



Super Antennas

Model YP-1



6 Band Rotatable Dipole
20, 15, 17, 12, 10, 6M



The SUPERANTENNA YP1 Rotatable Dipole is the driven element of the YP3 Yagi by Vern, W6MMA

Congratulations. You have just received a light-weight, extremely flexible 6-band Dipole antenna designed for field applications by the QRP operator and others. The antenna provides forward gain and directivity on all bands 20M through 6M using an ingenious combination of parts that you adjust in the field with almost no tools. When placed on a common push-up mast or similar mast at least 15 feet tall or more, the antenna will provide the benefits of directional reception and transmission. Yet, you may carry the antenna in a 3 foot long bag with great ease as you move from home to field and back again. In operation, the antenna expands to a maximum side to side width of about 220 inches. The estimated power limit of the antenna is 500 Watts DC.

WHAT IS THE SUPERANTENNA YP1? The YP1 is a 6-band Rotatable Dipole, optimized within its design for use on a wide range of frequencies. The Rotatable Dipole design provides wide bandwidth on each band for each field adjustment. You only need to set and measure the element lengths and coils according to the instructions for each band. You may even vary the recommended dimensions for special circumstances and the instructions will provide you with some guidelines.

For 6 meter operation, the elements greatly reduced in length but it is now a full size Element with good gain on the bottom of the band 50.0 to 50.5 MHz. CW operation is 50.0 to 50.100 normally. 50.110 is the international SSB and CW calling frequency. 50.125 is the beginning of the stateside phone band. Normally SSB contacts inside the USA are not done below 50.125. The 6m beacon band is 50.0 to 50.080.

On 10 meters you have a full size Rotatable Dipole that covers the bottom 1 MHz with one setting and no coils are needed. Coil is replaced with a one inch long hex nut.

On 17 and 12 meters mid element coils are used to resonate the elements and the antenna will cover the full amateur band. You will experience good gain.

20 and 15 meters are much wider bands, therefore the coil loaded element require two settings per band. On 20m the reduced size of the antenna for portable work will provide good directivity offering improved communications.

TOOLS REQUIRED for setup: Measuring tape.

Prior to assembly chose the band you intend to operate.

1 Layout the elements sections by length and position as shown the DIMENSION sheet. Now begin threading the element sections together. The large coils are used only on 20M (7mh). Use a tape measure to set the exposed length of each element section. TIP: If you plan on using the same band over and over, mark the dimension with a permanent felt pen marker and note the band (20m) next to the marks. This will really speed up reassembly at the next site.

2 Continue assembling the sections until you get to the 1/4" diameter rod tips. Use a tape measure and set each tip pair to the correct length.

