RFID iPhone

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https://learn.adafruit.com/rfid-iphone

Last updated on 2023-08-29 02:09:29 PM EDT

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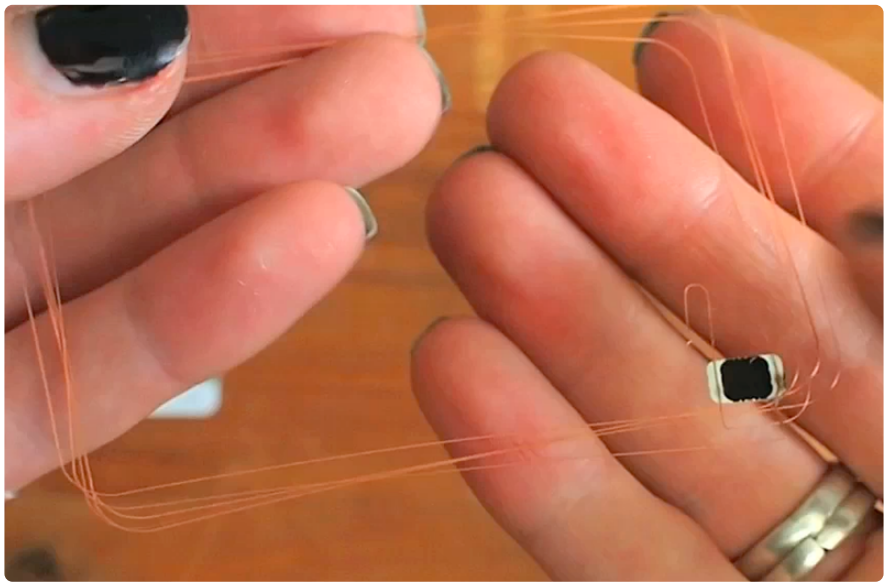
Overview

After seeing Dhani Sutanto () mod his Oyster Card (London transit pass) into a ring, I got excited to try something similar with an CharlieCard (Boston's RFID transit pass). You can dissolve the card in acetone and then remove the RFID antenna and chip inside.

Dissolve the Card

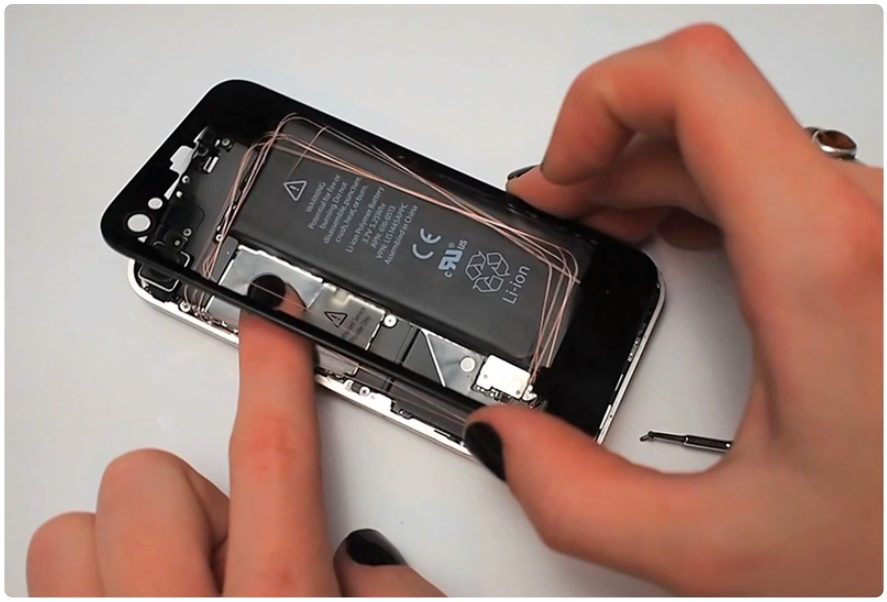
Put your card in a vessel and fill with acetone until the card is completely submerged. Cover the container so the acetone doesn't all evaporate, and wait 15-30 minutes.

Once the plastic has all peeled away, gently poke around in the mess to find the shiny RFID antenna and carefully remove it from the vessel. You can reuse the acetone, just pour it back into the bottle and throw the now-destroyed plastic away.



The antenna is made of enamel-coated wire, and it does not have to remain in this exact shape to still function just fine.

Tape Tag and Finish



At first we tried putting the antenna under the back plate of the phone just the way it was, all floppy-like. It didn't scan. For the reader to induce power flow through the antenna, there can't be a bit metal object right next to it, there needs to be a bit of air space.

We achieved this by taping the chip/antenna to a piece of paper, then building up several layers of packing tape until we could reliably scan the tag from inside the phone. The positioning within the phone can affect scanability too.

Replace the back plate of your phone and enjoy!