

NEO Color Modification

Recorded + reformatted on 8/20/2021 at 11:07 pm by u/bellumaster

(Warning: **Following these instructions will void the warranty on your NEO.**
If that concerns you, don't try any of this. Also, **if you're not careful, you can ruin your NEO utterly.** Be careful.)

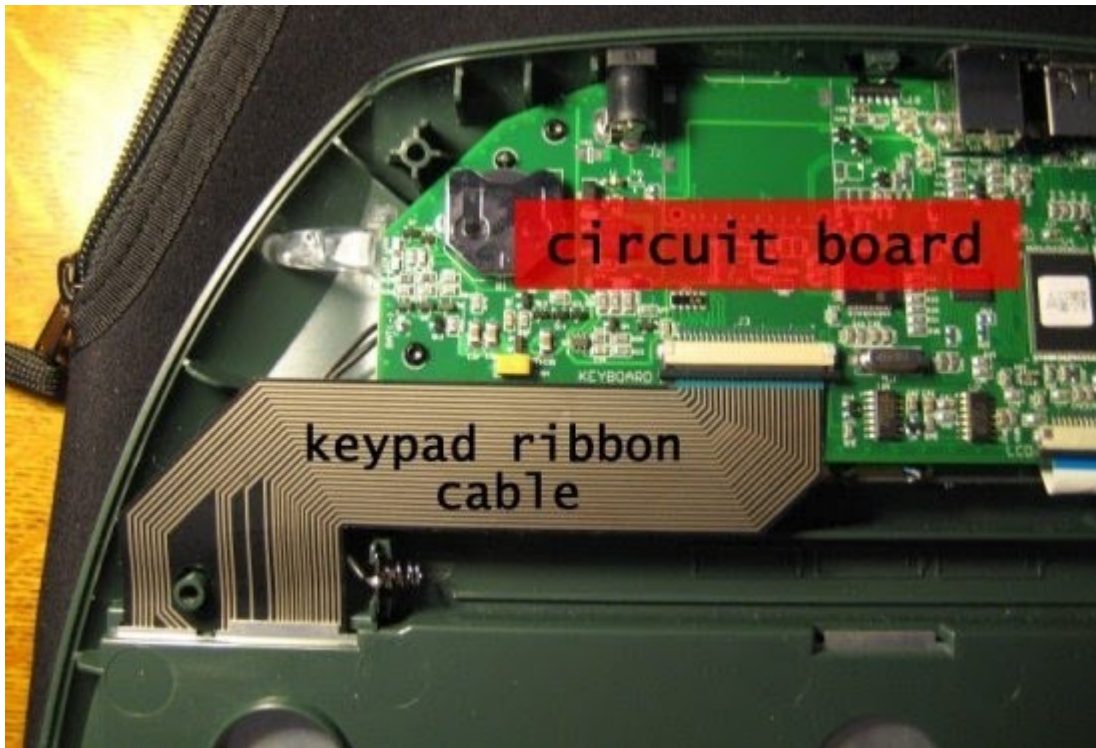
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Step 1: Disassembly

