Reverse Engineering

8310G, Crosswind Eaglebots. Collierville, Tennessee

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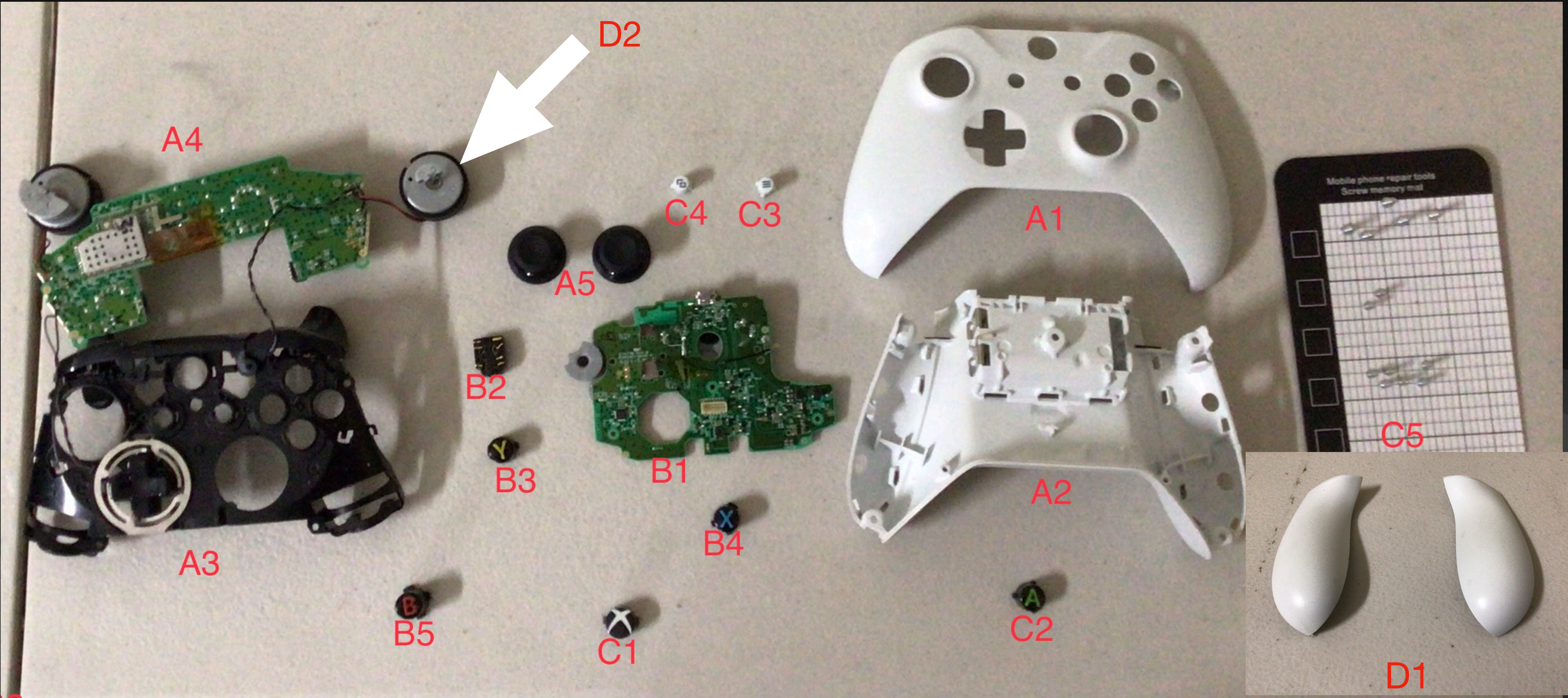# Table of Contents

