



iPhone 3GS Front Panel Replacement

Replace a cracked front panel on an iPhone 3GS.

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INTRODUCTION

Use this guide to separate and replace the front panel and digitizer on the iPhone 3GS.

[video: <http://www.youtube.com/watch?v=9foQGx-ULow>]



TOOLS:

- [Heat Gun](#) (1)
- [Metal Spudger](#) (1)
- [Phillips #00 Screwdriver](#) (1)
- [Suction Handle](#) (1)
- [Spudger](#) (1)



PARTS:

- [iPhone 3GS Front Panel](#) (1)
- [iPhone 3G Front Panel Adhesive Strips](#) (1)

Step 1 — Broken Glass



- If your display glass is cracked, keep further breakage contained and prevent bodily harm during your repair by taping the glass.
- Lay overlapping strips of clear packing tape over the iPhone's display until the whole face is covered.
 - ⓘ This will keep glass shards contained and provide structural integrity when prying and lifting the display.

⚠ Wear safety glasses to protect your eyes from any glass shaken free during the repair.

Step 2 — Display



- Remove the two Phillips #00 screws from the dock-connector end of the iPhone.
- ⓘ Make sure to keep all the screws organized as you are taking the phone apart. They are different sizes.

Step 3



- Remove the metal handle from the suction cup. It's easier and safer to grip the suction cup's base instead of the metal handle.
- ⚠ Be very careful when opening the iPhone so that the cables under the display are not severed.
- ⓘ There is a rubber gasket between the silver front bezel and black display assembly. A bit of force is required in this step to separate the iPhone's display assembly.
- Use a small suction cup near the Home button to gently pull up the lower portion of the iPhone's display assembly.
- ⓘ If the display assembly is too damaged to allow the suction cup to adhere, tape with a strong adhesive such as duct tape may be used.

Step 4



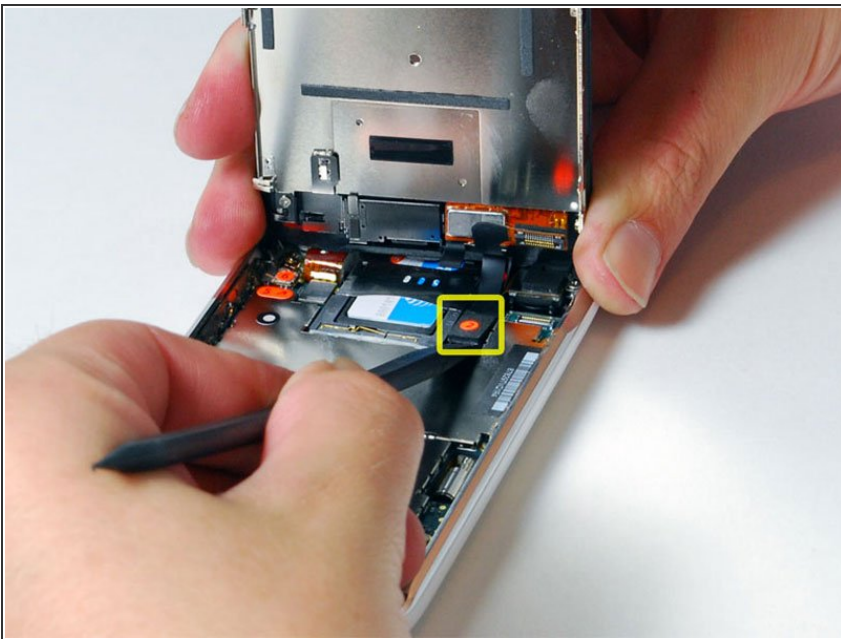
- ⓘ The display assembly is still connected to the iPhone by several cables, so don't try to remove it entirely just yet.
- Rotate the display assembly up until it is at an angle of approximately 45 degrees.

