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More from the Doctor: Loading a 43 Foot Vertical with Additional Inductance

A 43 foot vertical made of 1 inch tubing fed and against four elevated 1/4 wave radials will have a feed point Z of $75 -j284$ at 14.15 MHz, based on an EZNEC model. This results in an SWR of 23.7:1 -- well beyond the spec range of most wide-range antenna tuners.

If fed through a series inductance of 284 ohms reactance (3.2 uH at 14.15 MHz) it will have an impedance of 75 ohms plus any loss resistance of the inductance (typically less than 3 ohms).

Per the ARRL Handbook formula, a single layer solinoidal inductor of 14 turns on 1 inch PVC (OD 1.315 inches) spread over 2.4 inches should do the trick.

The result should be a 50 ohm SWR of about 1.5:1, which can be fed directly, or through virtually any antenna tuner.