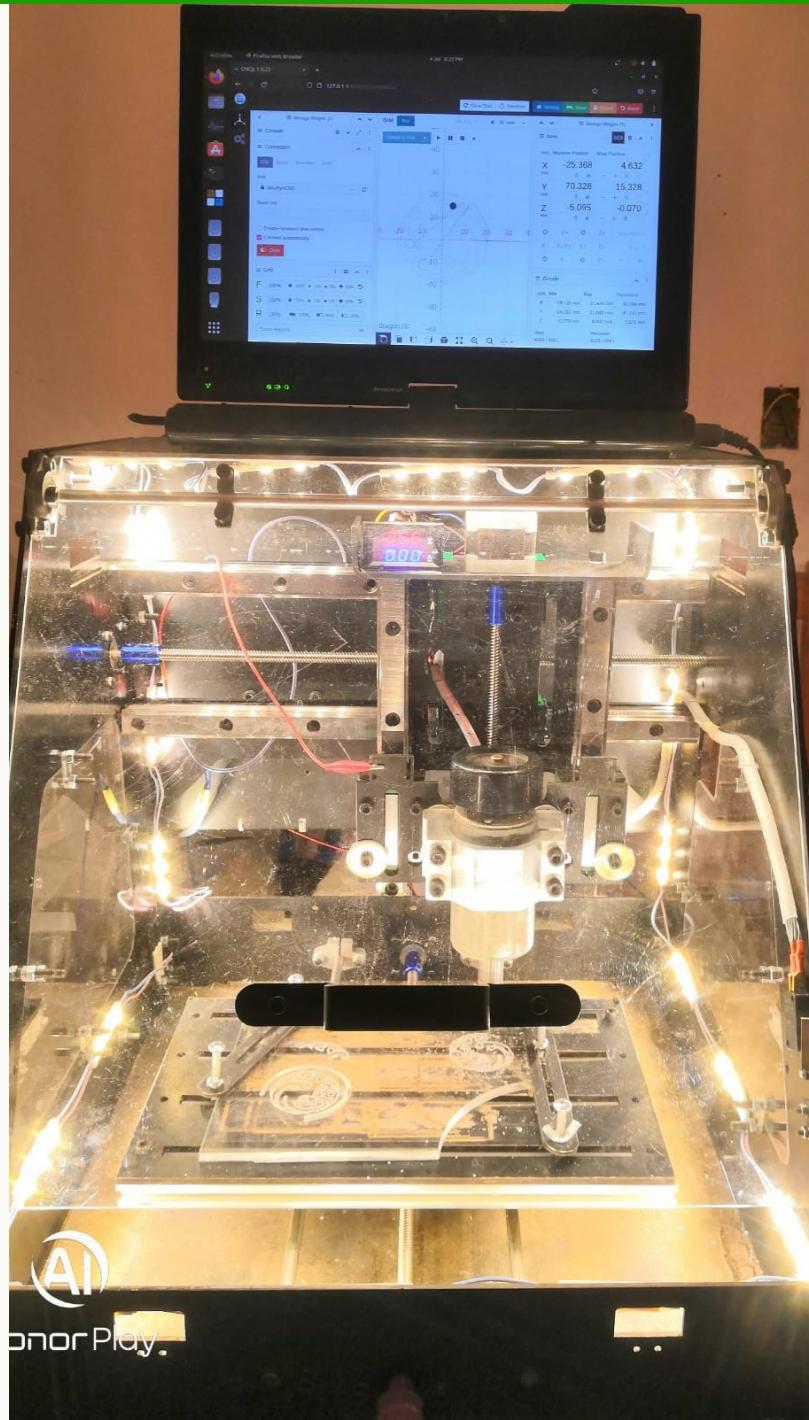


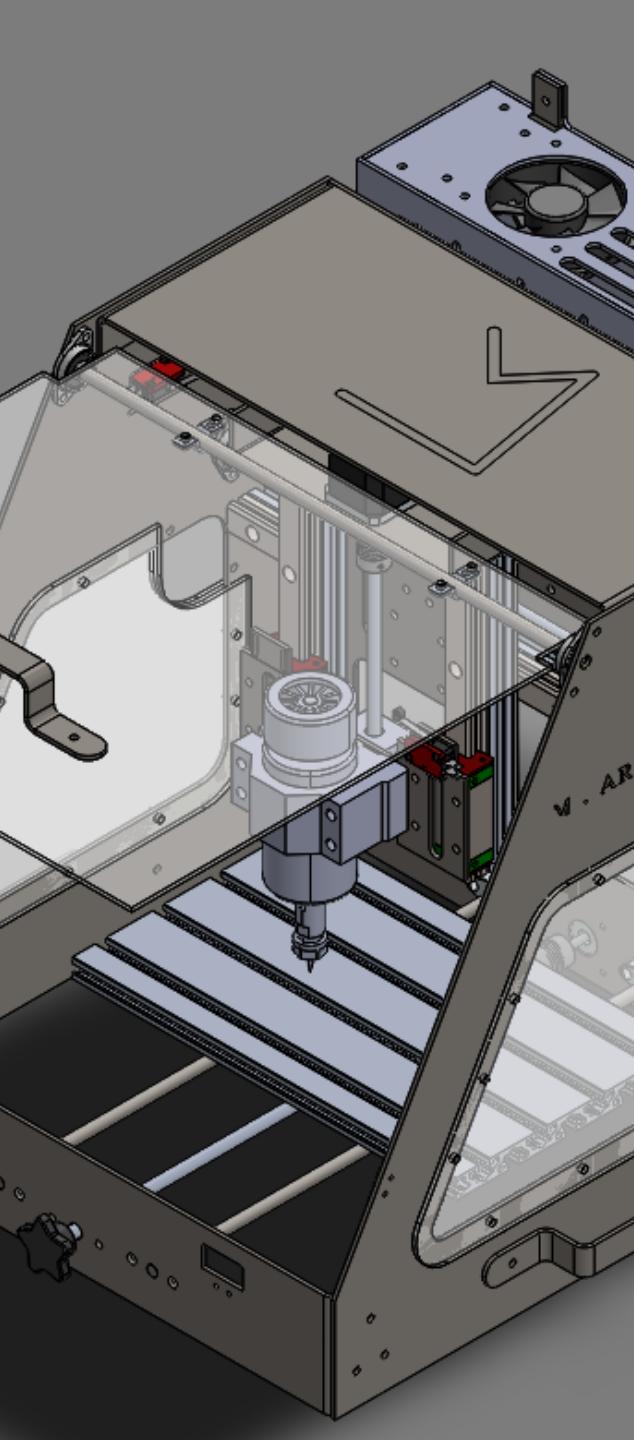
3-Axes CNC

Specially made for PCBs

- Supervised By:
Asst. Prof. Omar.M.Shehata

- Team:
Mohamed Hassan , Mohamed Sayed
Mohamed Khaled ,Fared Amr ,
Ahmed Maher, Ahmed Mohamed ,
Mohamed Hesham