Step 5



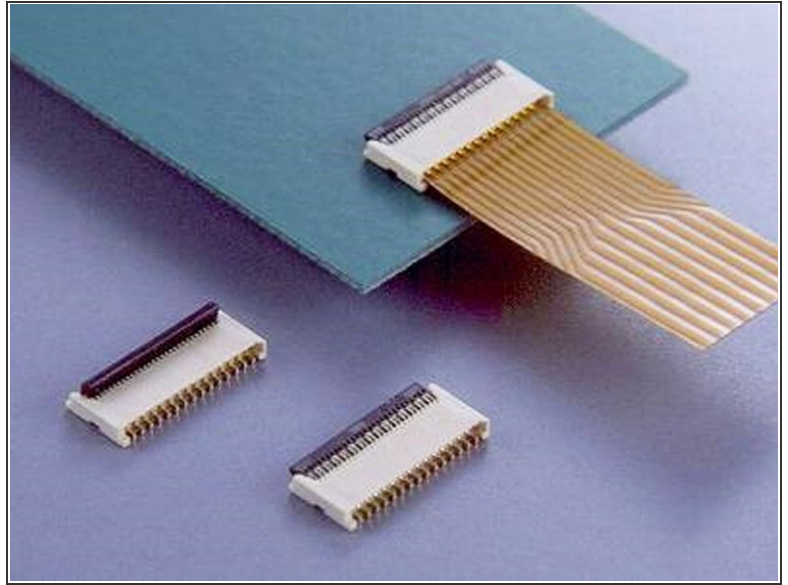
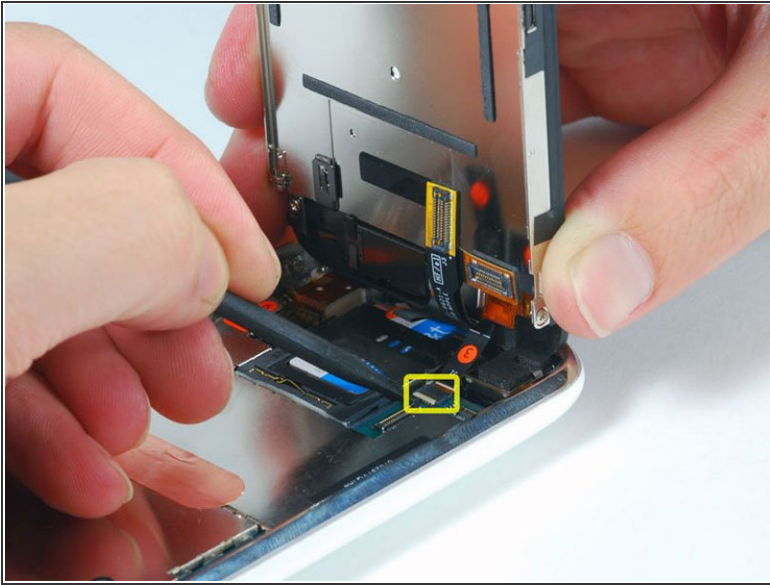
- Continue to hold the display assembly with one hand, and use your other hand and a spudger to disconnect the black ribbon cable labeled "1."
- Ribbon cable "1" is connected with a plug style connector. The block at the end of the cable is the plug which is simply pushed into a socket on the circuit board. No other locking mechanism is used.

Step 6



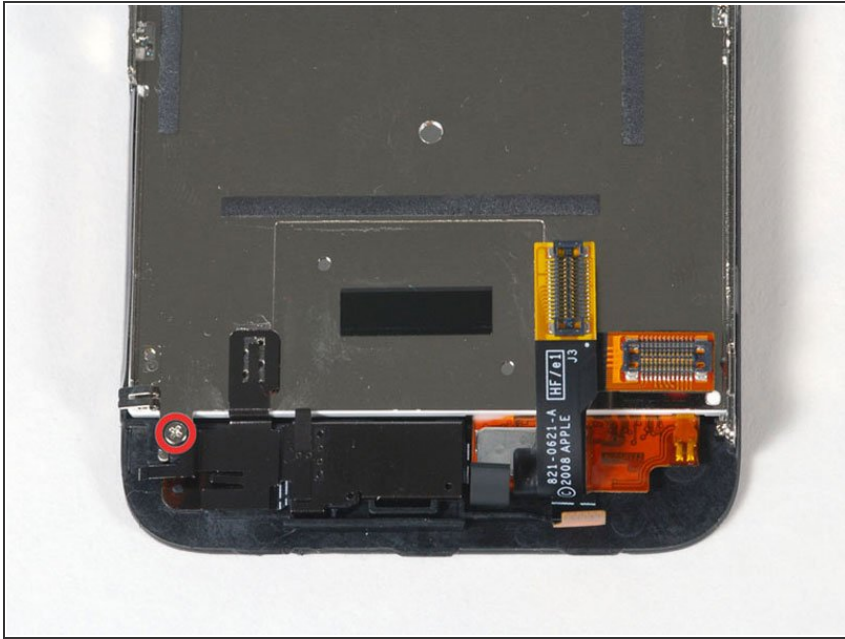
- Rotate the display assembly up until it is roughly vertical. This will allow easier access for disconnecting the remaining cables.
- Use a spudger to disconnect the black ribbon cable labeled "2."

