

Chroma Polaris Membrane Panel Replacement

This describes the replacement of the Chroma Polaris membrane switch assemblies. The process is not terribly difficult, but great care should be taken, because the adhesives are quite sticky, and if the panels are accidentally misaligned, it is unlikely that they can be lifted and realigned without damaging them. We cannot be responsible for your installation errors, so get it right the first time.

You will need enough space to lay the Polaris out, on a sturdy table or bench surface. For these photographs, we used a coffee table protected by an old heavy blanket. You will also need good light, and for cleaning the old adhesive residue, good ventilation. You will also need a few tools and materials:

1. Equipment and materials needed

A medium sized Phillips screwdriver for removing the Polaris panel and the circuit boards.

A large flat screwdriver for removing the two captive bolts that hold the panel down from underneath.

Some small needlenose pliers.

Perhaps some pointy tweezers. You may be able to do without.

A 9/32" nutdriver for removing the nut that holds the ground lead to the panel. A pair of pliers can be used in a pinch.

A small brush (perhaps a toothbrush) for cleaning out the holes and slots in the panel. A Q-tip would probably work fine, too.

Some xylene based solvent for cleaning the silicone adhesive residue off the panel. We've successfully used Xylol and Goof-Off.

Some paper towels.

Some masking tape, preferably the blue temporary kind. You should be able to reuse the pieces of masking tape that were used to hold the panels to the hardboard packing material.

A small container to keep the screws and knobs in, so they don't get lost.

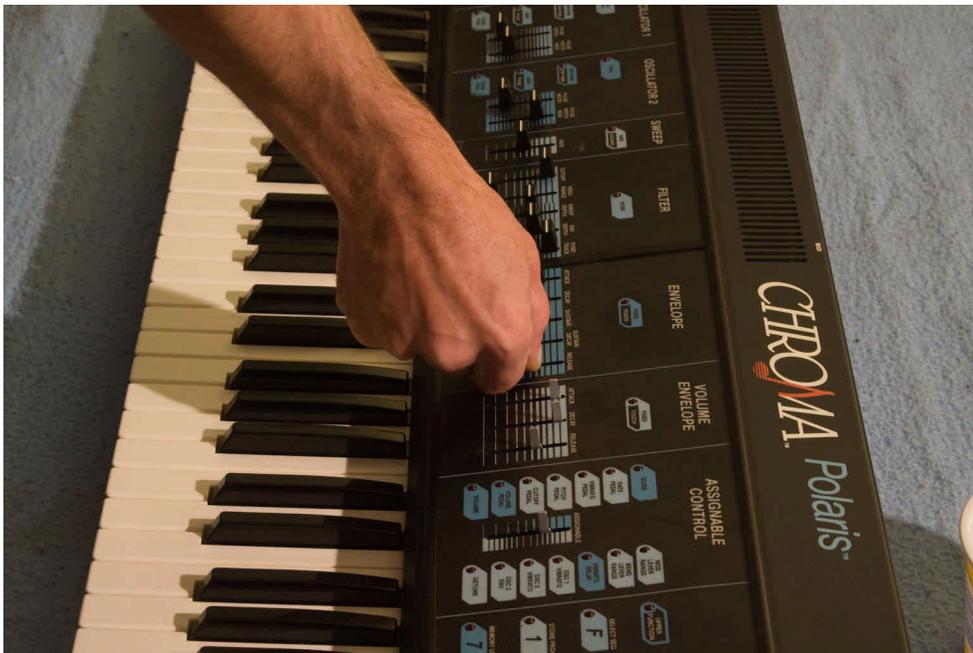
2. Lay out the Polaris on the work surface

Don't plug it in.



3. Remove all the slider knobs

These just pull off.



4. Loosen the panel hold-down bolts

These are the two large flat-head bolts on the bottom of the instrument, one at each end. They need only be loosened until they disengage from the threaded bracket inside; they don't need to be removed completely.



