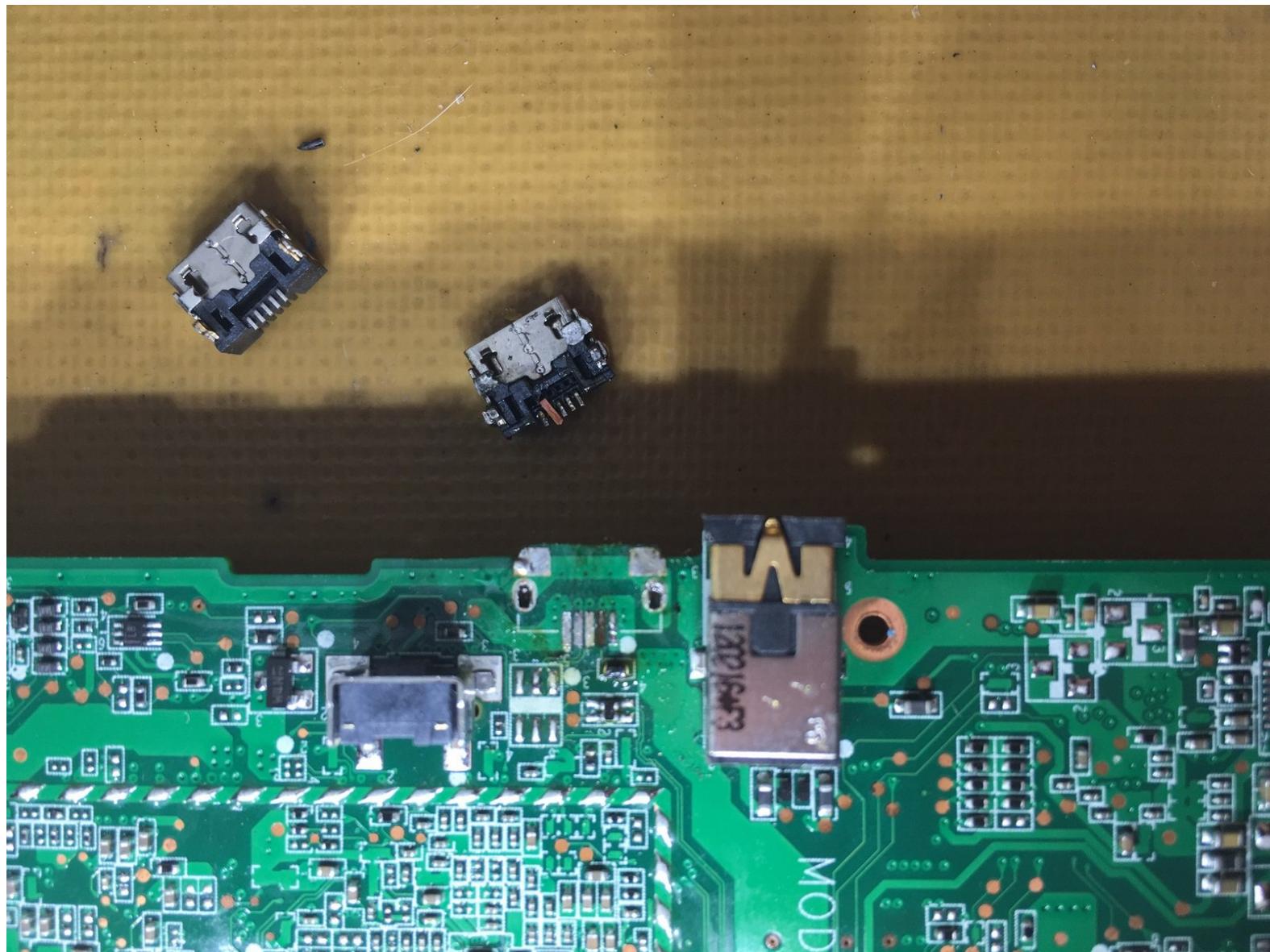




# Tips on How to micro Solder on a budget

Would love to have some of the great equipment iFixit sells but what I have is older equipment and a need to fix a broken trace on a Kindle Fire. These steps can be used on array of problems. BUT REMEMBER, don't try unless your sure of your skills.

Written By: Ken



## INTRODUCTION

Purpose of this guide it to show that in a pinch you can fix some really small problems without lots of money or equipment. But you must have patience.