Step 7



-  Ribbon cable "3" is held in place by a FPC style connector. You must unlock this connector before sliding the ribbon cable out. The locking mechanism is on the opposite side of where the cable is inserted - it swivels upwards 90 degrees. Use a plastic spudger to lift the locking mechanism.
-  The FPC locking latch is very delicate and is typically a different color than the body of the connector. (see the detail image of FPC connector open and closed)
- Slide the ribbon cable out of the connector, and remove the display assembly from the iPhone.
-  It's impossible to properly reinsert a ribbon into an FPC connector unless the lock is disengaged. Make sure the locking latch is open when attaching/detaching the cable.

Step 8



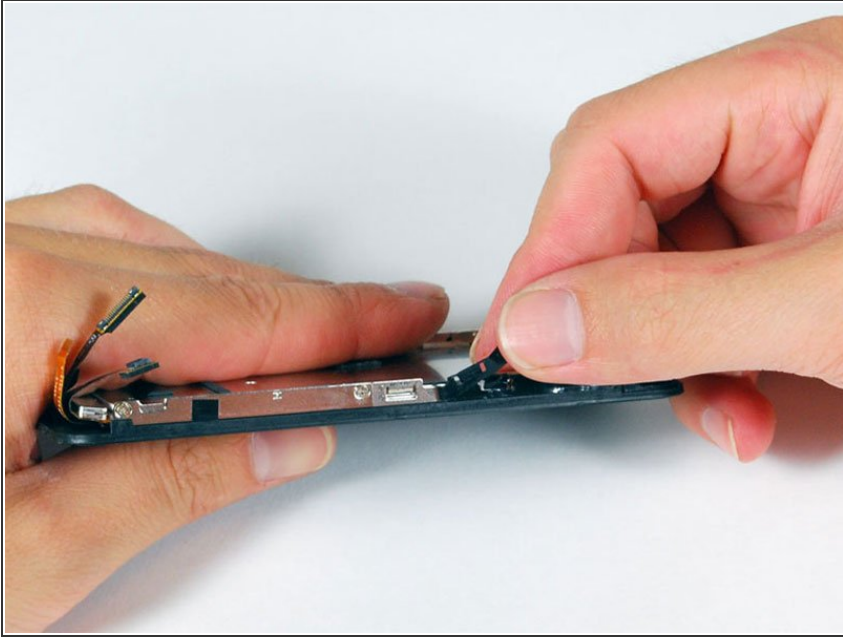
- Remove the single Phillips #00 screw from the corner of the display assembly.

Step 9



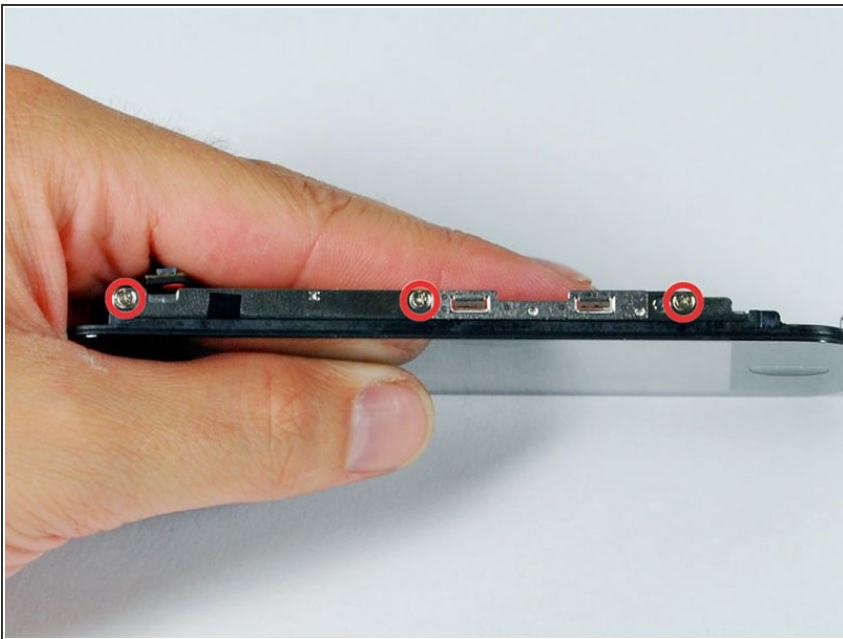
- Remove the two Phillips #00 screws from the right side of the display assembly.

