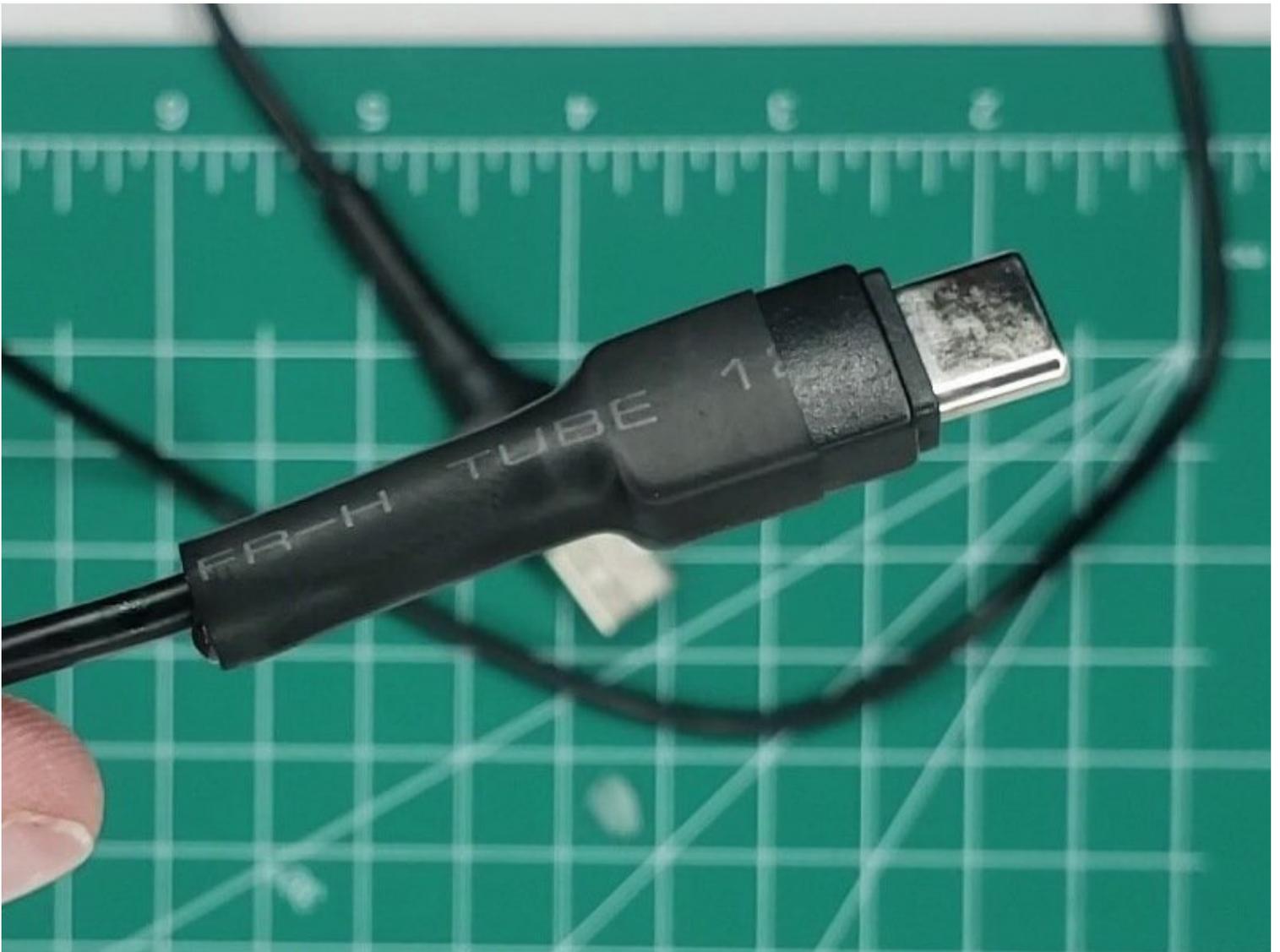




# Reinforcement of Frayed or Damaged Charging Cords

Written By: Group One



## TOOLS:

Glue Gun (1)

