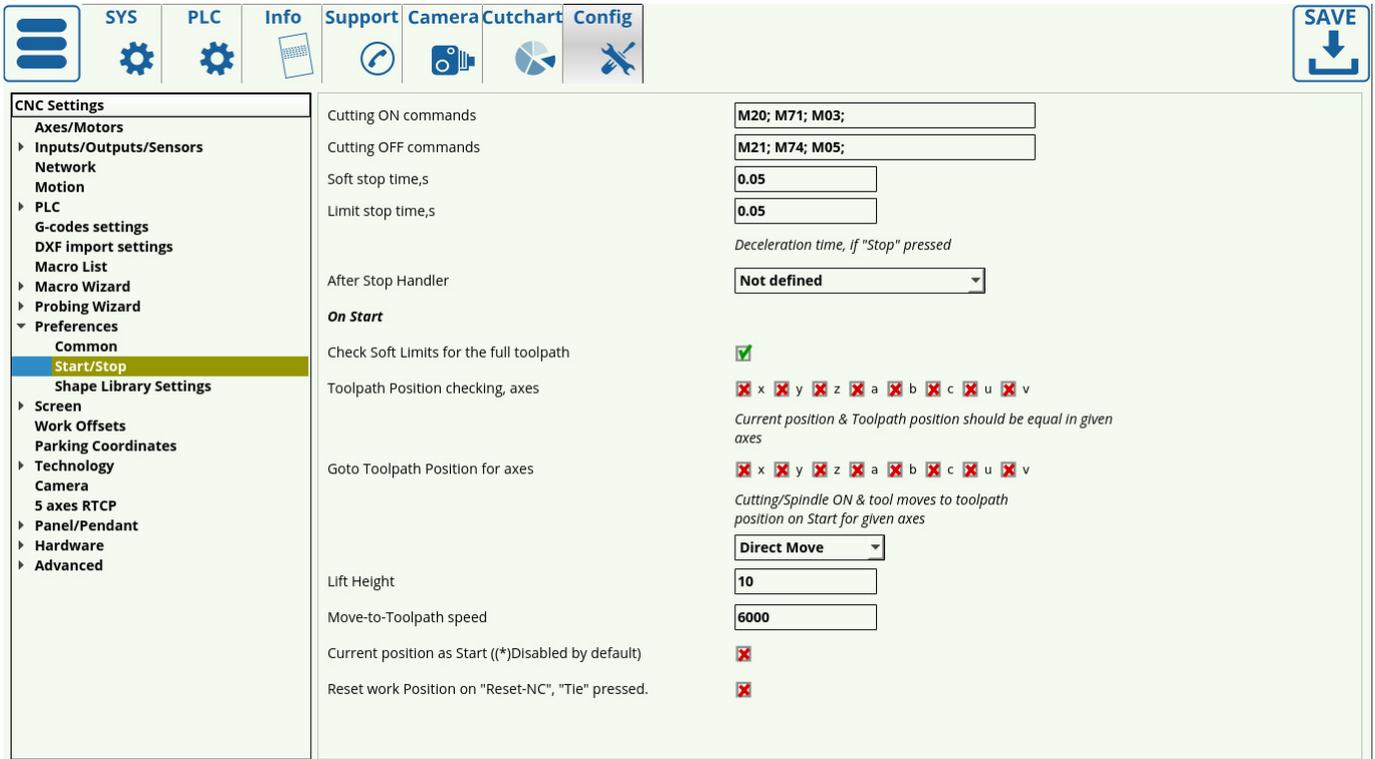


Start/Stop Setup

This article is designed to introduce the reader to the basic setup process of the Start/Stop procedure in myCNC settings.

Upon opening **CNC Settings > Preferences > Start/Stop**, the following screen is presented to the user:



On Start behaviour

A common scenario with mill and plasma machines is having to move the plasma torch or any other working tool away from the cutting point in the middle of running a program, for cleaning/inspection/etc. In order to continue the cutting process smoothly after having stopped the machine and moved the working tool, the **On Start** section of the Start/Stop menu can be used to properly describe the behaviour of the machine when it is started again from the middle of the program.

