### **Shop Rules**

- 1. When in doubt ask! Never use a tool that you are unfamiliar with!
- 2. All authorized personnel inside Shop must wear safety glasses (ANSI approved) and closed-toed shoes, long pants and short sleeve shirts at all times.
- 3. All Shop users must tie up free hanging hair.
- 4. All Shop users must not wear any free or loose ties, scarves or jewelry.
- 5. All Shop users may not use headphones while in the Shop.
- 6. Workers must not remove or make ineffective any safeguards, unless authorized.
- 7. Machines and equipment shall be operated by authorized personnel only.
- 8. No machine shall be left unattended while it is in motion.
- 9. Cleaning, oiling or adjusting any machine shall be done within normal operating parameter of equipment.
- 10. Materials to be machined shall be securely fastened or clamped to the working surfaces before starting the machine.
- 11. Keys or other adjusting tools must never be left so that they may creep, be thrown, or fall when machine is started.
- 12. Use a brush, special tool or hook to remove chips, shavings or other material from work. Flowing shavings shall not be handled with bare hands; metal hooks shall be used.
- 13. Operators shall stand so that they can easily reach the machine controls.
- 14. Clean-up chips, spills, etc., on and around machinery after each use.
- 15. No food or drink in the Shop.
- 16. Only authorized personnel are allowed in the Shop
- 17. No horseplay, screaming or yelling in Shop

### **Shop Tools for Safety Training**

#### **Wood Tools**

Jig Saw Miter Saw Plunge Router Table Saw Disk Belt Sander Drill Press

#### **Metal Tools**

Angle Grinder Hacksaw Nibbler Hand Torch Drill Press Solder Station

## **Equipment Tutorial Videos**

Jig saw https://www.youtube.com/watch?v=5P38s\_Yj\_kM
Miter saw https://www.youtube.com/watch?v=zmwiMRjsu54
Plunge router https://www.youtube.com/watch?v=-ptHg73\_Czl
Table saw http://www.sawstop.com/why-sawstop/video-vault
Disk Belt Sander https://www.youtube.com/watch?v=4JlHQrGN3Nc
Drill Press https://www.youtube.com/watch?v=Nu9tYcld7ck
Angle grinder https://www.youtube.com/watch?v=qTWnPzTLhrw
Hacksaw https://www.youtube.com/watch?v=jpKCgs1o9nc
Nibbler https://www.youtube.com/watch?v=E1JALyXKvrc
Hand torch https://www.youtube.com/watch?v=yo5E6hw9YBE

## **Protective Personal Equipment**

Wear face shield **Jig Saw** Wear safety glasses Don't wear gloves Wear safety glasses **Miter Saw** Don't wear gloves Wear face shield **Plunge Router** Wear safety glasses Don't wear gloves Wear safety glasses **Table Saw** Don't wear gloves Wear safety glasses **Disk Belt Sander** Don't wear gloves Wear face shield **Drill Press** Wear safety glasses Don't wear gloves

# **Protective Personal Equipment**

Wear face shield **Angle Grinder** Wear safety glasses Don't wear gloves Wear safety glasses Hacksaw Wear gloves Wear face shield **Nibbler** Wear safety glasses Wear gloves Wear face shield **Hand Torch** Wear safety glasses Wear gloves Wear face shield **Solder Station** Wear safety glasses Wear gloves

### **Detailed Equipment Instructions**



#### Jigsaw/Plunge Router/Angle Grinder/ Nibbler

- 1. Clamp or otherwise secure your piece to the table.
- 2. Make sure the power cable is placed in an area where people don't trip over it.
- 3. Place extraction bag to collect particles/chips.
- 4. Make sure the safety guard is in place.
- 5. Make sure the power is off before plugging in the machine.
- 6. Make all the adjustments with the power off.
- 7. Make sure the working area is clean.
- 8. Avoid any distractions like waiting for a text or working amid a conversation.
- 9. Put on the face mask if required.
- 10. No gloves and make sure your hands are not slippery.
- 11. Never work the saw inwards.
- 12. Make sure the hand that is not maneuvering the tool is away from it.
- 13. Turn off the machine before disconnecting it from the wall.