Precision Utility Knife (1)

Lighter (1)

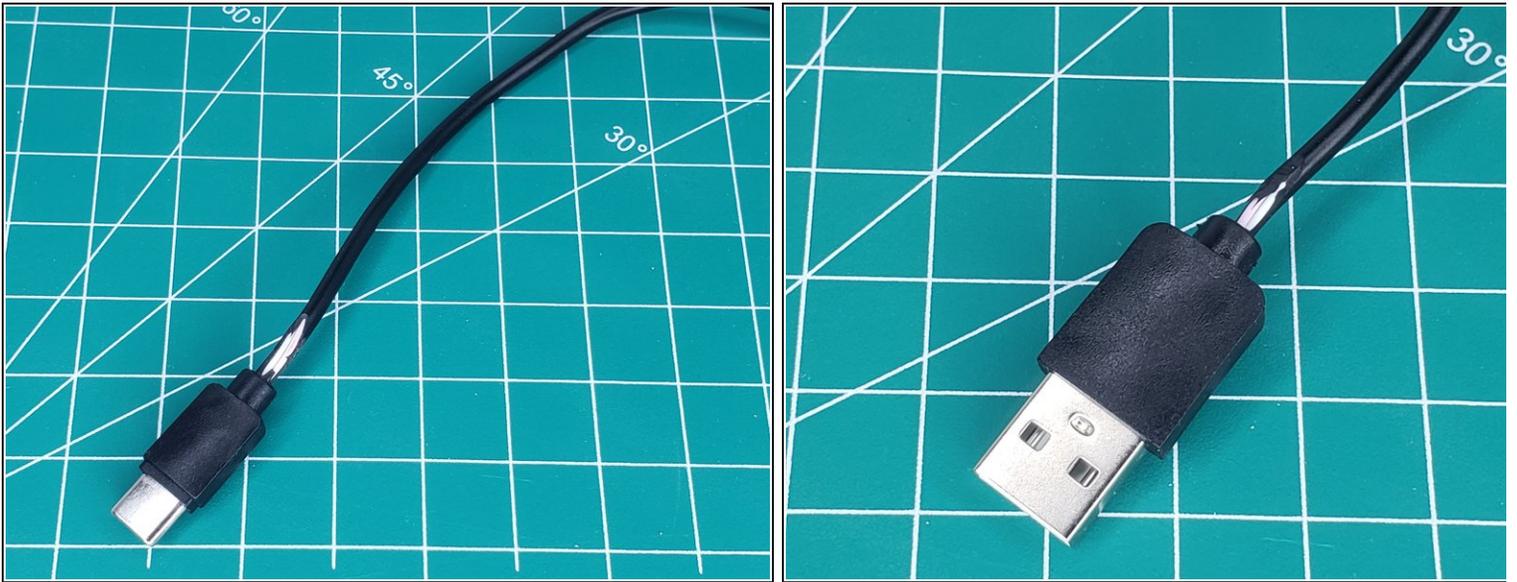
## PARTS:

Heat-Shrink Tubing (1)

USB Type C Charger Cable (1)

