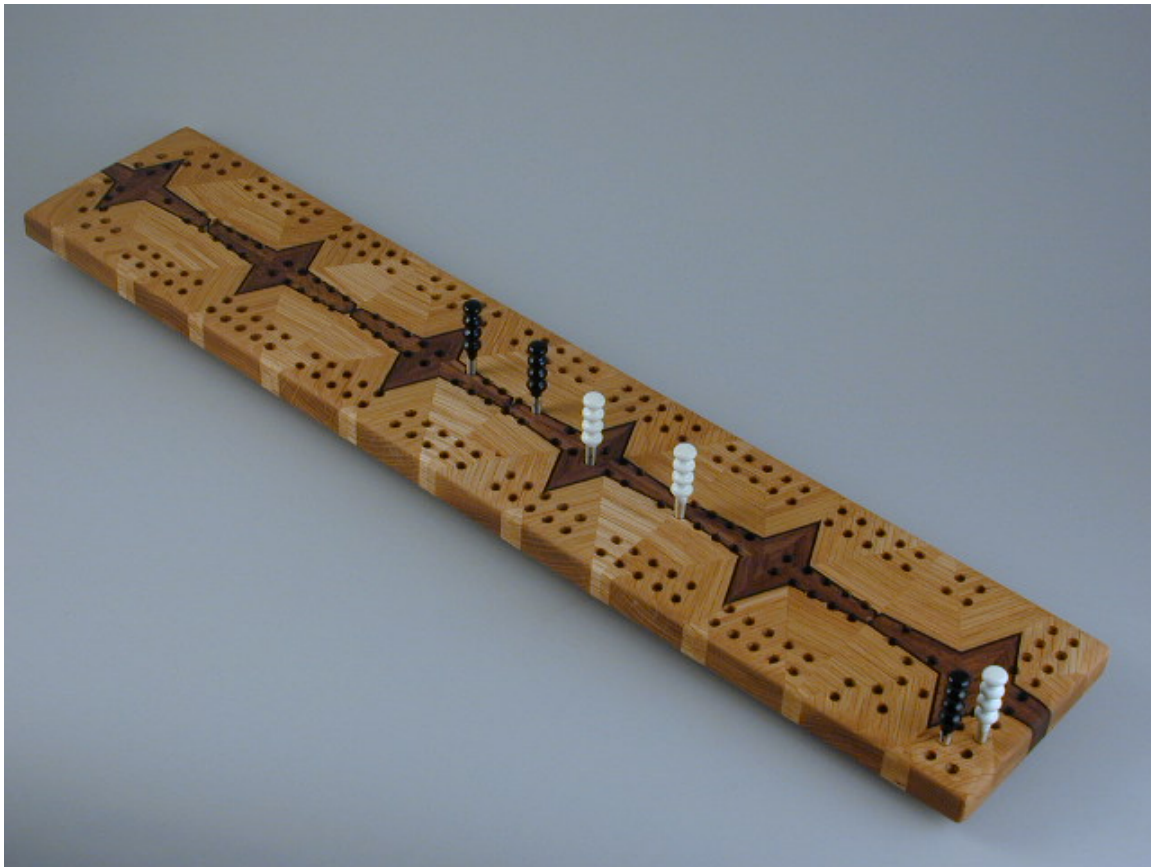


Laminated Cribbage Board

Project Designer	Lloyd Johnson
Version	1.0
Contact Info	mailto:lloyd@woodturnerpro.com
Skill Level	Intermediate
Time to complete	4 hours for 1 board, 16 hours for 8 boards
Cost of materials	\$8 per board



About the Project

I come from a large family and one thing that we have in common is that we like to play cribbage. So for Christmas I decided to make cribbage boards with a laminated design for each family member. Since working with laminations might be new to many of you, I also wanted to do a project that was fairly simple and would be a tutorial on the process of designing and constructing a project from laminated wood.