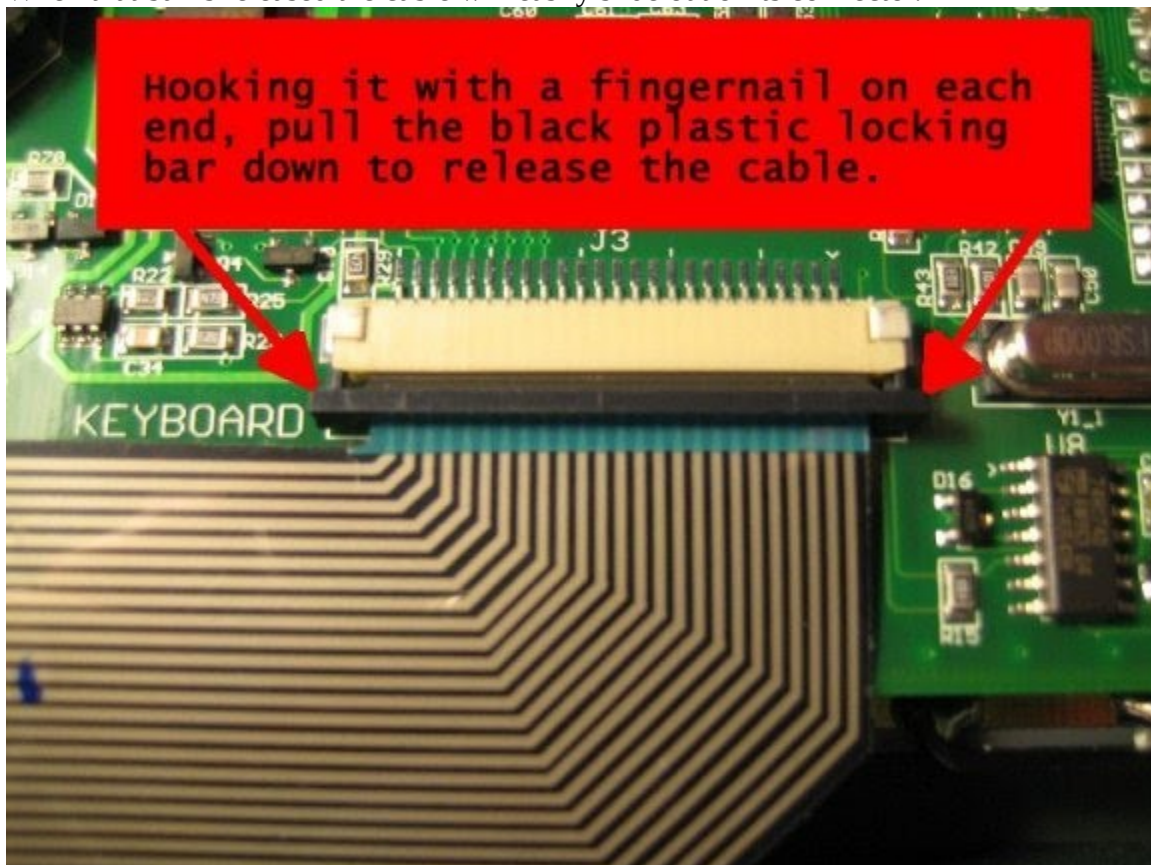
1. Flip the NEO onto its belly. Remove the Phillips-head screw from the battery cover and the eight Torx screws holding the back on. Don't lose the screws.



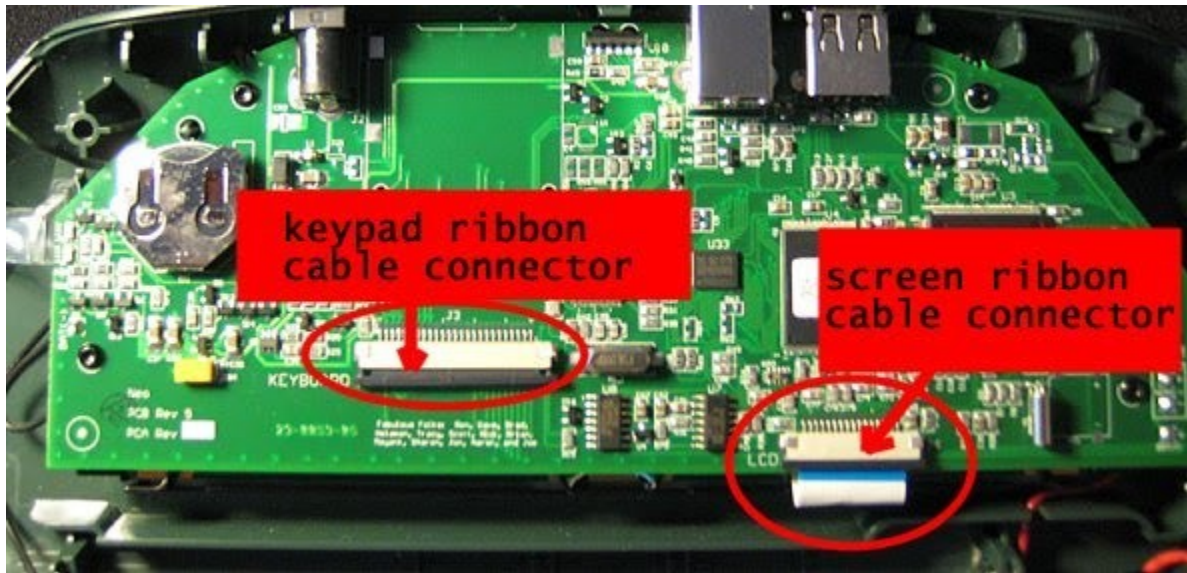
2. Lift the back off and set it aside. You'll see the circuit board and the ribbon cable connecting the keypad to the circuit board.



