



Disabling a Tool Home or Tool Out Sensor

How to temporarily disable a tool out or tool home sensor in the winMulti control software

 Difficulty Easy

 Duration 5 minute(s)

Contents

Introduction

Step 1 - Exit winMulti

Step 2 - Open tools.mul

Step 3 - Disable the tool reference

Step 4 - Save tools.mul

Step 5 - Restart winMulti

Step 6 - Disable the Alarm

Comments

Introduction

If there is a failure of a tool out or tool home sensor on the Stuga spindle ring, it is important to be able to quickly disable the input so the machine can continue production until the problem can be properly resolved. The software has an inbuilt functionality to do this - this tutorial takes you through the necessary steps

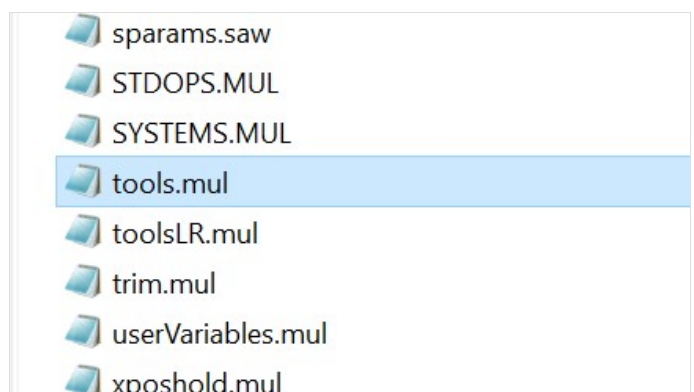
Step 1 - Exit winMulti

A change has to be made to one of the setup files, so you need to exit to the desktop



Step 2 - Open tools.mul

Navigate to the directory containing tools.mul.
Depending on the machine type, this could be c:\multi, c:\ddrive or d:\



Step 3 - Disable the tool reference

i ...The ioReferences for the spindle home / out inputs are different for various machine types. This is a historical anomaly left over from when the control programs were merged

See Dictionary for more detail on IO inputs

For Autoflows:

The ioRefs are in the range 67-86 and begin InB_Spin...

For ZX and Flowline:

The ioRefs are in the range 405-422 and begin SP or DP

To disable the input, change the IOReference code to -1

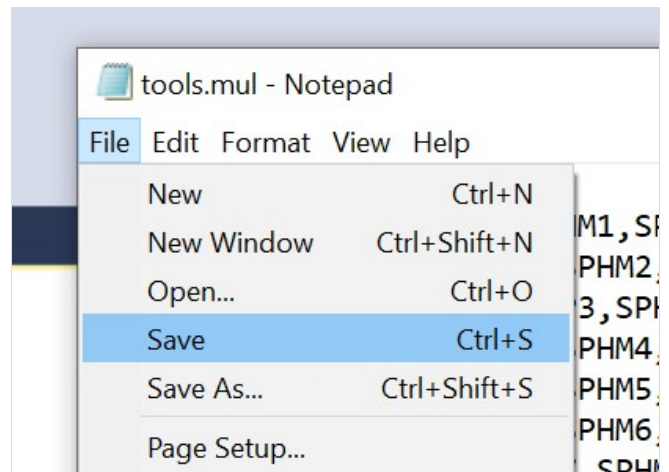
The spindle software automatically uses a timer instead of the input to control the spindle

