A visual reference guide of shop tools available for checkout from the Sharp Instructional Shops
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**30° – 60° Drafting Triangles**
Used for drafting and light layout of common angles 30°, 60°, 45°, 90°.

**Bevel Gauge**
A layout tool used for marking and transferring various angles among workpieces; unmarked for degree increments.

**Adjustable Speed Square**
Identical to the standard speed square but with an added variable angle protractor.

**Speed Square**
A handy and durable shop square with 90° and 45° measurements and a scale for calculating rise/run.

**Angle Finder**
Used for drafting and light layout of various angles, marked in 360° increments.

**Chalk Line**
A layout tool ideal for marking straight lines over moderate to long distances where a square is inadequate.
Circle Stencil
Used for accurately drafting and marking circles within a range of diameters; 1/16" increments.

French Curves
Drafting tool for rendering sloped, non-circular, curves.

Combination Square
Measuring and marking tool useful for a variety of layout tasks including checking 90° and 45° angles.

Measuring Tape
Retractable measuring device ideal for measuring medium to moderate distances where a ruler is inadequate.
Available in 26 feet (8 meters)

Calipers
Measuring tool used to determine workpiece diameter.

Protractors
Measuring and drafting tool useful in determining or rendering the slope of an angle.
Ruler
Useful for measuring and rendering straight, short to medium length lines as well as acting as a very effective straight edge for cutting with utility knives.

Available Sizes:
12 inches, 36 inches & 48 inches

Level
Used to check either an object’s level (parallel with ground plane) or plumb (perpendicular to ground plane).

T-Square
Drafting tool used for rendering straight lines perpendicular to a reference surface.

Compass
Used to render circles of variable diameter on a drawing or workpiece.

Torpedo Level
A smaller version of the standard level for measuring in tight circumstances.

Trammell Compass
Used for marking large circles on drawings or workpieces where a standard compass is inadequate.
Corner Clamp
Used to clamp and hold two workpieces at 90° for gluing, fastening, etcetera.

F Clamp
General use medium duty clamp suitable for glue ups and various hold down purposes.
Available in:
10, 16, 22, & 28 inch lengths

Dowel Drilling Jig
A handy jig for drilling holes appropriately centered for dowel joints.

Hand Screw Clamp
An extremely adjustable clamp useful for clamping and holding oddly shaped materials.

Drill Vise
A vise useful for holding small workpieces specifically on the drill press where other clamping areas are inaccessible. But also useful on a variety of other hand machining and assembly operations.

Large C Clamp
Deep throtted clamp useful when other clamps are too small. Particularly useful on the drill press.
Medium C Clamp
Clamp useful for holding down medium sized workpieces and other assembly operations where higher clamping torque is ideal.

Pipe Clamp
A heavy duty clamp with a rigid spine excellent for clamping situations where maintaining material flatness is important.

Strap Clamp
(aka Band Clamp) A clamp ideally suited for clamping or holding oddly shaped workpieces on which other kinds of flat clamps are unusable. The Strap Clamp acts like a very tight belt.

Quick Clamp
A clamp with an easily adjustable tightening mechanism useful for light clamping and work-holding purposes. Quick clamps are easy to use but do not supply as much clamping pressure as Pipe, F or C style clamps and thus are unsuitable for many gluing applications.

Spring Clamp
Used for temporarily holding two objects together. Ideal for light duty applications where the distribution of clamping pressure is not of major concern.

Pocket Hole Jig
An assembly jig designed specifically for piloting and driving screws into two workpieces oriented at 90°. Pocket Hole joints make for a fast, yet strong alternative to laborious hand jointery.
Combination Saw
A Western-style handsaw (cuts on the pushstroke) equally suited for making rip and crosscuts. Does not produce a finished edge.

Back Saw
A Western-style saw (cuts on the pushstroke) specifically for making short rip cuts, particularly those common in furniture joints like the dovetail and the mortise and tenon.

Hack Saw
A saw with replaceable blades suited for cutting metal and other non-wood materials.

Coping Saw
A saw with a narrow flexible blade useful for cutting curves and detailed shapes by hand. A hand powered scroll saw.

Pull Saw
An Asian-style saw (cuts on the pull stroke) which incorporates both a ripping blade and crosscutting blade in one saw. Because the saw has no spine, it is well suited for cutting thick material and performs well on both wood and foams.

Pneumatic Hand Saw
Powered off of the pneumatic air system, the Pneumatic Saw is an open-ended saw useful for making free form rough cuts in foam and other very soft materials.
Corded Circular Saw
The circular saw is a portable power tool and is well suited to make straight cuts in wood and wood composite materials. Though the circular saw is an extremely versatile tool, it is also very prone to kickback if used incorrectly. Great caution should be exercised when learning and using this tool.