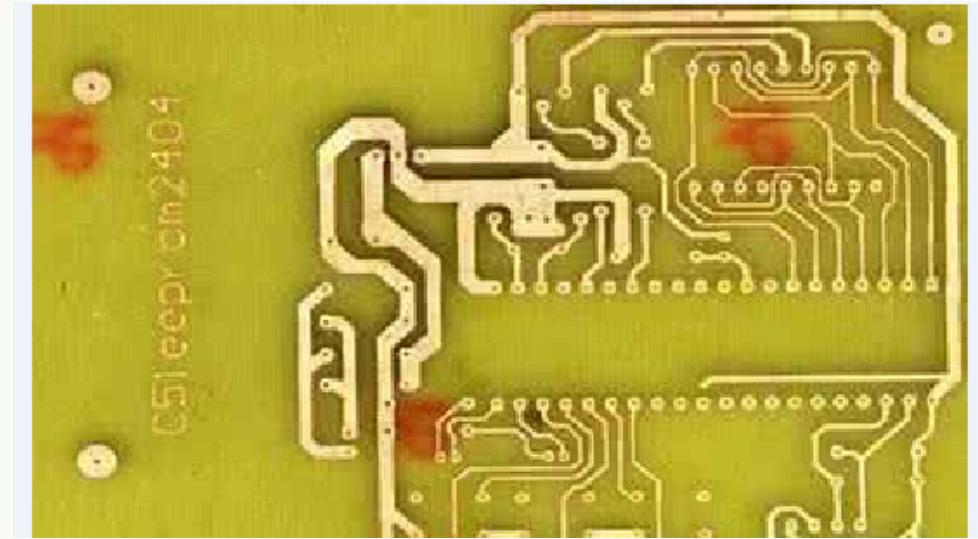
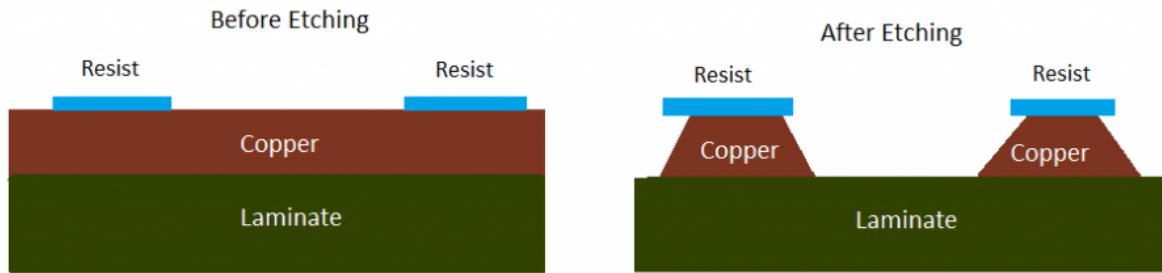


Presentation Layout :

- 1 Goal of this Project
- 2 Considerations
- 3 Mechanical Parts
- 4 Electrical Parts
- 5 Firmware / Control
- 6 Problem we faced
- 7 Safety

