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Laser Pointer  
Calibration

SBG00602

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Once the Laser Pointer is installed the next step is to calibrate it.

1. Download the files onto your PC.
2. Transferring files to SbParts.
3. Calibrating the difference between the laser pointer beam and the spindle location

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## Step 1- Downloading Files

Please visit.

<https://www.shopbottools.com/support/documentation/accessories>

Download the files under the Laser Pointer Subtitle.

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## Step 2 - Transferring Software

Open two File Explorer Windows, this will make it easier to drag and drop files.

Select the File name *Laser Pointer*, *LP Variables* and *Registration*.

Click the C Drive and find the SBparts Folder.

Drag the Files into your SBparts Folder.

The image displays two side-by-side screenshots of Windows File Explorer windows. The left window shows the 'SBparts' folder on the C: drive, listing various files and folders. The right window shows the 'Downloads' folder, with 'Laser Pointer', 'LP Variables', and 'Registration' files selected.

**Left Window: C:\Users\... \SBparts**

Name	Date modified	Type	Size
a_PostProcessors_forCAMsoftware	10/11/2021 11:15 ...	File folder	
Custom	10/19/2021 1:53 PM	File folder	
Custom_BACKUP_PREVIOUS	10/11/2021 11:18 ...	File folder	
Custom_CopyOEM	10/11/2021 11:18 ...	File folder	
Five Axis	10/11/2021 11:18 ...	File folder	
MyProjects	9/14/2021 2:57 PM	File folder	
Plasma	10/19/2021 1:45 PM	File folder	
Training	10/11/2021 11:18 ...	File folder	
VacuumTables	10/11/2021 11:18 ...	File folder	
aa_DESKTOP First Setup.stp	2/7/2018 10:12 AM	ShopBot Part File	2 K
aa_DESKTOP Squaring.stp	2/8/2018 3:01 PM	ShopBot Part File	9 K
Azoro.stp	6/10/2014 4:18 PM	ShopBot Part File	9 K
sb_ Desktop MAX Squaring.stp	2/8/2018 3:01 PM	ShopBot Part File	9 K
sb_ Desktop MAX First Setup.stp	2/7/2018 10:12 AM	ShopBot Part File	2 K
Drill Offset.stp	8/26/2014 4:05 PM	ShopBot Part File	6 K
Initial_Calibration_Handibot_V1.stp	5/22/2014 2:01 PM	ShopBot Part File	3 K
Laser_Control_Demo.stp	6/2/2018 4:32 PM	ShopBot Part File	2 K
sample_BuddyTop.stp	2/8/2008 3:53 PM	ShopBot Part File	5 K
sample_Center_inHole.stp	2/8/2008 2:15 PM	ShopBot Part File	5 K
sample_Center_inHole_w2test.stp	2/8/2008 3:53 PM	ShopBot Part File	5 K
sample_demoLabp	2/8/2008 3:53 PM	ShopBot Part File	2 K
sample_DishOme.stp	3/30/2009 7:59 PM	ShopBot Part File	2 K
sample_drillLabp	2/8/2008 3:53 PM	ShopBot Part File	7 K
sample_morisa.stp	2/8/2008 3:54 PM	ShopBot Part File	4 K

**Right Window: Production \Downloads**

Name	Date modified	Type	Size
Custom Offset Commands	10/19/2021 1:50 PM	File folder	
Laser Pointer	10/19/2021 1:50 PM	File folder	
LPVariables	10/19/2021 1:50 PM	File folder	
Registration	10/19/2021 1:50 PM	File folder	
Adafruit_NeroParel-master.zip	12/12/2018 4:48 PM	Compressed group...	46 KB
arduino-1.8-windows.exe	12/6/2018 2:58 PM	Application	308,105 KB
desktop.ini	12/6/2018 1:57 PM	Configuration setti...	1 KB
http7.exe	4/3/2019 11:37 AM	Application	17,807 KB
Setup_Sb3_8_50.exe	10/11/2021 11:06 ...	Application	27,342 KB

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## Step 2 - Transferring Software

Your SbParts Folder should look similar to this.

The screenshot displays the ShopBot CNC software interface. The main window is titled "Command Console" and shows the ShopBot CNC logo. Below the logo, there are speed settings for X & Y (Move: 2.00, Jog: 4.00) and Z (Move: 1.00, Jog: 3.00). A code editor shows G-code: "G2, JH" and "PF, Laser Calibration.sbp, 1, 1, 1, 1, 0, -0.00, 0, 0, 1, 1". There are buttons for "EASY", "Replay", and "Save".

