

HF Antennas for Portable Use



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Definitions

- Fixed Operation
 - Residence, institution, or business
 - Usually a permanent installation
- Portable Operation
 - Field location
 - Usually a temporary installation
- Mobile Operation
 - Radio use while in motion
 - Vehicle mobile
 - Bicycle mobile
 - Pedestrian mobile

HF Portable Antenna Types

- Horizontal
 - Dipole (2 supports)
 - Sloper (1 support)
 - Inverted vee (1 support)
 - Beam
 - Mast beam
 - Wire beam
- Vertical
 - Wire
 - Self-supporting

HF Portable Horizontal Antennas

- Advantages
 - Don't rely on a ground system or counterpoise
 - Good performance with adequate elevation
- Disadvantages
 - Band change usually requires lowering antenna
 - Requires supports
 - No natural supports (e.g. firetower, trees) may be available
 - Too dense natural supports are problematic!

Horizontal Antenna Examples

- N2CX Gusher classic
 - wire dipole, cut for any single band 40-10
 - RG-174 coax feedline to crimped BNC
- N7UN multiband dipole
 - jumper across insulators for band change
 - 40/30/20 meters
- W7EL FD
 - 2 el 20 meter wire beam
 - used by N7UN



HF Portable Vertical Antennas

- Advantages
 - Quickest setup (self-supporting)
 - Band change is usually easy-to-reach
 - Outstanding performance near salt water
- Disadvantages
 - Poor performance without good ground system
 - Most portable ops deploy poor ground system
 - Radials & guy supports are trip hazards

Telescoping Pole Examples

- Collapsed length ~46”
- Crappie Fishing Pole
 - Sunny Day SD-20: 20’ @\$20
- Jackite
 - 20’ @\$30, 28’ @\$45, 31’ @\$55
- MFJ-1910
 - 33’ @\$80
- DK9SQ
 - 33’ @\$99



Tailgate Portable

- Radio equipment and antenna are carried in vehicle to near operating location
 - Most Field Day operations
 - Campgrounds, parks, etc.
- QRO operation possible
 - Generators
 - Large (heavy) batteries
- Elaborate antennas possible
 - Portable towers, beams, etc.

Tailgate Portable HF Antennas

- Antennas designed for fixed operation
 - anything that will fit into vehicle or trailer
 - towers & full-size beams possible
- Antennas designed for tailgate use
 - easy to assemble/disassemble
 - flexible mounting options
- Antennas designed for backpack use
 - minimum size and weight

Backpack Portable

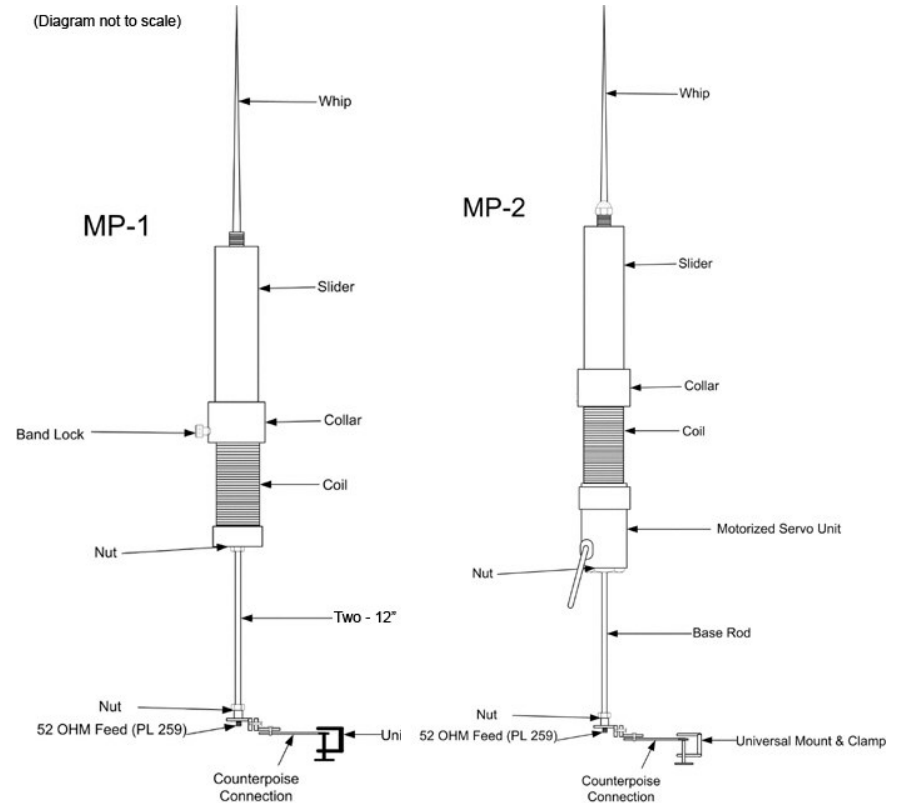
- Radio equipment and antenna are carried by operator to operating location
 - Beach
 - Backcountry hiking
- QRP only
 - High performance batteries are light weight and provide long operating time
- Antenna size & weight are extremely limited
 - Must be easily carried for miles