Although our site is primarily for woodturners, the techniques for creating the laminated designs are the same as shown in this project. I could have turned the pegs but since I wanted this to be a Christmas and not an Easter project, I bought them instead.

Materials and Machinery Required

I chose to make the design from walnut, surrounded by black-dyed veneer and in a field of oak. These woods are relatively inexpensive and readily available but the pattern can be made much more dramatic by substituting woods such as holly, purpleheart, yellowheart, etc. The Lamination PRO software lets you pick what woods you want to use for your laminated board and shows it to you using actual photos of the woods used. If you want to use a wood that was not included in the software, you can simply copy a photo either downloaded from the internet or from a digital camera into the species subdirectory and you're ready to go.

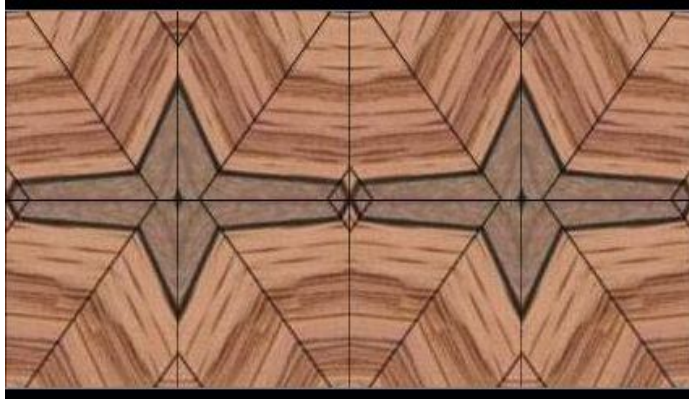
I bought a steel template for drilling the holes from Gene Jestus of Big Lake, Minnesota. His company is Gene's Machine & Welding and his email address is <mailto:jestus@sherbtel.net>. He has templates for 2, 3 or 4 players in various sizes. Since I wanted to make good sized boards, I chose a template made with 3/16" holes as opposed to 1/8" holes. The final size of the boards I made is 22" x 4-3/8". Gene also sells many different sizes and types of pegs in a variety of colors. For mine, I ordered stainless steel pegs which are powder coated in black and white.

The two tools I found to be most useful in this project were the Dubby Cutoff Fixture which makes the accuracy and repeatability of cuts easy and, of course, our own Laminate Laser which was used for positioning cuts for the second generation. Both of these products are available on the Woodturner PRO web site. In addition to a drill press and tablesaw, a thickness planer or drum sander is also required for this project.

Safety

Be sure to read and follow the safety requirements of any tool you use in this project. Cutting laminated wood often results in having fingers close to saw blades. Always wait until the blade has come to a complete stop before attempting to remove strips or waste.

In some of the pictures in this project, the blade guards and sled clamps have been removed for photographic clarity. Failure to correctly use blade guards and sled clamps can result in great injury.



This is the design I created using the Lamination PRO software. The first generation is 30 degrees at 1-1/4" strips and the second generation is 35 degrees through the strips with inclining patterns.

The final width is 4-3/8".



Here are the pieces I'll be using for this project prior to the glue up. A great deal of time is saved by doubling the thickness. I started with 8/4 stock which will be resawn to a final thickness of 3/4".

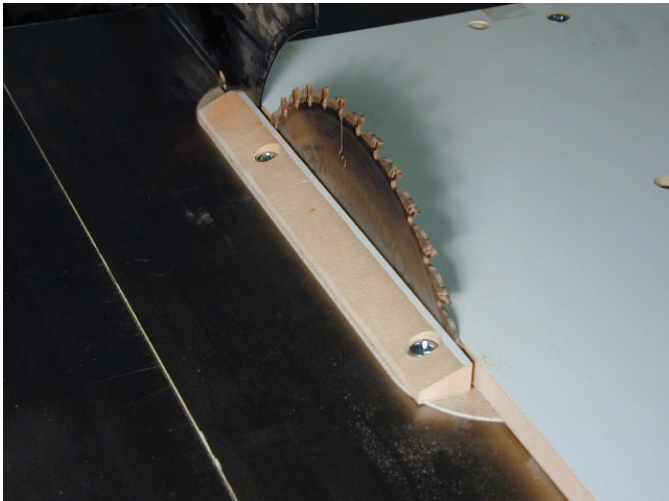
If you can resaw accurately on your bandsaw, you can make layers that are between 1/4" and 1/2" and glue the layer to a solid base.



