

# Outfeed Skid Support System For PRS Buddy and 5-Axis Tools





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#### **Hardware**

Part Name	Quantity	ShopBot Part Number	Notes
Upper Support Track	1	003535	
Rail Assembly	2	-	
Leg Assembly	2	-	
1/4-20 x 3/4" BHSCS	8	002135	
1/4-20 Nylock Hex Nut	8	000454	
10-32 x 7/8" FHSCS	7	003533	
5/16-18 x 1/2" Low Profile SHCS	2	003556	
5/32" Drill Bit	1	005085	
10-32 Spiral Point Tap	1	000835	







#### **Remove Powerstick**



The Powerstick engages with the X-axis motor mounted underneath the deck. The motor can be engaged or disengaged using the Cam Handle located on the lower right side of the machine (shown here on a 5-Axis tool).

Pull out the Cam Handle and move it to the right to disengage the motor and allow the Powerstick to slide freely. Remove the Powerstick from the deck and set it on a clean, flat surface. Make sure that the gear rack (on the underside of the Powerstick) faces up.

#### **Replace Proximity Switch Targets**

Remove two hex bolts from the underside of the Powerstick using a 1/2" wrench and discard. They will be replaced with the low head socket cap screws provided (part 003556).



# **Mount Upper Support Track**

Lay the upper support track into the narrower channel on the underside of the Powerstick, with the countersunk holes facing up. With a 4-foot Powerstick, the two larger holes in the rail will fit over the new proximity switch targets. With a 6- or 8-foot Powerstick, center the rail horizontally.





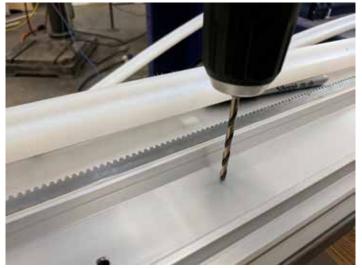
On the 4-foot powersticks, you can temporarily screw in the 5/16" low head socket cap screws to hold the upper support track in place. Then mark the 7 holes for the mounting screws with a marker. For 6 or 8 foot powersticks, just hold the upper support track in place while you mark the holes.





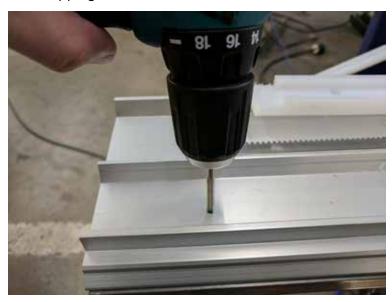
After marking, remove the upper support track. Using the provided 5/32" drill bit, drill all seven mounting holes. The hole only needs to go through the first layer of the extrusion, which is about 1/8" thick.



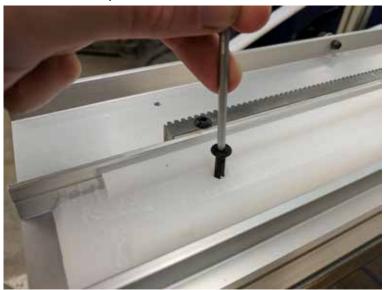




After drilling the pilot holes, chuck up the provided 10-32 tap into a drill and use it to tap the holes. Be sure to go slowly and use the reverse feature of the drill when removing the tap. If the drill being used has an adjustable clutch, it is recommended to use this on about half power to avoid breaking the tap. WD-40, light machine oil, or tapping fluid is also recommended to lubricate the tap.



Once the holes are drilled, attach the upper support track to the bottom of the powerstick using the seven  $10-32 \times 7/8$ " flat head socket cap screws with a 1/8" allen wrench.

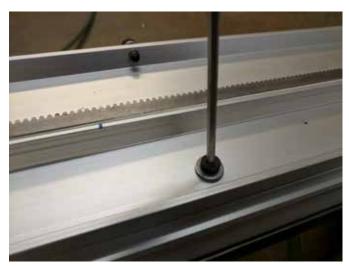




Then install the two 5/16" low head socket cap screws with a 5/32" allen wrench. For 4 foot power-sticks, install them through the large holes in the upper support track. For 6 foot and 8 foot power-sticks, install them into the original target holes with 3 of the 000032 shim washers under each bolt.









