

Desktop MAX Quick Start Guide



*Tool shown with optional spindle and speed controller.

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We make
the tools
for making the
future.

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Revision History

Date:	ECO:	Change:	Author:
2015 12 03		New Release	M. Cummings

The purpose of this guide

This quick start guide covers the basics of CNC digital routing using the ShopBot Desktop MAX. It also provides essential information about machine set up and operation - information that will be required almost every time the machine is used. Don't hesitate to call technical support at 1-888-680-4466 if there are any questions. Also, feel free to visit the friendly and active forum at TalkShopBot.com as many questions may already be answered there.

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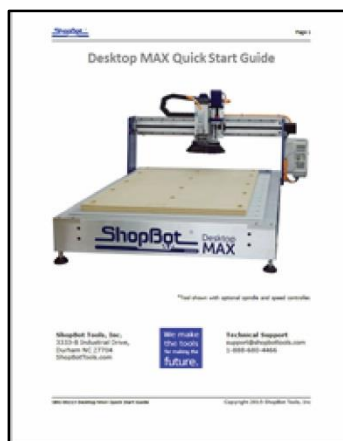
What's in the crate?

Desktop MAX D3624

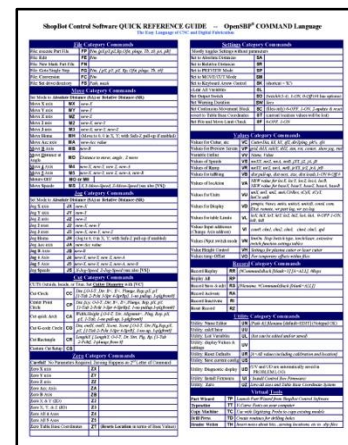
Shown with optional spindle and speed controller.



Thumb drive with software



Quick-Start Guide



Command reference guide



1/4" and 1/2" spindle or router collet sets



Collet wrenches



Bit kit (Optional)



Z zero plate assembly



Power cord



Hold down bolts for making DIY deck

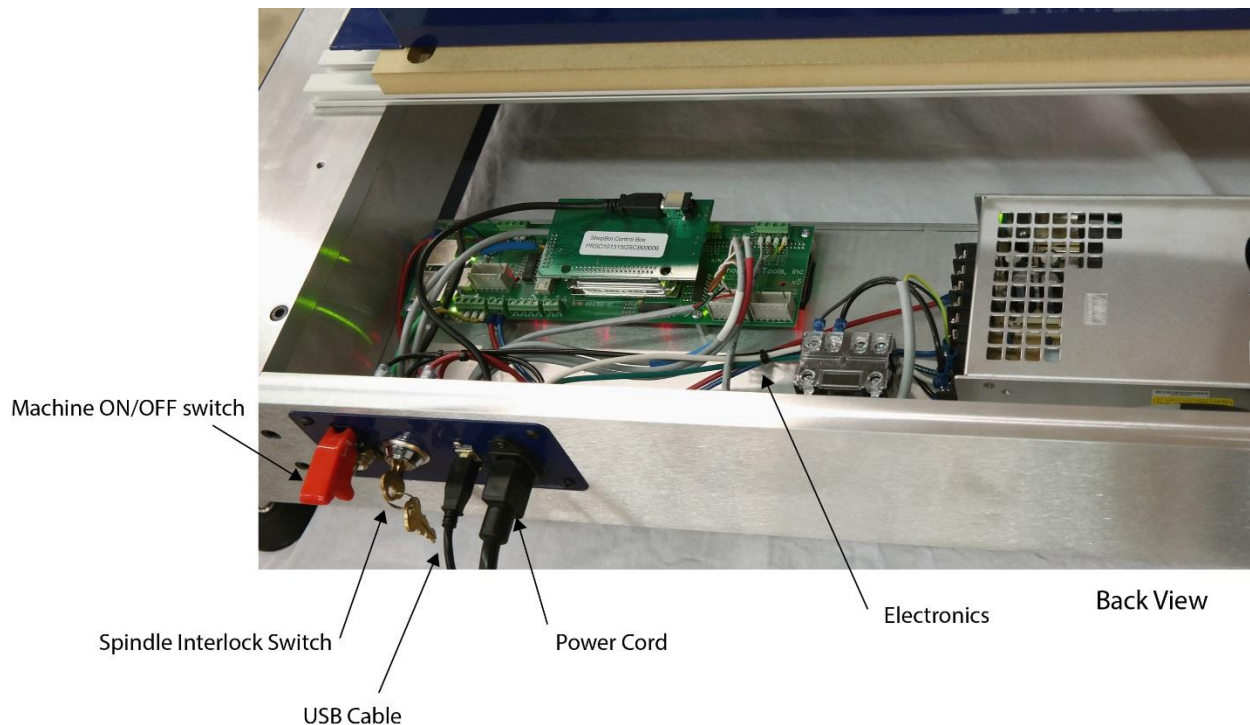
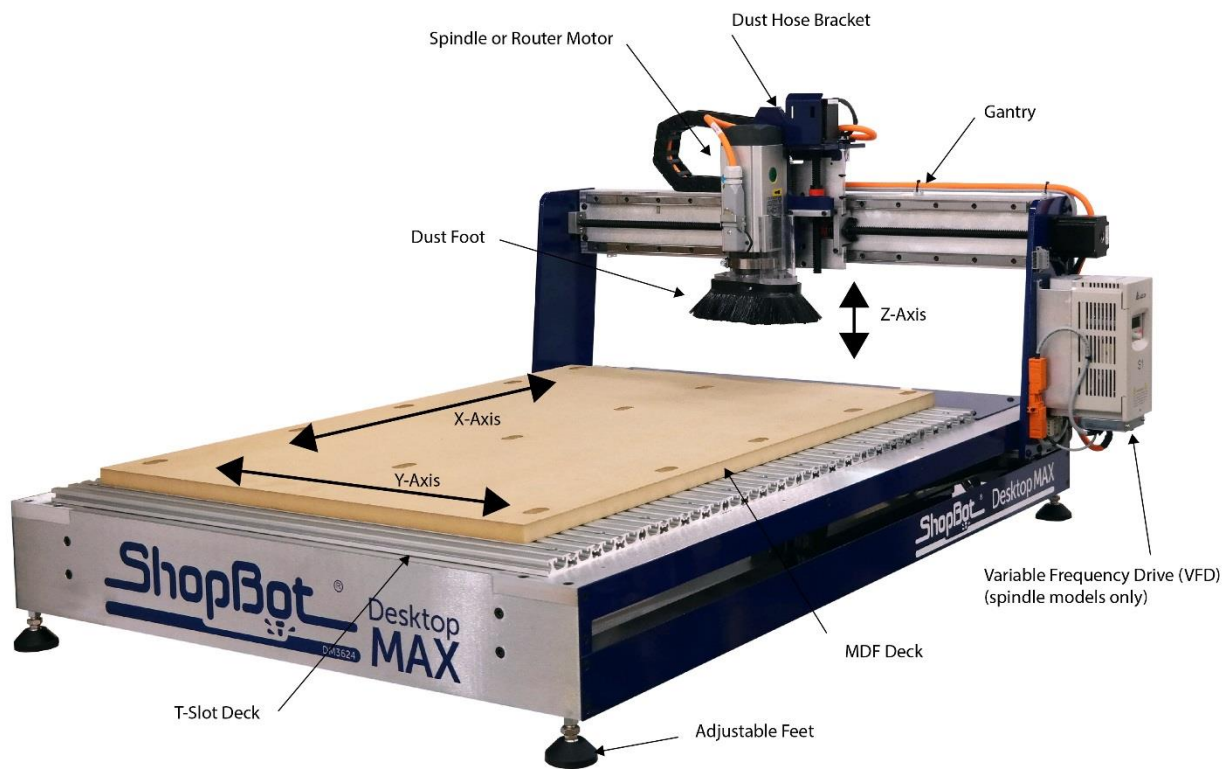


USB cord



Spindle Interlock Keys

ShopBot Desktop MAX overview - Model DT3624



Uncrating



The ShopBot Desktop MAX comes securely crated for shipping. Use a claw hammer to remove each of the four metal clips. **Use caution, clips are under tension and may spring during removal.**

Remove all tools and accessories packed with the Desktop MAX.

Remove packing materials and sides of crate.

Lift Desktop MAX onto a sturdy table or bench.

