



# USB Cable Repair

This guide will help you learn how to replace a damaged USB plug or cable.

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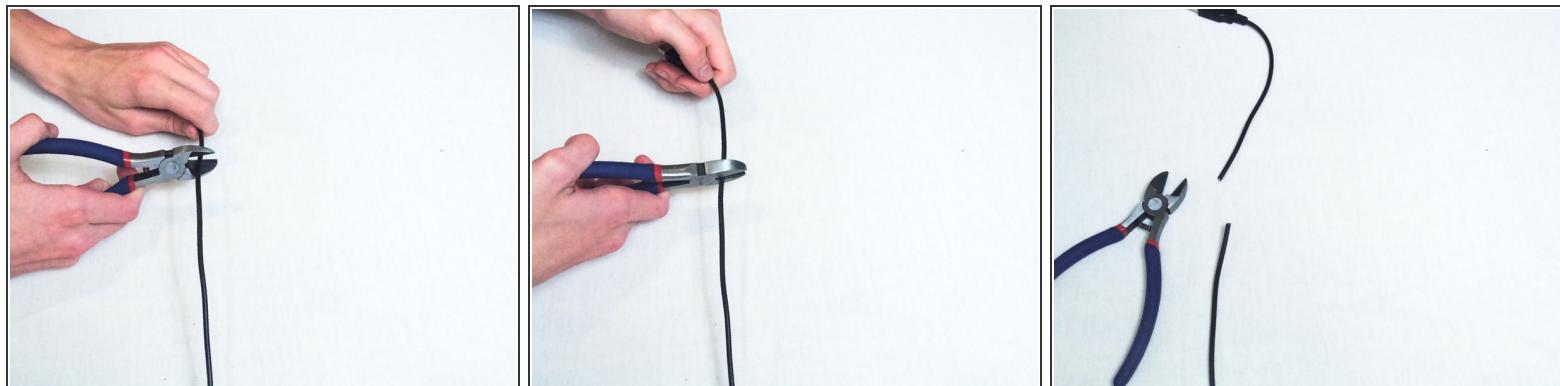
## INTRODUCTION

Most USB cables consist of four wires: red, black, white, and green. Some newer cables have eight wires, but the idea is the same. If the USB plug itself is damaged, you'll need to remove the whole plug and replace it. Otherwise, just the damaged portion of the cable can be removed.

### TOOLS:

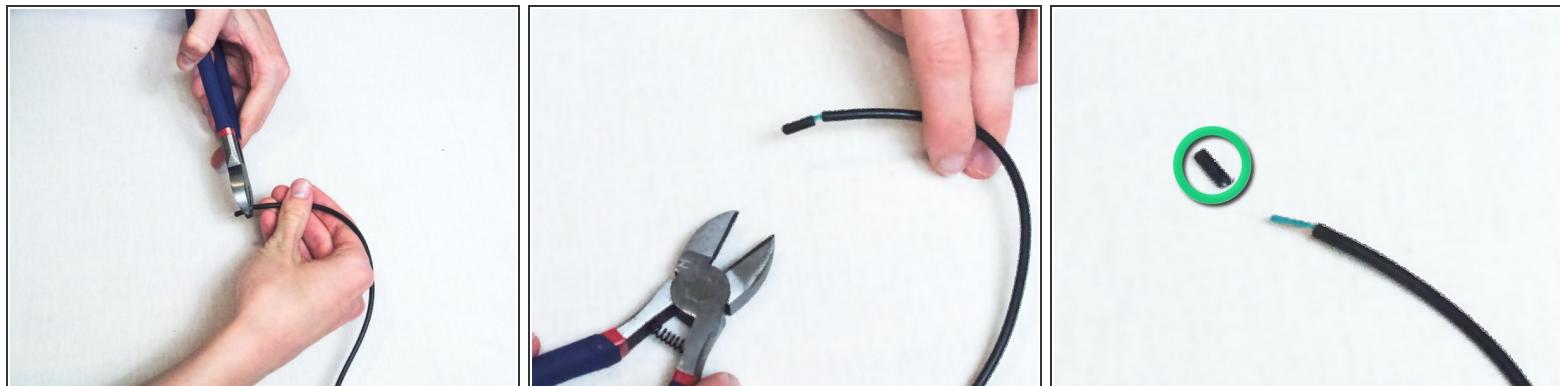
- [Wire Stripper \(1\)](#)
- [Electrical Tape in 6 Assorted Colors \(1\)](#)
- [Solder \(1\)](#)
- [Soldering Iron \(1\)](#)
- [Flush Wire Cutters \(1\)](#)

## Step 1 — USB Cable Repair



- Use wire cutters to remove the broken portion of the USB cable.
- You should be left with two pieces of cable. If you had to remove the whole USB plug, you'll need a replacement plug. And yeah, you'll have to snip that one too.