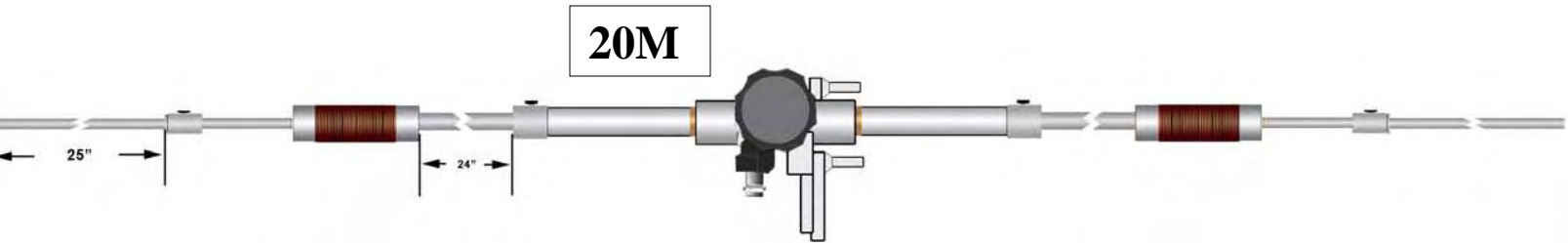
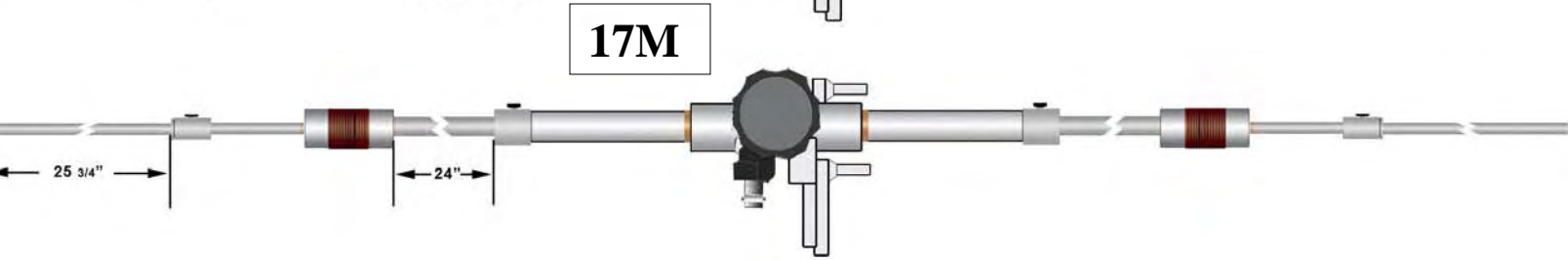
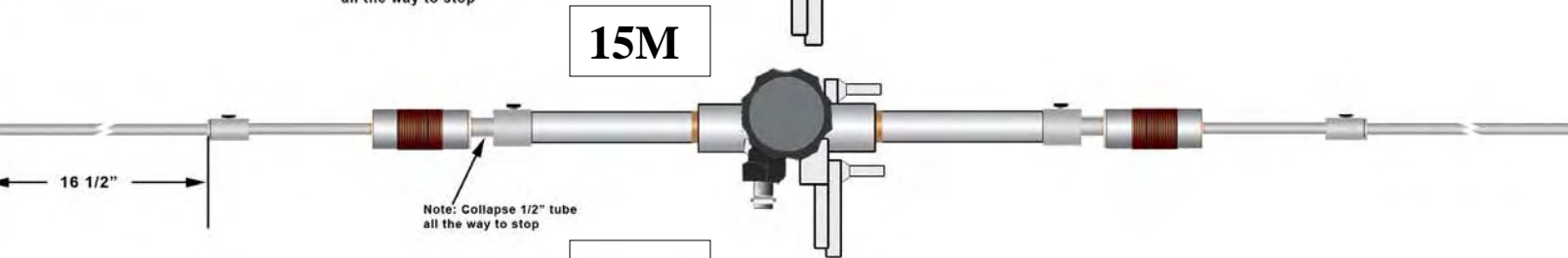
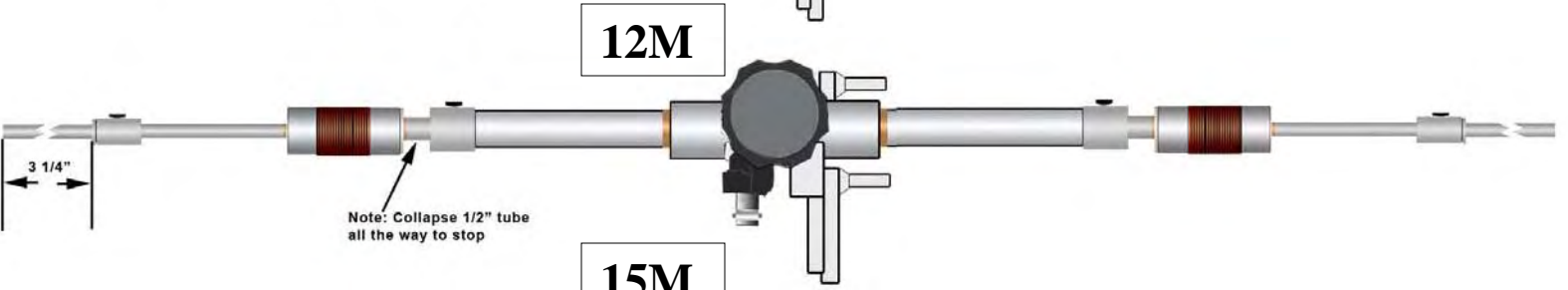
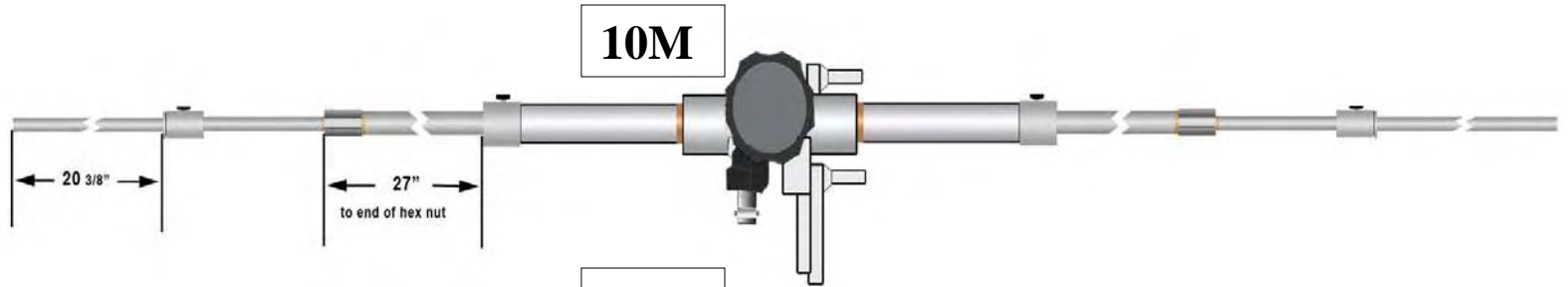
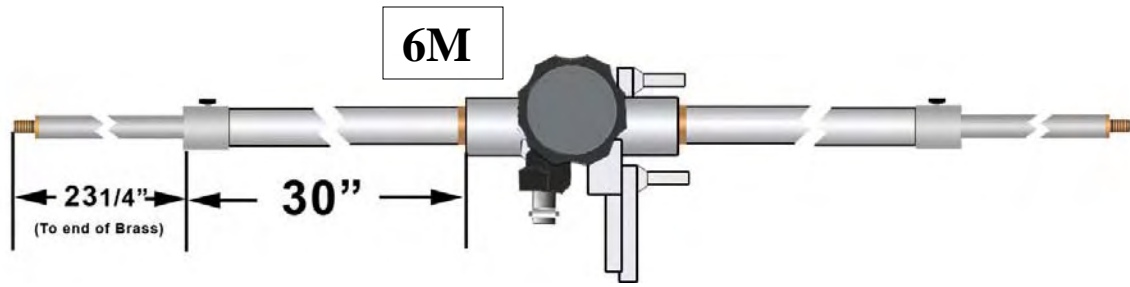
3 Plug in the banana jack to BNC adapter, attach your feed line and mount the antenna on an appropriate mast as high as possible. If the antenna is placed 15 to 20 feet above ground, the best match should be very close to center of the band or band segment you have chosen. Small adjustments to the driven element tips should bring the match to the desired frequency.

