



WPI



VOX Scenic Safety Manual

Authored By:
Angela Calvi
Caitlin Enright
Ryan Herrmann
Benjamin Mart
Kevin Boenisch

Created in conjunction with the
Worcester Polytechnic Institute Department of Environmental Health and Safety

Table of Contents

Introduction	2
In Case of Emergency	3
Definitions	4
Training Procedure	5
First Aid, CPR, AED Training	5
General Safety	6
Tool Setup	7
Tool Safety	8
Saws	8
Sliding Compound Miter Saw	8
Table Saw	10
Circular Saw	11
Jigsaw	13
Reciprocating Saw	14
Drills and Drivers	15
Routers	16
Sanders	17
Compressor and Attachments	17
Special Thanks	20
VOX Safety Training Agreement	21

Introduction

This safety manual was written in conjunction with VOX Musical Theatre and the Worcester Polytechnic Institute Environmental Health and Safety Department. The purpose of this manual is to provide a uniform, standardized set of safety information to all parties looking to participate in scenic work and ensure the safety of these individuals. Please contact the VOX Musical Theatre Executive Board at gr-vox-exec@wpi.edu with any questions, comments, or concerns.

In Case of Emergency

In the event of an emergency, the following procedure must be followed:

1. Call WPI Police at (508) 831-5555.
2. If a wound is serious, quickly apply direct pressure using a clean thick pad or cloth to control the bleeding. Gauze and medical tape can be found in the VOX First Aid Kit.
3. Once the situation is under control, calmly contact the show's Producer as well as the VOX Technical director so that show exec and VOX exec will be made aware of the incident.

See www.wpi.edu/about/emergency-management for more details on emergency management for various types of emergencies.

Definitions

The following terms are used frequently in the VOX community and appear in this manual.

Front of house - The general area nearest to the lobby in Alden Hall. Specifically, near the north wall between the double doors where VOX sets up sound and lighting equipment.

Hold - A “stop work” call that can be called by anyone to halt all work in the hall.

Lighting Designer - The student selected to be responsible for managing all lighting equipment for the show. The Lighting Designer is chosen on a per-show basis.

Loading dock - The loading dock between Alden Hall and Riley Hall. Specifically, the raised portion north of Alden Hall’s loading dock door.

Loading dock driveway - The paved area in front of the loading dock.

Master Carpenter - The student chosen to be responsible for supervising all scenic build calls. The Master Carpenter is chosen on a per-show basis.

Sound Engineer - The student chosen to be responsible for supervising all sound-related equipment for a show. The Sound Engineer is chosen on a per-show basis.

Technical Director – An elected member of the VOX Executive Board. This student oversees all of the club’s tools, runs strike, and enforces safety procedures with regards to building.

Training Procedure

Before a member may conduct any construction or other work involving tools in a VOX production, they must read this manual, attend a training session, and sign the form on the last page of this manual. This procedure must be followed for each production that a member participates in, even if they have already done so for a previous production.

The VOX Technical Director is responsible for the training of members. They will hold a training session before work on a show begins and may also hold additional training sessions for members that join the production later. Before attending a training session, each member must have fully read this manual.

At the training session, the Technical Director will review the manual, explain and demonstrate safe tool use, and answer any questions. Afterwards, the form on the last page of this manual will be provided to each member in attendance to sign. These forms will be kept by the Technical Director, and a list of trained members will be provided to VOX Exec, Show Exec, and the Faculty Advisor.

In addition to the training provided by the VOX Technical Director, each member must also complete an online machine safety course provided by EHS. At the time of publishing, this course is not yet available, therefore the VOX Safety Manual will be updated once it is.

First Aid, CPR, AED Training

VOX members are strongly encouraged to attend a First Aid, CPR, and AED training session arranged by EHS. At least one member who has received this training must be in attendance whenever construction work is being done or tools are being used. The training will be arranged around D-term of each year and is available to members that will not be graduating that year.

