

# ZS6KMD 20/40m Multiband Dipole



For those just starting out in Amateur Radio, the antenna question seems to be foremost and probably least often answered satisfactorily. Just last week on the SARL forum, the question arose again... Which antenna is best?

Now not specifically the best, but awesome by any standard, wire antennas cut and trimmed for each band are definitely well worth investigating. I have worked all continents and 90% of countries with wire antennas and the design seen in the picture above is a successful combination that I have used to achieve many sought after contacts worldwide.

So what is the ZS6KMD 20/40m Multiband Dipole? The dipole as can be seen is strung in an inverted Vee configuration, with two legs elements) on each side held parallel to each other by 21cm spacers. The upper leg is for 40m and the lower one for 20m. The spacers are made from 7mm plastic garden sprayer support tubes cut to 21cm. 5mm in from each end a hole is drilled through to facilitate passing the element wire through. The legs are cut to length using the formula  $468/\text{Freq}$  in Mhz. This gives us the length in feet. Converting to meters is a simple step if you are used to metric measurements. E.g.  $468/7.070 = 33.1'$  (10.088m). Insulating porcelain eggs are used as termination at the end of each element. These are tied off to some Dacron rope or nylon rope and the elements stretched out as seen above.

Adjusting the SWR is simple, start with the longest element (40m) first, once set it is simple to cut the shorter one to length (20m). Before you cut any wire off, first loop it back and clamp with a cable tie until the correct length is achieved for a perfect SWR, only then tie off permanently and clip excess wire off. I have used nylon UV resistant cable ties to tie off mine as they last longer, in the past I have also stripped some insulation back and soldered them, but this exposes the copper wire to the elements and some oxidation does occur.

The center feed-point used here in this example is the ZS6KMD Nescafe Balun. This is a 4:1 toroid balun encased in a Nescafe coffee lid with epoxy. For information on how to make one of these, see my [web site](#)

I hope this makes it a little easier for some to get some wire up in the air and that even if it your first antenna, it will work very well and that you will pull in some good DX.

Good luck and enjoy

73 de Kevin ZS6KMD

<http://www.zs6kmd.za.net>