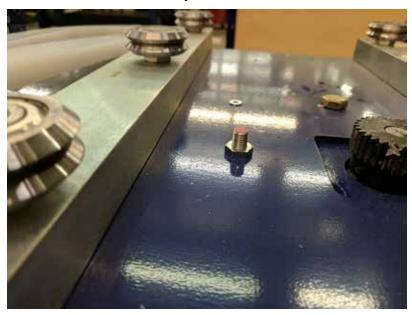
## **Adjust Proximity Switch Height**

Now that the upper support track is mounted and the shorter proximity switch targets are installed, the proximity switch height must be adjusted so it will trigger on the new targets.

Begin by loosening the nut that locks the switch in place with an adjustable wrench. You may also need to use the wrench on a second nut below the deck.

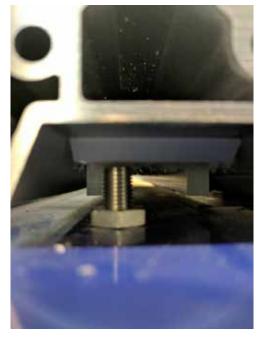


Then turn the proximity switch until it is raised above the surface of the deck as shown. The wire for the switch may need to be removed termorarily to allow the switch to turn.



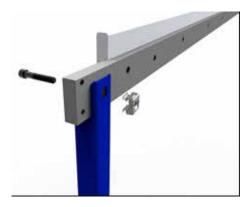


Reinstall the powerstick temporarily to check for clearance. The switch needs to be adjusted so that there is 1/16" or less of a gap between the end of the switch and the upper support track, as shown.

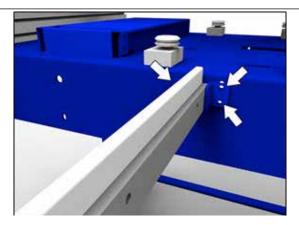


Remove the power stick and re-tighten the switch in place once the height is adjusted correctly, then re-connect the wire to the switch if it was removed. Reinstall the powerstick, lock it in place by releasing the cam handle, and check that the proximity switch is triggering correctly when the machine moves to both ends of X travel. Additional adjustment may be required if the switch is not triggering.

# **Mount Support Rail to Machine Deck**



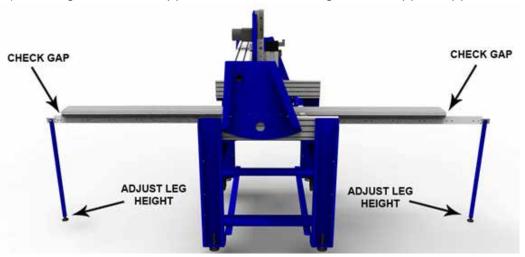
Attach a leg to each lower support rail with a 1/4"-20 clip-on nut (pre-installed) and a 1/4"-20 x 1-1/2" socket head screw. Check each leg for square before fully tightening the screw.



Attach the L-brackets on the support rails to the deck with 1/4"-20 x 1" button head bolts and 1/4"-20 nylock nuts. Use a 7/16" open end or adjustable wrench and 5/32" allen wrench to tighten. **Make sure that the upper support track (white plastic) is facing up.** Installing the support track upside-down is possible, and will result in an unsupported power stick.

If the support rail system was purchased along with a new machine, the deck has already been drilled for the mounting brackets. Center the bolts vertically in the slotted holes.

**For retrofit kits only:** Drill mounting holes with a 5/16" drill bit. Replace the Powerstick (see instructions below), and align the lower support rail so that it sits against the upper support track.



Move the Powerstick to each end of the support rail and check for any gaps (legs too low) or resistance (legs too high). Adjust either leveling foot as necessary.