

HFp 80 Meter Dipole User's Guide

3.5 MHz – 30 MHz Portable Amateur Radio Antenna

The HFp Antenna

The HFp design provides a highly efficient antenna design in an extremely portable package. The antenna is highly configurable, and, with the 80 Meter Coil, covers all the Amateur bands from 80M to 10M (as well as most frequencies in between). Typical setup time is about 10 minutes.

The full 80 Meter band is covered by the HFp in overlapping segments, as shown in the following table. Typical operating bandwidth is about 75 KHz.

Band	Whip Length		
	Max	Min	
80M - CW	3.50	3.70	MHz
CW - Hi	3.57	3.79	MHz
SSB- Lo	3.67	3.89	MHz
75M SSB	3.81	4.06	MHz

The element configurations for the pre-defined tuning segments are shown in the 80 Meter Configuration table, shown next. Element 1 is always the inside element, attached to the center insulator.

HFp 80 Meter Dipole Configuration Table

Note – this is for one-half of the Dipole – set up each side the same way.

Band	EI - 1	EI - 2	EI - 3	EI - 4	EI - 5	EI - 6	EI - 7
80m CW	3 Stripe-Out	80 M Coil	2 Stripe-In	1 Stripe	1 Stripe	1 Stripe	1 Stripe
Lo - Mid	3 Stripe-Out	80 M Coil	1 Stripe	1 Stripe	2 Stripe - Out	1 Stripe	1 Stripe
Hi - Mid	2 Stripe-Out	80 M Coil	1 Stripe	3 Stripe - Out	1 Stripe	1 Stripe	1 Stripe
75M SSB	1 Stripe	80M Coil	1 Stripe	2 Stripe - Out	3 Stripe - Out	1 Stripe	1 Stripe

The 60 Meter Band

The 80 Meter Coil also allows the HFp to be tuned to the new 60 Meter band. The 60 Meter frequencies are: 5332, 5348, 5368, 5373, and 5405 kHz. The last channel is common to the UK amateur experimental band plan. The following setup chart is also included on the back of the 80 Meter Laminated Card, for easy field use.

Note – this is for one-half of the Dipole – set up each side the same way.

Using the 80M Coil							
5200- 5900	3 Stripe-Out	2 Stripe - Out	1 Stripe	1 Stripe	1 Stripe	80 M Coil	1 Stripe

Radials at full length. Freq Range is with whip extended / collapsed.

In order to use the 60 Meter band, you must set your radio to upper sideband mode, and set the carrier frequency (the frequency shown on the radio's display) 1.5 KHz below the channel frequency. (Note some radios are set up differently – see your radio manual to be sure!)

Tuning

As usual, the configuration table should be used as a starting point. Remember that it defines a setup in the open, away from nearby objects. You may have to adjust the mix of elements to get the antenna to perform in your specific location. Typically, if some nearby object is lowering its resonant frequency, moving one of the loaded elements out (or, less desirable, removing one of the outer elements) will get the antenna back on target. Use the tuning procedure described in the HFp Users Guide to check the resonant frequency of the antenna.

Support

The bottom Support Pole may be any pole with a 3/4" Acme thread, such as a painter's extension pole. This pole may be attached to a vertical support, or the entire antenna and pole may be free-standing, guyed by lines attached to the top stud on the Center Insulator.

The Top Support Ring may be suspended by a rope or other light line from some overhead support. If the Dipole is mounted in this fashion, it will probably be desirable to attach a guy line to each end of the Dipole to prevent it from turning.

The Gusset Pole and Gusset Guys **MUST** be used for Dipole configurations lower than 14 MHz. Without the additional support, the elements will droop excessively, and could be damaged. **IMPORTANT** – Note that there is a special set of the Gusset Guys for the 80 Meter Dipole – the 40 Meter guys are too short because of the added length of the 80M coils.