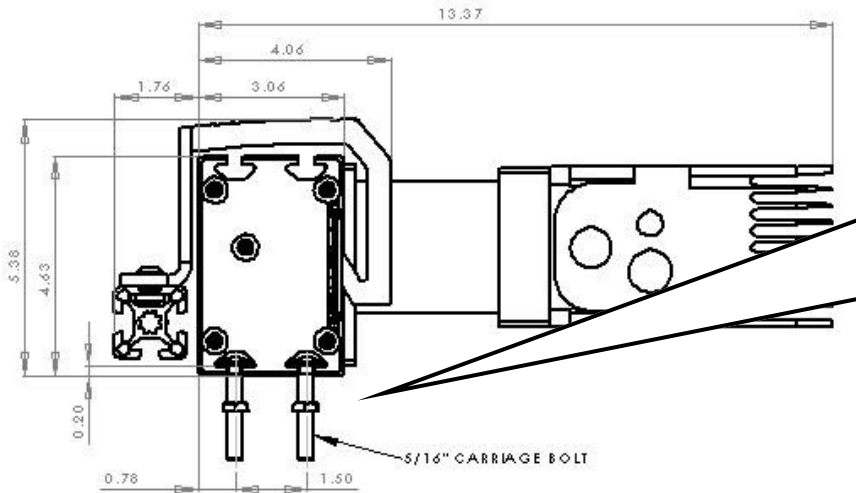


# RAZORGAGE

## QUICK START GUIDE (ST)

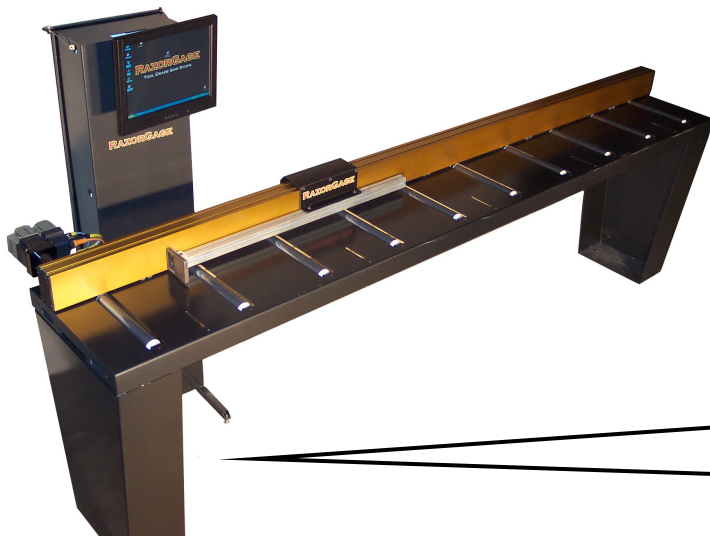
### Mount the RazorGage to Your Own Table



If you are mounting the RazorGage ST to your own table, use the dimensions at left to help you plan. You may use the 5/16" carriage bolts provided with the RazorGage to bolt the RazorGage to your table. The head of the carriage bolt fits in the T Slots as shown.