#### **Hand Torch**

- 1. Never use cylinders with damaged or missing seals. Discard cylinders if dirt or rust particles are present in valve areas.
- 2. Make sure your torch head is turned off before attaching a fuel cylinder. Be sure to hold the cylinder upright while attaching hoses or appliances. Hand tighten only, never use tools to tighten as overtightening can damage seals.
- 3. Check for leaks once appliances are attached, put soapy water on connections and look for bubbles. Also listen for the hiss of escaping gas, feel the extreme cold and smell of rotten egg odors. Do not use if you detect fuel is leaking.
- 4. Connect cylinder only when you are going to use it and make sure you detach it when you are done.
- 5. Empty and clean the area from dust, tools or any other potential hazard.
- 6. Wear heat-protective gloves.
- 7. Cylinder should always be upright if it sputters or flairs, turn it off.
- 8. Allow hand torches to cool after use. Detach the fuel cylinder for the hand torch when not in use and replace caps to keep valves clean.



#### **Soldering Station**

- Repeated exposure to rosin can cause respiratory and skin sensitization causing and aggravating asthma.
- 2. Do not touch the element of the soldering iron.
- 3. Hold wires to be heated with tweezers of clamps.
- 4. Keep the cleaning sponge wet during use.
- 5. Always return the soldering iron to its stand when not in use. Never put it down on the workbench.
- 6. Turn unit off and unplug when not in use.
- 7. Make sure not to have any cable in the middle or around the operation area.
- 8. Wash your hands with soap and water after soldering.
- 9. Collect waste and clean the area after use.

#### **Hacksaw**

- 1. Do not test saw teeth on hands or fingers to determine whether a hand saw is sharp.
- 2. Begin cutting by starting carefully and slowly to prevent the saw blade from jumping or binding.
- 3. Cut outwards always, never toward your body.
- 4. Make sure the piece to be cut is safely placed on the table.
- 5. Use the length of the blade during each stroke.
- 6. Always carry a hand saw by its handle with the saw end pointed down.



- 1. Turn on dust collector.
- 2. Roll sleeves up past the elbow and make sure no loose clothing will get caught in the belt or disc while operating the disk/belt. Tuck in clothes if necessary.
- 3. Make sure there are no scrap pieces between the belt or disc and their respective tables before turning on the belt/disc sander.
- 4. Before turning on the belt/disc sander, make sure your stock is not touching the belt or disc.
- 5. After the belt/disc sander has been turn on, wait to sand your stock until the machine has come up to full speed.
- 6. After the belt/disc sander has been turned on, wait to sand your stock until the machine has come up to full speed.
- 7. Keep fingers at least 2 inches away from the belt or disc at all times
- 8. Keep the stock moving across the belt or downward side of the disc to avoid wearing out or burning a portion of the belt/disk.
- 9. Do not sand pieces too small, these must be done by hand.
- 10. When turning the machine off, remain in place until you see it completely stopped.







# Miter Saw / Table Saw / Disk Belt Sander / Drill Press

- 1. Keep protective guards in place at all times.
- 2. Remove scraps and other foreign items from the machine before operating the saw.
- 3. Make sure the piece to be cut is firmly held against the table and fence before cutting.
- 4. Allow the blade to reach full operating speed before starting the cut.
- 5. Never hold the piece to be cut in a manner that causes your arms to cross. The majority of all cuts are made on the miter saw with the material held with the left hand on the left side of the saw while the right hand operates the machine.
- 6. Do not leave the area of the machine until the blade has come to a full and complete stop.
- 7. Always maintain a 6" margin of safety between all body parts and the blade.
- 8. Remove chips, scraps and cutoffs only after the blade is a complete stop.