



CARVEWRIGHT™

WOODWORKING SYSTEM

PROJECT
BASIC
DIFFICULTY

PROJECT TUTORIAL



Stallion Profile Weighted Bookends

Designed for CarveWright™ by Michael Tyler - www.carvebuddy.com

This project features full 3D stallion/horsehead profiles on classic-styled, weighted bookend bases. Decorative and functional, these bookends are great for your own use or as items to sell or give as gifts! The finished dimensions of each bookend are approximately 7" tall x 4" wide x 6" deep. The horse head itself is about 2" wide at the widest point.

Each completed bookend weighs about 2½ pounds, for a nice quality "heft".

The project requires no special bits and all components are carved and cut out with just the two standard bits that came with your machine.



Main items you will need:

1) The Project Files (included)

- Horsehead_Sections.mpc
- Bookend_Base.mpc
- Bookend_Backboard.mpc

2) Boards with the following dimensions:

Horseheads (two boards): .75" x 7" x 34"

Bases (one board): .75" x 9" x 19"

Backboards (one board): .75" x 11" x 14"

NOTE: Do not use boards that are smaller than specified above!

3) Zinc-Plated Steel BB's

4) Felt and Cork self-stick sheets

5) Wood Screws (four #6 x 1")

6) Sandpaper, drill, clamps, wood glue, epoxy glue, wood filler, wood stain and/or paint and clear finish

7) A Dremel-type rotary tool with assorted sanding wheels and bits to sand small details and speed up preparation for finishing.



Stallion Profile Weighted Bookends

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STEP 1

Start your Designer software and open the .mpc files. (Fig. 1a)

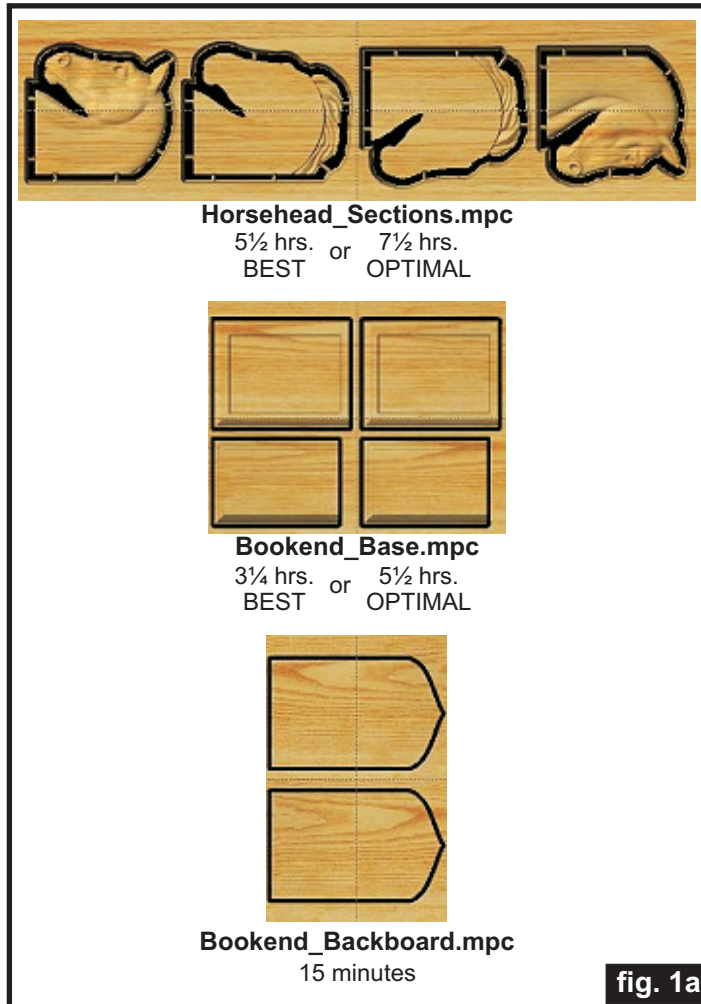


fig. 1a

All you need to do at this point is upload the project files to your memory card. (File/Upload). You may get a pop-up window with an “Auto-Jig” warning message (Fig. 1b)