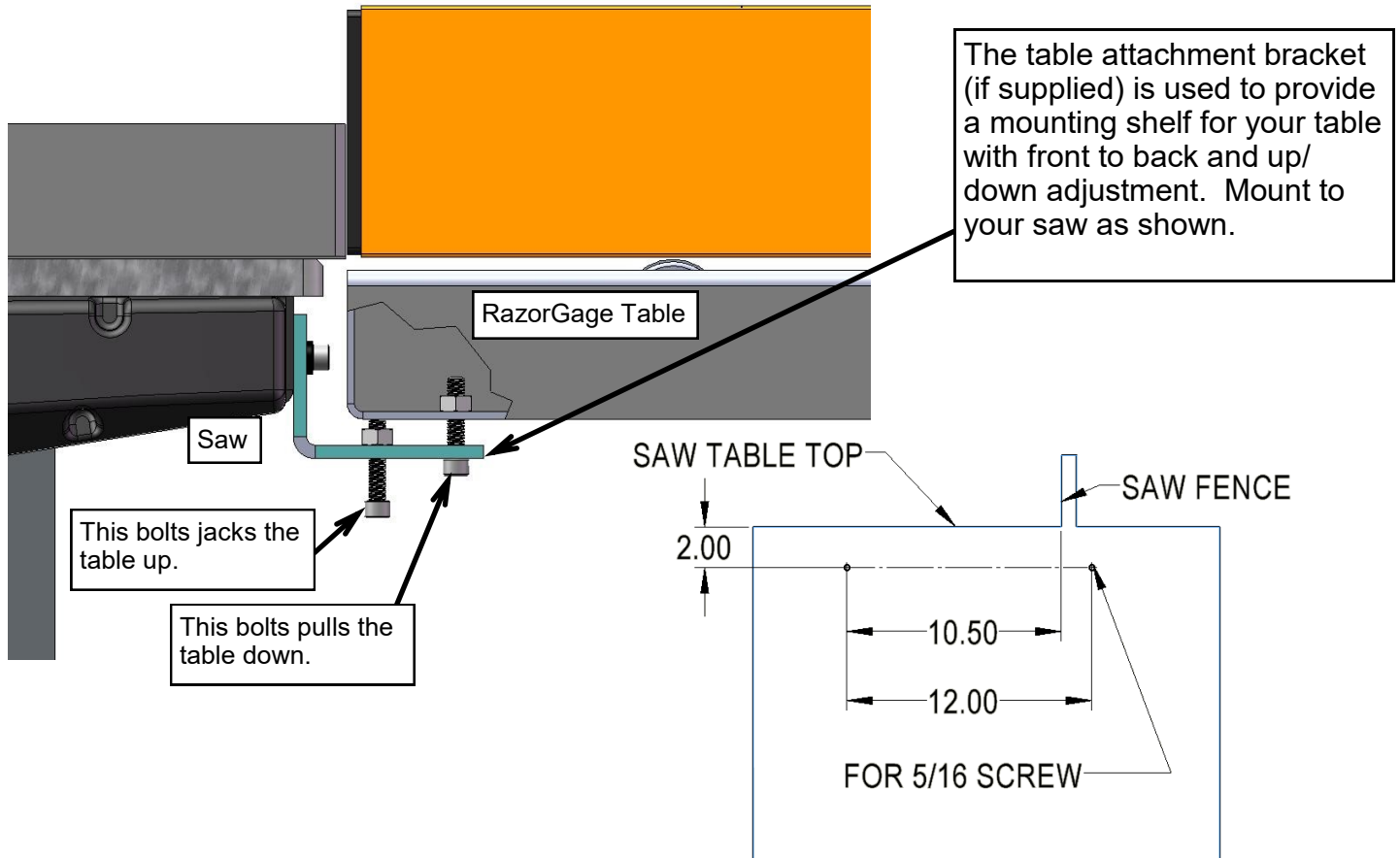
### Mount the RazorGage to a Table Provided by RazorGage

Mount the leg(s) to the RazorGage table with the bolts provided then mount the RazorGage to the table with the carriage bolts provided. The RazorGage can mount over the rollers or behind the rollers depending on your application. Use the 1/4" shims provided to space the unit above the rollers.



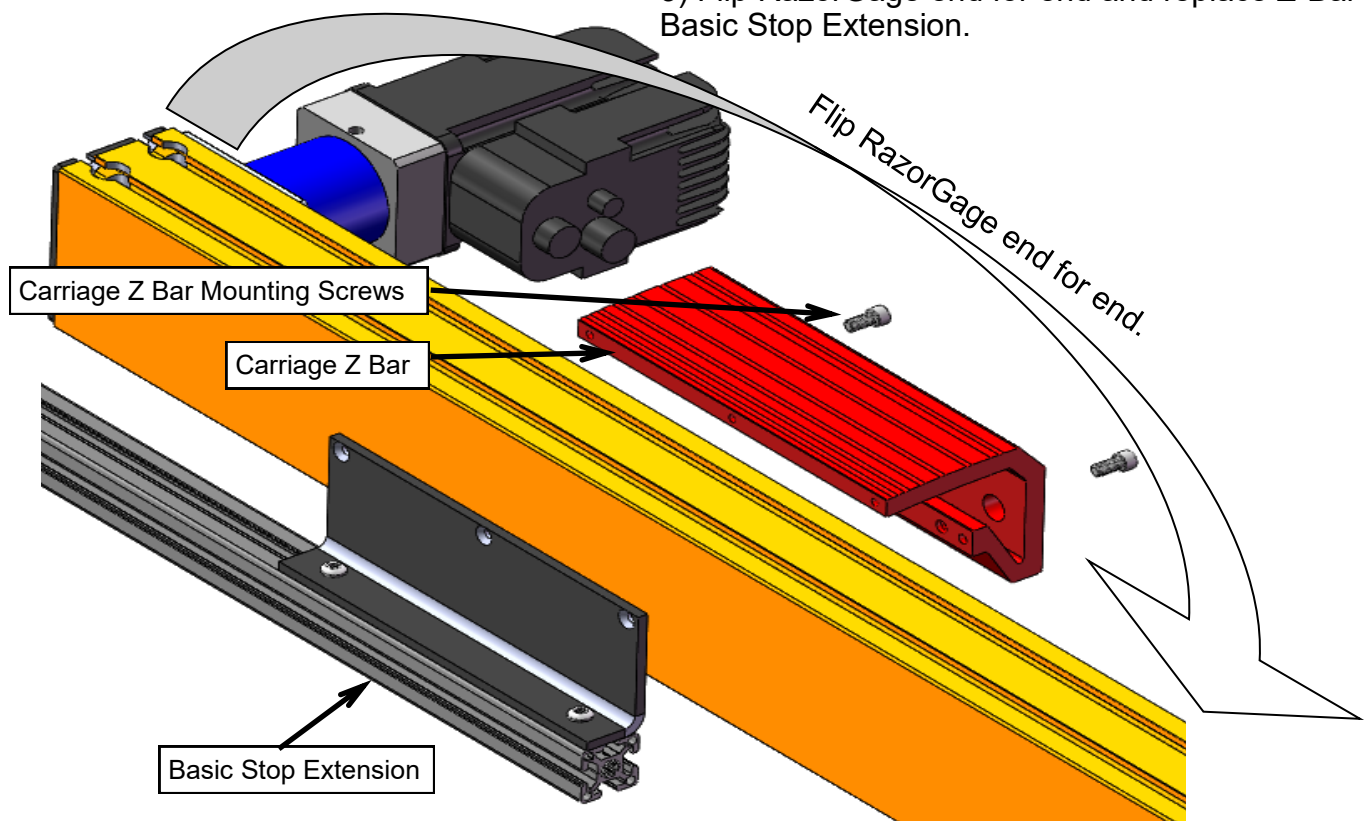
The table shown here is freestanding but unless you specifically ordered an extra leg, your RazorGage will only have one leg per table. The motor end is usually attached to the saw as shown on the next page.