CAUTION:

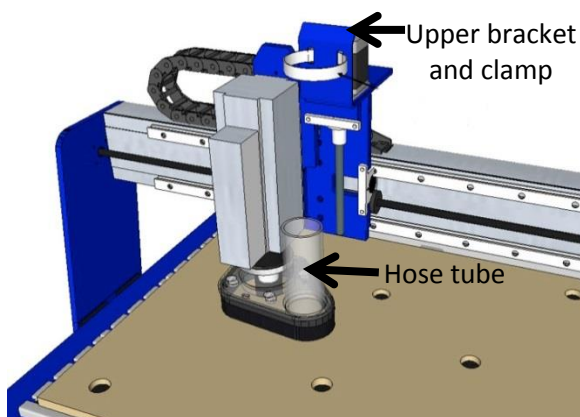
The ShopBot Desktop MAX is a substantial tool and depending on accessories, it can weigh from 175 to 190 lbs. Have AT LEAST one more person help lift the tool.



Assemble a few parts



Adjust leveling feet with 5/8" wrench so the tool doesn't rock, then use 9/16" wrench and nuts to lock the leveling feet into position.



If the Desktop MAX is equipped with dust collector, slide the supplied hose over the vertical hose tube and attach hose to the upper bracket with hose clamp. NOTE: The bottom of hose should not be clamped so it can freely slide up and down on the tube during operation.

Refer to [Desktop Dust Collection Setup Manual](#) in Desktop section of Shopbot Docs at Shopbottools.com.

Load software

Minimum computer requirements:

A PC that is running Windows XP, Vista (Home Premium / Business or higher), Windows 7, or Windows 8. We recommend the equivalent of a dual core (or higher) Pentium processor and a minimum of 2GB RAM (4GB preferred).

The ShopBot Desktop MAX requires one USB port for connection to the tool. USB ports for a mouse, keyboard, and other USB peripherals may be necessary. An open USB port to transfer part files to the computer from a thumb drive is also helpful.

Special note for schools: This software runs best with full administrative permissions enabled. We strongly advise against setting up separate administrator and user accounts on the control computer.

For international customers: The computer used to run the machine **MUST** have the language set to “English (United States)” in order for the software to run correctly.

Computer configuration

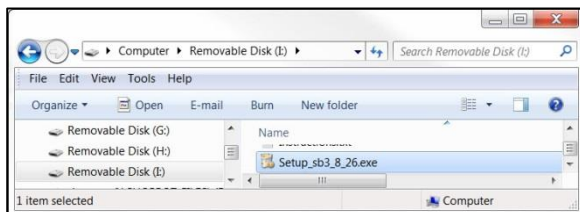
Important: Some programs and features will interrupt the proper installation of ShopBot 3 control software. To ensure trouble free installation and operation, ShopBot recommends performing the following actions before installation.

- ☐ Install program using administrative account.
- ☐ Set User Account Control (UAC, not applicable to Windows XP) to “Never Notify.”
- ☐ Disable network connection.
- ☐ Disable security and antivirus software.
- ☐ Make sure the USB cable from the ShopBot is **not** plugged in.



Locate the ShopBot thumb drive that came with the Desktop MAX and plug it into computer.

Access file name “setup_sb3_8_32” in control software folder. Follow the setup wizard to install file.



Access file name “vcarveproshopboteditionv8013_setup” in design software folder. Follow the setup wizard to install file.



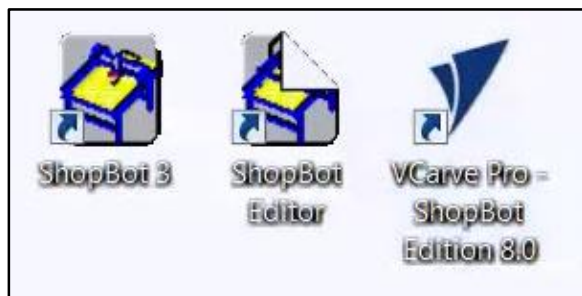
Ensure software codes provided via e-mail are handy. These can be copied and pasted when the information is requested during installation.

Follow the prompts to install the software packages.

On the last screen, click “Finish” to complete the software setup.

NOTE:

Microsoft Windows sometimes gives a message saying there is an issue with the driver installation. Temporarily ignore this message and proceed with the rest of the software installation and machine setup. Try launching the ShopBot 3 software by clicking the shortcut icon on the computer desktop (Covered in “Launch the Software” section below). If ShopBot 3 fails to launch, turn to page 39 (“Help installing ShopBot Drivers on Microsoft Windows”).



These three shortcut icons should be present on the desktop.

Connect the power

IMPORTANT SAFETY NOTE



Off / emergency stop

If a situation arises where it is necessary to terminate the tool action abruptly to prevent damage to people, material, or the tool, push down the red off/emergency stop switch. This will completely cut power to the machine and stop all movement.

Note that the presence of an emergency stop switch does not alter the need for good safety procedures while operating the ShopBot.

For more info: See the section “Restarting after an emergency shut down”.

For non-emergencies, simply hit the space bar on the keyboard. This will pause the tool while maintaining XYZ coordinates, and allow the cut file to resume without starting over.



Power Cord

Install power cord into back of the Desktop MAX.



Plug in power cord to a standard 110 volt 15 amp receptacle.

Note: Do not use a ground fault interrupt (GFI) circuit.



USB Cable

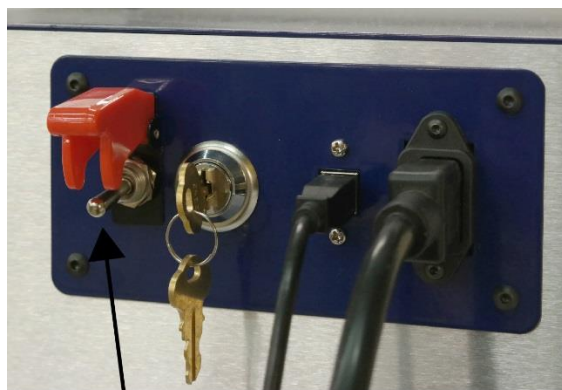
Install USB cable into back of the machine.



USB Port

Connect USB cable to computer and Windows will recognize a "New Device."

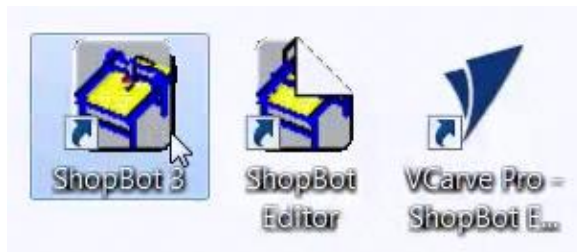
NOTE: It is best to use the same USB port every time the ShopBot is attached to the computer.



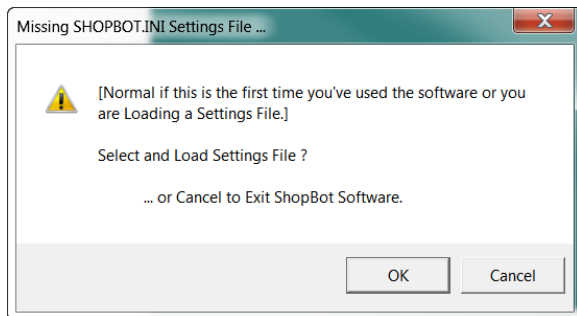
ON Switch

Turn ON machine by flipping up the red cap and toggle switch on the right side of the machine.

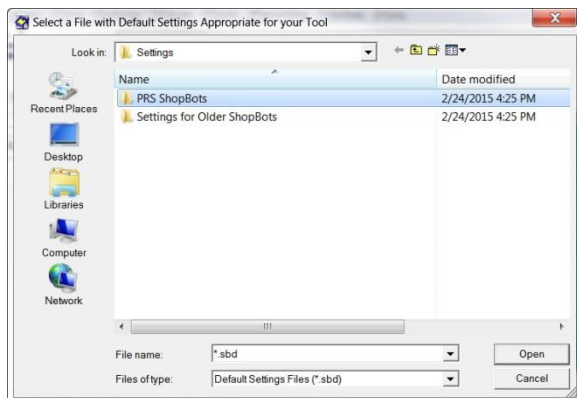
Launch software



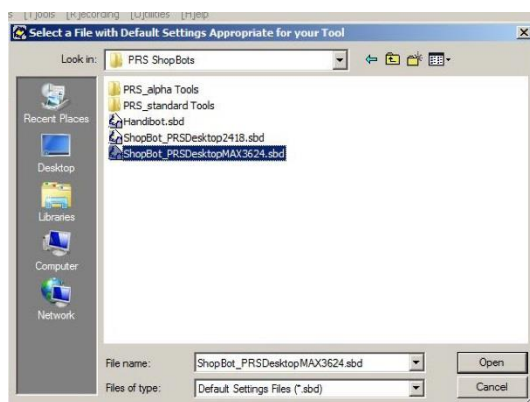
Double-click the ShopBot 3 icon to open the machine's control program.