Step 10



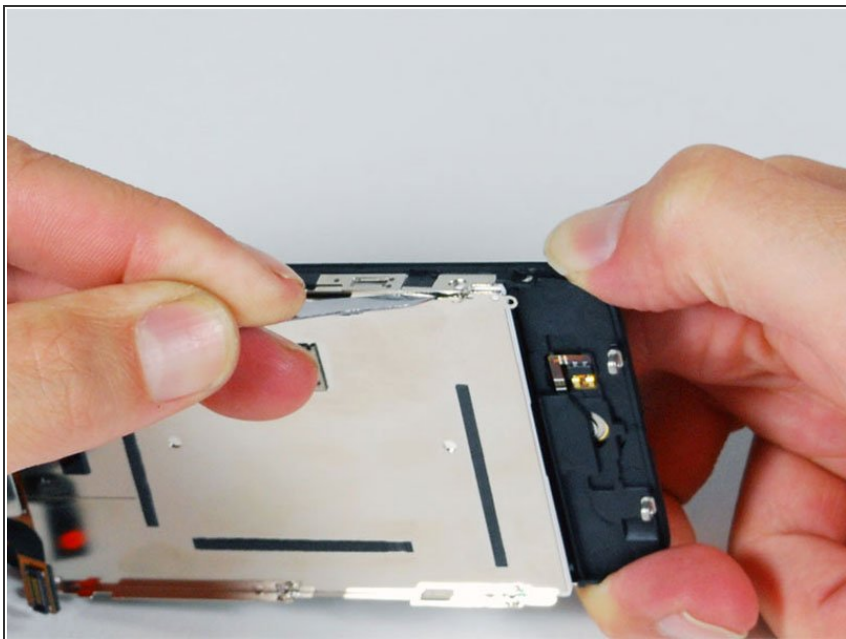
- Turn the display around, and if there is a thin strip of black tape on the edge of the display assembly, carefully peel it up.
- ⓘ Keeping the tape from sticking to itself can be tricky. We recommend placing the tape on a wax-coated piece of paper (any sticker backing will do).

Step 11



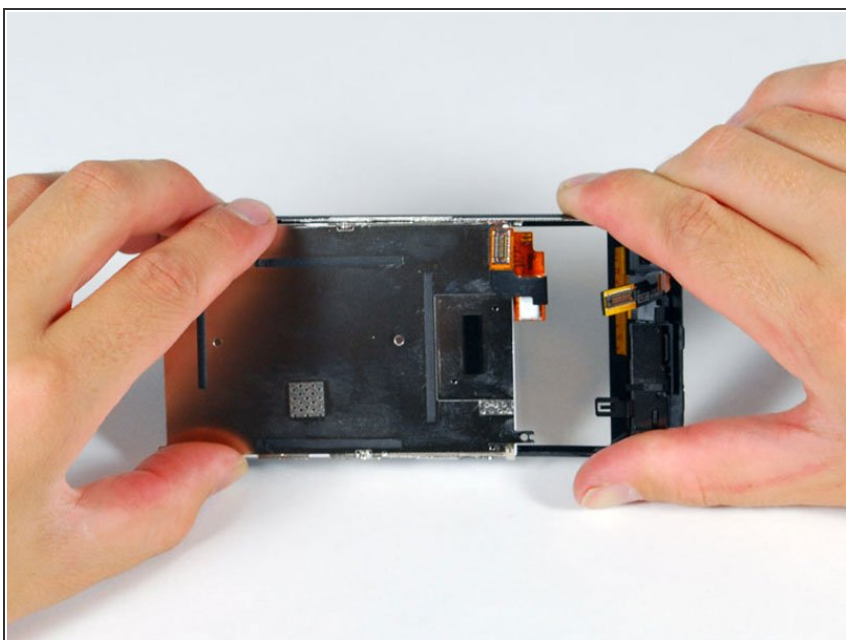
- Remove the three Phillips #00 screws from the left side of the display assembly.