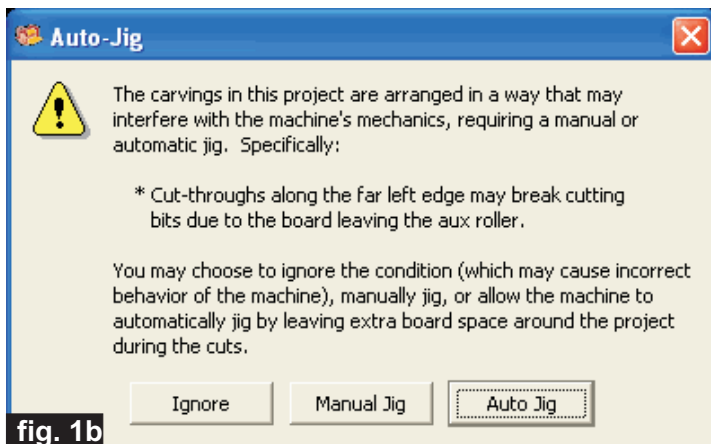


fig. 1b

If you do see the message, you may safely click on “Ignore” because our actual boards will be large enough that it won’t cause any problems at all. After each project is compiled, select “Best” or “Optimal” for the File Quality setting.

Click “OK” and upload each mpc project file to your memory card. Insert the card into your machine and load a board that measures the appropriate dimension specified for each particular mpc (see page 1 for board dimensions). Turn on your machine and proceed with the standard project setup in Step 2...

STEP 2

You will see “Project Menu” on your LCD display. Press “1” then scroll to the **Horsehead_Sections.mpc** and press the green ENTER button to select it. Then follow the additional prompts....

- **Stay Under Rollers** - press 1) YES
- **DO NOT RESIZE or SCALE the projects!** If ever prompted, always keep the original size. **No scaling!**
- **How to Place...** - press 1) Center
- **Cut Board to Size?** - press 2) NO
- **Select Carving Bit: 1/16" Carving** - Press the green ENTER button. (Moves to center of machine.)
- **Load Bit: 1/16" Carving** - Insert your 1/16" carving bit, then press the green ENTER button. After homing and finding surface, the machine will begin the carving process. It leaves little tabs to hold the parts in the board.
- This carve produces a lot of sawdust. If you do not use a Dust Collection system, you may want to stop the machine periodically to manually remove some of the sawdust buildup, two or three times during the carve.
- When the machine is finished, remove your board and clean your machine. **Load another board and run the Horsehead_Sections project again to make your second set of horse head sections.**
- When the machine is finished, remove your board and clean your machine before running the next mpc.

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Stallion Profile Weighted Bookends

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STEP 2 (cont.)

• Scroll to the **Bookend_Base.mpc**, load your board and press the green ENTER button. Then follow the setup procedure below....

• **Stay Under Rollers** - press 1) YES

• **DO NOT RESIZE or SCALE the projects!** If ever prompted, always keep the original size. **No scaling!**

• **How to Place...** - press 1) Center

• **Cut Board to Size?** - press 2) NO

• **Select Vector Bit: 1/8" Cutting** - Press ENTER.
(Moves to center of machine.)

• **Load Vector Bit:1/8" Cutting** -Insert your 1/8" cutting bit, then press the green ENTER button.

• **Select Cutting Bit: 1/8" Cutting** - Just press the green ENTER button, since the bit is already installed.

• **Select Carving Bit: 1/16" Carving** - Press the green ENTER button. (Moves to center of machine.)

• **Load Bit: 1/16" Carving** - Remove the 1/8" cutting bit, and insert your 1/16" carving bit, then press the green ENTER button. After homing and finding surface, the machine will begin the carving process.

• **After it is done carving, you will be prompted to load your 1/8" cutting bit.** Remove the 1/16" carving bit, and insert your 1/8" cutting bit, then press the green ENTER button. The machine will now proceed to perform the recessed pocket areas first, then the cutouts after that. Tabs will hold the parts in the board. When finished, remove your board and clean your machine of excess sawdust.

• Scroll to the **Bookend_Backboard.mpc**, load your board and press the green ENTER button. Then follow the setup procedure...