The first time the program is opened, there will not be a settings file for the machine. Click "OK" and a prompt will appear to load a settings file for the machine.



Access the folder for PRS ShopBots.



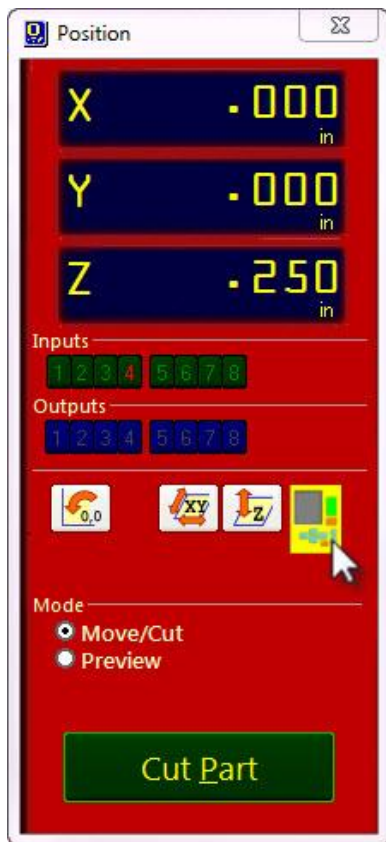
Find the desktop MAX setting file, "ShopBot_PRSDesktopMAX3624.sbd".

(NOTE: If this file is not available, it can also be found at <http://www.shopbottools.com/mSupport/controlsoftware.htm>.)

Save file to thumb drive for future reference.

Make it move

The “Easy” control panel



This panel provides access to essential machine information and controls. The following steps will walk through some of the most frequently used controls and the steps of installing a bit, zeroing the machine’s three axes, and cutting a couple of sample projects.

Click the yellow button to bring up the “KeyPad” panel.

The KeyPad



This window allows the user to manually move the X, Y, and Z axes of the machine. Click on the blue arrows to move the spindle/router and gantry.

X and Y axes can also be moved with the cursor buttons on the computer keyboard. Use the “Page Up” and “Page Down” buttons on the keyboard to move the Z axis up and down.

Move the spindle/router to a safe Z position below the Z proximity switch and near the middle of the deck.

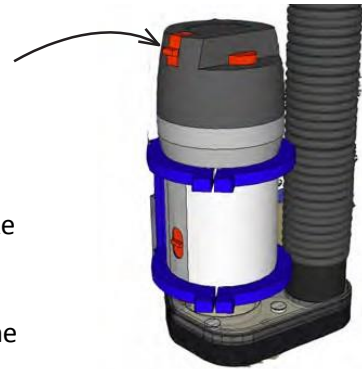
Click on the X in the upper right corner to close yellow KeyPad.

SWITCH OFF ROUTER OR SPINDLE FIRST

Switch turned OFF

If machine has a ROUTER, make sure the switch is turned OFF.

For BOTH ROUTERS and SPINDLES, make sure the switch under the main power switch is turned to OFF (counter-clockwise). This will cut the power to the spindle or router.



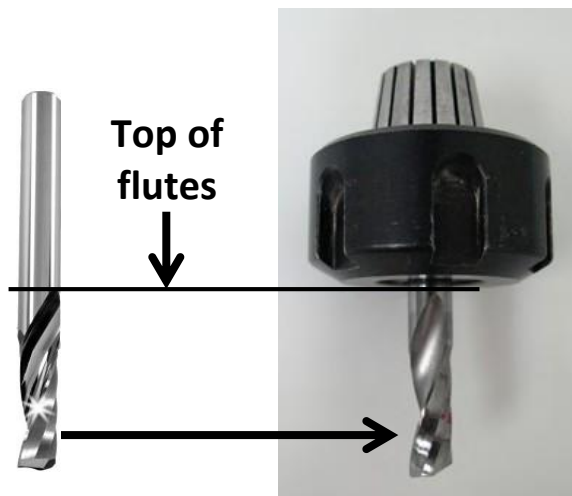
Locate both the 1/4" collet and the spindle collet nut for spindle machines.



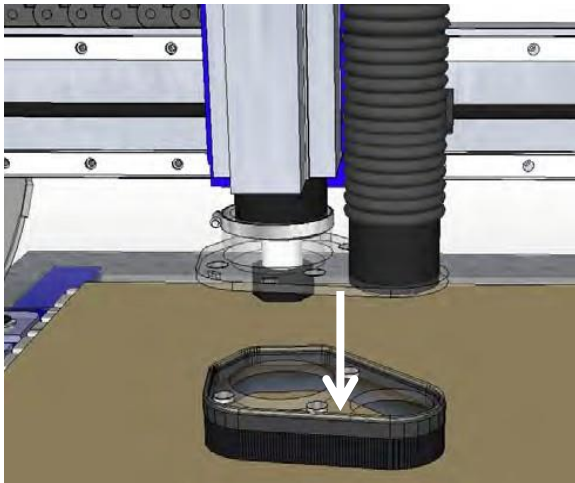
For router machines, the collet nut and collet come locked together as a single unit.



Press the spindle collet into the spindle nut. Listen for a “click.” If the collet doesn’t seat properly, press it in at a slight angle. Confirm that the collet is snapped in place by holding the nut upside-down (shown in the photo to the left) and letting the collet hang freely. It should not fall out.



Locate the 1/4” diameter upcut spiral bit that came with the machine. Slide bit into collet. Ideally, the shank of the bit should fill up at least 75% of the collet to provide sufficient gripping surface. It’s OK if the shank of a bit extends above the top of the collet (maximum 3/8” of excess). Make sure that the collet grips only the shank of the bit, keeping the top edge of the flutes outside of the collet.



Remove bottom of dust foot by pushing it down. It's attached with magnets, which makes it easy to remove. Set dust foot out of the way.



Hold spindle to keep it from turning, and hand-thread collet nut onto spindle. It should go on very easily. If resistance is encountered, do NOT apply force. Stop and try again until it goes smoothly. Once the nut is finger-tight, reposition the bit if it has slipped.



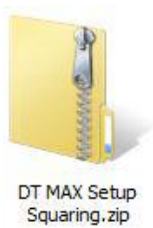
Use the included wrenches to fully tighten nut.

Over-tightening will make collet difficult to remove and may damage it. Under-tightening will allow the bit to slip during operation.

A firm one-hand squeeze is usually sufficient - a torque of approximately 59 ft-lbs.



Stand clear of the tool when it is in motion, preferably standing near the computer that is controlling the tool's operation. A ShopBot is a very safe power tool as long as safety procedures are followed.



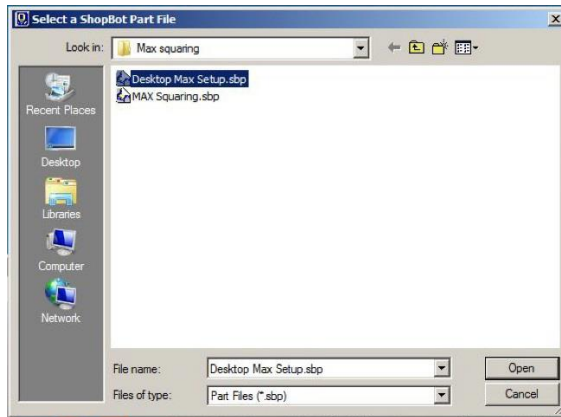
Go to www.shopbottools.com > ShopBot Docs > Desktop MAX > Files > DT MAX Machine setup Files and download the DT MAX Setup Squaring file. Open the zipped folder containing the setup and squaring .sbp file.

These files will set the MAX proximity switch offsets, then run a squaring program, which will run the gantry along the Y axis until it hits the end. The motors will sound like they are grinding, but in actuality, this is NOT damaging the machine, nor is it causing any shortage of product lifespan.

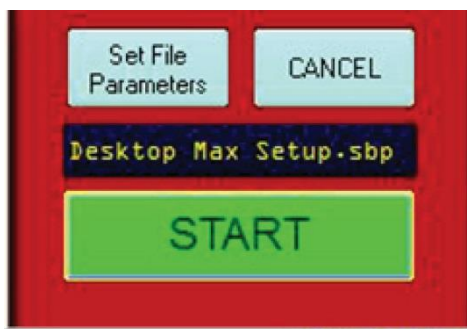


Open zipped folder and copy the two files to a convenient location.