General Safety

The following safety procedures are imperative and must be observed by all builders at all times:

- Wear safety glasses. In the event that no safety glasses are available, please contact the VOX Technical Director at vox-td@wpi.edu requesting that more safety glasses be acquired.
- Do not work alone.
- Wear closed-toed shoes. Any and all individuals looking to build who show up to a scenic call without closed-toed shoes will be sent home to retrieve them.
- Tie long hair back. Any hair that is long enough to be tied back must be tied back.
- In order to operate powered equipment, users must not be wearing baggy clothing.
- Hearing protection must be worn when using any type of saw. Said hearing protection is provided by VOX at all building sessions.
- Work gloves will help prevent against splinters but are not strictly necessary. Tweezers should be available in the VOX first aid kit at all times.
- Do not use tools that you are unfamiliar with unless under the supervision of an experienced tool user. If you must use a tool that you have never used before, ask the Master Carpenter to train you on this equipment. If the Master Carpenter does not know how to use this tool, they may assign a designee to train inexperienced builders. In the event that no one has experience with the tool, you should reach out to the VOX Technical Director or consider using a different tool if possible. You must also read the “Tool Safety” section of this manual before using any power tools that you are unfamiliar with.
- Do not compromise your hearing ability. For example, do not put on headphones while building. You must be able to hear in case anyone calls “hold”. The only time that you may cover your ears is when you wear hearing protection, which is required for certain tools.
- Do not be afraid to call “hold”. It is better that you call “hold” and nothing happens than hesitate and risk the safety of yourself and those around you.
- Do not step on any structure unless you are certain that it can support your weight.
- Make yourself aware of the location of the VOX first aid kit. A stocked first aid kit will be available and easily accessible at all times. Contact vox-td@wpi.edu immediately if the first aid kit is lacking supplies or is missing altogether.
- Always err on the side of caution.
- Never be afraid to ask questions. Chances are, someone has an answer to your question, and the more you know, the safer the building environment will be.

These general safety guidelines will be reinforced by the Master Carpenter, their assistant, and/or a designee.

Tool Setup

Traditionally, VOX sets up tools in the same location from show to show. The equipment should be set up as follows:

- **Sliding Miter Saw:** The miter saw should be stationed on the Alden Hall loading dock such that a builder can use the saw from the ground. The miter saw should never hang over the front of the loading dock. Whoever sets up the miter saw must ensure that there are supports on either side of the saw so that the builder has a flat surface on which they can rest the wood that they are cutting. A power cable can be run from the miter saw to the external power outlet on the west side of Alden Hall, directly adjacent to the loading dock. Power cables should never cross in front of the saw and should never be placed in a location which may cause a builder or passerby to trip.
- **Table Saw:** The table saw should be stationed on the loading dock driveway at least ten feet away from the edge of the dock and in a location where it will not interfere with the miter saw. A ten-foot minimum ensures that an eight-foot piece of plywood may be cut without risk of interfering with other tools. A power cable can be run from the miter saw to the external power outlet on the west side of Alden Hall, directly adjacent to the loading dock. Power cables should never cross in front of the saw and should never be placed in a location which may cause a builder or passerby to trip.
- **All Other Powered Equipment:** All other equipment may be used either in the main hall, on the loading dock, or in the loading dock driveway. Please consult the applicable subsection under “Tool Safety” for more information on how to go about setting up and using this equipment.

While the miter and table saws are traditionally stationed in the loading dock area, this may not always be the case. If a build must occur during times of inclement weather, these saws may be stationed inside the main hall. In this case, the miter saw can be set up on VOX’s miter stand. Support for lumber must still be provided on either side of the miter saw. The table saw must be set up near a wall such that the lumber being cut is facing away from the wall. Power cables must be run to a wall outlet in the hall in a manner in which they will not interfere with the saws or cause users to trip. All saws must be used a reasonable distance (preferably more than fifty feet) away from any rented Lens and Lights equipment stationed at front of house. In the event that building in the hall must occur, the Sound Engineer and Lighting Designer must be notified so that they can properly protect their equipment from sawdust. The only material that may not be cut inside under any circumstances is pressure treated wood.

Tool Safety

This section on Tool Safety will provide important usage and safety information about the types of tool VOX owns and uses regularly. If you are using a tool for the first time, make sure that an experienced tool user is observing you. The experienced tool user should ensure that you are using the equipment in a proper and safe manner.

Saws

VOX uses a variety of saws when building sets. Each saw works differently and therefore has different safety procedures. Before using saws, be sure that the saw you have chosen is the best saw for your application.

