

TET-EMTRON

TU-91K

9:1 Unun Kit

500W PEP Current Unun.

Tools Needed:-

Soldering iron and solder.
No.1 Phillips head Screwdriver.
Small pliers.

Some form of tape(sticky tape flexes well).
Sharp Craft Knife or wire stripper.
8mm Socket

Parts List.

Part No.

Balun Box with lid x 1.
205 F14 Ferrite ring x 1.
350mm of 3mm insulated auto wire x 3.
454 SO239 2 hole connector x 1.
31 M3x12mm bolts x 2.
41 M3 Nyloc nuts x 2.
204 Small solder tag x 1.
232 Small cable ties x 2.

Part No.

35 M5x20mm bolt x 1.
82 M5 Wing Nut x 1.
0 Plastic button x 1.
45 M5x12mm Bolts x 2.
28 1/4x5/8 Flat Washers x 2.
14 M6 Spring Washers x 2.
Unun Kit Sticker x 1.
760 Clear sticker x 1.

Instructions.

1. Unpack the kit and make sure it is all there according to the parts list at the top of this page. To do this you have to bend the solder tabs up out of your way. This will also make it easier to solder them.
2. Bolt the connector on using the 2 x M3 bolts, M3 Nyloc nuts and the solder tag. Make sure you put the solder tag on the left, as in the photo(Fig.1). I pre-bend the solder tag a bit to make it easier for the pliers to hold. It needs to end up at the top of the nut to make soldering easier. Another helpful hint is mount the connector so the open side of the pin you solder to is at the top.
3. Now you should have a good look at all the pictures so you have an idea in your mind of how the finished item should look, and what colour goes where.
4. Assemble the three wires as in Figure.2, using pieces of tape and keeping a close eye on having the colours correct. They should go Black, Red, Yellow. Have the first tape about 40mm from the end and another wrap of tape every 30mm or so.
5. Put the wires through the ferrite so at least 30mm protrudes and secure with a cable tie as in Figure.3. Wind the wires around the ferrite 4 1/2 times, so it looks the same as in Figure.4. Secure with the other cable tie. IT IS VERY IMPORTANT THAT YOU DO NOT CROSS OVER OR TWIST THE WIRES DURING THIS PROCESS.
6. Strip about 20mm of the PVC off the short red wire. Cut the long black wire to the same length(30mm) as the red wire and strip also. Twitch the wires together and tin.
7. Just as in the last step, strip about 20mm of the PVC off the short yellow wire. Cut the long red wire to the same length(30mm) as the yellow wire and strip also. Twitch the wires together and tin.
8. Strip about 10mm off the short black wire and tin. The whole unit should now look like Figure.5.
9. Place the wound ferrite in the box by wiggling it over the three posts. You may have to spread the wires a little to do it. Solder the single black wire to the earth tag.
10. Solder the joined red and black wire to the centre of the connector. Put the piece of foam with the holes back over the posts.
11. Place the yellow wire in back towards the solder lug. Cut to the appropriate length, strip and solder in. Use the photos as a guide.
12. Use the extra black wire to make a link wire to go from the earth lug to the left hand side of your Unun. Once again the pictures are the best guide(Figure. 6). Fold the solder lugs back down and check they do not impede the lid.(Figure.7)
13. Next screw the M5x20 bolt through the hole from the inside. Best way is with a drill and 8mm socket.
14. Glue the lid on using a good glue. Put some on top of the posts as well. I recommend a good "superglue" style glue, but an epoxy will work. Use a vice or similar clamp to hold the box together until the glue sets for a good bond.
15. When dry, put the cable strain relief hanger disc and wing nut on.(Figure.8) Put the flat washers and then the spring washers on the brass mounts with the M5x 12 bolts and your balun is complete.
16. All that is left is the stickers. It is best to write them on a flat surface, using a ball point pen or a fine permanent marker. The clear sticker is to put over where you have written. This will protect it from the weather.

