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## 80-40-20 M dipole

**80 □ 40 □ 20 Meter Dipole Array**

**By KJ4EX □ October 2008**

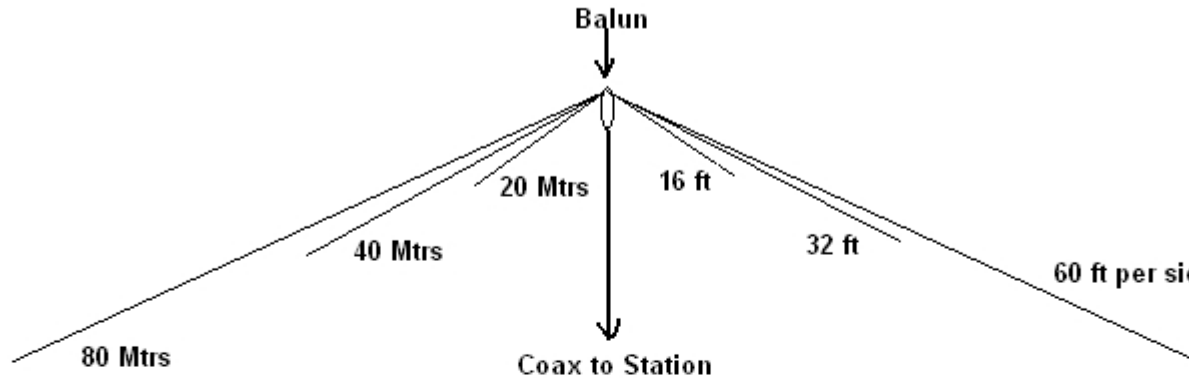
**Recently I have installed three of these systems, all untuned, requiring the use of a tuner, but capable of operating on 80 through 6 meters.**

**Manually trimming and tuning the elements to resonant frequencies on the bands they are cut for would eliminate the need for a tuner, but limit you to the frequencies they are cut/trimmed to.**

**These systems are currently in use at Athens Regional Medical Center , using a TS-480SAT it tunes 80 through 6 meters.**

**Others are in use at the QTH□s of KJ4DDZ, and K9CRB, both of whom report excellent results. Dave, KJ4DDZ does not have the balun on his system. I have used an 80 and 40 meter version of this system for over 20 years, with very-very good results. The center point of this Inverted Vee system needs to be as high as possible, but can be as low as 30 or 40 feet**

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Wire clamps are used at the center insulator to tie the 3 sets of wire together with the lead coming out of the balun. The antenna wires are looped through the side eyelet on the balun, and secured back on itself with the lead wire.

The antenna wires are then looped through the end insulators and wrapped back on itself. Wrap it about 3-4 times to provide a secure end tie that shouldn't come apart.

Anyway, here is a parts list and the drawing.

ITEM	Cost	Qty	Source
MFJ 918 1:1 Current Balun	\$29.95/ea	1	Texas
#541 14G-7 strrand copper antenna wire	\$45.00 total	250 ft	The Wir
#810 End Insulator (\$2.85/pair)	\$8.55 total	3 pair	The Wir
Wire Clamps (copper split nut)	\$6.00 total	1 pair	Hills Ac

(Hills Hardware, Gardner-Bender part # GSBC-8, Split Bolt Connector)(Electric al Section)

**Rope** □ Length as needed to hoist and secure dipole ends. Recommend The Wireman # 814, 1/8 inch Black Dacron at 9 cents per foot for orders over 100 feet total. (Buy 500 feet, you□ll always have some. \$45.00)

**Coax (RG-8X / Mini)** length as needed to get from Antenna Balun to Radio Location The Wireman #116

There are variations to the above list of course, you can use wire you have available, other types of end insulators, rope, etc. The key part of this antenna is the Center Insulator / Balun, however even that can be skipped provided you wrap about 8 turns of coax on a 4 inch PVC form just before it□s attached to the antenna wires at the center feed point.

If you were to buy every item above, the rope and coax, etc.

<b>Balun</b>	<b>1</b>	<b>\$30</b>
<b>Wire</b>	<b>250 ft</b>	<b>\$45</b>
<b>Insulators</b>	<b>6</b>	<b>\$10</b>
<b>Rope</b>	<b>500 ft</b>	<b>\$43</b>
<b>Coax</b>	<b>100 ft</b>	<b>\$30</b>
<b>PL-259 w adapters</b>	<b>2</b>	<b>\$10</b>
<b>30 ft telescoping mast</b>	<b>1</b>	<b>\$60</b>
<b>10 foot mast section</b>	<b>1</b>	<b>\$10</b>
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<b>Total &gt;&gt;</b>		<b>\$238</b>