Sites which were used

- acidmods.com

- resources.pcb.cadence.com

- https://.youtu.be/Ry2s1i5bkYk

Our team decided to dissemble

A broken Xbox series one, model 1708 controller

D2

A4

C4   C3

A1

A5

B2

C5

B1

B3

A2

B4

A3

B5

C2

C1

D1

* Micro controller unit

**the place where your headphones / headset are connected

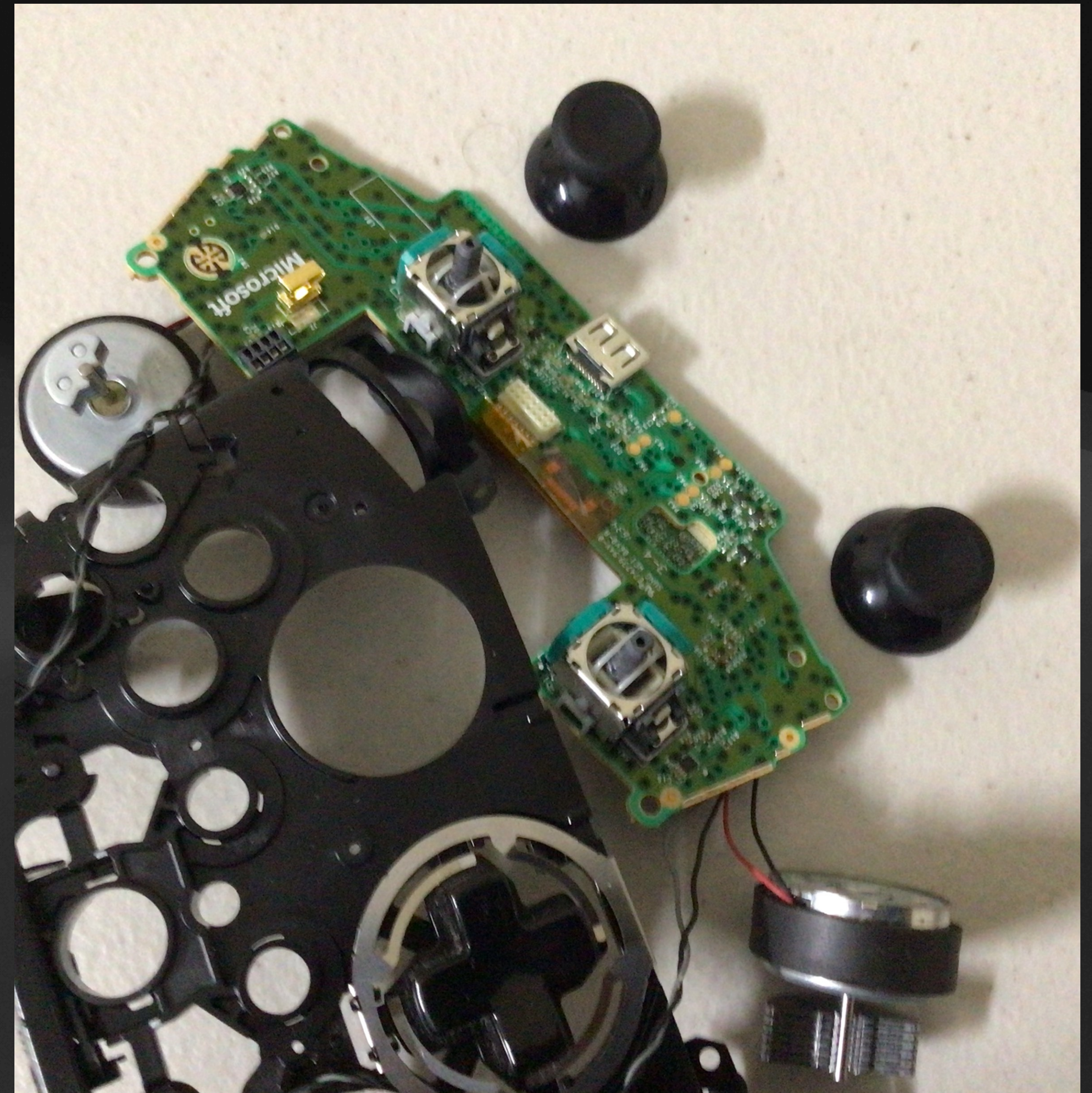|				
A1- front panel	A4- 1708 *MCU board bottom	B2- **audio jack	B5- B button	C3 - menu button	D1- controller grips
A2- back panel	A5- joysticks	B3- Y button	C1 - power button	C4-quick settings	D2- motors
A3- plastic internal frame	B1- 1708 button power board, bottom	B4- X button	C2- A. button	C5-13 screws	

The joystick is broken

And we have to fix it

Problem & Solution

- **The Problem** was that the joystick was turning 360° from the bottom not from the top and it would wiggle. **The Solution** was to open it up and push it in when you see the internal plastic frame. Then we pushed it in and the controller was fixed.

the picture is on the standard buttons on the Xbox series one controller . The arrow pointing is an audio jack.