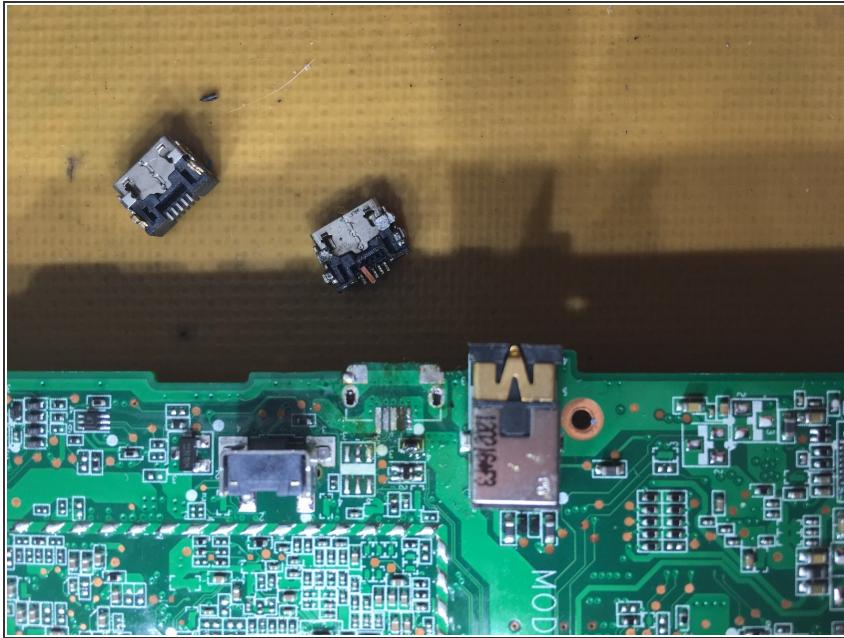
### **TOOLS:**

- Soldering Iron (1)
- Precision Utility Knife (1)
- Tweezers (1)
- Illuminated Magnifier Lamp (1)
- helping hands (1)

### **PARTS:**

- Electrical Tape in 6 Assorted Colors (1)
- Wire of small guage (1)
- Desoldering Braid (1)
- Flux Pen 10ml No Clean (1)
- Solder (1)

## Step 1 — Remove defective part



- Problem was broken power connector on grandsons Kindle. Removed bad connector and broken trace came up with part. New connector also shown.
- I used a soldering iron with a 700 degree tip and de-solder braid to remove defective part. Hot air gun would have been a better option but I didn't have one.
- Note: enlarge image to zoom in to see fine detail. Also how I checked work

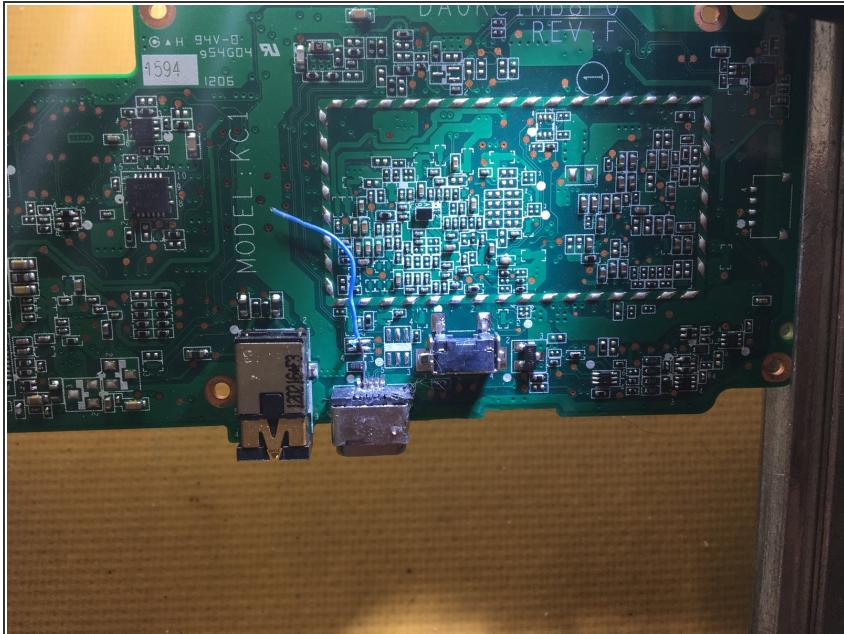
## Step 2 — Prep for repair



- After cleaning up the board and reseating new socket I simply resoldered in place. Now with the new socket installed, I needed to connect the unsoldered lead to the data port on board.
-  To find where the trace/lead went to I went to the Internet to find where it connected. I found many usable images to determine the path.

