



How To Fix iPhone X Keeps Restarting - Motherboard Repair

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Written By: Phryne



INTRODUCTION

Unique design and structure of its motherboard have made any repairs to the iPhone X far more difficult than previous series. With our repair case today, abnormal boot current of the upper layer indicates that the fault is probably caused by USB IC. We can fix the keep restarting issue by USB IC replacing and motherboard re-soldering.



TOOLS:

- [3 in 1 Rework Station](#) (1)
 - [Heating Platform](#) (1)
 - [Electron Microscope](#) (1)
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Step 1 — Test



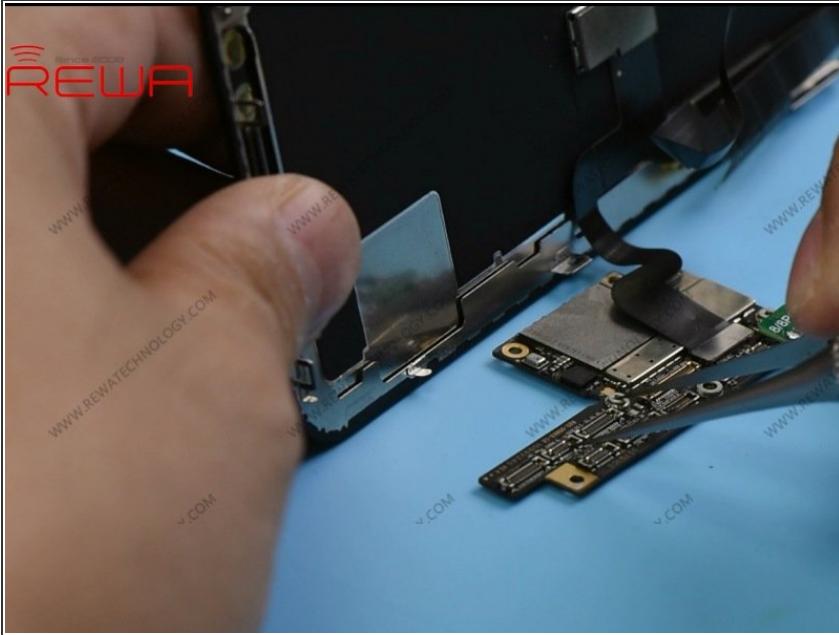
- Press the power button. Apple Logo appears on the screen. The phone keeps restarting afterwards.
- ❗ Motherboard of iPhone X is folded in half and soldered together. With the upper layer mainly responsible for turning on task, the lower layer mainly features baseband RF circuit.
- Judging by this, the fault might be related to the upper layer of the double-stacked motherboard.

Step 2 — Motherboard Separating



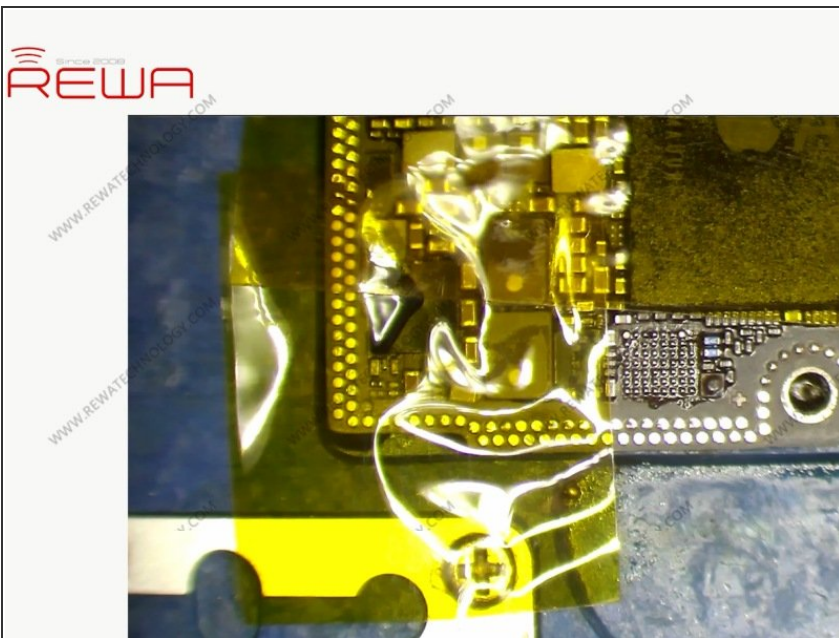
- Place the motherboard on iPhone X motherboard specialized heating platform and heat for several minutes.
- Remove the upper layer with Sculpture Knife and tweezers. Then clean the third space PCB.

