

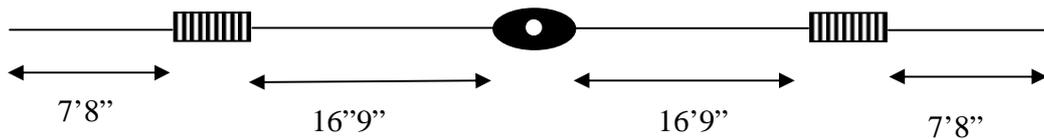
## Pacific Antenna PAC-20+40M ultralight dipole kit

The Pacific Antenna dual band 20/40M dipole kit uses traps to give simultaneous operation on both bands. The traps use a coil and capacitors in parallel to give a high impedance at 14 Mhz to isolate the inner part of the antenna for 20M operation. On 40M the trap has low impedance and provides loading to shorten the overall length.

### Kit Contents:

Approximately 70ft of #24 stranded wire  
BNC connector (1)  
Delrin dipole center insulator (1)  
Coil forms (2)  
27pF 3KV capacitors (4)  
Clear heat shrink tubing (2)

### Antenna Lengths in feet and inches:



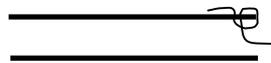
### Wire Preparation:

The kit includes approximately 70 feet of wire. You may find it easier to pre-cut the wire lengths when assembling the antenna. If you do so, leave about 3 or 4 inches extra in each section to make the connections at the feedpoint and coils. Do not leave longer as there may not be sufficient wire if the sections are cut too long. Remember to measure twice and cut once to reduce any errors.

### Trap Assembly

#### Coil Winding

The coils are each wound with 48 turns and are paralleled with 13.5pF of capacitance. Start by inserting the wire through one of the end holes of the coil form to make the outer section. Leave about 3 or 4 inches hanging and loop the wire back through the hole in the insulator to secure it as shown below.

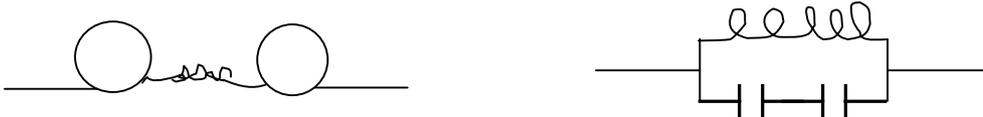


This excess wire will be used to attach the capacitors. The capacitors will be soldered to the ends of the coils and to the wires forming the antenna sections. The antenna sections wires should also be looped through the hole in the insulator to provide relief of the solder joint. Leave the wire ends free for now as they will be soldered together and to the ends of the capacitor string. Wires may be temporarily secured with tape during assembly to prevent the coil turns loosening.

### Capacitor Preparation

The capacitors are connected end to end in series to form a series string of two capacitors by twisting and soldering their leads together. Leave enough length to be about a half inch shorter than the coil form. The string of capacitors is then placed in the coil form tube and connected to the wires from each end of the coil and from the antenna sections. Solder one end first leaving an extra inch of wire so that it can be pushed through to the other end of the coil for that connection to be soldered.

This forms a parallel coil-capacitive trap as shown below.



### Center Insulator

The black center insulator has a large hole drilled in the center for mounting the BNC connector. Insert the connector in this opening, place the washer and ring terminal over the threads and secure with the supplied nut.



Feed the wire through the outer hole from the back side of the insulator (connection side) of the BNC connector and loop back through the inner hole leaving sufficient length to make the solder connections. A bit of extra length is a good idea here. Strip the ends of the wires approximately 1/8 to 1/4 inch and solder to the BNC center conductor pin and ring lug terminal. Once the wire is soldered, the excess can be pulled back through the holes. This will help to secure the wire in place and prevent strain on the BNC solder connections.

Alternatively, a lightweight feedline such as RG-174 can be directly soldered to the antenna ends and the BNC not used. The feedline can be looped through the hole for the BNC and secured with tape or heat shrnk. This will reduce the weight of the antenna.

### Setup

The antenna can be mounted as a dipole with center and end supports or as an inverted V with a single center support. It can also be assembled in a V configuration with a short feedline or BNC adapter to connect it directly to the rig feedpoint. An antenna analyzer makes tuning the antenna easier but it can be adjusted by checking the SWR at the lower and upper end of the band and if the SWR is highest at the highest frequency than the lowest, then it is too long.

Thanks for purchasing the Pacific Antenna PAC-2040 dipole kit. If you have any questions, please contact us at the following email address:

[grpkits.com@gmail.com](mailto:grpkits.com@gmail.com)

Thanks from the Pacific Antenna Team!