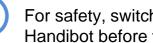


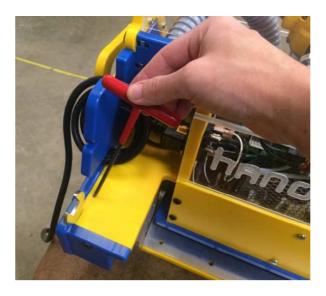
#### **Installing Accessory Motor** Cable



For safety, switch off the power to your Handibot before touching any electronics.



Grab your trusty 4mm wrench from the back of the tool.

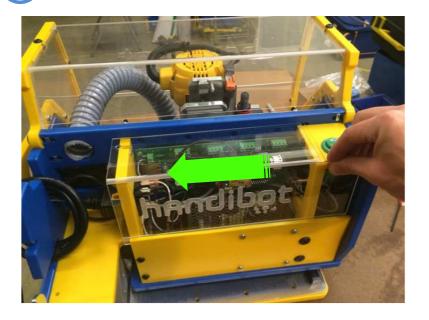


## 3

Remove the button head screw from the left. top side of the clear electronics enclosure.

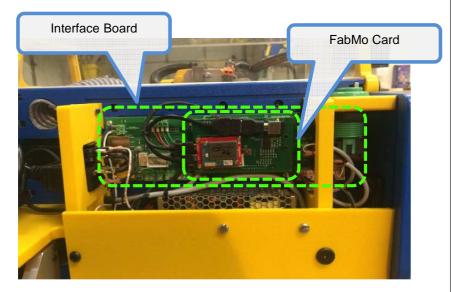


#### Slide the electronics enclosure to the left.



You now have access to the FabMo Control Card and Interface Board of your Handibot.

6

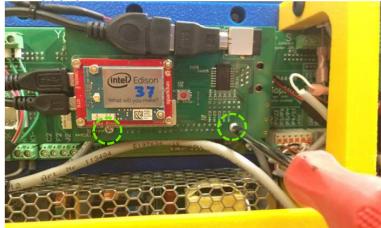




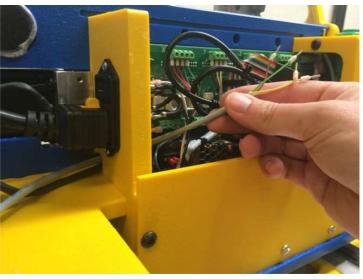
Pull the electronics enclosure away from the tool.



Older control cards will be held in place by two screws. Remove the two phillips head screws holding the FabMo control card in place. Gently pull the FabMo card off of the interface board.

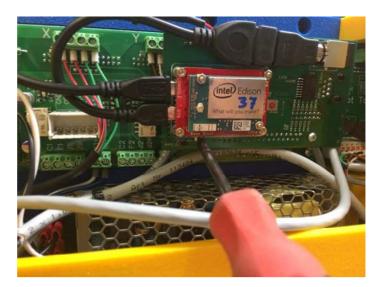


Pass the accessory motor cable through the hole in the left side of the electronics enclosure.



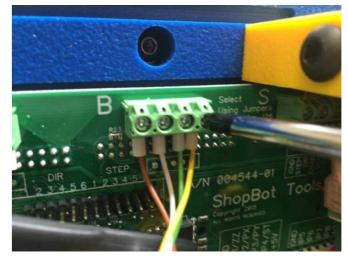


Re-attach the FabMo card with the two phillips head screws.





Screw the wires into the terminal block labeled "B". From left to right: Brown, White, Green and Yellow. Make sure that the wires are snug and do not pull out.



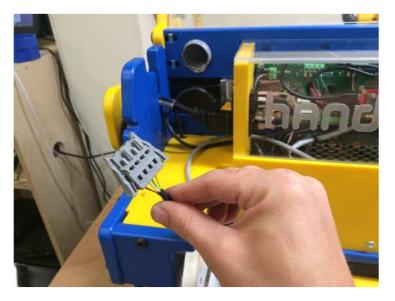


Replace electronics cover.





Plug grey WAGO connector into your accessory motor.

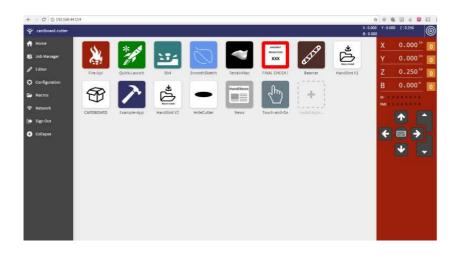




# Setting up a rotary axis in FabMo

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To use a rotary or any other 4<sup>th</sup> axis accessory with the handibot—you'll need to activate your auxiliary axis in FabMo.





First, open the "Configuration" menu for your tool.