## Table Attachment Bracket



## Changing the Hand of Your RazorGage

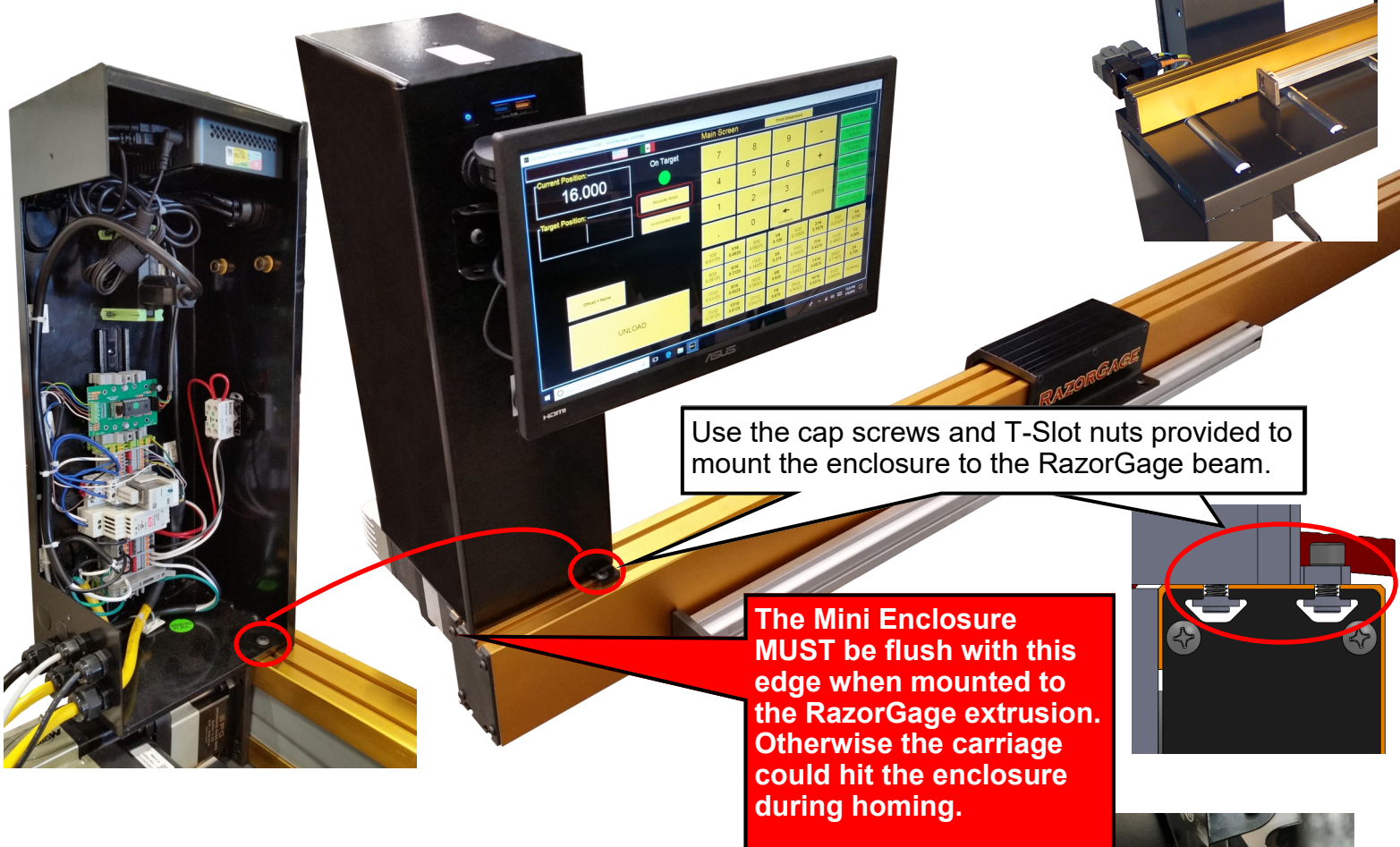
- 1) Remove Basic Stop Extension
- 2) Lift upper dust seal and extend allen wrench through holes in carriage Z-Bar to remove two screws as shown. Remove Z Bar.
- 3) Flip RazorGage end for end and replace Z-Bar and Basic Stop Extension.





