

Touch Probe

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Table of Contents

1. T	O INSTALL ON YOUR SYSTEM:
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Thank you for purchasing the FlashCut CNC Touch Probe.

1. To install on your system:

1. Install the touch probe in a 3/8 collet in your mill raising the head of the mill to allow the touch probe to easily slide into position.



- 2. Wire the touch probe to an open input position on you FlashCut CNC signal generator.
- 3. Open up FlashCut CNC (Must be version 2.20 or greater)
- 4. In the configuration menu under Input Lines set the line that you have wired to the touch probe as **control** and define it as touch probe.

t		Configu	uration			
- Machine Mechanics	Input Lines	3				
Homing Feedrate/Ramping Reference Points	Line #	Function	Location	Description	Wiring	Debounce Distance (inches)
- Fixture Offsets	1	Home / Limit	X+	X+ Home / Limit	N.C.	0.0010
Threading	2	Home / Limit	X-	X-Home / Limit	N.C.	0.0010
- System	3	Home / Limit	Y.	Y-Home / Limit	N.C.	0.0010
Signal Generator	4	Home / Limit	Y+	Y+ Home / Limit	N.C.	0.0010
Communications	5	Home / Limit	Z+	Z+ Home / Limit	N.C.	0.0010
Motor Signals	6	Unused	N/A		N.C.	0.0010
Performance	7	Unused	N/A		N.C.	0.0010
Units	8	Control	N/A	Touch Probe	N.C.	0.0010
= I/O	9	Unused	N/A		N.C.	0.0010
	10	Unused	N/A		N.C.	0.0010
Output Lines	11	Unused	N/A		N.C.	0.0010
Analog Output	12	Unused	N/A		N.C.	0.0010
Programming	13	Unused	N/A		N.C.	0.0010
M-Code Definitions	14	Unused	N/A		N.C.	0.0010
M Code Evention	15	Unused	N/A		N.C.	0.0010
C Code Execution	16	Unused	N/A		N.C.	0.0010
- Cutter Compensation - Import - Tools	Debound	ce Factor: 12	(msec	1	Set All Wir Normally	ing: Closed
OK Cancel	50504		(11000	,	Normally	Open

- 5. Go online with your system using the FlashCut CNC software and the check the *Input Line Status*... making sure the line defined as Touch Probe is opens and closes when you make contact with the touch probe.
- 6. In the configuration menu under Sensing in the touch probe screen check the button the use touch probe and make sure the line to monitor is the line that the touch probe is hooked up to. Also check the parameters that define the type of machine you are using and that the output files are correctly selected. Last make note of the retract distance.

	Contiguration						
Analog Output	Touch Probe						
- Programming							
M-Code Definitions	Use Touch Probe						
G-Code	Sensing Feedrate: 3.00 (in/min) Sensing Axis: Z 💌						
	Monitor Input Line: 1 T						
- Tools							
Tool Geometry	Retract Distance: 0.0200 (inches) Positioning Axes: X 💌						
- Tool Change							
Tools in Changer	Probe Tip Diameter: 0.0780 (inches) Y						
Sensing							
Tool Length Sensing	Point File Type: XTZ						
Program Zero Sensing	Point File Delimiter: Space						
Touch Probe							
- Preferences	Create Output Files: 👿 SCN (Raw scan data, FlashCut CNC format)						
Viewports Deint Lint	✓ XYZ (Points)						
logging	V/Z (Points, compensated for probe tip diameter)						
Pendant							
Files	STE (Surrace)						
Messages	STL (Surface, compensated for probe tip diameter)						
Security							
General 🔹							

7. Making sure you have clearance around the touch probe move each axis to be sure the motors move in the correct direction.

- 8. Place the piece to be measured on the bed of the mill.
- 9. Jog the probe to the lower left quadrant of the work piece to be measured making sure there is clearance between the lowest y on the workpiece and the smallest x on the workpiece. Also, raise the head until the end of the touch is higher in the z+ than the highest point on the workpiece plus clearance over the retract distance from the touch probe configuration screen.



10. On the main FlashCut CNC screen select **Probe** near the lower left corner, and define the main axis and the distance in the X, Y and Z directions using a –Z for the lowest point on the workpiece you wish to measure. Set the resolution you wish to measure at and the location of the folder you want the data to be saved in.



11. Press start and make sure the probe is lowering itself to the lower point level set on the previous step. The probe will start its sweep to find the work piece. When the probes touches the workpiece while moving in the main axis it will then retract up and move toward the work piece again and will repeat until it passes over without touching in the main axis. The touch probe will then start it's up and down probing of the part until it is clear of the part or reaches the limit of its probing area.