

## Basic settings-Homing

Parameter

Co-ordinates Tools Misc. parameters Technology Macro Data format Basic Settings

Spindle Speed control Monitoring Display/Operation

Ports X-Axis Y-Axis Z-Axis 4.-Axis Equipment Dimensions Homing Jog Signal wizzard

	X	Y	Z	4
Reference switch at...end	neg.	pos.	neg.	pos.
Reference point is...	+ 0.00	+ 0.00	+ 0.00	+ 0.00
			mm	°
Homing offset	+ 0.00	+ 0.00	+ 0.00	+ 1.00
			mm	°
Reference speed, search	20.00	20.00	20.00	15.00
			mm/s	°/min
Ref. speed, moving free	1.00	1.00	1.00	8.00
			mm/s	°/min

Reference sequence Z-X-Y Homing 4th axis... last

☒ Check ref.switches at reference start

OK Abort Save...

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## Reference switch at ... End

This parameter enables you to define in which direction the axis is moved in order to search for the switch. Movement clear from the switch then takes place in the opposite direction.

## Reference Position

During homing the axis positions are normally zeroed on the reference switches, i.e. that the machine zero point is set by the reference switches.

Normally the reference switches are installed on the negative end of the axes. However, with some systems it is advantageous to attach them on the opposite side.

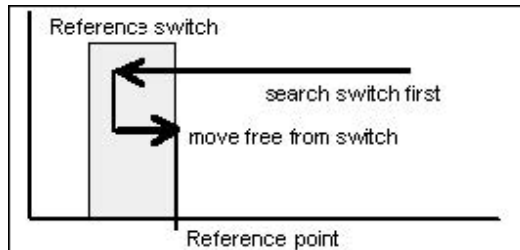
*Reference position freely definable*

By the parameter reference position WinPC-NC can easily be instructed to set this specific position on the reference switches and thus defining the desired position of the machine zero point.

## Reference offset

*Safe moving  
free of the*

To avoid a stop directly at the reference switch's edge after a reference and moving free it is possible to determine an additional



*reference  
switch*

path with the reference offset. This has to be carried out after moving free from the switch. First after moving the offset the axis is resetted or the defined reference position is adjusted.

Typical values are 0.5 to 1mm additional distances to the switch.

## Reference move, search Reference move, clear movement

Each axis starts moving with search rate and searches for the reference switch. Movement stops when the switch changes its level. Then movement starts at speed 2 in the opposite direction back again.

The edge of the reference switch defines the reference point for this axis. A low value should be specified for speed 2 so the movement ends with the shortest possible ramp when moving free.

## Reference sequence

Reference movement of the individual axes takes place in a particular sequence. Usually, it is necessary to move the Z-axis upwards first so it is withdrawn from the workpiece. Then the two other axes move to their reference points.

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## Homing sequence of 4th axis

The reference movement or move to zero point of the 4th axis can be performed either before or after the other axes.

## Checking reference switches prior to homing

*Reference  
move  
exclusive with  
vacant switches*

Prior to a reference move the parameter induces **WinPC-NC** to check the switches. Only if each defined switch is vacant a reference move can take place.

This test makes sense if several reference switches are connected on the LPT port by a single input line and if it is not possible for **WinPC-NC** to recognize the axis currently placed on its switch.

In case if the reference move should be rejected due to one or several actuated switches, it is necessary to move the switches free by the function JOG.