Blender 2.9

shortcuts

- SHIFT z: switch wireframe and object mode
- f: fill faces or edges between edges or vertex
- a: select all
- ALT+a: select nothing
- c: circle select
- b: box select
- SHIFT+b: zoom to box
- SHIFT+s: cursor move or selection move
- w: cycle between selecion modes

numpad emulation

- edit \rightarrow preferences \rightarrow input \rightarrow emulate numpa
- enable 1,2,3 switch faces, edges, vertex: edit \rightarrow preferences \rightarrow keymap \rightarrow search mode
 - select mode toggle: ALT+1
 - select mode toggle: ALT+2
 - select mode toggle: ALT+3

fix boolean operations

Sometimes boolean difference fails. Before try on each object:

- edit mode
- select all vertices A
- vertex (top menu) \rightarrow Merge Vertices \rightarrow by distance (this operation remove duplicate vertices)

hide / show

- select (multiple) object and SHIFT+H to hide others
- recall others with ALT+H

edit mode

TAB key

• activate Vertex select with 1, Edge select with 2 and Face select with 3

Create new object from selected vertex:

- duplicate with SHIFT+d
- ESC to exit from grab mode
- parent selected with "p"
- exit from edit mode with TAB and you will have two objects

CTRL+I: select touching vertex, edges, faces

Recalculate normals (to solve bevel problems): select all with "a" and hit "shift+n"

knife mode K:

- c for angle constrain
- z for cut all deeper edges

put vertex same X, Y or Z:

- position the 3d cursor at the Y location
- set the pivot point to the 3d cursor (. period key)
- then scale by zero on the Y axis (S Y 0)

blendercam

Vevor 3018pro vevor manual

```
cd /lab/blender
git clone https://github.com/vilemnovak/blendercam.git
```

edit blender_manifest.toml commenting shapely wheels

install system packages

yay -S opencamlib python-numba python-shapely

setup blender scripts alternate file path

	Blender Prefer	ences 🙁
Interface	▼ Data	
Themes	Fonts	<i>"</i>
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	Sounds	<i>II</i> 🔚
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Input	Render Cache	-
Navigation	 Applications 	
Keymap	Image Editor	-
System	Animation Player	Internal ~
Save & Load		
File Paths		

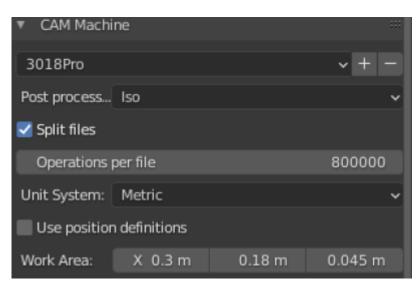
save preferences restart blender and enable blendercam add-on

Blender Preferences 🤹							
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select CAM render engine in scene tab

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	Add operation first	
	* CAM Material size and position	
	Add operation first	

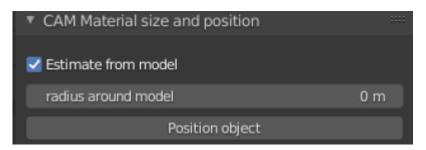
CAM machine \rightarrow add preset '3018pro' with 'iso' post processing



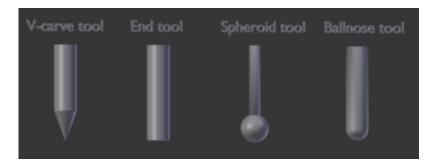
CAM operations \rightarrow add one operation and select target object

CAM opera	tions	::::
Operation_1		+
•		
Operation pre	sets	~ + -
	Calculate path	
	Calculate path in background	
	Simulate this operation	
Operation N	Operation_1	
File name:	Operation_1	
🛃 Auto export		
Source of da	object	~
Object:	🔲 Cube	×

CAM material size and position \rightarrow put object into job area with position button



CAM cutter



▼ CAM Cutter	::::		
Cutter presets	~ + -		
Tool number	1		
Cutter: V-carve	~		
Cutter v-carve angle	60.00000		
Cutter diameter	0.003 m		
Cutter flutes	1		

CAM operation setup \rightarrow strategy parallel and **skin**

 CAM operation setup 				
	D an ta			
Number of a	3 axis		~	
Strategy:	Parallel		~	
Distance between toolpaths 0.001 n			0.001 m	
Distance along toolpaths 0.0002 m				
Angle of paths 0			0°	
Inverse milling				
Use bridges				
Autogenerate bridges				
Skin			0 m	

header gcode to increase velocity spindle motor Genmitsu GS-775M 775 to 7000 (it double velocity x2)

M03 S1000 G4 P0.5 M03 S2000 G4 P0.5 M03 S3500

M03 S1000;G4 P0.5;M03 S2000;G4 P0.5;M03 S3500

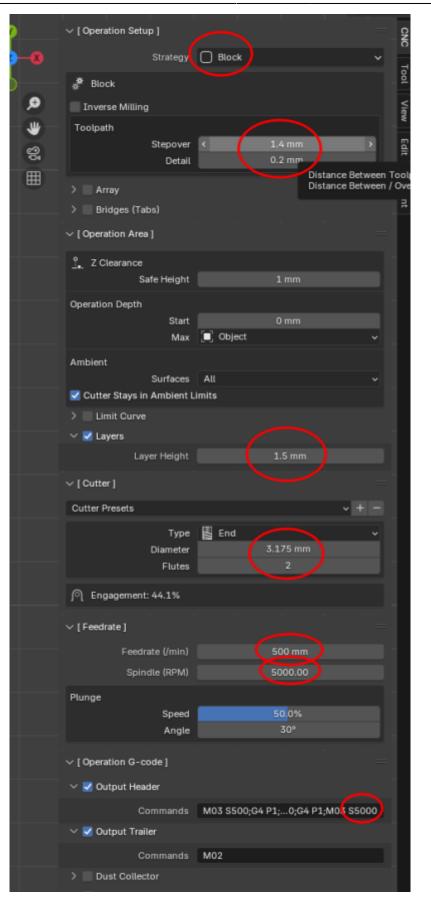
Hey! Apologies for Necro'ing this thread but I think I have the exact same board and machine as you, and was running into the exact same problem. I don't know if you wound up solving your problem, but the change that worked for me was two fold:

- twist the spindle wires together between the motor and the board, adding a shield if necessary (I eventually removed the shielding when I accidentally damaged it)
- solder a 0.1uF ceramic capacitor (make sure it is bidirectional!!!) between each terminal of the spindle motor to the spindle motor body itself. Ideally, you would also solder a third capacitor

between each motor terminal, but I did not do so and have not yet had the random dropouts I did before.

Hi guys, after long time dealing with exactly the same problem I figured out that the power supply of mine 3018 is insulation class type II, it means that there is no connection of the CNC ground to net ground, so the entire frame/circuit is "floating". Also, there was no connection between the controller board ground and the frame. It makes it very sensitive to electric noise! So I installed a **ground wire fixed from the frame to the controller** board AND a **connection from the frame to the nets** ground and all problems desapeared. So instead os be changing cables, installing pullups and pulldowns or changing configurations my recomendation is "make sure it is all ground connected.

Block operation



Invert axis X

download

```
(sets X-axis direction invert mask)
$3=3
(sets Y-axis direction invert mask)
($4=3)
( save your settings )
$10=255
(To Revert Back)
(typically $3=0 for X and $4=0 for Y)
( save your settings )
$10=255
```

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