Commercial Portable Antennas

- Super Antennas (Vern Wright W6MMA)
 - <http://www.superantennas.com/>
- Pacific Antenna (James Bennett KA5DVS)
 - <http://www.pacificantenna.com/>
 - <http://www.njqrp.org/pac-12/>
- Buddipole (Budd W3FF)
 - <http://www.buddipole.com/>
- Black Widow Vertical (Eastern PA QRP Club)
 - <http://www.n3epa.org/>

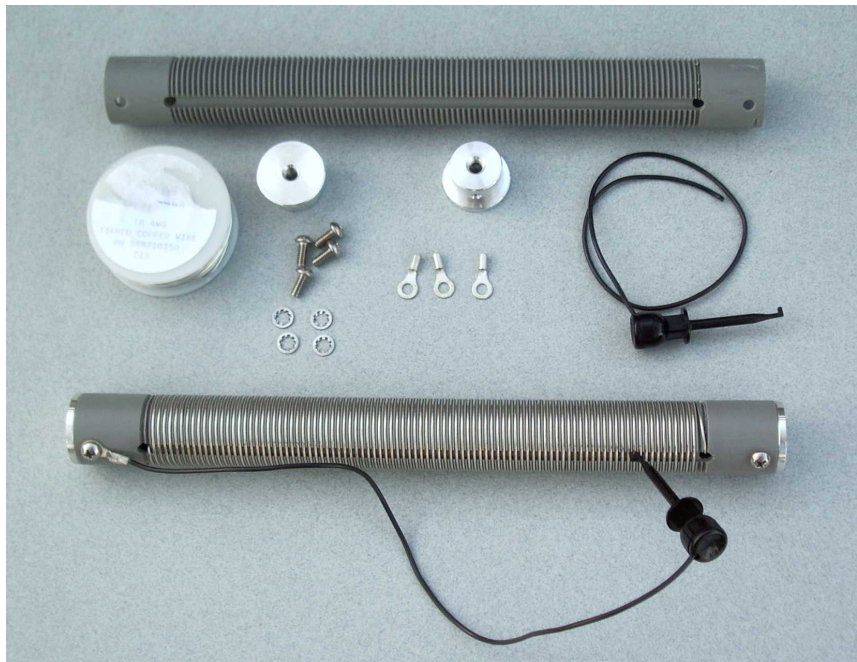
Super Antennas MP-1 and MP-2

- Vern Wright W6MMA
- <http://www.superantennas.com/>
 - MP-1 monopole \$99 (40-6)
 - MP-2 monopole \$225 (40-6)
 - MP-1 dipole \$360 (40-6)



