

HFp 80 Meter Option 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 entire package weighs just over 2 pounds (1 kg). 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 5 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 bottom element, attached to the base insulator.

HFp 80 Meter Configuration Table – Ground Mount

Band	El - 1	El - 2	El - 3	El - 4	El - 5	El - 6	El - 7
80m CW	3 Stripe-Up	80 M Coil	2 Stripe-Down	1 Stripe	1 Stripe	1 Stripe	1 Stripe
Lo - Mid	3 Stripe-Up	80 M Coil	1 Stripe	1 Stripe	2 Stripe - Up	1 Stripe	1 Stripe
Hi - Mid	2 Stripe-Up	80 M Coil	1 Stripe	3 Stripe - Up	1 Stripe	1 Stripe	1 Stripe
75M SSB	1 Stripe	80M Coil	1 Stripe	2 Stripe - Up	3 Stripe - Up	1 Stripe	1 Stripe

The radials should be extended to their maximum length for 80M configurations.

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.

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

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.

Tuning

As usual, the configuration table should be used as a starting point. Remember that it defines a setup on the ground and 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 up (or, less desirable, removing one of the top 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.

Guy Lines

Guy lines are included with the HFp for use when it is windy, or when the antenna will be left up for some time. The guy lines **MUST** be used with the 80M vertical setup. The antenna is not strong enough to stand up in any but the lightest breeze when it is configured for 80 meters.

On the lower frequency bands you usually need to take off the top assembly of elements in order to adjust the whip length to get the lowest SWR at your favorite frequency. Depending on their attachment point, the guy lines and attachment lugs can be a problem when you try to unscrew the elements above the guy attachment point.

But, if the guy line lugs are installed underneath the inter-element connector at the top of the fourth long element, and that inter-element connector is tightened a bit more than normal, then the top portion of the assembled antenna can be easily removed without the guy lugs loosening up and interfering. This makes whip adjustments on the longer setups much less of a hassle.