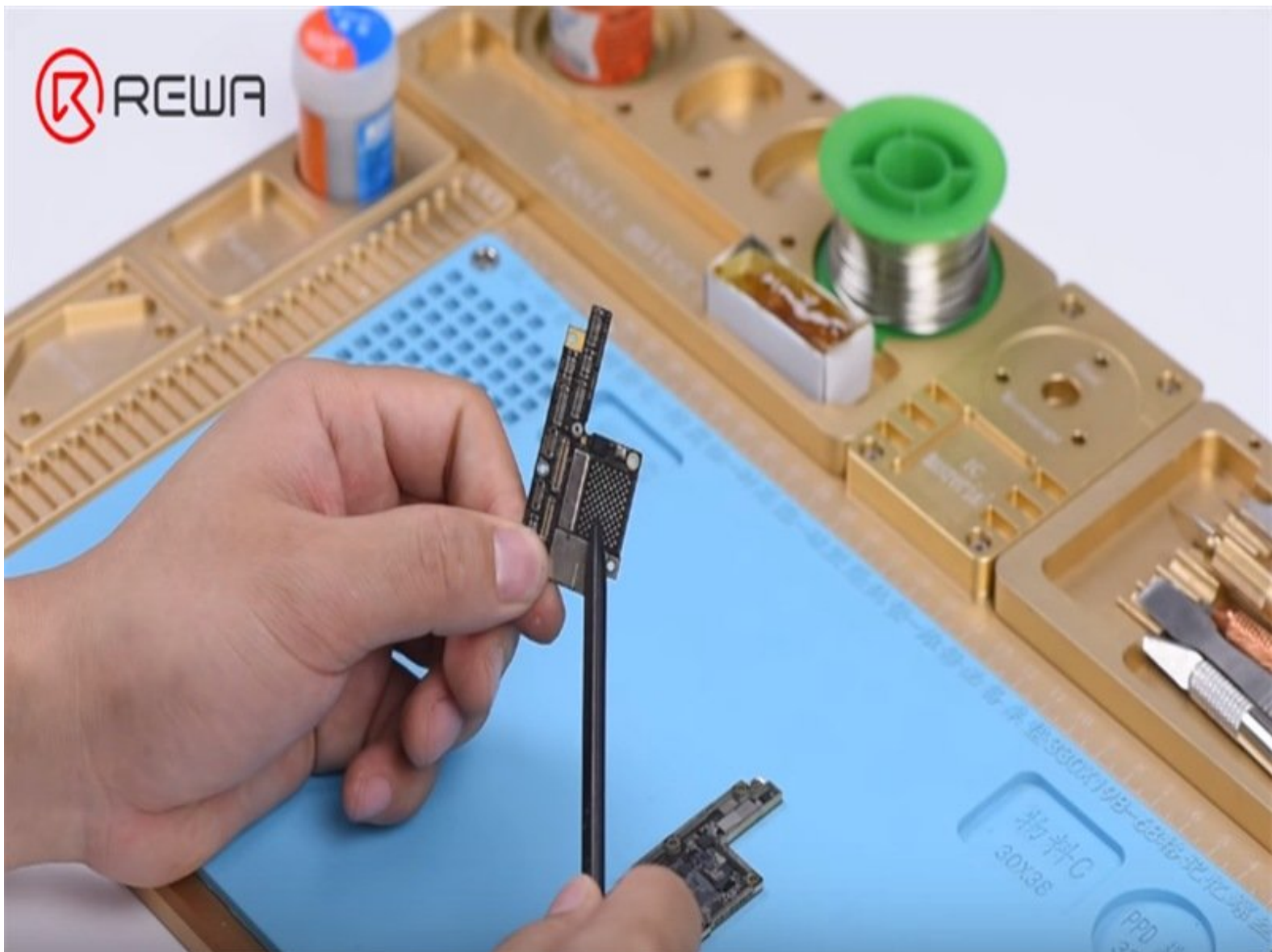




# iPhone X Board Swap Detailed Tutorial

How To Fix iPhone X Won't Turn On By Board Swap. iPhone X Board Swap Detailed Tutorial.