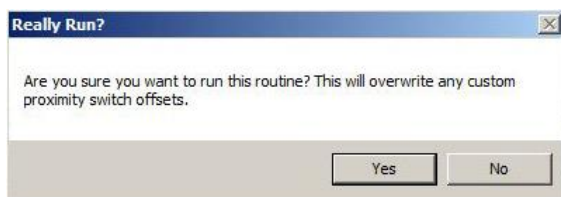
Ensure Desktop MAX is connected to computer and powered on. Start SB3, then press "Cut Part" button.



Locate and open “Desktop MAX Setup.sbp”.



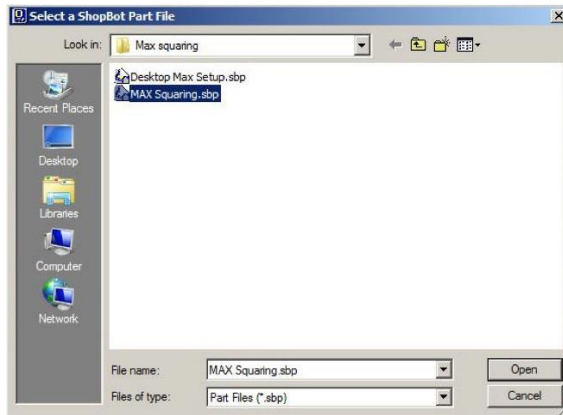
Click START.



When prompted, click “Yes” to run routine.



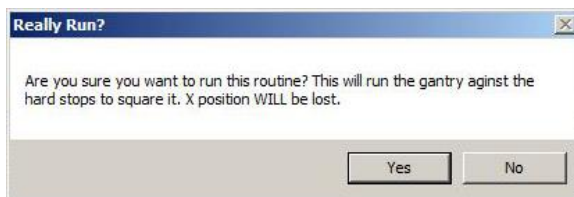
Press “Cut Part” again.



Locate and open "MAX Squaring.sbp".



Click START to run the squaring routine.



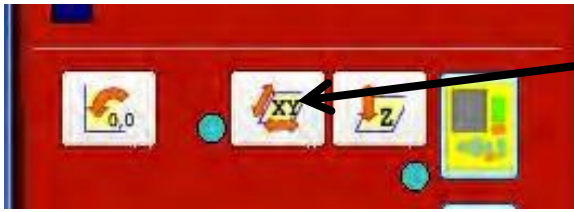
When prompted, click "Yes" to run routine.

IMPORTANT!



This procedure should be performed any time the machine is crashed, after the gantry is moved by hand with the power turned off, or the after the machine is moved, to ensure that the gantry is square. If this process is not performed, the cut program could be noticeably off.

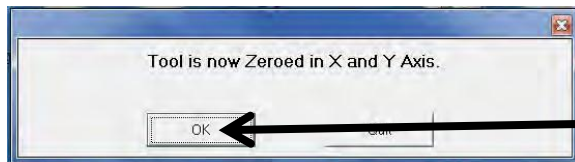
Zero the X and Y axes



Click the middle white button marked with the X, Y. The machine will now move through an automatic routine that zeroes the X and Y axes to the left lower (front) corner of the machine using the proximity switches.



The X and Y locations in the control panel should now read .000 in.



NOTE: Ensure the setup and squaring process (see page 19) has been run prior to performing this step!

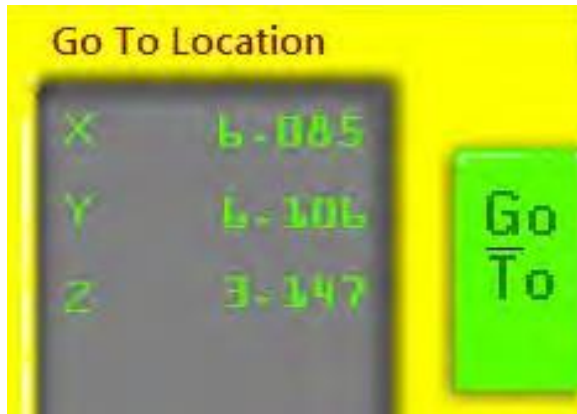
Click OK when this message appears



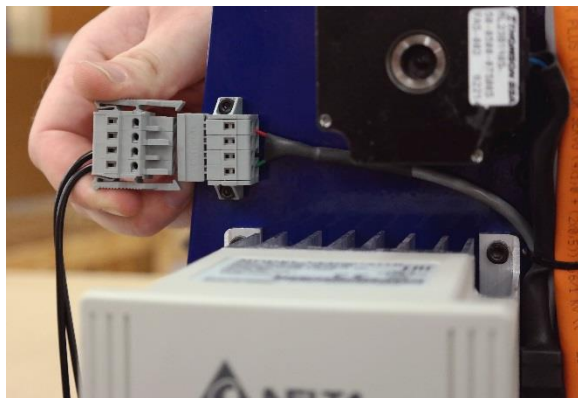
The spindle/router should now be in the left lower (front) corner of the deck. X=0, Y=0 position.

Zero the Z axis

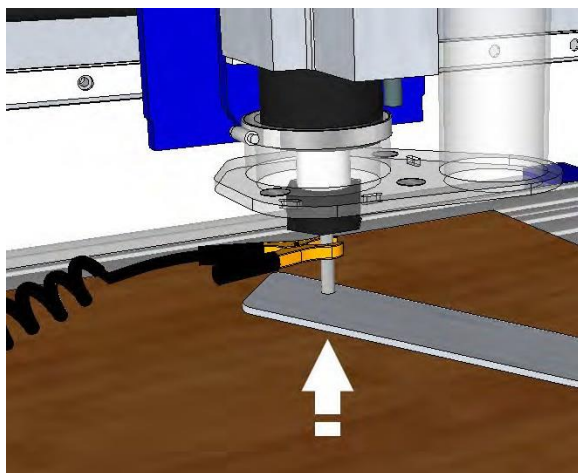
Zeroing the Z axis requires a few more steps than zeroing the X and Y axes, so it should be practiced a few times to ensure it is properly understood.



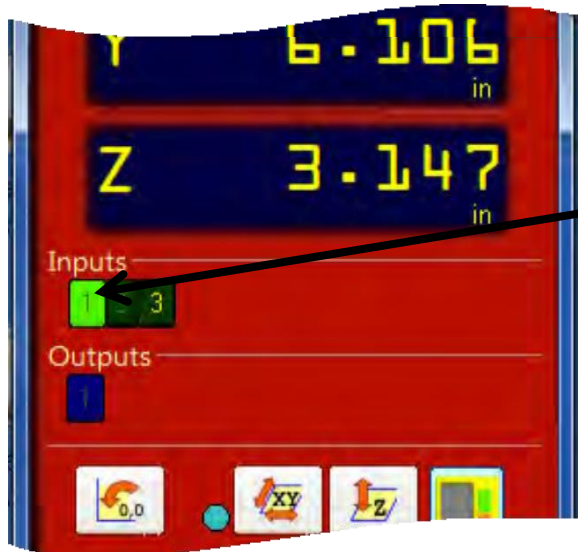
Open the yellow KeyPad and enter X=6, Y=6. Close the KeyPad by clicking on the “X” in the upper right corner of the yellow keypad or by pressing the “Esc” key on the keyboard. This puts the spindle in a convenient location for zeroing the Z axis.



Plug in Z zeroing assembly into front left of machine.

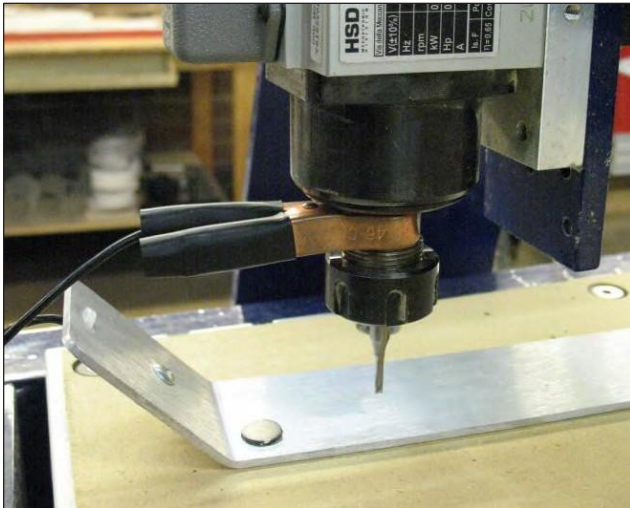


Attach Z zero grounding clip to router bit (or collet) and touch the Z zero plate to the bottom of the bit.