• **Stay Under Rollers** - press 1) YES

• **DO NOT RESIZE or SCALE the projects!** If ever prompted, always keep the original size. **No scaling!**

STEP 2 (cont.)

• **How to Place...** - press 1) Center

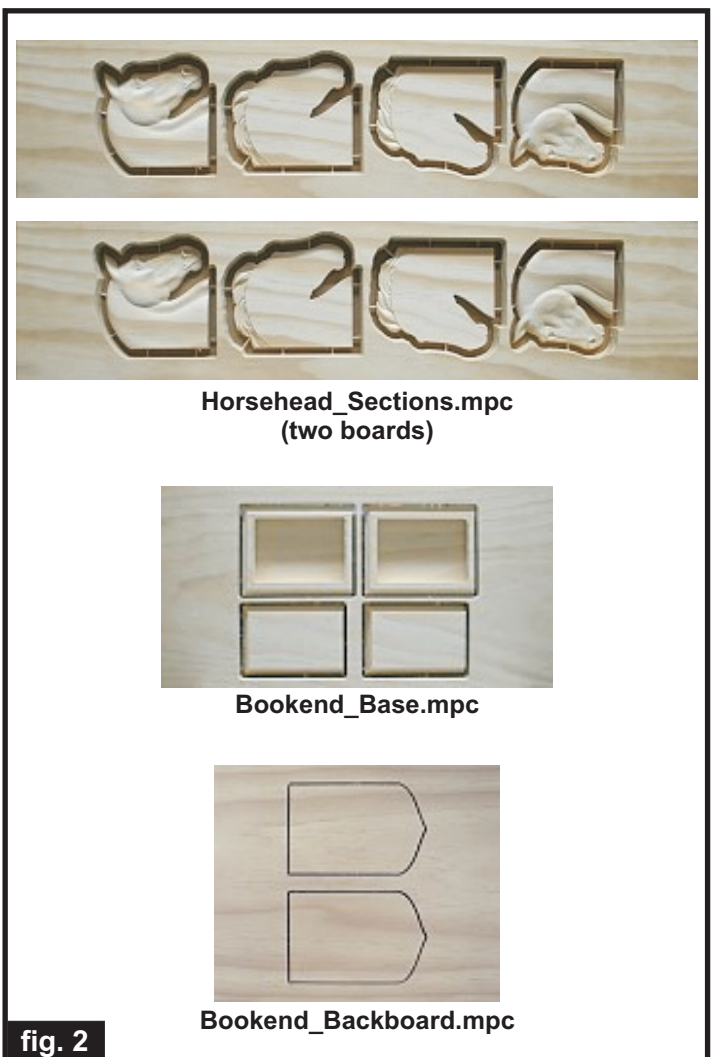
• **Cut Board to Size?** - press 2) NO

• **Select Cutting Bit: 1/8" Cutting** - Press ENTER.
(Moves to center of machine.)

• **Load Bit:1/8" Cutting** -Insert your 1/8" cutting bit, then press the green ENTER button.

• The machine will now proceed to perform the cutouts. It leaves little tabs to hold the parts in the board. When finished, turn off your machine before removing the memory card. Remove your board and clean your machine of excess sawdust.

Your boards will look like this...(fig. 2)



Stallion Profile Weighted Bookends

(cont.)

STEP 3

Separate all the pieces from the boards with a utility knife or hobby saw, sand off the tabs. Also sand the bottom and rear flat areas of the horse with a tabletop belt sander or by hand with the flat areas overhanging the square edge of a workbench as a guide. These areas will be slightly tapered due to the taper of the carving bit. Left as-is, the horse head will not sit flush with the base and the backboard. It is easier to sand these flat areas before the final glue-up. (fig. 3a, 3b, 3c)



fig. 3a



fig. 3b



fig. 3c

STEP 4

Sand the mane details before glue-up, since you won't be able to reach these areas after gluing. (fig. 4a)

