

Changing Center Frequency and Bandwidth of the Passive CW Filter Kit
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Our Passive CW Filter Kit, XS-PCWFK, ships with capacitors to build a 700 Hz center - 250 Hz bandwidth CW filter. The appendix in the manual includes instructions for converting the bandwidth to 500 Hz. This requires winding a different number of turns on the toroids and using a different set of capacitors.

This addendum expands on that flexibility. It lists the component changes you need to make if you wish to convert to a 500 Hz center frequency with a 400 or 250 Hz bandwidth. In addition, you can download from our website - link here – an excel spread sheet, if you wish to configure the filter for a different center frequency and bandwidth.

Fc	BW	L2 [mH]	C1=C3 [ufd]	L1=L3 [mH]	C2 [ufd]
500	400	6.4	50	2.4	19
500	250	10	80	1.4	11
700	400	6.4	50	1.1	9
700	250	10	80	0.67	5.2

Number of Turns of wire on the FT87-AJ core formula:

$$\text{Number of turns} = 1000 * \text{SQRT}(X \text{ mH}/6040)$$

Sub in X for mH amount and then calc number of turns.

Turns Calculator below:

L in mH	No of turns	(for FT87-AJ core)
0.67	10.5	
1.1	13.5	
1.4	15.2	
2.4	19.9	
6.4	32.6	
10	40.7	

round turns to nearest digit.

See the 500 Hz, 250 Hz bandwidth example on the following page.

