

CNC ROUTER GUIDE



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Step1 – Tool Path Creation

- Open your design file in V-Carve Pro
- Define project material size and thickness.
- Add or change design elements as needed, including part nesting. Make sure vector paths are continuous using “join” tool if required.
- Add tool paths to selected vectors as desired. Choose path type, router bit type, depth, direction... Remember to add tabs to parts that will be cut out.
- Simulate toolpaths to check for errors.
- Create ShopBot G-code file (.sbp) by saving tool path.

Step2 – Machine Preparation

- Power machine on. Reset drive relays (blue button on right side of shopbot frame).
- Add spoiler material beneath project material if cutting all the way through project material.
- Place project material on table surface. Ensure table surface is clean and flat.
- Secure project material to table using preferred method (clamps, screws, pins).
- Install appropriate router bit.
- Open ShopBot control software.
- Click “Try with another port”
- Click “Find ShopBot Connection”
- Click “OK”
- Click “OK”
- Use yellow control box located to the right of the preview menu, in the red rectangle to move the router.
- Use arrows on keyboard to position router bit over project material home position, in the same position you set in VCarve. (Page Up and Page Down control z-axis) .
 - Exit out of yellow control box
- Zero x-axis and y-axis using “zero” drop-down menu, select “zero x/y”
- Attach vacuum skirt.
- Place Z-Plate under bit, and attach alligator clip to the bit.
- Click “Zero z-axis w/ Zzero Plate” located under “cuts” drop-down menu.
 - Click “enter”
 - After “” prompt, put away zero plate and alligator clip.
 - Click “OK”

Step3 – Project Dry Run

- Raise z-axis to safe height above material. Zero z-axis (temporary for dry run).
- Open tool path file (xxx.sbp) using the G-code editor. Make changes as needed, including feed rate changes. Save and close file.
- Load path file in ShopBot control software.
- Perform dry run (without powering spindle).
 - Verify that tool path is correct and positioned over material.
 - Ensure no clamps or screws will interfere with the router path.

- Visualize feed rate. Adjust if necessary.
- Repeat as needed.
- Jog home. Zero the z-axis using the zero plate (C2 in the “Cuts” menu).

Step4 – Let the Chips Fly!

- Double check the following: Tool path file, Home position, Material placement and hold down...
- Load part file in ShopBot control software.
- Click the green “start”
- Power on the spindle and the dust collector.
- Click “Ok”

Step5 – Cleanup (Leave it better than you found it!)