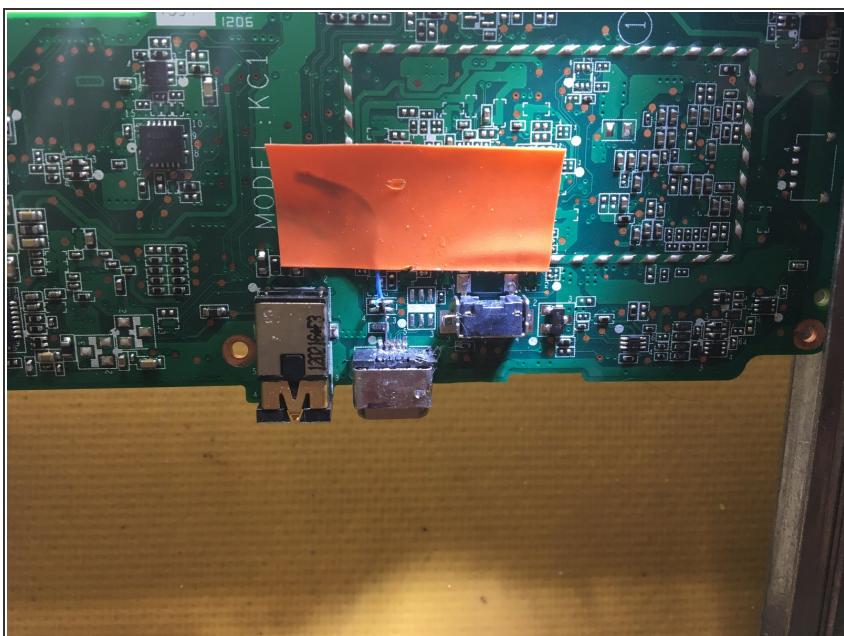
- To remove the coating on the board where I needed to solder , I scrapped away the coating with an Xacto knife.

## Step 3 — Prep to solder



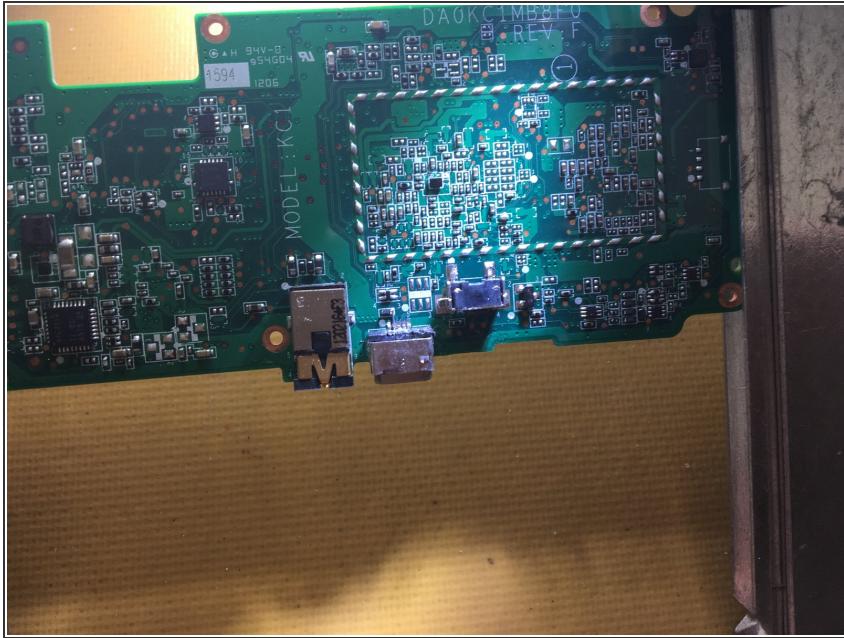
- Stripping and tinning a piece of 60mm wire I layed it in the path where I needed to attach. I bent the wire to give better leverage.

## Step 4 — Secure wire for soldering



- Putting a piece of electrical tape over a bent wire kept it in place

## Step 5 — Trim to fit



- Using a fine tip on my iron , I again used a 700 degree tip , dabbed the area with liquid flux and soldered the wire to the lead and exposed trace.
- When done I removed tape, cleaned flux off and trimmed wire to length.
- Please Note: you must have a steady grip on your iron to attach the wire. By using a long wire, you make it easier to keep it in place as you solder and it's so thin you can remove the excess wire with little stress to the repair.

## Step 6 — Size reference



- The repair was the size of the wire next to the finger posted here

## Step 7 — Seeing up close



- Not very high tech, but it got me through this without a proper scope. In this image I was verifying I didn't have any solder bridges on socket.
- When everything was cleaned back up I put the Kindle back together and it charges and plays like it should.
- When I was done soldering I used my iPad Pro 9.7 to take hi resolution image that I could view and blowup to ensure the repair was intact and clean

using this technique, you can get yourself out of a pinch by repairing an item half the length of rice ,and half as thick.