4 If large frequency shifts are required, find the frequency where the antenna is working properly like 28.4 mHz. Divide that frequency by the new frequency. $28.4/29.4 = .966$. Measure the element half length, say 98", and multiply

$98 \times .966 = 94.668$ (round off to 94.75) and adjust each element tip to achieve the new element half length. Make small improvements in frequency and VSWR by adjusting the Driven Element tips slightly.

Don't be too concerned about a VSWR of 1.5:1 or less. Your radio should handle this with ease and spend time on the air having fun...enjoy!

Configuration Diagrams

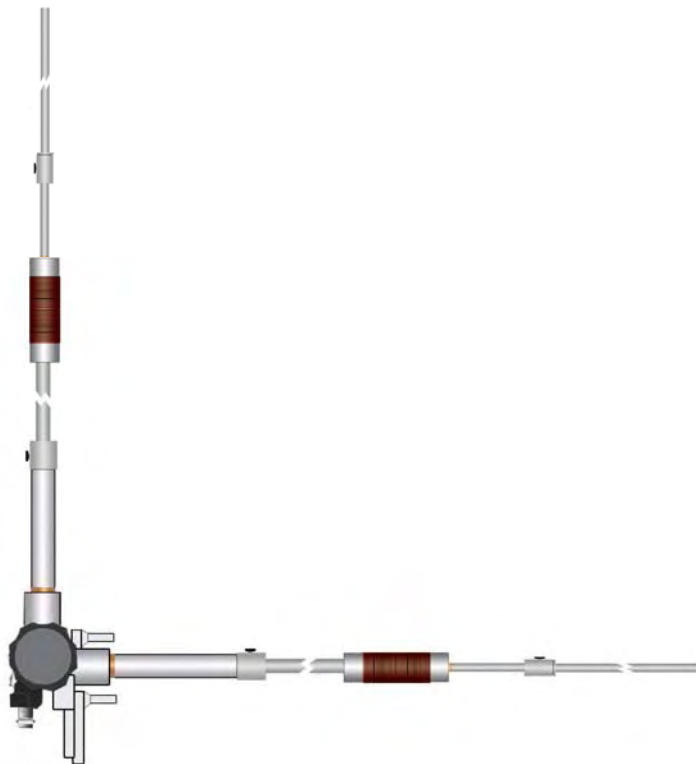


Alternate Configurations

YP-1 Rabbit Ear Configuration



YP -1 Inverted – L Configuration



PARTS LIST:

DESCRIPTION	QTY
Dipole Center Section (with rotatable arms)	01
5 1/8" by 30" Dipole Element	02
1/2" by 30" Dipole Element	02
3/8" by 22" Dipole Element	02
1/4" by 30" Dipole Tip Element	02
3/8" by 24" 1" Long Hex Nut	02
3.5mh Coil (for 17,15, 12m)	02
7.0mh Coil (for 20m only)	02
Tape Measure	01
36" Black Canvas Travel Bag	01
Owners Manual	01