Step 12



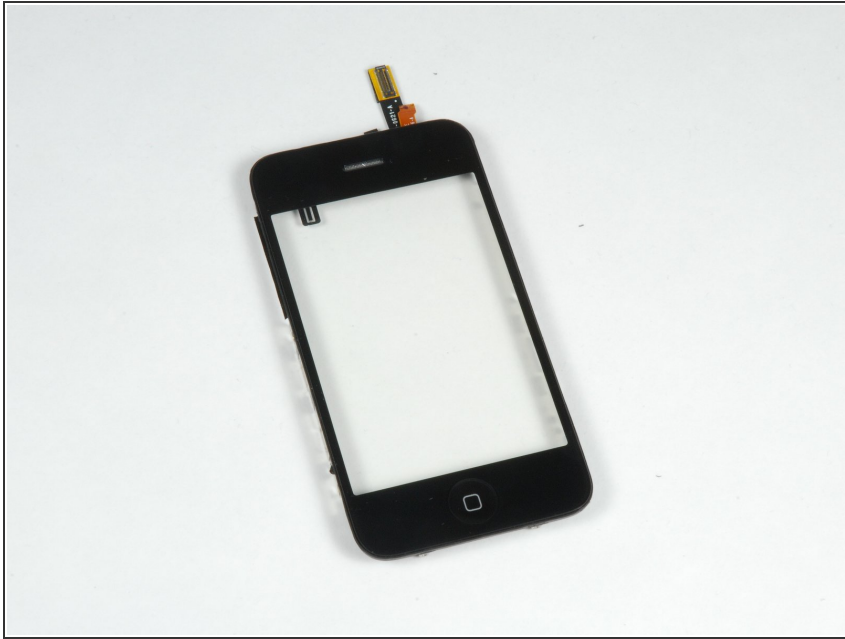
- Turn the display assembly over and again carefully insert a metal spudger between the two metal rails along the edge of the display assembly. Gently rotate the spudger to lift the LCD up from the glass.

Step 13



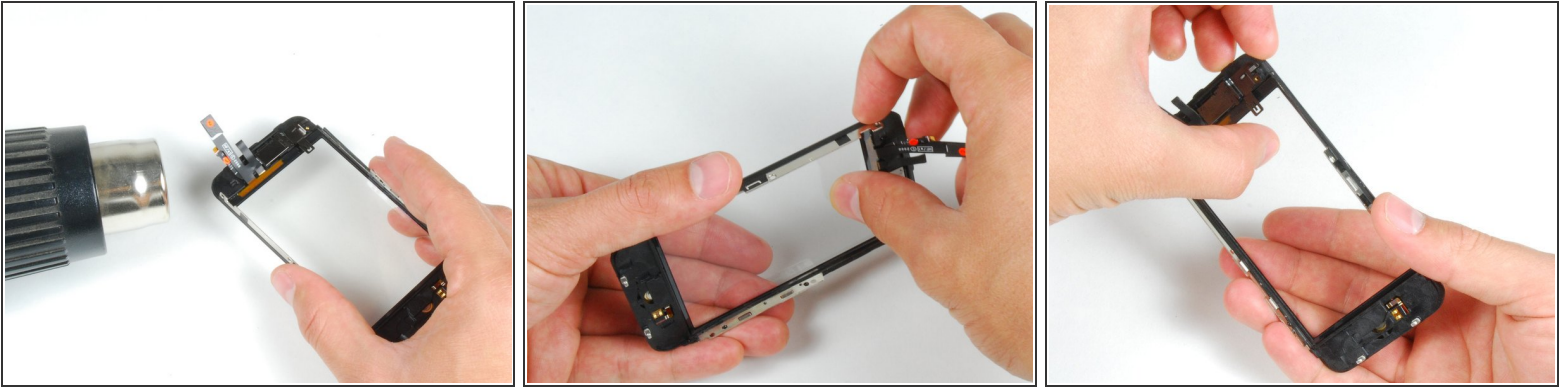
- Separate the LCD and glass by sliding the LCD panel away from the ribbon cables on the glass.