Hole Saw Set
A hybrid offspring of the drill bit and the saw blade. Hole saws are excellent for drilling round holes in thick materials where other drill bits might struggle.

Cordless Circular Saw
A cordless version of the Corded Circular Saw. The Cordless Circular Saw is lighter and less powerful and is thus meant for material no thicker than 1 inch.

Biscuit Jointer
An exceptionally useful tool when it comes to joining wood parts together without the use of screws or other metal fasteners. The biscuit jointer cuts matching slots in the adjacent faces of the material to be joined. A pre-cut “biscuit” of wood is then inserted during glue-up. Biscuit joints are quick, accurate, very strong, and are of great help when it comes to laminating multiple parts while maintaining their planarity.

Jig Saw
A hand held power tool fitted with a linear cutting blade, the jigsaw is ideal for making curved cuts in flat wood or wood composite material. The Jig Saw can be thought of as a portable band saw.

Plunge Router
A rotary power tool which can be fitted with a wide variety of router bits for profiling the edges of material or for cutting grooves of various geometry within the face. Used mostly on wood and wood composite material.
Pneumatic Nipper
(aka Pneumatic Nibbler) Powered off the Pneumatic air system, the pneumatic nibbler makes fast and clean cuts in thin gauge metals like metal flashing.

Trim Router
Similar to the plunge router only smaller. The trim router is ideal for routing smaller areas on which a plunge router is too large to be effective.

Tin Nips
(aka Tin Snips) Another scissor-like tool for cutting thin gauge metal. Tin Snips have slightly less leverage than shears, but produce something of a more controlled and clean cut.

Metal Shears
The metal shears are like scissors for thin gauge metal.

Scissors
A versatile shearing tool suitable for papers and lightweight cardboards.

Utility Knife
A tool with a retractable, replaceable razor-like blade, the utility knife is superb for cutting all sorts of material. From paper to cardboard to fabric, the utility knife can produce very controlled and workable cuts. This tool is best used with a straight edge or other cut controller to minimize hazards of an exposed and extremely sharp blade.

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Claw Hammer
To the hammer, all the world is a nail.

Rubber Mallet
A hammer-like instrument with a forgiving hard rubber head for making last minute adjustments during glue-up and other operations which need striking force, but where a steel headed hammer would damage the workpiece.

Grommet Tool Set
Used to set grommets in fabric which in turn strengthen holes in fabric and help resist tearing. Common in sails and other places where fabric might be critically tied in position. Grommet Set includes an anvil, a punch, and the male and female components of the grommet.

Wood Carving Set
This set is for carving and detailed shaping. Solid wood use only.
Available in a variety of profiles

Straight Chisel Set
This set is for removing wood and cutting straight sided mortises, available from ¼ inch to 1 inch wide.
Allen Wrench Set
Hexagonal profiled wrenches made specifically to interface with allen keyed fasteners.
Available in Metric and Standard

Fixed Width Wrench Set
The traditional style wrench for loosening and tightening hex bolts of a fixed size.
Available in metric and standard sizes

Screw Driver
A tool used for driving screw type fasteners by hand. Available in many sizes and screw head profiles.

Adjustable Wrench
A useful tool for loosening and tightening multiple or unknown sized hex bolts. Can be adjusted to fit both metric and standard sizes.

Ratchet Set
A driver set for tightening and loosening hexagonal headed bolts.
Available in metric and standard

Staple Gun
A hand powered staple gun which shoots light duty staples. Perfect for stretching canvas and other fabric to wood attachments.
Needle Nose Pliers
Pliers with a long tapered nose for grabbing and holding small objects. Needle nose pliers also include an integrated set of wire cutters near the handle.

Flat Jaw Pliers
Flat jaw pliers are best suited to gripping and pulling flat sided material.

Slip Jaw Pliers
Similar to flat jaw pliers but with increased jaw capacity, Slip Jaw pliers also incorporate a channel locking system which allows the user to grip large objects while still applying parallel jaw pressure.

Needle Nose Locking Pliers
A plier like tool with an adjustable locking mechanism suitable for grabbing and holding items with more force than could be applied with the Flat Jaw Pliers.

Locking Pliers
Identical in function to the Needle Nose Locking Pliers but with a wider and firmer grasping head.
**Flat Crowbar**
Useful as a lever for general construction purposes. Also useful as a high leverage nail puller for pulling large or stubborn nails.

**Cordless Pin Nailer**
(aka Cordless Nail Gun) A battery operated cordless nail gun for fastening wood. Shoots medium gauge headed nails.

**Pneumatic Pin Nailer**
A tool powered by the compressed air line, much like the Cordless Pin Nailer. The Pneumatic pin nailer shoots very small (23GA) pin nails for fastening wood where a light to very light hold is needed.