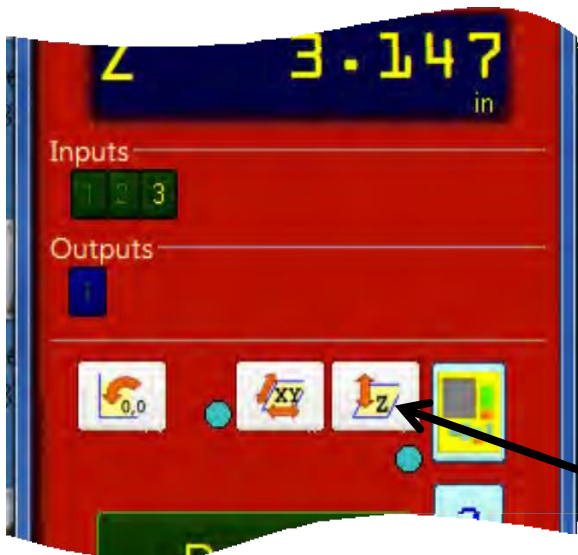
When Z zero plate touches router bit, Input 1 should light up. Input 1 light will go off when Z plate is removed.

It's important to check this each time the grounding clip is connected to verify that the contact is good. If Input 1 doesn't light up, ensure the grounding clip is well connected and try again.



Place Z zero plate on top of spoil board beneath the router bit.

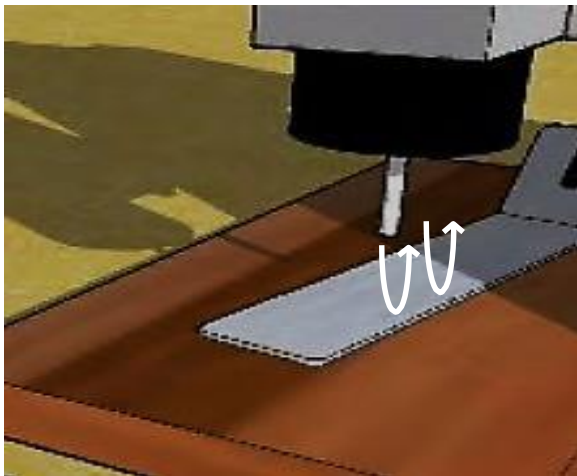
(NOTE: Machine can be Z zeroed to the top of the spoil board or to the top of the project material depending on how it is set up in the design file.)



Click the white button marked "Z".



This message will appear to ensure the Z zero plate is under the router bit. Double check the location of the Z zero plate and click OK. An alarm sound will signify that the Z axis will start moving down in a couple of seconds. Place the Z zero plate under the bit and on top of the deck while the Z zero routine takes place.



The spindle/router will lower until the bit contacts the Z zero plate. It will then retract and repeat the process again.

Wait for the router bit to contact the Z zero plate twice before removing the Z zero plate or the grounding clip.

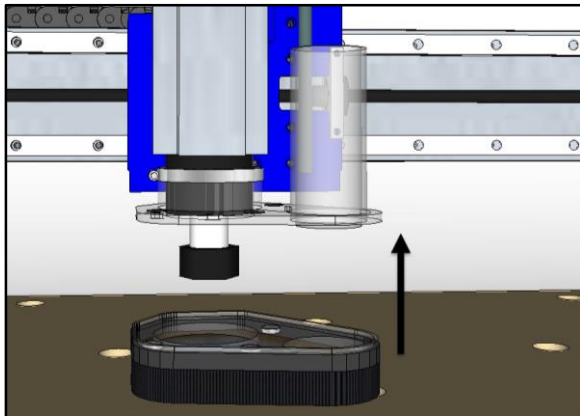


After bit makes second contact, bit will retract to a position of 1/2" above the deck. The Z axis is now zeroed to the top of the MDF deck.

Unplug and remove Z zero plate and clip from machine.



Press "OK" to exit the program.



Re-attach dust foot.



During operation keep area around machine free from people and objects.

Move to home position

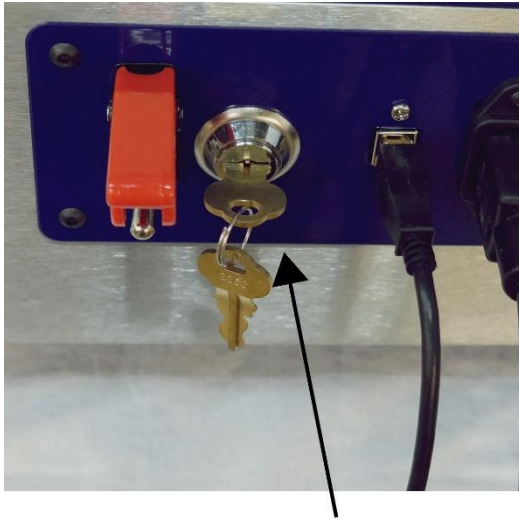


Click the white button marked 0, 0.



This will move the spindle/router to the machine home position in the left lower (front) corner of the machine, which is the default zero position for both the X and Y axes.

Warm up (spindle models only)



Key Switch in ON position

Desktop MAXs equipped with a spindle also have a variable-frequency drive (VFD), which is used to control the RPMs of the spindle.

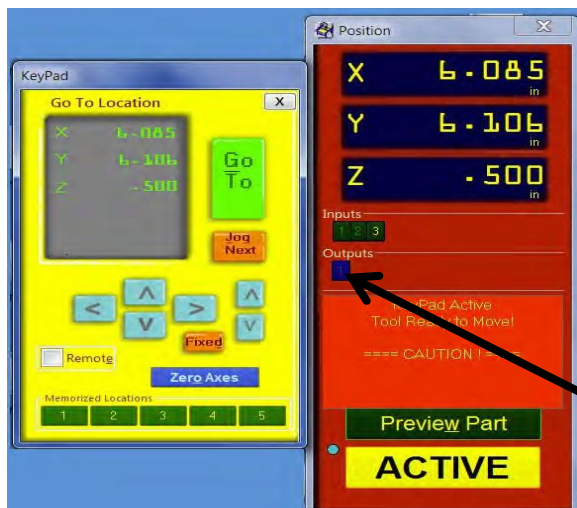
There is a spindle interlock switch that locks out the spindle power for additional safety. (shown engaged with the key in the lock in image to the left)

Turn the spindle interlock switch ON by turning key in clockwise motion.

Turn the knob on the VFD so it reads approximately F 100. F 100 equals 6000 RPM or about half of the typical operating speed for cutting wood.



To maximize service life, a spindle requires a warm up cycle to bring the bearings up to operating temperature. Before cutting, run the spindle at 1/2 of the intended cutting RPM for 10 minutes at the beginning of each day and after the spindle has been idle for more than 3 hours.



Open the yellow KeyPad, and click on the Output 1 button in the position window.

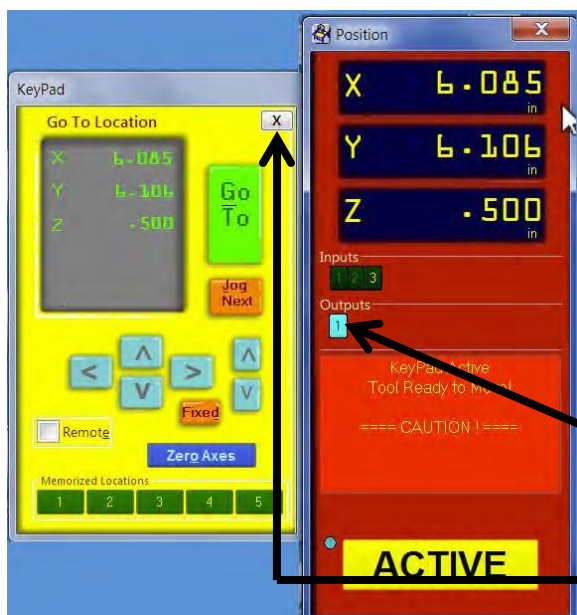


Click "OK" for the spindle to start. Allow it to run for 10 minutes to warm up.



After the spindle has run for 10 minutes, adjust the VFD so it reads approximately F200. You should hear the spindle increase in speed as you adjust the dial.

F200 equals 12,000 RPM and is a common operating speed for carving and cutting wood.



Turn off the spindle by clicking on the output #1 button.

Close the yellow KeyPad.

Desktop MAX spindle RPM settings



The display on the VFD will show the frequency. To find RPM, multiply the listed frequency by the Hertz setting.