A "Select a ShopBot Part File" dialog box is open, showing the "SbParts" folder. The file list includes:

Name	Date modified
a_PostProcessors_forCAMsoftware	10/11/2021 11:15 AM
Custom	10/19/2021 1:57 PM
Custom_BACKUP_PREVIOUS	10/11/2021 11:18 AM
Custom_CopyOEM	10/11/2021 11:18 AM
Five Axis	10/11/2021 11:18 AM
Laser Pointer	10/19/2021 1:54 PM
LPVariables	10/19/2021 1:54 PM
MyProjects	9/14/2021 2:57 PM
Plasma	10/19/2021 1:45 PM
Registration	10/19/2021 1:54 PM
Training	10/11/2021 11:18 AM
VacuumTables	10/11/2021 11:18 AM

The dialog box shows the file "Laser Calibration.sbp" selected. The "File name" field contains "Laser Calibration.sbp" and the "Files of type" is set to "Part Files (\*.sbp)".

On the right side, there is a "Position" display showing X, Y, and Z coordinates in inches:

- X: 7.848 in
- Y: 2.906 in
- Z: 1.000 in

Below the position display, there are "Inputs" and "Outputs" sections with numerical values. At the bottom right, there is a "Mode" section with "Move/Cut" selected and a "Cut Part" button.

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## Step 3 - Calibration

Next you will click in the command toolbar and type FP. Select the *C Drive > SbParts > Laser Pointer* and then click the *Laser Calibration.sbp* File.

The screenshot displays the ShopBot CNC software interface. The main window is titled "Command Console" and shows the "ShopBot CNC" logo. The "Speeds" section is visible, with "Move" and "Jog" settings for X & Y and Z axes. The "Position" window on the right shows the current coordinates: X 7.848 in, Y 2.906 in, and Z 1.000 in. The "Mode" is set to "Move/Cut". A "Cut Part" button is visible at the bottom of the Position window. The "Select a ShopBot Part File" dialog box is open, showing the "Laser Pointer" folder. The file list includes "ADD.sbp", "Laser Calibration.sbp", and "SUB.sbp". The "File name" field is set to "Laser Calibration.sbp" and the "Files of type" is set to "Part Files (\*.sbp)".

Command Console

[F]ile [M]ove [J]og [C]uts [Z]ero [S]ettings [V]alues [T]ools [R]ecording [U]tilities [H]elp

ShopBot CNC

EASY

Replay

Save

Speeds

X & Y Z

Move: 2.00 1.00

Jog: 4.00 3.00

Position

X 7.848 in

Y 2.906 in

Z 1.000 in

Inputs

Outputs

Mode

• Move/Cut

○ Preview

Cut Part

Select a ShopBot Part File

Look in: Laser Pointer

Name	Date modified
ADD.sbp	9/24/2021 2:02 PM
Laser Calibration.sbp	10/11/2021 1:33 PM
SUB.sbp	10/11/2021 2:19 PM

File name: Laser Calibration.sbp

Files of type: Part Files (\*.sbp)

Open

Cancel

Status Completed

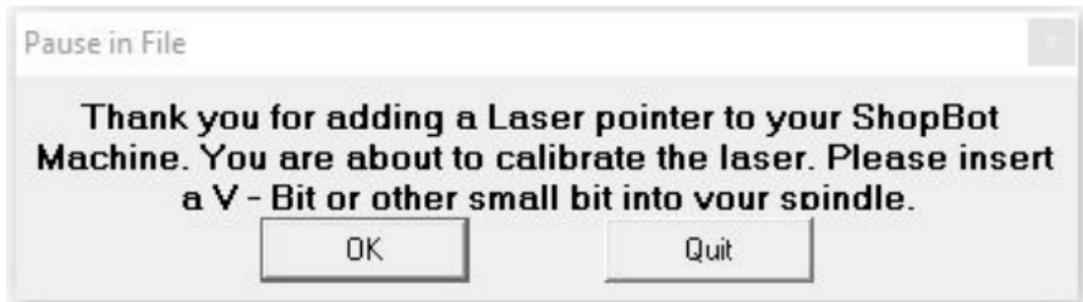
00:00:51

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## Step 3 - Calibration

Please make sure cutting area is free and clear of anything that could be damaged.

Follow the steps as prompted.



Using a V - Bit or a small bit like 1/8" End Mill will help you calibrate your Laser Pointer as accurately as possible.

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## Step 3 - Calibration

The program will ask you how you would like to Zero your material.

If you want to use the Z - Plate, please click **Yes** and proceed.

If you select **NO** the Keypad will come up and you will Zero your bit manually.

