Any ideas or suggestions you may have would be appreciated, on what material to use, how best to build it, and whether you can buy them on the open market or not.

Hope that you can help as I'm looking forward to trying out this antenna very much. All the best and keep up the good work.

**S. DIXON G6TJN**

*Thanks for your letter. I provided the very abridged building instructions re. a half wave 2m aerial for handitalkies as the basis for individual experimentation rather than a firm recipe. It is worth pursuing because the hand held performance improvement is dramatic. It is roughly equivalent to running 100W of RF rather than the typical 1W!*

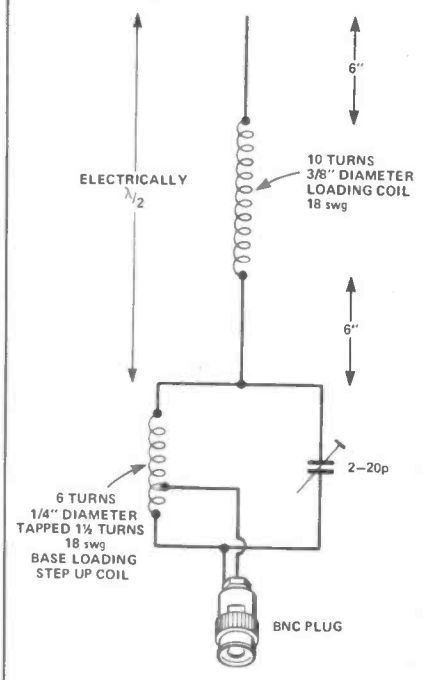
*Yes, gaps and things like that are important but so is the guage of wire, the material on which the loading coil is wound and the diameter of the whip sections. However, the general points are these. The first thing you will need is a miniature bulb rated at 28V 0.04A. Lower voltage ratings can be used but you must be careful not to blow the bulb. The current rating must not be higher than 0.04A though. Solder on a piece of bare copper wire to the outer casing of the bulb. This is held in the hand with the centre contact as the RF sensing point. Next, get the base loading step up network to resonance. Connect an SWR meter to the output socket of the rig and plug the BNC step up coil assembly into the 'aerial output' socket on the meter (you will probably need an adaptor).*

*With the aerial assembly removed, tune the trimmer on the coil until something happens on the SWR meter. The needles should thrash about near resonance but you won't get a sensible reading at this stage. Next touch the bulb centre contact to the top of the coil. At resonance, the bulb should light quite brightly. If you can't get it to light, then play around with the number of turns on the base step up coil and/or trimming capacitor values. Don't proceed further until you are sure that resonance does occur. With the lamp lit brightly, the SWR reading should begin to make some sense.*

*Without readjusting the trimmer, connect the rest of the aerial assembly. Run the bulb contact over the length of assembly and note positions where it starts to glow. These should be at the ends of the centre loading coil with a null in the physical centre. If there are no clear voltage nodes on the aerial, then start playing with the number of turns on the centre loading coil.*

*If the bottom section lights the bulb but the top doesn't, take some turns off. If the top does but the bottom doesn't, put turns on.*

*Eventually, some sort of balance between top and bottom should be achieved. At this point, start looking at the SWR again. Adjust the trimmer for lowest reading. Proceed with fine adjustment of centre loading coil alternately with adjustment of the trimmer. Somewhere, there will be a balance between SWR and a nice deep voltage null at the centre of the middle loading coil. Good luck — Ed.*




**'Improved handitalkie aerial' described in June Technicalities**