Sanding the laminated boards at this stage makes the sawing and gluing processes easier.



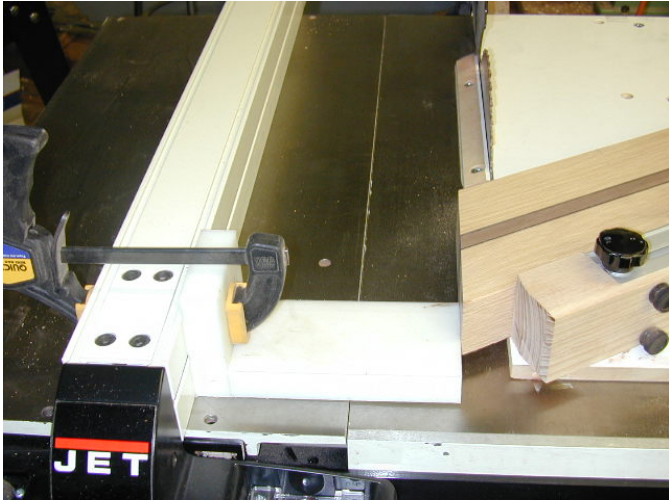
Here are the laminated boards which have been sized according to the Lamination PRO instructions.



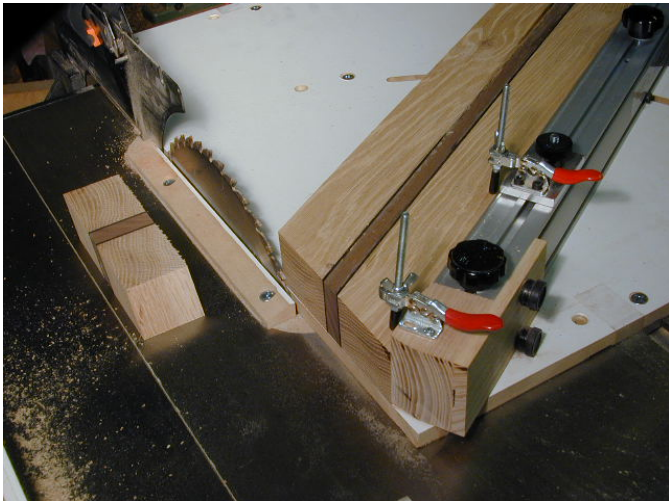
This picture shows a wedge that I have added to the cutoff side of the sawblade. This wedge will cause the sawn pieces to fall away from the blade.



Having set the fence on my Dubby Cutoff Fixture according to the instructions, I make the first cut.



I have clamped a stop block to the fence of my tablesaw to guarantee that all strips will be the exact same width.



This picture shows how nicely (and safely) the strips fall away from the sawblade. Also notice the two hold downs mounted to the fence of the Dubby. This allows me to keep my hands far away from the blade.



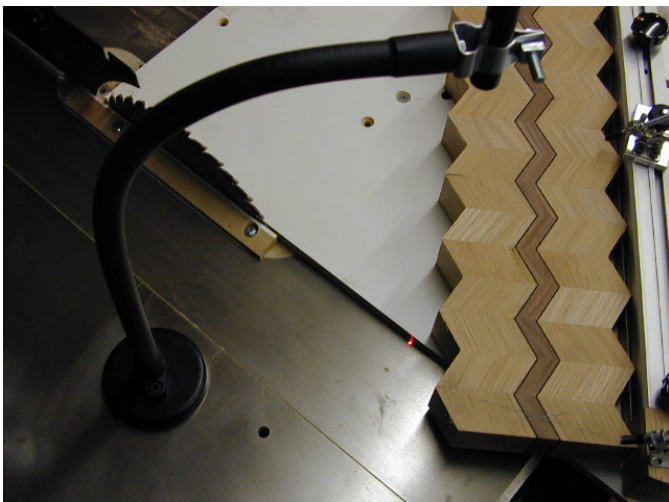
Here are enough strips to make either eight 3/4" or twelve 1/2" cribbage boards.



