

# Intarsia Basics

Presented to



**The ONE club for ALL Woodworkers**

by Frank Cushman

# Introduction

- What is Intarsia

The technique of intarsia is believed to have developed in the Islamic world; introduced into Europe through [Sicily](#), the art was perfected in [Siena](#) and in northern Italy in the fifteenth and sixteenth centuries, spreading to German centers and introduced into [London](#) by Flemish craftsmen in the later sixteenth century.

It is the craft of using varied shapes, sizes and species of wood fitted together to create an almost 3-D inlaid, mosaic-like picture. It is thought that the word 'intarsia' is derived from the Latin word 'interserere' which means "to insert" and that it was originally developed in Siena, Italy in the 13th century by crafters using inlays of [ivory](#) inserted in wood as well as inlays of wood inserted into wall murals, table tops and other furniture

Today, intarsia is created by selecting different types of wood, using its natural grain patterns and colors (rather than dyes and stains) to create the different colors in the pattern. Each piece of wood is then individually cut, shaped, and sanded before fitting them together like a jig-saw puzzle and gluing them to a piece of 1/4 inch plywood backing cut to the shape of the final product. Sometimes, additional pieces of plywood are used to raise areas of the pattern to create more depth. Once together, a final layer of finish is applied and the project is complete.

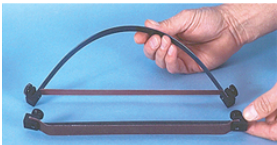
# Lesson Outline

- Topic 1: Tools
- Topic 2: Wood
- Topic 3: Patterns
- Topic 4: Wood Selection & Pattern Transfer
- Topic 5: Cutting
- Topic 6: Shaping
- Topic 7: Finishing
  - Final Sanding & Varnishing
- Topic 8: Mounting

# Topic 1: Tools



- Scroll saw with a remote Foot Switch: Needs to be a good saw with as little of vibrations as possible. Ex. DeWalt and Excalibur
- Assortment of Blades sizes.
- Magnified light: Ex. Luxo
- A dowel or popsicle stick, Eye protection, Dust mask and Vacuum.
- 80 and 100 grit Drum Sander & Sander cleaning stick. Other rotary carving and sanding tools can be helpful.
- Hand sanders with 100, 120, 180, 220 & 340 grit paper.
- Gloves, 1" foam brush, tack cloth, Varnish.
- Optional: Laminating machine



# Lesson 2: Wood

- Any wood, softwood or hardwood, can be used.
- The color and pattern of the wood is most important to obtain color for the pattern. Most patterns are define in shades of wood color; White, Light, Medium Light, Medium, Medium Dark and Dark.
- Western Red Cedar is a good wood to obtain all shades other than white.
- Aspen is good for white areas.
- Woods can be stained or tinted to obtain desired shades. However, most intarsia is made of natural wood color.
- Wooden dowel is used on some projects.

## Topic 2: Wood

- Make sure wood is thoroughly dry because wet or damp wood that has been cut into an intarsia piece can shrink or warp when dry..
- Sort woods by colors or tones. Looks for six shades to be used in projects: W, L, ML M, MD, D. Dampen sections of the wood with water to determine shade, then mark the wood with a permanent marker.
- Mark any splits within the wood completely down the board grain. Do not use these areas with an intarsia piece.
- Store wood in a dry area.

# Topic 3: Patterns

- Intarsia patterns can be:
  - purchased via mail or internet order,
  - found in intarsia books,
  - gotten free in craft and scroll saw magazines,
  - or if you are real creative you can make you own.
- Can be traced to the wood (just one extra copy needed)
- Best practice is to make at 6 to 10 copies, depending on the complexity of the pattern, or purchase sets of patterns (where possible). Most commonly needed is 8 pieces.

# Topic 4: Wood Selection & Pattern Transfer

- Method 1: (not accurate so not the recommended method)
  - Trace each pattern piece onto the wood you wish to use this method.
- Method 2: (recommended method)
  - Mark each pattern part with a number ID. Exp. 1,2 ,3 ,4, etc.
  - Mark pattern parts that will not touch others parts with a yellow marker.
  - Cut each numbered part of the pattern into separate pieces, except when like shades and wood directions are located together.
- Select a wood pattern that best represents the natural look of the area if the project piece (Straight or curved), keeping in mind that grain will bend when shape sanding is done.
- Use repositionable spray glue or a laminating machine to adhere the paper to the wood.
- Glue each pattern piece to the selected piece of wood using the grain direction arrows on the pattern piece.