Written By: Phryne



---

## INTRODUCTION

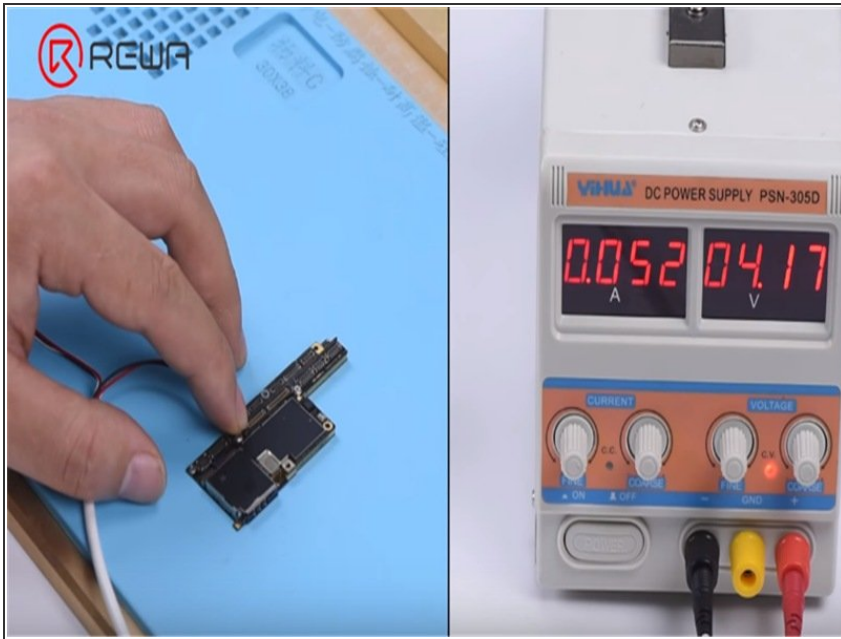
This is a real-life repair case from REWA chip-level motherboard repair service. The iPhone X motherboard was severely damaged with a hole in the upper layer during the reassembling process, resulted in an iPhone X won't turn on issue. Follow our guidance in the guide today and learn how to diagnose and troubleshoot the double-stacked motherboard step by step.



### TOOLS:

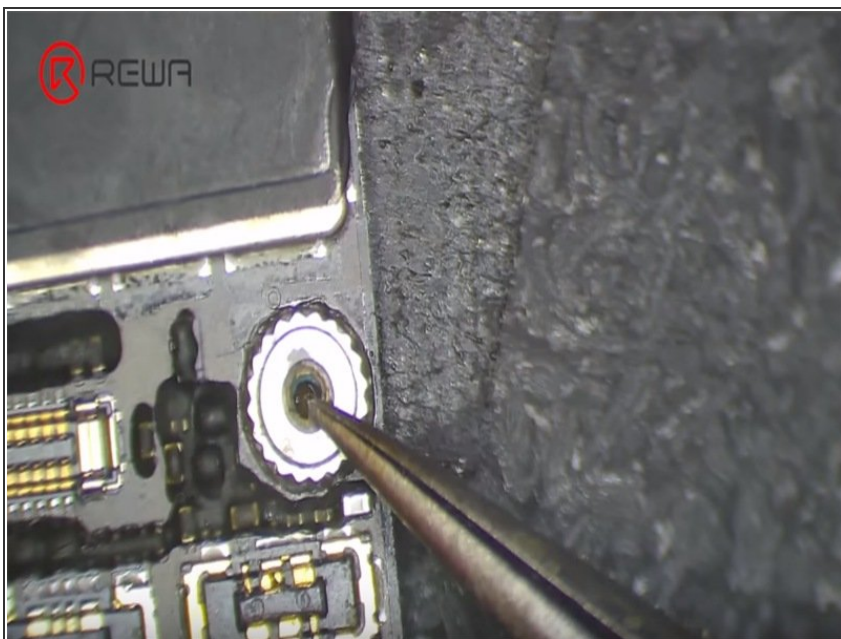
- [Heating Platform](#) (1)
  - [PCB Holder](#) (1)
-

## Step 1 — Diagnosing



- Connect the battery connector with the DC Power Supply. The boot current reading is larger than normal value.
- Run diode mode measurement of the battery connector. The measured value of Pin 1 is 11, which is abnormal. The measured value of Pin 35 of the display connector J5700 is also abnormal.
- We can confirm now that the main power supply circuits of the motherboard have shorted or the motherboard is leaking electricity.

