A vertically-polarised VK2ABQ Antenna

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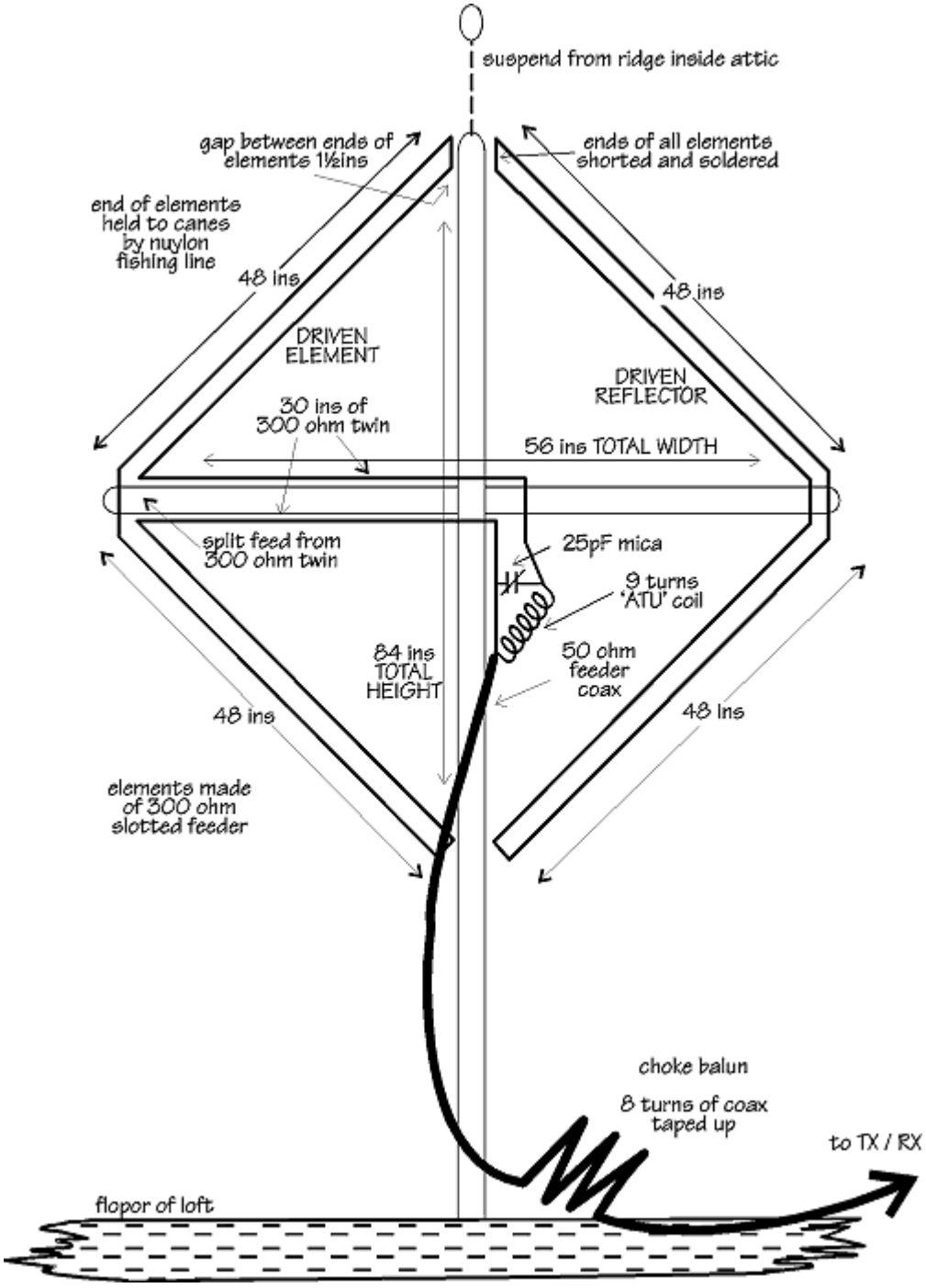
For six metre FM/mobile/repeater working I have found this aerial to be the best of all the verticals I have tried, particularly because it is rotatable. The design is that of VK2ABQ, a well documented one which I have scaled down for 50MHz.

The usual criticism of a close-coupled beam is that the feedpoint is low impedance, but in this design it has been increased by using folded driven and reflector elements. A small, integral 'ATU' matches this to 50 ohm coax. The coax has an eight-turn coil in it, taped up, which acts as a current balun/RF braid choke. The forward gain is about 4dBd.

I made the aerial out of 300 ohm slotted ribbon feeder. The frame is made of bamboo canes in the shape of a cross, for support. My loft is 8'6" (2.6m) high from floor to under the ridge, and the aerial is 7' (2.1m) top-to-bottom. It is suspended by a short cord from the ridge of the loft.

As can be seen from the diagram, the feeder coax comes down through the centre of the aerial. The choke balun (in the cable) is located a few feet from the aerial 'proper'. The 'ATU' is a mica compression trimmer of about 25pF plus nine turns of 18SWG wire 0.5" (12mm) in diameter and 1" (25mm) in length. The SWR is 1:1 over a bandwidth of about 750kHz.



The VK2ABQ antenna for 50MHz. Vertical polarisation, 4dBd.