Frequency to RPMs for 60Hz (US, Canada, and Mexico. May apply to other countries):

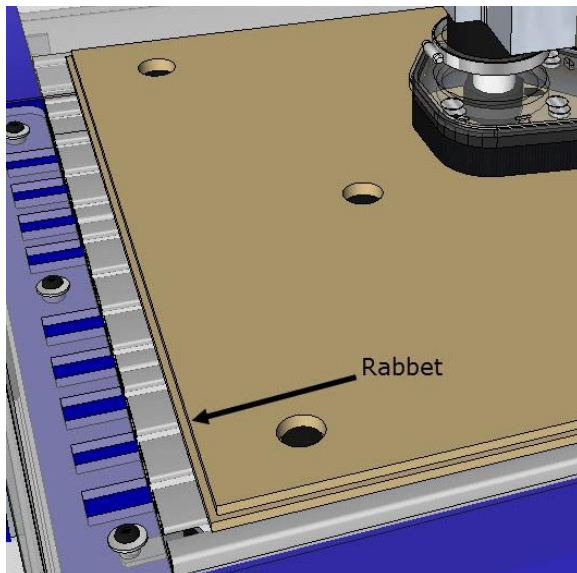
Display	Spindle RPM
300	18000
266	16000
233	14000
200	12000
166	10000
133	8000
100	6000

Frequency to RPMs for 50Hz (Europe and most other regions):

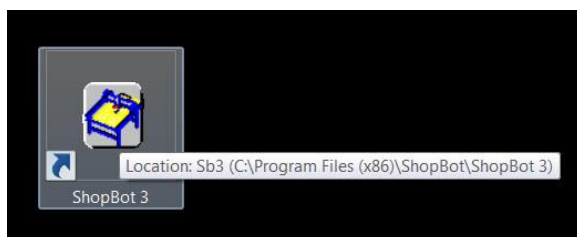
Display	Spindle RPM
300	15000
266	13300
233	11650
200	10000
166	8300
133	6650
100	5000

Trim the deck

Do not proceed with this section until X, Y, and Z axes have been zeroed and the spindle is warmed up.



This step will rout a rabbet around the perimeter of the basic deck to reveal the 24" x 36" cutting area. Ensure the X, Y, and Z axes have been zeroed prior to proceeding.



If the ShopBotEASY control is not currently open, double-click the ShopBot 3 shortcut icon.

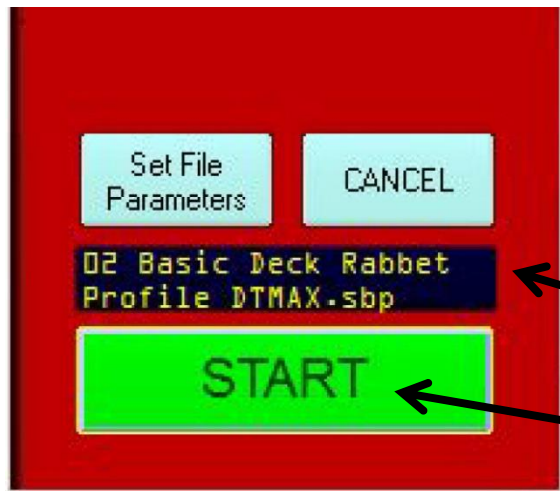


Click the "Cut Part" button on the position screen



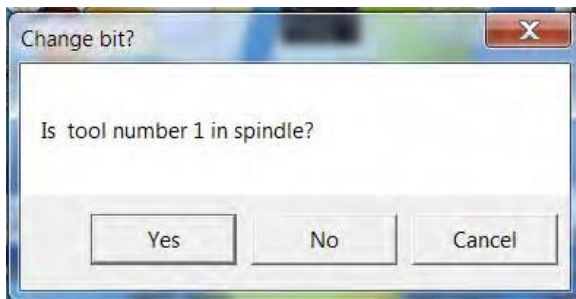
02 Basic Deck
Rabbit Profile
DTMAX .zip

Go to www.shopbottools.com > ShopBot Docs > Desktop MAX > Files > Desktop MAX Work Area Cut File and download the zipped folder containing the rabbit .sbp file.



The file name will now appear in the display window in the ShopBotEASY controller.

Click the "START" button to run file.

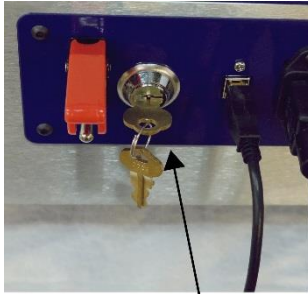


Verify that there is a 1/4" spiral upcut bit installed in the tool and click "Yes."

Note that the tool may be a number other than 1.

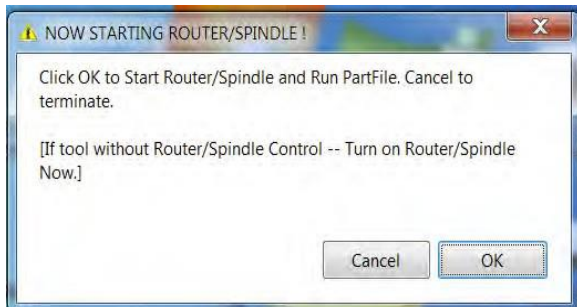
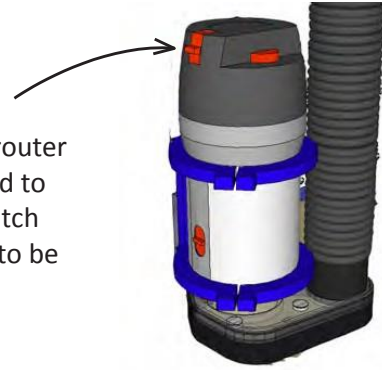


If Z axis is zeroed to the top of the spoil board, click "Yes."



Key Switch in ON position

Turn on power to router/spindle. If a router is equipped, its' power switch will need to be engaged and then the interlock switch (shown in image to the left) will need to be turned clockwise.



Click "OK" and the tool will take two passes around the perimeter of the deck creating a rabbet that is approximately 1/8" wide by 3/8" deep.

Things to keep in mind:

- The center section of the deck represents the actual useful cutting area of the Desktop MAX, which is 24" x 36".
- The left front (lower) corner of this center section represents the home position for the X and Y axes.
- By default, the router returns to this position after it completes the cutting program.
- This home position aligns with the center of the bit when the router is positioned above it.
- Most X, Y measurements for designing and routing are based off this location.



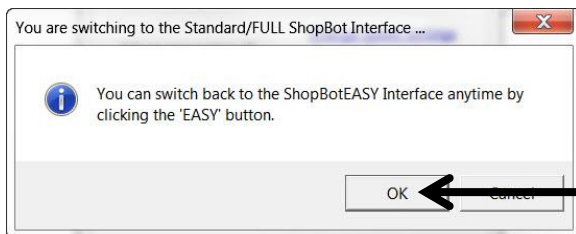
Switch to ShopBot FULL



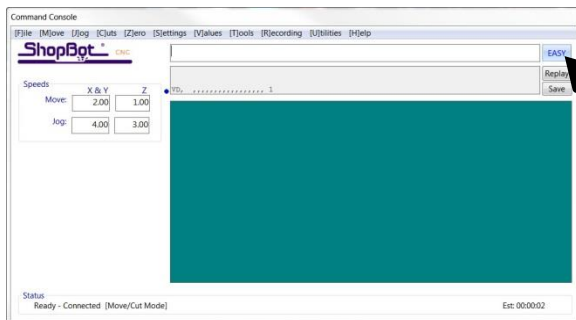
ShopBotEASY has limited functionality; in order to use all of the tools, switch to ShopBot FULL. To do this from the ShopBotEASY position window, click on the help (?) button.



At the bottom of the window, click on the "Switch to FULL" button.



Click "OK" to continue to the FULL interface.

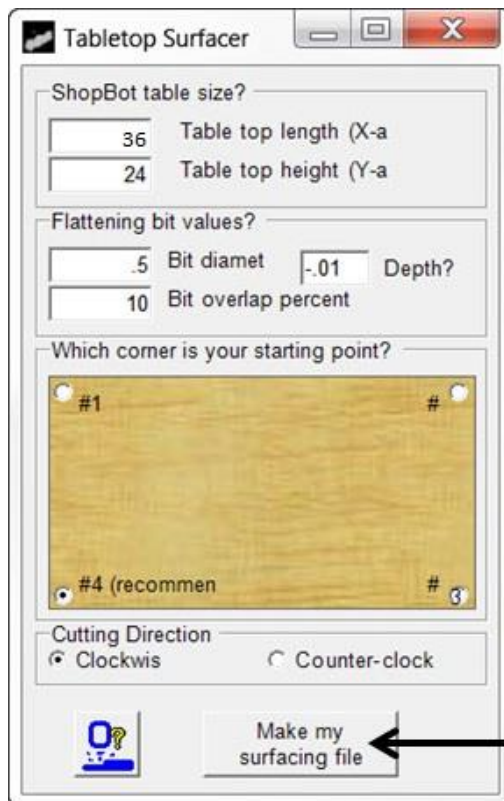


When the command console pops up, notice the "EASY" button that can be used to switch back to ShopBotEASY when necessary.

