Mach3 Software Screenshot

How does thing work???
MAGIC! No, actually it uses platforms connected to drawer slides to allow for lateral movements. These movements are controlled by NEMA17 stepper motors that rotate a threaded rod that each platform is connected to. Each stepper motor controls a single axis of the machine. The machine uses a T6560 4-Axis Stepper Motor Driver board to connect to each stepper motor and the driver board is controlled by a computer that is running Mach3, a CNC controller software. This allows the axis to move together in order to make shapes over the material that the machine is drilling or printing filament onto.

Who We Are

About Us
Do you need to be able to mill out an object or 3D print an object using a 3D printer? Get in touch with us and we can hook you up!

Contact Us

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3D C&P MACHINE MK. I

NET 499 – Capstone
Bryan Roark
Does it print.... In 3D?!??!

YES! Or at least, it will. The 3D printing aspect is well underway and nearing completion. One this is complete, it will be able to print with the following specifications:

- 1.75mm PLA and ABS filament
- Down to 0.2mm accuracy
- Approximately 13"x14"x7" (lxwxh) print area

Future Work

- Enclosure to house all the electronics directly to machine
- Perhaps a fully metal rebuild using a similar, yet using slightly more accurate measurements, design.
- Controlling the CNC router/dremel with Mach3.
- Adding the 3D printer heat bed with an onboard temperature controller.
- Add quick connects/disconnects for the NEMA17 motors for quick setup/teardown.

“Working hard is important. But there is something that matters even more: Believe in yourself.”

-Harry Potter

So what about CNC???

Performing cuts using a Dremel tool or similar routing tool is also possible with this machine. The routing device is currently a standalone device from the machine as it is not controlled by the machine. This functionality may be implemented in the future however!

Cutting has currently only been performed on wooden materials; however, this machine could potentially be used for cutting other materials such as metal and plastics!