5. Unscrew the panel along its back edge, and lay the panel out.

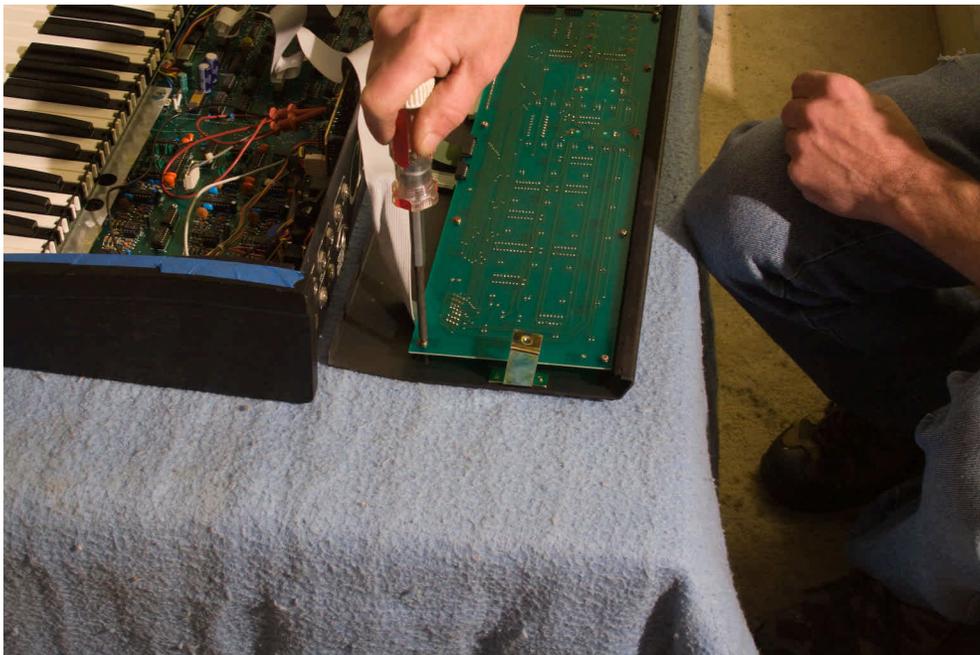


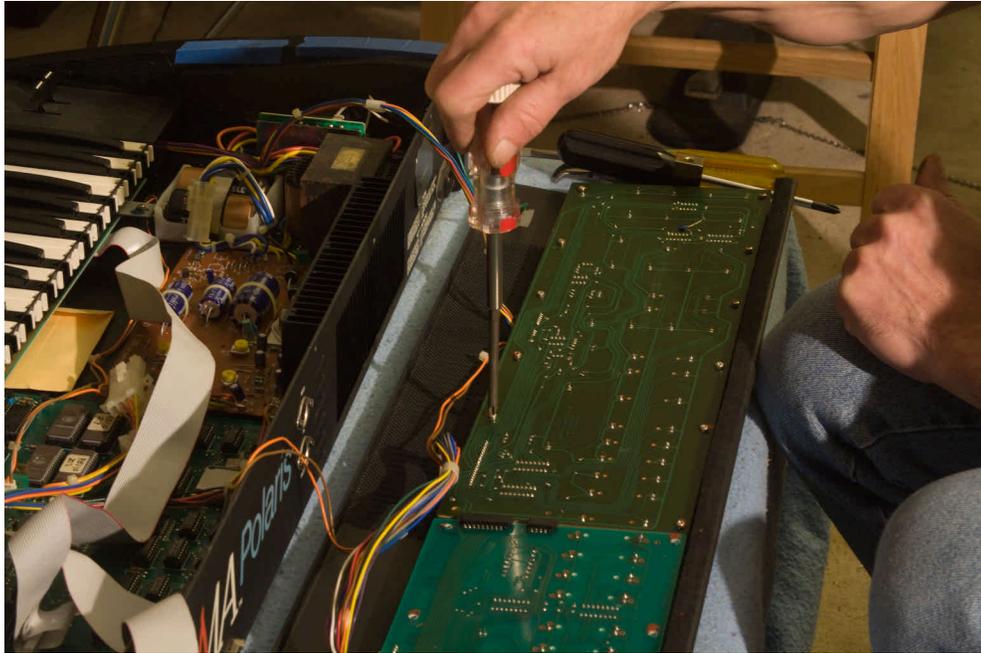
It is not necessary to unplug any of the internal cables.