Goal of this project

- -To make it easy and quick to make a PCB without Using etching method



Considerations

1 Compact Size

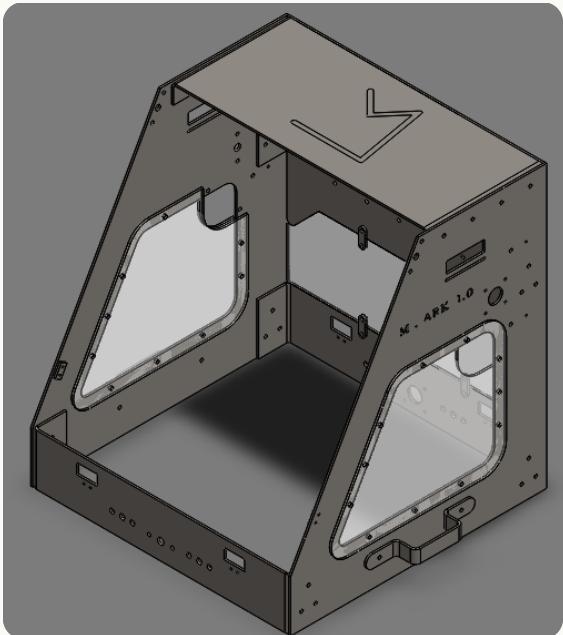
2 Easy to operate

3 Power Saving

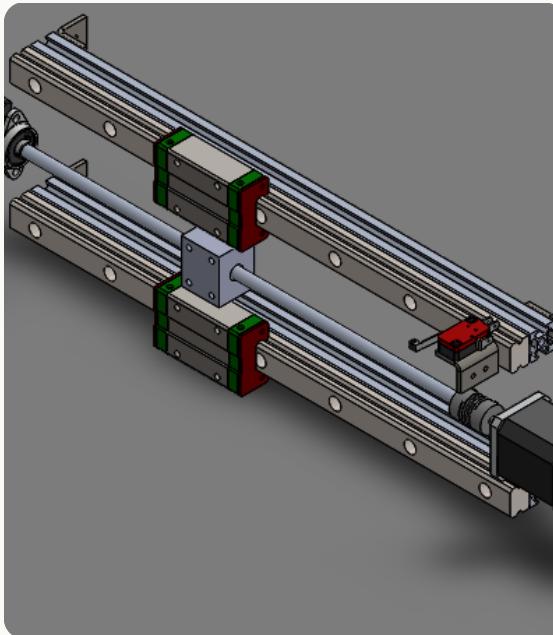
4 Working Area

5 Safety

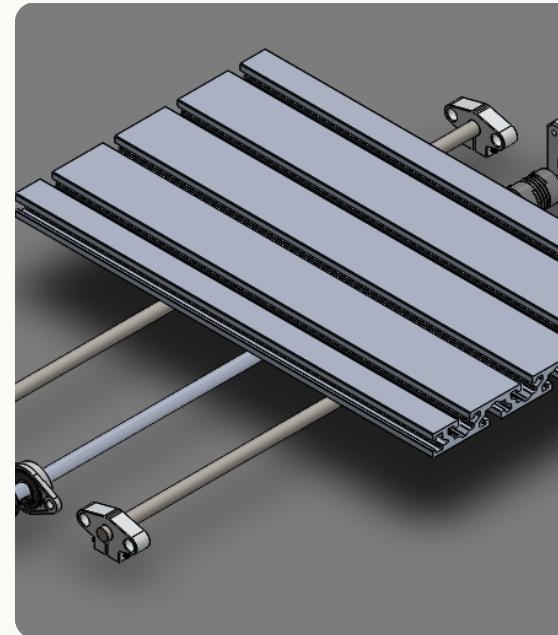
Main Mechanical Parts



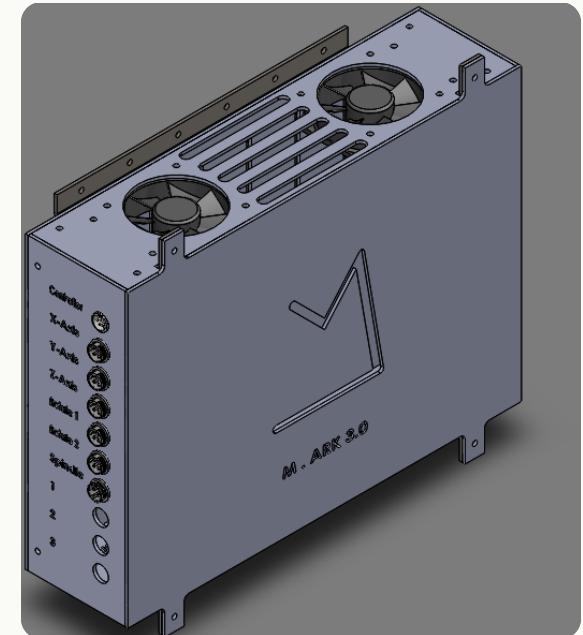
1/ Main Frame



2/ X & Z Axis Mechanism



3/ Y Axis Mechanism



4/ Control Unit

Main Electrical Components

(Motors)



