Fitting the New Power Switch

1. If you are building up a new TEC-1G kit, skip ahead to Step 3.

2. If your TEC-1G already has the old 2 pole power switch, then this needs to be desoldered carefully, leaving the 6 holes clean and clear of old solder. You also need to remove the 100nf smoothing capacitor labelled C2, just above the 7805 regulator. Lastly, the diode marked D0 (just above the big 1000uf capacitor) must be flipped and connected to a new location. See Step 8 for details, but for now, just desolder the CATHODE (right side of the diode).

3. With no old Power Switch in the way, cut the strip of 6 pins into individual pins, and insert them into the 6 holes of the old power switch on the motherboard. You have a choice of leaving the plastic on the pins, or for a neater fit, you can remove the plastic a little later on. (Do NOT solder the 6 loose pins just yet! You have installed them simply to be a guide into the little New Switch PCB. It might be helpful to elevate the motherboard PCB off the table to allow pins to sit upright.)

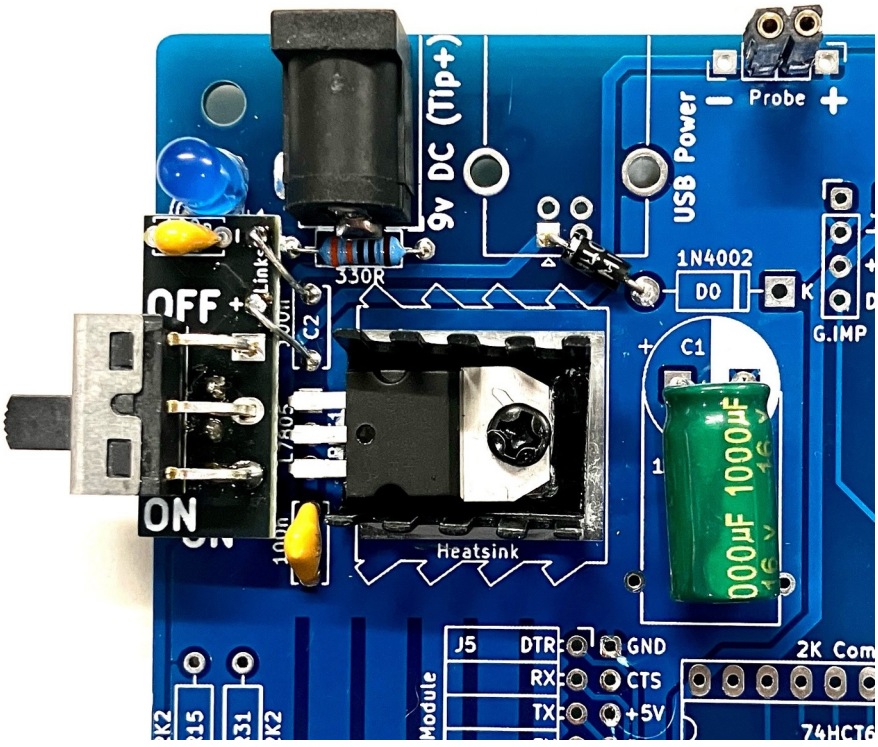
4. Get the New Switch PCB and carefully insert the loose pins through the corresponding 6 holes. This will be the most painful part of the process. Be patient. Once they are all through, solder all 6 pins to the New Switch PCB from the top face. (Do NOT solder the pins to the motherboard!)

5. With the most painful task done, take the New Switch PCB out of the 1G with the 6 pins now soldered in and trim the tops off as close as possible to the PCB. This is so the new horizontal switch lays as flat as possible to the PCB. Don't worry about the metal case of the switch interacting with the trimmed off pins under it. All those are GND pins and are shorted together in the PCB anyway. Go ahead and solder in the New Switch in place, from either above or below (prefered).

6. Solder in the smoothing 100nf capacitor into the New Switch PCB. Trim off the legs but don't throw them away. Instead, solder them into the holes marked "links" that transfer power from the motherboard into the New Switch PCB. You can route the wire links so that the long length come out the top or out of the bottom of the PCB. (I did it out of the top so I didn't have to fish for them.) That is all the assembly of the New Switch PCB done!

7. Now that the New Switch assembly is complete, it is time to fit it into the motherboard. This is where you get to choose to leave or remove the plastic spacers on those 6 pins. I left mine on, but I think I should have removed them to tighten everything up. Once you make your choice, guide the pins into the motherboard and also check if the wire links are accessible. Those wire links will be connected into the holes where C2 is located, just above the 7805 regulator. Solder in the 6 pins and those wire links.

8. The last part of this process is the rectifying diode, labelled D0. This no longer is installed like displayed on the silkscreen. Certainly the ANODE (left leg) is inserted in the normal position, but instead of attaching the CATHODE to the right-hand diode hole, you swing it around 135° counter-clockwise and insert the CATHODE leg into pin 1 of the USB Power socket. (That's the bottom left one that is square shaped.)



Here is a a photo of what is should look like when you are all finished.

You are done! Enjoy the smooth, solid feel of a switch that will last you decades. If you have any questions, don't hesitate to reach out via Facebook, Messenger, eBay or Tindie. Enjoy!