# Topic 5: Cutting

- Square the Table and blade with a small square.
- Use best size for the wood you are cutting.
  - Use Reverse Skip-Tooth blade.
  - 5 Gold is best for Western Red Cedar
  - 0 to 3 is best for cutting like parts into separate pieces.
  - Blade must be tight.
  - Change blades at the first sign of dullness.
- Make sure you have a flat clean bottom on the board you are cutting. Sand if needed.

## Topic 5: Cutting (cont)

- Test the square of the cut with a small square often.
- Cut to remove the line. Once you are good enough cut to leave half of the line toward the part side.
- Use a angled dowel or popsicle stick to hold down small parts.
- Hold the part down to the table with one finger and guide the parts with your other hand. Remember one hand is to be in control.
- Sand the bottom of the part to make sure burrs or
- Check for fit. Do not remove the pattern paper at this time.

# Topic 6: Shaping

- The main shaping tool will be the drum sander, but other device can be used to obtain final shape.
- Drum sander speed should be around 1750 RPM for best results.
- Rough shape with 80 grit and follow up with 120 grit paper.
- Before removing the paper, transfer the number from the pattern to the back of each piece. Remove paper when fit is good and number has been transferred.
- Study pictures or the actual subject to determine shape. Look for depth of all the section of the subject.
- Plan to sand the parts that are in the background or farthest from the viewer and work forward.

# Topic 6: Shaping (cont)

- Determine which pieces need to be sanded together and make a sanding shims of  $\frac{1}{4}$ " plywood. The parts will be double faced taped, with small strips, to the shims. Do not remove from the sanding shims until shaping is completed.
- Other parts will be shaped separately.
- Put parts side-by-side and mark adjoining sides with a fine mechanical pencil or point pencil. This will give you a reference point when sanding down the connecting parts.
- Try not to sand parts down to less than  $\frac{1}{4}$ " because they can warp before getting them glued down.
- Continues shaping all parts increasing the thickness as the position of the parts becomes closer to the viewer.

# Topic 7: Finishing – Final Sanding

- Hand sand all parts with 180 and 220 grit sandpaper in the direction of the grain.
- Make sure all parts are smooth on the front and no burrs exist on the back side.
- Complete any addition feature work on the parts, such as wood burning or eye parts installation. The white highlight of an eyeball should be the last thing to go on the project prior to varnishing.
- Dry assemble all parts and check that all parts are fitting together well.
- Remove all dust from all parts using a blower and/or a tack cloth. (Recommend a dry style of tack cloth)
- Clean up the immediate surrounding area. (at least an area large enough to layout all the parts for varnishing.)

# Topic 7: Finishing - Varnishing

- There are many finishes on the market but I Judy Gayle Roberts recommends Polyurethane (Varnish) wiping gel. (Bartley or Old Masters are perfect)
- Place a small amount of the gel on the can top and set the top back on top of the can.
- Use a 1" foam brush to apply each coat (2-3 in total), then use a blue auto shop towel or Bounty hand towel to remove the excess. Do Not put gel on the back of the parts.
- Use compressor air to blow out gel from very small slits.
- Let 1<sup>st</sup> coat dry overnight, others 4-6 hours.
- Lightly sand between coats with 320 or 400 grit paper. Use tack cloth after each sanding.

# Topic 8: Mounting

- Get a 1/4" plywood or 1/8" tempered hardboard large enough to mount the intarsia project, called mounting board.
- Assemble the project on a white paper that has been sprayed with a light coat of glue. Make sure all parts fit tightly.
- Use a pencil to draw around the entire project and within any open areas of the project.
- Remove the parts board and lightly spray glue on the back side of the paper and stick to mounting board.
- Use the scroll saw to cut 1/8" inside the marked line. Stain plywood edges dark brown or black. Tempered hardboard does not need stain.
- Use carpenter's glue with a combination of trim or hot glue to mount the parts to the mounting board.
- Install a wall hanger device (mirror or saw tooth) on the back of the project.
- Don't forget to sign and date your work on the mounting board.