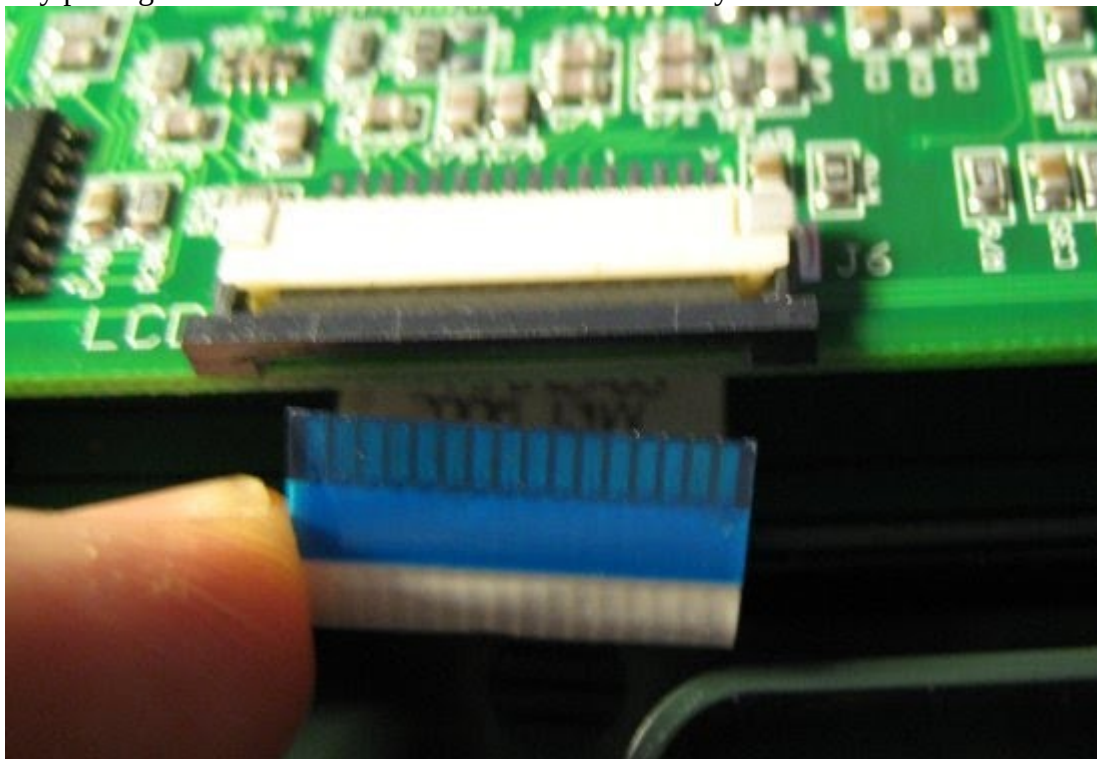
3. To remove the ribbon cable, release the black locking bar that's holding it in place on the circuit board. When that bar is released the cable will easily slide out of its connector.