Step 14 — Front Panel



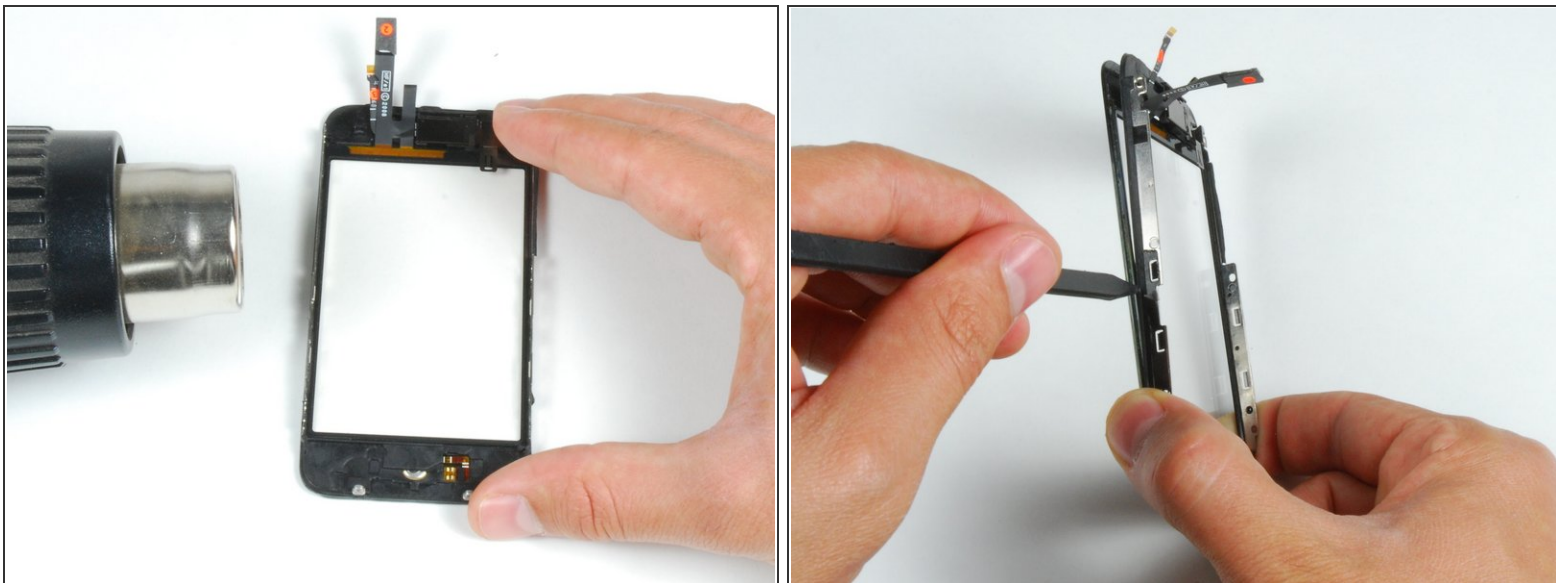
- This is what should be left after removing the LCD.

Step 15



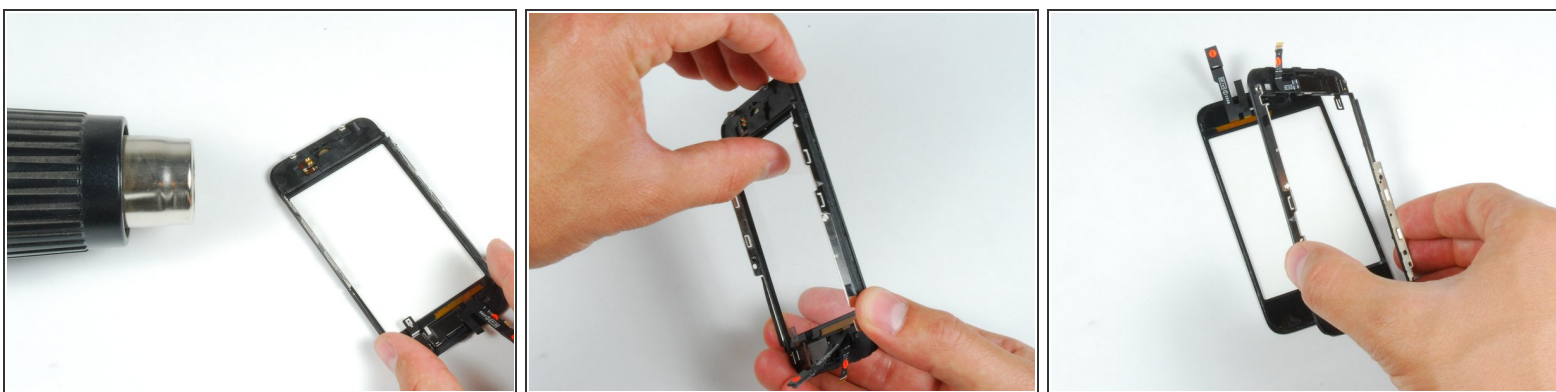
-  Be careful when using a heat gun in the forthcoming steps. Use it at a very low heat setting, and make sure not to melt the touch screen plastics or Home button. The metal frame tends to conduct heat very well so try to avoid touching these hot areas.
- If the glass has shattered at the top or bottom be especially patient and gentle when removing fragments. In extreme cases you may have to pick off any glass shards that remain glued to the plastics.
 - Using a heat gun or hairdryer, heat the top left area of the touch screen.
 - Use your fingernails to slowly lift up the left corner. The touch screen plastics are held to the touch screen with adhesive. It may take some work to free the corners.
-  If it seems like too much force is being applied to lift the touch screen plastics, try using the heat gun again.
- Heat and repeat for the right side.