Sliding Compound Miter Saw

VOX owns two sliding compound miter saws. Sliding miter saws are a type of chop saw. Sliding miter saws allow the blade to slide toward and away from the user on a set of sliding rails. The “compound” distinction means that the angle of the saw may be adjusted in two planes. Consult the “Tool Setup” section of this manual before using this saw. See below for a diagram of a sliding compound miter saw.



The sliding function of the sliding miter saw can be eliminated by engaging a lock. The sliding feature should only be used when necessary as the sliding of the blade may take a new user by surprise and cause them to have less control of the movement of the blade than they expected. For this reason, the lock should always be engaged after each use.

The first step to using a compound saw is to ensure that you are cutting at the desired angle. To do this, you can use the miter lock handle to adjust the turntable and produce a “miter cut”, or a cut in which the blade is vertical and the cut is across the workpiece. You can also use a knob behind the blade to adjust the head rotation to produce a “bevel cut” in which the blade tilts at an angle and the cut is square across the workpiece. A combination of these adjustments is considered a compound cut. Whenever the angle is adjusted, you must ensure that the blade has

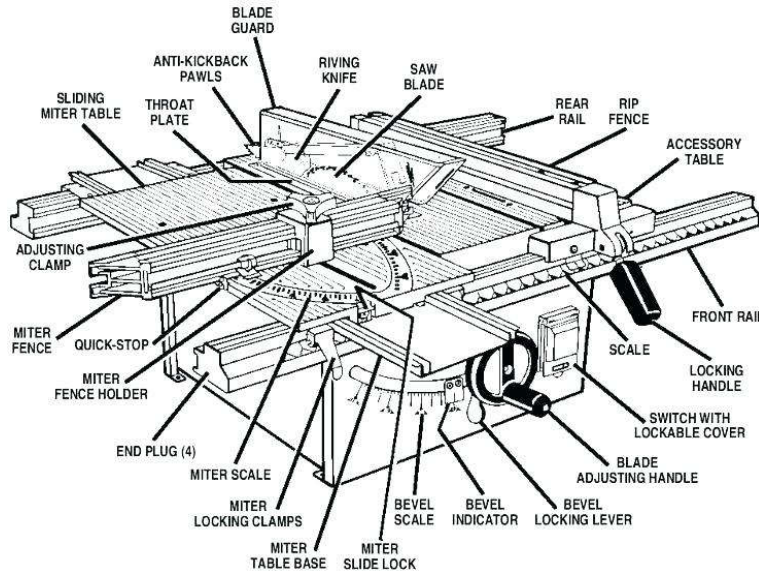
enough clearance such that it will not cut through the fence or the plastic slot located on the turntable that the blade passes through. If the blade will cut through the fence, the fence may be adjusted using a set screw located behind the fence. The next important step when using this saw is to place the workpiece securely on the turntable. Before cutting, the workpiece must be in contact with the turntable and the supports (covered in the “Tool Setup” section) along its entire length to ensure that it will not move when it comes in contact with the blade. The workpiece must also be in contact with the fence along its entire length for the same reason. When making a cut, the user’s left hand must secure the workpiece to the left of the fence. The following diagram displays the proper and improper hand placement.



Ensure that the piece of wood to the right of the blade will not tip once it is cut; if it will, obtain supports or another person to support this piece. Once the workpiece is secure and everything is aligned, you are ready to cut your workpiece. When making bevel cuts, assure that the workpiece is especially secure because the workpiece will want to walk in the direction of the cut. Place your hand on the handle and depress the trigger. The blade should reach full speed before it comes in contact with the workpiece. Lower the blade slowly and carefully until the piece is cut. Continue depressing the trigger until the blade is returned to its resting position. If using the sliding function of the saw, extend the saw fully before engaging the trigger. When depressing the trigger, the blade may kick. Once the blade is at full speed, ensure that the saw is fully extended, then lower it slowly, slide the blade away from you, return the blade to its resting position, and release the trigger.

Table Saw

A table saw is a saw in which the saw blade is mounted vertically and protrudes upward through the surface of the table. A diagram of a table saw can be seen below.