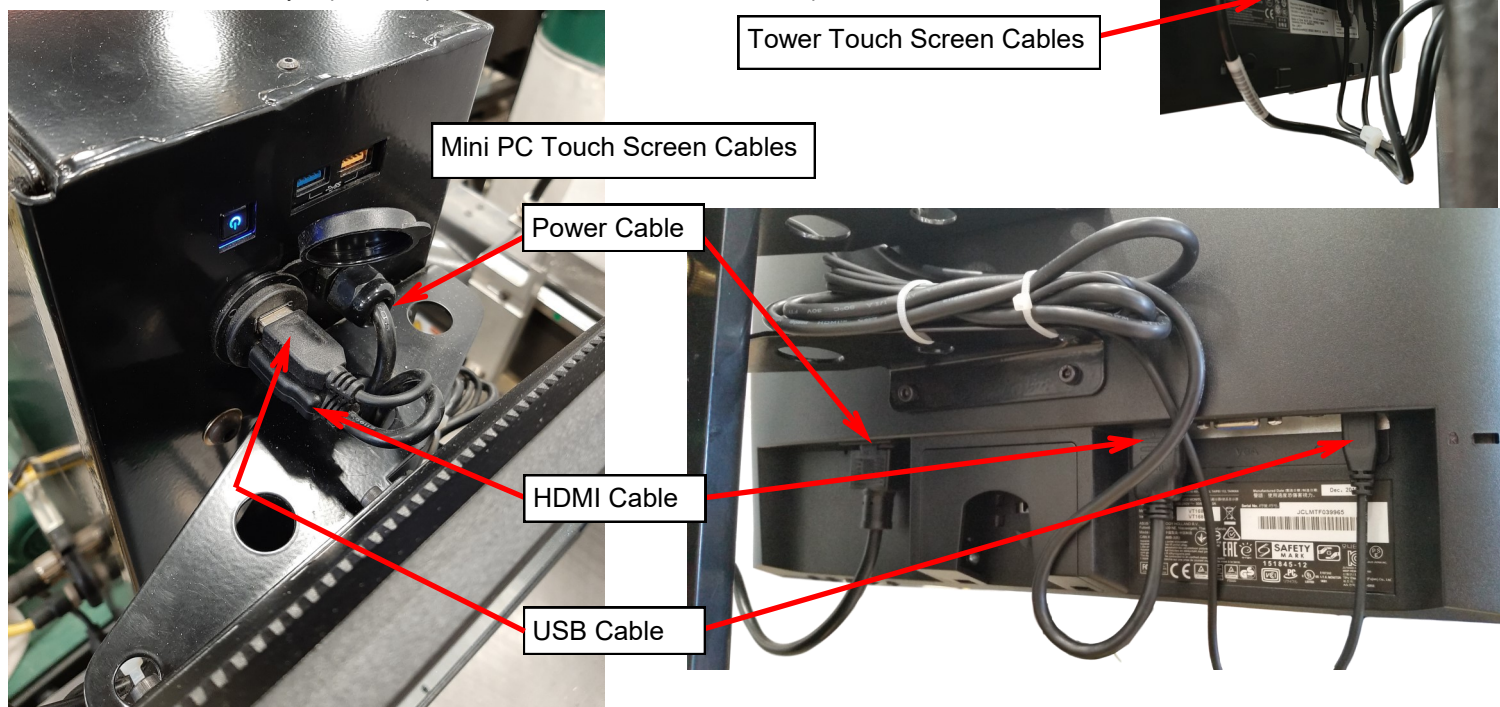
# Mount the Enclosure

Disregard this step if you have the freestanding Tower Enclosure.



## Touch Screen Monitor Connections

The Android tablet only requires the power cable . Communication is accomplished via Bluetooth.