**Riveter / Pop Rivet Gun**
Tool specifically for setting pop style rivets.
Paddle Bit Set
(aka Spade Bit) Type of drill bit ideal for cutting larger holes in softwood. Only appropriate for use on the drill press.
Available in sizes from ¼ inch – 1¼ inch diameter

1/4 inch Shank Router Bits
(aka Router Bits) Variety of bits used in the router. Comes in many varieties ranging from straight mortising bits to fancy profile bits.
Also Available: 1/2 inch shank router bits

Counter Sink Bit
A drilling and driving combination set for screw piloting and driving.

Forstner Bit Set
Type of drill bit ideal for cutting large holes in harder woods; leaves a flat bottom hole. Only appropriate for use on the drill press.
Available in sizes from ¼ inch – 2 inch diameter

Cordless Drill
A battery powered drill for freehand drilling operations and driving fasteners. Should not be used with drill bits 1 inch diameter or above.

Drill Bits
(aka Twist Drill Bit Set) General duty drill bit can be used on most materials in either the drill press or in a hand drill.
Rasp
A coarse metal toothed abrading device suitable for fast material removal but which leaves a very rough finished surface. Faster abrasion than a file and much coarser than any sandpaper. Available in various profiles.

Also Available: Round Rasp

Detail Rasp Set
Coarser than sand paper, and similar to a file—used for rough shaping small to medium sized complex shapes.

Available in a number of shapes and profiles

Flat File
A medium coarse metal toothed abrading device. Finer than a rasp, but more aggressive than sandpaper. Do not use on plaster.

Available in various profiles.

Surform Shaver
A very coarse metal toothed abrading device. Slightly more aggressive than the rasp.

Available in various profiles

Smoothing Plane
Used for flattening large surfaces. Solid wood use only.

Draw Knife
An Old Timey tool used for roughly shaping long rectangular or cylindrical stock. Cuts on the pull. Solid wood use only.
Sanding & Shaping

Spoke Shave
Used for shaping medium to long cylindrical stock, available in flat and round bottom. Solid wood use only.

Dremel Tool
A rotary tool that accepts bits of different profiles for detail shaping and carving of various materials.

Block Plane
Used for light shaping and small scale flattening. This tool is sharp and precise, leaving a smooth finish. Solid Wood use only.

Pneumatic Orbital Sander
A sander, which runs on the pneumatic air line but in, most other ways works very much like other palm sanders. The Pneumatic Orbital Sander is quieter and leaves a better-finished surface. This sander must be used on the downdraft table.

Pneumatic Die Grinder
Similar to a Dremel tool but more powerful and with larger diameter burrs.

Palm Sander
A powered sanding tool for sanding great areas efficiently and effectively. Works well on flat and rounded areas.

Replacement sandpaper available for free through tool checkout.

Spoke Shave

Block Plane

Pneumatic Die Grinder

Palm Sander
Mini Belt Sander
A powered sanding tool for quickly sanding flat areas. Not suited for sanding rounded areas.

Large Belt Sander
Manager approval and TA supervision required, no overnight checkout allowed.

Hot Glue Gun
An adhesive administering tool—hot glue guns heat a solid glue stick to its melting temperature, which is then extruded from its tip with the depression of the tool’s trigger. Though hot glue is a versatile adhesive, it lacks strength and is thus inadequate for permanent structures.
Steam Iron
A heated tool used in combination with an ironing board to remove wrinkles in fabric. Requires water for steam ironing.

Commercial Sewing Machine
An industrial strength textile machine used to stitch fabric or other material together with thread. Lab Monitor supervision is required to use this machine.

Standard Sewing Machine
A textile machine used to stitch fabric or other material together with thread.

Ironing Board
A platform to press your tresses.

Embroidery Hoop
A sewing device used on or off the sewing machine for embroidery (aka thread painting).
Safety Goggles
Protective eyewear which fits well over prescription eyeglasses.

Ear muffs
Hearing protective equipment; a suitable alternative to ear plugs.

Safety Glasses
Protective eyewear best suited for those who do not wear prescription eyeglasses.

Tool Belt
Gives the impression you know what you are doing. Also keeps tape measure, hammer, drill, and screws by your side.

Tool Bag
Looks great with all outfits especially those including a tool belt. Also great for storing and transporting more tools than what you might be able to carry.

Tool Cart
A five-drawer work cart used for storing and transporting tools.
Air Nozzle
Attaches to the pneumatic air line. The air nozzle provides a high pressure blast of air for blowing off debris or providing a quick cooldown on a hot summer day.

Lathe Chuck
A machining fixture for the wood lathe. Allows for single ended or face plate turning.

Hand Truck
A wheeled fixture for moving heavy items. Can be used on two wheels or as a four wheeled cart.

Shop Vacuum
A rugged vacuum that can inhale dust and larger debris without clogging.

Lightening Bolts
When your day or piece is looking dull, lightening bolts provide pizzaz.

John Deere Hat
A Midwest standard.
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