VOX does not own the miter fence assembly, which includes the items labelled miter fence, adjusting clamp, quick stop, miter fence holder, miter scale, miter locking clamps, miter table base, and miter slide lock.

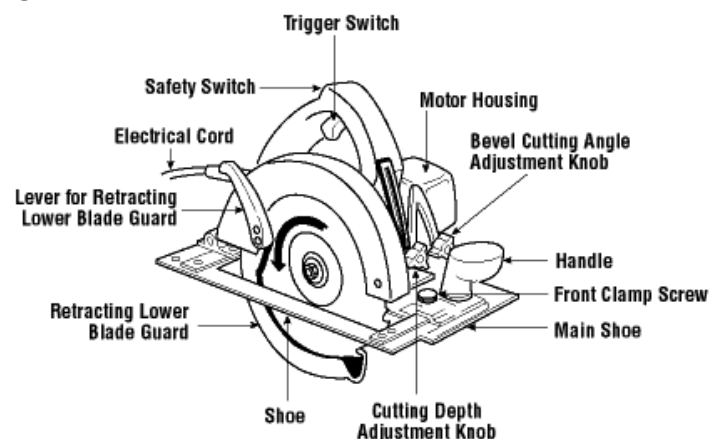
To use the table saw, you must first adjust the fence to the desired position. If the table is not long enough to support the desired length, you may extend the table using the black plastic locking mechanism visible in a cutout in the table to the right of the blade. The fence must always be positioned such that the workpiece, when flush with the fence, can rest on a sufficient section of table adjacent to the fence. When setting the fence, you should push it past the desired cut length and ease it closer to the blade by tapping it from the side closest to you until it is in the desired position. This will ensure that the blade will not bind the workpiece. Binding is when the workpiece is caught between the blade and the fence, and this causes the workpiece to stop, which creates a safety hazard. If your workpiece binds, turn off the saw, wait for the blade to come to a complete stop, lift the anti-kickback pawls that are present on either side of the riving knife, back the workpiece out carefully as to not damage the blade, and reset the fence as described above to eliminate the issue. It is a good idea to verify the size of your cut with a tape measure as the table saw scale tends not to be accurate. You must also adjust the angle and height of the blade to the appropriate positions. The height and angle of the blade can be adjusted using the blade adjusting handle located on the front of the table saw. Often, the handle alone adjusts the height of the blade, but when you release the bevel locking lever and push the adjusting handle in, a gear will engage so that you may adjust the angle of the blade. If your cut depth does not exceed the height of your workpiece, then set the height as desired. If you are cutting cleanly through the workpiece, the only requirement is that the blade clears the top of the workpiece. Generally, it is good practice to keep the blade from extending excessively past the top of the workpiece. Once you are confident

that your fence is at the desired distance from the blade and your blade is positioned correctly, you are ready to begin your cut. Depending on the size of your workpiece, you may need to ask your fellow builders for assistance. For example, if you are cutting a full 4'x8' piece of plywood, you will need at least two additional people to help guide the workpiece through the saw. One person will be essential for pushing the workpiece from the side so that it remains flush with the fence. The other will be stationed behind the table saw to catch the workpiece as it moves through the saw. The person catching the workpiece should not pull the workpiece through the saw; they should only provide support so that the workpiece moves smoothly and does not fall or bind. Place your workpiece securely on the table such that it is flush with both the table and the fence. Avoid allowing the workpiece to lose contact with either or both of these surfaces for the entire duration of the cut. Once the workpiece is in place, you or a fellow builder may turn on the saw using the switch located on the front of the saw. Readjust the workpiece if necessary to ensure that it is still flush with both the table and the fence. Once you are ready, push the workpiece slowly and carefully in the direction of the blade. Push with both hands from the back of the workpiece such that one hand is on either side of the blade. Make sure that your hands are never in line with the blade such that they will get cut if the workpiece kicks forward. Additionally, never lean forward over the table saw. In the case that there is inadequate room to place your hand safely between the blade and the fence, use a push stick or other scrap wood to push the material.

VOX's table saw is equipped with a Saw Stop system, which automatically stops the saw blade should the user contact it to prevent injury. The Saw Stop system is not a toy and should never be activated intentionally. Should the Saw Stop activate, the policy to report injuries must be followed if necessary. Additionally, the Technical Director must be notified so that they can email EHS (ehs@wpi.edu) to coordinate replacement of the saw blade and cartridge.