Step 16



- Once the top is free, use the heat gun to heat the sides of the touch screen.
- Use a spudger to free the sides of the touch screen plastics.

Step 17



- Heat the bottom corners with the heat gun.
- Again, use your fingernails to free the corners.
- Remove the touch screen plastics from the touch screen.

Step 18



- In order to adhere the new panel, peel as much of the existing adhesive off of the front panel frame as you can.
- ⓘ This will ensure a better fit and ensure good attachment of the new adhesive.

Step 19



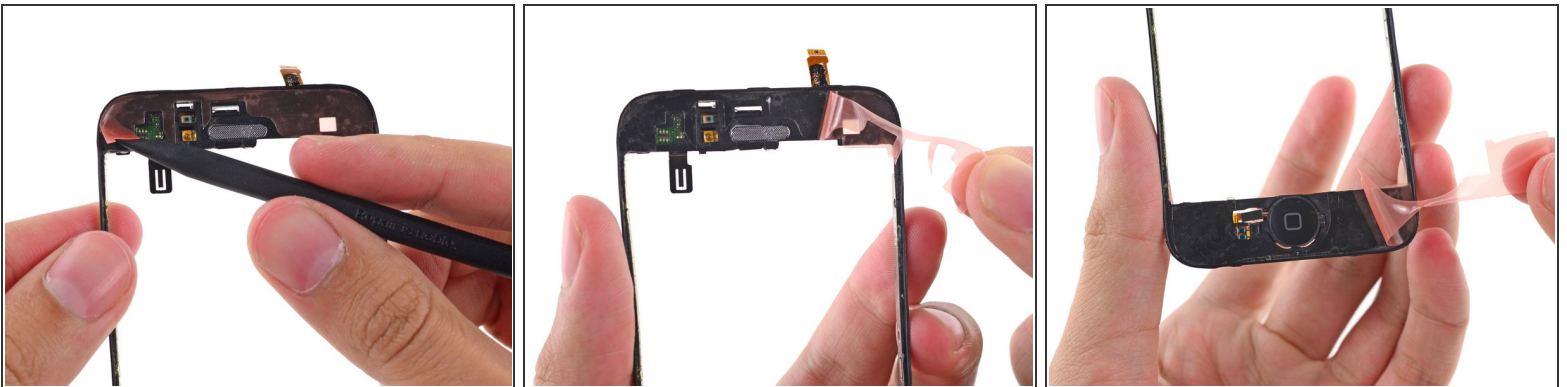
- Place custom fit adhesive strips or double stick tape on the upper area of the front panel plastics.
- Use the flat end of a spudger to press the adhesive strips to the plastic frame.
- ⓘ This will clear out bubbles and ensure good adhesion.

Step 20



- Place the second adhesive strip or double stick tape on the home button end of the front panel frame.
- Run the flat end of a spudger over the strip to stick it down and push bubbles out from under the sticker.

Step 21



- Using the tip of a spudger to start, peel the adhesive backings off of the strips on the front panel plastic.
- i** The adhesive backing is fairly thin, be sure you are only peeling up the backing and not the adhesive itself.

