

Tips and Tricks.

Aerials:

Zero cost insulators

- * A great nil cost insulator for the ends of your aerial can be made using the plastic hoops that you find holding four-packs of beer together. This can be made even stronger by doubling up the hoops. *Steve G0KVZ*
- * Use Nylon cord. *Peter G7JRK*
- * Use Nylon tie-wraps (but only use the black ones they resist UV best. *Peter G7JRK*
- * Use large buttons, loop the aerial wire and the supporting cord through opposite holes. *Pepe G4RMZ.*

Tuning aerials

- * When tuning wire aerials to obtain a match, it isn't necessary to actually cut the wire, you can simply bend the ends of the wires tightly and fasten to itself using tape. *Robin G3JWI*

Insulation

- * Use Self amalgamating tape, this is far superior to any other insulating tapes.
- * Use Liquid insulating tape, this coats any joints, and produces a similar result (better?) than Self amalgamating tape.

Waterproofing connectors

- * Place the connectors in an upturned bottle and support the bottle above the ground using a bamboo cane or similar. *Robin G3JWI*

Protecting cables

- * To protect underground cables they should be coated in a thin layer of Mansion Polish *Robin G3JWI*

Batteries:

Storing LiIon cells

- * When storing Lithium Ion batteries, they store best when charged to 40% of full charge. *Robin G3JWI*

Batteries

- * When using cells in a battery, it is important to ensure that the cells are matched, and none have a significantly higher capacity than others. *John G4XTS*

Tips and Tricks (continued)

Circuit Boards:

Alternative to DALO pen

- * A good alternative to DALO pens are the Staedtler permanent markers, that are available from normal stationers. Not only are these relatively cheap, but they are also good for thin lines, and are very resistant to ferric chloride. *Steve G0KVZ*
- * Pentel supply very good etch resistant pens, and they are available with bullet or wedge tips
- * Brady manufacture wide range of good quality self adhesive pads, that can be used as etch resistant markers. *Pepe G4RMZ.*

Easier layouts

When laying out a PCB, it is difficult to get the holes in the correct places if you are using a paper template. A good technique is to fasten a piece of perf' board (or VERO®) to the PCB, and to 'spot through' in the appropriate places. It is not advisable to drill right through, as the ferric chloride will wick through the hole and dissolve the copper from behind the resist. *Steve G0KVZ*

When drilling PCB's

- * A light box can be used to identify the centres of holes to be drilled on printed circuit boards. *Pepe G4RMZ.*

Enclosures:

Labelling Enclosures.

- * Labelling on project boxes can often let a project down. A great product is available to enable labels to be printed from your PC. This paper is available from Crafty Computer Paper who are based in Hexham. Take a look at www.craftycomputerpaper.co.uk There is a users guide available as a PDF from the website. *Steve. G0KVZ.*

Re-using old Die-cast boxes.

- * If you salvage a Die-cast enclosure from an old project, you will undoubtedly find holes in the wrong places.
These are simple to fill - Simply cover the hole on the outside using suitable tape. (Check a sample in an oven first) You can then fill holes in the same plain, using araldite. After it has been applied, place in a pre-heated oven (100°) and allow to cure for an hour. This will allow the resin to run into the hole freely, and to cure it adequately. *Steve. G0KVZ.*

Radio Operating:

Stop that wandering key

To keep your key / paddle in one place, a piece of sheet butyl rubber can be cut and placed between bench and key. Suitable sheets can be obtained from the car section of Wilkinsons. *G3MBN from www.w9aiu.org/MoretipsQRP.htm*

Receiver improvement

If your radio has an upward pointing speaker, you might find that the audio is 'lost'. Simply take a 5" dia kids plastic ball, cut in half as accurately as possible, and then cut it in half once more, sit the result on top of the rig, and you have the ability to 'steer' your audio. This will also improve the high frequency audio. (One ball will make four devices - share this with your friends!) *G4APO from www.w9aiu.org/MoretipsQRP.htm*

Tips and Tricks (continued)

Safety:

Working with High voltages

Always work on a Rubber mat *Steve G0KVZ*

Working with high voltages #2

Keep your left hand in your pocket at all times.

That way it is unlikely to put a high voltage across your heart! Steve. G0KVZ

Soldering:

Soldering DIN Plugs

These common connectors can really be frustrating to solder, as the plastic usually melts, and the pins move from their desired positions. If the plug is inserted into a suitable socket before commencing work, then there is less chance of distortion. *Steve G0KVZ*

Handling solder

As 500g reels of solder are a much more economical way to buy solder, the reels are unfortunately quite cumbersome. Simply coil up a length onto a broom handle, and drop into an old 35mm film can, a small hole can be pierced in the top to allow the solder to come out. *Steve G0KVZ*

Protect enclosures from burning

When wielding a soldering iron within tight spaces, it is a common problem to damage surrounding components or the enclosure with the hot barrel of the soldering iron. Simply slip a length of 'Periglas' sleeving onto the barrel of the iron to minimise the risk. (Best done when the iron is cold). *Mike G4BQF*

Test:

Check current drain on battery powered devices

Simply cut a piece of double sided copper to 6mm x 50mm and solder a lead to either side, this will enable an ammeter to be inserted in series with the batteries. *Roy G3ASH*

Test the operation of an infra-red remote.

Simply point the remote towards a digital camera, the flashing of the pulses from the remote will be clearly seen on the screen if it is working. *Pat G0UXK*

Tips and Tricks (continued)

Tools:

Holding Screws/Nuts whilst tightening

- * When fitting and tightening small screws or nuts in tight spaces, Simply put a small blob of 'Blu-tac' on the end of the screwdriver etc., this will hold the fastener in place while it is tightened. *G3YCC from www.w9aiu.org/MoretipsQRP.htm*
- * Use a short length of polythene (or silicon rubber) tubing to grip difficult nuts while tightening. *Peter G7JRK*
- * Use a magnetised screwdriver, or if one isn't available, simply put a bar magnet on the shaft of the screwdriver and this will provide sufficient magnetism to hold the fastener. *Roy G3ASH*

Third hand

Simply attach a BullDog clip to the top of an old screw-type capacitor! *G3YCC from www.w9aiu.org/MoretipsQRP.htm*

Third Hand #2 (Reverse action Pliers)

A simple way to enable pliers to hold on their own, is to wrap an elastic band around the handles. *Originally from Sprat (courtesy G0BHI)*

Versatile 'torch'

Solder an LED on the end of stiff wires, and connect the other end to a switch, series resistor, and a battery. this compact light source can be manouvered into the smallest spaces. *Mike G4BQF*

To see hidden areas in equipment

Dentists mirrors are often seen at radio rallies, and can also be found at the usual electronics stockists - The plastic types are considerably safer to use. *Mike G4BQF*

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