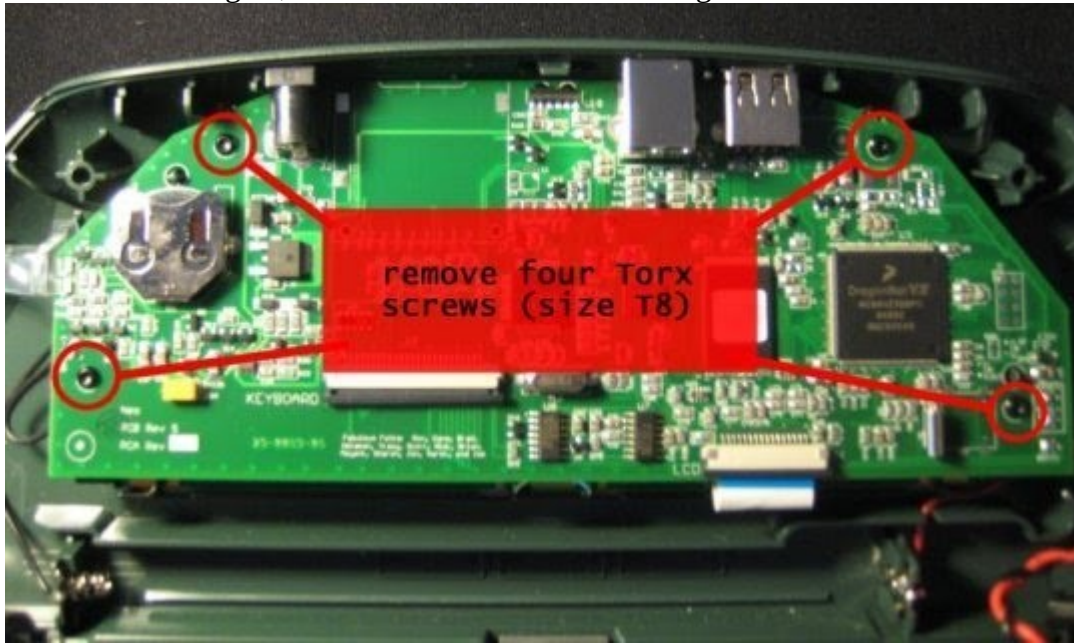
4. On the other side of the circuit board, you'll see a smaller ribbon connector that runs under the circuit board and connects with the NEO's screen.



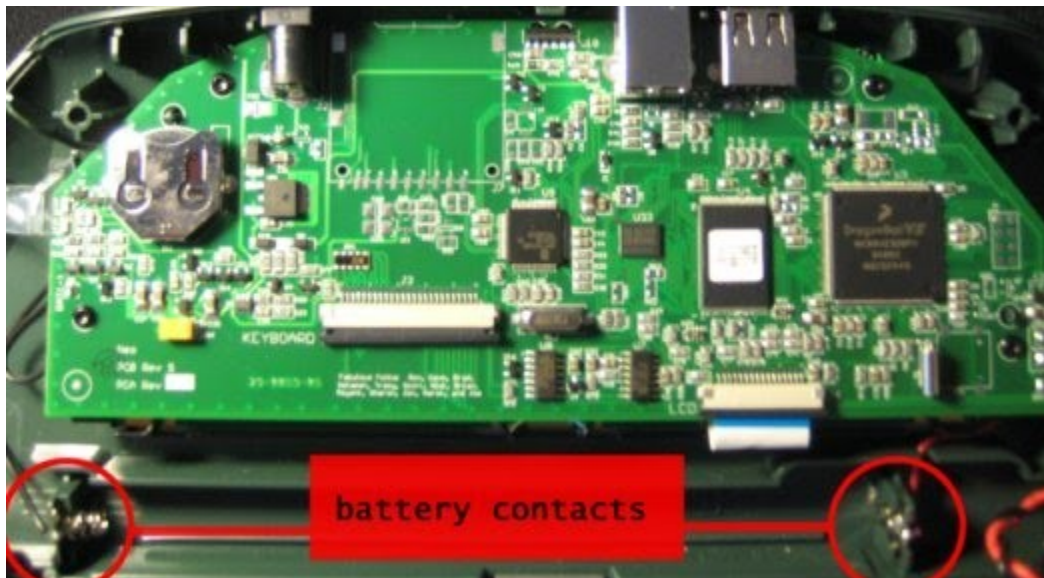
5. As with the keypad ribbon connector, release the black locking bar from the screen ribbon cable connector by pulling down. The cable should then slide out easily.