6. Unscrew the panel boards

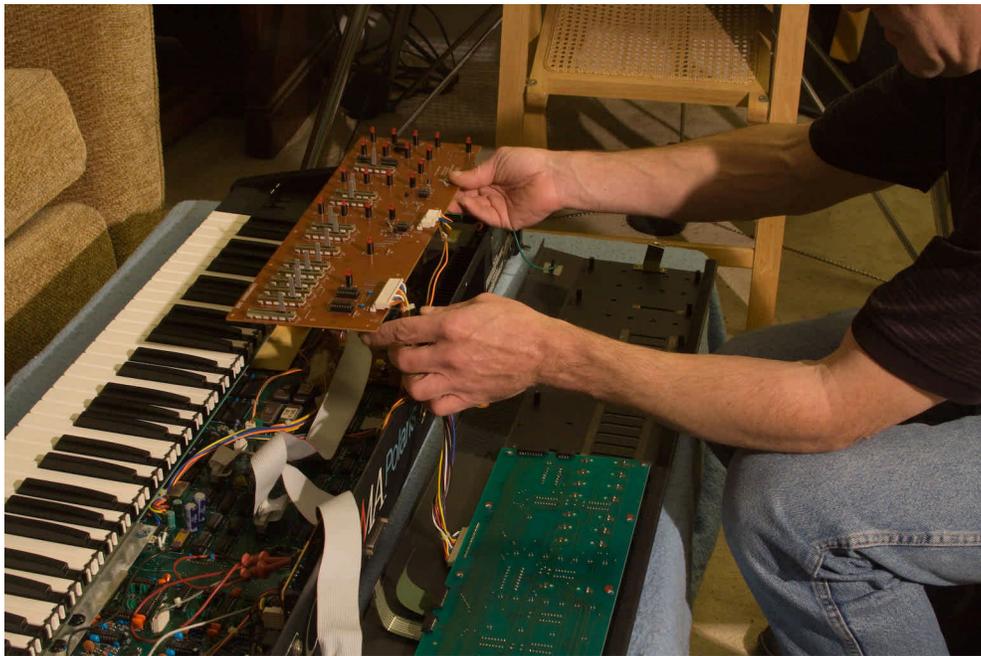
A couple of the screws on the left panel board hold down clips that hold wires together. These screws are likely to be longer than the rest, so remember which ones they are.