Circular Saw

Circular saws are handheld saws generally used to cut straight lines where the table saw cannot be used. These saws can be both corded and cordless. The cordless version is generally less powerful and smaller, therefore they are generally safer to use and better for smaller lengths of cut in thinner materials. The corded version is generally more powerful and larger. This version is better to use on long cuts and thicker materials.



The above diagram shows the important features on most circular saw models. These components can be broken into three groups: safety features, saw adjustments, and places to grip the saw.

All circular saws have the ability to adjust the depth of cut, which is how far the blade cuts through the wood. It is best to set the depth so that the saw is just deep enough to cut through the wood completely to prevent the blade from inadvertently cutting through any other materials. All saws also have the ability to cut at an angle to create a bevel. This should be set to vertical at all times unless an angled cut is desired. After completing angled cuts, return the angle of the blade to zero. Angle cuts are particularly hard to do correctly, and extra care should be taken when doing them.

There are two critical safety features on most circular saws: a two-switch trigger system and an automatic blade guard. The two-switch trigger system prevents the user from using the saw without the proper grip and automatically turns off the saw in the event that the user loses control of the saw. The second safety feature is the blade guard that covers the majority of the blade while the saw enters the cutting material and when the saw is not in the process of cutting a material. It is important to remember that the blade guard will not cover the bottom of the blade as it is cutting through the material. The blade guard may be retracted manually through the use of the blade guard lever. This should only be used in specific instances by users who are experienced and comfortable with the saw. Experienced users should use their discretion when raising the guard manually. If raising it manually, the user should ensure they have a secure hold on the tool and all extremities are clear of the blade.

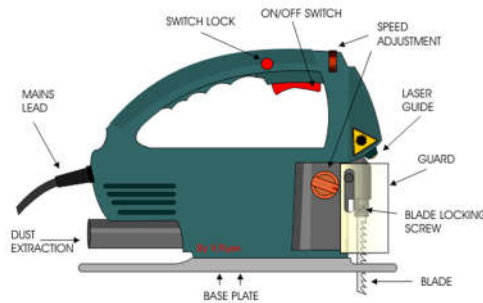
Circular saws have two main grips for holding the tool: the handle where the trigger is mounted and a front grip. Generally, circular saws are designed for right-handed people. The user's right hand should grip the trigger handle and the left hand should grip the front handle. The circular saw must be used with two hands at all times.

Ensuring a safe work station for the circular saw is very important for safe operation. The workpiece should be supported by flat surfaces. The material being cut should be offset from the supporting surface, which can be done by overhanging the piece off of a flat surface or by placing the material on blocks. The cutting material should be well mounted so that it will not shift during cutting. The cut should be clearly marked on the surface and the line should be checked to ensure that the saw will not cut through the material supporting the piece. The operator should ensure the circular saw is on and the blade is spinning before beginning the cut. The shoe of the saw should be flush with the surface of the material at all times. While cutting, the user should ensure that they keep the cutting path clear of all objects, especially the cord.

The saw blade can be changed by loosening the screw seen on the front of the saw. This screw is threaded with left handed threads and is often very hard to undo. After installing the new blade, the operator should ensure that the screw is tightly fastened again.

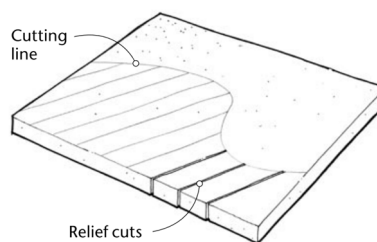
Jigsaw

Jigsaws are handheld saws generally used to cut curves or intricate shapes. They are generally corded but can be cordless.



The most important thing to remember when using a jigsaw is to ensure that the wood is securely attached to the cutting surface or held down by another builder. This prevents the wood from slipping or moving while the saw is in motion. To hold a jigsaw, place your dominant hand on the handle with your pointer finger by the trigger. This hand will control the trigger and place pressure on the saw to keep it flat. Place your other hand on the front of the saw, making sure it is not near the blade or hanging over the edge of the plastic casing. This hand will steer the saw. If one hand is needed to support the workpiece, place your dominant hand on the handle and use your non-dominant hand to support the piece. Make sure your supporting hand is well clear of the cutting path.