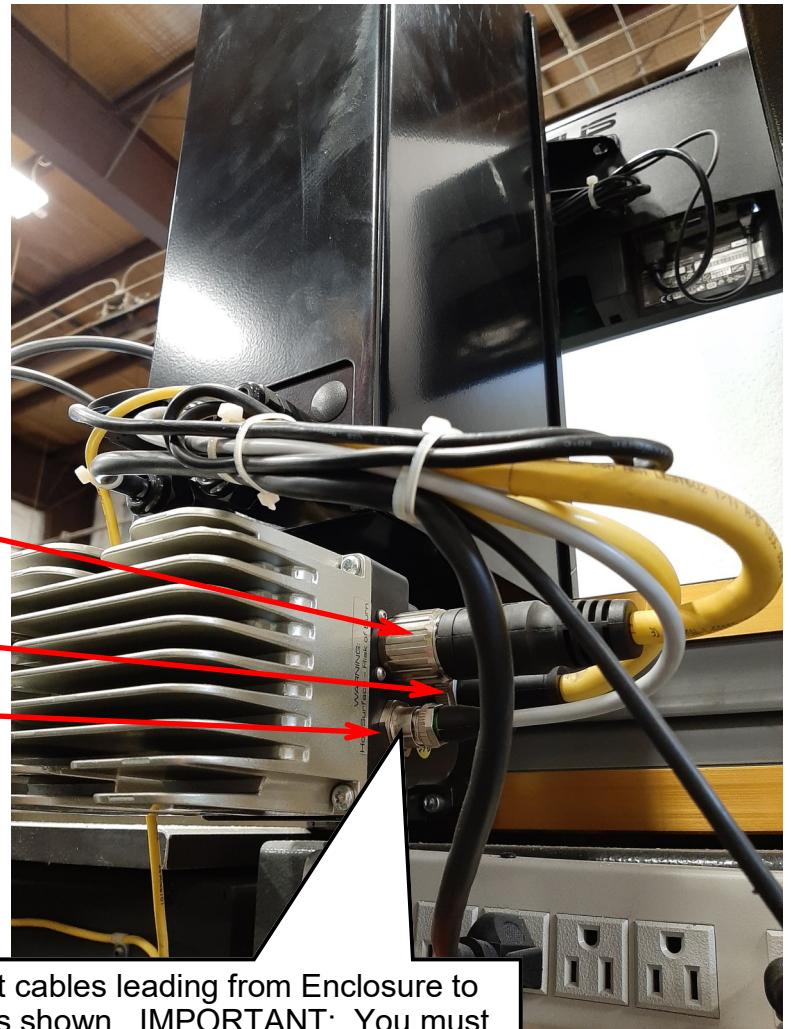
# Motor Cable Connections

## Mini PC Enclosure

I/O Cable (Optional)

Power Cable

Communication Cable



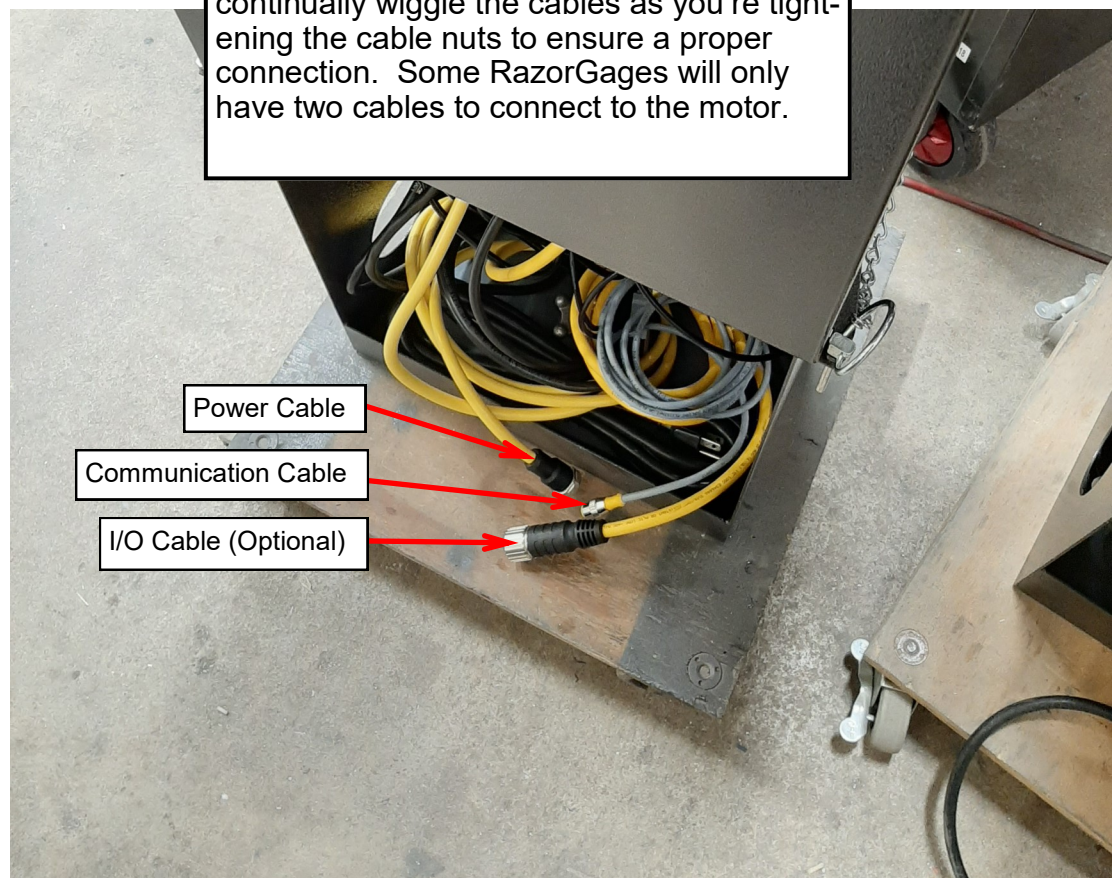
Connect cables leading from Enclosure to Motor as shown. **IMPORTANT:** You must continually wiggle the cables as you're tightening the cable nuts to ensure a proper connection. Some RazorGages will only have two cables to connect to the motor.