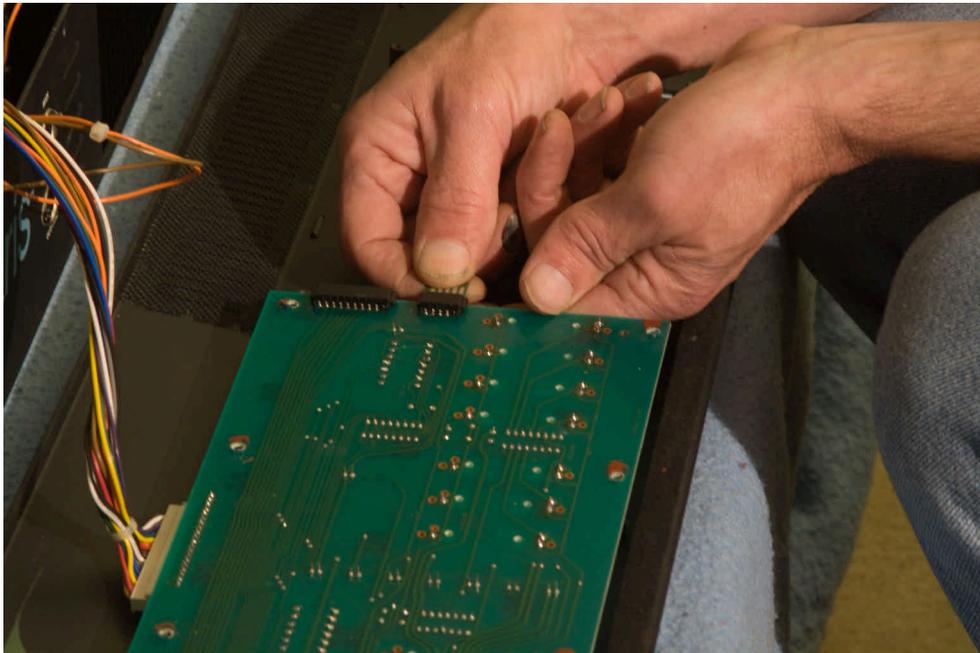
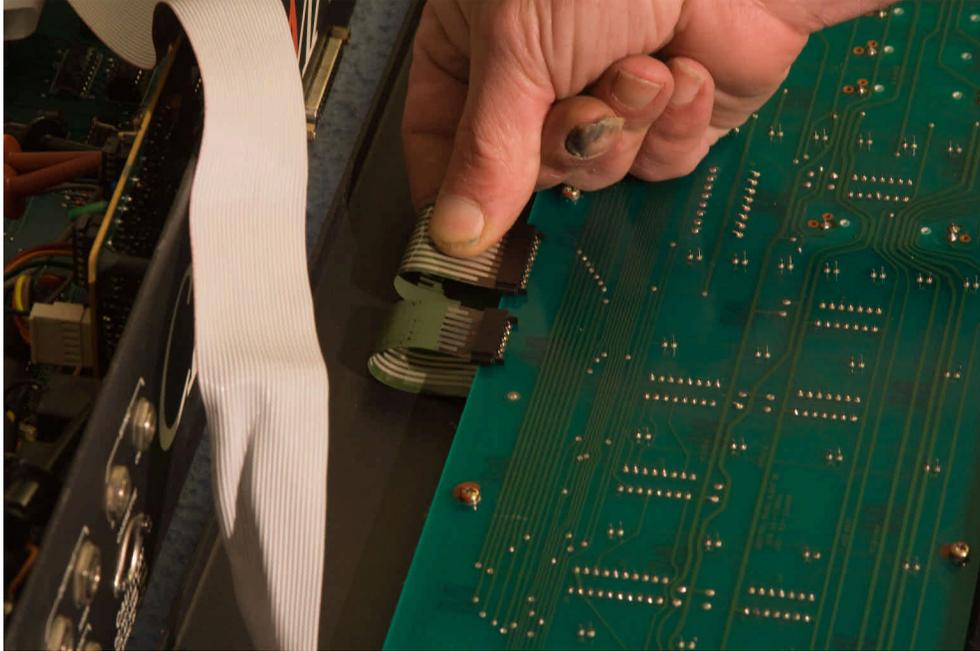
7. Remove the left panel board

Lay it carefully on top of the rest of the Polaris. (This is why you don't want the unit plugged in.)



8. Unplug the membrane panel tails

Pull these out by hand. If they break off, which is likely, it may be necessary to pull a fragment out of the connector, which you can do with the needle-nose pliers, or with tweezers.



9. Remove the right panel board

Lay it carefully on top of the rest of the Polaris.