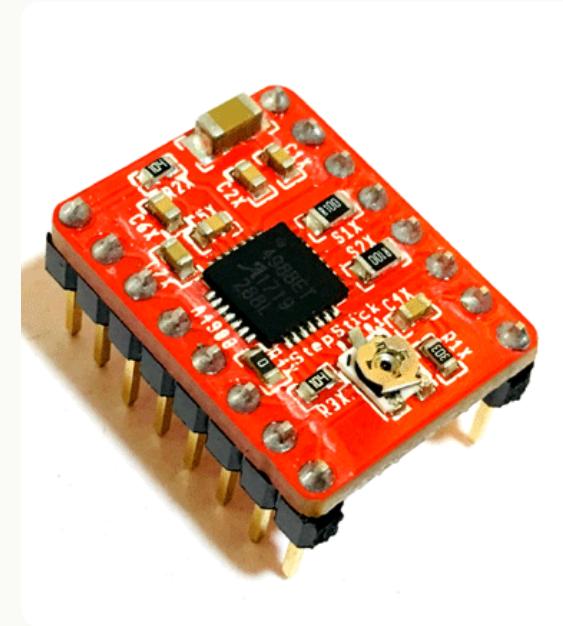
1/ Power Supplies



2/ Nema 17 Stepper Motor



3/ Spindle



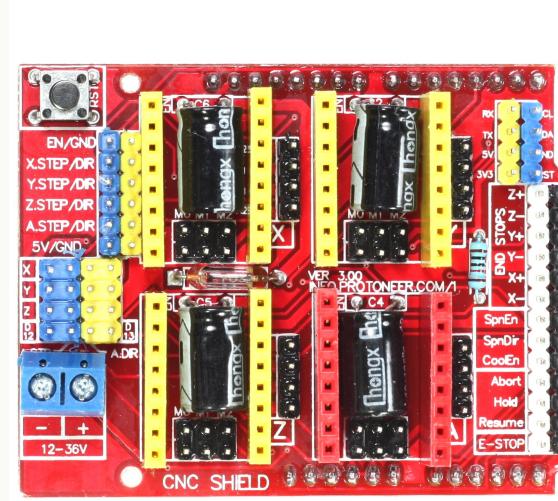
4/ A4988 Stepper Motor Driver

Main Electrical Components

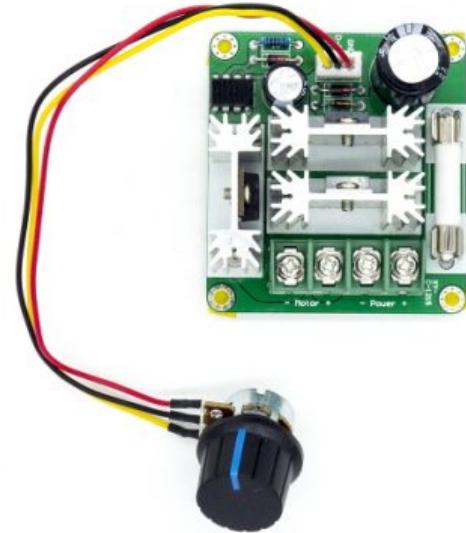
(Control)



5/ Controller



6/ CNC Shield



7/ Speed Controller



8/ Mini digital
Voltmeter and Ammeter



Firmware

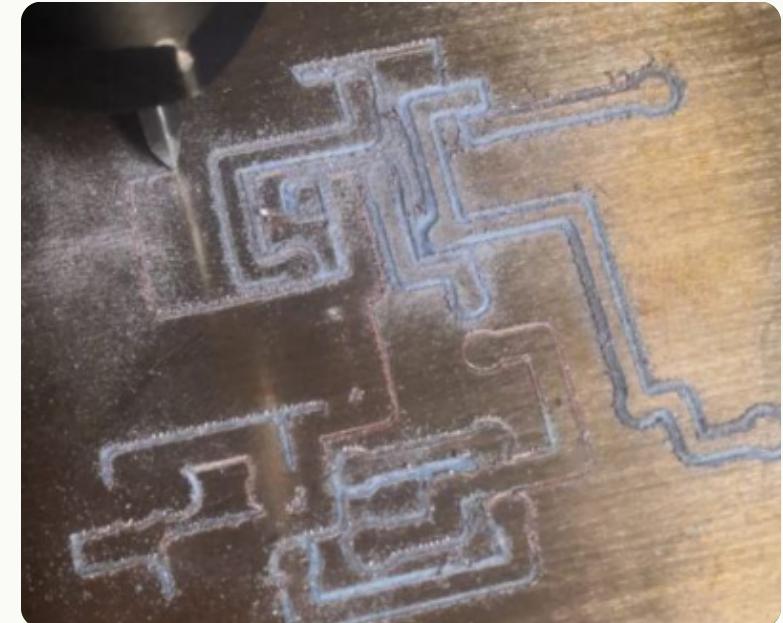
Problems We have Faced



1/ Distortions in circles or curves



2/ Loud noises and vibrations from stepper motors



3/ Depth Problems

Safety

1 E-Stop Switch

2 Safety Acrylic Door

3 Door Safety Switch

Thank You