## Tower PC

Power Cable

Communication Cable

I/O Cable (Optional)



# Calibrating your RazorGage to the Machine

First adjust the stop extension.

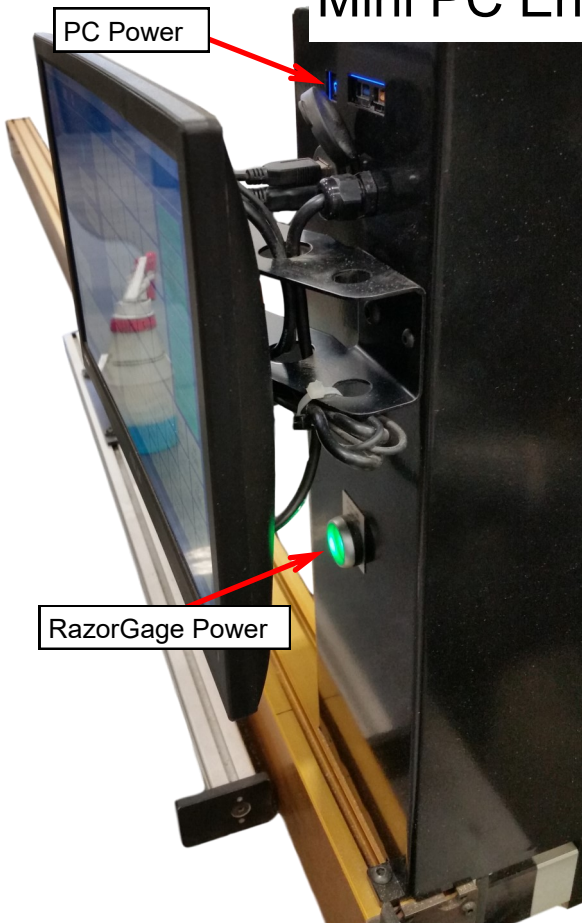
Once your RazorGage is securely mounted to your machine you begin the first-time calibration process by first adjusting the stop extension. Loosen the mounting screws on the Stop Extension and slide it away from the saw so that it won't hit your saw when you Home the machine. With the power off, push the moving carriage toward the motor end of the RazorGage until the carriage hits the internal hard stop. Now extend the stop extension toward the saw blade until it is as close as you want it to be. If you're using the RazorGage as a pusher you will want the stop extension to reach almost all the way to the blade so that your final trim cut doesn't result in much waste. If you're using the RazorGage as a stop then adjust the stop extension so that the distance from the cut to the stop face is less than the shortest part you want to be able to cut. Tighten the stop extension screws.



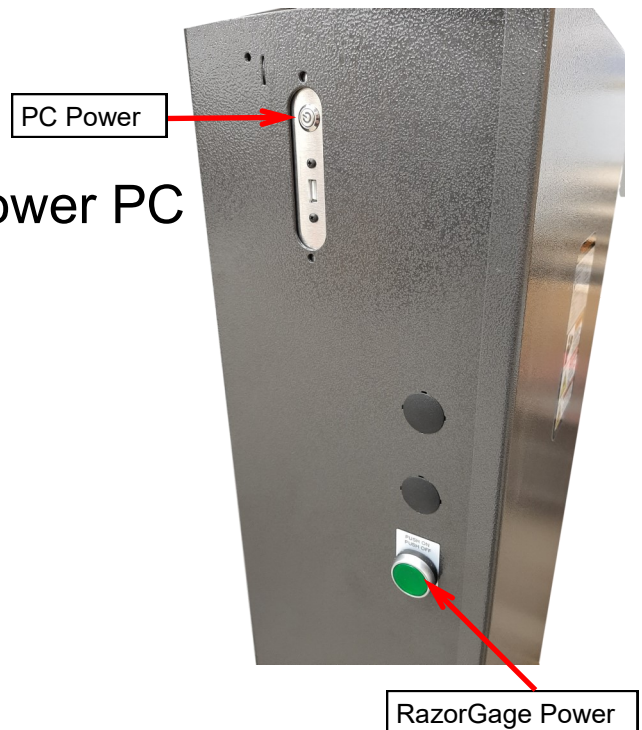
Next power up your RazorGage.