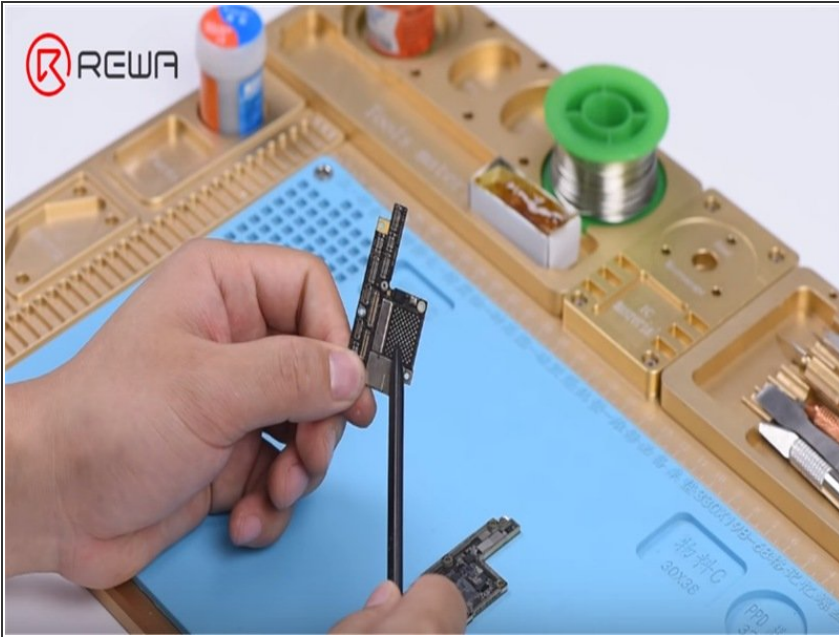
## Step 2 — Troubleshooting



- Next, we need to separate the motherboard to confirm whether the fault is related to the upper layer or the lower layer.
- Check the upper layer under the microscope. We can see clearly that the charging IC U3300 is damaged.
- Remove the charging IC. We can see that the PCB has also been severely damaged. There is a large hole in the upper layer.