This is a handy clamp for gluing the strips together. It clamps from the end as well as applying top and bottom pressure. I use waxed paper (the top layer of paper was added after the photo was taken) to keep the clamp from sticking to the glue squeeze out.



The Laminate Laser works best if it is perpendicular to the work surface. Here I use a square to verify that it is square to the table.



I have positioned the laser so that the dot is immediately off the edge of the sled. This dot position should now be perfectly aligned with the tablesaw blade.



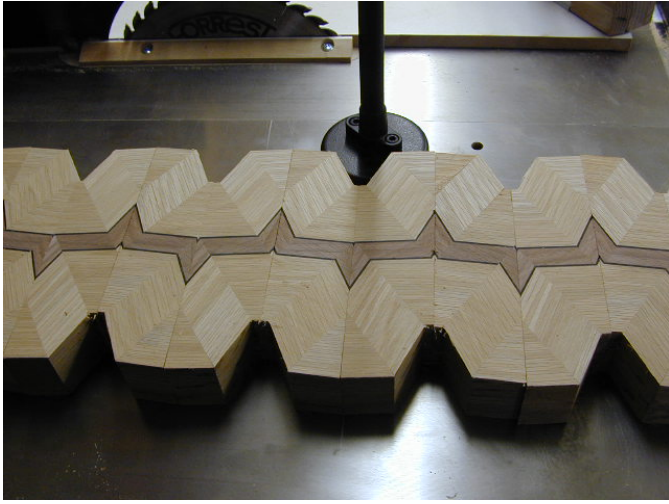
I have marked the exact center of the strip by drawing lines from the opposing corners. According to the Lamination PRO instructions, the saw cuts for the second generation are to be cut through the strips with inclining patterns. It is very important that this first cut is made in the correct spot as the remainder of the cuts will be based on this first cut.



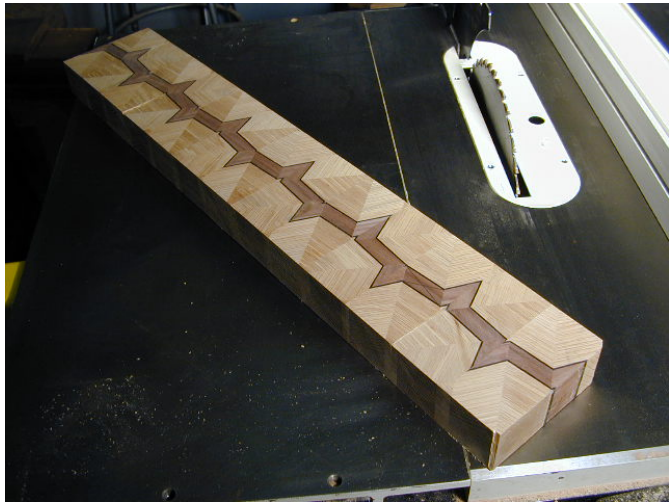
Once the first cut has been made, pull the sled back without moving the board. Now reposition the laser so that the dot is pointing to a very recognizable point.