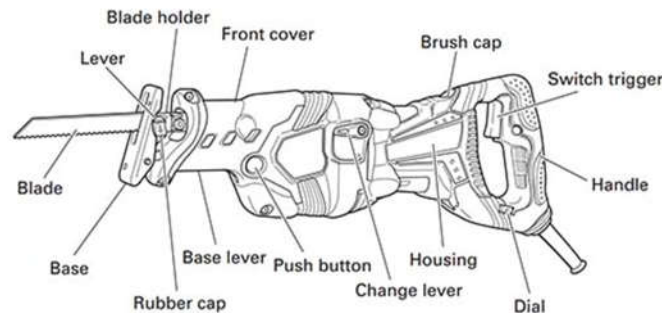
When starting a cut with the jigsaw, make sure that the scrap wood will be supported during the cut and that the path of the blade below the wood is clear. Due to the nature of the jigsaw, the blade will move up and down during the cut. For this reason, allow sufficient space beneath the blade. Also ensure that the cord will not get caught on anything during the cut. Then, place the base plate flush against the wood. It must stay flat for the entire duration of the cut. Do not start with the saw touching the wood. Always ensure the blade is moving before the saw touches the wood to prevent the saw from getting stuck or kicking back. The trigger is located beneath the handle at the top of the saw. Press down the trigger and begin leading the saw along the cut. Depending on the type of wood being cut, there may be a lot of sawdust. In this case, it may be helpful to stop the cut every so often and wipe the sawdust away so that the line can be seen clearly. To do this, stop pushing the saw forward and then release the trigger. To begin the cut again, back the saw up within the cut and press the trigger before making contact with the wood again. When cutting on a curve, use your non-dominant hand to 'steer.' Enter into the curves slowly and do not attempt to use the jigsaw on steep curves. If the blade begins to bind or slow down, back up into your cut and release the trigger immediately. It may also be helpful to use relief cuts to limit the strain on the rest of the wood as well as the saw itself.



Most jigsaws have a blade that is kept in place by a set screw. To change blades, ensure that the saw is unplugged. Then loosen and remove the screw. Carefully take the blade out. Then place the new blade into the slot and tighten the screw. Do not change blades immediately after using the saw as the blade will be hot.

Reciprocating Saw

A reciprocating saw (often called a Sawzall) is a battery powered or corded saw that has a blade that reciprocates (moves in and out) to cut material. Similar to a jigsaw, the reciprocating saw is used more frequently for vertical cuts and often for cuts that do not require as much precision.



Just like the jigsaw, an important aspect of the reciprocating saw is making sure the material being cut is secured. Because the blade cuts in a push and pull action, it is common for the material to get pushed and pulled with the blade instead of cut. Securing the material will mitigate this. Before starting a cut, ensure that the correct saw blade is being used. The proper saw blade is dependent on the material being cut and the thickness of the material. To begin a cut, rest the base flush on the material to be cut. Place one hand on the center portion of the tool and the other one on the handle. Pull the trigger and allow the blade to start reciprocating. Once the blade reaches a comfortable speed, slide the tool towards the material and begin to cut. Maintain an even hold on the trigger, and an even pressure on the tool. An inconsistent hold on the trigger and a lack of pressure to hold the base against the material can result in the saw blade catching on the material and the entire tool reciprocating causing an unsafe “bucking” of the tool.

Depending on the type of saw, blade holders can vary. In the example image, there is a lever that, when pulled, releases the blade. To install a new blade, pull the same lever and slot the blade in place. Jimmy the blade around some to ensure it locks in place after releasing the lever. To test for secureness, pull on the blade to make sure it doesn't come out. Different reciprocating saws can have different blade change procedures, but the practices of ensuring secureness remain valid.

Drills and Drivers

Drills and drivers are used to fasten pieces of wood together with fasteners. Drills can be used to drill holes with drill bits as well. Most drills now are cordless with rechargeable battery packs.