The behaviour of the machine with all the flags turned OFF is to simply continue cutting straight from the the point to which the working tool has been moved, as if it was still at its original position. This can lead to issues with cutting, since this effectively fails to cut the particular part at which the machine has been stopped. In order to correct this, two options are present.

- **OPTION 1:** Block the machine from starting up again if the new start point for the cut is not the same as the stop point.
- **OPTION 2:** After the machine has been stopped and move, automatically move it back to the original stop position before attempting to cut again.

NOTE: Only one option can be chosen for each given axis

Option 1: Block the machine from running

In order to block the machine from running if its new start position is different from its stop position, the user can select the particular axes for the machine to check before running. In the example below, the x- and y-axes have been selected to check their position before attempting to move again.

This will check the axes and, if any position values for each selected axis are different after the move, will stop the program when the Run button is pressed, as seen in the image below:

Option 2: Move back to stop position

The second option allows the operator to stop the machine, move the working tool to a desired position and then, after pressing the Run button, makes the machine automatically return to the original stopping position and resumes the cut from there. This is especially useful on large machines, where the operator may stop the machine in the middle of running the program to check the working

tool and then has to move it closer in order to inspect it.

In order to set this option up, the user needs to select the particular axes for which the machine will check its position values and, if any of them are different from their position values at the stop point, the machine will move the working tool back in place. In the example below, axes x, y and z have been selected to go back to the original stopping point, therefore allowing the user to lift the tool and move it closer towards themselves, then pressing Run for the tool to move back:

The screenshot shows the 'CNC Settings' window with the 'Start/Stop' configuration page. The 'Goto Toolpath Position for axes' section is highlighted with a red box. This section contains checkboxes for axes x, y, z, a, b, c, u, and v. The checkboxes for x, y, and z are checked, while the others are unchecked. Below this section, the 'Lift Height' is set to 15 mm. Other settings include 'Cutting ON commands' (M20; M71; M03;), 'Cutting OFF commands' (M21; M74; M05;), 'Soft stop time,s' (0.05), 'Limit stop time,s' (0.05), 'Deceleration time, if "Stop" pressed' (Not defined), 'After Stop Handler' (Not defined), 'Check Soft Limits for the full toolpath' (checked), 'Toolpath Position checking, axes' (x, y, z, a, b, c, u, v), 'Move-to-Toolpath speed' (6000), 'Current position as Start ((*Disabled by default)' (unchecked), and 'Reset work Position on "Reset-NC", "Tie" pressed.' (unchecked).

The Lift Height has been set to be 15 mm, allowing the machine to lift the working tool before moving as to prevent any collision with the working part. Note that this value will be different depending on the specific part and machine configuration.

These two options can be set to be different for different axes - for example, the x- and y-axes can be set to return back to the original stopping point, while the z-axis can be set to block movement if the working tool has been moved up or down, as in the image below. Note however, that only one option is available for each specific axis.

myCNC control software. Ver:1.88.3064- [[lib-shape-045.nc]

SYS PLC Info Support Camera Cutchart Config

SAVE

CNC Settings

- Axes/Motors
- Inputs/Outputs/Sensors
- Network
- Motion
- PLC
- G-codes settings
- DXF import settings
- Macro List
- Macro Wizard
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- Preferences
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 - Start/Stop**
 - Shape Library Settings
- Screen
- Work Offsets
- Parking Coordinates
- Technology
- Camera
- 5 axes RTCP
- Panel/Pendant
- Hardware
- Advanced

Cutting ON commands: M20; M71; M03;

Cutting OFF commands: M21; M74; M05;

Soft stop time,s: 0.05

Limit stop time,s: 0.05

Deceleration time, if "Stop" pressed

After Stop Handler: Not defined

On Start

Check Soft Limits for the full toolpath:

Toolpath Position checking, axes: x y z a b c u v

Current position & Toolpath position should be equal in given axes

Goto Toolpath Position for axes: x y z a b c u v

Cutting/Spindle ON & tool moves to toolpath position on Start for given axes

Move On Lift Heig: Move On Lift Heig

Lift Height: 15

Move-to-Toolpath speed: 6000

Current position as Start ((*Disabled by default):

Reset work Position on "Reset-NC", "Tie" pressed:

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