It is very important to note that there are TWO things that must be turned on: The RazorGage AND the PC (or Android)

## Mini PC Enclosure



## Tower PC





# Calibrating your RazorGage to the Machine (cont.)

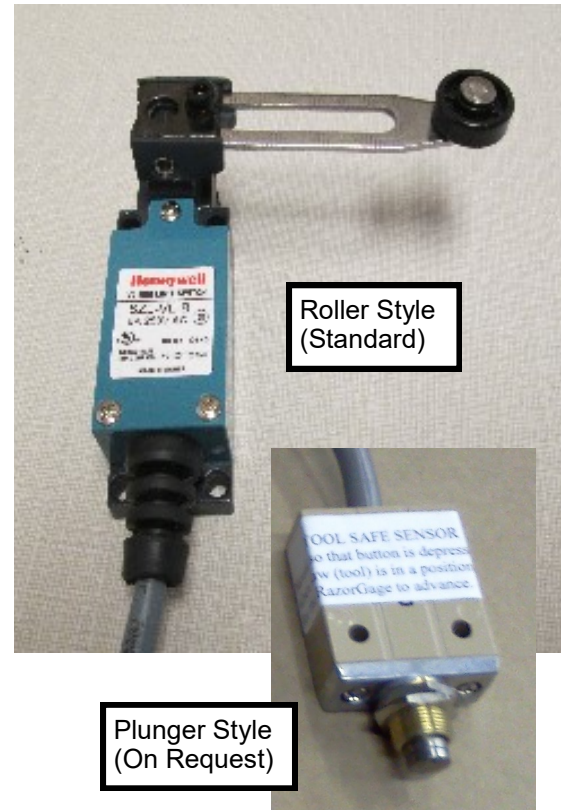
Once Windows or Android has booted, find the RazorGage icon on the touch screen and, on Windows, double click. The RazorGage software will start and prompt you to press OK to home. After homing is complete the MAIN SCREEN will appear as shown below. Now you may calibrate the RazorGage to your saw. Before you start make sure that, with the RazorGage in HOME position, the stop extension is positioned close enough to the saw blade to cut the shortest part you need to cut. If you're using the RazorGage as a pusher, make sure that the stop extension is close enough to make your desired end trim cut. If you want to slide the stop extension closer or further from the blade, loosen the stop extension screws and adjust it now. When you're done press the button that says SETUP SCREEN, enter the password 90210, then press the CALIBRATE HOME OFFSET button. Follow the on screen instructions for setting the home offset. To watch a video of this procedure go to [www.razorgage.com](http://www.razorgage.com), click the YouTube button, and choose the RazorGage Calibration Demonstration Video.



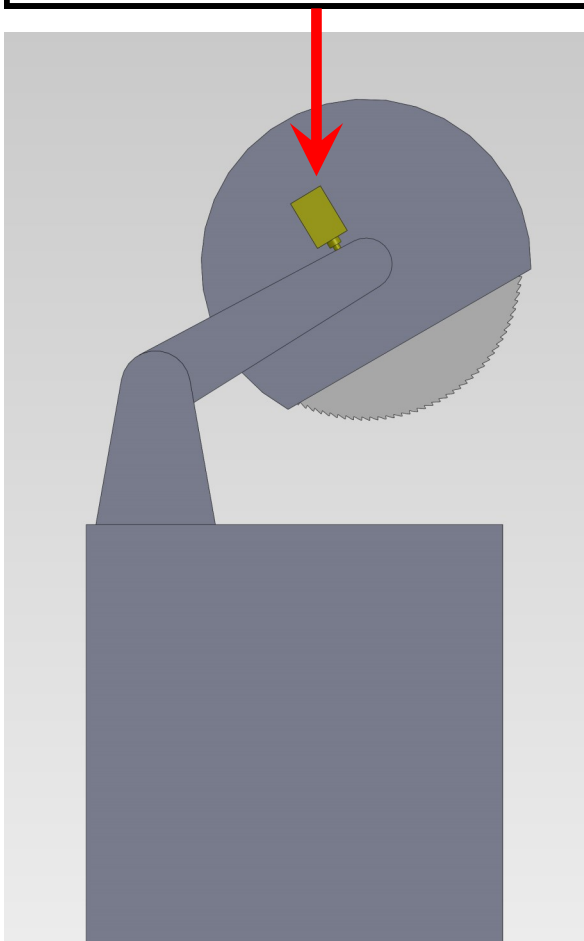
**Saw Kerf:** When using the RazorGage as a pusher the Home Offset will only affect the accuracy of the first trim cut. Part length accuracy is a factor of the scale factor and the kerf. If all parts are equally inaccurate simply adjust the kerf. If short parts are accurate and long parts are not or vice versa then adjust the scale factor in step two of the Calibration Wizard accessed from the Calibrate Home Offset button. Step 2 password is 5239