Surfacing the deck

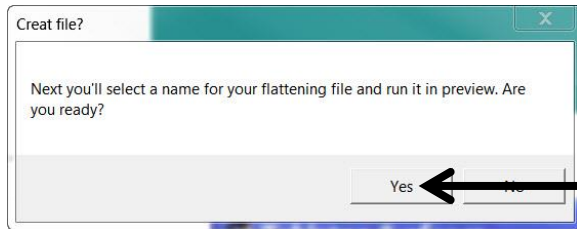


The basic deck is made out of MDF. It makes a good sacrificial deck, but the thickness can vary due to the manufacture of the material and changes in humidity. For most cutting this doesn't matter, but for critical depth cutting/pocket cutting or v-carving, the MDF should be surfaced first. Use the "Table Surfer" routine under "Tools" in the FULL ShopBot control. It can also be accessed by typing "TU".



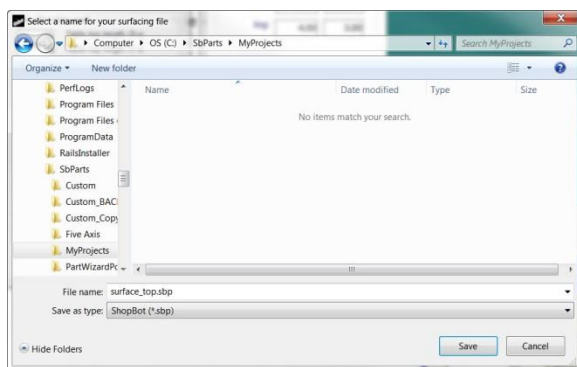
Choose a straight bit that's 1/2" or greater in diameter. Then zero the bit to the top of the MDF. A lot of sawdust will be generated. Make sure the dust collector is hooked up and running before cutting.

The default table size numbers are for a 96" X 48" table. Change these values to 36" x 24", set the depth to -.01", and change the bit diameter to the size of the bit chosen (1/2" in this example). Click the "Make my surfacing file" button.



Click “Yes” to proceed to the save window.

Save the file with a name that is easy to remember, in a location that will be easy to find. Include the tool in the name for convenience later.



Click “Save”. A preview file will appear. Open and run the cut file. If an area of the deck is left unsurfaced, re-zero to the area that was missed and rerun the surfacing program. Repeat this program any time the deck gets worn from use. When the MDF deck gets thin and close to the bolts holding the deck to the machine, simply glue on a new piece of MDF – there’s no need to remove the thin part that’s still attached.

Beyond the basics

VCarve Pro (Previously called PartWorks)

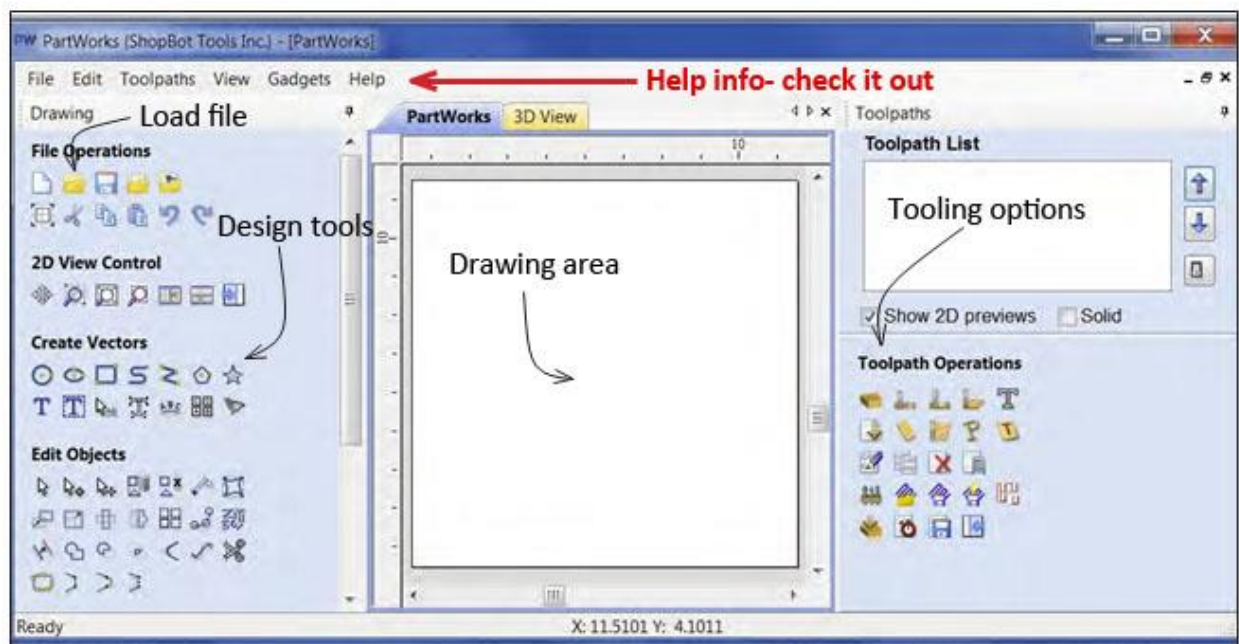


Once VCarve Pro is installed, it can be started through the Shortcut icon shown left or through the start menu.

The first time using VCarve Pro requires entering the I.D. number attached to the cover of the quick start guide sent with your machine.

VCarve Pro is the design/tool-pathing program that is included with the ShopBot and is used to create part files. This program can be installed on two separate computers.

Tutorials will be copied to the computer as part of the installation process. They are located at Start > All Programs > ShopBot > Tutorials.



Here is a basic overview of the program interface. There are a lot of resources on using this program through tutorials, training at ShopBot, online training through ShopBot, the provided help files in the program, and online support. Be sure to take advantage of these resources, many of them are listed on the next page.

Resources

ShopBot tutorials & videos

www.shopbottools.com/mSupport/tutorials.htm

ShopBot training classes

www.shopbottools.com/mSupport/training.htm

Information on a variety of different CAD/CAM software packages for design.

www.shopbottools.com/mProducts/software.htm

Tooling, materials, and more

www.shopbottools.com/mSupport/resourcelist.htm

ShopBot Forum

<http://www.talkshopbot.com/forum/forum.php>

Technical support

<http://www.shopbottools.com/support.htm>

Help installing ShopBot drivers in Microsoft Windows

Microsoft Windows sometimes gives a message saying there is an issue with the driver installation. If this message is received, temporarily ignore it and proceed with the rest of the software installation. Plug the ShopBot into a power source and connect the USB cable into the computer. Launch the ShopBot3 software by clicking on the shortcut icon on the computer's desktop. If ShopBot3 fails to launch, click the start menu on the desktop and type "UAC" into the search bar. The user account control settings will show up in the search results. Click on this item to open this window. In Vista, uncheck the box marked "enable user account controls." In Windows 7, slide the options bar down to 'never notify' and click OK.

Remove the ShopBot USB cable from computer, and restart operating system. Click on the start menu again and select "Computer." Navigate to C:\Program Files (choose program files x86 if available) \ShopBot\ShopBot3\Drivers\ShopBotControllerV201. Make sure that the ShopBot's USB cable is disconnected from the computer at this point and double-click on Driverloader.exe. This will re-install the USB drivers. When the drivers have been successfully installed, connect the ShopBot to the computer and turn on the control box. Open the ShopBot software and it should connect. If this doesn't solve the issue please see the software documents on our website. If needed, call tech support at 1-888-680-4466.

Restarting after an emergency shut-off

If it is ever necessary to use the Desktop MAX's main power switch to stop the machine during a cut, there are a few steps required to get the machine back up and running. This applies to any situation in which the tool loses power unexpectedly, including a power outage, a tripped circuit breaker, or any other event.

It is important to understand that when the machine is powered off, there is nothing holding the motors in place and they may move out of position, albeit slightly. Therefore, when the machine is turned back on, the location coordinates on your screen will probably no longer be accurate.