6. Using the Torx T8 tool again, remove the four screws securing the circuit board.



7. Before you can completely remove the circuit board, you must pull the battery contacts out of their green plastic holders. If you grasp the metal tab with a needle-nose pliers and pull straight up, they will come out without much fuss. Be careful not to break the solder connections.



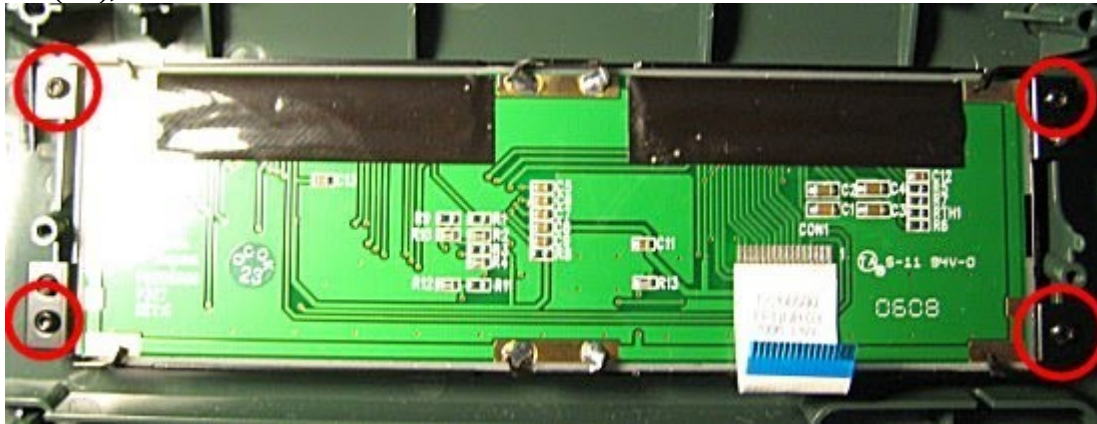
Close-up pictures of the battery contacts:



Pulling up gently with needle-nose pliers. Watch the solder point!



8. With the circuit board removed, you have clear access to the back of the screen. Remove its four Torx screws (T8), and lift it out.