## Step 2

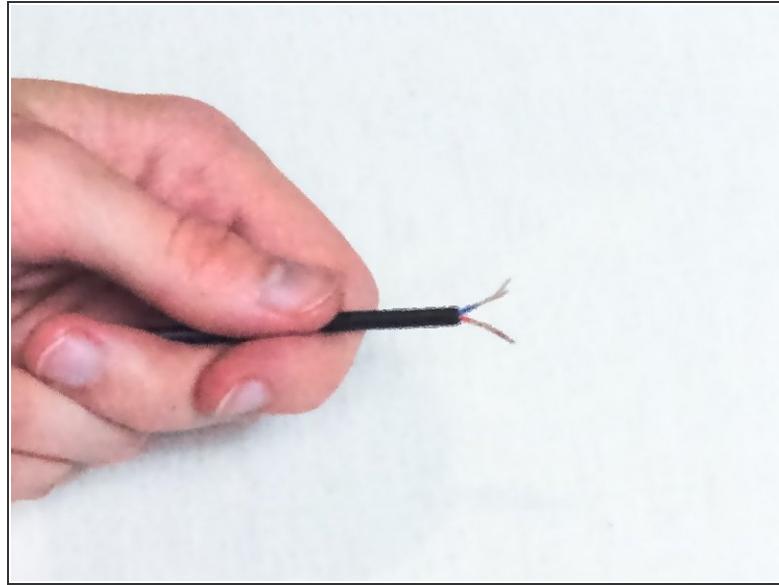
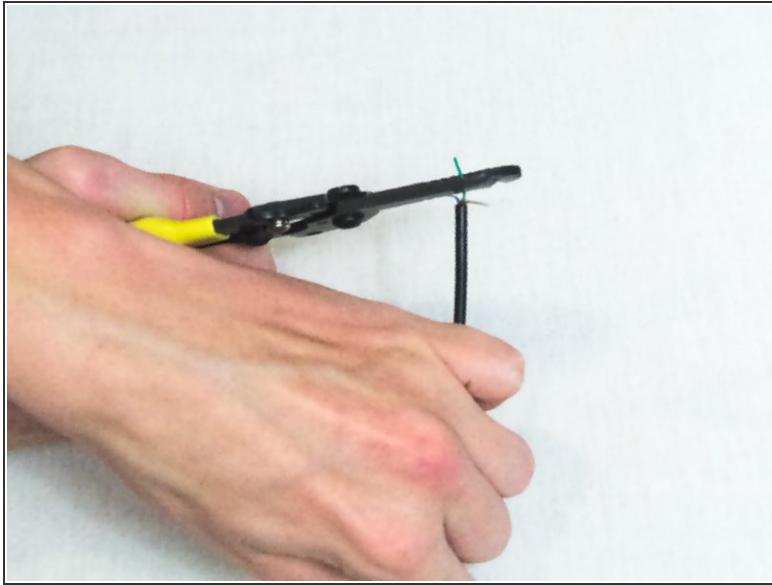


- With wire cutters or scissors, carefully strip the outer cable covering.
- Cut just the outer cover of the cable, and make sure to cut all the way around. Don't cut any of the internal wires.
- Pull on the piece of cover that you've separated from the rest. You should be left with four exposed individual wires.

*(i)* There should be four wires, and occasionally a piece of string too. If there are fewer wires, then you've clipped one off, and you need to trim the others and try this step again.

- If there are more than 4 wires, you probably have a USB 3.0 cable. In this case, make sure that whatever wires you'll be reconnecting are both USB 3.0.