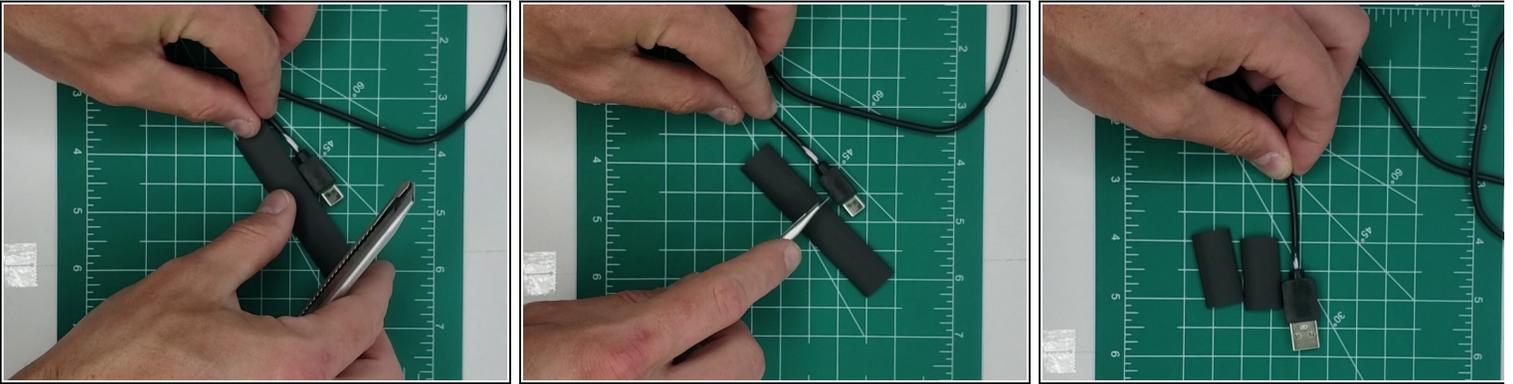
All Purpose Glue Stick (1)

### Step 1 — Evaluation of Cable



- Identify that the cord being repaired still works, then make sure both ends are unplugged and free to be worked on.
- ⓘ This method is best for when the insulation is damaged, but the wires are still intact as shown in this photo.

## Step 2 — Measuring and Cutting



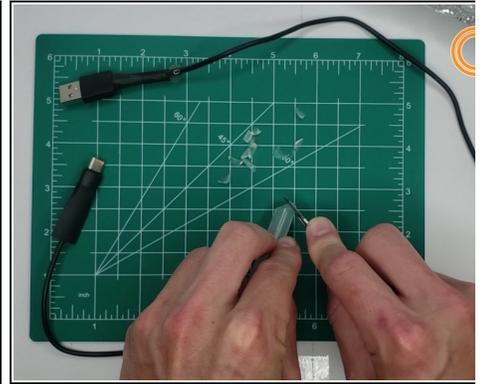
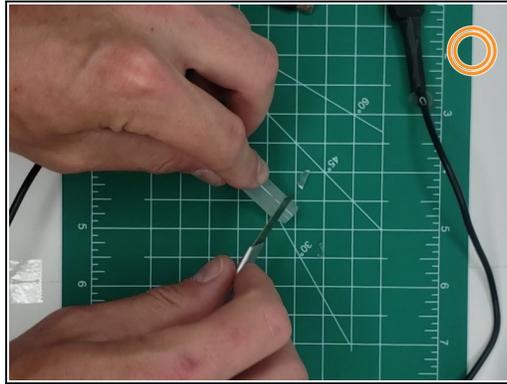
- Measure out a piece of heat shrink to be at least 1/2 inch (12.7mm) longer than the damaged length of the cord. Then cut that piece to size.
- ⓘ For a better fit on the cord try to use the smallest size heat shrink possible.
- ⓘ Note that you can cut the heat shrink using scissors, a box cutter, or any kind of knife.
- ⚠ Be careful with sharp objects.

## Step 3 — Positioning the Heat Shrink



- Slide the cord through the heat shrink to check that the heat shrink covers all of the damaged area.
- ⓘ It is easiest to slide through at the smaller end of the cord.
- Keep the heat shrink on the cord but away from the damaged area for the next steps.

