



MasterPrint3D & Print Head Quick Start For DeskCNC

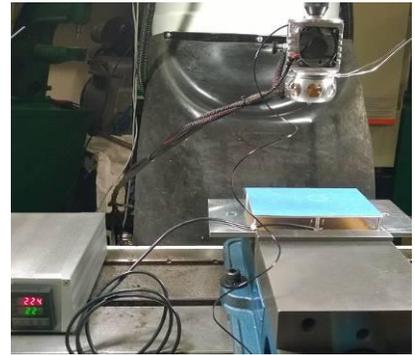
The Quick Start guide is a walk through of the basic functionality required to create a 3D printed object in as little time as possible after MasterPrint3D and the Print Head have been installed. Complete instructions, safety and warning information can be found in the User Manual. **MAKE SURE THE SPINDLE FOR THE MACHINE IS TURNED OFF DURING THE ENTIRE PRINT PROCESS INCLUDING ANYTIME THE PRINT HEAD IS ATTACHED.**

Power ON

- Power on the machine and the Print Head Controller to allow the Print Head to heat up to 225°C (437°F), approximately 10 minutes
- Run the MasterPrint3D.exe software and DeskCNC.exe or other motion control software

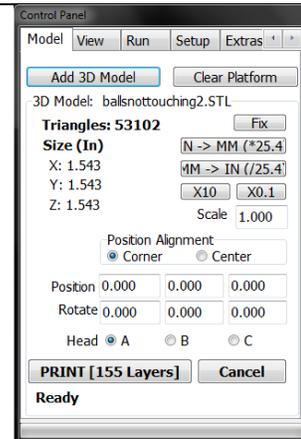
Prepping the Surface

- Clean the print surface with alcohol and a clean paper towel
- Apply single layer of painter's tape to the print surface and lightly wipe applied tape with alcohol



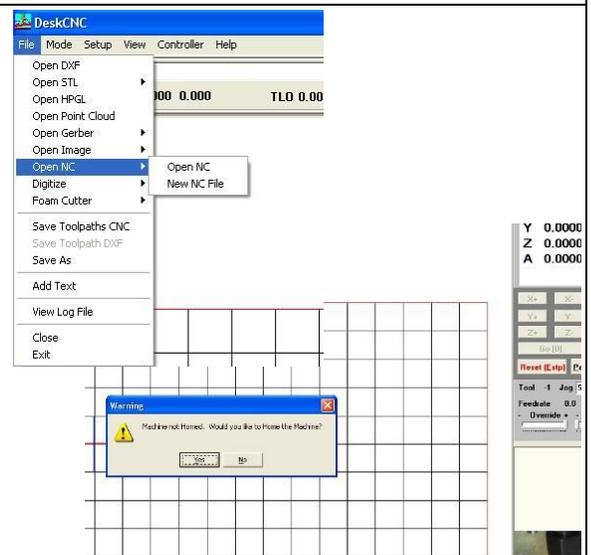
Add 3D Model

- In MasterPrint3D, select the Model tab and click Add 3D Model
- Select the 3D model you would like to use and select Open
- The Model tab allows you to change the position and scale of the object to fit on your print surface
- When the model is in the correct position and scale for your machine click the Print button and save the new .DNC file to the location that your motion control software loads files from

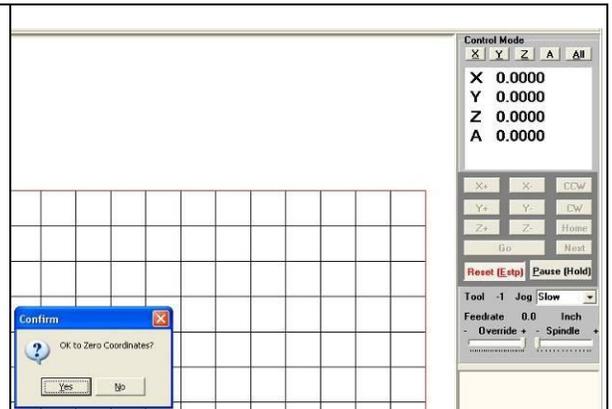


DeskCNC and machine Setup

- After machine is powered on and DeskCNC.exe has opened, Home the machine by clicking the Home button
- Setup your Work Coordinate Offsets as you would normally do for machining a part. Also, set your TLO so that the Print Head's nozzle is just touching the print surface
- Next add the .DNC file that was saved in MasterPrint3D by clicking File, Open NC. Select the file and click Open
- Before beginning the print, set the jog speed to Slow. Slow jog feed should be 5 IPM. Click and hold CW (clockwise) to feed filament through the Print Head then clean off excess filament



- It is **EXTREMELY IMPORTANT** to zero the A axis after starting the filament, but before printing by clicking the A button under Control Mode above the coordinate readouts. Failure to do so can cause the filament to be reversed out of the Print Head causing a jam



PRINT!

- Click Go and watch the Print begin



Precautions

Make sure the Print Head is fully heated up before feeding filament at any step in the process. When changing the filament, it is **strongly** recommended to only feed the filament in the positive (A+, B+, C+) direction. Reversing the filament direction (A-, B-, C-) can cause the filament to jam the Print Head. It is best to cut the filament off a $\frac{1}{4}$ of an inch away from the entry point and feed the new filament in behind the old filament. This will also work when switching from the top feed entry point to the side feed entry point and vice versa.

Obtaining adhesion to the print surface is crucial for the print to be successful. Watch the print and periodically check to ensure the object has not pulled off of the print surface. If the object has pulled away the print should be canceled. Clean the print surface again before attempting another print and double check the Z axis depth.