



Standard Operating Procedure 3D PRINTERS (FILAMENT BASED)

DO NOT use this machine unless you have been instructed in its safe use and operation and have been given permission

Personal Protective Equipment and Clothing



Safety glasses must be worn when sanding and removing prints from the build bed.



Long and loose hair must be contained.



Correct respirator must be worn during sanding process or use of solvents.



Gloves should be worn whilst removing prints from the print bed.



Rings and jewellery must not be worn.

PRE-OPERATIONAL SAFETY CHECKS

- ✓ Ensure you have read the Risk Assessment, Standard Operating Procedure and completed the Machine Use Logbook before using the printer – these are available from the Machine Document Index.
- ✓ Ensure the plastics spool is correctly fitted into the extrusion head – refer to the User Manual.
- ✓ Correctly initialise the printer after it has been moved or relocated.
- ✓ Ensure all cables are inserted or connected correctly and securely.
- ✓ Pre-heat the build platform (if possible) to maximise effect adhesion and stability.
- ✓ Be aware that ABS vapours are toxic. Ensure that your work area is well ventilated or the printer is within an enclosure.
- ✓ Room temperatures are best between 20-30°C.
- ✓ Faulty equipment must not be used. Immediately report any suspect equipment or machinery.

OPERATIONAL SAFETY CHECKS

- ✓ Never attempt to program this CNC machine without proper training.
- ✓ Familiarise yourself with all machine operations and controls – refer to the User Manual.
- ✓ Ensure the extraction system is operational if printing ABS.
- ✓ Only ONE person should operate this machine at a time – or remove finished products.
- ✓ Always wear safety glasses and gloves when removing support materials.
- ✓ DO NOT TOUCH any moving parts during operation.
- ✓ Keep both hands behind the sharp spatula and tools when removing prints from the build bed.
- ✓ Use caution when using clippers and tweezers.

ENDING OPERATIONS AND CLEANING UP

- ✓ Switch off machine when work completed and unplug from the wall socket – ensure the cord is stored safely.
- ✓ Remove any waste materials from the build area and clean down the printer.
- ✓ Place any waste filament, support materials or failed prints in the relevant recycling container.
- ✓ Remove filament and return it to storage in the airtight bag.
- ✓ Complete the Machine Use Logbook before leaving the space or the next user uses the printer.

DON'T

- ✗ Do not print ABS without extraction or good ventilation – do not print ABS when the space is busy.
- ✗ Do not push scrapers or blades towards body/hand when removing prints from the build bed.
- ✗ Do not leave the printer heating if you're not supervising it or printing.
- ✗ Do not run overnight prints without ensuring the space is safe to do so – consult a Lead Maker.
- ✗ Do not leave filament loaded in the printer once you finish unless asked to do so by the next user.
- ✗ Do not attempt to adjust anything on the 3D printer other than the bed levelling nuts.
- ✗ Do not drink or place liquids near the printer.
- ✗ Do not attempt to touch the extruder when heated

POTENTIAL HAZARDS AND INJURIES

- | | |
|------------------------------|------------------------------|
| ⓘ Hot surfaces and materials | ⓘ 240v electrical components |
| ⓘ Molten plastics | ⓘ Toxic vapours |
| ⓘ Moving components | ⓘ Control errors |
| ⓘ Sharp edges | ⓘ Failure or malfunction |
| ⓘ Eye injury | |

This Standard Operating Procedure does not necessarily cover all possible hazards associated with this equipment and should be used in conjunction with other references. It is designed as a guide to be used to compliment training and as a reminder to users prior to equipment use. Users acknowledge that improper use of equipment increases their risk of harm and that this is a decision they make. Anyone found to be using equipment incorrectly will have their usage rights removed pending a re-induction on the safe use of the equipment; this may incur a charge of £10 for each induction.

A*

For use by Lead Makers and trained staff only. Use by anyone else is strictly prohibited.

A

For use by adult members (18+) who have received and signed the specific induction package. No Lone Working.

B

For use by adult members (16+) who have received and signed the specific induction package. Lone Working Permitted.

C

For use by all members (6+) under the supervision of adult members/Lead Makers who have received and signed the specific induction package. Adult Lone Working Permitted