



The purpose of this project is to construct a 40 metre coaxial trap to be installed into the 80 metre dipole.

The trap will be installed into each leg of the 80 metre dipole.

#### Materials required:

180mm of 20mm electrical conduit.

4.6 metres of RG58 c/u coax. (Note: length may vary with type of coax)

Access to coaxial trap soft ware (link on EMDRC web site)

Tape measure

Soldering Iron

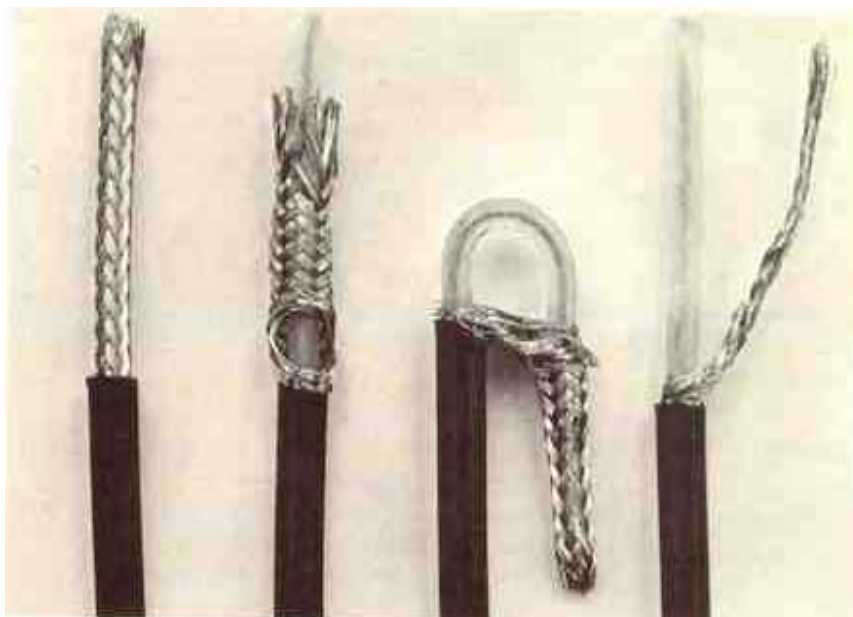
Hot glue gun

Drill

5mm drill bit

#### Method:

1. Drill 5mm hole through each end of conduit, 20mm from one end.
2. Drill 5mm hole through **one side only**. Place hole at 90° from original hole. Locate hole 25mm from end. (5 mm from first hole)
3. Calculate the length of coax for each trap using the software. Our example is 2.3metres at 7.060Mhz
4. Strip 200mm of the outer insulation at each end. To ensure that both ends of each coax are identical strip all 4 ends and make sure that they are identical
5. Make a pig tail the easy way. At one end of the coax cable, strip 200mm of the outer jacket. Prick a hole in the outer braid, The inner conductor is now fished through the hole, the completed pig-tail lead ready for use





6. Thread one end of the coax through the hole that is drilled 25mm from the end of the conduit. Pull through until outer insulation reaches conduit. Place coax from centre off conduit.
7. Wrap coax one turn around conduit and secure with hot glue, continue winding coax a further 3 turns and apply more hot glue, continue until 23.67 turns are wound. (the length of the coil should be 1880.9mm)
8. After winding the coil, 23.67 turns, drill a 5mm hole through the conduit, one side only. This hole will line up with the end of the outer insulation.
9. Using hot glue secure coax coil.
10. While holding coax secure drill one 5mm hole through both sides of the conduit, place holes 20mm from end of conduit, 90° from single 5mm hole.
11. Thread coax through single 5mm hole, pull through to outer insulation.
12. Measure distance of wound coil
13. At one end leave the inner insulation on the centre conductor to the same distance as the wound coil, strip excess inner insulation from centre conductor.
14. Draw inner conductor through centre of conduit, use a stiff piece of wire to draw cable through conduit.
15. Join the end of the centre conductor to the braid of the coax at the opposite end Solder together as far into centre of conduit as possible, cut off excess and push remainder into conduit.
16. At this stage there should be an outer braid at one end and a centre conductor at the other.
17. Connect the centre conductor of the trap to the Balun (feed point) side of the antenna and the braid to the other side of the antenna.
18. Cut the original 80metre dipole to a distance of 11.3metres, from the Balun. Join the trap to the dipole so that the distance from the Balun to the first coil of the trap measures 11.1metres. Repeat on both sides. (The 200mm difference in the length is to allow for adjustment.
19. Join the braid of the trap to the remainder of the dipole, the distance to the end of the dipole should measure 5.73metres, measure from the last coil to the end of the antenna.

**Note: do not cut excess wire from dipole, wrap excess back around itself.  
Ensure that the internal connections in the conduit are insulated**