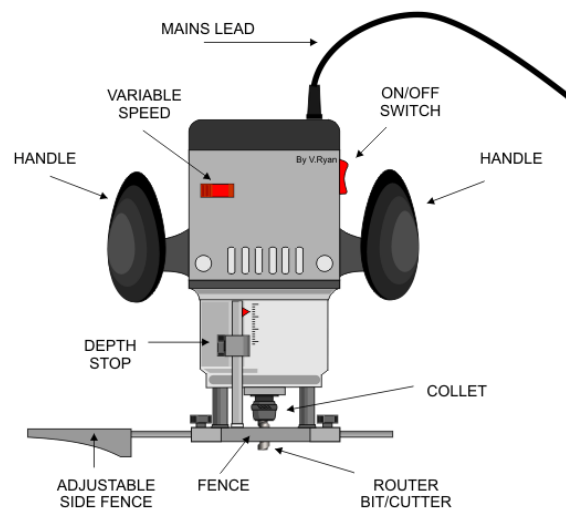
To insert a bit, you first have to loosen the chuck by twisting it counter clockwise. Then place the hex part of the bit between the metal “jaws” and rotate the chuck clockwise until the bit is secured. Make sure that it is straight and didn't fall between any of the jaws while twisting the chuck. Make a small indentation where you want the screw to go with the tip of the driver bit. Make sure the piece you are screwing into is properly secured and will not move. Hold the handle and the trigger with your dominant hand. Toggle the black button above the trigger to change the direction. To put in a screw, it should be rotating clockwise. Place the tip of the screw in the indentation and driver bit in the head of the screw. Make sure that the screw is perpendicular to the wood. Then slowly press the trigger until the screw “catches”. This means that if you remove the drill from the screw that it will remain upright in the wood at the right angle. Do not place your non-dominant hand too close to the screw once you have done this. Then you can press harder on the trigger to finish screwing the screw in. Sometimes you will need to add more pressure to help the screw go in. This can be achieved by pushing on the back of the drill with your non-dominant hand. Keep screwing until the head of the screw is either flush with the wood or slightly sunken.



An impact driver is a driver that has more torque and power than a normal drill. They are generally helpful when screwing more difficult wood such as two 4x4s or when using large hardware such as lag bolts. Impact drivers have a “collet” that only accepts hex shaped bits. To insert the bit, pull back the collet and place the bit into the slot. Once the collet is let go of, the bit is secured.

Routers

Routers are used to make complex shapes in or on the edge of wood. They are generally not for drilling holes down or for creating long straight lines. Routers spin at very high speeds and create a significant amount of noise and dust. They can be intimidating for new users but are easily operated in a safe manner by all types of users.



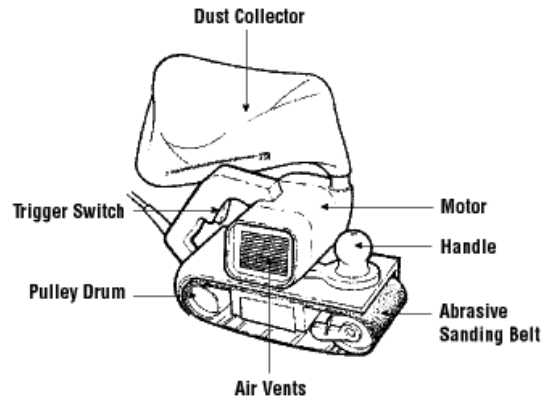
Routers are designed to be operated with two hands, one holding each handle. The tool is powered on by a single switch and the speed of the tool can be adjusted. The depth stop allows the user to set the depth of cut for the tool.

Unlike many other cutting tools, routers have numerous bits that allow for a wide range of cuts. These bits are mounted in the collet and loosened and fastened with a set of wrenches. The user should make sure the bits are securely fastened in the tool before use.

Routers are able to cut in any direction and will have a tendency to climb along their cut. Users should be especially careful when cutting toward themselves to prevent any injury. The workpiece should only be horizontal and well supported. Part of the fence may be unsupported during cuts which will require the operator to provide additional support for the tool. The cutting material should be well mounted so that it will not shift during cutting. The intended cut should be clearly marked on the surface and the line should be checked to ensure that the router will not cut through the material supporting the piece. Turn the tool on before beginning the cut. While cutting, the user should ensure that they keep the cutting path clear of all objects, especially the cord.