Step 3 — Diagnosis



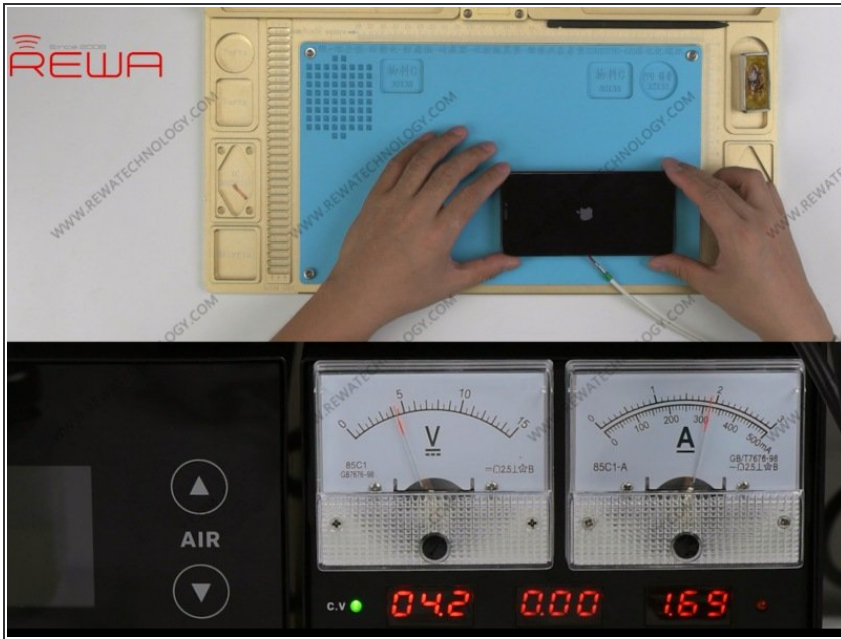
- Connect the upper layer with display assembly and measure the boot current again.
- Judging by the current reading, the fault is probably related to USB IC U6300.

Step 4 — Troubleshooting



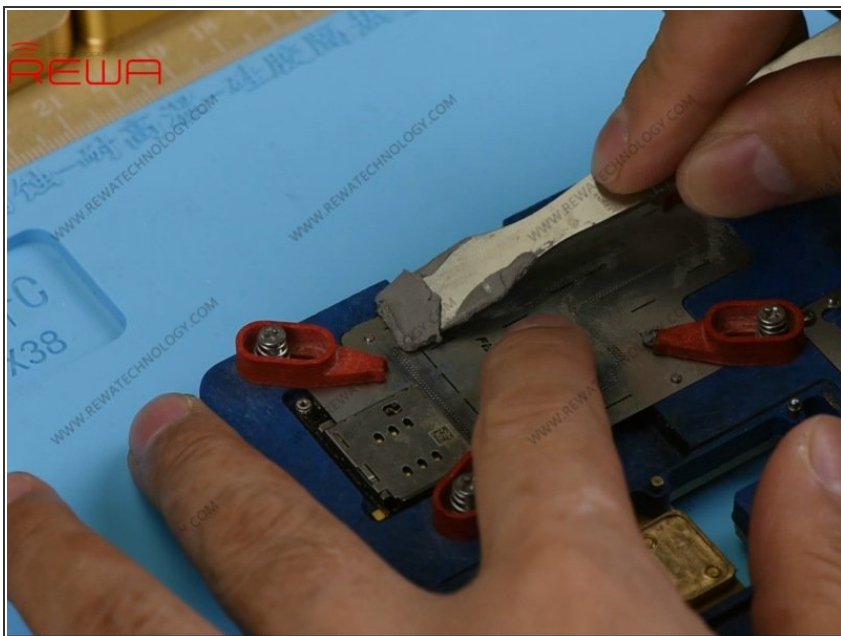
- Let's replace with a new USB IC and see how it works.
- Attach the upper layer to PCB Holder. Detach the USB IC from the upper layer with Hot Air Gun.
- We find that the USB IC has been replaced before. What's more, two empty pads have gone missing.
- Solder a new USB IC with hot air gun.

Step 5



- Again, let's measure boot current of the upper layer.
- Current reading on the ammeter is normal this time. The phone can get access to the home screen normally.

Step 6 — Motherboard Recombining



- Next thing we do is to solder the two layers together.
- Reball the lower layer first. Then attach the lower layer to the heating platform.
- Apply some BGA Paste Flux to the third space PCB and get the upper layer in position.
- Once the two layers have been soldered together, wait for the double-stacked motherboard to cool for 15 minutes.

Step 7 — Reassemble And Test



- Now we can assemble the phone and test. Press the power button. The phone turns on normally.

Step 8 — Video Guide



- What can we learn from abnormal boot current of the upper layer? Check out the video now!
- Credit: [REWA Technology](#)

Also, for repair technicians, it's important for you to understand [how iPhone boot circuit works](#) before starting your repair work.