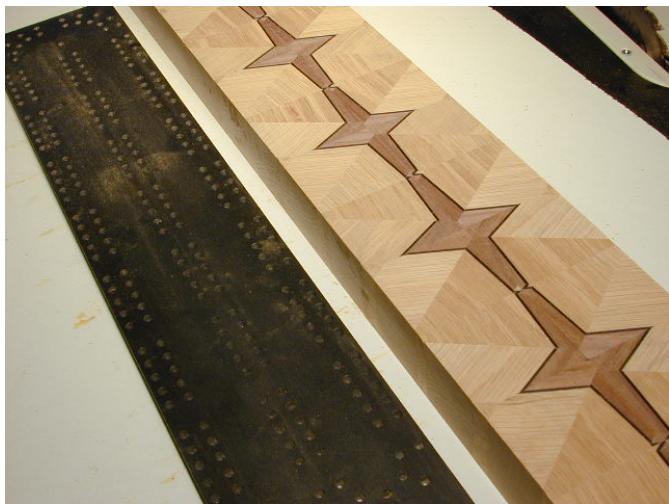
Now slide the board until the exact point on the next repeating unit is under the laser dot. Make the next cut and repeat this process until the entire board has been cut into strips.



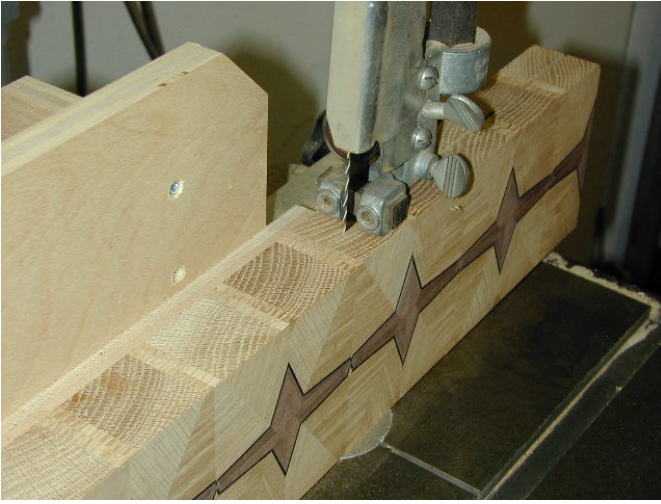
The strips have now been joined to form the second generation.



I've now cut off the excess material leaving a width of 4-1/2". The final lengthwise cut through the center of the board will give a finished width of 4-3/8".



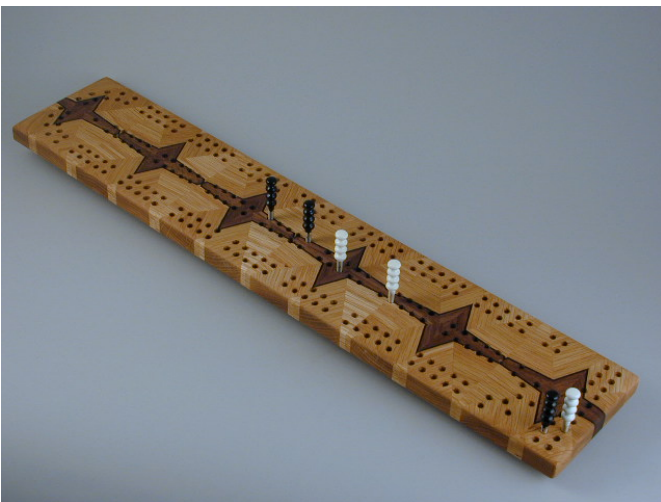
After the lengthwise cut, the top and bottom halves are slid by one strip giving the final desired pattern.



You can use either a bandsaw or tablesaw to cut the board into the final thickness. On the tablesaw, you'll have to raise the sawblade to slightly above the center to make the first pass, then flip the board end-for-end, leaving the same side against the fence to make the second cut.



After final thicknessing, double-side tape the template to the board and drill the holes.



Having used a round-over router bit and final sanding, the board is complete.

This project has shown you one design from Lamination PRO. That leaves approximately 2.5 million that we haven't tried yet. I guess that should keep us busy for awhile!

I'd sure appreciate it if you sent me a picture of your cribbage board.

Thanks, and always work safely,

Lloyd Johnson

<mailto:lloyd@woodturnerpro.com>