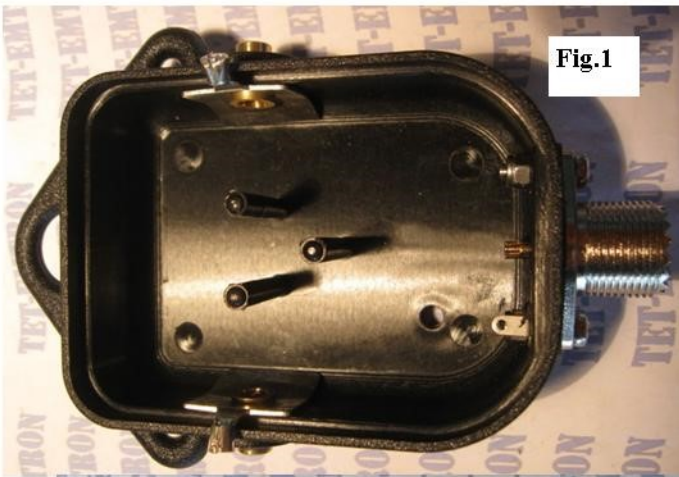


Fig.1

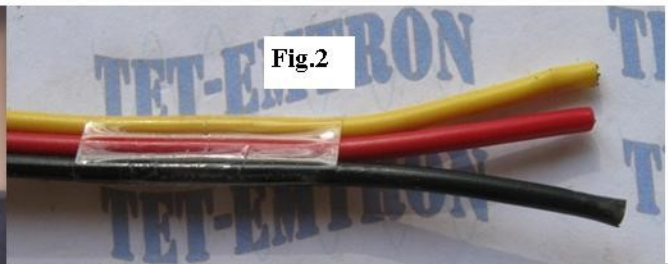


Fig.2



Fig.3

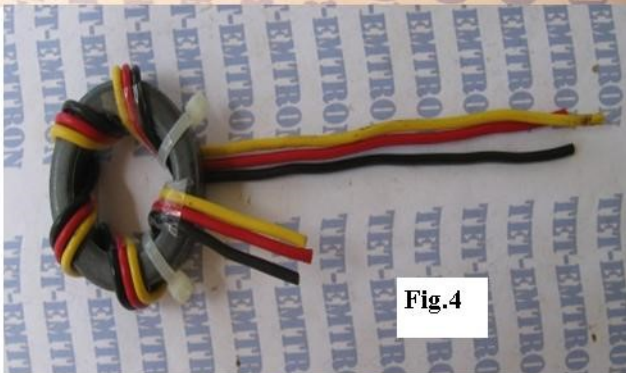


Fig.4

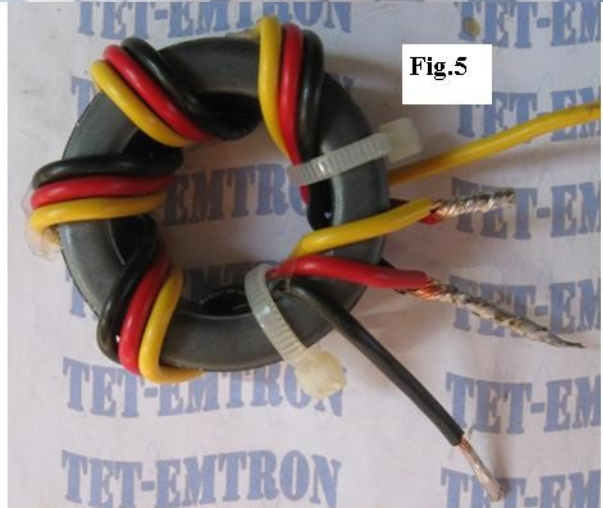


Fig.5

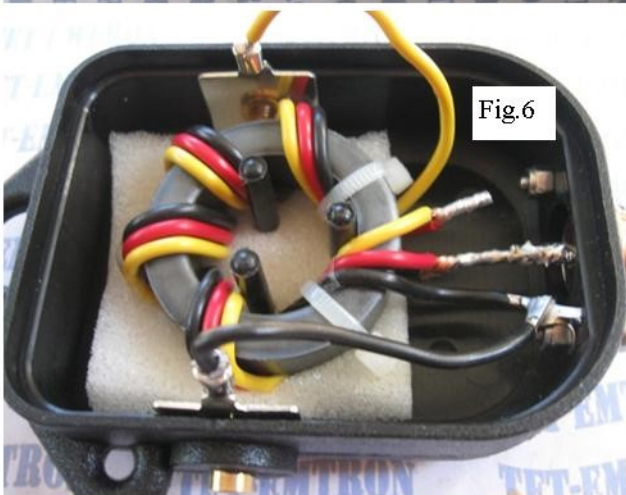


Fig.6



Fig.8



Fig.7

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