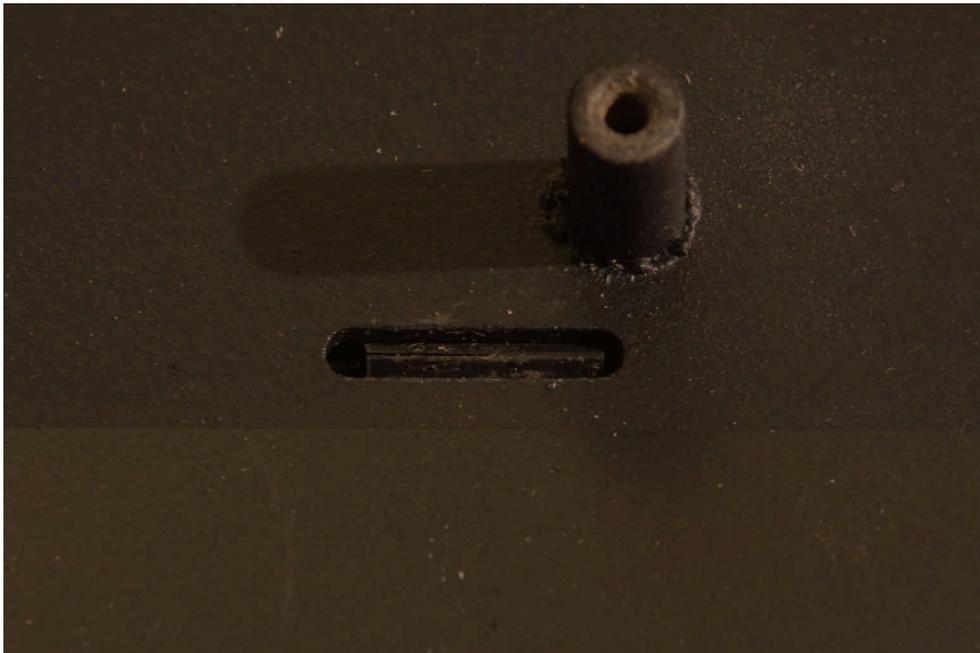
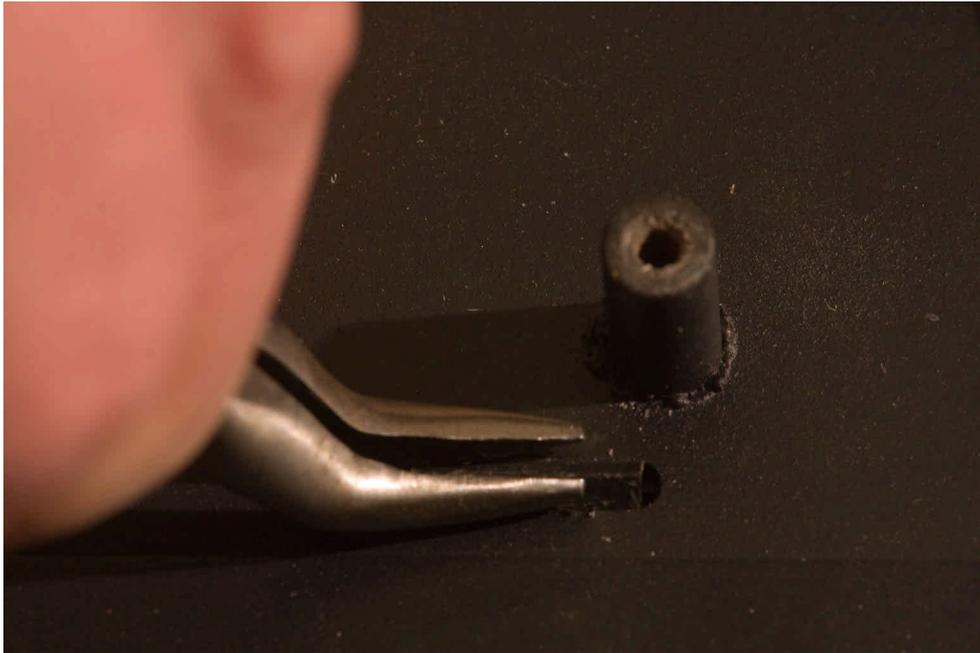
10. Disconnect the ground wire

Undo the nut holding the ground wire to the panel. At this point, the panel is now free. If you wish, you can move the rest of the Polaris somewhere else, since you'll only be working on the panel.

11. Remove the plastic molding strips

Note that the molding snaps into place through slots in the panel. If you merely try to pull the strips off, you'll likely break the bifurcated tongues that snap into the slots. The correct technique is to turn the panel over, gently pull the strip away from the panel with one hand, and pinch the two halves of the tongues together with pliers until they fit through the hole.

You can see that we used some angled needle-nose pliers, but the job can be done with straight ones, albeit with a little more difficulty.





Once the molding has been removed, turn the panel face up, and note how the edges of the panel line up with the molding slots.



