

# Hints and Tips

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If any members have any ideas or suggestions they would like to share with the rest of us, here's your chance. That trick you've used for years, and seems so obvious to you, might just be what someone else is looking for to solve a problem. Here to kick off the column is a couple of ideas that I've used recently.

## Those loose valve bases

Many suggestions have been made for refastening a loose brass or bakelite base to a valve's glass envelope. Most involved a celluloid cement or, in recent years, epoxy adhesives and cyanoacrylates ('superglue'). Even white woodworking glue has been seen. All such attempts lead to unsatisfactorily sloppy results and eventually the base again comes loose.

There is a much better method. First, clean away all residue of any previous cement - scraping the glass envelope with a knife is acceptable. If a celluloid type of cement is on the base, it will usually peel off. Epoxy can be cleaned off the base with acetone. With a large darning needle, scrape the cement junction so that any residue of a previous attempt is removed.

Dilute clear fingernail lacquer (find a colour that the xyl doesn't like!) with acetone: one part lacquer to two parts acetone. Be sure it is thoroughly mixed. Using the small brush in the nail lacquer bottle, carefully apply the thinned mixture at the joint between base and envelope. It will immediately soak into the original cement. Continue application all around the base. Don't be afraid of using too much, although six or seven brush-loads evenly spaced around the base are usually sufficient. Stand the valve vertically and allow the lacquer to set for at least twenty-four hours. It will be found that the base adheres firmly to the envelope.

If any thinned lacquer inadvertently runs on to the base, let it dry. It can be removed later with acetone. Any dried lacquer on the glass envelope can be removed by judicious scraping.

This method has been used for over four decades and never once did it have to be repeated. Electrical qualities of the solidified lacquer seemingly are good enough that even

high-voltage rectifiers suffer no impairment. Interelectrode capacitances are not altered.

*[From "Electronic Classics" by Andrew Emmerson with permission of the Author]*

## Noisy PTT switches.

Most military and some amateur and CB rigs have a double pole PTT switch, one pole operates the relays, the other is in series with the microphone and is open if the PTT is not pressed. Why? In the case of Larkspur/Clansman gear, it is possible to connect two handsets in parallel, the switch isolates the unused microphone to prevent it transmitting extraneous noises. It's quite common for the switch to become noisy, resulting in erratic audio and nasty crackling noises on the transmission if the PTT switch is moved. Simply spraying with switch cleaner rarely provides an effective or lasting cure. Instead, make sure the handset is disconnected from the radio, then open up the handset and temporarily connect a length of wire to each of the terminals of the switch that is connected in series with the microphone then connect a 12 volt power source and a load that will draw a couple of amps, such as a car brake-lamp bulb, in series with the switch. Spray the switch sparingly with Servisol 10 switch cleaner (WD40 will not do - it carbonises and fouls up the contacts completely, Electrolube cleaner doesn't seem to be much better!) then operate the switch several dozen times. Disconnect the wires, reassemble the handset and hey presto - no noise. This method works also on those long strip pushbutton switches used for waveband selection in 60's/70's transistor radios too, but make sure there isn't a dc path across the switch when it is open (through a coil or semiconductor for example).