

HFp-V 80 Meter Option User's Guide

3.5 MHz – 54 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 6M (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 seen in the following table. Typical operating bandwidth for each configuration is about 75 - 80KHz.

The element configurations for the different 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

Band	EI - 1	EI - 2	EI - 3	EI - 4	EI - 5	EI - 6	EI - 7	EI - 8
80m CW	3 Stripe-Up	80 M Coil	2 Stripe-Down	1 Stripe	1 Stripe	1 Stripe	1 Stripe	-
Mid	2 Stripe-Up	1 Stripe	80 M Coil	0 Stripe	3 Stripe-Down	1 Stripe	1 Stripe	1 Stripe
75M SSB	2 Stripe-Up	1 Stripe	80 M Coil	3 Stripe-Up	1 Stripe	1 Stripe	1 Stripe	-

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

The top Pull-Out-Whip should be extended to its maximum length for the 80M setups, and adjusted as needed. Just remember that the whip doesn't have much adjustment on 80 Meters, as seen in the table below.

Band	Whip Length		
	Max	Min	
80M - CW	3.40	3.58	MHz
Mid	3.58	3.80	MHz
75M SSB	3.80	4.06	MHz

The 60 Meter Band

The 80 Meter Coil also allows the HFp to be tuned to the new 60 Meter band. The 60 Meter channelized frequencies are: 5332, 5348, 5358.5, 5373, and 5405 kHz. (Note that, originally, 5368 KHz was one of the channels, but it was replaced with 5358.5 in Nov, 2011) The last channel is common to the UK amateur experimental band plan. The following setup chart is also included on the 80 Meter Laminated Card, for easy field use.

Band	EI - 1	EI - 2	EI - 3	EI - 4	EI - 5	EI - 6	EI - 7	Whip
60M	1 Stripe	1 Stripe	3 Stripe-Down	2 Stripe-Down	1 Stripe	80 M Coil	1 Stripe	4.5 Sect

The radials should be extended to the 9th mark for the 60M configuration. The top Pull-Out-Whip should be extended to 4.5 sections for the 60M setup, and adjusted as needed.

Important Note: In order to properly 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 lower than 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. The whip can be shortened, but on the 80M band, the whip doesn't provide much adjustment.

Use the tuning procedures 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 should always be used with the 80M vertical setup. The antenna is not heavy 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.

With the new Special IEC which allows the element stack to rotate freely with the Guy Lines attached, it is easy to just unscrew the stack, make an adjustment, and re-install the element stack.

This makes whip and element adjustments on the longer setups much less of a hassle.