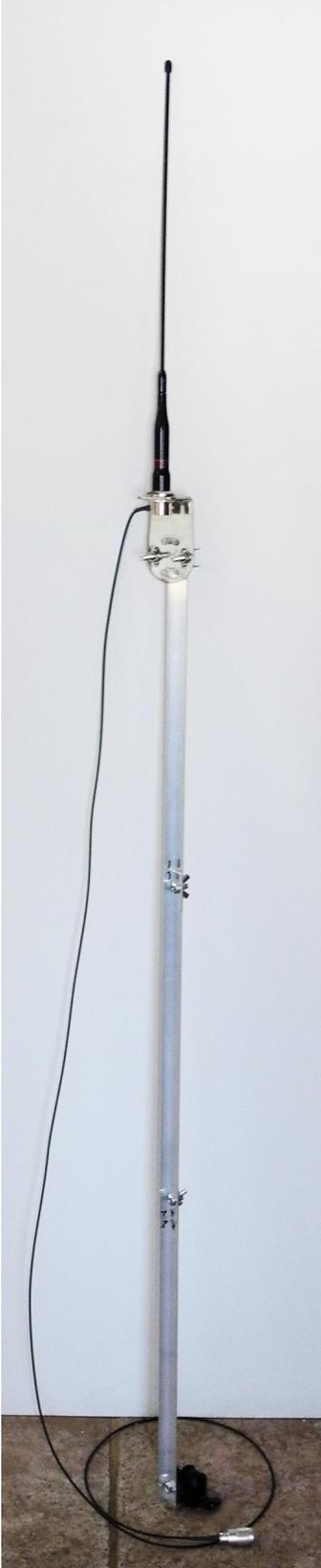


Lightweight Backpack Antenna Assembly

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Construction

Cut the Aluminum angle into three 15" pieces. Align the three pieces and drill and allow them to overlap 1.5" Drill 1/4" holes through the two overlapping pieces. Place a 1/4-20 1/2" screw and wing nut through the two overlapping pieces and hand tighten. Write numbers on the pieces for future alignment. On one end, install the Diamond CRM mounting bracket and cable assembly. Mount the antenna on the SO-239 connector. On the other end, drill a 1/4" hole for tripod head. Place the tripod head 1/4-20 screw through the aluminum angle and a hex nut on the other end. Tighten with a wrench. The antenna assembly weighs 21 ounces and the tripod weighs 11 ounces. The total weight is 33 ounces, 2.1 pounds. The antenna assembly is 59" tall assembled. The tripod is 44 inches tall assembled. The total height is 103 inches (8.6 feet) tall assembled and 15 inches folded.

This system was designed as a VHF/UHF antenna system. An HF mobile antenna stick and larger counterpoise can also be used.

The top assembly is shown without the tripod on the left.

Parts List

Tamrac TR406 ZipShot Compact, Ultra-Light Tripod, \$49.95

Diamond AZ504FXH, 2m/70cm antenna, 15.5", 2.15 db gain 440MHz,
\$39.95

Diamond CRM mounting bracket, \$16.95

Diamond C101 cable assembly, 6.5' RG316 Teflon 1/8" diameter
coax, Low-loss PL259 adapter included, SO239 base, \$37.95

Aluminum (Alloy 6061) 90 Deg Angle, 1/16" Thick, 3/4" X 3/4" Legs, 48" long
aluminum angle, mcmaster.com 8982K561, \$3.45

5 1/4-20 steel wing nuts, (3 for the antenna assembly plus to 2 extra
in case they are lost), \$.50

5 1/4-20 1/2 steel bolts, (3 for the antenna assembly plus to 2 extra in
case they are lost), \$.50

1 1/4-20 hex nut, \$.10

Shipping, \$20.00

Total: \$169.35