

# 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:

The screenshot displays the 'Start/Stop' configuration window in myCNC. The sidebar on the left lists various settings categories, with 'Start/Stop' highlighted. The main configuration area includes the following settings:

- 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:** (field empty)
- 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*
  - Direct Move:** Direct Move
  - Lift Height:** 10
  - Move-to-Toolpath speed:** 6000
  - Current position as Start ((\*):Disabled by default):** ☒
  - Reset work Position on "Reset-NC", "Tie" pressed:** ☒

## 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.

**CNC Settings**

- Axes/Motors
- Inputs/Outputs/Sensors
- Network
- Motion
- PLC
- G-codes settings
- DXF import settings
- Macro List
- Macro Wizard
- Probing Wizard
- Preferences
  - Common
  - 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**  
Not defined

**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

**Lift Height**  
10

**Move-to-Toolpath speed**  
6000

**Current position as Start ((\*Disabled by default)**  
☒

**Reset work Position on "Reset-NC", "Tie" pressed.**  
☒

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.

☰

SYS  
⚙️

PLC  
⚙️

Info  
📄

Support  
🔄

Camera  
📷

Chart  
📊

Config  
🔧

SAVE  
⬇️

CNC Settings

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

Cutting ON commands

Cutting OFF commands

Soft stop time,s

Limit stop time,s

After Stop Handler

**On Start**

Check Soft Limits for the full toolpath

Toolpath Position checking, axes

Goto Toolpath Position for axes

Lift Height

Move-to-Toolpath speed

Current position as Start (\*)Disabled by default

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

M20; M71; M03;

M21; M74; M05;

0.05

0.05

*Deceleration time, If "Stop" pressed*

Not defined ▼

☒

☒ x ☒ y ☒ z ☒ a ☒ b ☒ c ☒ u ☒ v

*Current position & Toolpath position should be equal in given axes*

☒ x ☒ y ☒ z ☒ a ☒ b ☒ c ☒ u ☒ v

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

Direct Move ▼

10

6000

✖

✖

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

The screenshot displays a CNC control interface. At the top, there is a row of icons for various functions like coordinate systems, tool selection, and machine status. Below this, a large black area shows a 2D toolpath for a part with four pockets. A red square highlights a specific area on the toolpath, and a red arrow points to it with the text "Different Start/Stop Position". To the right of the toolpath, there are dimensions: 561.270 and 647.000. Below the toolpath, there is a status bar with various parameters: Jog over speed, Over Speed, Spindle Speed, Tool Length, Tool, Z correction, and a row of buttons for tool selection (T1, T2, T3, T4, T99). On the right side, there is a panel with coordinates (G54: 179.866, 318.676, etc.) and a row of buttons for axis selection (X, Y, Z, A). At the bottom, there is a panel with a camera view, G-code, Mill, and Log buttons, and a status bar showing the current program (lib-shape-045.nc) and machine status (MCC: Idle, C: , PLC: 0, I: 0, Cmd: 0 / 0 (9)).

### Option 2: Move back to stop position

Last update:

2019/05/27 11:29 quickstart:mycnc-quick-start:start-stop-setup <http://cnc42.com/quickstart/mycnc-quick-start/start-stop-setup?rev=1558970956>

---

From:

<http://cnc42.com/> - **myCNC Online Documentation**

Permanent link:

<http://cnc42.com/quickstart/mycnc-quick-start/start-stop-setup?rev=1558970956>

Last update: **2019/05/27 11:29**