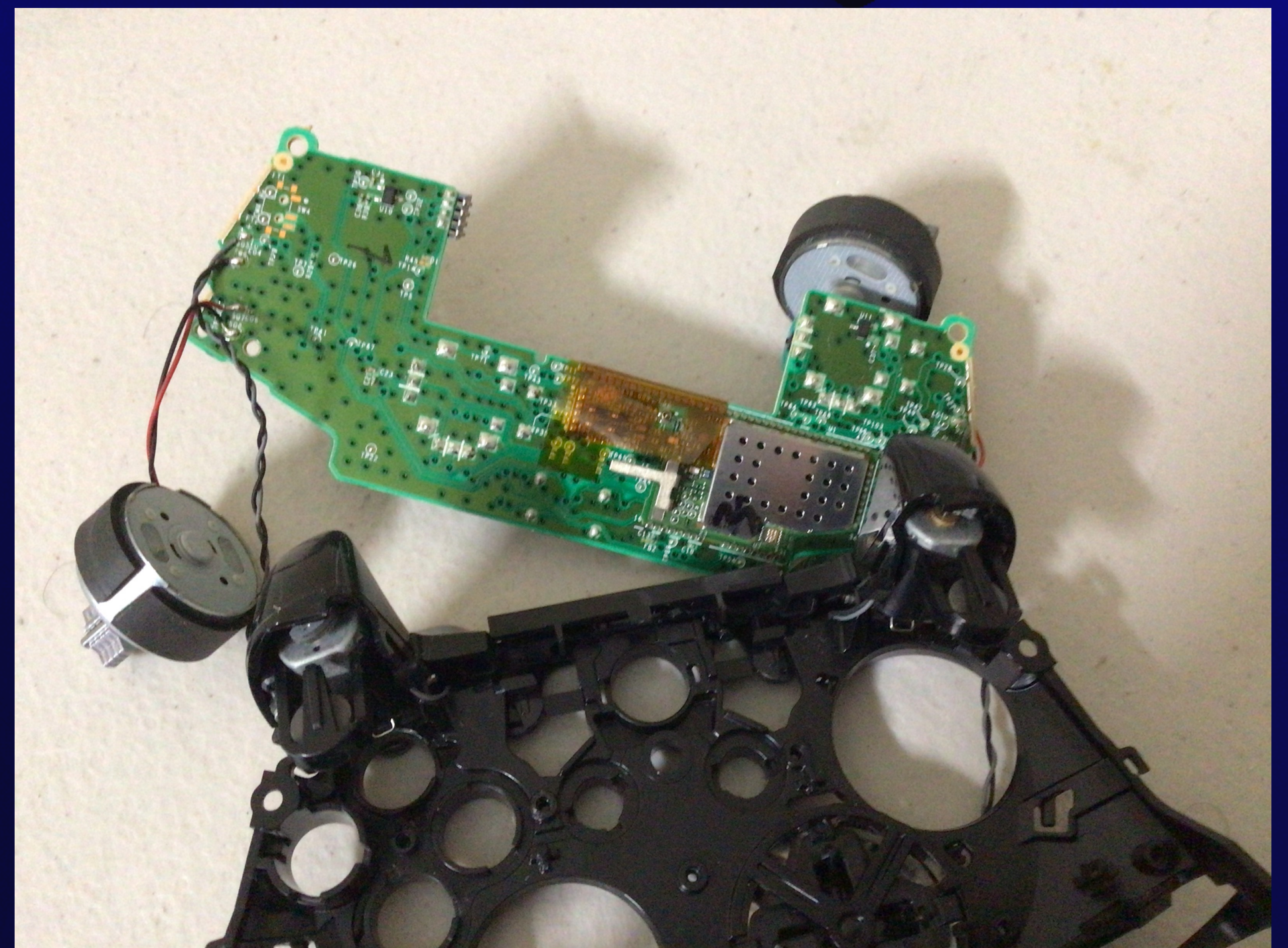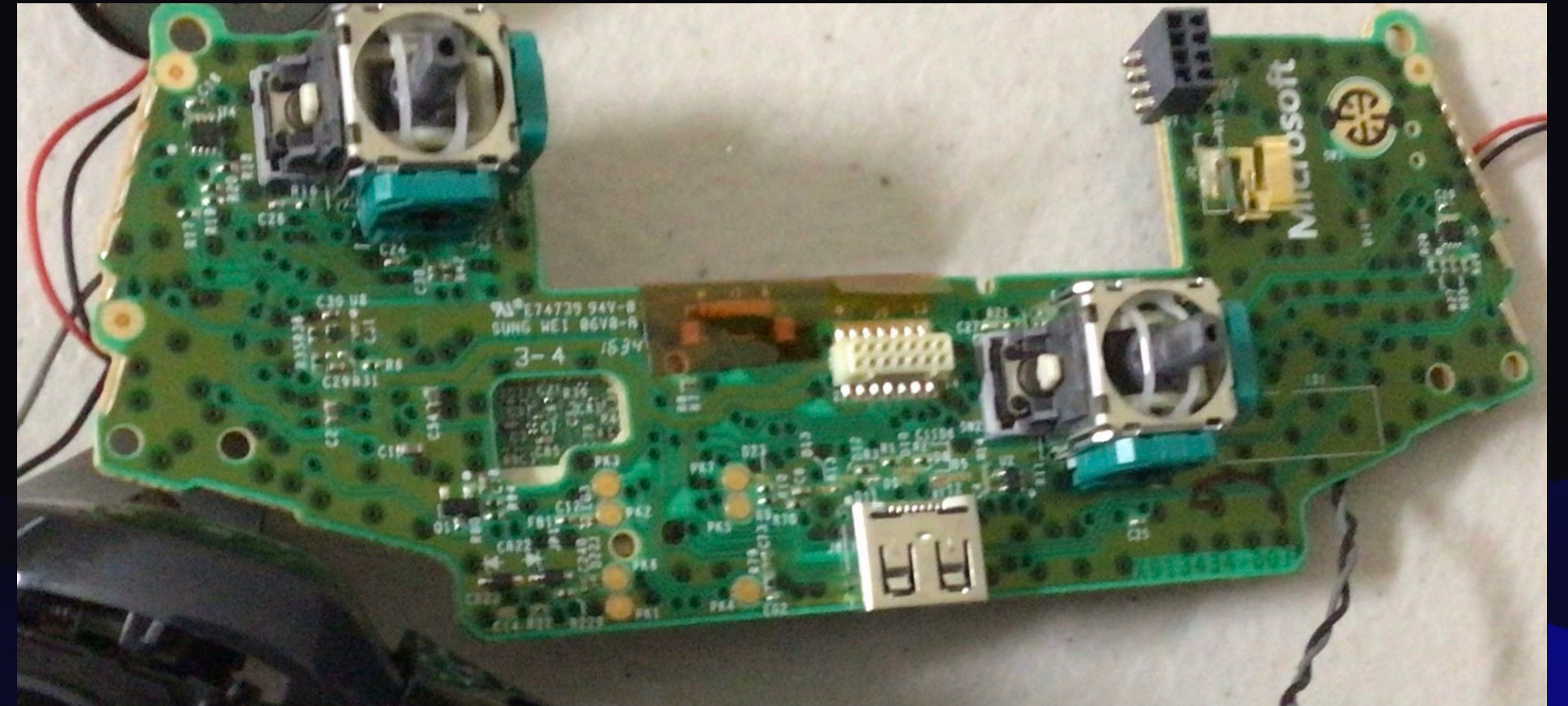This picture shows the the parts of the plastic internal frame took apart

This picture shows the back of the plastic internal frame.

This is the front piece and the back piece the back piece holds the batteries the front holds the buttons which are in the picture above this one.

What does MCU mean?

- An MCU is an intelligent semiconductor IC that consists of a processor unit, memory modules, communication interfaces and peripherals. The MCU is used across a broad range of applications, including washing machines, robots, drones, radio and **video game controller's**

Summary

Introduction
Controllers have been substantially used for Xbox, PlayStation, Nintendo, drones, remote control cars, and Vex IQ and countless more. This all proves that controllers are commonly used entity in technology.

Experience
During this experience me and my team had fun opening up the controller we found many different parts of which we were curious, one of the parts was the MCU board which was very fascinating. We found out what MCU means. Are team also felt taking a controller apart was very appealing and enjoyable.

Conclusion

We learned about what is an MCU is and where it is, we also discovered where the motherboard was, we learned about what each pieces purpose is. Finding the solution to the problem was a simple fix compared to what other countless problems could have happened. Overall I must say this was a very enjoying project for me and my team we had troubles along the way as not having correct pieces, not finding info on Google, and having troubles put the controller back apart , but we all learned something new.