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Project: Lighted Shelf

Overview: Create a shelf that can illuminate whatever decorations are placed on top of it. A store bought rope light can be installed or get creative and build your own LED light string. LED light string plans are available on different internet sites.

Materials: Appx 5 sq. feet. A 2"x8" that is six feet long will work fine for this project

Minimum Cutting Area: 10" x 72"

Bit Size: 1/4"

Finishing: Most hardwoods will finish best with a stain and polyurethane. This example was cut from a piece of pine and painted.



Always read the entire project details before starting to cut the file yourself

Account for the thickness of the physical material on hand and the material thickness in the file

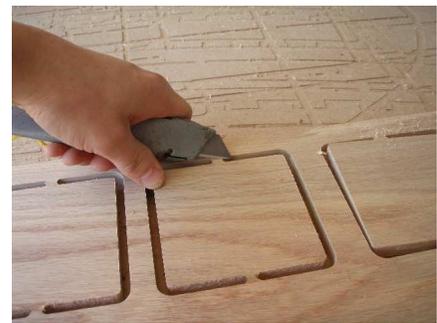
This file is zeroed to the tables surface, Zero your bit to the tables surface



Included with the cut file is a hold down toolpath that shows where it is safe to put screws. Run this file separately from the cut file so you can screw down the work piece, or if you have a different size board or different type of hold down disregard the file.



As the file starts cutting the profile of the parts make sure the cut is going all the way through the work piece and into the table surface. If you need to adjust any part of the file make sure you do not remove the hold down or you will loose position.



Tabs are use to hold all the pieces to the scrap wood attached to them. Use a utility knife to score these edges. Never try to push a piece out without cutting the tab, it will tear the grain on your project. Sand remaining tab flat.



A random orbital sander should be used on all of the surfaces and hand sand paper to knock down the sharp corners. One can also add routed edges if desired.



There are no fasteners used for assembling this project, so a proper glue joint is necessary to hold the pieces together. Spread glue evenly on both surfaces.



Start gluing the shelf together piece by piece. The three back pieces should all be flush on the top side.



Clamp the back pieces together and let them setup before gluing to the top piece. Note the extra board used just for clamping purposes due to the cutout on the back of the back piece.



Flush the back pieces with the back edge of the shelf. A scribed line will help show where to place the glue.



Clamps or weights can be used to attach the back pieces to the bottom of the top piece. Make sure everything is centered and flushed before the glue sets up.



For this example the edges of the boards were routed with a 1/2" roundover. So a caulk line is being installed in the inside corners to be smoothed round to match the routed edge.



This example was given a hammered texture paint to make the end result of the project look like it is a metal shelf.



Included in the files is the cut file for the Plexiglas used for the shelf top.



Rope lights can be found at hardware stores, big box stores and available online. If this project is going to be used in a classroom setting why not try to build your own LED rope light. Plans are available online.



This is what one should have in front of them before final assembly. A shelf glue up, piece of glass cut and a light source.



Start with one end and fish the rope through the channel. Make sure it isn't twisted up too much or the rope will have a tendency to pop out of the grooves.



It won't hurt to put a few dabs of superglue around the edge of the glass. This will help hold it in place. Just be careful not to get it on the glass.

