ShopBot®

888-680-4466 • ShopBotTools.com

Manually Setting
X and Y Zero Locations

The Easy Way

To use this method, set up the positions of the X and Y hard stops and proximity targets as covered in the proximity installation documents.

The software will pick the 0,0 location. After running this routine, mark the 0,0 location on the spoil board for reference. To put the Z zero location at a different point, it will be necessary to use the manual method outlined later in this document.
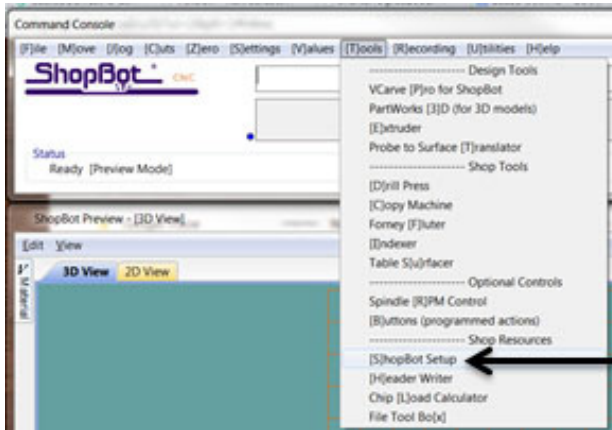
Under the SB3 full mode, go to "Tools" and "ShopBot Setup" or type TS.

Understand the information in the pop up screen before continuing to the next screen.
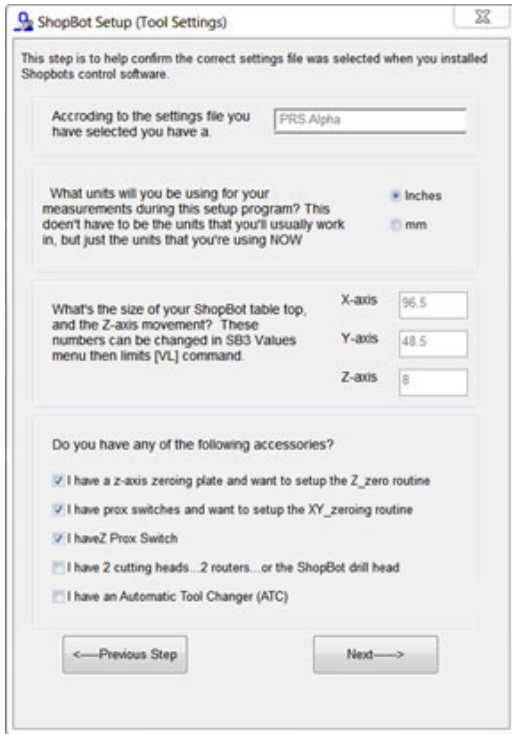
Make sure the top section has the correct tool settings. Under accessories, check all of the proximity switches to activate them for use (machine may not have the same settings as shown here). Once settings are correct, continue to the next screen.

This screen can be skipped for now, as it should already be correctly set. It will be possible to come back to it later if desired.
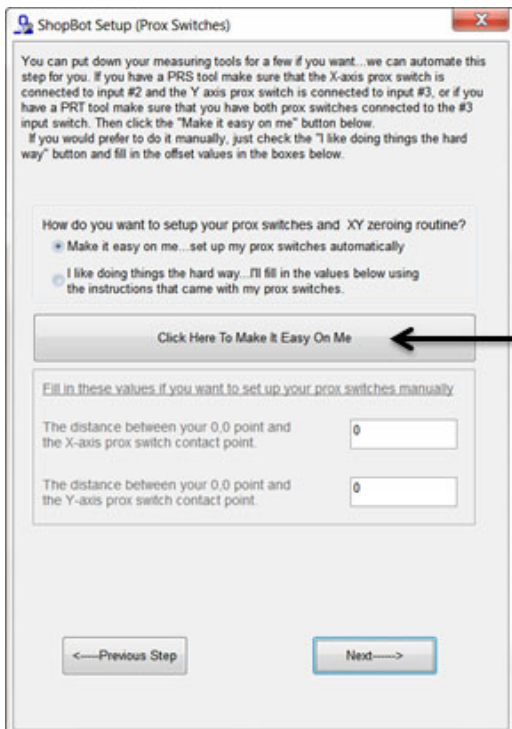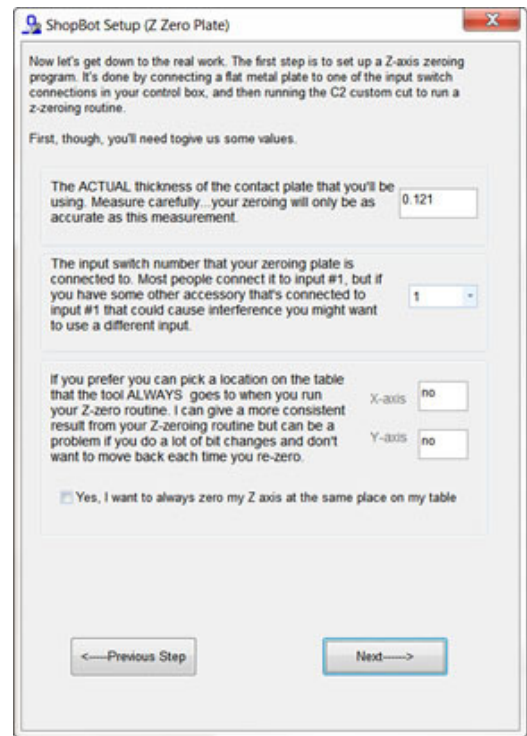
This screen will set the zero location to the proximity switches. Click the "Click Here To Make It Easy On Me" button to start the zeroing process.