## Step 4 — Preparation of Hot Glue



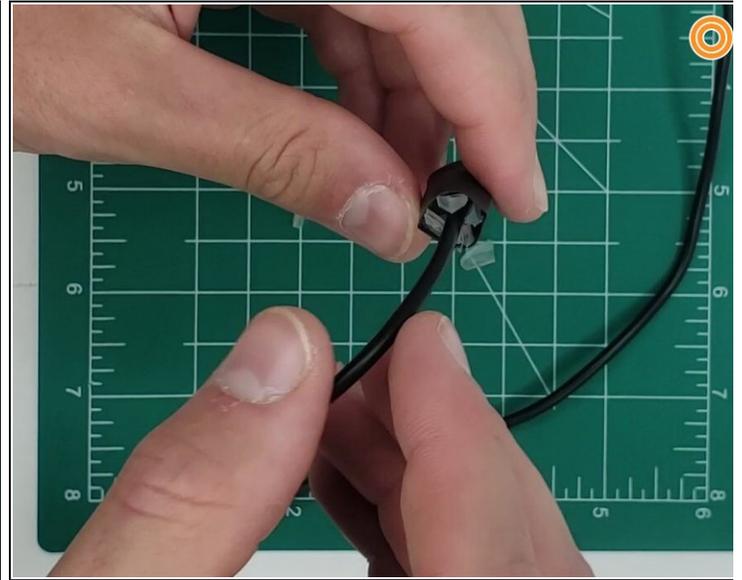
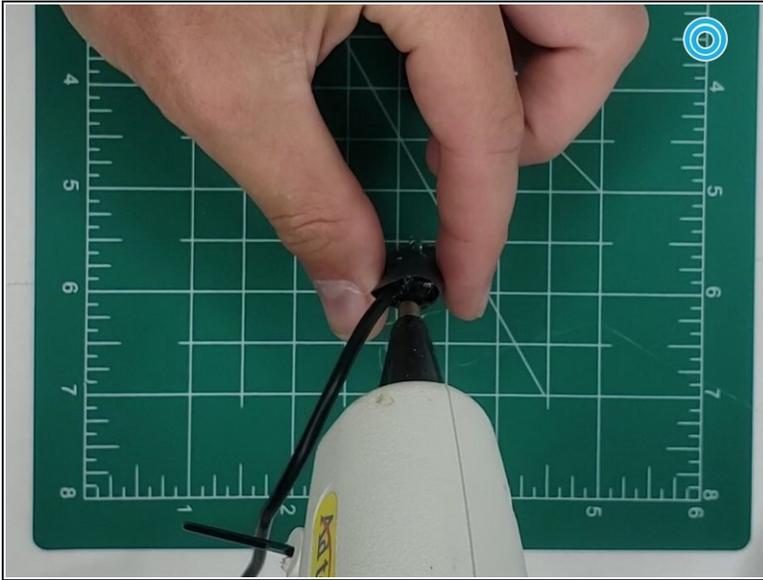
- Glue Gun Method: Prepare the hot glue gun by plugging it in and allowing it to fully heat up.
- Glue Stick Method: Prepare the glue stick by cutting off small pieces to use.
- ⓘ Note that you can cut the glue stick using scissors, a box cutter, or any kind of knife.
- ⚠ Be careful with the glue gun, temperatures get hot enough to burn skin.
- ⚠ Be careful with sharp objects.

## Step 5 — Applying the Prepared Hot Glue



- Glue Gun Cont. : Apply hot glue in excess over the damaged area and then slide the heat shrink over that area.
  - Glue Stick Cont. : Without applying any hot glue, slide the heat shrink over the damaged area of the cord.
  - ⓘ Feel free to be generous with the glue. Most effective repair will occur when the heat shrink is near-full of glue for either option.
- ⚠ Be careful with the glue gun, temperatures get hot enough to burn skin.