Step 22

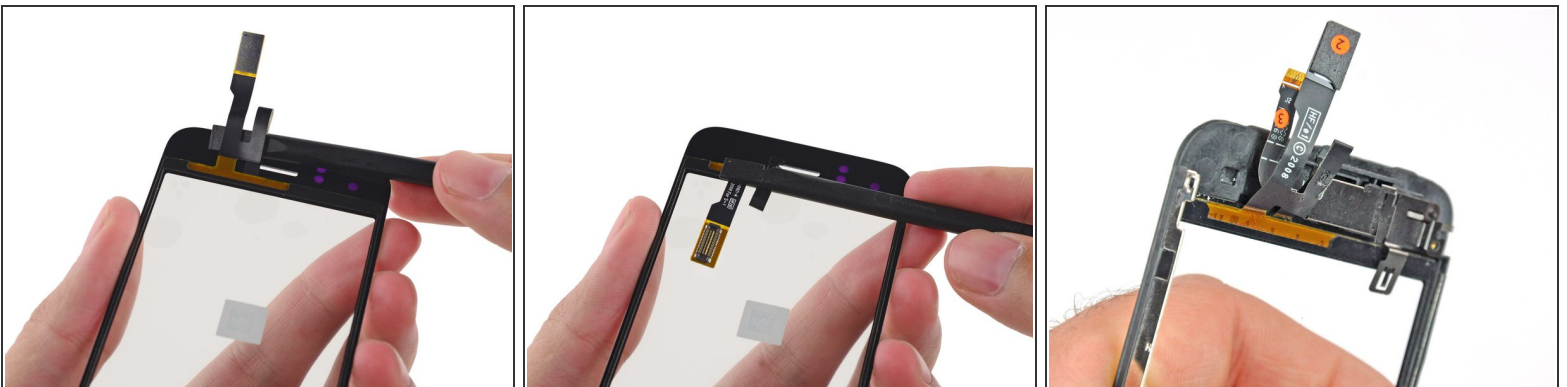


- Peel the protective plastic off of the inside of the front panel glass.

 There are three separate pieces: be sure to peel up the **home button piece**, **center glass piece** and the **piece under the cables**. Failure to peel these up could mean poor adhesion and a murky screen.

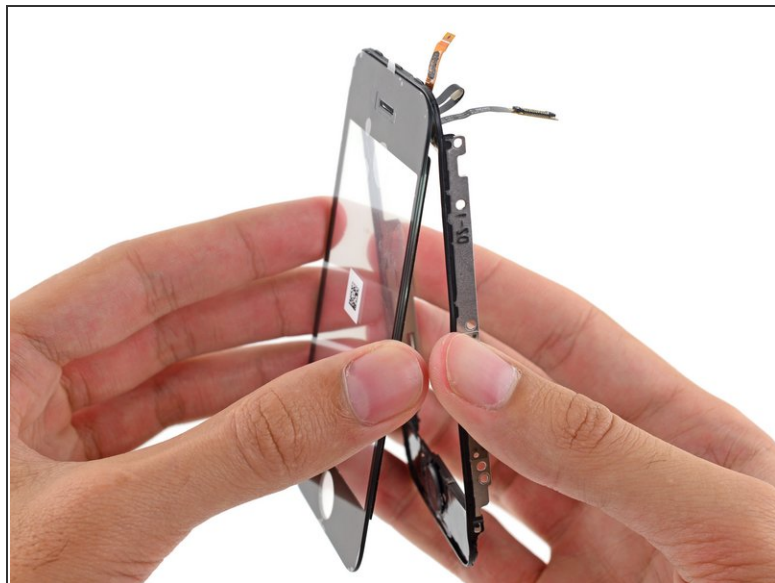
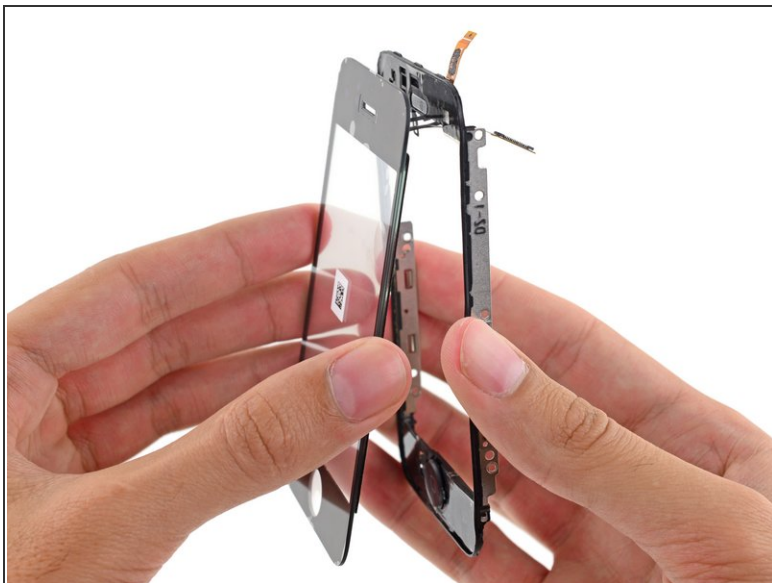
-  Try not to touch the inside of the glass to avoid putting fingerprints between the display glass layers.

Step 23



- Fold the front panel cables down toward the home button recess to get them out of the way.
-  The cable labeled as "#2" should lay as shown when you merge the two pieces of the front panel.

Step 24



- Ensuring that the upper cables are folded clear, align the top of the front glass with the front panel frame.

Step 25



- Press the front panel and front panel frame together, ensuring the the home button ends are aligned.

Step 26



- Firmly press both ends of the phone to ensure the attachment of the adhesive.

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