Icom IC-746 Backlight Repair

Remove top and bottom cover.

Remove the 4 screws holing on the face, 2 on left and 2 on right of face holding it to chassis. There's 1 ribbon cable connecting the face to main unit, just pull it straight out.

Remove all the knobs by pulling them off. VFO knob just pulls off as well.

(Added by N5KBP after destroying 2 pots)→Remove nuts from NR-APC and AF-RF/SQL pots, and the screw from VFO tensioner assembly. Remove plastic face by unhooking the 4 clips on top and bottom.

Unplug all ribbon cables on back of face.

There are 5 screws holding the top circuit board in, take them out and lift up board. Feed 2 of the ribbon cables through the board. On the backside of this board there are 2 steel boxes on the board. Take the top off of the biggest one.
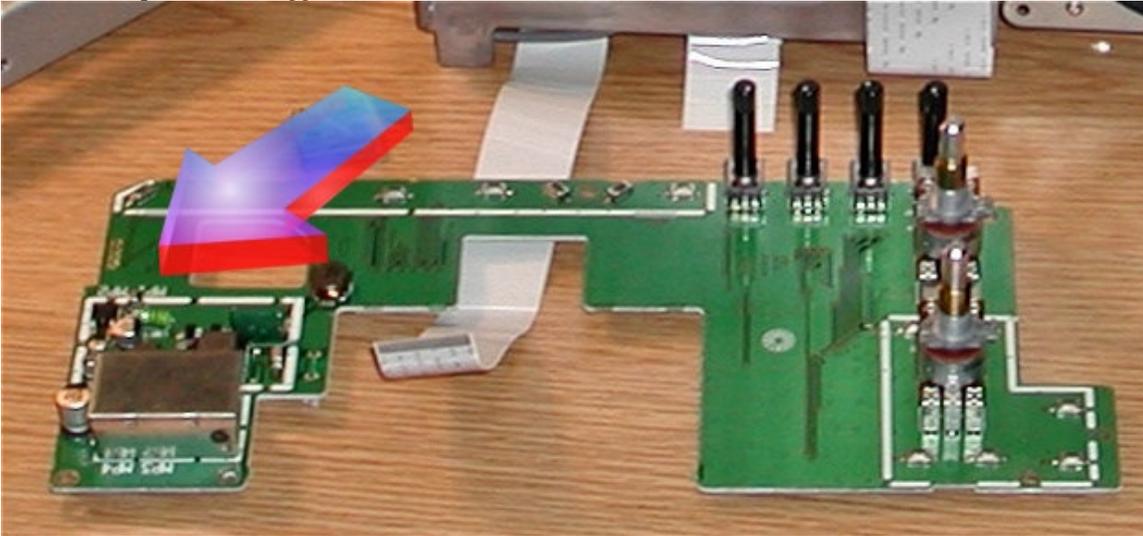
You will see a small square transistor with the #B1201 on it. This is the culprit.
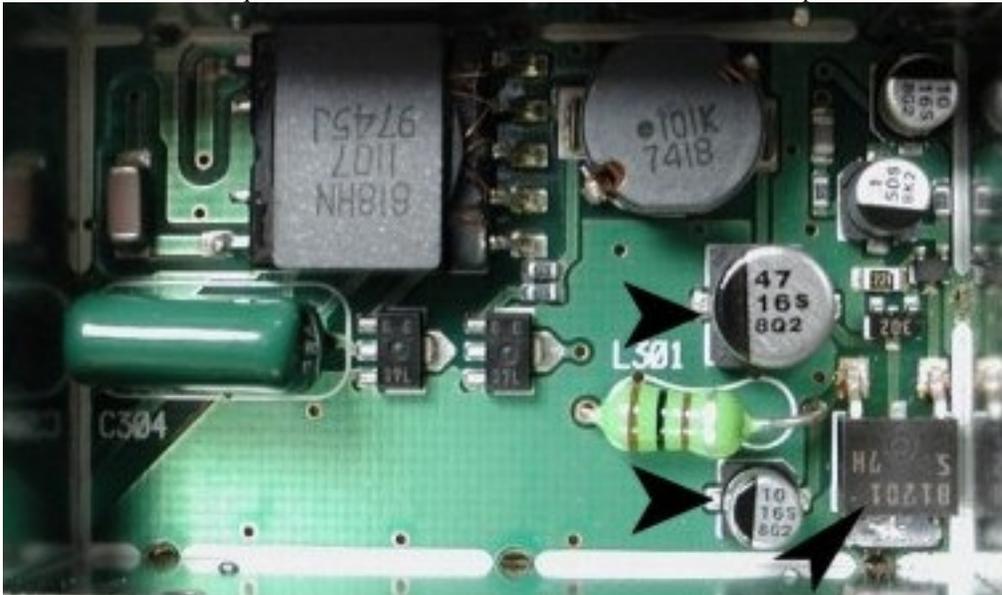
This transistor has no way of cooling laying flat on the board. remove this at your own risk. You have to have a small tip iron and a good set of eyes and steady hands. The center leg on the transistor is cut off, this is the ground leg, and the top of the transistor is soldered to the board.

Remove the box by using solder wick on the underside of the board.

Heat the top of the transistor and lift it and it will come loose, then unsolder the legs and lift. Remember which way it came out. Take the new transistor and don't cut the center leg off, the center leg needs to be soldered where the top of the transistor was soldered. And the other 2 where they were from the start, leaving the part standing up instead of lying flat on the board.

Solder the box back on, making sure it is all the way down on the board.

Now push the transistor's side against the metal box and put some heatsink compound around the transistor and between the part and box, now it can keep cool. (Added by N5KBP after destroying 1 transistor)→Be careful and not allow the metal tab on the transistor to touch the box. It will destroy the transistor.

Put the top back on the box and put the unit back together. Replacement part #s are NTE2525 or 2SA1244 or 2SB1201, good luck and take your time.

Now set your backlight brightness in the menu to 100%. This should increase the life of your new transistor.

Pictures from KA1MDA's page http://www.ka1mda.org/ham/746/
He explains a more involved and probably better repair procedure.

Original instructions from mods.dk

Instructions made more idiot proof by N5KBP from his own experience. (I was the idiot)

N5KBP