To all Yaesu VR500 Owners

There will surely come a time when the rotary clicking channel selector switch will get so worn, that the radio channel change will either refuse to go forwards, miss channels or jump backwards to previous channels. It gets progressively worse and the only solution is to replace the switch. These are available from Yaesu as a spare part, a bit pricey for what it is and I would hate to think how much one would be charged to have it fitted.

Now I am fast approaching 60 and my abilities now for working on such a small receiver do leave a lot to be desired. The fingers are not so nimble, much to large and shaky, the eyesight is also next to useless at short distances.

But I decided to have ago and hopefully give you some confidence in doing the same job yourself. But! Don't you blame me if you find you do not have a working radio anymore. It is a very risky operation and you have to take the utmost care when the switch is actually replaced.

Step 1, probably the easiest, is to remove the back cover:

Take off the battery cover, remove the batteries and locate and remove the two screws as shown, either side in the upper part of the battery enclosure. These are self tappers! This is most important to remember on re-assembly.



Next remove the two screws from the upper part of the back cover. These are machine screws and not the self tapping type fitted lower down.



The rear cover should now lift off, with a little persuasion, to reveal the internals as shown.



Is your heart still beating?

Next you have to remove the knobs, first pull off the small channel/freq change knob.



Then the lower one that does the squelch.





Next the Volume knob pulls off followed by the rubber seal around the BNC/Antenna connector.



Next is the removal of the small seal that is under the now removed volume knob.



Now the first of the tricky operations starts. This is the removal of three circular fixing nuts that are located under the three items just visited. I did not have the special spanner required for these but the photo on the left gives a clue as to how I removed the fixings. A pair of thin long nosed pliers were used to engage in the slots of the rings and to enable the rings to be unscrewed, normal anticlockwise rotation to remove. The YELLOW arrow is one of the unscrewing slots, the RED arrows show the cutaways that allow the ring to slip over the BNC socket.









Next remove the two small screws holding the keypad board at the bottom of the case.



With these fittings removed, it should now be possible to remove the remaining half of the plastic case including the loudspeaker. As this was my first attempt I accidentally removed some board fixing screws that did not need removal until the next step. However, it did not make any real difference and I will show these being removed prior to case removal just for keeping continuity in the photographs. If you have already removed the case then removing these next three screws is your next step.



The last photo is where you should be now, put the case and rubber seal/switch covers safely to one side.



Remove the funny flat head screw located close to the offending channel switch. Now you will need the soldering iron to unsolder at three locations. These are at two chassis earth points and the antenna input from the BNC socket center terminal. The latter is unsoldered at the board and NOT at the BNC socket.







This upper board can now be lifted up and away to reveal a second board beneath. Now we have to remove another three screws for this board, which once done, will allow the board to be removed by sliding to the right (as viewed on the photos) and slightly upwards. It is easier to do than to describe!



1st Screw



2nd Screw



3rd Screw



Pull board up to disengage the white rectangular connector then slide right and upwards to clear. frame.





Escutcheon removed.

Left is another view of THE NASTY! Still a bit to do yet before we can extract it and the going gets really tough from now on. We have to remove the metal frame after first removing the LCD metal escutcheon. When this is removed, the LCD is hanging perilously by three small wires on one side. The LCD must therefore be treated with utmost care to ensure minimum displacement until we get it all back together again. The escutcheon is removed by carefully bending back its securing tabs.



1st metal frame fixing screw.



2nd metal frame fixing screw.



Frame removed.



How did I get the little XXX out? Well I laid the whole soldering iron bit across all six solder pads of the switch and melted them all at once. At the same time I was applying pressure to make the switch let go of the board but also making sure the iron did not destroy the LCD!

I wish I had had an assistant to help me but somehow I managed to do it. I also figured I could clean the board up afterwards and when the switch had been removed, I found it easier to solder suck from the other side of the board, that is the switch body side.

I cannot stress too much the need for minimum movement of the LCD. Just raise it gently to give sufficient access for the soldering iron bit and NO MORE!

It may be helpful to slightly trim the tags of the new switch before fitting. The reason for this is that the new switch has slightly longer tags than the old one removed. If you do not trim the tags, they will stop the LCD setting down in its correct position. If you leave them long you will find it difficult to trim the tags without lifting the LCD display and this should be avoided as much as possible.

Re-assembly is of course the reverse of above instructions and don't forget to resolder the BNC and earthing points.

The rubber seals are a bit tricky to get back but not too difficult.