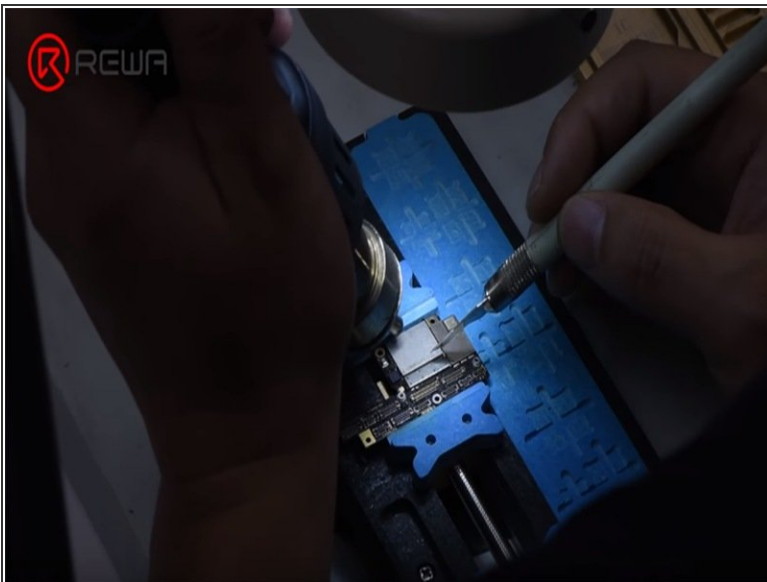


## Step 3 — Troubleshooting



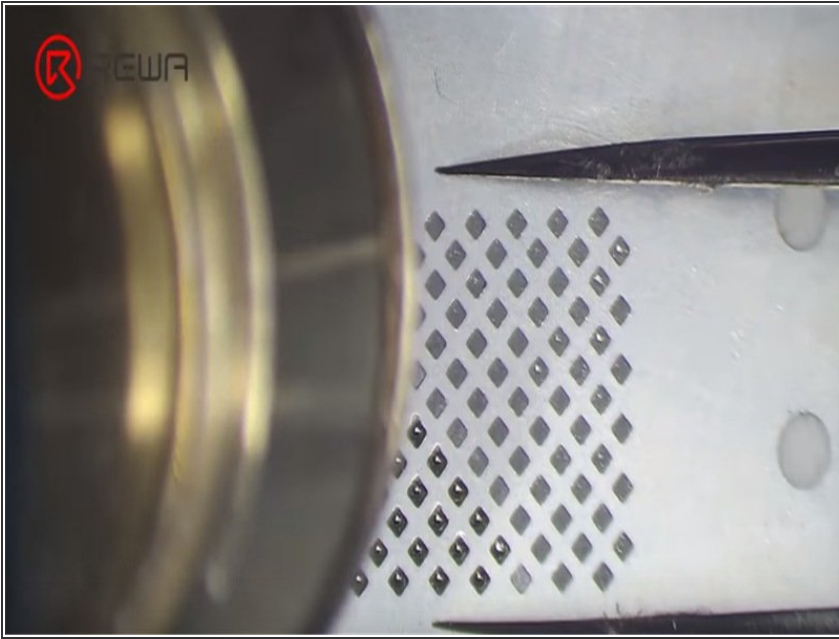
- The upper layer has been badly damaged and cannot be repaired anymore. We need to transplant CPU, EEPROM, and NAND on the upper layer onto a new upper layer.
- ① Here we recommend using a specialized upper layer with CPU, EEPROM, and NAND previously removed.

## Step 4 — iPhone X Board Swap



- Remove NAND first, then CPU, and then EEPROM.
- Once done, clean CPU, then NAND, and then EEPROM.

## Step 5 — iPhone X Board Swap



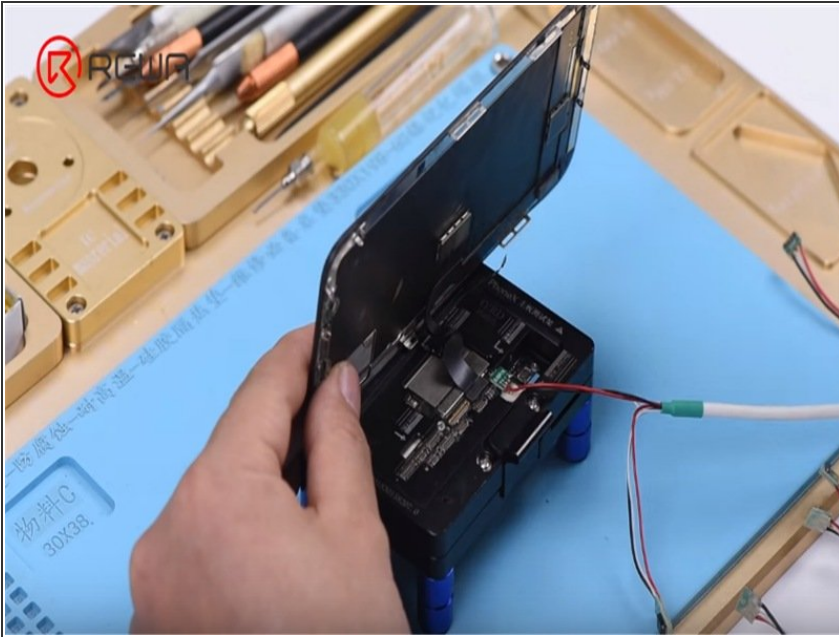
- Now we need to reball CPU, NAND, and EEPROM one by one.
- Once done, clean corresponding bonding pads on the new upper layer.

## Step 6 — iPhone X Board Swap



- Now we need to solder the reballing finished CPU, EEPROM and NAND to the new upper layer one by one.

## Step 7 — Motherboard Test



- Attach the upper layer and the lower layer to the Test Fixture. Connect the upper layer and the lower layer with the display assembly.
- Connect the battery connector with the DC Power Supply. Get the motherboard powered on with tweezers. The phone turns on normally and can get access to the home screen.

## Step 8 — Motherboard Recombining



- Next thing we do is to solder the two layers together. First, we need to reball the lower layer.
- Continue to apply some BGA paste flux to the third space PCB. Get the upper layer in position. Turn on the power switch of the heating platform.



## Step 9 — Reassemble And Test



- Now we can assemble the phone and test.
- iPhone board swap can be difficult if one is not familiar with these steps. Make sure you follow our [video](#) guide step by step and be patient during the operation.
- Credit: [REWA Technology](#)