

## **Project:** Bull using 123D Make by Autodesk

**Overview:** Autodesk has created several software's free to use at http://www.123dapp.com/Using 123D Make users can take any 3d image, slice it into pieces, cut it on the ShopBot then glue it back together as a 3D model. By following these plans other models can be done in the same set of directions as the bull has been created.

Materials: .4" plywood

Minimum Cutting Area: 4' x 8'

Bit Size: 1/4"

**Finishing:** Spray paint to the color of ones choosing.



\*\*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 tool path 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.



All of the pieces are tabbed, so a spindle sander works great to remove the tab remains.



The Autodesk 123D make software labels each slice, so it is nice to keep a computer close by for assembly, this way the user knows which piece connects to each other.



Use a good yellow glue to hold the pieces together. A pin nailer will help keep pieces aligned until the glue has set up.



The horn pieces can become very hard to follow on which piece goes where. Feel free to use your imagination and place the pieces to your liking.



Give the bull some color. It is recommended to paint the body one color and the horns another color.



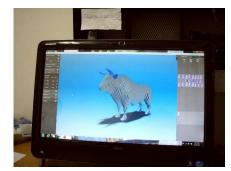
Adding a base to a size of your choosing will help stabilize the bull and add to his physical appearance.



If one wants more than the provided files, please visit http:// www.123dapp.com/ and create your own 3D model.



123D Make is the Autodesk program that is used for slicing these 3D models.



The software is easy to follow along with and sizes and shapes can be manipulated to ones own request.



Included in the bull.crv file is a print of the Autodesk assembly. Simply count from layer 1 up to build the entire bull.



The horns accented with a different color really add to the appearance of the bull.



Simply adding a screw up through the base into the bulls feet will transfer the bull from a simple model to an actual 3D sculpture.



Autodesk 123d Make has so many features and options, and they are only growing. Try a 3D model of your own, of try the bull scaled up or scaled down.