

~ FABRICATION ~



ELECTRONICS

OPERATING INSTRUCTIONS

INTRODUCING



ELECTRONICS

the



3D PRINTER



3D Printer

Access Level 2 (see Tech Workshop induction Guide on Access Levels)

CNC Extrusion machine used to build small 3D items out of PolyLactic Acid (PLA) and AcryloNitrile Butadiene Styrene (ABS) thermoplastics

PPE Basic

- Generally, not required for this machine

What to do before use

- Visual check of the machine for signs of damage to machine.
- IF STUDENT, report any faults to any member of workshop academic/ technical staff
- IF STAFF log the fault via the Fault Reporting Log Book – then email technical team to report if machine requires maintenance or servicing and whether it will be out of operation and for how long

LEVELLING THE PRINTING BED:

- Turn the Printer on
- Select manual move from the settings menu
- Move the extruder to the rear left position
- Adjust the z height of the bed so that the scraper just slides under the extruder nozzle with very little resistance and without compressing the levelling springs
- Move the extruder to the rear right position
- Adjust the right levelling spring so that so that the scraper just slides under the extruder nozzle with very little resistance and without compressing the levelling springs
- Move the extruder to the centre forward position
- Adjust the front levelling spring so that the scraper just slides under the extruder nozzle with very little resistance and without compressing the levelling springs

CALIBRATING THE EXTRUSION (Z) HEIGHT:

- From the settings menu select 'Set the Z Height'
- The printer will home the nozzles to the rear left position
- Move the nozzles via the control buttons to the centre position
- Use the controller to adjust the Z height of the bed up and down so that 3 pieces of paper can slide under the extruder nozzle with very little resistance and without compressing the levelling springs
- Press ENTER to complete the process

How to Use This 3D Printing Machine

- Make sure that your file has been checked by 3D printing staff for suitability; the technical staff can advise you on good design features and file format
- Save the build file onto a USB DRIVE for the 3D Touch printer, and onto a SD CARD for the BFB 3000
- Slide the memory device into the respective 3D printer
- FOR BFB 3000: Select 'Run File', press LEFT and RIGHT buttons to find the file, press the ENTER button to select the file, press ENTER AGAIN to run
- FOR 3D Touch: Press 'Print', press LEFT and RIGHT to find your file, select the filename of the object you want to be printed
- The printer(s) will now print the file
- If the object FAILS TO STICK to the bed, the printer RUNS OUT of material or the printer FAILS TO PRINT properly in any way, CANCEL the print and talk to the technical staff
- If the printer makes a LOUD JUDDERING noise, SWITCH OFF the printer immediately and consult the technical staff
- When your object has been printed, take care removing from the machine as several parts may still be very HOT

Date

I verify that I have read and understood the information detailed within this document

Name

Signature