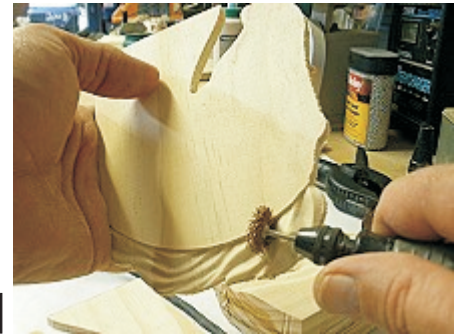


fig. 4a

Glue the sections of each horse head together, starting with the two parts for each half, then gluing the two already glued halves together to form the complete profile. Give priority to matching up the profiles rather than the flat edge areas. You can "touch-up" sand the flat areas later, if required. (fig. 4b)



fig. 4b



Clamp the sections together until the glue is completely cured. (fig. 4c)

fig. 4c

Remove the clamps and final sand the horse heads. Use a Dremel-type tool to make the job go faster. I used 3M Radial Bristle Discs to sand the details, and various abrasive bits/sanders for smoothing the seams of the glue-up. (fig. 4d)

I also used emery boards (nail files) and sandpaper to get into tight areas. Fill any slight seam gaps with wood filler, if necessary.



fig. 4d

Stallion Profile Weighted Bookends

(cont.)

STEP 5

Sand the base and backboard components. Fill the base cavity with BB's to add weight to the bookends. Shake the BB's down several times to fit as many BB's as you can into the cavity. (fig. 5a)



fig. 5a

Glue the base top over the cavity. Make sure it is centered and flush with the back of the lower base. Glue the backboard to the base and clamp until the glue is set. (fig. 5b)



fig. 5b

Test fit the horse heads. Sand the horse head flat areas so they fit tightly in the corner formed by the base and backboard.

STEP 6 - Finishing

Apply stain/paint and clearcoat of your choice. Here's what I used on my Stallion Profile Weighted Bookends made from Select Pine wood:

Base:

- Minwax English Chestnut #233 stain
- three coats Krylon Clear Gloss Acrylic (spray can)
- two coats of Minwax water-based Satin polycrylic (brushed on), sanding with 400-grit wet/dry sandpaper between coats

Horse Heads:

- two coats of Krylon Ruddy Brown Primer, sanding between coats
- three coats of Krylon FUSION Brown Metallic Hammered Finish spray paint

STEP 6 - Final Assembly



Use quick-set Epoxy to glue the horse heads to the bases. (fig. 6a)

fig. 6a

Drill two countersunk holes through the backboard into the very bottom base layer and through the backboard into the back of the horse head. (fig. 6b)



fig. 6b



Screw in two 1" long #6 screws in each backboard to fully secure the horse heads, base and back-board assemblies. (fig. 6c)

fig. 6c

Trace an outline of the base and cut two pieces out of self-adhesive sheet cork for the base bottoms to add friction and protect shelf surfaces. Trace and cut two pieces of self-adhesive felt for the backboards to hide the countersunk screw holes and add a nice, finished touch to your bookends. (fig. 6d)



fig. 6d

IN CONCLUSION

I hope you had fun making this project and enjoy it for many years to come!

Happy Carving!

Michael



Materials Source Page

- **3M Radial Bristle Discs** from www.mcmaster.com
(stack 3 discs at a time on your rotary tool mandrel)
 80-grit: part # 4494A19
 220-grit: part # 4494A18



Items Purchased at Lowes™

- **Minwax Stain - English Chestnut #233**
- **Minwax water-based Satin Polycrylic**
- **Disposable Brushes and Paint Rags**
- **A Roll of Cork Self-stick Shelf Sheeting**

Items Purchased at Michael's Arts & Crafts™



Self-Stick Felt Sheets

Items Purchased at WalMart™

- **Krylon Ruddy Brown Primer**
- **Krylon Clear Gloss Acrylic**
- **Krylon Fusion Brown Metallic Hammered Finish**
- **Zinc-Plated Steel BB's**



Zinc-Plated Steel BB's
from WalMart™

Additional Resources

RESOURCES...

There are numerous resources for the CarveWright/CompuCarve owner to make their experience with these machines much more enjoyable.

Every owner should join the CarveWright User Forum (<http://forum.carvewright.com/forum.php>) where fellow users share their experiences and knowledge with these machines on a daily basis. It is a FREE service that you will surely appreciate. A handy Search Feature helps you find answers to any questions you may have.

