

This syllabus is intended to aid instructors in providing training for this tool, and for quick reference by existing users. It is not intended to teach you the tool by itself.

## **1. Safety**

### **1.1. PPE**

- Safety glasses required
- Hearing protection recommended (especially when cutting metals)

### **1.2. Entanglement risks**

- No loose clothing or cables
- No loose jewellery (e.g. watches)
- No gloves
- Long hair must be tied back

## **2. Startup checks**

### **2.1. Surrounding area cleared of obstacles**

### **2.2. Other workshop users alerted to keep clear**

- Make sure there are no users that would be at risk of accidentally knocking you while the bandsaw is in operation

### **2.3. Table clear of objects**

### **2.4. Blade set up correctly**

- Aligned correctly
  - Remember to check that the blade isn't contacting the rollers either side causing them to spin
- All adjustments tightened
- Guard for blade locked into place, set as low as possible
- No damage to blade
- Machine can manually be spun freely
  - Power off the machine before checking this
  - Open the front door, spin the blade by hand to check it runs freely
  - Blade must stay aligned when spinning manually
- Remind the trainee that they **should not** start a cut if they are not comfortable with how the machine is set up. Instead, they should contact the maintainers ([tools@edinburghhacklab.com](mailto:tools@edinburghhacklab.com) / [wiki](#))

### **2.5. Speed**

- The bandsaw can run at different speeds for different materials
- The speed is changed by adjusting the belt and gearbox position in the rear compartment
- Check the speed and belt/gearbox positions and consult the wiki page for a table of settings for different materials
- Close both doors after changing speed
- Trainees should never assume the speed is correctly set for the material they are about to cut - check every time they start a session

## **3. Usage**

### **3.1. Starting of the machine**

- Ensure the main ventilation fan is running (especially important for wood)
- Tap your tag on the access control
- Release the E-Stop
- Press the green button on the contactor
  - Wait for the VFD to start (a while)

- Press the green button on the bandsaw to start the motor

### 3.2. Stopping of the machine

- Both the foot switch and the red button on the bandsaw will cause a VFD stop, and should be used in most situations
- The E-stop should be pressed in an emergency, this will cut power to the bandsaw
- Remember to log out if leaving the machine unattended for any period of time

### 3.3. General

- Keep your hands a reasonable distance away from the blade i.e. at least 3-4cm
- Particular care must be taken around the gap where the blade disappears
- Hold workpiece tight, pressing the workpiece firmly into the table, push at a steady rate through the blade
- Only work on pieces you can safely hold by yourself. If it's too large, ask for another member's help to hold the material
- Keep your hands out of the cutline at all times
- Keep work in contact with table or stops. Do not freehand above the surface. Elevated parts will be grabbed by the blade
- Make sure the workpiece is supported e.g. pieces with overhangs or circular pieces
- Don't force the blade to cut a small radius curve. If this is required make it with multiple small cuts
- Never back out of a radius cut while the machine is running
- Do not leave the machine running unattended
- Have a wide/stable stance
- If the workpiece gets stuck in the blade, stop the machine and gently remove the piece

### 3.4. Materials

- Acceptable materials include:
  - Wood
  - Aluminium
  - Mild steel
  - Copper
  - Plastic
- Unacceptable materials include:
  - Stainless steel
  - Hardened steel
- Consult the complete list of materials on the wiki page
- Ask a maintainer if you are unsure of suitability

### 3.5. Post Cutting

- Once you have finished your cut, turn off the bandsaw, log out of the access control, and clean up the table
- Leave the machine in the state you would expect to find it

## 4. Maintenance

### 4.1. General

- Contact [tools@edinburghhacklab.com](mailto:tools@edinburghhacklab.com) if anything seems amiss with the saw.
- Common issues include:
  - Damage to the blade
  - Blade out of alignment/not running true

- Grinding/squeaking/etc noises from moving parts

**5. Other**

- The table can tilt but as we do not yet have suitable stops, this table shall stay flat