Turn on the power switch. If necessary, use the yellow Keypad function to move the Z height of the bit to a safe location above the work pieces. Zero the X, Y, and Z axes as usual. An error message may occur saying that communication with the tool has been lost. Click OK to continue past the message. If there are any further errors, or additional trouble opening the Keypad, exit and restart the software to fix the problem.

Repeat "DT MAX Setup and Squaring" process as described on p. 19.

DIY basic MDF deck

The Desktop MAX comes with a built-in aluminum T-slot table. Using special T-nut hardware, this table holds moveable jigs and fixtures and is well-suited for engraving and carving work on the surface of a workpiece. If doing any work that cuts through the material, attach a sacrificial work surface to the table to avoid damaging the aluminum bed.

Parts required:

- T-nuts (included)
- 1 1/4" socket head bolts (included)
- 3/4" flat head bolts (included)
- 5/32" Allen wrench
- 5/16" Drill bit
- 3/4" 36.25" x 24.25 MDF (offset lower left corner by 1/8" to allow for the rabbet as shown on page 31)
- 1/4" diameter end mill with a flute length of at least 3/4"





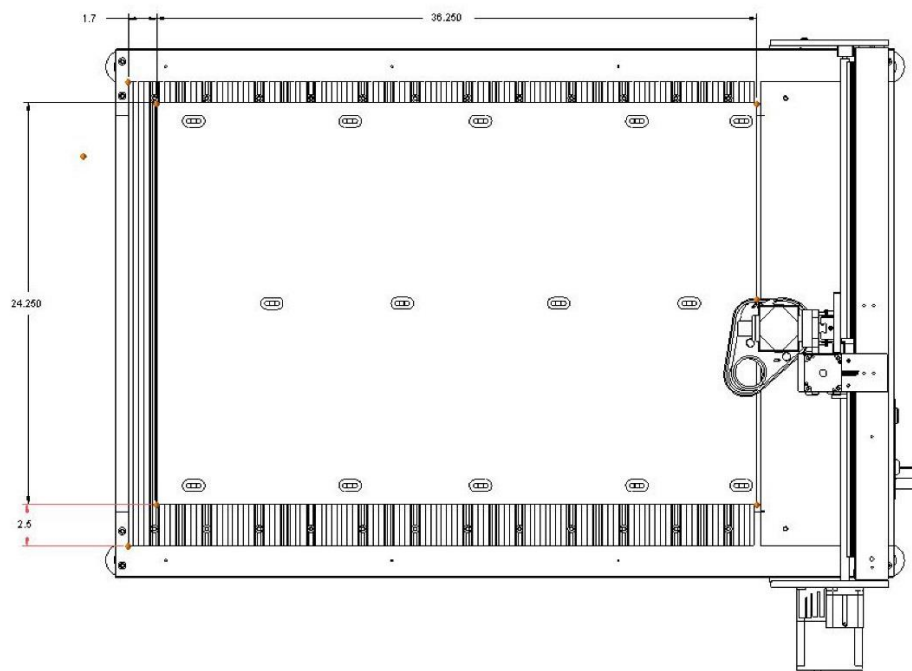
A cut file with a drilling pattern for a 3/4" x 36" x 24" work surface is located at www.shopbottools.com > ShopBot Docs > Desktop MAX > Files > Desktop Max Spoil Board Design File. This will not cover the entire surface of the aluminum table bed, but the ShopBot is capable of about 1" of over-travel to ensure cutting past the edge of this MDF deck.

To avoid damage to the table, the holes in this cut file will stop short of the full depth of the 3/4" deck material. Complete the holes with a 5/16" drill bit. Alternatively, place another piece of 1/4" material below this deck and reset the file to cut a full 3/4" deep.

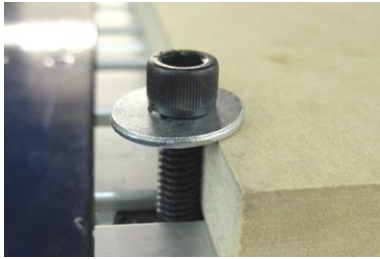
Note: The cut file was created for a 3/4" thick sheet of material. Ensure material is at least .700" thick (just over 11/16"). If it is any thinner, there is risk of damaging the aluminum bed. If a sheet thinner than .700" thick is attached, edit the design file (VCarve Pro) to reduce the depth of cut.

Setting up temporary hold-downs

As with any ShopBot project, secure the work piece before cutting. Use the included T-nuts, washers, and 1 1/4" bolts. Place the 36 1/4" x 24 1/4" sheet on the table bed according to the drawing below (note the dimensions are based from the edge of the aluminum deck) and position the bolts so they are snug against the sides. Tighten the bolts into the T-nuts. Test the holding strength by trying to move the board with hands. There should be no movement at all. If placing a spacer under the deck longer hold down bolts may be required.



Selecting and zeroing bit



Select a 1/4" diameter end mill with a flute length of at least 3/4". Zero the bit to the top of the material, not to the table base. Once the Z-Axis is zeroed, zero the X and Y axes to the bottom left corner of material. Align the bit to the corner of the material by eye.

Attaching new work surface

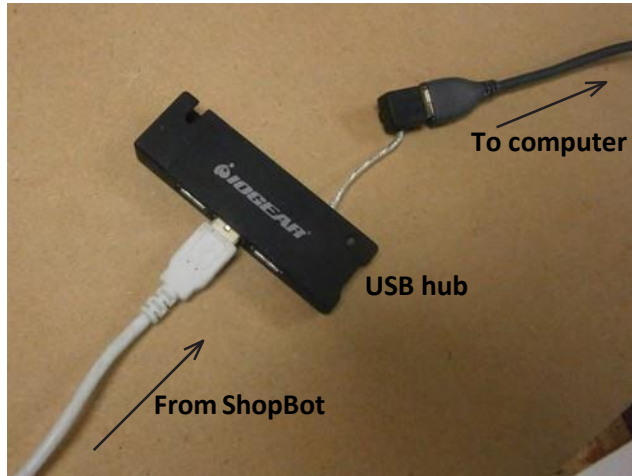
Once the ShopBot has finished cutting the file, remove the board from the table bed. Using a 5/16" drill bit, complete the clearance holes that were started by the cut file. Trim away any material blow-out on the back of the board so that it will sit flat on the table.

Slide T-nuts into grooves on table base. Place the work surface down on the table bed and use a flashlight to check for alignment with the T-nuts. Align the left and front edge of the 36.25" x 24.25" MDF deck at approximately X=-.125, Y=-.125. This will cut a 1/8" rabbet around the 36" x 24" work area of the deck.

Once everything is aligned, use the 3/4" flathead bolts to secure the board to the table. If using screws to secure the work piece to the MDF deck, ensure they do not drive through the board into the aluminum base.

Additional information

Extending the USB cable



The USB cable provided is 10 feet long. If it is necessary to increase the length of the USB cable, use a USB 2.0 hub to connect 2, 10' USB cables. Using a cable longer than 10 feet without a hub as a booster may result in loss of signal or increased electrical interference. If extending cable, do not use a powered 2.0 hub, just one of the small simple ones. Do not use USB equipment made by Belkin as they have proven problematic in the past. If there is a USB communication problem from electrical noise of the spindle or router, try shortening the cable.

Stopping and temporarily pausing or quitting a file

Typically, when cutting a part file you may need to temporarily stop or quit the file, but are not in an emergency situation. The ShopBot control software allows a more controlled pause and resumption in work than a full emergency stop. This might be the case if a file setting needs to be changed, a hold-down clamp needs adjusting, or the operator just needs to leave the room. Stop the machine by pressing the space bar or Enter/Return key on the computer's keyboard. The cursor remains on the stop button during cutting, so clicking the mouse will also stop the machine. In these cases, the ShopBot will come to a gentle ('ramped') stop and will pull up to a safe Z height.

If the ShopBot is moving below the "Fast Stop Threshold" (0.8 ips by default; configured in [VR]), it will just stop. Hitting the 'S' Key will produce a ramped stop and pull-up, even if the tool is going slower than the fast stop threshold. After stopping, a menu will appear that allows a ShopBot command, resume cutting, or quit the file. The option is available to 'nudge' any axis slightly in case it may be slightly out of position. When this type of temporary stop is used, the tool remains powered, and locations calibrated, so that the project may continue.

To return to a location in a file that was already started, use the [FG] command to start the file in a specific line in the code.

A remote stop button (ShopBot part number 002723) can be set up in a convenient location near the tool. Hitting it has the same effect as hitting the space bar. That is, the remote stop button stops the tool, but it is not an E-Stop that also cuts power to the system. Additional external stop buttons can be set up on an unused Input and configured for the same stop action using the [VN] command.