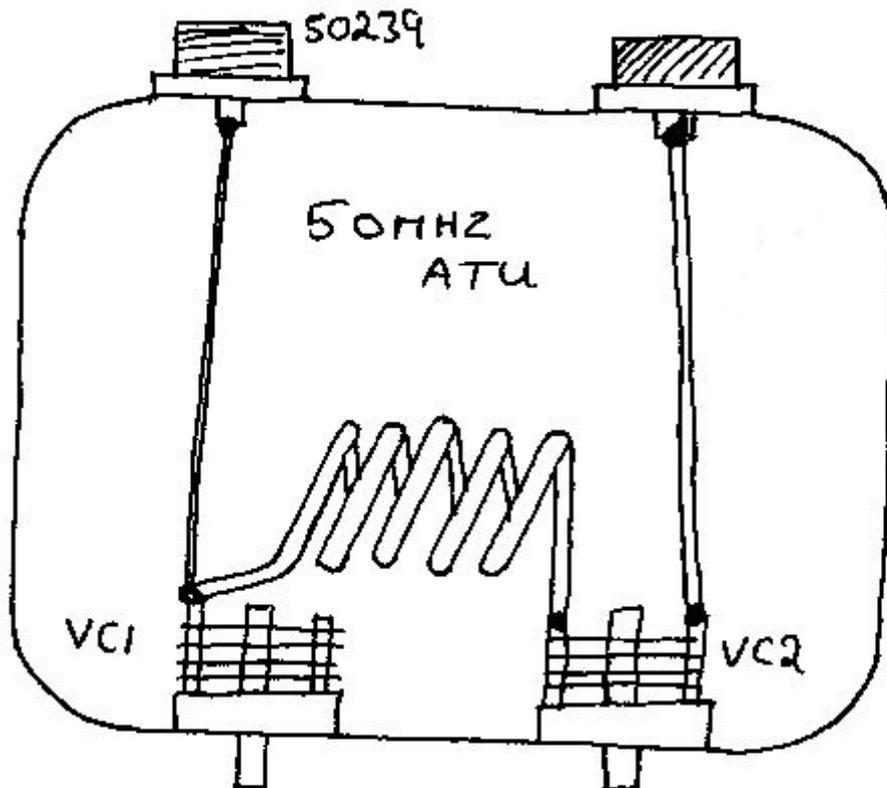


# 6M ATU



The comments in Monitor about the interest in 6 mtr's came at a good time as I had just finished making a ATU for a friend who wants to get on "6" using his end fed "act of God" aerial he has for SWling.

As with the HF ATU it is very difficult to make a ATU for an aerial I know nothing about? But if you have a non-resonant end fed for HF we can get around this "hopefully"

Unlike the one for HF both capacitors will be left in circuit in the hope that some of the harmonic content will be attenuated. Remember the second harmonic falls very near "classic FM" so lets hope you neighbours are not cultured, other than this the third harmonic is in a Police band!

Again the ATU is made in a plastic or wooden box. ATU's that are made with short wiring and "tuned" correctly do not radiate like the legend says any more than your feeder because the RF is not sitting in the ATU but hopefully flying up to the aerial. But if you must put it into a metal box the sides, top and bottom must be 3,1/2 times the diameter of the coil away from the coil.

LI is 9 turns of 2.5mm wire called cooker cable with the plastic removed or 12/14 SWG.

Wind the coil around a suitable former of 1 inch. Remove the former and space the windings apart by about the wire diameter. Don't forget to leave some wire on the ends of the coil, as it will be self-supporting between the VC's.

So make the coil first and use it as a guide to see how far apart the VC's can be.

Both capacitors are the small receiving types of around 50pf (Birketts) if you want to keep the cost down get the pre set type. If you first tune up with low power and then slowly increase power re dipping the ATU you should be able to use 100 watts?

Any earth connections, use the braid from old coax "never throw anything away" connect the sockets and VC's together with the braid.

To keep the efficiency of the ATU up the coil is not tapped, if you fail to get a low VSWR it may be your aerial has a impedance out side of the range the ATU can manage. The easy way out is to shorten or lengthen your end fed by a few feet at a time till it has an impedance the ATU is able to match

The other way, the hard way? is to remove turns of the coil one at a time. If the coil has too much inductance this will be shown by the fact that the VC's will be at the minimum capacitance settings when the VSWR starts to drop.

Another use for this ATU could be to fit it to the base of a half wave vertical. A cut down CB aerial (if it's a "CB base" aerial you will have to remove the coil in its base first ) or as I used for a while a bamboo bean pole supporting a wire cut to about 9 ft and the ATU at its base and just one radial wire 4ft 6 inches long taped to the COAX.

It is possible with "MODS" to put the ATU on 145Mhz. The coil is 4 turns of 1.5mm wire and ¼ inch Diameter. The VC's, 25pf max. Remember a end fed aerial at these frequencies is truly a "long wire" and will have gain but in what direction who knows? That's why it's a "AOG" act of God.