## Step 6 — Filling Heat Shrink with Glue



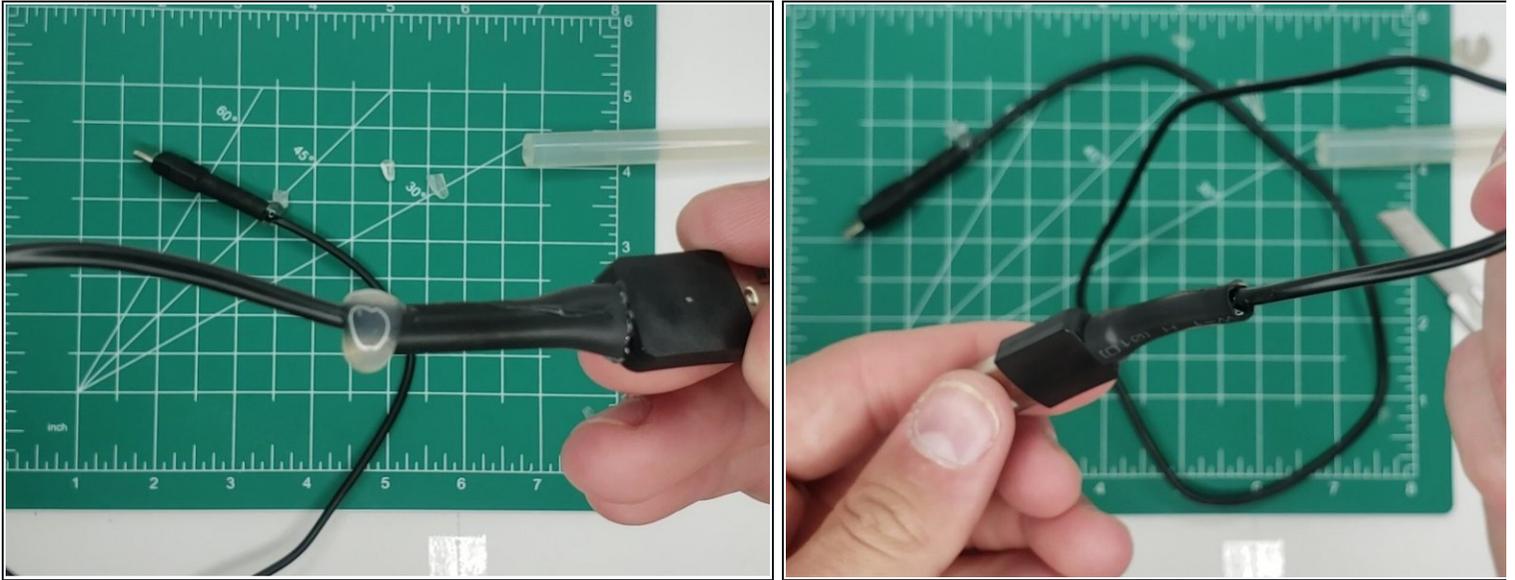
- **Glue Gun Cont.** : Completely fill the heat shrink with glue by placing the glue gun nozzle into the opening and fill the remaining space.
- **Glue Stick Cont.** : Fill drop the small pieces of glue stick into the heat shrink. Firmly press the pieces in until they are tightly packed and the heat shrink is full.
- ⓘ Maintain even spacing between the walls of the heat shrink and the cord when applying glue.
- ⚠ **Be careful with the glue gun, temperatures get hot enough to burn skin.**

## Step 7 — Heating the Shrinking Tube



- When enough glue has been added, apply heat from the lighter or other heat sources onto the heat shrink.
- ⓘ Be sure to apply heat in a back and forth motion. Alternative heating option can be hair dryer or heat gun.
- ⓘ Glue oozing out the sides is a good sign that you've applied enough.
- ⚠ **Warning! Open Flame. Do not hold the heat source to one spot of the heat shrink or you will risk burning and damaging the cord.**

## Step 8 — Cooling and Finalizing the Repair



- Once the glue cools, you're free to tear off the excess
- ⓘ Note how the glue is now fogged over, this means it has properly cooled.
- ⚠ Avoid cutting it off with a knife else you may redamage the cord.

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