← · ⑦ ③ 192.168.4	4.114/#/app/config					X : 0.000	¥:0.000	[2] ∉ 7:0.250	
						8:0.000			
ff Home		Inputs Channels	. Machine Apps User			31.51	x	0.000	Ľ 🖸
Job Manager	General Settings					1		0.000	<sup>10</sup> 0
	Wathine Name		hachime ID		Default Unit System		z	0.250	in 📊
Configuration	cledboard-cutter	0	FZEDAS49D010.09501		in .	350	в	0.000	
Macros	Distance Mode		hondal Tolerance		Junction Aggression			0.000	- 10
Network	Absolute		0.001	m	0.2			WII 4	
								*	-
Sign Out	Logging								
Collapse	Log Level				Status Report Interval		5		2
	informational	<u>(</u> )			250	em		*	-
	Updates								
	Software Version V1.5.1				Update Software				
	Rotation								

16

Switch over to the "Axis" tab. This tab lists the move speeds and type of each axis.

cardboard-cutter		-				X:0.0 B:0.0		00 Z:0.250	6
Home	Configuration General		wnnvils Machine Apps	User		vid	x	0.000	1
Job Manager	X-Axis	-					Y	0.000	
Editor	Feedrate Maximum		Velocity Maximum		Maximum Jerk		z	0.250	
Configuration	720	in/min	360	in/min	100	in/min <sup>3</sup>	-		- "
	High Speed Jerk				Axis Mode		В	0.000°	
Macros	10000	in/min <sup>3</sup>			Linear				
Network							Out		
Sign Out	Y-Axis								î
Collapse	Feednate Maximum		Velocity Maximum		Maximum Jerk		÷	<b></b>	
	720	(n/min	360	in/min	100	an/man <sup>2</sup>			
	High Speed Jerk				Axin Mode				×.
	10000	In/min <sup>3</sup>			Linear				
	Z-Axis								
	Feedrate Moximum		Velocity Maximum		Maximum Jerk				
	720	in/min	240	in/min	-100	in/min <sup>2</sup>			
	High Speed Jerk				Axis Mode				
	10000	in/mm*			Linear	100			

Now, switch over to the "Channels" tab. This tab displays the controls for each of your tool's motor driver channels.

cardboard-cutter						X:0 8:0		00 Z:0.250	6
Home	Configuration General	Axis Inputs Ch	annots Apps User	50 		- 194.0	x 🖻	0.000 <sup>in</sup>	1
Job Manager	Channel 1						Y	0.000 <sup>in</sup>	
Editor	Unit Value		Power Management Mode		Power Level		z	0.250 <sup>in</sup>	
Configuration	4000	steps/units	Always on	12	1	0-1.0	1		
	Direction				Am		B	0.000"	
Macros	0	(0-CW, 1-			×	270		2333574	
Network									
Sign Out	Channel 2								
Collapse	Linit Valcie		Power Management Mode		PowerLoval		4	-	
	4000	steps/units	Atways on		1.	0-1.0			
	Direction				Aris				•
	0.)	(B-CW, 1-			X.	(*)			
	Channel 3								
	Unit Value		Power Management Mode		Preser Level				
	4000	steps/units	Always on	64 (4	2	0-1.0			
	Direction				Anis				
	0	(0-CW, 1-			z	(a)			



Scroll down to the B-Axis settings. In the "Axis Mode" pulldown—set the axis to "Rotary" mode.

		Velocity Maximum		Maximum Jerk	
45000	deg/min	15000	deg/min	6000	deg/min <sup>3</sup>
				Axis Mode	
				Disable	
Feedrate Maximum	distants.	Velocity Maximum	. Alexandria	Maximum Jerk	to to the
Feedrate Maximum 50000	deg/min	Velocity Maximum 50000	deg/min	Maximum Jerk 50000	deg/min <sup>3</sup>
	deg/min		deg/min	50000	deg/min <sup>3</sup>
	deg/min		deg/min		deg/min <sup>3</sup>
	deg/min		deg/min	50000 Avis Mode Rotary Disable	
	deg/min		deg/min	50000 Axis Mode Rotary	



Scroll down to the listing for channel 5. Set the unit value of this channel to 33.3333—and the power management to "Always On"

Unit Value		Power Management Mode		Power Level	
0.05167	steps/units	Disabled		1	0-1.0
Direction				Axis	
0	(0-CW, 1-			A	
nannel 5					
lanner 5					
		Power Management Mode		Power Level	
33.3333	steps/units	Always on	*	1	0-1.0
Direction		Always on		Axis	
1	(0-CW, 1-	On only when in cycle	<u> </u>	в	
	de entre	niikin antiy vinan maxinger ana ana a			
nannel 6					
Unit Value		Power Management Mode		Power Level	
33.33333	steps/units	Disabled	*	1	0-1.0
Direction				Axis	
0	(0-CW, 1-			с	



The positional readouts on your tool should now show a B axis location in degrees.





#### Attaching the Rotary Axis to Your Handibot



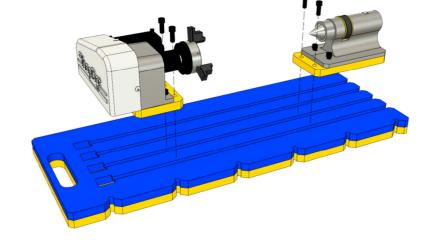
Attach the headstock and tailstock to the riser blocks that were included with the Accessory Base.