Function	Timer
Plunge Out	Parameter 'toolplunge'
Plunge Home	Fixed 10ms
Double Plunge Out	Fixed 0.75s
Double Plunge Home	Fixed 0.75s

```
tools.mul - Notepad
File Edit Format View Help
[spindles]
1,0.0,4,SPIN1,SPPL1,-1,SPHM1,SPT01,-1,-1,300,-1,0,27048,0
2,314.9,3,SPIN2,SPPL2,-1,SPHM2,SPT02,-1,-1,300,-1,0,186464,0
3,270.0,2,SPIN3,SPPL3,SPDP3,SPHM3,SPT03,-1,DPT03,300,7,0,6982,0
4,225.0,7,SPIN4,SPPL4,-1,SPHM4,SPT04,-1,-1,300,-1,0,456,0
5,179.8,4,SPIN5,SPPL5,-1,SPHM5,SPT05,-1,-1,300,-1,0,13583,0
6,134.9,3,SPIN6,SPPL6,-1,SPHM6,SPT06,-1,-1,300,-1,0,76357,0
7,90.0,2,SPIN7,SPPL7,SPDP7,SPHM7,SPT07,-1,DPT07,300,3,0,4778,0
8,44.9,3,SPIN8,SPPL8,-1,SPHM8,SPT08,-1,-1,300,-1,0,0,0
[tools]
1,3mm Drill          ,900,500,30,0,0000
2,10mm Router       ,500,500,100,0,0000
3,5mm Router        ,1200,800,50,0,0000
4,12.7mm Router     ,500,500,127,0,0000
7,16mm Drill        ,300,300,160,0,0000
```

```
tools.mul - Notepad
File Edit Format View Help
[spindles]
1,0.0,4,SPIN1,SPPL1,-1,SPHM1,SPT01,-1,-1,300,-1,0,27048,0
2,314.9,3,SPIN2,SPPL2,-1,SPHM2,SPT02,-1,-1,300,-1,0,186464,0
3,270.0,2,SPIN3,SPPL3,SPDP3,SPHM3,-1,-1,DPT03,300,7,0,6982,0
4,225.0,7,SPIN4,SPPL4,-1,SPHM4,SPT04,-1,-1,300,-1,0,456,0
5,179.8,4,SPIN5,SPPL5,-1,SPHM5,SPT05,-1,-1,300,-1,0,13583,0
6,134.9,3,SPIN6,SPPL6,-1,SPHM6,SPT06,-1,-1,300,-1,0,76357,0
7,90.0,2,SPIN7,SPPL7,SPDP7,SPHM7,SPT07,-1,DPT07,300,3,0,4778,0
8,44.9,3,SPIN8,SPPL8,-1,SPHM8,SPT08,-1,-1,300,-1,0,0,0
[tools]
1,3mm Drill          ,900,500,30,0,0000
2,10mm Router       ,500,500,100,0,0000
3,5mm Router        ,1200,800,50,0,0000
4,12.7mm Router     ,500,500,127,0,0000
7,16mm Drill        ,300,300,160,0,0000
```

Step 4 - Save tools.mul



Step 5 - Restart winMulti

Step 6 - Disable the Alarm

Depending on the setup of the individual machine, there will probably be an alarm set up to detect if the sensor is active at the correct stroke of the cylinder.

This is easily disabled through the Settings->Alarms screen by unchecking the "Enabled" box



The screenshot shows the 'Machine Settings' window with the 'Alarms' tab selected. The table below lists various alarms with their configurations and status checkboxes.

RefNo	Input Ref	iState	Output Ref	oState	Timeout	Action	Message	Module	Enabled	DemoH
10	SPT01	Off	SPPL1	On	150	3Cycle...	Spindle 1 Tool Not Plunged	MH	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11	SPT02	Off	SPPL2	On	150	3Cycle...	Spindle 2 Tool Not Plunged	MH	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12	SPT03	Off	SPPL3	On	150	3Cycle...	Spindle 3 Tool Not Plunged	MH	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13	SPT04	Off	SPPL4	On	150	3Cycle...	Spindle 4 Tool Not Plunged	MH	<input checked="" type="checkbox"/>	<input type="checkbox"/>
14	SPT05	Off	SPPL5	On	150	3Cycle...	Spindle 5 Tool Not Plunged	MH	<input checked="" type="checkbox"/>	<input type="checkbox"/>
15	SPT06	Off	SPPL6	On	150	3Cycle...	Spindle 6 Tool Not Plunged	MH	<input checked="" type="checkbox"/>	<input type="checkbox"/>
16	SPT07	Off	SPPL7	On	150	3Cycle...	Spindle 7 Tool Not Plunged	MH	<input checked="" type="checkbox"/>	<input type="checkbox"/>
17	SPT08	Off	SPPL8	On	150	3Cycle...	Spindle 8 Tool Not Plunged	MH	<input checked="" type="checkbox"/>	<input type="checkbox"/>
18	<Undefined>	On	<Undefined>	Off	0	3Cycle...	Stop Button Pressed	MH	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20	<Undefined>	On	<Undefined>	Off	0	3Cycle...	Air Pressure Low	Bath	<input checked="" type="checkbox"/>	<input type="checkbox"/>
22	InA_PuH	Off	QuA_PULL	Off	100	3Cycle...	Timeout Infeed Pull Home	MH	<input type="checkbox"/>	<input type="checkbox"/>
23	InA_PuO	Off	QuA_PULL	On	80	3Cycle...	Timeout Infeed Pull Out	MH	<input type="checkbox"/>	<input type="checkbox"/>
30	<Undefined>	Off	<Undefined>	Off	0	4Abort	Spindle Invector Alarm	MH	<input type="checkbox"/>	<input type="checkbox"/>
32	<Undefined>	On	<Undefined>	Off	0	3Cycle...	Rear V overload Tripped	MH	<input checked="" type="checkbox"/>	<input type="checkbox"/>
33	<Undefined>	On	<Undefined>	Off	0	3Cycle...	V Nitch Motor Overload	MH	<input checked="" type="checkbox"/>	<input type="checkbox"/>