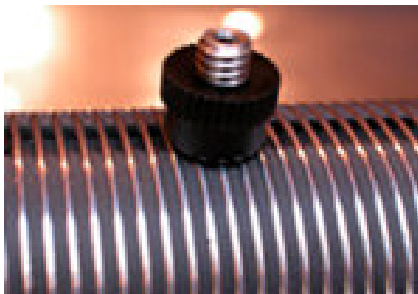
Pacific Antennas PAC-12

- James Bennett KA5DVS
- <http://www.pacificantenna.com/>
 - \$85 (kit, 2 coils, 60-10)
 - \$105 (kit, multiband coil, 40-10)
- <http://www.njqrp.org/pac-12/>
 - Homebrew instructions



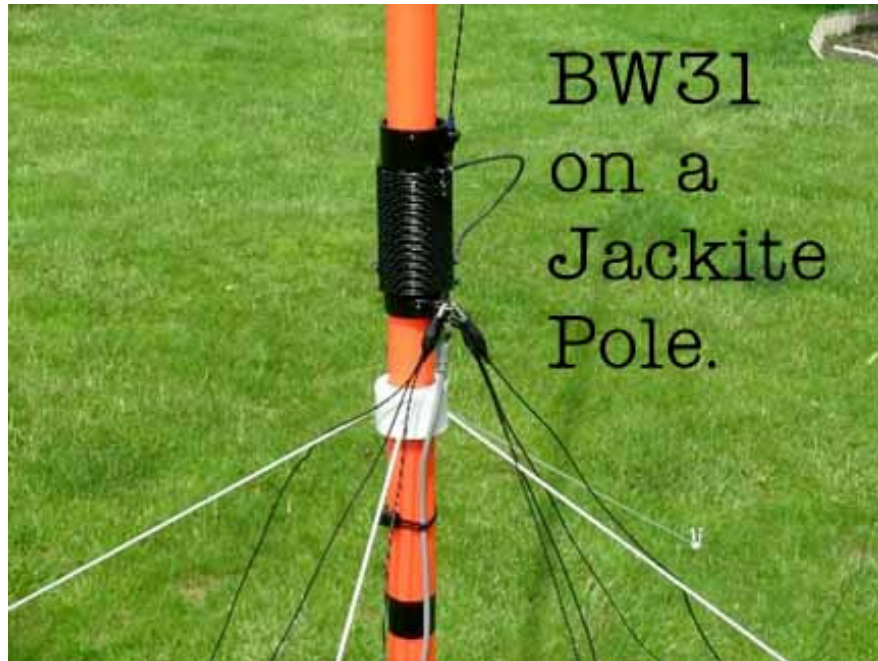
Buddipole

- Budd W3FF
- <http://www.buddipole.com/>
 - \$139 monopole (40-10)
 - \$199 dipole (40-10)
 - \$399 dipole w/ mast & tripod



Black Widow Vertical

- Eastern PA QRP Club
- <http://www.n3epa.org/>
- Designed by Ed WA3WSJ
 - \$147 w/ 20' Crappie pole (40-20)
 - \$122 w/o pole (80-15)



Web Groups

- Hfpack
 - <http://hfpack.com/>
 - 7000 members
 - Founded Nov 2000 by Bonnie Crystal KQ6XA
- PolarBearQRP
 - <http://polarbearqrp.org/>
 - 100 members
 - Operate October-March on weekend nearest full moon
 - Founded 2005 by WA3WSJ, WB3AAL, K3YTR, NK8Q

Photos and Videos

- N7UN (Rainman)
 - <http://n7un.blogspot.com/>
- VA3SIE (Ditti Bear)
 - <http://web.ncf.ca/fj620/ChilliCon07/>
 - <http://web.ncf.ca/fj620/PBMMEOct07/>
 - <http://arsqrp.pbwiki.com/VA3SIE+Polar+Bear+Moonlight+Madness+Nov+%2707>

June 2006, Hunter Mtn, Catskills, NY