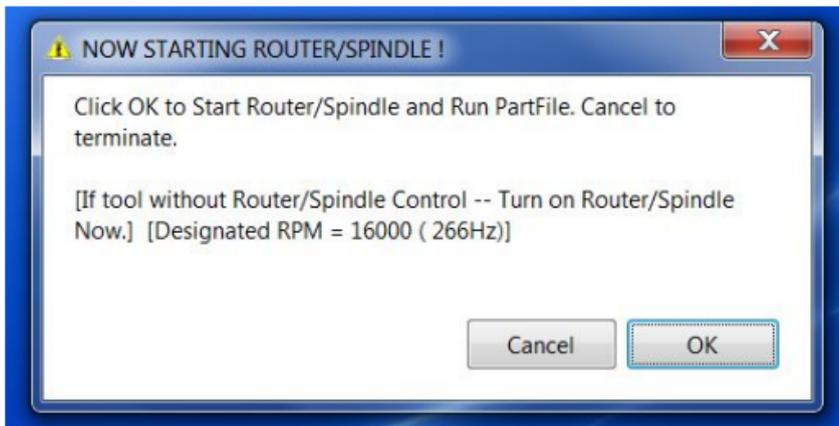


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## Step 3 - Calibration

After you have zeroed your bit the warning to start the spindle will appear.

**MAKE SURE THE Z-ZERO CLIP & PLATE ARE DISCONNECTED.**



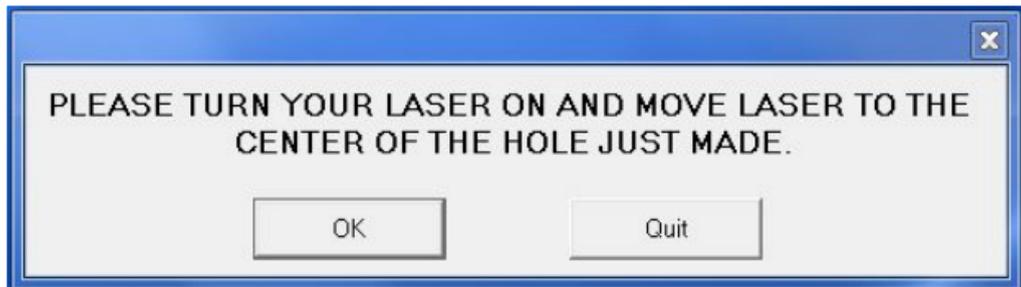
The Spindle will turn off and make a small indentation at X6, Y6.

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## Step 3 - Calibration

You will be prompted to turn on your Laser Pointer.

Once clicking OK, the keypad will come up on the screen and you will move the Laser Point to the center of the hole just made.

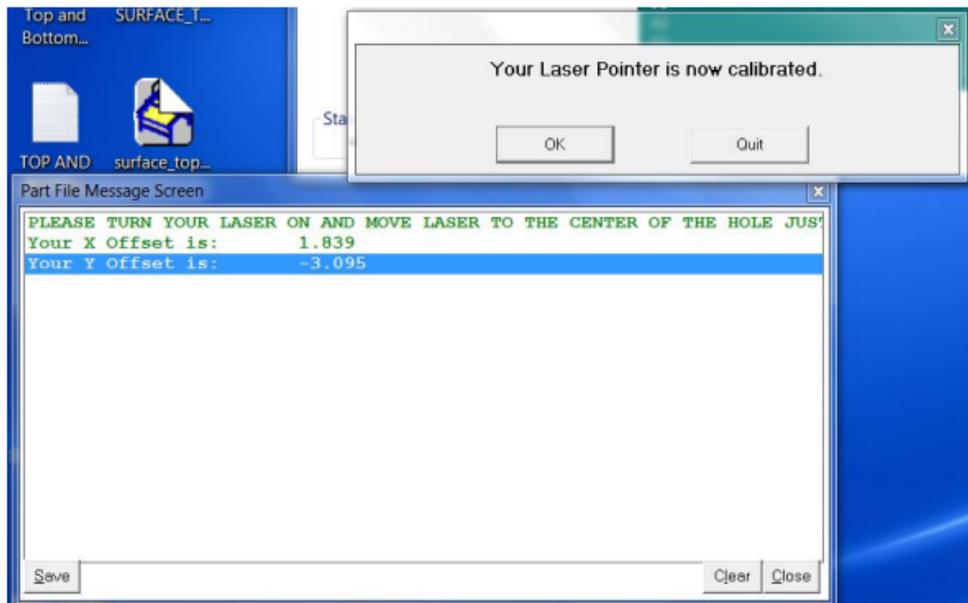


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## Step 3 - Calibration

Once you move your Laser. Hit the ESC key.

The Keypad will close, your offset will be displayed in the message screen and the file will end. Your Offsets will be logged into the LP Variables folder.





Thank you.

Your laser pointer is now calibrated.

Please contact ShopBot support if you have any issues.

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