9. The small clear plastic doodad off to one side simply lifts out.



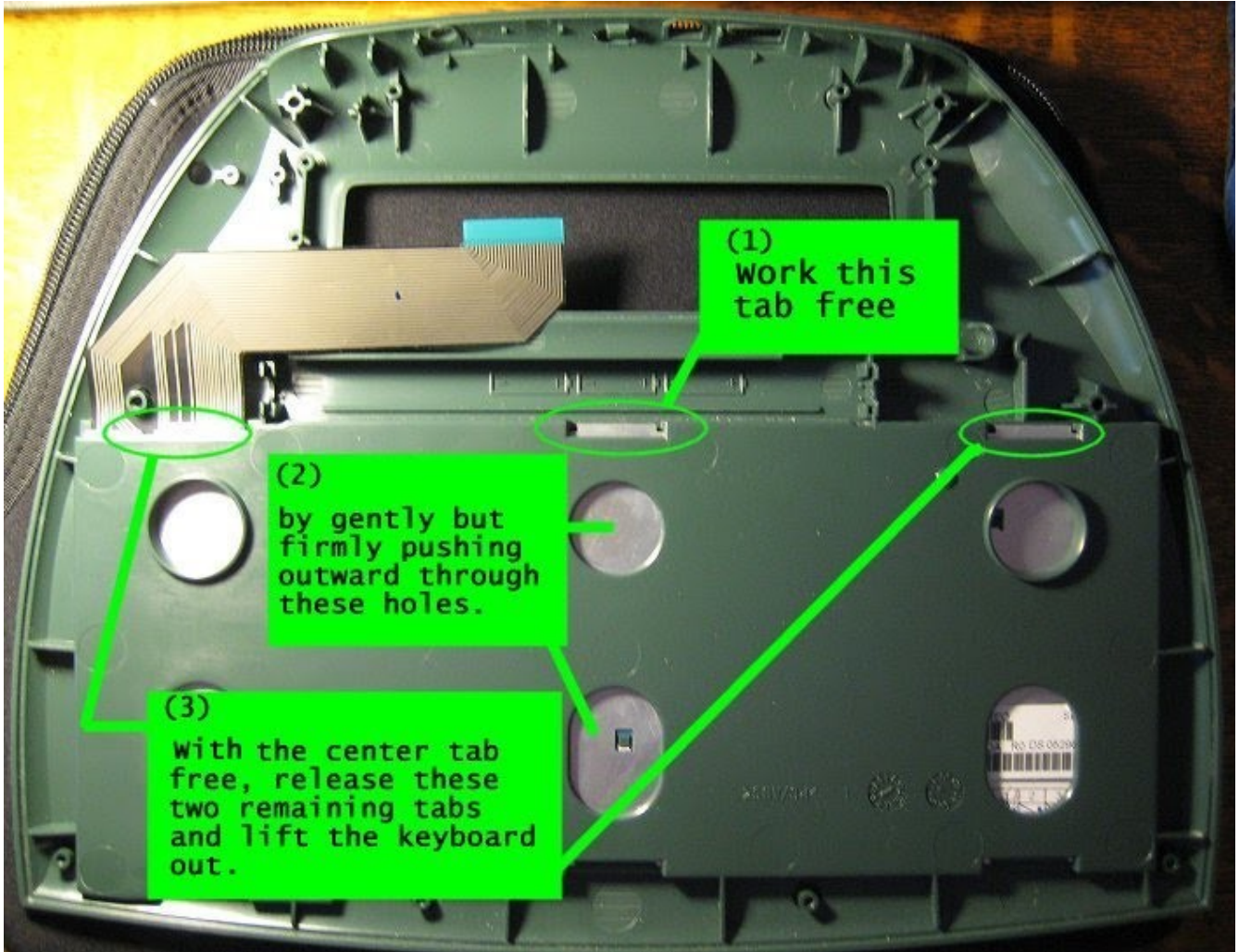
Also carefully remove the dark piece covering the NEO's infrared beam.
It's on the top edge of the NEO, near the USB plug.



10. At this point, everything is out of the NEO except the keyboard.



11. Getting the keyboard out is a little tricky. It is secured at top and bottom by tabs. The first goal is to free the top middle tab, then the other two top tabs follow fairly easily, and the keyboard will lift out of its place. To release that middle tab, you need to flex the keyboard just a bit by pushing through the holes in the case. See illustration.