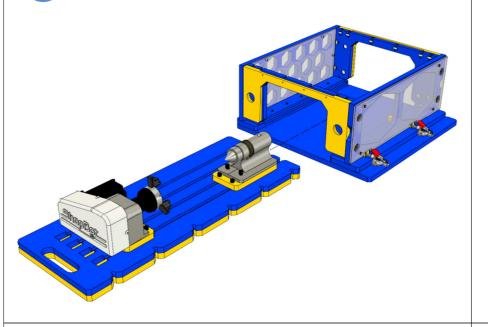
Bolt the headstock and tailstock to the T-slot tray.





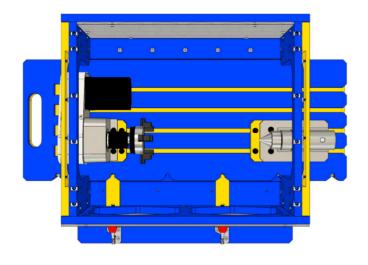


#### Slide the T-slot tray into the accessory base.





Lock the T-slot tray in place by depressing the two red toggle clamps on the side of the accessory base.



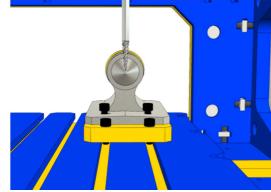
26

Attach the handibot to the accessory base using the 8 ¼-20 bolts that were packaged with the accessory base.



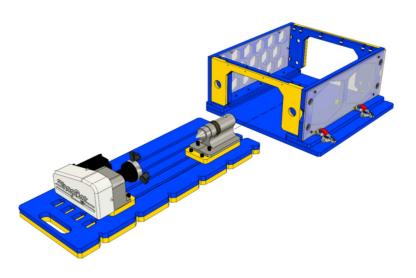
27

Insert a small-tipped bit, such as a v-bit, or ballnose bit into the router. Move the tool in all three axes until the tip of the bit is lined up with the pointed tip of the live center on the tailstock. This will be your home position—the center of the round stock that you'll be turning. Zero the X and Z axes here.



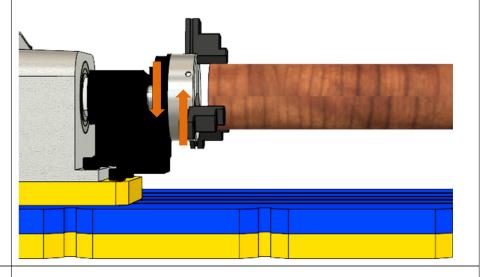


Release the toggle clamps to remove the tray in order to secure the material you wish to cut.



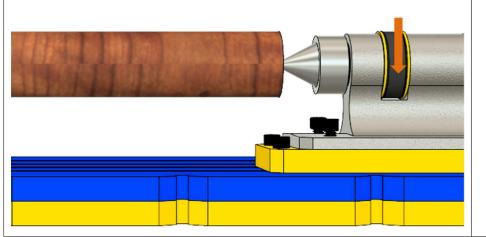


Rotate the hub of the headstock to open and close the jaws. Material should be held firmly by all three jaws of the chuck.



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Rotate the collar on the tailstock to drive the live center into the center of your round stock.

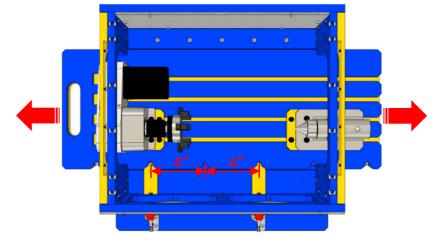


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Slide the tray back into the accessory base. With the tool at X=0, enter the radius of your material into the Z position readout and press "Go". Verify that this moves the bit to your material surface. Depending on the way that you set up your rotary cut, you may need to zero the bit to the surface of the material rather than the center.



To accomplish a "tiled" cut, release the red toggle clamps and shift the T-slot tray by 4 inches in either direction. Lock the clamps into the v-shaped grooves to precisely locate the work piece for your next cut.



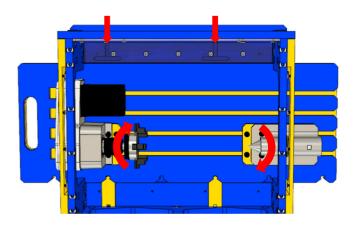
# handibot®

### **Rotary Axis Troubleshooting**



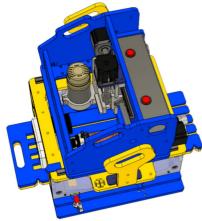
Problem: Material is not parallel to handibot yaxis.

Solution: Release toggle clamps, then adjust alignment screws on opposite side of frame to rotate the T-slot tray.





Problem: Cutter doesn't reach material Solution: Loosen router collar screws; lower router body until cutter can reach the center of your material when tool is at bottom of Z-axis travel.



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Problem: Tool not cutting deep enough Solution: Verify that the material size in your cut file matches the actual material size exactly.