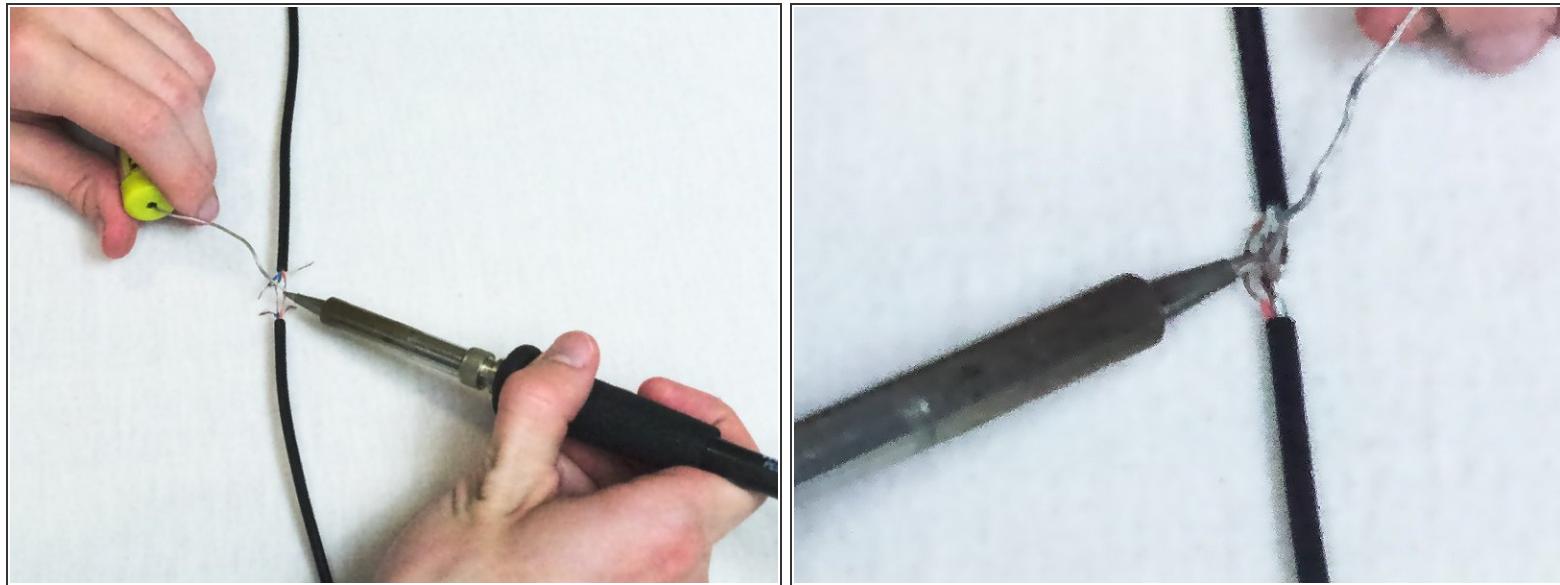
## Step 3



- Strip all the wires from both cables. You'll need about  $1/8" - 1/4"$ , or about 1/2 cm of exposed copper wire.
  - If you have a wire stripper, the wires will likely be 28 gauge, though they could sometimes be 26 gauge.
  - If you don't have a wire stripper, you can strip the wires exactly the same way as you exposed these wires: use wire cutters or scissors to gently cut the outer insulation, then pull off the insulation.

**⚠** When stripping wires, do not cut or damage the copper wires. If you do damage the wire, cut off the damaged portion and try again.

## Step 4



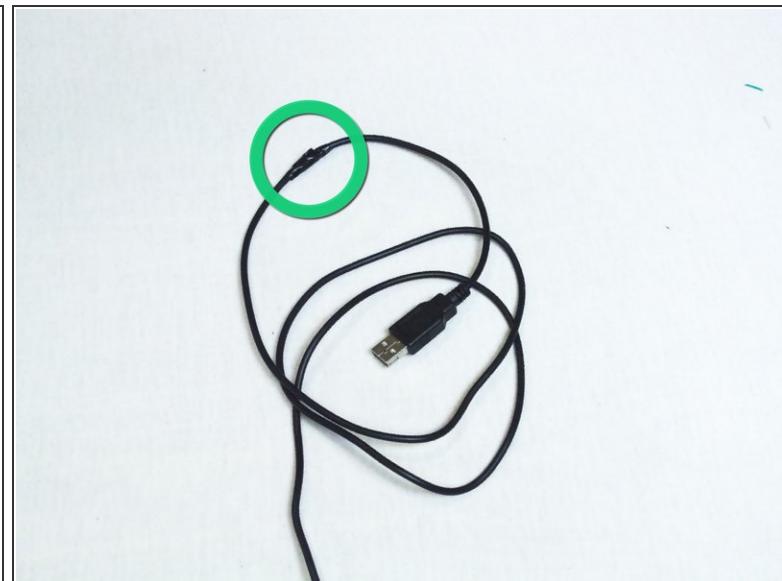
- Solder like-colored wires to each other.
- There are many excellent guides for soldering online. Alternatively, you might ask a geeky friend to do this step for you.

## Step 5



- Wrap each wire in electrical tape. Make sure that there is no exposed copper.
- This is mostly to make sure that the exposed wires don't touch. You don't need more than 1/4" or 1 cm of tape for each wire.

## Step 6



- Wrap all the wires together in electrical tape to make it look better and last longer.

To reassemble your device, follow these instructions in reverse order.