

20 TO 6 METER VERTICAL TRAVEL ANTENNA

Mission: To design and construct a resonant durable, lightweight, vertical travel antenna that can work all bands and any frequency, that is quickly and easily deployed in the field.

Construction Notes: The base is a plastic - polymer plate that is easily drilled with a hand power drill. The vertical element is comprised of two or three short lengths of telescoping aluminum tubing for strength and durability. It is infinitely tunable by simply loosening a hose clamp and telescoping the tubing longer or shorter overall. The ground plane is comprised of three wires which are staked out using common ten stakes and short bits of rope. It is infinitely tuned resonant so it can match directly to coaxial cable transmission line. One could employ a 1:1 choke balun to assure against common mode current on the transmission line.

I can assemble and disassemble this entire antenna system, including the steel tripod, in about ten minutes. Very sturdy and durable. This will survive a very strong wind - the radial wires double as guy ropes.

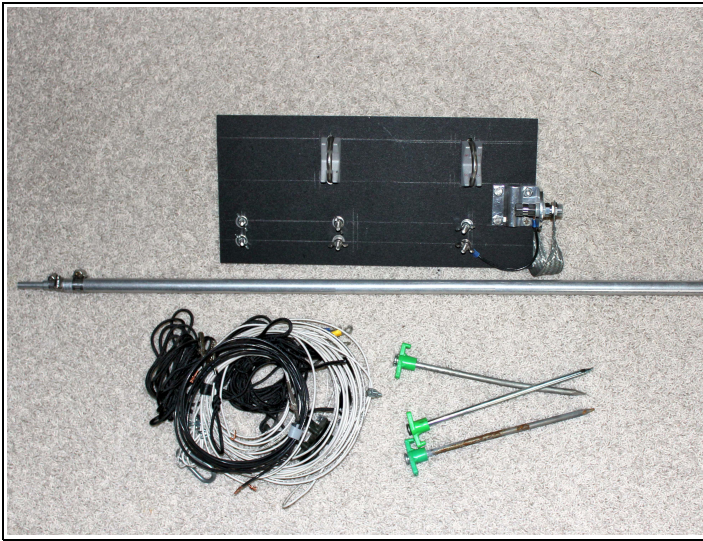
Quantity	Item Part No.	Description	Unit Price	Total Price
1	DXE-MMP-P2	.25 in. x 7.5 in. x 11.5 in. Plate, Polymer Plastic, Blank - DXE-MMP-P2	\$7.50	\$7.50
3	DXE-SAD-075 A	3/4 in. Saddle Clamp, Stainless 1/4 in. U-Bolt & Hardware	\$5.35	\$16.05
2	DXE-CAVS-1P	V-Saddle Clamp, 1/2 in. to 1-3/4 in. O.D. Applications - DXE-CAVS-1P	\$9.95	\$19.90
1	DXE-AT1243	Aluminum Tubing 3' x 0.750" x 0.058" wall, one end slit	\$4.80	\$4.80
1	DXE-AT1242	Aluminum Tubing 3' x 0.625" x 0.058" wall, one end slit	\$4.55	\$4.55
1	DXE-AT1205	Aluminum Tubing 6' x 0.500" x 0.058 wall", one end slit	\$6.60	\$6.60
1	DXE-ECL-060	Element Clamp for 3/4 and 7/8 in. tube	\$1.90	\$1.90
1	DXE-ECL-040	Element Clamp for 5/8 in. tube	\$1.90	\$1.90
3		30 feet of 14 g insulated stranded cooper THHN wire	\$.10	\$3.00

One variation uses aluminum tubing for the ground plane elements, while another uses three 14 gauge insulated copper wires.

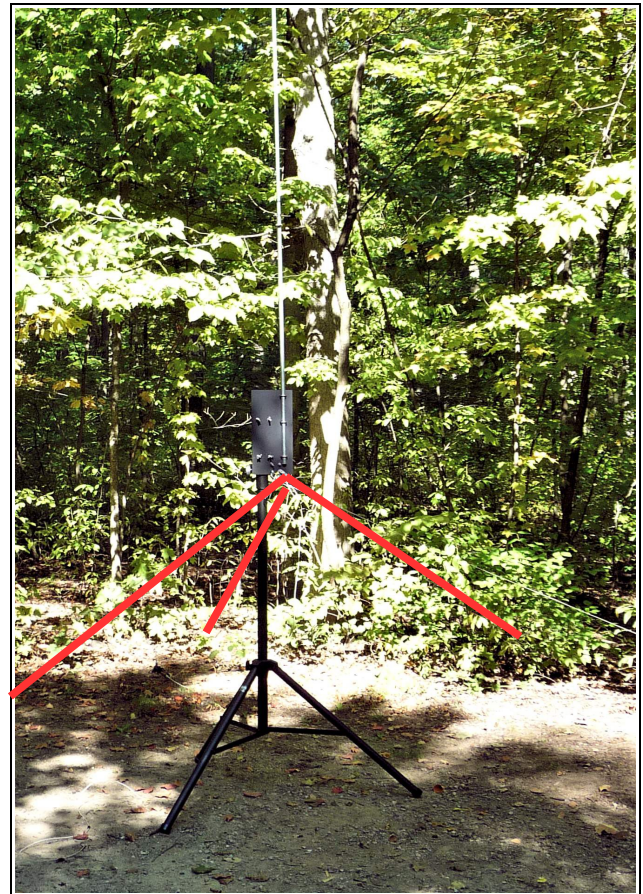
Without the mast, the antenna alone weighs about 4 pounds.



DISASSEMBLED ANTENNA - PARTS



ASSEMBLED ANTENNA



This is the actual traveling version, which employs elevated wire ground wires that are staked with aluminum ten stakes, and which also serve as guy ropes to anchor the tripod.



Radials can be tubes or wires.

If wires, they serve as both radial wires and guy supports.