X and Y axis zeroing setup

Now we're going to run a program that will calibrate your prox switches and setup your XY zeroing routine. Your ShopBot needs to be at the 0,0 point for the setup program to correctly calibrate your XY zeroing routine, so when you click the Run button below the ShopBot software will open the Keypad control.

When you're sure everything is ready to go and everyone is clear of the tool, click the Run button and the ShopBot software will start the process of calibrating your prox switches.

Run the prox switch setup routine

This screen will prompt the operator to put the spindle or router at the desired 0,0 location. Once completed, run the routine. This will determine the distance that point is from the proximity switches to allow for an easy return to that point.

The Manual Way

To use the X,Y zeroing routine (C3 or the zeroing icon) in a custom location, the values for the routine must be set.

Set the desired 0,0 location

Insert a V bit into the collet to easily visualize where the X,Y location is.

Use the keypad control (K) to move the tip of the bit to the 0,0 location. Move the Z down close enough to the spoil board surface to accurately see the location on the spoil board - but not so close to drag the bit across the top of the material.

To make small adjustments, click on the "Fixed" key in keypad control and edit the increments so that each bump of an arrow will move the axis the defined distance. Increments are adjusted by changing the value in the box that appears when clicking on the fixed key. Click on the fixed key again or use "Esc" to resume normal motion.

When the tip of the bit is at the desired location, zero the X and Y axis there by using the blue "Zero Axes" button on the Keypad screen, or escaping from keypad control and using Z2. Note that the red position screen indicates 0,0 in both X and Y.

Determine the distance between the 0,0 location and the limit/proximity switches

Using keypad control, hold the left arrow button down until the X-axis runs into the limit switch. Once it has stopped, do not press the left arrow button down again, or the X-axis will continue past the limit switch.

Write down the value of the X-axis shown on the position screen. It should be a negative number.

Press on the right arrow button to move the X-axis off of the limit switch. Return the X-axis to 0 by typing 0 in the X-axis box on the Keypad control, and clicking on "GO TO".

Use keypad control and hold the down arrow button down until the Y-axis runs into the limit switch.

Write down the value of the Y-axis on the position screen. It should be a negative number.

Press on the up arrow button to move the Y-axis off of the limit switch. Return the Y-axis to 0 by typing 0 in the Y-axis box on the Keypad control, and clicking on "GO TO".

The 0,0 should be the current position of the machine, and should display 0 for both X and Y. If this is correct, continue to the next step. If not, start this section over.

It should be necessary to only do this once until the spoil board is changed or the location of the target bolts get moved.

In case these numbers are needed again, keep a record of the values in a location that's easy to find. This will enable consistency in tool setup for jigs, as well as other time saving measures.

Use ShopBot setup to enter values into the X,Y zeroing routine
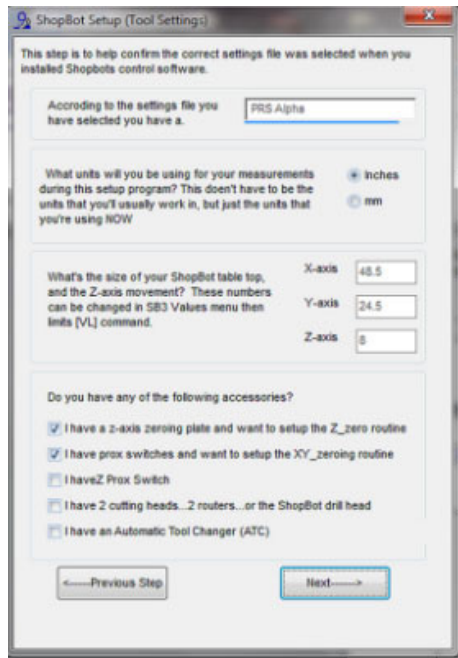
Enter "TS" from the menu to open the ShopBot tool setup screen.

Page through the screens by clicking on Next until the screen appears to enter the desired values.

This screen shows that the size of the new configuration has been recorded by the control software.

This is the screen where the values will be entered from the previous page (remember that they should be negative).

The ShopBot software can also determine the distance between the 0,0 location and the limit/proximity switches. Click on that option from this screen.

Start with the tip of the bit at the correct 0,0 location.

After pressing the "I'm Done" button on the next screen, the XY homing routine can be run by entering C3 or using the icon.