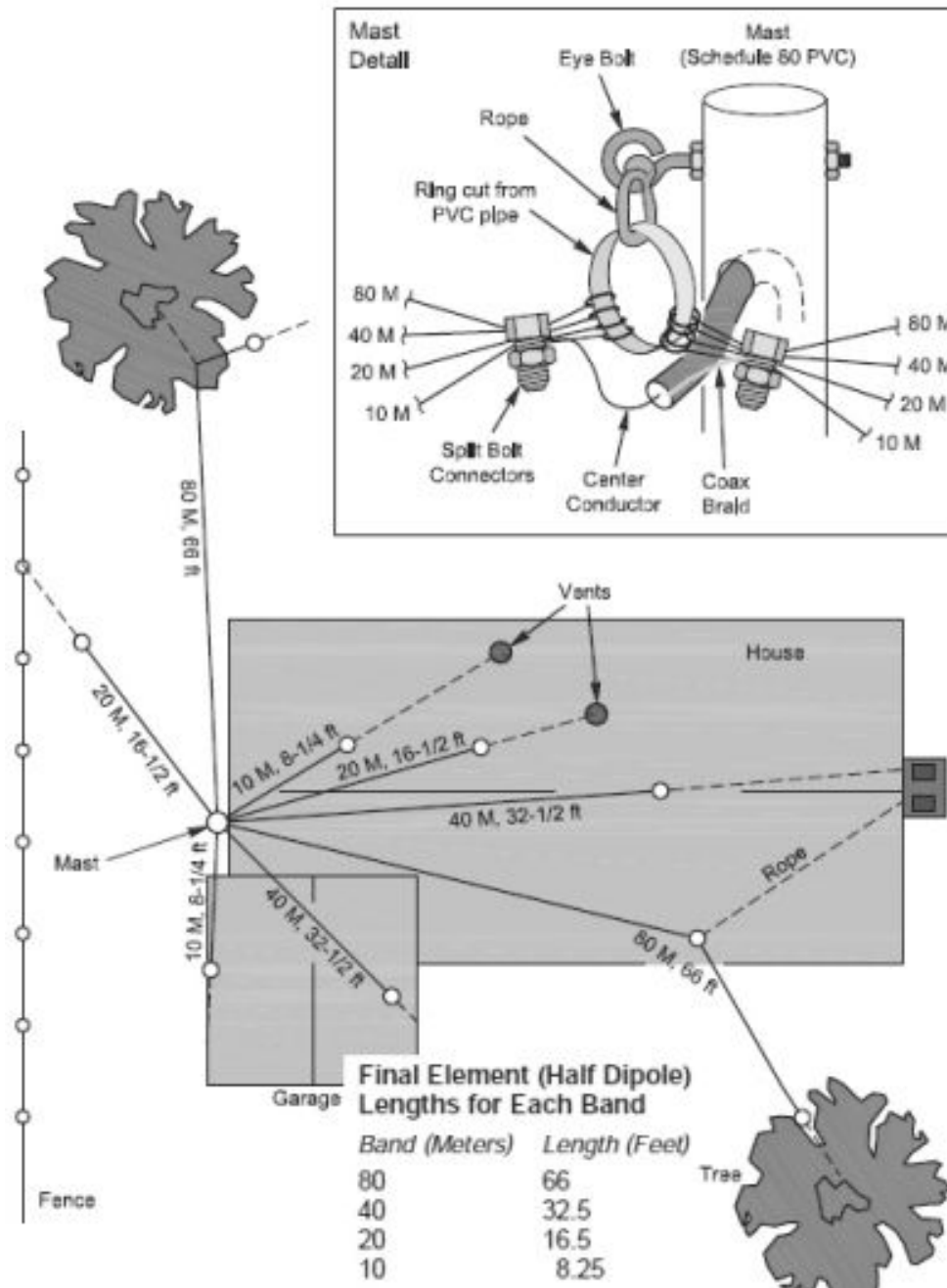
QS1003-Hedman01

MHz	A	B	C	D	E	F	G	H	L
144	1' 2.2"	0' 4.7"	0' 3.5"	0' 1.8"	0' 7.1"	0' 4.7"	0' 6.5"	1' 4.5"	1' 4.3"
28	5' 11.6"	1' 10.8"	1' 6.9"	0' 9.4"	2' 11.8"	1' 10.8"	2' 8.3"	6' 11.4"	6' 11.0"
21	7' 11.6"	2' 6.3"	2' 1.2"	1' 0.6"	3' 11.6"	2' 6.3"	3' 6.9"	9' 3.0"	9' 2.6"
14	11' 11.3"	3' 9.7"	3' 1.8"	1' 6.9"	5' 11.2"	3' 9.7"	5' 4.6"	13' 10.9"	13' 9.7"
7.1	23' 10.5"	7' 7.3"	6' 3.6"	3' 1.8"	11' 10.5"	7' 7.3"	10' 9.1"	27' 9.8"	27' 7.4"

Half-Rhombic Directive Antenna for 20m to 6m



Fan-Dipole Antenna for 80m through 6m



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