Sanders

VOX owns a single belt sander which is used to quickly remove material from a workpiece. The sander should never be used to cut a material.



The belt sander is powered on by a trigger on the handle. Your dominant hand should be used for the trigger and the non-dominant handle should be placed on the handle. Two hands should always be used with the belt sander. The sanding surface is along the abrasive sanding belt. The flat surface along the bottom of the tool should be used to sand. The tool can be operated in any orientation as long as the user has a strong hold on the tool. However, the tool has a tendency to walk forward, in the direction the belt is spinning, so special care should be taken when not sanding a horizontal surface.

The sander should not be turned on until it has been lifted off of a surface by a user and should not be placed down before the belt has stopped moving. Always ensure that all body parts are clear of the sander.

Compressor and Attachments

An air compressor is a tank that uses electricity to pressurize the air inside. The force of this air is used to power things such as staple and nail guns. Hearing protection should be worn when using this tool.



When using an air compressor, first make sure that the pressure release valve, located at the bottom of the tank above the floor, is closed. Plug the compressor in and then turn it on by moving the red lever to the on position. The compressor will be very loud while it is compressing the air so be sure to warn those around you that you will be turning it on. After a couple of minutes, the compressor will shut off which means the tank is full of compressed air. You can then add attachments. First, you have to add the hose.



To connect the air hose to the compressor, locate the valve on the tank. It is a metal valve with a cuff. In the picture above, the valve to the left will be connected to the tank. Retract the cuff on the compressor's valve and insert the valve of the hose. Release the cuff and the hose should be attached.

The main attachment that is used with the air compressor in VOX is the nail gun. At the base of the nail gun, there is a valve similar to the valve at the end of the hose that was connected to the air compressor. Connect the remaining end of the hose to the nail gun in the same way. Spanning the length of the nail gun is a slot that contains the nails. The nail gun may only be reloaded while it is disconnected from the hose. To reload the nail gun, pull the black tab at the bottom and pull out the cartridge. Insert more nails of the appropriate size according to the specific nail gun. Slide the cartridge back into the slot until you hear a click. When this is pulled to a certain degree, a nail is sent into the wood from the tip of the nail gun located at the other end of the cartridge. There is a small metal plate that acts as a safety measure. The nail will only be shot out if the metal plate is pushed up and the trigger is pulled. In natural use, the plate gets pushed up when you place the tip of the gun against the wood you are nailing into. Regardless, the nail gun should only be connected to the air compressor when in use.



When using the nail gun, hold it in your dominant hand. Make sure your non-dominant hand is safely away from the location you are placing the nail. Place the tip at the desired location and press firmly so that the metal tip retracts, then when you are ready, pull the trigger and the nail will be shot into the location.

To turn off the compressor, first disconnect its attachments. Be sure to not touch the trigger. Then, pull the cuff at the bottom of the air gun and remove the hose. Place the gun back into its case. Then do the same thing to remove the other side of the hose from the air compressor. Turn the red lever to the off position and then unplug the compressor. Finally, open the release valve under the tank. When all the air is drained, the air compressor can be stored away.

Special Thanks

We would like to thank the following individuals for their help and support in creating this safety manual.

Dave Ortendahl, VOX Musical Theatre Faculty Advisor

Christine Sharry, Director of Student Activities

Daniel Sarachick, WPI Environmental Health and Safety Director

Christine Kobza, Associate Director of Student Activities

Caitlin Donlan, Associate Director of Student Activities

VOX Safety Training Agreement

Before a member may conduct any construction or other work involving tools in a VOX production, they must read this manual, attend a training session, and sign this form. This procedure must be followed for each production that a member participates in, even if they have already done so for a previous production.

Please fill in the following details:

Name: _____ Graduation Year: _____

Production: _____

Are you currently First Aid trained? (circle one) Yes No

Please initial each of the following statements:

_____ I have fully read and understand the VOX Safety Manual

_____ I have attended a safety training session for this production

_____ I agree to follow all safety guidelines and procedures set forth in the VOX Safety Manual

_____ I understand that unsafe practices or failure to follow the VOX Safety Manual will result in revocation of my ability to work on construction or use tools for this VOX production

Please sign below:

Signature: _____ Date: _____