# Tool Safe Sensor

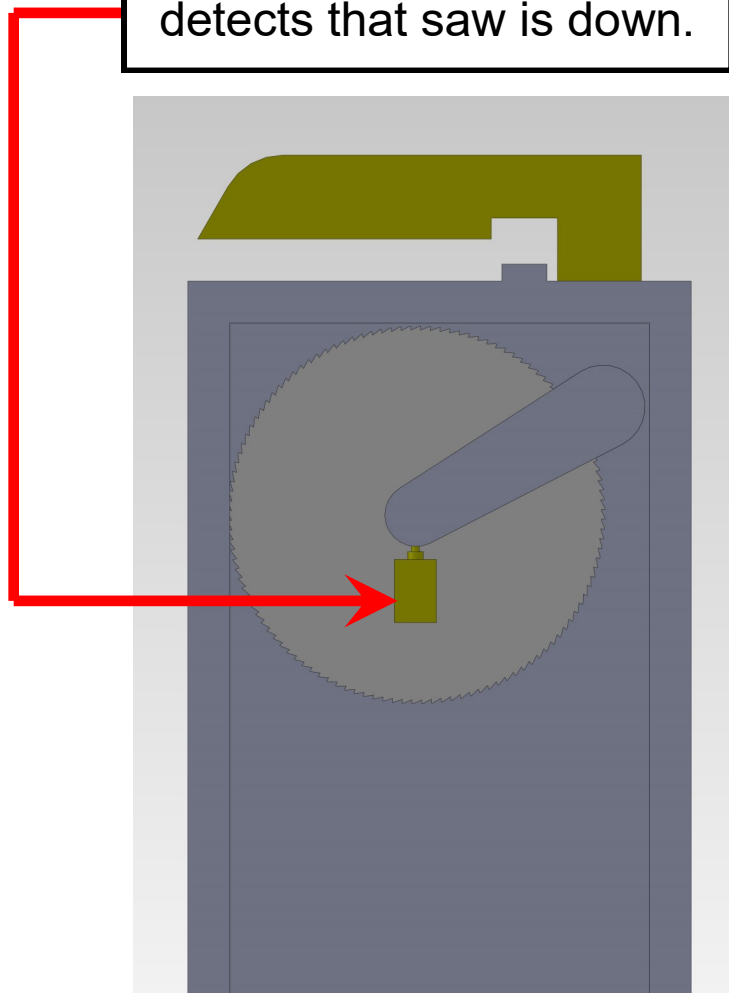
The Tool Safe Sensor is a limit switch to be installed on the user's saw, drill press, punch press, or whatever the processing tool may be, that, when depressed, indicates to the RazorGage software that the processing tooling is not in a position that favors movement of the pusher. The software then prohibits motion of the positioning carriage. The Tool Safe Sensor is also used to detect that the tool has completed a cycle. In certain software screens that allow semi-automatic to fully automatic operation, the RazorGage will automatically move to the next position after sensing that the Tool Safe Sensor has opened and closed within a certain timeframe. Since the RazorGage control is simply looking for a set of contacts to close, you may use a relay on your machine instead of the limit switch. The diagram on the next page shows how you can test the tool safe sensor. Contact the factory for more details.



Down Cut Saw - Switch detects that saw is up.



Up Cut Saw - Switch detects that saw is down.



**Setup Screen**

System Parameters		User Parameters		Controls	
Stroke: 48.000	Speed: 25.000	Unload: 5.000	7	8	9
Scale: 3488.000	Accel: 30.000	Load: 5.000	4	5	6
	Decel: 30.000	Saw Kerf: 0.162	1	2	3
	100%	Offset: 0.000	.	0	←
	30.000	Calibrate			ENTER
Board Com1 Com2 Com3 Com5 Test Com		1. Clamp Valve - ON 2. Timer 1 - Delay 3. Saw Valve - ON 4. Timer 2 - Delay 5. Saw Valve - Off 6. Timer 3 - Delay 7. Clamp Valve - OFF Generate Event Log			
Home: (Zero) Left Right ST Extrusion		Move to Lower Limit Move to Upper Limit Home The Positioner Run Laser Routine		Controls Test Run Index Locator Enter Setup	
		Password:		Save Changes	

From the RazorGage Setup Screen, press CONTROLS TEST to check to see if the controller is receiving the signals from the switches.

**Controls Test Screen**

USB Saw Cycle Button 1

USB Saw Cycle Button 2

USB Next Button

'Defect' Input

'RG Enable' Input

'Saw Up' Input

Analog Position =

DONE

Tool Safe Input  
(Saw Retracted)

Saw Extended Input

Go to [www.razorgage.com](http://www.razorgage.com) and click DOWNLOADS for the ever growing library of help documents. Click on the You Tube button to see helpful tutorial videos.