12. The front half of the NEO's shell, sans everything (and I swear that's dust, not cookie crumbs):



Step 2: Dyeing

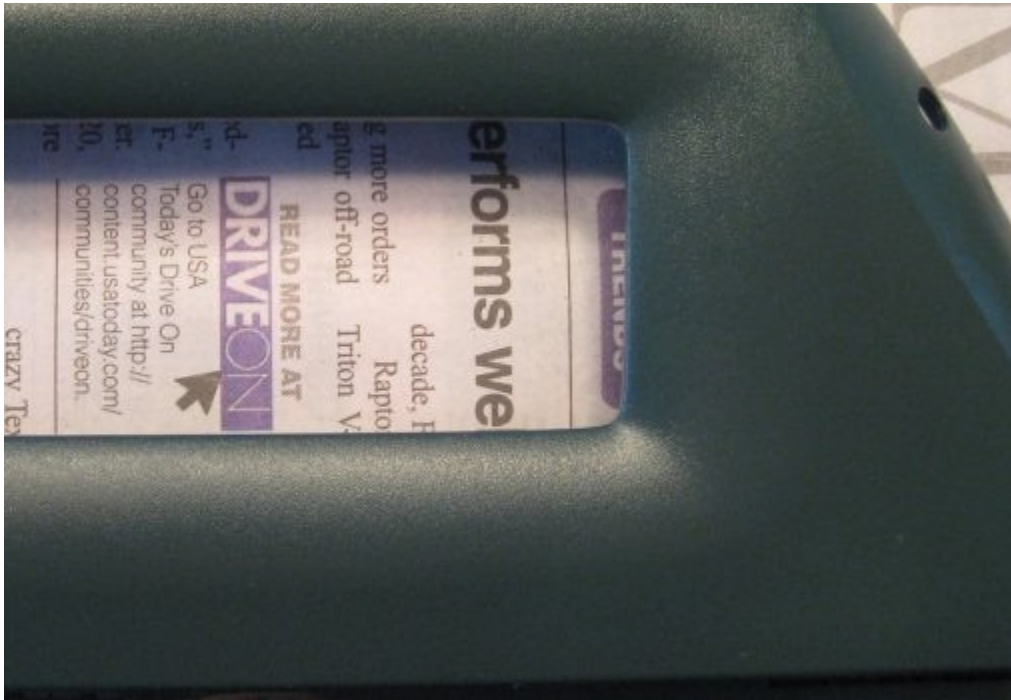
1. Before you can apply the vinyl dye, the NEO's shell needs to have stickers and labels removed and be thoroughly cleaned. There are two labels to deal with, the large instruction label on the back and the NEO logo on the front. The back label is by far the simplest to handle. I peeled the label off with the help of a thin, wide blade---I got one edge started and the whole thing pulled off in one piece. Glue and paper residue left on the NEO was easily dispatched with some Goo Gone and a couple of washings in warm water and dish soap. The label, if it's in one piece, can be glued back on at the end of the dyeing process, or, if you have design/layout skills, you can make your own label in a more satisfying color combination, print it on sticky-back label paper, and plaster it back in the same spot on the NEO.



2. The **NEO BY ALPHSMART** label on the front is far more difficult to remove. The words are silk-screened directly onto the plastic, and must be coaxed off carefully. I began by dosing it liberally with Goo Gone and rubbing at it with a rough teri-cloth rag. It was slow going. After expending much Goo Gone and a good deal of elbow grease, I eventually tried gently rubbing with a very fine-grade steel wool, lubricating all the while with Goo Gone. This, along with further teri-cloth rubbing, did the trick. **HOWEVER**, both the teri-cloth and the steel wool flattened out the natural grain of the plastic just a bit. I was careful not to rub too hard, and the flattening was minimal. Just be aware that the rubbing will change the appearance of the spot where you're rubbing, so take it easy. I spent at least an hour on this process. Patience is key. Midway through the job:



Ta-da:



3. Wash both halves of the case again in warm, soapy water and rinse thoroughly. Any traces of grease or other residue will foul up the dye job.

4. I suggest testing the dye before you attack your NEO with it. Since I'm replacing my green NEO keyboard with a charcoal-gray NEO 2 keyboard, I was able to pop some keys off my old keyboard and experiment on them. I followed the instructions on the dye can, and the testing helped me get a feel for the process.



Now I have a motley keyboard that I'll hang onto for parts.



5. When your NEO halves are clean, dry, dust-free, and ready to dye, take them outside for the operation. Raise them up on something so that you can reach the underside of all the edges with the spray. I elevated mine on a roll of duct tape. Following the instructions that came with the dye, I sprayed three coats ten minutes apart; the coverage was quick and easy.



Don't forget the battery cover.



Step 3: Reassembly

1. Reassembly is pretty simple, mostly a matter of reversing the disassembly process. The most challenging part is getting the new keyboard into place correctly. I inserted the top tabs (and the ribbon cable) first, then worked the bottom tabs into place by flexing upward (very slightly) in the middle of the keyboard while pushing the tabs into their slots. The middle tab took a little extra effort---it wouldn't quite go all the way home into the slot until I reached down with a thin screw driver and gave it a bit of a push. Snap! All in. After that, re-attach the screen, then the circuit board. Attach the two ribbon cables, re-insert the battery contacts, put the back on, and you're finished.



